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Lausanne (Switzerland), May 20–22, 2026

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Schweizerische Gesellschaft für Allgemeine Innere Medizin
Société Suisse de Médecine Interne Générale
Società Svizzera di Medicina Interna Generale
Swiss Society of General Internal Medicine

10TH ANNUAL SPRING CONGRESS OF THE SWISS SOCIETY OF GENERAL INTERNAL MEDICINE (SSGIM)

LAUSANNE, MAY 20–22, 2026

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ORAL FREE COMMUNICATIONS – SWISS SOCIETY OF GENERAL INTERNAL MEDICINE (SSGIM)

FC1

Shared decision-making for treatment of self-limiting infectious diseases in Swiss primary health care

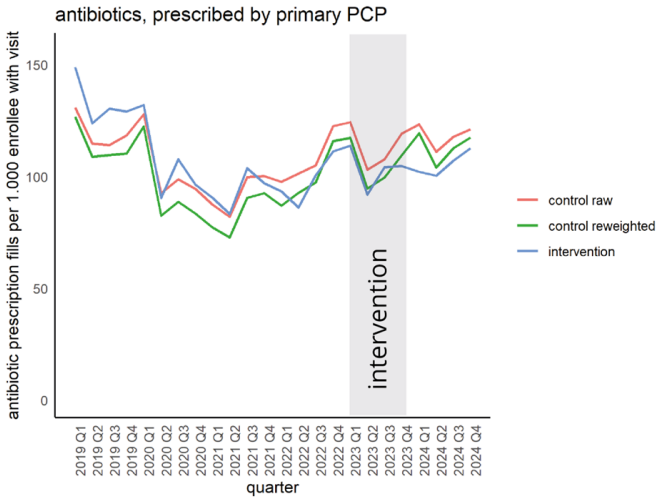
P. Aebi[1,2], L. Zwicker[1], C. Bähler[3], C. Frei[3], M. Trottmann[3], R. Auer[1,4], A. Rohrbasser[1,5]

[1]University of Bern, Berner Institut für Hausarztmedizin (BIHAM), Bern, Switzerland, [2]Spital Thun, Medizinische Klinik, Thun, Switzerland, [3]SWICA, Health Services Research, Winterthur, Switzerland, [4]University of Lausanne, Department of Family Medicine, Unisanté, Centre for Primary Care and Public Health, Lausanne, Switzerland, [5]Medbase Healthcare Center, Medbase Wil, Wil, Switzerland

Background: Antimicrobial resistance threatens the effectiveness of future therapies; In outpatient settings, most antibiotics are prescribed by primary care providers (PCPs). Previous studies indicate that PCPs prescribe antibiotics less frequently when engaging in shared decision-making (SDM) with patients. Following the development of SDM tools for potentially self-limiting infectious diseases, this study aimed to evaluate the impact of these tools on antibiotic prescribing among PCPs.

Methods: We conducted an interventional study involving 18 PCP offices that received multidimensional training on our SDM tools. The intervention group included patients whose PCP was trained on SDM tools, while controls had non-affiliated PCPs. We used insurance claims data (SWICA health insurance) from 2019-2024 to provide baseline data on antibiotic prescriptions and then compared rates after the intervention. The intervention lasted from 01/2023 – 12/2023. Inverse probability weighting was used to balance groups. The effectiveness of the intervention was evaluated using a difference-in-difference approach combined with logistic regression. The primary outcome was at least one antibiotic claim per patient-quarter prescribed by the registered PCP.

Results: The intervention group comprised 53’468 patients from the 18 participating primary care provider (PCP) offices, while the weighted control group consisted of 54’332 patients. After reweighting, the intervention was associated with a significant reduction of antibiotic claims prescribed by PCPs that received the multidimensional intervention (OR 0.88; 95% CI 0.84-0.92; p <0.001), corresponding to an absolute reduction of ~0.19 percentage points per quarter and a relative decrease of ~13%.



Conclusion & clinical implications: A multidimensions intervention promoting SDM for antibiotic prescription among selected PCP was associated with lower rate of claims for selected antibiotics compared to PCP who didn’t receive the intervention. Extended follow-up is planned to test the maintenance of these measures of associations. Future research should assess the impact of the intervention in a broader range of primary care providers and continue to employ study designs that allow robust causal inference.

FC2

Effectiveness of statin therapy in primary prevention in people living with HIV under anti-retroviral therapy: a systematic review and meta-analysis

E. D'Ospina[1,2], J. Beck[1,2], M. Davidovic[3], B. Surial[4], O. Efthimiou[2], N. Rodondi[1,2], M. Haller[2,1]

[1]Inselspital, Innere Medizin, Bern, Switzerland, [2]Universität Bern, Berner Institut für Hausarztmedizin, Bern, Switzerland, [3]Universität Zürich, Swiss School pf Public Health (SSPH+), Zürich, Switzerland, [4]Inselspital, Infektiologie, Bern, Switzerland

Background: Whether statins should be prescribed for primary cardiovascular prevention in people living with HIV (PLWH) remains a matter of debate. In the general population, statins in primary prevention are recommended in high-risk patients, yet their use in PLWH is unclear due to heterogeneous evidence and inconsistent recommendations across clinical guidelines. We therefore aimed to assess the effectiveness of statin therapy in primary prevention in PLWH.

Methods: Given that there are only few randomized controlled trials (RCT), we did a systematic review of observational and RCT of statin therapy that included PLWH treated with antiretroviral therapy, with 2 years minimum follow-up time, and reported major cardiovascular events (MACE) or all-cause mortality. We searched MEDLINE, Embase, ClinicalTrials.gov, Global Health, Global Index Medicus and Cochrane Library, up to August 26, 2024. We excluded articles without full text, those who included PLWH without antiretroviral therapy, and articles that reported none of our outcomes. We then did a meta-analysis with a fixed and random model combining results from RCTs and cohort studies. We reported all-cause mortality and MACE as outcomes separately.

Results: 14 studies fulfilled our eligibility criteria (11 cohort studies, and 3 RCT). 174,004 participants were analyzed; of which 22% were statin users. Mean follow-up was 4 years. We found that statin as primary prevention was associated with a reduced risk of all-cause mortality among PLWH (HR = 0.64 [95% CI: 0.49–0.85]) with moderate heterogeneity, in both common and random effects models (see figure 1). Similarly, statin use was associated with reduced incident of MACE (HR = 0.65, [95% CI 0.51-0.83]) in the fixed model (figure 2). We did not find strong evidence that this association was influenced by age or sex. Data were too limited to assess whether theses associations were influenced by cardiovascular risk score at baseline and CD4 counts.

Conclusion & clinical implications: Our meta-analysis, the largest on this topic, found some evidence of an association between statin use and reduced all-cause mortality as well as with MACE. More research should be done to assess the extent to which statin therapy benefits PLWH across different cardiovascular risk strata.

Figure 1: Forrest plot of hazard ratios with all-cause mortality as an outcome

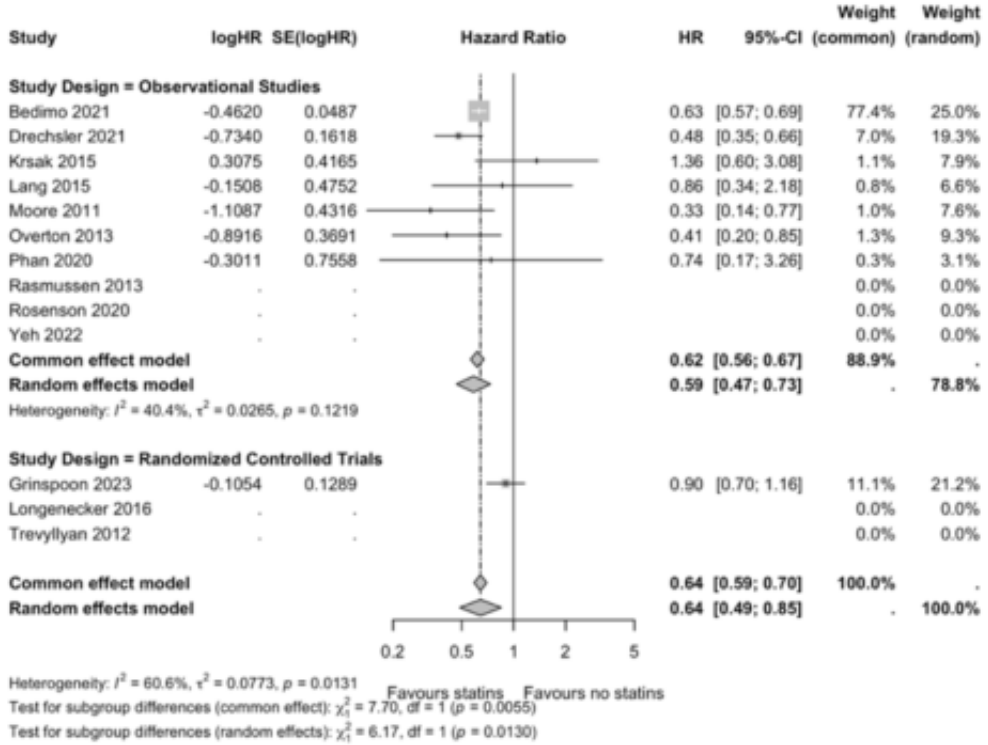
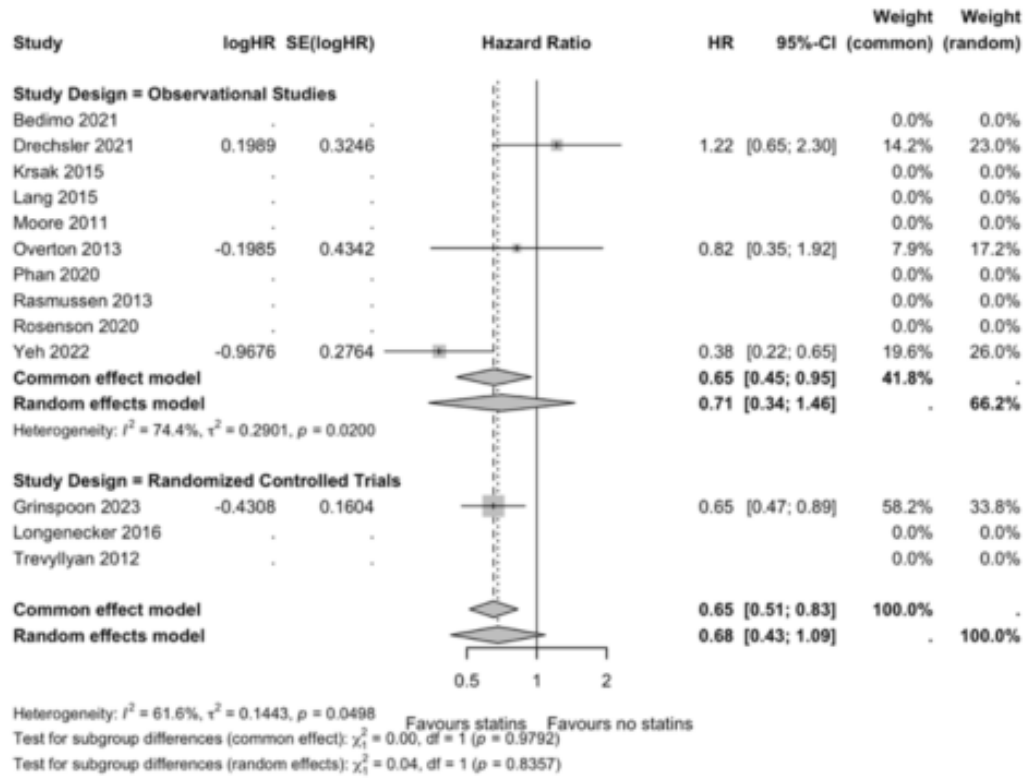


Figure 2: Forrest plot of hazard ratios with MACE as an outcome



FC3

Pelargonium sidoides extract (EPs® 7630) versus usual care for acute bronchitis in Swiss primary care (Phytobronch): a pragmatic, open-label, randomised controlled trial

A. Bourqui[1,2], O. Corpataux[1], F. Bonofiglio[1], J. Dubois[1], N. Abolhassani[1,3], S. Baggio[4,3], C. Csajka[2,5,6], P.-Y. Rodondi[1], C. Podmore[1]

[1]Institut de médecine de famille, Faculté de médecine, Fribourg, Switzerland, [2]Centre de Recherche et d'Innovation en Sciences Pharmaceutiques cliniques, CHUV, Lausanne, Switzerland, [3]Institute of Primary Health Care (BIHAM), University of Bern, Bern, Switzerland, [4]Institute of Psychology, University of Lausanne, Lausanne, Switzerland, [5]School of Pharmaceutical Sciences, University of Geneva, Genève, Switzerland, [6]Institute of Pharmaceutical Sciences of Western Switzerland, University of Geneva, University of Lausanne, Lausanne, Switzerland

Background: Acute bronchitis is a common primary care condition and a major cause of unnecessary antibiotic prescribing. The effectiveness of *Pelargonium sidoides* extract (EPs®7630) in the management of acute bronchitis remains uncertain due to a lack of pragmatic trials. We aimed to assess whether EPs®7630 reduces symptom duration or antibiotic use compared with usual care in adults with acute bronchitis.

Methods: We conducted a pragmatic, open-label, superiority randomised-controlled trial across 36 primary care practices and five walk-in clinics in Switzerland. Adults (≥18 years) consulting a general practitioner for the first time for a new episode of acute bronchitis, with a cough of up to eight days' duration, were eligible for inclusion. The co-primary outcomes were (1) number of days required to achieve a 50% reduction in symptoms from the peak value, and (2) the proportion of participants who used antibiotics. Both outcomes were analysed in the intention-to-treat population, including all randomized participants. The safety population included all randomly assigned patients who received at least one dose of the assigned treatment.

Results: 332 participants were enrolled and randomly assigned: 155 to EPs®7630 and 177 to usual care. No significant difference in time to 50% reduction of symptoms between the EPs®7630 and usual care groups was observed (adjusted regression coefficient 0.05 [95% CI −0.13–0.23]; p=0.578). Antibiotic use was 7 percentage points lower (31% relative reduction) in the EPs®7630 group (17.4%, 20 of 155) than in the usual care group (25.2%, 33 of 177), adjusted risk ratio 0.78 [95% CI 0.49–1.26]; p=0.309. Adverse events were reported more frequently in the EPs®7630 group (32.3%, 50 of 155) than in the usual care group (21.5%, 38 of 177; hazard ratio 1.40 [95% CI 1.03–1.89]; p=0.030); all adverse drug events were mild.

Conclusion & clinical implications: Although EPs®7630 did not reduce symptom duration or antibiotic use significantly, EPs®7630 may contribute to lowering antibiotic use, by offering a well-tolerated alternative for acute bronchitis in primary care.

FC4

Real-world eligibility of a 3-day antibiotic regimen for community-acquired pneumonia in immunocompetent patients: a 10-year multicenter retrospective study in Switzerland

T. Brahier[1], J. Regina[2], G. Carra[1], M. Méan[2], N. Boillat Blanco[1], The LUCID consortium

[1]Service des maladies infectieuses, CHUV, Département de médecine interne, Lausanne, Switzerland, [2]Service de médecine interne, Département de médecine interne, Lausanne, Switzerland

Background: Current guidelines recommend treating community-acquired pneumonia (CAP) for a minimum of 5 days. However, a randomized clinical trial by *Dinh et al*. showed that in patients clinically stable by day 3, a 3-day antibiotic course is non-inferior to longer durations. We aimed to determine the proportion of patients eligible for shorter treatment to assess the feasibility of a 3-day course in a real-life setting.

Methods: This is a multicenter retrospective cohort study in four Swiss university hospitals. It is nested within the *Low Value Care in Medical Hospitalized Patients* (LUCID) project, a National Data Stream on quality of care in Swiss university hospitals. We included adult patients (>18 years) hospitalized with CAP, defined by an ICD-10 pneumonia code as the primary diagnosis, no other primary infection code, and initiation of antibiotic therapy within 48 hours of admission. Daily clinical stability was defined using criteria used by *Dinh et al*: systolic blood pressure > 90 mmHg, heart rate < 100/min, temperature < 37.8°C, respiratory rate < 24/min and saturation > 90%. For each day, the worst value of each vital sign was retained.

Results: Among 12′681 hospital stays for CAP, we excluded 4′519 patients who did not meet the *Dinh et al*. inclusion criteria: 3′076 were immunosuppressed, 1′406 had aspiration pneumonia, and 223 had abscess. This left 8′162 patients for analysis. The mean age was 70 (15), 3149 (39%) were female and 6′853 (84%) had at least one comorbidity. Median antibiotic duration was 6 days (IQR 5-8) with 5′458 (67%) receiving antibiotics for > 5 days. A total of 3′424 patients reached clinical stability by day 3, corresponding to 42% (95% CI:41-43) of included patients. Table 1 compares characteristics of patients with and without clinical stability by day 3. Overall, 8′389 antibiotic-days could have been saved by applying a 3-day course when appropriate.

Conclusion & clinical implications: Our study shows that 42% of patients hospitalized with CAP may be eligible for a 3-day antibiotic course. This shows the feasibility of a short regimen and highlights the importance of assessing clinical stability on day three to guide antibiotic discontinuation.

Figure.1: Flow-chart of included stays

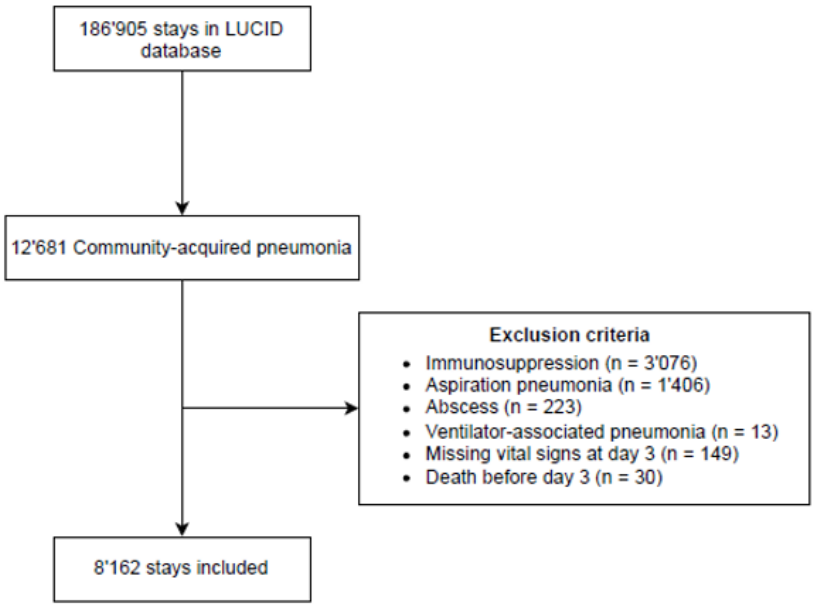


Table.1: Characteristics of patients hospitalized with community acquired pneumonia

	No stable at day 3, n = 4738	Stable at day 3, n = 3424	P-value
Demographics and comorbidities			
Sex male	1877 (39.6)	1279 (37.1)	0.025
Age, mean (SD)	69.68 (15.27)	69.75 (15.12)	0.841
Any comorbidity	4069 (85.9)	2788 (81.4)	<0.001
Charlson index median	5.00 [4.00, 8.00]	5.00 [3.00, 7.00]	<0.001
Heart failure	1309 (27.6)	677 (19.8)	<0.001
Ischemic myocardial infarction	287 (6.1)	202 (5.9)	0.803
Peripheral vascular disease	468 (9.9)	326 (9.5)	0.618
Cerebrovascular disease	235 (5.0)	185 (5.4)	0.399
Dementia	498 (10.5)	331 (9.7)	0.227
Bronchiectasis	81 (1.7)	41 (1.2)	0.074
COPD	1168 (24.7)	635 (18.5)	<0.001
Chronic pulmonary disease	1471 (31.0)	842 (24.6)	<0.001
Renal disease	1088 (23.0)	831 (24.3)	0.178
Liver disease moderate to severe	35 (0.7)	16 (0.5)	0.164
Diabetes mellitus with complication	447 (9.4)	300 (8.8)	0.317
Diabetes mellitus without complication	880 (18.6)	640 (18.7)	0.915
Metastatic malignancies	547 (11.5)	343 (10.0)	0.032
HIV	84 (1.8)	52 (1.5)	0.425
Vitals			
Temperature	38.00 [37.30, 38.70]	38.00 [37.30, 38.70]	0.007
Blood pressure	103.00 [91.00, 116.00]	106.00 [95.00, 119.00]	<0.001
Respiratory rate	30.00 [25.00, 36.00]	27.00 [22.00, 32.00]	<0.001
Heart rate	105.00 [92.00, 120.00]	98.00 [87.00, 110.00]	<0.001
Saturation	89.00 [85.00, 92.00]	91.00 [88.00, 93.00]	<0.001
Laboratory results			
Leucocytes	10.70 [7.58, 14.50]	10.50 [7.85, 14.20]	0.785
Platelets	230.00 [173.00, 300.00]	224.00 [173.00, 295.00]	0.123
Potassium	4.10 [3.70, 4.40]	4.00 [3.70, 4.40]	0.002
Sodium	137.00 [134.00, 139.00]	137.00 [134.00, 139.00]	0.132
Creatinine	89.00 [69.00, 122.00]	88.00 [69.00, 118.00]	0.592
CRP	102.73 [43.00, 188.95]	88.00 [36.88, 169.08]	<0.001

Results are expressed in median [interquartile range] or in numbers (percentage)

FC5

Does a structured medication review reduce mortality and readmission in older patients with heart failure? a substudy of the OPERAM trial

L. Brockhus[1,2], J. Jakob[1,3], W. Knol[4], M.G Van Der Meer[5], P.M Kearney[6], D. O'Mahony[7,8], B. Boland[9,10], C. De Terwangne[10,11], B. Gencer[1,12,13], S. Baggio[14,1], N. Rodondi[1,2], L. Adam[1,15]

[1]Berner Institut für Hausarztmedizin, Clinical Research, Bern, Switzerland, [2]Inselspital Bern, Klinik für Allgemeine Innere Medizin, Bern, Switzerland, [3]Inselspital Bern, Klinik für Pädiatrie, Bern, Switzerland, [4]Medical Center Utrecht, Utrecht University, Department of Geriatric Medicine and Expertise Centre Pharmacotherapy in Old Persons, Utrecht, Netherlands, [5]University Medical Center Utrecht, Department of Cardiology, Division of Heart and Lungs, Utrecht, Netherlands, [6]University College Cork, School of Public Health, Cork, Ireland, [7]University College Cork, Department of Medicine, Cork, Ireland, [8]Cork University Hospital, Department of Geriatric and Stroke Medicine, Cork, Ireland, [9]Université Catholique de Louvain, Institute of Health and Society, Louvain, Belgium, [10]Cliniques Universitaires Saint-Luc, Geriatric Medicine, Brussels, Belgium, [11]Institut de Recherche Expérimentale et Clinique, Pôle de Recherche Cardiovasculaire, Brussels, Belgium, [12]Geneva University Hospital, Cardiology Division, Geneva, Switzerland, [13]Lausanne University Hospital, Department of Cardiology, Lausanne, Switzerland, [14]University of Lausanne, Institute of Psychology, Lausanne, Switzerland, [15]Allgemeine Innere Medizin und Angiologie, Kantonsspital Schaffhausen, Schaffhausen, Switzerland

Background: Adequate medication is the cornerstone of heart failure (HF) management aiming to reduce HF-related symptoms and mortality. HF is common in multimorbid older patients, a growing patient group with often challenging polypharmacy regimens and a high risk for inappropriate medication use and consequent medication-related hospital readmissions and death. OPERAM is a randomized controlled medication optimization trial conducted in four European countries (Belgium, Netherlands, Switzerland, Ireland).

Methods: We analysed the effect of the inhospital STOPP/START-based medication optimization intervention in older patients with HF and at high risk of HF (structural heart disease) within OPERAM. The control group received usual pharmaceutical care. The primary composite outcomes were 1) all-cause death and readmission and 2) HF-related death and readmission, both within 12 months using Cox Proportional Hazard Models (modified with Lambert Method).

Secondary, patient-reported outcomes at 12 months were patients' quality of life (using EQ-5D-VAS), and high functional status (Barthel Index ≥95 points). We adjusted all models for age, sex, education, site, number of comorbidities, cardiovascular risk factors, living situation, and hyperpolypharmacy.

Results: Among 1,049 patients with documented HF (511 patients) or at high risk for HF (538 patients), median age was 80 (Interquartile Range (IQR) 75-85) years, 418 (40%) were women. The multivariate-adjusted HR was 0.92 (95% Confidence Interval (CI) 0.79 to 1.08) for the primary composite outcome of all-cause death and readmission (events intervention group n=314, events control group n=354), and 0.82 (95% CI 0.54 to 1.24) for the HF-related composite outcome (Fig. 1 & 2).

The intervention group's EQ-5D-VAS was 3.0 (95% CI 0.2 to 5.9) points higher, and the relative risk for Barthel Index ≥95 points 1.19 (95% CI 1.05 to 1.35) compared to the control group.

Conclusion & clinical implications: While a structured inhospital STOPP/START-based medication optimization intervention in patients with documented HF or high risk for HF did not significantly reduce all-cause and HF-related death and readmissions within 12 months, patients in the intervention group reported slightly higher life quality and functional status at 12 months. This suggests that STOPP/START-based medication reviews may enhance patient-centered outcomes, with less impact on hard clinical endpoints.

Figure 1. Survival Curves, all-cause.

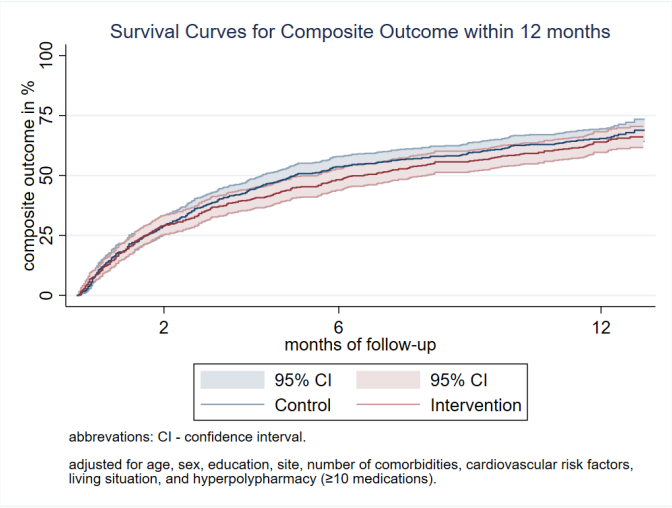
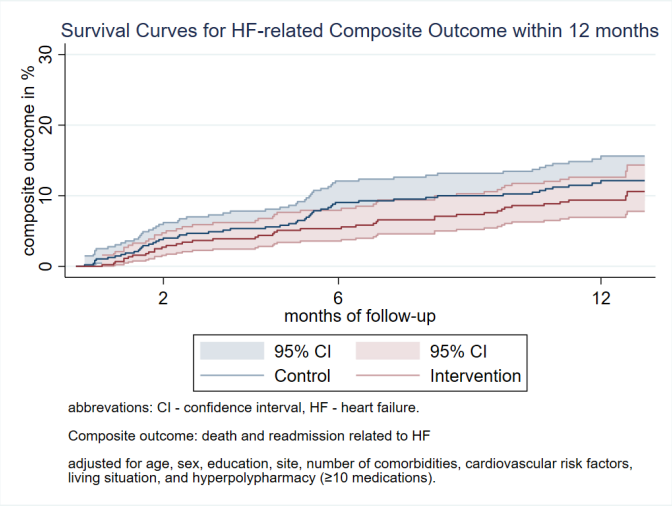


Figure 2: Survival Curves, HF-specific.



FC6

Incidence and preventability of clinical work during night shifts in internal medicine: a prospective observational study

P. Darbellay Farhoumand[1,2], A. Berner[1,2], C. Buclin[1,2], S. Carballo[1,2], O. Grosgurin[1,2], C. Marti[1,2], N. Garin[1,3], J. Serratrice[1,2], D. Courvoisier[4,2,5], T. Agoritsas[1,6,2]

[1]Geneva University Hospitals, Division of General Internal Medicine, Geneva, Switzerland, [2]Université de Genève, Faculté de Médecine, Genève, Switzerland, [3]Riviera Chablais Hospital, Division of Internal Medicine, Rennaz, Switzerland, [4]Geneva University Hospitals, Quality of Care Division, Genève, Switzerland, [5]Geneva University Hospitals, Division of Rheumatology, Geneva, Switzerland, [6]McMaster University, Department of Health Research Methods, Evidence, and Impact, Hamilton, Canada

Background: Night shifts are a core component of internal medicine residency and are characterized by reduced staffing and increased cognitive load. While time-motion studies have provided insights into how physicians allocate their time during on-call work, detailed data on clinical activity and workflow during these hours remain limited. Increasing knowledge of the components of overnight clinical workload is needed to identify modifiable organizational and educational factors.

Methods: We conducted a prospective real-time observational study in the Internal Medicine Division of the University Hospitals of Geneva. Trained observers shadowed residents during 66 evening and night shifts (632 hours) and recorded all clinical

interventions. For each shift, they documented the total number of patients in charge, and the nature, timing, duration, hourly distribution, and need for bedside evaluation for every intervention. Each medical issue was independently assessed for preventability. An intervention was considered preventable if it could have been avoided under current organizational processes and care planning. Analyses were descriptive.

Results: A total of 943 interventions involving 589 patients were recorded, including 174 new admissions. Residents covered a median of 70 patients per shift. The mean number of interventions per shift was 11.5 ± 3.2 during evenings, 12.7 ± 3.0 on weekday nights, and 19.4 ± 5.7 on weekend nights. Workload intensity peaked between 20:00 and 22:00, shortly after nursing ward rounds, reaching 3.5 interventions per hour. During peak periods, residents frequently managed four to six situations simultaneously, occasionally up to ten. Most medical issues were handled without bedside evaluation (445/753, 59.1%), while 272 (36.1%) required in-person assessment. Among medical issues, 271/753 (36.0%) were judged preventable or possibly preventable.

Conclusion & clinical implications: Overnight clinical workload is characterized by high incidence, predictable peaks, and frequent multitasking, with more than one third of medical interventions considered potentially preventable. These findings reflect gaps in daytime planning and communication. Improving anticipatory management, clarifying care plans, strengthening handovers, and fostering better mutual understanding of roles and workflows between nurses and physicians are actionable measures to help mitigate this workload.

FC7

Trends in cost-related forgone care among older adults in Switzerland: a repeated cross-sectional study

M. Jendly[1,2], S. Cullati[1,3,4], C. Wagner[1,3,4], A. Braggion[1,4], V. Santschi[5], A. Chiolero[1,4,6]

[1]Population health laboratory (#PopHealthLab), University of Fribourg, Fribourg, Switzerland, [2]HFR Fribourg, Internal Medicine, Villars-sur-Glâne, Switzerland, [3]University of Genava & Lausanne, Swiss Centre of Expertise in Life Course Research, Geneva & Lausanne, Switzerland, [4]Swiss School of Public Health (SSPH+), Swiss School of Public Health (SSPH+), Zürich, Switzerland, [5]HES-SO University of Applied Sciences and Arts Western Switzerland, La Source, School of Nursing Sciences, Lausanne, Switzerland, [6]University of Bern, Institute of Primary Health Care (BIHAM), Bern, Switzerland

Background: Cost-related forgone care reflects financial barriers to healthcare access and contributes to health inequities, including in ageing populations with increasing health needs. In Switzerland, despite compulsory health insurance, cost-sharing remains high. We examined trends and socioeconomic disparities in cost-related forgone medical and dental care among adults aged ≥65 years between 2017 and 2024 in Switzerland.

Methods: We used data from the 2017, 2021, and 2024 waves of the Commonwealth Fund's "International Health Policy Surveys", a population-based study of randomly sampled adults aged 65 or older (n=2570, 1888, and 1948, respectively). Participants reported whether they had forgone medical prescriptions, consultations, medical tests, treatments or follow-up consultations, and dental visits due to cost. Forgone care was analysed for insurance-covered services, dental care, and all services combined. Weighted prevalence estimates were calculated. Disparities by education and income were assessed using stratified analyses and the index of disparity.

Results: Participants' characteristics were stable across all waves (mean age 75; 54% women). In 2024, 20% reported forgoing at least one service due to cost (13% forgoing dental care, 13% insurance-covered services). Forgone care was similar in 2017 (21%) and lower in 2021 (16%). Women and adults aged 80 years or older reported lower rates of forgone care compared to men and adults aged 65-79 years, respectively. Across all years and services, income-based disparities exceeded those based on education. Dental care consistently showed the largest disparities. The index of disparity showed widening income-related disparities over time, while disparities by education remained stable.

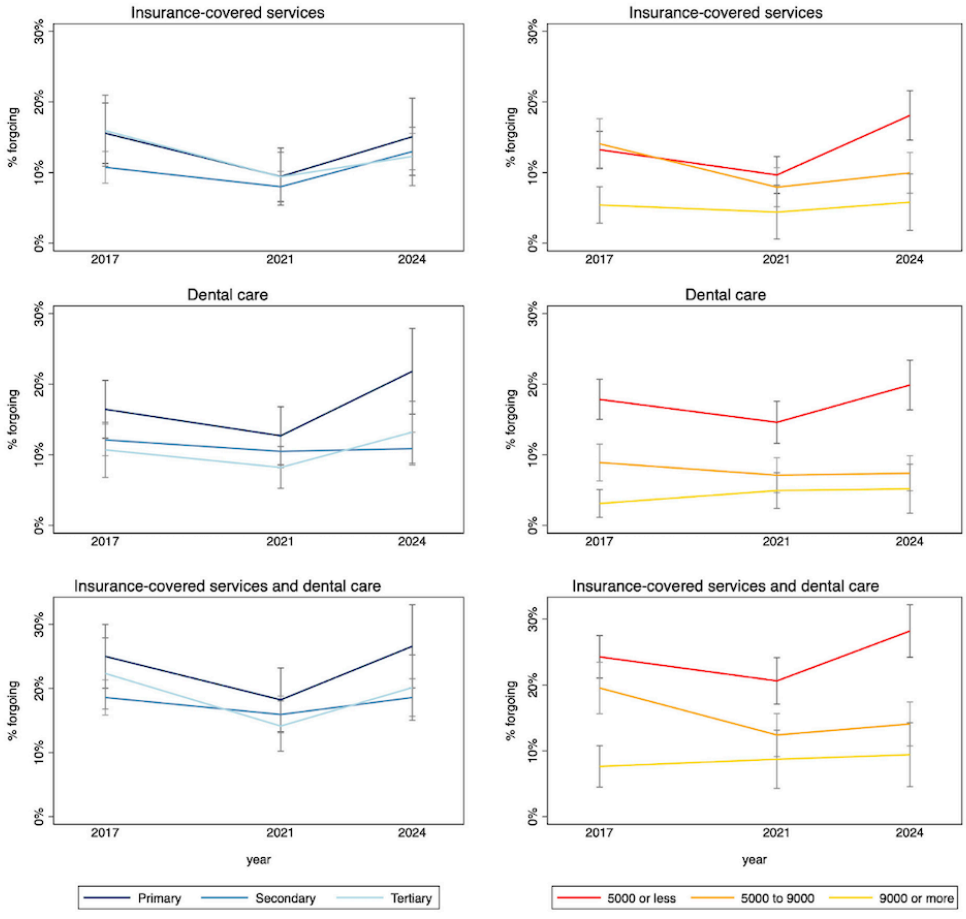
Conclusion & clinical implications: Despite Switzerland's compulsory health insurance, one in five older adults still forgo care for financial reasons. While overall prevalence remained stable, income-related disparities widened between 2017 and 2024, especially for dental care. These findings highlight persistent financial barriers related to healthcare access.

Table 1: Characteristics of the participants (N^{17} = 2570; N^{21} = 1888; N^{24} = 1948). Results are shown as N (weighted percentages).

Characteristics		2017	2021	2024
Gender	Men	1245 (46)	915 (46)	943 (46)
	Women	1325 (54)	973 (54)	1006 (54)
Age (years)	Mean (SD)	74.6 (6.7)	74.8 (6.6)	74.8 (6.8)
	65-79	1990 (76)	1460 (75)	1467 (74)
	80+	580 (24)	428 (25)	481 (26)
Language	French	1491 (25)	792 (25)	526 (25)
	Italian	257 (7)	208 (6)	255 (6)
	German	822 (68)	888 (70)	1167 (68)
Education level	Primary	557 (24)	401 (23)	342 (17)
	Secondary	1419 (64)	1009 (67)	1182 (71)
	Tertiary	594 (12)	478 (10)	424 (13)
Monthly household income	Less than 5'000 CHF	1251 (54)	937 (52)	900 (47)
	5'000 to 8'999 CHF	876 (34)	664 (38)	760 (38)
	9'000 CHF or more	443 (13)	287 (10)	288 (14)
Self-rated health	Excellent or very good	805 (30)	603 (30)	540 (28)
	Good	1224 (49)	924 (52)	919 (46)
	Fair or poor	536 (21)	358 (18)	466 (25)
Morbidities	Arterial hypertension	1257 (49)	932 (52)	918 (48)
	Cardiac	548 (22)	355 (20)	442 (23)
	Diabetes	371 (14)	246 (12)	274 (14)
	Pulmonary	299 (11)	243 (14)	225 (12)
	Psychiatric	351 (12)	227 (10)	214 (12)
	Cancer	377 (14)	292 (16)	294 (16)
	Arthritis	1172 (43)	754 (40)	765 (41)
	Stroke	171 (6)	108 (5)	126 (6)
	Neurological	60 (2)	41 (2)	66 (3)
	Multimorbidity	1369 (51)	939 (52)	989 (53)

Note : CHF= Swiss francs. Education categories reflect the International Standard Classification of Education (ISCED) 2011 version.

Figure 1: Forgone insurance-covered services, dental care, and insurance-covered services and dental care combined due to cost, by education level and by monthly household income (Swiss francs) among Swiss older adults (2017-2024).



FC8

Estimated direct inpatient costs of RSV-associated hospitalizations in Switzerland: age-stratified analysis 2017–2023

M. Boesing[1,2], D. McCarthy-Pontier[3], J. Leuppi[1,2], N. Kräutler[3]

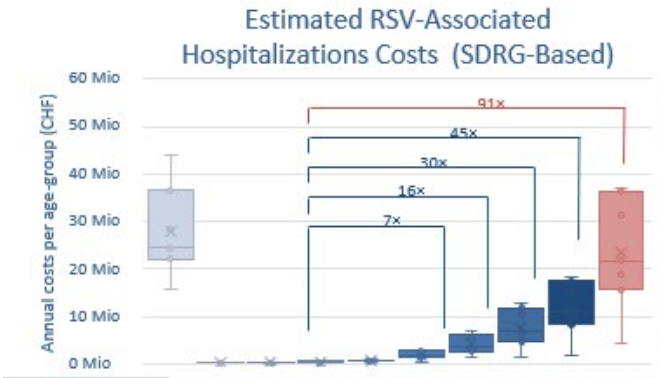
[1]Kantonsspital Baselland, University Institute of Internal Medicine, Liestag, Switzerland, [2]University of Basel, Faculty of Medicine, Basel, Switzerland, [3]Moderna Switzerland, Medical Affairs, Basel, Switzerland

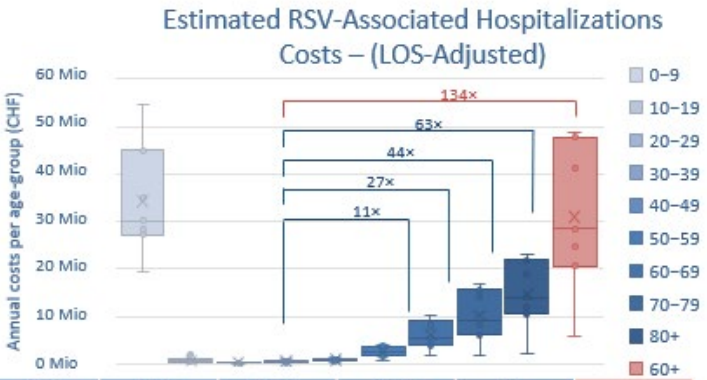
Background: Respiratory syncytial virus (RSV) is a well-recognized cause of hospitalization in young children, but its health-economic burden in adults – particularly older adults – remains underappreciated. While recent Swiss data demonstrated a high burden of severe RSV disease in older adults, age-specific estimates of direct inpatient hospitalization costs are lacking in Switzerland.

Methods: This study represents a follow-up health-economic analysis based on previously published nationwide data on RSV-associated hospitalizations in Switzerland from 2017 to 2023. Using age-stratified RSV-associated hospitalization counts derived from Swiss Federal Statistical Office inpatient data, we estimated direct inpatient costs by applying age-specific all-cause SwissDRG-based costs per hospitalization case (2024). Analyses were performed in 10-year age groups, with an aggregated evaluation of adults aged ≥60 years. To account for increased disease severity and longer hospital stays associated with RSV, costs were additionally adjusted using age-specific ratios of RSV-associated versus all-cause length of stay (LOS).

Results: Across all age groups, RSV-associated inpatient hospitalization costs were estimated at CHF 55.1–70.2 million per year, with the lower bound based on age-specific cost-per-case estimates and the upper bound reflecting longer RSV-associated length of stay. Children aged 0–9 years generated CHF 27.8–34.3 million annually. Despite fewer hospitalizations, adults aged ≥60 years generated comparable costs of CHF 23.7–31.0 million per year, driven by higher costs per case (CHF 17,000–22,800 vs. CHF 8,100–10,000 in children). While length of stay increased with age for both all-cause and RSV-associated hospitalizations, the relative increase for RSV was most pronounced in older adults, further amplifying total costs.

Conclusion & clinical implications: RSV-associated hospitalizations impose a substantial inpatient cost burden across the lifespan in Switzerland. While children account for most hospitalizations, older adults generate a comparable economic burden due to greater disease severity and longer hospital stays. These findings highlight RSV as an underrecognized cause of healthcare utilization in older adults and provide important inputs for clinical decision-making, vaccination strategies, and future health-economic evaluations.





Age group	0–9		10–19		20–29		30–39		40–49		50–59		60–69		70–79		80+		60+	
Hospitalizations (all years)	23,985		182		149		248		348		864		1729		3059		4947		9735	
Costs (CHF Mio)	SDRG	LOS	SDRG	LOS	SDRG	LOS	SDRG	LOS	SDRG	LOS	SDRG	LOS	SDRG	LOS	SDRG	LOS	SDRG	LOS	SDRG	LOS
2017	22.1	27.2	0.4	0.8	0.2	0.2	0.2	0.3	0.8	1.0	1.8	2.4	3.1	4.5	6.1	8.2	9.5	11.9	18.8	24.6
2018	24.5	30.2	0.3	0.6	0.3	0.2	0.3	0.4	0.6	0.7	1.5	2.0	3.7	5.4	6.8	9.1	11.1	14.0	21.7	28.4
2019	28.3	34.9	0.3	0.6	0.3	0.3	0.4	0.6	0.9	1.1	2.7	3.7	5.5	8.0	10.6	14.1	15.2	19.0	31.2	41.1
2020	15.7	19.3	0.2	0.3	0.2	0.2	0.3	0.3	0.6	0.7	1.3	1.7	2.7	4.0	4.6	6.2	8.3	10.5	15.7	20.6
2021	36.6	45.1	0.2	0.4	0.0	0.0	0.3	0.3	0.2	0.3	0.5	0.7	1.3	2.0	1.3	1.8	1.6	2.0	4.3	5.8
2022	44.2	54.5	1.0	2.0	0.5	0.4	0.9	1.1	1.1	1.4	3.0	4.1	6.9	10.1	12.6	16.8	17.4	21.9	37.0	48.8
2023	23.2	28.6	0.5	0.9	0.4	0.3	0.5	0.7	0.7	0.9	2.8	3.8	6.2	9.0	11.7	15.6	18.5	23.2	36.4	47.8
average/year	27.8	34.3	0.4	0.8	0.3	0.2	0.4	0.5	0.7	0.9	1.9	2.6	4.2	6.1	7.7	10.2	11.7	14.6	23.6	31.0

FC9

Prediction of cardiovascular events and potential for disease compression in cardiology out-patients using carotid ultrasound

M. Romanens[1], A. Adams[2], M. Havranek[3], H. Lanter[1], I. Sudano[4]

[1]Vascular Risk Foundation (Varifo), Prevention, Olten, Switzerland, [2]BG prevent GmbH Zentrum, Kardiologie, Koblenz, Germany, [3]University of Lucerne, Competence Center for Health Data Science, Lucerne, Switzerland, [4]University Heart Centre, Cardiology, University Hospital, Zurich, Switzerland

Background: Ultrasound detection of carotid plaque can improve management of cardiovascular risk. The total carotid plaque burden can be quantified as carotid total plaque area (cTPA), which may also be used to estimate the potential for disease compression.

Methods: A total of 1,224 patients (mean age: 57 years; 38% female) underwent repeated carotid ultrasounds (median follow-up 6.5 years). The occurrence of any cardiovascular disease was recorded at follow-up visits or via hospital records/phone calls. FRAMINGHAM LIPID/BMI, SCORE2/-OP and cTPA were used to evaluate disease progression. Disease data were extracted from clinical charts. We applied morbidity-associated multipliers for risk categories derived from the Chicago Heart Association study (Circulation, 2017; 135: 1693–1701).

Results:There were 611 cTPA progressors (baseline: 45 [20–86 IQR] mm²; final visit: 81 [43–140] mm²) and 613 cTPA regressors (baseline: 64 [34–103 IQR] mm²; final visit: 40 [20–75] mm²). 52 events occurred (In those grpoups: myocardial infarction 7 and 1, cerebrovascular event 7 and 4, coronary revascularisation 21 and 5, death 1 and 0, coronary or peripheral artery diseease 5 vs 1, total events 41 vs 11 or 6.7% vs 1.8% (p<0.01). Disease burden increased from 822 to 1,201, with any new disease incidence recorded in 347 patients (28%). The hazard ratio for any cTPA progression was 3.5 (95% CI: 1.8-7.0, p<0.01) for cardiovascular events. The potential for disease reduction with all favourable risk factors was 14% in women and 25% in men (Table 1).

Conclusion & clinical implications: Carotid plaque burden, quantified by cTPA, predicts cardiovascular events and allows estimation of disease progression and potential disease compression in cardiology outpatients, supporting ultrasound-based plaque quantification to refine long-term preventive strategies.

CVD Risk AVG ± SD (%)	Baseline	Systolic BP	Cholesterol	Diabetes	BMI	NICOTINE	ALL
FRAM-Lipids	10.5 ± 7.9	8.8 ± 6.4	9.4 ± 7.4	9.7 ± 6.8	-	9.3 ± 7.2	6.2 ± 4.3
FRAM-Lipids cTPA posttest	20.4 ± 14.5	17.9 ± 13	18.7 ± 14	19.4 ± 13.5	-	18.6 ± 13.7	13.9 ± 10.5
FRAM-BMI	12.3 ± 9.3	10.3 ± 7.7	-	11.4 ± 8	10.8 ± 8.5	11.4 ± 8.4	7.7 ± 5.2
FRAM-BMI cTPA posttest	22.7 ± 15.7	20.1 ± 14.3	-	21.7 ± 14.8	20.7 ± 15	21.6 ± 15.1	16.3 ± 11.9
SCORE2/-OP	5.3 ± 3.5	4.7 ± 3	5.0 ± 3.4	4.9 ± 3	-	4.7 ± 3.4	3.6 ± 2.4
SCORE2/-OP cTPA posttest	12.7 ± 10.6	11.3 ± 9.5	12 ± 10.3	11.8 ± 9.7	-	11.5 ± 10.2	9.1 ± 7.9

FC10

Trends, clinical consequences and management of hospital malnutrition in Switzerland: a nationwide analysis of 12 million hospitalizations (2012–2022)

A. Tanweer[1,2], P. Marques-Vidal[1]

[1]Lausanne University Hospital (CHUV) and University of Lausanne, Department of Medicine, Internal Medicine, Lausanne, Switzerland, [2]University of Management and Technology, Department of Nutrition and Dietetics, School of Health Sciences, Lahore, Pakistan

Background: Hospital malnutrition is a major but under-recognized contributor to morbidity, mortality, and healthcare costs. In Switzerland, national data examining recent epidemiological trends and management practices are scarce. We aimed to analyse nationwide temporal trends, determinants, consequences, and management of hospital malnutrition in Switzerland from 2012 to 2022.

Methods: We conducted a retrospective analysis of the Swiss Hospital Discharge Database including 12,195,344 adult hospitalizations. Malnutrition was identified using ICD-10 codes (E40-E46). Multivariable logistic regression examined demographic and clinical determinants, adverse outcomes, and the dietetic management.

Results: The prevalence of documented malnutrition rose sixfold from 1.4% (2012) to 8.1% (2022). Independent predictors included age >90 years (OR 9.62 (9.37–9.88), female sex (OR 1.26 (1.25-1.27)), high comorbidity burden (Charlson's comorbidity index>8, OR 6.73(6.68-6.79)), and emergency admission (OR 1.47(1.46-1.48)). Malnutrition was associated with higher ICU admission, in-hospital mortality, and length of stay. Among malnourished cases, 61.9% had a documented dietetic consultation, while enteral and parenteral nutrition were used in 8.3% and 6.6%, respectively. Propensity-matched analysis suggested that dietetic consultation attenuated the association between malnutrition and in-hospital mortality, but not ICU admission or length of stay.

Conclusion & clinical implications: Hospital malnutrition in Switzerland is increasingly recognized yet underdiagnosed. It is strongly associated with adverse clinical outcomes, but the nutrition management remains underutilized. Strengthening malnutrition screening and integrating dietitians into routine inpatient care may improve clinical outcomes and potentially reduce the resource use.

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FC11

Pharmacokinetic variability of tacrolimus in renal transplant patients: role of digestive microbiota, metabolome, CYP3As, P-gp and other intrinsic factors

Y. Bennani[1], F. Haidar[2], G. Magliocco[3], O. Golaz[4], P. Lescuyer[4], N. Gaia[5], V. Lazarevic[5], V. Olivier[2], K. Hadaya[2], S. De Seigneux[2], C. Samer[1], J. Schrenzel[5], A. Thomas[3], Y. Daali[1]

[1]Hôpital Universitaire de Genève, Service de Pharmacologie et Toxicologie Cliniques, Genève, Switzerland, [2]Hôpital Universitaire de Genève, Service de Néphrologie et Transplantation, Genève, Switzerland, [3]Centre Universitaire Romand de Médecine Légale, Unité de Toxicologie et Chimie Forensiques, Lausanne, Switzerland, [4]Hôpital Universitaire de Genève, Service de Médecine de Laboratoire, Genève, Switzerland, [5]Hôpital Universitaire de Genève, Laboratoire de Recherche Génomique, Genève, Switzerland

Background: Tacrolimus, a calcineurin inhibitor used to prevent graft rejection in renal transplantation, shows high interindividual pharmacokinetic variability that may lead to toxicity or rejection. About 40% of this variability is explained by CYP3A5 polymorphisms[1,2]. Other contributors include albumin, hematocrit, age, sex, weight and P-gp expression[3-5]. Gut microbiota and endogenous metabolites may further improve dose prediction[6,7].

Methods: An observational study was carried out in 30 renal transplant patients taking tacrolimus. Eligible patients were contacted by their physicians, and two sessions were held at 3-month intervals. At each visit, stool, urine and blood samples were collected for microbiological (stool), metabolomic (blood and urine) and genetic (blood) analyses. In addition, the Geneva phenotyping cocktail was administered to patients to measure CYP3A and P-gp phenotype by capillary blood sampling at 2h, 3h and 6h after cocktail ingestion.

Results: A significant positive correlation was observed between tacrolimus dose and CYP3A activity (r = 0.47, p = 0.0066). Female patients required significantly higher doses than males in both sessions. No association was found between tacrolimus dose and P-gp phenotypes or genotypes. Following previous studies[6], no correlation was observed between *Faecalibacterium prausnitzii* abundance and tacrolimus dose. In contrast, four bacterial species (*Gemella morbillorum, Lactococcus lactis, Abiotrophia defectiva,* and *Mogibacterium diversum*) were significantly associated with tacrolimus exposure. Several endogenous metabolites correlated with pharmacokinetic parameters, including tyrosine, hippuric acid, testosterone and the dipeptide L-valine–L-proline.

Conclusion & clinical implications: CYP3A phenotype accounted for 47% of the variability in tacrolimus exposure. The identified endogenous metabolites and bacterial species will be further investigated to better characterize the remaining sources of variability.

FC12

Physiologically based pharmacokinetic modeling of cytochrome P450 3A genetic polymorphisms effects on drug-drug interaction vulnerability

C. Chehade[1], Y. Daali[1], C. Samer[1]

[1]Service de pharmacologie et toxicologie cliniques, Hôpitaux Universitaires de Genève (HUG), Département d'anesthésiologie, pharmacologie, soins intensifs et urgences, Genève, Switzerland

Background: Cytochrome P450 3A (CYP3A) enzymes metabolize over 50% of marketed drugs. Interindividual variability in CYP3A activity leads to major differences in drug exposure and in the magnitude of CYP3A-mediated drug-drug interactions (DDIs). Substrate and inhibitor selectivity for CYP3A4 versus CYP3A5 may influence DDI severity across genotypes. Physiologically based pharmacokinetic (PBPK) modeling offers a mechanistic framework to quantify the genotype-dependent DDI risk.

Methods: PBPK simulations (Simcyp® v24) were conducted in virtual healthy adults stratified into four CYP3A genotype groups: CYP3A4 normal function (*1/*1) vs reduced function (*1/*22); and CYP3A5 expressers (≥1 *1 allele) vs non-expressers (*3/*3). Two substrates were investigated: midazolam (relevant CYP3A5 contribution), and nifedipine (mainly CYP3A4). DDIs were simulated using itraconazole (preferential CYP3A4 inhibitor), and ritonavir (potent inhibitor of both isoforms). For each genotype and scenario, Cmax and AUC were quantified to estimate exposure increases under inhibition and identify higher-risk genotypes.

Results: PBPK simulations revealed genotype-dependent susceptibility to CYP3A DDIs. Under itraconazole, CYP3A5 non-expressers exhibited larger exposure increases than expressers for both midazolam (~6 vs ~2-fold) and nifedipine (~8 vs ~4-fold). With ritonavir, midazolam AUC increased more in expressers (~42-fold), reflecting a higher baseline CYP3A5 contribution; however, absolute post-inhibition exposure remained higher in non-expressers due to lower baseline clearance. For nifedipine, genotype-related differences were largely attenuated when both isoforms were strongly inhibited by ritonavir. These substrate- and inhibitor-specific patterns support CYP3A5 genotype as a key determinant of DDI vulnerability.

Conclusion & clinical implications: PBPK simulations suggest CYP3A5 non-expressers are at highest clinical risk under strong CYP3A4 inhibition, with greater post-DDI exposure, while CYP3A5 expression may provide partial protection for selected substrates. These findings support CYP3A5 genotype as a clinically relevant driver of CYP3A-mediated DDI magnitude and highlight the value of PBPK modeling as a quantitative tool to translate genotype information into expected exposure changes, supporting individualized DDI risk assessment.

FC13

First-dose exposure and bioavailability of ocular dexamethasone in preterm infants - a pharmacokinetic pilot study

S. Dumasdelage[1], H.M. Öhnell[2], U. Sjöbom[3], L. Gränse[2], J. Van Den Anker[4], A. Hellström[3], V. Gotta[1]

[1]University Children's Hospital, Paediatric Pharmacology and Pharmacometrics, Basel, Switzerland, [2]Skaḥe University Hospital, Lund University, Ophtalmology, Department of Clinical Sciences, Lund, Sweden, [3]The Sahlgrenska Centre for Pediatric Ophthalmology Research, Institute of Neuroscience and Physiology, Sahlgrenska Academy, University of Gothenburg,Sahlgrenska University Hospital,Region Västra Götaland, Gothenburg, Sweden, Department of Clinical Neuroscience and Physiology, Department of Ophtalmology, Gothenburg, Sweden, [4]Children's National Hospital, Department of Pediatrics, Washington DC, United States

Background: Ocular dexamethasone is licensed in Switzerland as an anti-inflammatory agent for adults and children >2 years old. Recently, its potential to prevent the progression of severe retinopathy of prematurity (ROP) requiring conventional treatment has been suggested. However, unknown systemic bioavailability and exposure are a safety concern in preterm infants. We aimed to characterize systemic exposure and bioavailability of ocular dexamethasone in preterm infants following the first dose.

Methods: An open-label, two-center pharmacokinetic (PK) study was conducted as a pilot study of a randomized controlled trial. Preterm infants with type 2 ROP initiating ocular dexamethasone (1 drop of Dexafree® 0.1% = 0.036 mg/eye/day) were enrolled. Patients were randomized to one of three PK sampling schedules on day 1 (3-4 serum and saliva samples, 0.25 -18h post-dose). Serum and saliva C_{max}, t_{max} were summarized as median [range]. Bioavailability and absorption rate were estimated using a pharmacometric model-based approach incorporating prior intravenous PK parameters (CL=0.140 L/h/kg; V=1.85 L/kg) from preterm neonates.

Results: A total of 27 serum and 24 saliva PK samples from 10 infants (weight range: 1382-2200 g, daily dose: 1-2 drops/eye) were collected on day 1 of ocular dexamethasone administration between 2022 and 2024. Five serum and one saliva sample were below the limit of quantification. Median [range] C_{max} / t_{max} was 1.3 [0.9-4.8] nmol/L / 2.3 [0.3-5.4] h in serum, and 37.1 [6.0–124] nmol/L / 5.2 [2.2–12.6] h in saliva, respectively. Bioavailability was estimated at 5.5% (95% CI: 3.9–7.6%), with a first-order absorption rate of 5.4 h^{-1} (95% CI: 3.9–7.5), corresponding to an absorption half-life of approximately 8 minutes.

Conclusion & clinical implications: This is the first PK study of ocular dexamethasone in preterm infants. An estimated low bioavailability (<10%) appears reassuring for the safety of dexamethasone in preterm infants for the prevention of ROP when administered 1 drop per eye per day. Nevertheless, the potential pharmacodynamic effects of low systemic but higher salivary dexamethasone exposure on endogenous cortisol and cortisone concentrations warrant further investigation.

FC14

Equilibrium angiotensin peptide and aldosterone concentrations in response to four classes of blood-pressure-lowering drugs in patients with arterial hypertension: a randomized trial

V. Van Der Velpen[1,2], F. Küng[1], A. Villiger[3], M. Poglitsch[4], R. Finch[5], U. Duthaler[3,6,7], A.S. Vischer[8,9], T. Burkard[8,9], E. Liakoni[1], S. Krähenbühl[3], M. Haschke[1,2]

[1]Inselspital, Department of General Internal Medicine, Clinical Pharmacology and Toxicology, Bern, Switzerland, [2]University of Bern, Institute of Pharmacology, Bern, Switzerland, [3]University Hospital Basel, Division of Clinical Pharmacology and Toxicology, Basel, Switzerland, [4]aTENSION.life GmbH, ., Vienna, Austria, [5]University of Kentucky, Department of Pediatrics, Kentucky, United States, [6]Health Department Basel-Stadt, Institute of Forensic Medicine, Basel, Switzerland, [7]University of Basel, Institute of Forensic Medicine, Basel, Switzerland, [8]University Hospital Basel, Medical Outpatient Department and Hypertension Clinic, Basel, Switzerland, [9]University of Basel, Faculty of Medicine, Basel, Switzerland

Background: The renin angiotensin aldosterone system (RAS) regulates blood pressure and fluid balance by a cascade of angiotensin (Ang) peptides. Understanding how antihypertensive drug classes modulate this cascade is important for clarifying mechanisms and optimizing therapy. This study examined how four mechanistically distinct antihypertensive drugs affect plasma concentrations of 10 Ang peptides and aldosterone in untreated hypertensive patients.

Methods: In this randomized, open-label, parallel-group study, 88 patients received 4 weeks of monotherapy with either an angiotensin-converting enzyme inhibitor (ACEi), an angiotensin receptor blocker (ARB), a calcium channel blocker (CCB), or hydrochlorothiazide (HCT). Equilibrium concentrations of 10 Ang peptides and aldosterone were quantified by LC–MS/MS at baseline and after 4 weeks, both pre- and 4 hours post-dose. In addition, drug exposure was confirmed by measured drug concentrations.

Results: Seventy-two participants completed the 4-week treatment (ACEi n=18, ARB n=17, CCB n=20, HCT n=17). The most prominent effects were seen for Ang I, Ang II, and aldosterone after ACEi and ARB treatment and were reflected in biomarkers for plasma renin activity (PRA-Q; Ang I+Ang II), ACE activity (ACE-Q; Ang II/Ang I), and the aldosterone/Ang II ratio (AA2-R). In the CCB and HCT groups, the downstream peptides showed minimal or no changes. Relative to baseline, ACEi increased Ang I and reduced ACE-Q. ARB increased Ang I and Ang II and decreased AA2-R without altering ACE-Q. ACEi intake was detected by ACE-Q < 1.05 pM/pM and ARB intake could be detected by Ang II concentrations > 175 pmol/L or AA2-R values < 0.85 pM/pM.

Conclusion & clinical implications: Four weeks of monotherapy with RAS-targeted therapy produces distinct peptide-level changes that are reflected by Ang-derived biomarkers. The mechanistically interpretable ratios (ACE-Q and AA2-R) discriminate drug class with high diagnostic performance supporting their potential utility for drug-independent adherence monitoring in personalized hypertension management.

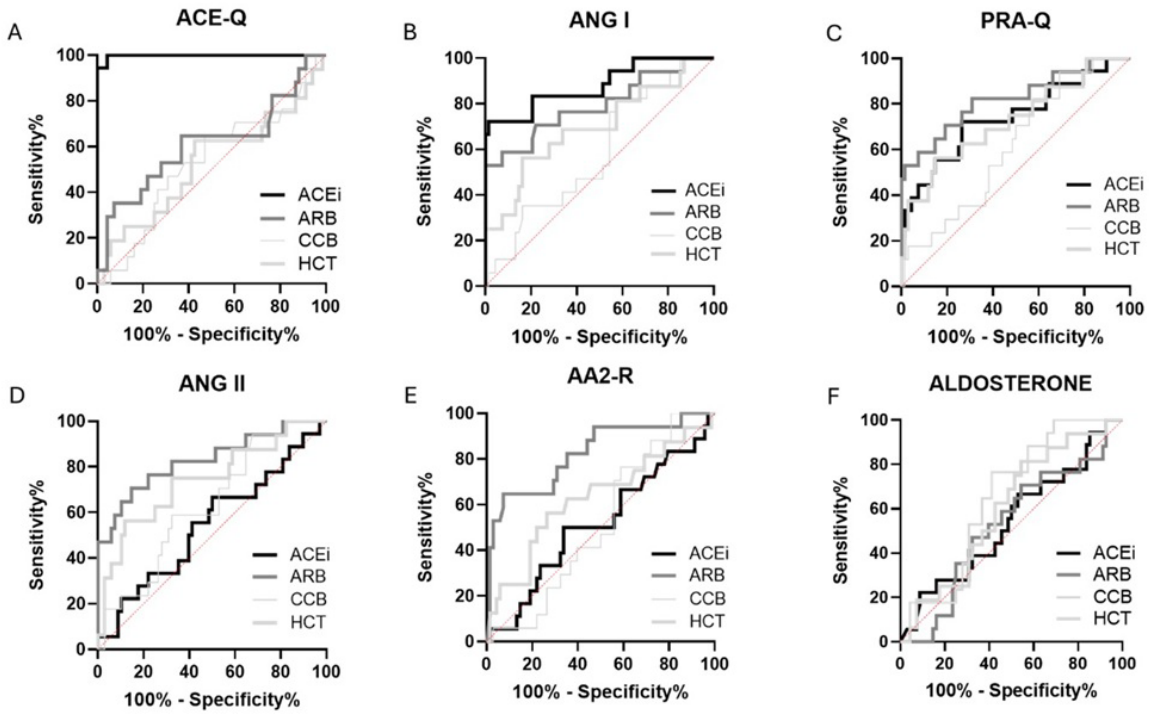


Figure 1. ROC curves reflecting the response to each of four antihypertensive drug treatments by each RAS biomarker.

FC15

Prediction of tacrolimus pharmacokinetics in kidney transplant patients using virtual twin approach integrating individual CYP3A4/3A5 activity

J. Müller[1], J. Terrier[1], Y. Bennani[1], F. Haidar[2], Y. Daali[1], C. Samer[1]

[1]*Service de pharmacologie et toxicologie cliniques, Hôpitaux universitaires de Genève, Département d'anesthésiologie, pharmacologie, soins intensifs et urgences, Genève, Switzerland,* [2]*Service de néphrologie et hypertension, Hôpitaux universitaires de Genève, Département de médecine, Genève, Switzerland*

Background: Physiologically based pharmacokinetic (PBPK) is a promising precision medicine approach for drugs with a narrow therapeutic index, such as tacrolimus. By integrating individual clinical information, virtual twin (VT) simulation of the patient can predict drug exposure before the first administration, a process called model-informed precision dosing (MIPD). This approach could prevent potential therapeutic failure, overdose, or drug-drug interactions.

Methods: Simcyp® (Version 24) tacrolimus PBPK model developed by Van der Weken *et al.* was validated in the healthy and kidney-transplanted populations. The model was then used to perform VT simulations for kidney-transplanted patients from an ongoing study in our division (Tacrobiote, n=15). VTs were generated for every selected individual following a stepwise data integration workflow including demographic data (Step 1), blood parameters (hematocrit and albumin, Step 2), CYP3A5 genotype (Step 3), and CYP3A phenotype based on two distinct 3A4/A5 correlation models (Step 4.1 and 4.2). Simulation performance for tacrolimus trough concentration (C_0) was evaluated using standard PBPK evaluation metrics.

Results: Tacrolimus model was validated in the healthy and kidney-transplanted population, with most mean fold errors (MFE) ranging from 0.8 to 1.25. The stepwise data integration workflow was successfully applied to the VT simulations. Up to Step 3, supplementary data added to the model increased prediction performance. Step 4.2 showed similar performance to Step 3, with lower bias. When considering CYP3A5 genotype subgroups, Step 4.2 was the only one to achieve acceptable MFE in both poor metabolizers (PM) and normal metabolizers (NM).

Conclusion & clinical implications: This study demonstrates the benefits of the stepwise data integration approach for VT simulations of tacrolimus C_0. CYP3A5 genotype integration markedly improved model performance, while integration of CYP3A4/3A5 phenotype further reduced bias and enabled more robust predictions in the NM subgroup. This study supports the evaluation of phenotype-driven VT simulations versus genotype-only approaches for tacrolimus in larger cohorts and a potential future use of tacrolimus PBPK-based MIPD.

FC16

Single centre, open label, randomized crossover trial on drug-drug interaction of levothyroxine and zinc-D-gluconate in healthy subjects – the ThyroZinc trial

E. Wiggli[1,2], S. Von Felten[3], J. Ledoux[3], C. Huppermans[1,2], J. Pereira Soares[1], L. Risch[4], M. Attinger[1,2], J. Bonzon[1,2]

[1]University Hospital Zurich, Department of Clinical Pharmacology and Toxicology, Zurich, Switzerland, [2]University of Zurich, Faculty of Medicine, Zurich, Switzerland, [3]University of Zurich, Department of Biostatistics at Epidemiology, Biostatistics and Prevention Institute, Zurich, Switzerland, [4]Dr. Risch Gruppe, Laboranalytik, Vaduz, Liechtenstein

Background: Thyroid hormones are often administered alongside preparations containing divalent cations, which can significantly affect their absorption. In particular, calcium and magnesium have been shown to reduce the bioavailability of thyroid hormones when taken together, potentially decreasing their therapeutic efficacy. Zinc, a common component of multivitamin supplements, is also frequently used. Furthermore, zinc deficiency is common among hypothyroid patients.

Methods: 15 healthy, euthyroid subjects (mean age: 25.8± 4.04 years; 7 males, 8 females) participated in this randomized, crossover trial assessing pharmacokinetic parameters after oral administration of 1mg levothyroxine, either alone or combined with 10mg or 50mg zinc. All participants received all three treatments in a randomized sequence, with a 4-week washout period between treatment visits. The study followed a 6-hour protocol, during which thyroxine (T_4) levels were measured at the time points 0, 30, 60, 120, 240 and 360 minutes after treatment administration. The primary endpoint was the T_4 area under curve (AUC), , secondary endpoints were the peak T_4 concentration (C_{max}) and the time to reach peak T_4 concentration (T_{max}).

Results: Co-administration of 10 mg zinc with levothyroxine resulted in a 15% reduction in the AUC compared to levothyroxine alone (95% CI: 8 – 22%, p = 0.0003). A stronger reduction of 26% in AUC was observed with 50 mg zinc (95% CI: 20 – 32%, p <0.0001). For C_{max}, co-administration of 10 mg zinc led to a 17% reduction (95% CI: 9 – 24%, p = 0.0003), while 50 mg zinc resulted in a 28% reduction (95% CI: 21 – 34%, p <0.0001). T_{max} showed a slight, non-significant increase with 10 mg zinc (2%, 95% CI: -8 – 13%, p = 0.70) and a moderate, increase of 11% with 50 mg zinc (95% CI: 1 – 23%, p = 0.039).

Conclusion & clinical implications: The observed pharmacokinetic interaction between levothyroxine and zinc is dose-dependent and statistically significant. Given the common use of zinc in multivitamins and supplements, healthcare providers should be aware of its potential to reduce levothyroxine bioavailability. To optimize treatment, it is recommended that patients separate the intake of levothyroxine and zinc to minimize interference with thyroid hormone absorption.

Fig. 1: AUC values for each treatment across all participants and mean AUC (cross bar)

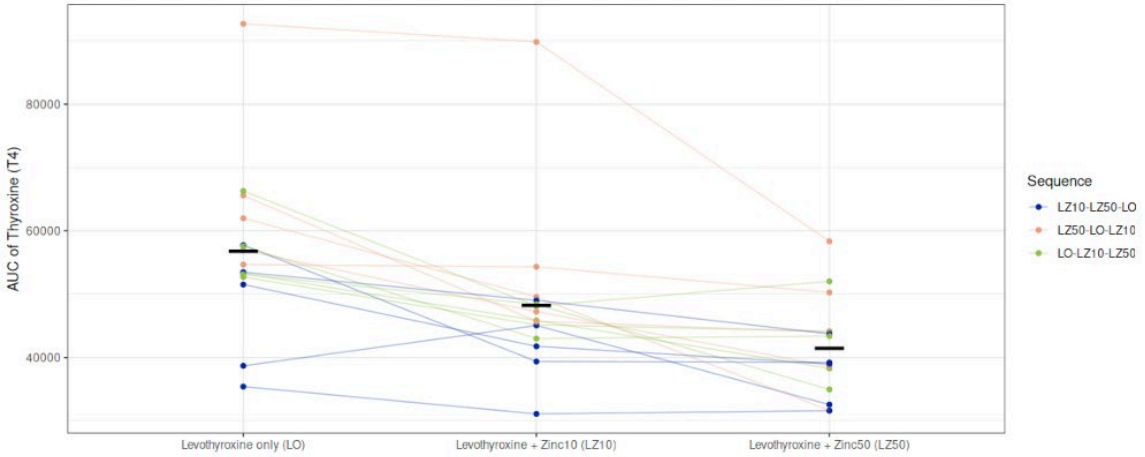
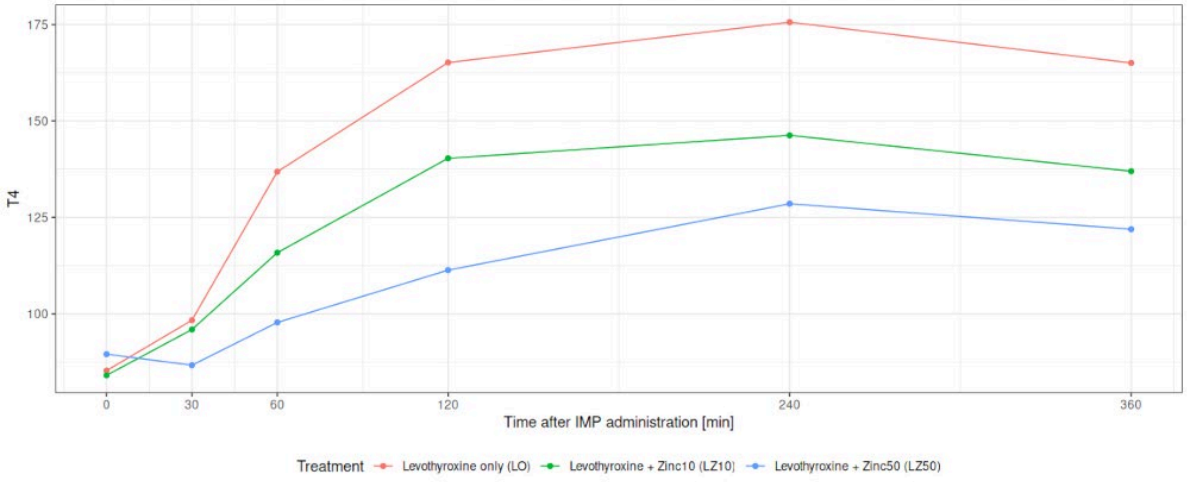


Fig. 2: Mean T_4 by treatment over 6 hours



POSTERS – SWISS SOCIETY OF GENERAL INTERNAL MEDICINE (SSGIM)

BP1

Vaccination coverage in older adults in Switzerland: a cross-sectional study in the Sentinella network

P. Aebi[1,2], Y. Mueller[3], C. Staehelin[4], L. Zwicker[1], R. Auer[1,3], A. Rohrbasser[1,5]

[1]University of Bern, Berner Institut für Hausarztmedizin (BIHAM), Bern, Switzerland, [2]Spital Thun, Medizinische Klinik, Thun, Switzerland, [3]University of Lausanne, Department of Family Medicine, Unisanté, Centre for Primary Care and Public Health, Lausanne, Switzerland, [4]University of Bern, Department of Infectious Diseases, Inselspital, Bern University Hospital, Bern, Switzerland, [5]Medbase Healthcare Center, Medbase Wil, Wil, Switzerland

Background: The Swiss Federal Office of Public Health recommends herpes zoster (HZV) and pneumococcal (PCV) vaccination for adults ≥65 years. Without dedicated programs, implementation in Switzerland depends on primary care physicians (PCP), but the vaccine coverage of patients typically seen in primary care is unknown. We aimed to assess age-specific vaccination coverage among this population.

Methods: We asked PCP collecting data within the established Sentinella Practice-based Research Network in late spring 2025 to record demographic characteristics and vaccination status for HZV and PCV among all consecutive patients aged ≥65 years. PCP also collected data on influenza and SARS-CoV-2 vaccination in the autumn of 2024. We used descriptive statistics, stratified by language region (German vs. French) and gender. All analyses were conducted using R.

Results: Of 145 invited PCPs, 85 (59%) collected vaccination data on 2,513 patients aged ≥65 years. 23% were French speaking. Overall, 8.2% of patients (95%CI 7.1–9.3) were vaccinated with all four age-specific recommended vaccinations (HZV, PCV, influenza, and SARS-CoV-2). Women and patients of French-speaking PCPs were less likely to be fully vaccinated (Figure 1). Vaccine-specific coverage was 36% (95%CI: 34.1–37.9) for HZV, 27.7% (95%CI 26.0–29.5) for PCV, 53.1% (95%CI 51.2–55.1) against influenza, and 25.3% (95%CI 23.7–27.1) against SARS-CoV-2 (Figure 2). Coverage for both HZV and PCV varied across language regions, with higher coverage observed in the German-speaking region.

Conclusion & clinical implications: Vaccination coverage among adults ≥65 years seen in primary care in Switzerland is low, especially for pneumococcal and SARS-CoV-2 vaccines. Uptake varies by language region and gender. Targeted interventions are urgently needed to improve vaccine uptake in this population.

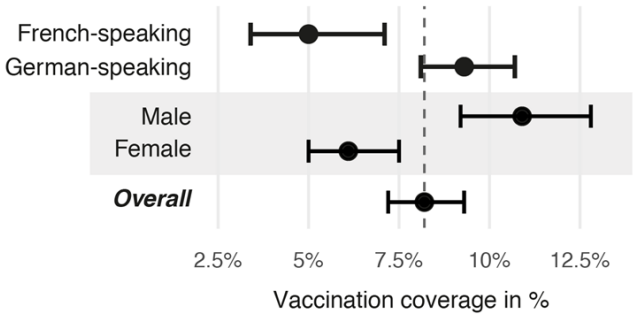


Figure 1 Horizontal bars represent 95% CIs.

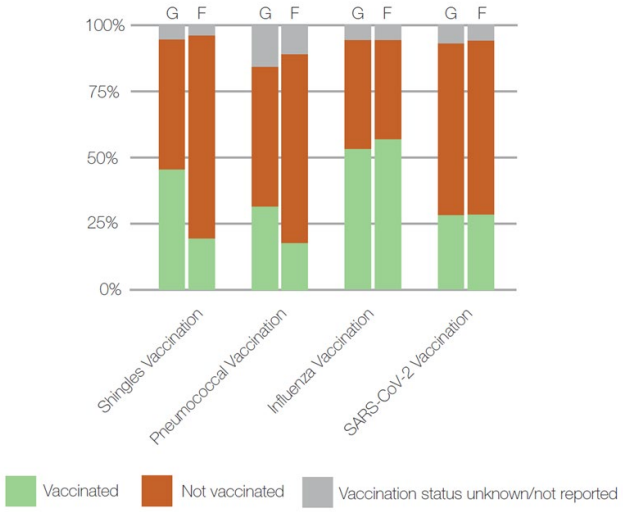


Figure 2

BP2

Vaccination recommendations in older adults by Swiss primary care physicians: a survey in the Sentinella network

P.S. Aebi[1,2], Y. Mueller[3], C. Staehelin[4], L. Zwicker[1], R. Auer[1,3], A. Rohrbasser[1,5]

[1]University of Bern, Berner Institut für Hausarztmedizin (BIHAM), Bern, Switzerland, [2]Spital Thun, Medizinische Klinik, Thun, Switzerland, [3]University of Lausanne, Department of Family Medicine, Unisanté, Centre for Primary Care and Public Health, Lausanne, Switzerland, [4]University of Bern, Department of Infectious Diseases, Inselspital, Bern University Hospital, Bern, Switzerland, [5]Medbase Healthcare Center, Medbase Wil, Wil, Switzerland

Background: The Swiss Federal Office of Public Health (FOPH) recommends vaccination against herpes zoster (HZV) since 2022 and pneumococci (PCV) since 2024 for adults aged ≥65 years. Since there are no official vaccination programs, most people get vaccinated through their primary care physicians (PCPs). PCPs are considered the most reliable sources for vaccination advice. This study looks at how PCPs in Switzerland understand, view, and apply these vaccination guidelines.

Methods: The survey was developed in a participatory process with PCPs within the established Sentinella Practice-based Research network, coordinated by the FOPH. The FOPH sent the survey to PCP in late spring 2025. It included questions about their opinion on vaccine recommendations and who is responsible for them, the methods they used to discuss vaccinations and their knowledge of the efficacy of the vaccines. We summarized the results using descriptive statistics. All analyses were performed in R.

Results: Of 145 invited PCPs, 89 (61%) responded (66 German-speaking/23 French-speaking). Overall, 91.0% recommended HZV (95%CI 85.1–96.9) and 86.5% recommended PCV for adults aged ≥65 years (95%CI 79.4–93.6). Most PCPs felt they were responsible for both telling patients about vaccinations and giving the vaccinations (97.8%, 95% CI; 94.8–100). Only 22.5% thought pharmacies should also be responsible for vaccinating patients (95% CI 13.8–31.2) (Figure 1). Half of the PCPs reported no specific strategy to systematically identify not vaccinated patients (50.6%, 95%CI 40.2–61.0) (Figure 2). PCPs usually provided advice on vaccination alone (93.3%, 95%CI 88.1–98.5), with only a few involving further practice staff.

Figure 1

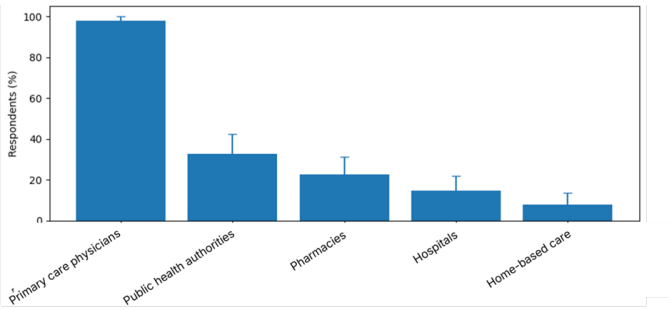
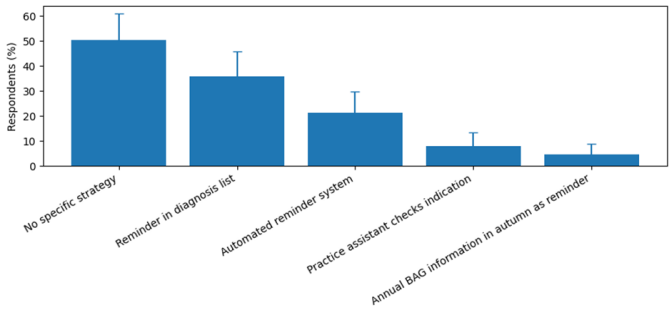


Figure 2



Conclusion & clinical implications: In this study, nearly all PCP in Switzerland report recommending and feeling responsible for HZV and PCV vaccination. Most don't report strategies for systematically identifying not vaccinated patients and don't involve further personnel in their practices. Since PCPs are convinced by these vaccinations, future studies should test interventions to have PCP systematically identify not vaccinated patients and explore whether engaging team members and pharmacies could improve vaccination rates.

BP3

Procalcitonin and lung UltraSonography-guided antibiotherapy in patients with lower respiratory tract infection in Swiss emergency departments: a pragmatic stepped-wedge cluster-randomized trial: the PLUS-IS-LESS study

C. Bessat[1], E. Garcia[2], R. Bingisser[3], M. Schwendinger[4], T. Bulaty[4], Y. Fournier[5], V. Della Santa[6], M. Pfeil[7], D. Schwab[7], J. Leuppi[8], N. Geigy[8], S. Steuer[9], F. Roos[9], M. Christ[10], A. Sirova[10], A. Atzle[11], F. Napieralski[11], O. Manuel[1], I. Locatelli[12], W. Albrich[13], O. Hugli[2], N. Boillat-Blanco[1]

[1]CHUV, Maladies infectieuses, Lausanne, Switzerland, [2]CHUV, Urgences, Lausanne, Switzerland, [3]USB, Urgences, Basel, Switzerland, [4]KSB, Urgences, Baden, Switzerland, [5]HIB, Urgences, Payerne, Switzerland, [6]RHNe, Urgences, Neuchâtel, Switzerland, [7]HRC, Urgences, Rennaz, Switzerland, [8]KSBL, Urgences, Liestal, Switzerland, [9]St Clarasspital, Urgences, Basel, Switzerland, [10]LUKS, Urgences, Lucerne, Switzerland, [11]KSSG, Urgences, St Gallen, Switzerland, [12]Unisanté, Epidemiologie, Lausanne, Switzerland, [13]KSSG, Maladies infectieuses, St Gallen, Switzerland

Background: Community-acquired lower respiratory tract infections (LRTIs) are a leading cause of emergency department (ED) attendance. Diagnostic uncertainty contributes to antibiotic overuse. We assessed whether a multimodal diagnostic algorithm could safely reduce antibiotic prescribing.

Methods: We conducted a pragmatic, open-label, stepped-wedge cluster-randomized trial in nine Swiss EDs. Consecutive adults presenting with LRTI were enrolled. The intervention (PLUS algorithm) integrated a clinical prediction score, lung ultrasound, and procalcitonin to guide antibiotic prescription, and was compared with usual care. Co-primary endpoints were antibiotic prescription by day 28 (efficacy) and clinical failure (safety; non-inferiority margin OR 1.7), defined as death, subsequent admission to an intensive care unit or hospital, or infectious complications within 28 days. Analyses followed the intention-to-treat principle and used mixed-effect logistic models with a random effect for cluster and a fixed effect for period.

Results: Between December 5, 2022, and February 16, 2025, 1556 patients were included, 867 (55.7%) in the control and 689 (44.3%) in the intervention group. Antibiotic prescription by day 28 was lower with the intervention (OR 0.55, 95%CI 0.38 to 0.79), with model-predicted probabilities of 0.62 vs 0.74 in the control group (absolute difference -0.13, 95%CI -0.21 to -0.05). Clinical failure was higher in the intervention group (OR 1.35, one-sided 95%CI 0 to 1.98), and did not meet the non-inferiority criterion. Model-predicted probabilities of clinical failure were 0.105 with the intervention and 0.080 with usual care (absolute difference 0.025, two-sided 95%CI: -0.013 to 0.073).

Conclusion & clinical implications: In adults presenting to EDs with LRTI, the PLUS algorithm reduced antibiotic prescribing at 28 days but did not demonstrate non-inferiority for clinical failure. Multimodal diagnostic guidance can meaningfully reduce antibiotic prescriptions, although a modest increase in adverse outcomes cannot be excluded.

BP4

Neuroaxonal and astrocytic injury biomarkers and their relation to objective cognitive performance in post-COVID condition: a prospective cohort study

K. Bopp[1], M. Mayr[1], G. Meinlschmidt[2,3,4], N. Cicic[2], R. Schnepper[2], R. Schaefert[2,3], J. Kuhle[5], A. Meienberg[1,3]

[1]Universitätsspital Basel, Medizinische Poliklinik, Basel, Switzerland, [2]Universitätsspital Basel, Klinik für Psychosomatik, Basel, Switzerland, [3]Universität Basel, Medizinische Fakultät, Basel, Switzerland, [4]Universität Trier, Department of Clinical Psychology and Psychotherapy – Methods and Approaches, Trier, Germany, [5]Universitätsspital Basel, Klinik für Neurologie, Basel, Switzerland

Background: Persistent fatigue and cognitive complaints are common in post-COVID condition (PCC). These symptoms may raise concerns about ongoing brain damage and contribute to maladaptive illness beliefs. Evidence on neuroinjury biomarker elevations in PCC is inconclusive. This study assessed circulating neuroaxonal and astrocytic injury biomarkers (serum neurofilament light chain [NfL] and glial fibrillary acidic protein [GFAP]) and their association with objective neurocognitive performance in PCC.

Methods: This prospective observational cohort study included participants from the Basel Long COVID Study (BALCoS) between May 2023 and April 2025. A total of 106 individuals with PCC were included in the present analyses. Participants underwent blood sampling for NfL and GFAP, standardized computerized neurocognitive testing (CNS Vital Signs), assessment of symptoms, comorbidities, patient-reported outcome measures, and routine laboratory testing. Biomarker values were evaluated using age-, BMI-, and sex-adjusted Z-scores derived relative to a large reference database comprising >4000 healthy controls.

Results: Circulating NfL and GFAP levels were within the expected normative range in 90.6% and 95.8% of participants, respectively, using a threshold of Z ≥ 1.5. Elevated NfL and GFAP levels were not associated with poorer overall neurocognitive performance or performance in any cognitive subdomain. Exploratory analyses revealed no associations between biomarker levels and illness duration, comorbidities, or routine laboratory markers.

Conclusion & clinical implications: Despite fatigue and subjective cognitive difficulties, circulating markers of neuroaxonal and astrocytic injury were largely within the normative range

and showed no relationship with poor neurocognitive performance, including those with elevated values. Our findings do not support ongoing CNS injury as a primary mechanism of symptoms in PCC. Overall, the results help contextualize persistent fatigue and cognitive complaints in PCC beyond frameworks centered on ongoing CNS injury alone.

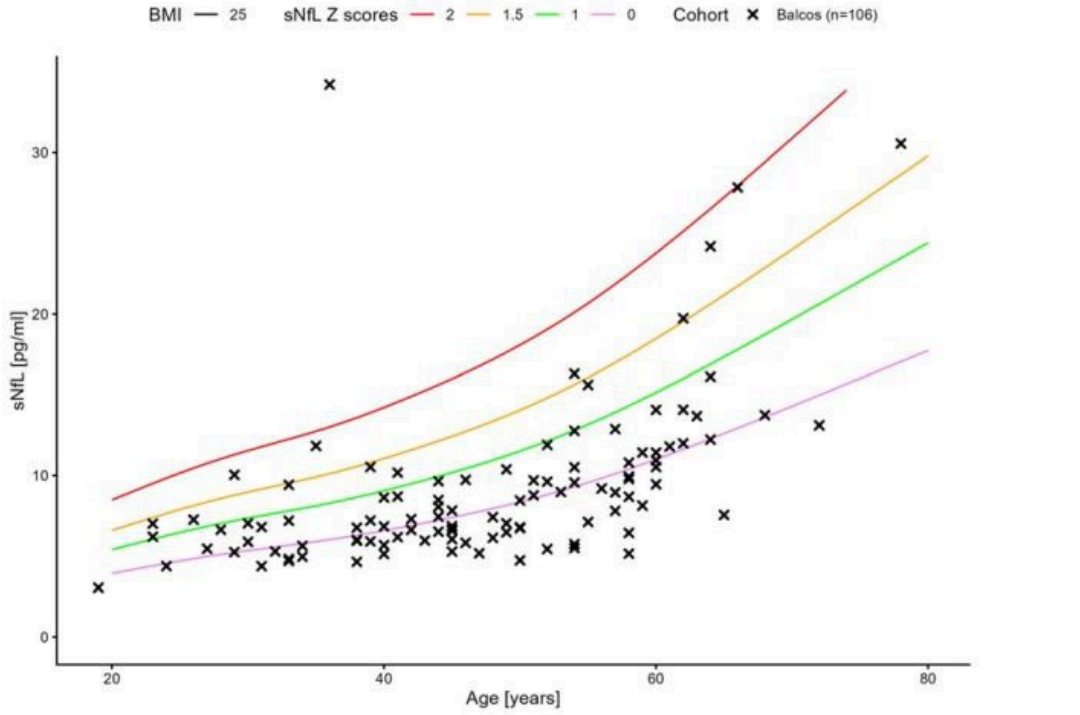


Figure 1: Sample sNfL values (black crosses) in comparison to sNfL Z scores derived from healthy controls

BP5

Optimizing cardiovascular prevention in patients with elevated blood pressure by integrating polygenic risk scores with clinical risk prediction models in a Swiss population-based cohort

S. Canonica[1], N.S. Ahanchi[1], C.W. Thorball[2], M.-P.F. Strippoli[3], J. Vaucher[1,4], R. De La Harpe[4]

[1]Fribourg Hospital and University of Fribourg, Department of Internal Medicine and Specialties, Division of Internal Medicine, Fribourg, Switzerland, [2]Lausanne University Hospital and University of Lausanne, Precision Medicine Unit, Biomedical Data Science Center, Lausanne, Switzerland, [3]Lausanne University Hospital and University of Lausanne, Psychiatric Epidemiology and Psychopathology Research Center, Department of Psychiatry, Prilly, Switzerland, [4]Lausanne University Hospital and University of Lausanne, Department of Medicine, Division of Internal Medicine, Lausanne, Switzerland

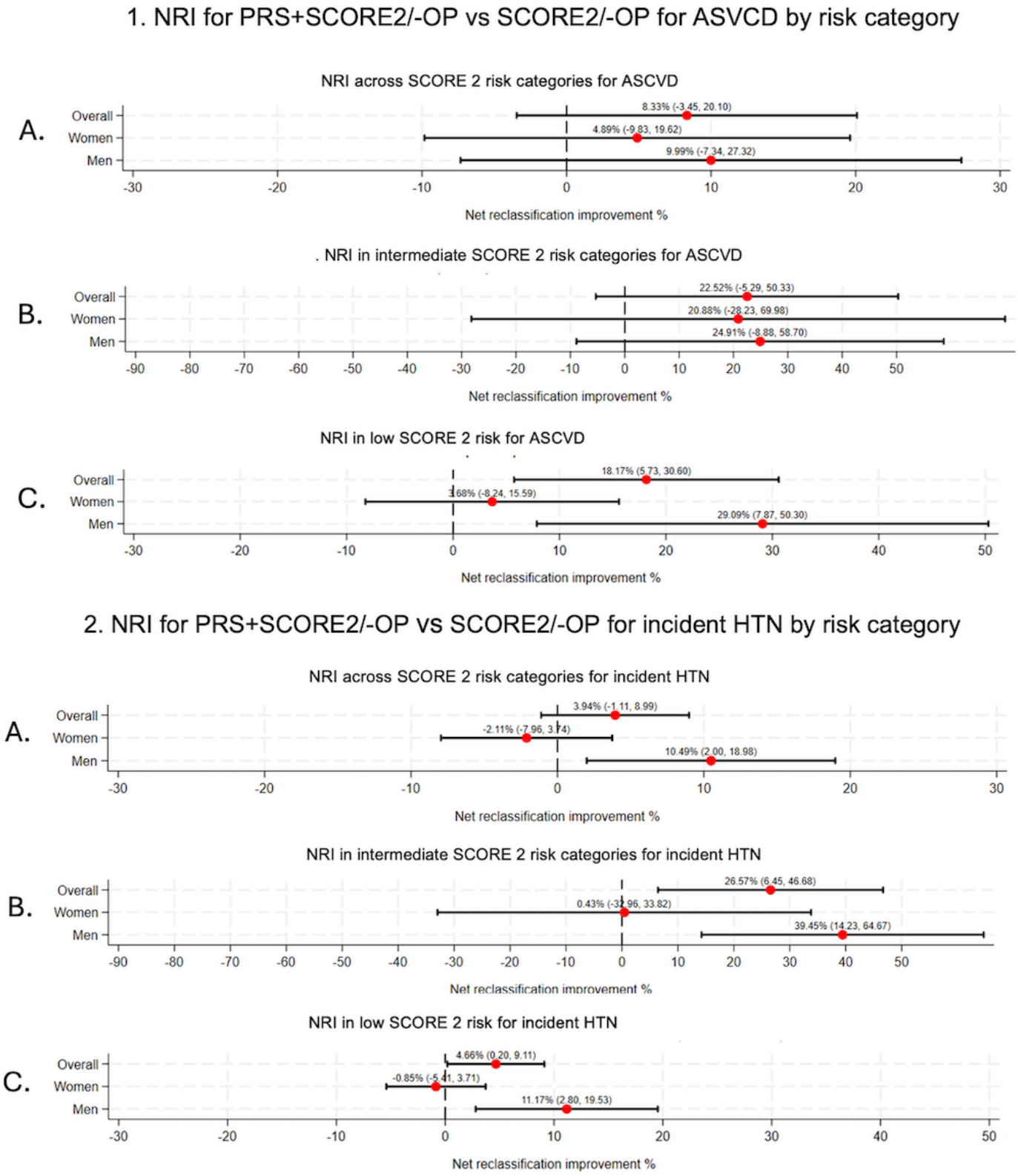
Background: The 2024 European Society of Cardiology hypertension (HTN) guidelines define elevated blood pressure (BP) (systolic 120-139 or diastolic 70-89 mmHg) as a distinct category, with management guided by cardiovascular risk using SCORE2 and SCORE2-Older Persons (OP). Polygenic risk scores (PRS) capture genetic susceptibility and may refine risk stratification beyond clinical models. We evaluated SCORE2 performance in elevated BP and assessed whether PRS integration improves risk reclassification.

Methods: We analyzed data from a Swiss population-based cohort, including participants with elevated BP, no antihypertensive treatment, diabetes, or prior atherosclerotic cardiovascular disease (ASCVD). Participants were stratified using SCORE2/SCORE2-OP into low (<5%), intermediate (5–10%), and high (≥10%) 10-year risk categories, as applied in the 2024 European Society of Cardiology HTN guidelines. ASCVD and HTN risk gradients were assessed across SCORE2/OP categories using incidence rates and regression models. An ASCVD-PRS was integrated into SCORE2/OP, and risk reclassification was quantified using categorical net reclassification improvement (NRI), overall and by baseline risk strata.

Results: Among 1,936 participants (mean age 50.8 years, 54% women), 82% were classified as low risk and 2.5% as high risk. Over a median follow-up of 14.4 years, 149 participants (7.7%) developed ASCVD and 723 (37.4%) developed HTN. Incidence increased stepwise across SCORE2 categories (ASCVD: 5.4%, 16.1%, 29.2%; HTN: 33.1%, 56.3%, 58.3%; p for trend <0.001). However, more than half of ASCVD (57.7%) and HTN (72.5%) events occurred in individuals initially classified as low risk. Integration of an ASCVD-PRS significantly improved risk reclassification, with stronger effects observed in men, particularly among those initially classified as low or intermediate risk (*Figure 1, 2*).

Conclusion & clinical implications: In individuals with elevated BP, SCORE2-based stratification identifies gradients of ASCVD and HTN risk but fails to capture a substantial proportion of future events. Integration of a PRS improves risk reclassification and may represent a clinically relevant modifier to better target preventive strategies in this population.

Figure 1, 2: NRI by SCORE2 risk category



BP6

Clinical relevance of overnight medical problems during on-call shifts in internal medicine: links between severity, short-term evolution, and preventability

P. Darbellay Farhoumand[1,2], C. Buclin[2,1], A. Berner[2,1], N. Garin[2,3], J.-L. Reny[2,1], J. Serratrice[2,1], D. Courvoisier[4,5,1], T. Agoritsas[2,6,1]

[1]Université de Genève, Faculté de Médecine, Genève, Switzerland, [2]Geneva University Hospitals, Division of General Internal Medicine, Geneva, Switzerland, [3]Riviera Chablais Hospital, Division of Internal Medicine, Rennaz, Switzerland, [4]Geneva University Hospitals, Division of Rheumatology, Geneva, Switzerland, [5]Geneva University Hospitals, Quality of Care Division, Genève, Switzerland, [6]McMaster University, Department of Health Research Methods, Evidence, and Impact, Hamilton, Canada

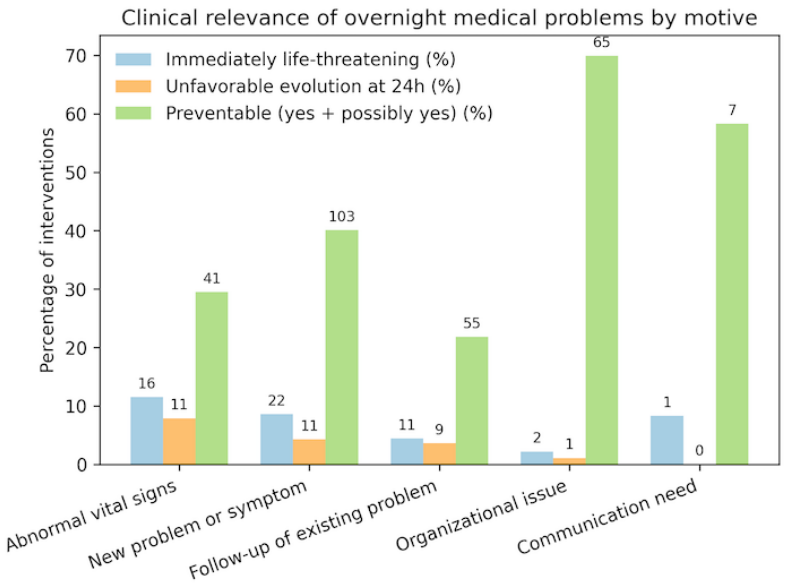
Background: Overnight care in internal medicine involves the management of diverse clinical problems, but their actual clinical relevance is uncertain. For residents, supervisors, and hospital organizations, it remains unclear which types of issues encountered at night are most likely to be severe, to worsen in the short term, or to be preventable. Clarifying these differences may help prioritize clinical attention, guide training, and identify avoidable workload.

Methods: We conducted an observational study at a tertiary hospital. During 66 evening/night shifts issues requiring intervention were recorded and categorized by trained observers into five motives: abnormal vital signs, new problem or symptom, follow-up problem, organizational issue, and communication. Independent reviewers rated severity, 24-hour evolution, and preventability. Severity was classified as non-life-threatening, potentially but not immediately life-threatening, immediately life-threatening, or death. Evolution was classified as favorable (discharge, resolution, or end-of-life death), unfavorable (IMCU/ICU transfer, surgery, or unexpected death), or stable. Preventability was rated as yes, possibly yes, possibly no, or no.

Results: Clinical relevance varied by motives (Table 1). Situations related to abnormal vital signs and new problems or symptoms accounted for the largest proportions of immediately life-threatening presentations and unfavorable 24-hour evolution. In contrast, follow-up of existing problems, organizational issues, and communication needs were less often immediately life-threatening and rarely followed by clinical deterioration. Organizational issues showed the highest proportion of preventable interventions, whereas problems related to abnormal vital signs were more frequently judged non-preventable. See figure 1.

Conclusion & clinical implications: These findings distinguish motives that generate preventable workload from those at higher clinical risk. Recognizing motives more often associated with severity and deterioration may support safer prioritization by residents, and guide supervisors for targeted training. For hospital organizations, the predominance of preventable, low-severity issues – especially organizational tasks – suggests opportunities to reduce avoidable nighttime workload and limit clinical "noise."

	Abnormal vital sign (N=139)	New problem (N=257)	Follow-up (N=252)	Organizational issues (N=93)	Communication needs (N=12)
Severity					
Non life-threatening	39 (28.1%)	125 (48.6%)	119 (47.2%)	72 (77.4%)	11 (91.7%)
Possibly life-threatening	82 (59.0%)	99 (38.5%)	122 (48.4%)	19 (20.4%)	0 (0.0%)
Immediately life-threatening	16 (11.5%)	22 (8.6%)	11 (4.4%)	2 (2.2%)	1 (8.3%)
Deceased (expected)	0 (0.0%)	11 (4.3%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Deceased (unexpected)	2 (1.4%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Preventability					
Yes	21 (15.1%)	56 (21.8%)	33 (13.1%)	58 (62.4%)	4 (33.3%)
Possibly yes	20 (14.4%)	47 (18.3%)	22 (8.7%)	7 (7.5%)	3 (25.0%)
Possibly no	35 (25.2%)	51 (19.8%)	22 (8.7%)	7 (7.5%)	1 (8.3%)
No	63 (45.3%)	103 (40.1%)	175 (69.4%)	21 (22.6%)	4 (33.3%)
Evolution at 24 hours					
Favorable	46 (33.1%)	158 (61.5%)	169 (67.1%)	78 (83.9%)	12 (100.0%)
Stable	82 (59.0%)	88 (34.2%)	74 (29.4%)	14 (15.1%)	0 (0.0%)
Unfavorable	11 (7.9%)	11 (4.3%)	9 (3.6%)	1 (1.1%)	0 (0.0%)



BP7

Frequency and patient characterization of opiate overdose treatment in the ambulance services in a Swiss tertiary referral hospital from 2020–2024 - a retrospective analysis

L. Eichenberger[1], B. Hug[1,2]

[1]Luzerner Kantonsspital, Innere Medizin, Luzern, Switzerland, [2]Universität Luzern, Zentrum für Hausarztmedizin und Community Care, Luzern, Switzerland

Background: Opiates are among the oldest analgesics and are widely used in modern medicine, for example in the treatment of cancer-related pain and postoperative care. However, they are also misused as addictive substances and overdoses may occur regardless of the intended use. According to the World Health Organization (WHO), several risk factors contribute to opioid overdose, including high prescribed doses and comorbidities. This study aims to identify affected populations and associated risk factors.

Methods: This retrospective, monocentric study included all individuals aged ≥ 16 years who received naloxone (antidote for overdoses) from the ambulance services between 01.01.2020 and 31.12.2024. Data collection was conducted consecutively, with each overdose recorded as a separate event. If an individual experienced multiple overdoses, these were documented individually. The data collected included biographical information, transport data and, where available, information on hospital stays and relevant pre-existing conditions. The analysis follows a descriptive approach, as the primary objective is to systematically describe the patient cohort under investigation without initially deriving further analyses or associations.

Results: During the study period, 62 events were recorded. Of these, 39 men (62.9%) and 23 women (37.1%) were affected. In 15 cases (24.2%), the overdose was suicidal in intent. The remaining 47 events were distributed as follows: 19 events (30.6%) in patients with pre-existing addiction, 3 cases (4.8%) in connection with chronic pain, 9 cases of poisoning (14.5%), and 16 cases (25.8%) with other causes. In 15 events (21.7%), methadone was responsible for the overdose, followed by oxycodone and morphine (both n = 13, 18.8%), whereby several opiates could have been taken simultaneously in an overdose (n = 69).

Conclusion & clinical implications: The study shows that around a quarter of overdoses are attributable to suicide attempts and just under a third to pre-existing addiction disorders. Methadone, which is often used in substitution-based treatment, was involved in around one-fifth of the incidents. These preliminary results indicate possible starting points for future prevention and education measures.

BP8

Peri-procedural code status: a cross-sectional survey of German and Swiss pulmonologists

F. Gössi[1,2], A. Arpagaus[1,2], B. Bissmann[2], S.K. Zumbrunn[2], S. Gross[2], C. Becker[2], S. Hunziker[2]

[1]University Hospital Basel, Division of Internal Medicine, Basel, Switzerland, [2]University Hospital Basel, Medical Communication Medicine, Basel, Switzerland

Background: In-hospital cardiac arrest is associated with poor outcomes, yet peri-procedural code status discussions before bronchoscopy may be inconsistent, particularly in patients with elevated procedural risk.

Methods: We conducted an anonymous online survey of hospital-based pulmonologists in Germany and Switzerland between April and July 2025. The survey assessed routine practices and attitudes regarding peri-procedural code status discussions, risk stratification, and management of patients with existing do-not-resuscitate (DNR) orders.

Results: A total of 148 pulmonologists participated (mean age 47.8 years; 94.6% board-certified). Code status discussions were conducted almost always or most of the time before high-risk bronchoscopies by 67.6% of respondents but were rarely or almost never performed before low-risk procedures by 72.0%. Procedural risk was the primary trigger for discussions, whereas patient-related factors were less influential. Peri-procedural DNR orders were considered debatable by 44.9%, and responsibility for discussions was unclear. Only 25% reported formal institutional training.

Conclusion & clinical implications: Substantial variability exists in peri-procedural code status practices before bronchoscopy. Clearer responsibilities and structured guidance are needed to better align care with patient preferences. This is an important insight for general internal medicine physicians, who are typically responsible for the indication for bronchoscopy in inpatients.

BP9

Bleeding risk prediction of a HAS-BLED score incorporating active cancer in patients with acute venous thromboembolism

I. Schäfer[1], O. Stalder[2], M. Méan[3], N. Rodondi[1], T. Tritschler[1], D. Aujesky[1]

[1]Inselspital, Universitätsspital Bern, Klinik für Allgemeine Innere Medizin, Bern, Switzerland, [2]Universität Bern, Departement für Klinische Forschung, Bern, Switzerland, [3]Centre hospitalier universitaire vaudois (CHUV), Service de médecine interne, Lausanne, Switzerland

Background: Accurate bleeding risk prediction is critical for guiding anticoagulation in venous thromboembolism (VTE). The widely known HAS-BLED score has limited performance in VTE, possibly because it omits active cancer, a major bleeding risk factor. A HAS-BLED incorporating cancer has been proposed but lacks validation.

Methods: We evaluated two adaptations of HAS-BLED incorporating active cancer, as part of the bleeding predisposition component (modified HAS-BLED) and as a separate variable (HASC-BLED), in 991 patients aged ≥65 years with acute VTE from a multicenter, prospective cohort and compared them with the original HAS-BLED. The outcome was major bleeding at 3 months, during initial anticoagulation, and over the entire follow-up. Scores were calculated at baseline, and patients were classified as low-/moderate- or high-risk using a cut-off of 3 points. We assessed discrimination using areas under the curve (AUCs) and evaluated calibration by optimism-corrected calibration curves.

Results: Median age was 75 years and 18% had active cancer. During a median follow-up of 29.6 months, 13.3% of patients experienced a major bleeding. At a cut-off of 3 points, the modified HAS-BLED's and HASC-BLED's sensitivity and specificity for major bleeding ranged from 69.0–73.6% and 37.9–40.9%, respectively, across follow-up periods. Discrimination of the modified HAS-BLED and HASC-BLED was poor (AUC 0.57–0.60) and comparable to the original HAS-BLED. Optimism-corrected calibration indicated systematic miscalibration, with underestimation of lower and overestimation of higher bleeding risk.

Conclusion & clinical implications: Incorporating active cancer into the HAS-BLED did not improve prediction of major bleeding over different follow-up periods in patients with VTE. The HAS-BLED score, with or without cancer, should not be used alone to guide anticoagulation decisions. Individualized bleeding risk assessment and management of modifiable risk factors remain essential.

BP10

External validation of the VTE-PREDICT bleeding and recurrence risk model in older patients with acute venous thromboembolism

V.J. Will[1], O. Stalder[2], N. Rodondi[1,3], M. Méan[4], T. Tritschler[1], D. Aujesky[1]

[1]Inselspital, Bern University Hospital, University of Bern, Department of General Internal Medicine, Bern, Switzerland, [2]University of Bern, Department of Clinical Research, Bern, Switzerland, [3]University of Bern, Institute of Primary Health Care (BIHAM), Bern, Switzerland, [4]Lausanne University Hospital, Division of Internal Medicine, Lausanne, Switzerland

Background: Which patients with venous thromboembolism (VTE) benefit from extended anticoagulation beyond 3 months is uncertain. The VTE-PREDICT models, consisting of 8-9 variables and the type of anticoagulation, have been derived to facilitate decision-making by estimating clinically relevant bleeding (CRB) and recurrent VTE (rVTE) risks. Although older patients represent the majority of cases with VTE and have a higher complication risk, the VTE-PREDICT models have never been validated in older patients.

Methods: Using prospective data from a multicenter cohort of patients aged ≥65 years with acute VTE, we determined the prognostic accuracy of the VTE-PREDICT bleeding model during extended anticoagulation and of the rVTE model after initial anticoagulation was stopped. The outcomes were CRB and rVTE at 24 months. Individual risks of CRB and rVTE were calculated for each patient and categorized as low (<7.5%) or high (≥7.5%). We showed graphically and compared the cumulative incidence of CRB and rVTE in low- vs. high-risk patients using the Fine-Gray method. We estimated discrimination using the area under the receiver operating characteristic curve (AUROC) and described calibration using plots.

Results: We analyzed 871 patients (median age 75 years). The cumulative 24-month incidence of CRB was 13.5% (95%CI 10.1-17.3%) in low- vs. 18% (95%CI 14.6-21.6%) in high-risk patients based on the bleeding model (*P*=0.063; Figure 1a). The discrimination of the bleeding model was poor (AUROC 0.58 [95%CI 0.52-0.63], *P*=0.007) and the calibration plot showed an underestimation of the observed bleeding risk (Figure 2a). The cumulative 24-month incidence of rVTE was 10% (95%CI 8.0-12.4%) in low- vs. 10.7% (95%CI 5.4-18%) in high-risk patients based on the rVTE model (*P*=0.94; Figure 1b). The discrimination was also poor (AUROC 0.55 [95% CI 0.49-0.62], *P*=0.123). The calibration plot demonstrated an underestimation of the observed rVTE risk (Figure 2b).

Conclusion & clinical implications: The VTE-PREDICT models showed a poor discrimination and calibration for predicting CRB and rVTE and may not be suitable clinical tools to guide decisions on extended anticoagulation beyond 3 months in older patients with acute VTE.

Figure 1. Cumulative 24-month incidence of clinically relevant bleeding (a) and recurrent venous thromboembolism (b)

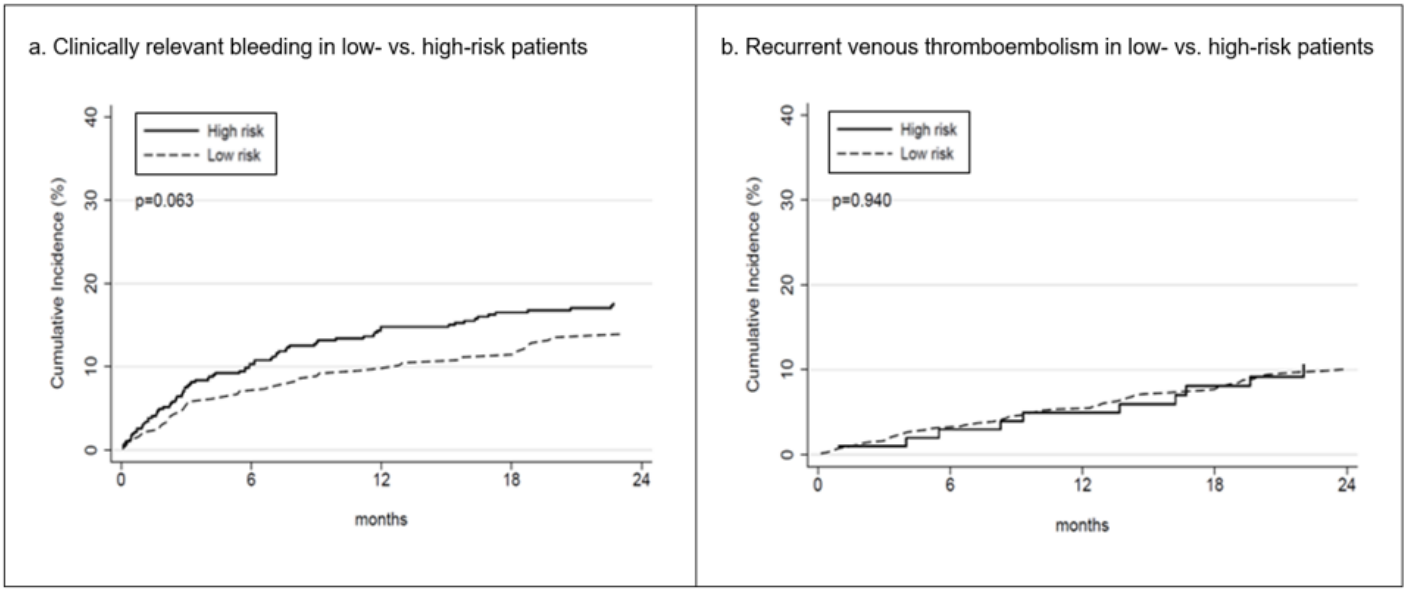
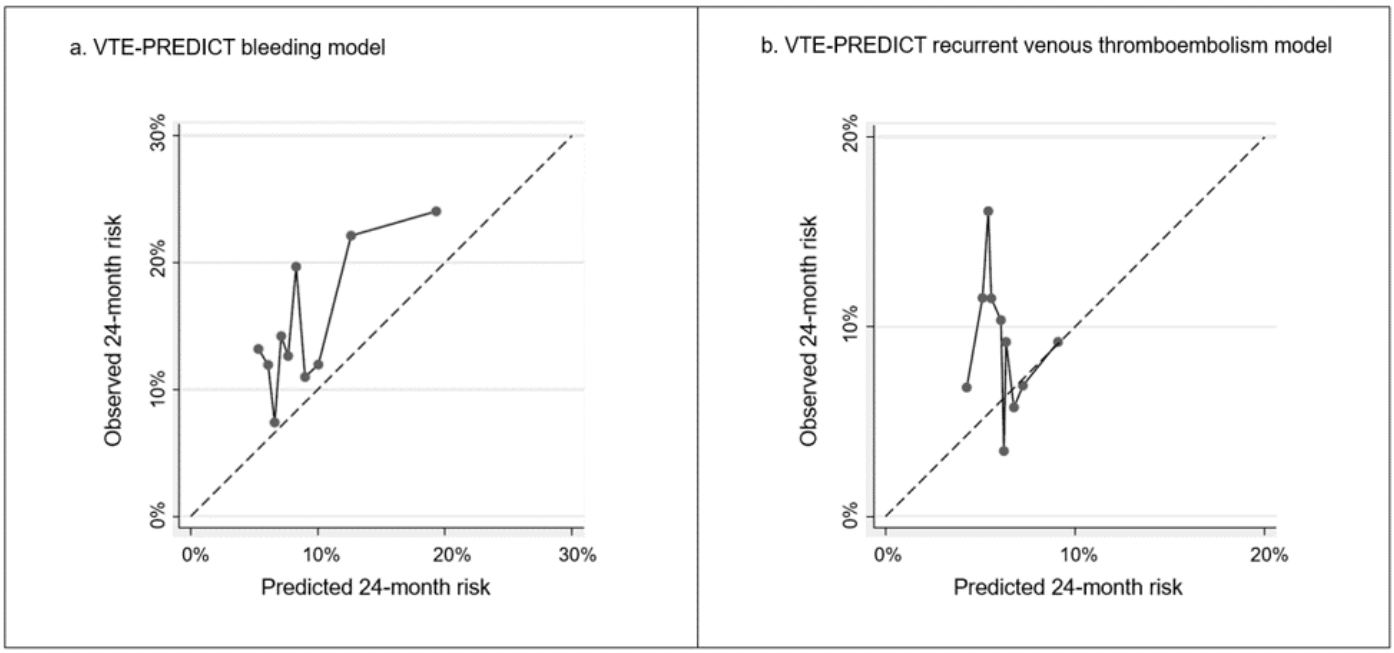


Figure 2. Calibration plots with predicted and observed 24-month risks for the VTE-PREDICT bleeding (a) and recurrent venous thromboembolism (b) model



BP11

When psychiatry meets internal medicine: lessons from a case of primary hyperparathyroidism

L. Ebner[1], A. Turk[1]

[1]*See-Spital Horgen, Innere Medizin, Horgen, Switzerland*

Case presentation: A 62-year-old woman was brought to the emergency room with reduced alertness. The paramedics report that they found the patient in the bathtub, along with several empty medication blister packs. The patient appeared disoriented during the anamnesis but confirmed, that she had attempted suicide by ingestion of several tablets. She had a history of emotionally unstable personality disorder and recurrent depressive episodes with multiple suicide attempts in the past. The clinical examination revealed flaccid muscle tone and symmetrically weakened reflexes, as well as diffuse abdominal tenderness. Laboratory tests revealed a severe electrolyte imbalance, including a significantly elevated calcium level of 4.87 mmol/l albumin corrected. Immediate therapy to restore electrolyte balance was initiated and the patient was admitted to the intensive care unit. Due to the significantly elevated parathyroid hormone levels, primary hyperparathyroidism (PHPT) was suspected and confirmed by choline PET CT, which revealed a parathyroid adenoma. Parathyroidectomy was performed, and follow-up examinations showed normal calcium levels in the blood. At the same time, the patient reported a significant improvement in her mental health for the first time in years.

Clinical implications: This case illustrates the critical importance of screening for PHPT in patients with treatment-resistant psychiatric symptoms. Depression and anxiety are frequently observed in PHPT, affecting up to one-third of patients, yet the underlying endocrine disorder often remains undiag-

nosed. Recent meta-analyses demonstrate that parathyroidectomy significantly improves psychiatric symptoms, with sustained reductions in depression scores postoperatively. This case underscores that severe hypercalcemia from PHPT can present with life-threatening psychiatric manifestations, including suicidal ideation, and that definitive surgical treatment may provide dramatic and sustained mental health benefits. Clinicians should maintain a high index of suspicion for PHPT in patients with refractory psychiatric illness, particularly when accompanied by nonspecific symptoms such as fatigue, muscle weakness, or gastrointestinal complaints. Early diagnosis and appropriate surgical intervention may be life-saving and can fundamentally alter the psychiatric trajectory of these patients.

BP12

Tularemia: a story of cats and mice

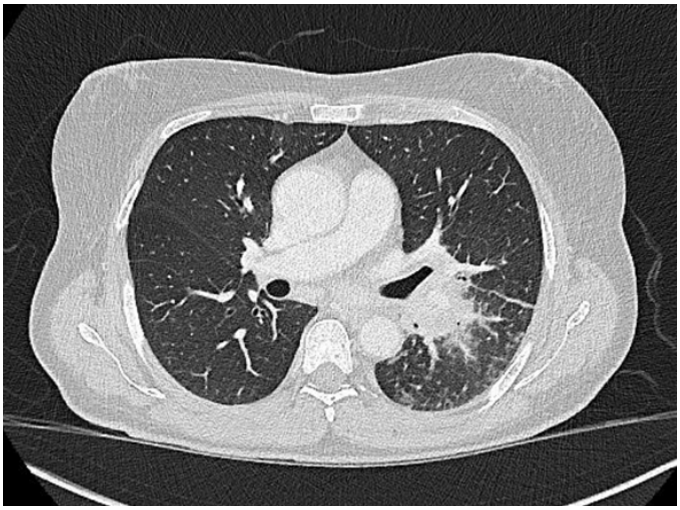
S. Ischi[1], F. Aigner[1], A. Schibli[2], A.J. Turk[1]

[1]*See-Spital Horgen, Klinik für Innere Medizin, Horgen, Switzerland,*
[2]*Stadtspital Zürich, Infektiologie und Spitalhygiene, Zürich, Switzerland*

Case presentation: A 55-year-old woman with a 20 pack-year history of ongoing nicotine use presented to our emergency department with a 9-day history of sore throat, cough, dyspnea, and moderate pleuritic chest pain exacerbated by deep breathing and coughing. Symptoms persisted despite 3 days of oral amoxicillin-clavulanate therapy. 18 days earlier, the same patient had presented with abdominal pain and nausea, leading to a diagnosis of acute appendicitis confirmed by surgical pathology as ulcerophlegmonous appendicitis. The patient reported no outdoor hobbies such as gardening or hiking and no recent travel history. She owned an outdoor cat that frequently hunted and presented mice to her.

Vital signs revealed subfebrile temperature (38.4°C). Physical examination showed diminished breath sounds over the left lower lung field. Laboratory findings included leukocytosis (11.67 G/l) and elevated C-reactive protein (262 mg/l). Contrast-enhanced chest computed tomography demonstrated a stellate soft-tissue-density mass in the left hilum, with increased number and partial enlargement of mediastinal and left hilar lymph nodes – findings highly suggestive of central bronchial carcinoma with lymph node metastases – accompanied by adjacent ground-glass opacities and reticular interstitial changes.

Endobronchial ultrasound-guided transbronchial needle aspiration (EBUS-TBNA) of the lymph nodes yielded necrotic cellular debris without evidence of malignancy. Polymerase chain reaction testing of biopsy material for *Francisella tularensis* was positive. The patient received ciprofloxacin for 10 days, with gradual resolution of symptoms.



Clinical implications: Tularemia, a zoonotic infection caused by *Francisella tularensis*, is an emerging disease in Switzerland that can cause pneumonia or mimic bronchial carcinoma. Due to the rising incidence, tularemia should be considered as a differential diagnosis, particularly in cases of pneumonia unresponsive to empirical therapy or a pulmonary mass lacking evidence of malignant cells on biopsy.

Transmission typically occurs via ticks, insects, infected animals (particularly rodents, especially rabbits), inhalation of contaminated aerosols, or ingestion of contaminated water or undercooked meat. Risk is elevated in individuals with nature exposure or rodent contact. Treatment includes antimicrobials such as doxycycline or ciprofloxacin for 10–14 days, although prolonged courses may be required.

BP13

When pneumonia strikes the skin: mucocutaneous manifestation of mycoplasma pneumonia in an adult patient

J. Köchli[1], H. Ruhwinkel[1], A. Kogias[1], L. Schilliger[1], R. Jost[1], M. Fischler[1]

[1]*Spital Bülach, Innere Medizin, Bülach, Switzerland*

Case presentation: A 25-year-old male patient presented to the emergency department with flu-like symptoms (cough, fever, intolerance to exercise for 1 week) and new erosions on the lips and perioral area. He was intermittently febrile, the initial blood pressure was 146/96mmHg, the heart rate 84 beats per minute and the oxygen saturation was 97% while receiving 1 L/min of oxygen. Clinical examination revealed rales over the right lung field and erosions on the lips and oral mucosa.

After hospital admission, the patient developed severe bilateral conjunctivitis, increasing involvement of the lips and oral mucosa with erosions and an exanthema spreading from the scrotum. The targetoid lesions involved the scrotum, groin and ventral thighs bilaterally, extending over both flanks, the knees and shins. In the further course, erosions also appeared on the glans penis around the urethra.Laboratory analysis showed elevated inflammatory markers, and imaging revealed pneumonia with medial middle lobe infiltrates. Mycoplasma pneumonia was detected in sputum. Due to severe dysphagia and inability to eat, gastroscopy was performed, revealing erosive mucositis of the proximal oesophagus with aphthoid and edematous lesions.

Based on the typical clinical history, characteristic mucocutaneous involvement and confirmed Mycoplasma pneumoniae pneumonia, the diagnosis of reactive infectious mucocutaneous eruption (RIME) was made. Intravenous doxycycline was initiated, leading to rapid improvement of systemic symptoms. Owing to prolonged fasting, parenteral nutrition was started and later switched to enteral feeding via nasogastric tube. As mucocutaneous involvement progressed despite antimicrobial therapy, steroid pulse therapy with Prednisolon 1 mg/kg body weight was administered for seven days, resulting in rapid clinical improvement. After healing of the oral lesions, nutritional intake was resumed and the patient was discharged in markedly improved condition.

Clinical implications: This case demonstrates an unusually severe mucosal involvement with oesophageal affection in an adult patient, a presentation more commonly described in paediatric population. The rapid response to corticosteroids suggests that early initiation may shorten the duration of symptoms and overall disease burden.

Informed consent: Written informed consent for publication of the case presenation and the images was obtained from the patient.

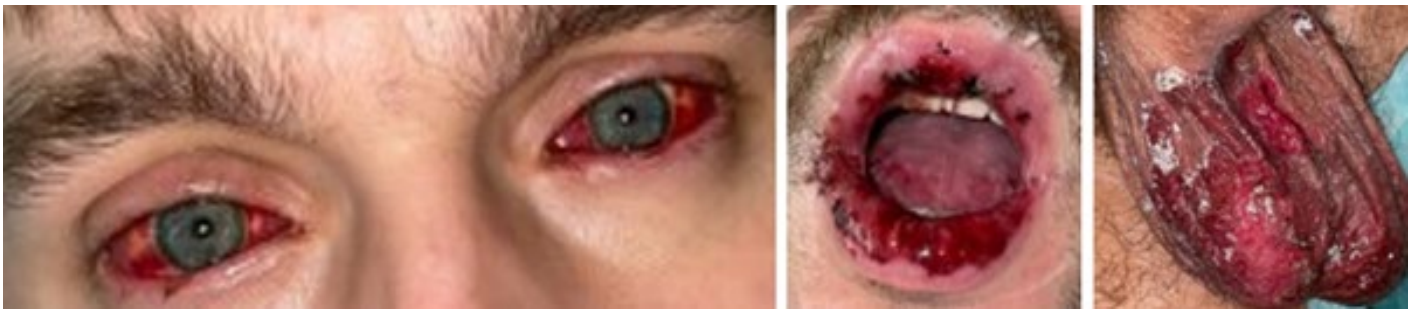


Figure 1: Clinical pictures showing fulminant cutaneous manifestations involving the eye, mouth, and scrotum (left to right) at initial evaluation.

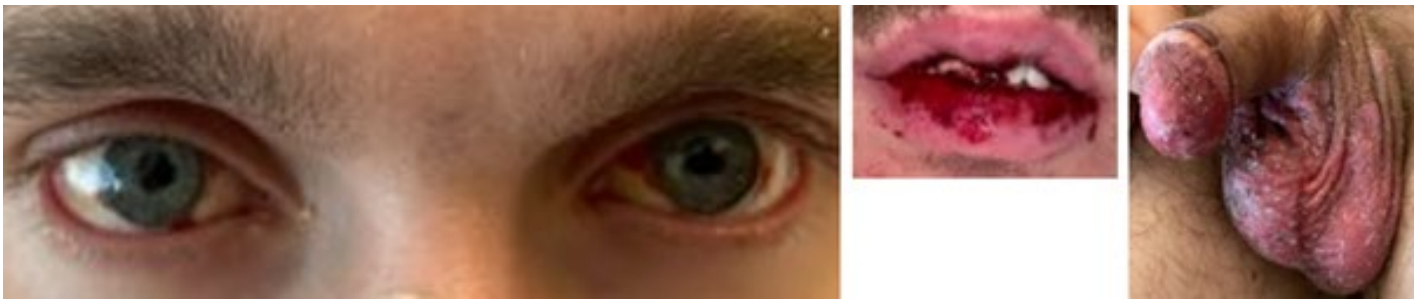


Figure 2: Marked improvement of ocular, oral, and scrotal findings after treatment.

BP14

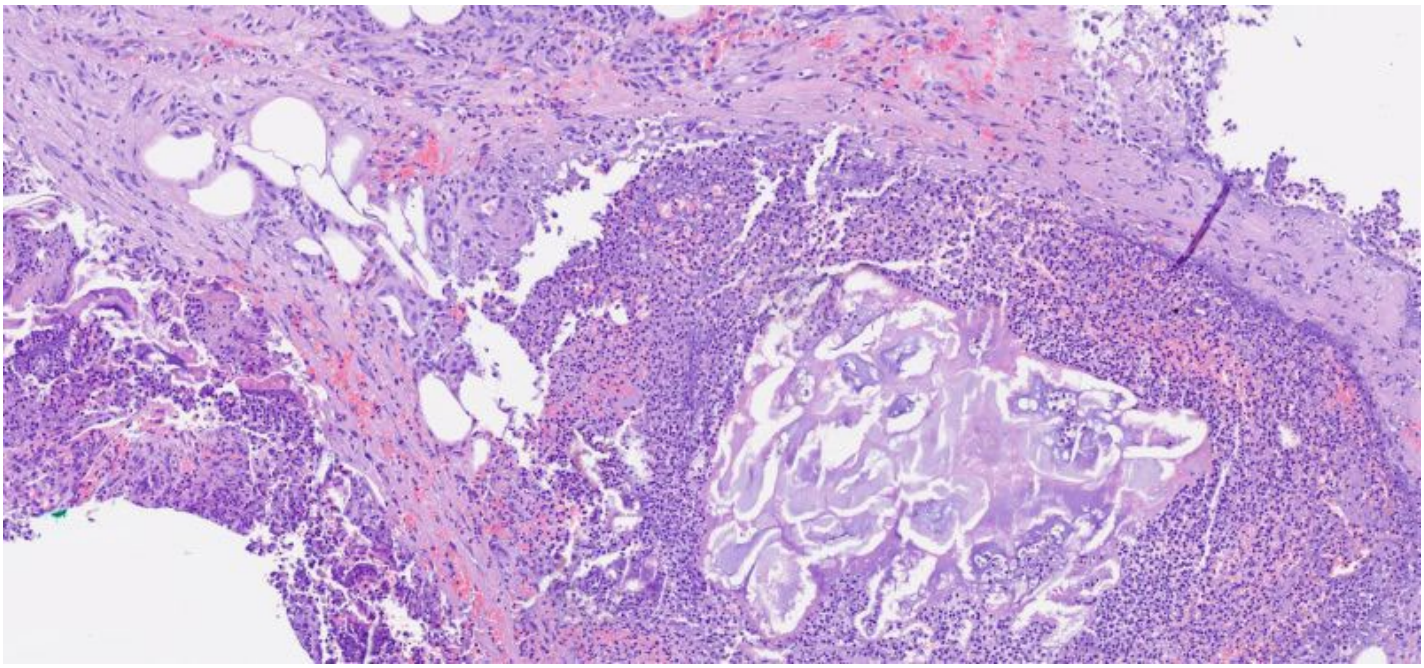
Pancreatitis, panniculitis and polyarthritis syndrome: recognizing a rare clinical triad

E. Leggeri[1], C. Seeli[2], C. Schlag[3], S.K. Rampini[1]

[1]Universitätsspital Zürich, Klinik für Innere Medizin, Zürich, Switzerland, [2]Universitätsspital Zürich, Klinik für Dermatologie, Zürich, Switzerland, [3]Universitätsspital Zürich, Klinik für Gastroenterologie, Zürich, Switzerland

Case presentation: We report a 71-year-old man who presented with atraumatic bilateral foot pain and swelling, accompanied by erythematous, slightly raised lesions on the feet and lower legs, and was hospitalized with suspected erythema nodosum and ankle arthritis. The remaining history and physical examination were unremarkable. Laboratory tests revealed elevated C-reactive protein (39 mg/L) and markedly increased serum lipase (7,801 U/L) in the absence of abdominal symptoms. Extensive diagnostic work-up for infectious, immunological, rheumatological or hematological causes was nonrevealing, except for a pancreatic duct concrement on abdominal CT. During hospitalization, oligoarthritis of the right hand developed, and the skin lesions became necrotic and partially ulcerated with brownish discharge, accompanied by rising inflammatory markers and lipase levels. Skin biopsy demonstrated necrotizing lobular panniculitis. Given the combination of polyarthritis, markedly elevated lipase consistent with pancreatitis, and histologically confirmed panniculitis, a diagnosis of pancreatitis-panniculitis-polyarthritis (PPP) syndrome was made. The pancreatic obstruction was successfully treated with endoscopic retrograde pancreatography and stent placement, resulting in rapid clinical and biochemical improvement. Long-term follow-up revealed residual ankylosis of the third finger.

Clinical implications: PPP syndrome is a rare condition, with approximately 70 cases reported since its first description by Chiari in 1883, and is defined by the triad of pancreatitis, panniculitis, and polyarthritis. Pancreatitis is asymptomatic in up to 50% of patients, potentially delaying diagnosis. Panniculitis predominantly affects lower extremities and presents as painful nodules that may ulcerate; histology shows sterile lobular fat necrosis (Figure 1). Arthritis is often symmetric and involves knees, hands, and wrists, with lipid-rich synovial fluid. The pathogenesis is not well understood and is attributed to systemic dissemination of pancreatic enzymes causing fat necrosis in subcutaneous tissue and joints, and serum lipase levels correlate with disease severity. In our case, chronic portal vein thrombosis may have influenced pancreatic enzyme dynamics. There is no specific medical therapy, management relies on prompt treatment of the underlying pancreatic disorder. Early recognition is essential, as PPP syndrome may lead to chronic disability and is associated with a reported mortality of 25–75%.



BP15

Can medical cannabinoids reduce anxiety and hypertension in critically ill patients with cannabis dependence?

D. Lidsky-Haziza[1], L. Lacroix[2], T. Favrod-Coune[1]

[1]Hôpitaux Universitaires de Genève, Service de Médecine de Premier Recours, Genève, Switzerland, [2]Hôpitaux Universitaires de Genève, Direction des soins, Genève, Switzerland

Case presentation: A 63-year-old woman with a long history of severe untreated anxiety disorder, suspected post-traumatic stress disorder (PTSD), and recurrent panic attacks, reported chronic heavy cannabis use, smoking 5 to 20 joints per day, mixed with tobacco for 39 years. She was admitted to the intensive care unit for acute hypercapnic respiratory failure secondary to an exacerbation of chronic obstructive pulmonary disease (COPD), in the context of surinfection. Management included invasive mechanical ventilation, antibiotic therapy, and systemic corticosteroids. During hospitalization, the patient developed episodes of acute pulmonary edema following hypertensive crises, along with a marked exacerbation of anxiety. In addition to antihypertensive treatment, quetiapine 25 mg 3 times daily and oxazepam 7.5 mg 6 times daily were initially initiated. The introduction of nabiximols (Sativex®) at a dosage of THC 16.2 mg/day and CBD 15mg/day, led to a significant reduction in hypertension and anxiety symptoms, allowing progressive dose reduction of oxazepam to 15mg daily and quetiapine to 50 mg/day. Clonidine (Catapresan®) 150mcg/day further improved blood pressure control and anxiety symptoms. Due to concerns regarding hypertension, nicotine replacement therapy was initially not prescribed. A 24-hour transdermal nicotine patch was finally introduced on day 17 of hospitalization. The patient's course was favorable: she was successfully extubated and transferred to the internal medicine department.

Clinical implications: This case illustrates how severe anxiety and panic attacks, associated with cannabis withdrawal may exacerbate blood pressure and instability respiratory failure in critically ill patients. A multimodal therapeutic approach, combining antihypertensive agents, anxiolytics, antipsychotics, and medical cannabinoids, was associated with improvement in anxiety, hemodynamic, and respiratory status. The delayed initiation of nicotine replacement therapy highlights the clinical dilemma between the potential hypertensive effects of nicotine and the often-underestimated impact of tobacco withdrawal, particularly anxiety and sympathetic overactivation. This case also suggests that nabiximols may represent a useful complementary treatment for refractory anxiety, suspected PTSD, and cannabis withdrawal symptoms. Medical cannabinoids may also represent an opportunity to experiment combustion-free version of cannabis as a harm reduction strategy, that can be continued after hospital discharge.

BP16

Prosthetic valve endocarditis: an exceptional diagnostic challenge of a chameleon-like disease

B. Jeker[1], S.A. Müggler[1]

[1]Spital Lachen, Department of Internal Medicine, Lachen SZ, Switzerland

Case presentation: A 76-year-old male patient was admitted to our emergency department due to prolonged neck pain with known severe cervical spondylarthrosis. On admission he was afebrile and laboratory testing revealed elevated CRP level of 87 mg/l and mild anaemia with a haemoglobin of 123 g/l. Due to suspected activated spondylarthrosis, empiric treatment with prednisone was initiated. Given the patients history of ascending aortic and aortic valve bioprosthesis implantation nine years earlier (due to aortic aneurysm correction), blood cultures were obtained, which showed growth of *Streptococcus sanguinis* after 25 hours. Consequently, steroid treatment was discontinued, and antibiotic treatment with amoxicillin / clavulanic acid was started. Spondylodiscitis was excluded by MRI scan. Transthoracic and transoesophageal echocardiography showed a large vegetation (14x11x12 mm) attached to the normally functioning prosthetic valve (Image 1). Additional CT scan revealed splenic and renal emboli. Also, Janeway lesions now appeared (Image 2). Prompt surgical intervention to prevent further embolization was recommended, but the patient declined surgery. Thus, conservative treatment with antibiotics (ceftriaxone, followed by amoxicillin) was administered for a total of 66 days. A PET CT scan excluded infection of the ascending aortic prothesis. After completion of antibiotic treatment,

normal function of the aortic valve bioprosthesis was confirmed, and serial blood cultures remained negative.

Discussion: PVE is the most severe form of infective endocarditis (IE), accounting for 20-30% of cases, and is associated with an increasing incidence and a poor prognosis (in-hospital mortality 20-40%). Clinical symptoms and laboratory testing often show nonspecific findings. Janeway lesions (nontender haemorrhagic macules) are attributed to septic emboli in IE. Blood cultures and echocardiography remain the diagnostic cornerstones but have a sensitivity of only about 60%. To increase diagnostic sensitivity, PET CT scan may be considered. Treatment options include surgery and conservative antibiotic treatment; however, the best therapeutic strategy is still debated.

Learning objective: Prosthetic valve endocarditis (PVE) is a potentially fatal disease that is more difficult to diagnose than native valve endocarditis (NVE) because it often presents atypically. Even nonspecific symptoms in patients with a history of valve replacement should prompt sampling of blood cultures.

Image **1**

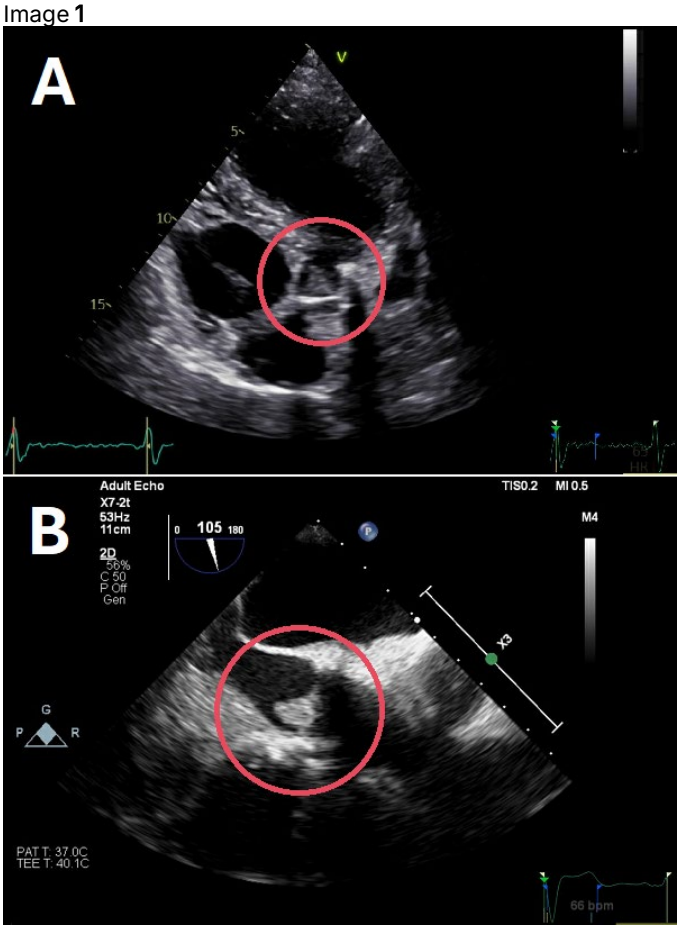
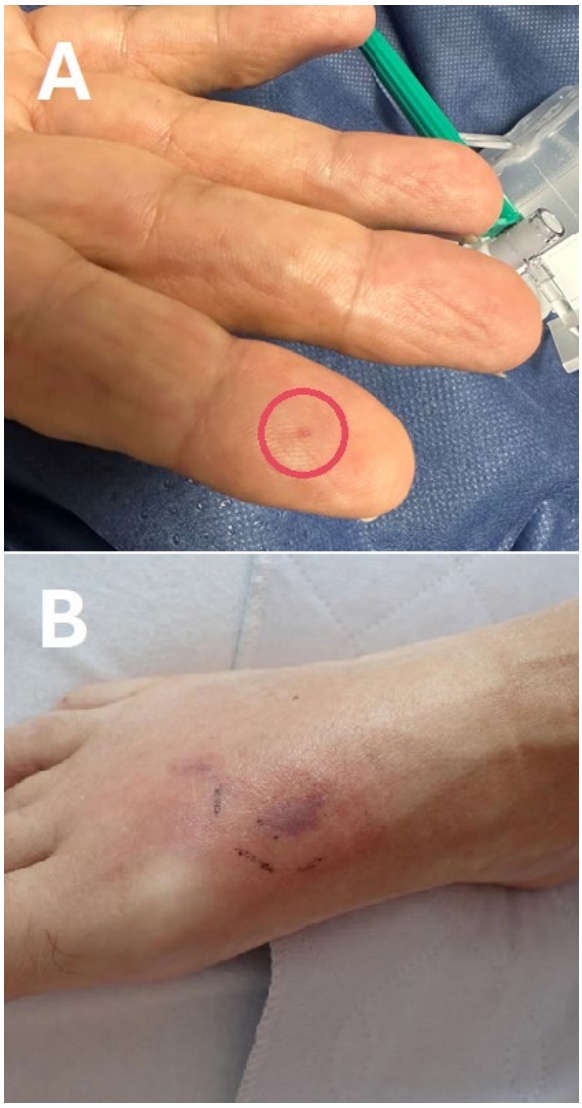


Image 2



BP17

Post-menopausal hyperandrogenemia with unremarkable imaging: look deeper

A. Notter[1], C. Brambs[2], I. Suter[3], S. Fischli[1]

[1]Luzerner Kantonsspital, Klinik für Endokrinologie und Diabetologie, Luzern, Switzerland, [2]Luzerner Kantonsspital, Klinik für Gynäkologie und Geburtshilfe, Luzern, Switzerland, [3]Arztpraxis, Suter Herz und Hormone, Wolhusen, Switzerland

Case presentation: A postmenopausal woman presented with new-onset severe hirsutism (Ferriman-Gallwey Score of 29 points) and acne. Laboratory evaluation revealed markedly elevated androgen levels: total testosterone 11 nmol/L (reference range: 0.07 - 1.56 nmol/L), free testosterone 29.8 pmol/L (reference range: 2.8 - 8 pmol/L) and androstenedione 13.89 nmol/L (reference range: 0.66 - 3.79 nmol/L), with normal DHEAS levels, effectively excluding an adrenal source and pointing toward an ovarian origin. Initial ovarian imaging was unrevealing: pelvic sonography showed no ovarian masses, and CT demonstrated only multiple uterine fibroids up to 5.5 cm, without distinct ovarian lesions. However, given the severity of the hyperandrogenemia, further tumor localization was pursued. An ^{18}F-FDG PET-CT subsequently identified a 1.6 × 2.2 cm FDG-avid lesion in the right ovary. Following multidisciplinary tumor board discussion, the patient underwent bilateral

laparoscopic adnexectomy. Histopathology revealed a 39-mm mixed sex cord–stromal tumor consistent with a moderately differentiated Sertoli–Leydig cell tumor (SLCT). Tumor staging according to UICC 2017 TNM was pT1a. Genetic analysis demonstrated a somatic pathogenic *DICER1* mutation. Postoperative endocrinological evaluation is pending.

Clinical implications: This case emphasizes the critical importance of recognizing ovarian androgen-secreting tumors as a cause of severe hyperandrogenism in peri- and postmenopausal women. In this population, the abrupt onset and rapid progression of virilizing features, combined with markedly elevated testosterone levels and normal DHEA-S, should raise strong suspicion for an ovarian source, even in the absence of clear detectable lesions on conventional imaging. Small androgen-producing ovarian tumors, particularly sex cord–stromal tumors, may evade detection by ultrasound and CT, leading to diagnostic delay and prolonged exposure to excessive androgens. The present case also highlights the value of functional imaging in this diagnostic setting. When biochemical evidence of ovarian hyperandrogenemia is compelling, advanced modalities such as ^{18}F-FDG PET-CT can facilitate tumor localization, enabling timely surgical intervention and rapid biochemical and clinical remission.

BP18

Fever, rash and the eschar: spotting rickettsiosis

P. Schmid[1], P. Rochat[1], M. Moos[2], R. Fulchini[3], A.D. Kistler[1]

[1]Spital Thurgau AG, Klinik für Innere Medizin Kantonsspital Frauenfeld, Frauenfeld, Switzerland, [2]Spital Thurgau AG, Interdisziplinäre Intensivstation Kantonsspital Frauenfeld, Frauenfeld, Switzerland, [3]Spital Thurgau AG, Infektiologie, Frauenfeld & Münsterlingen, Switzerland

Case presentation: A 74-year-old male with type 2 diabetes mellitus and liver fibrosis presented to the emergency department with a four-day history of fever, worsening malaise, drowsiness and confusion. Clinical and laboratory findings revealed septic shock with acute kidney injury, cholestatic and hepatocellular hepatopathy, thrombocytopenia and impaired plasmatic blood coagulation. A thoracoabdominal computed tomography showed low-volume perihepatic ascites and lymphadenopathy of the hepatic hilum. Empiric beta-lactam antibiotic treatment was initiated and the patient was transferred to the intensive care unit. After his wife reported a tick bite three weeks earlier in Turkey, a faint disseminated maculopapular rash and an eschar (centrally necrotic area) on the dorsal upper arm were noted. Antibiotic therapy was switched to doxycycline on suspicion of spotted fever. While initial serologies for rickettsiosis, tularemia and leptospirosis on day six after fever onset were negative, PCR from an eschar biopsy was positive for *Rickettsia conorii*, confirming Mediterranean spotted fever. On day 14, rickettsial serology (IgM and IgG) became positive.

Due to persistent metabolic acidosis, invasive ventilation and hemodialysis were necessary. Additionally, cerebral MRI demonstrated vasculitis, and hepatic injury progressed, presumably due to vasculitis and drug toxicity. Under treatment with doxycycline and steroids, the patient slowly improved and doxycycline was stopped after 10 days. However, the further course was complicated by disseminated intravascular coagulopathy, recurrent spontaneous bacterial peritonitis and bacteremia. Ultimately, a decision was made to withhold further life support and the patient died from multi-organ failure.

Clinical implications: This case illustrates a severe course of rickettsiosis, a zoonotic infection caused by gram-negative bacteria of the genus Rickettsia, transmitted primarily by arthropod vectors such as ticks, fleas and mites. The patient presented with the classic triad of fever, rash and eschar after a tick bite. Due to the unspecific presentation of rickettsiosis with flu-like symptoms, precise history taking and clinical exploration are crucial for timely diagnosis and treatment initiation. An eschar at the site of a tick bite is an important diagnostic hint. Initially negative serology is a diagnostic pitfall, highlighting the importance of repeated serological testing and ideally PCR from a tissue sample.

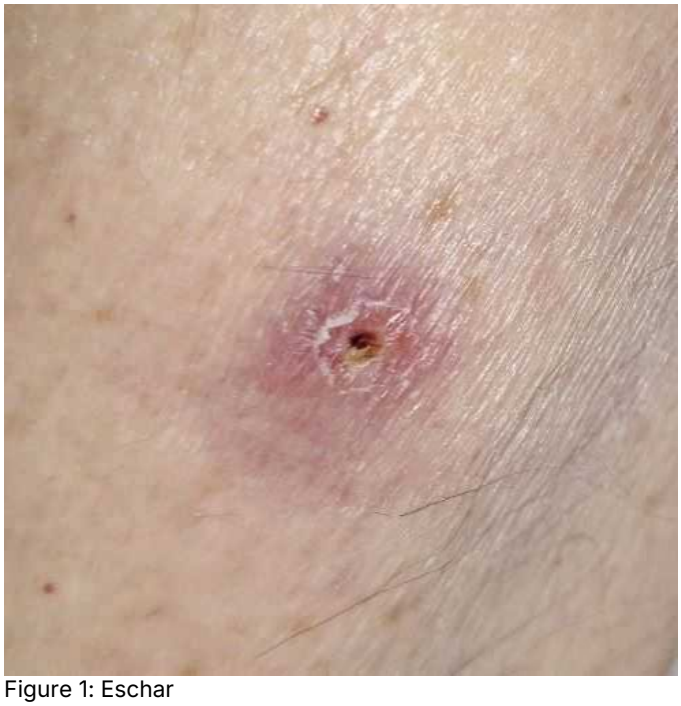


Figure 1: Eschar

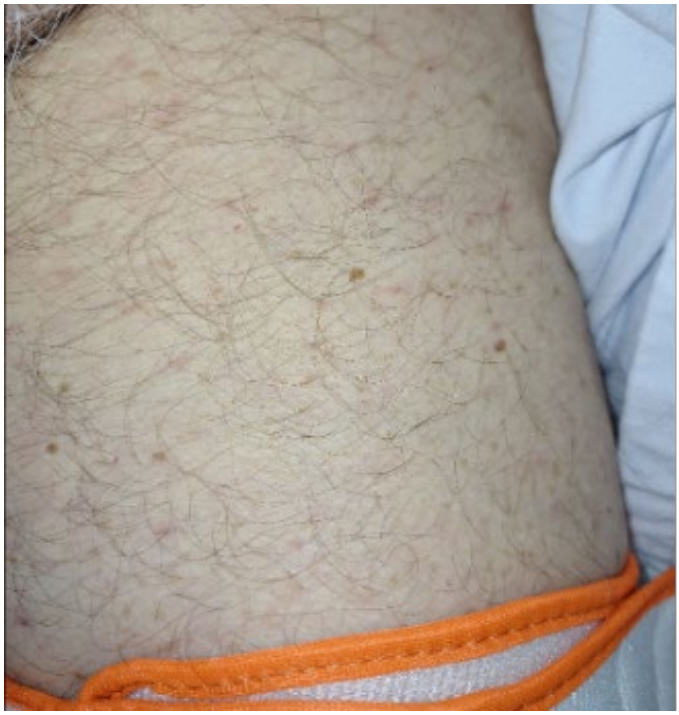


Figure 2: Maculopapular rash

BP19

When bone protection backfires: biphosphonate-induced Addisonian crisis

A. Seibel[1], M. Bigger[1]

[1]*Stadtspital Triemli, Departement Innere Medizin, Zürich, Switzerland*

Case presentation: **Learning Objective**

Recognize bisphosphonates as a potential trigger of adrenal crisis in patients with adrenal insufficiency.

Case: A 67-year-old man was admitted to the emergency department (ED) in the evening via air ambulance due to acute reduction in consciousness. According to his partner, he had received a zoledronate infusion the day before. That evening, he had already felt febrile and reported myalgias. On the day of presentation, he developed recurrent vomiting, abdominal pain, and progressively worsening confusion. His medical history was notable for metastatic melanoma, complicated by panhypopituitarism following ipilimumab-induced hypophysitis, for which he takes hydrocortisone and levothyroxine daily. Upon arrival in our ED, the patient appeared septic with markedly mottled skin. He was hypotensive, tachycardic, and febrile at 38.8 °C. Blood glucose and oxygen saturation were normal. He was agitated and severely confused. The remainder of the clinical examination was unremarkable, except for a diffusely tender abdomen. Laboratory results including arterial blood gas analysis showed no pathologies except CRP was moderately elevated (68mg/l). A CT scan of the thorax and abdomen, as well as PCR for respiratory viruses, revealed no evidence of infection. Initial therapy consisted of crystalloid boluses, co-amoxicillin, and 100 mg hydrocortisone given his history of hypophysitis requiring steroid replacement. Approximately two hours later, he was fully oriented, and his vital signs gradually normalized. He was admitted for monitoring on double his usual hydrocortisone dose. As subsequent blood and urine cultures remained negative, empirical antibiotics were discontinued, and he was discharged after three days.

Clinical implications: **Discussion:** The sudden onset of vomiting, abdominal pain, altered mental status, and hypotension are typical features of an Addisonian crisis. In this patient with secondary adrenal insufficiency, the crisis was precipitated by zoledronate. No infection or alternative trigger was identified. Zoledronate is known to trigger an acute-phase reaction, typically presenting with fever and myalgias. Rare case reports describe Addisonian crisis following zoledronate infusion in patients with adrenal insufficiency. Given the increased risk of osteoporosis in this population, bisphosphonate therapy is often necessary. Administering a stress dose of hydrocortisone and close monitoring after zoledronate infusion should be considered.

BP20

When the kidney loses thyroid hormones: hypothyroidism in nephrotic syndrome

C. Wenker[1], I. Heinimann[1], E. Potlukova[1], F. Burkhalter[2]

[1]*Kantonsspital Baselland, Innere Medizin, Bruderholz, Switzerland,* [2]*Kantonsspital Baselland, Nephrologie, Bruderholz, Switzerland*

Case presentation: A 50-year-old man presented with rapid weight gain of 8 Kg within two weeks with progressive swelling of lower extremities and raised blood pressure. He attributed the symptoms to recent onset of proton pump inhibitor. Relevant comorbidities included type 1 diabetes mellitus, autoimmune thyroiditis, arterial hypertension, and hypercholesterolemia. On clinical examination, the blood pressure was 143/69mmHg, heart rate 88bpm and pronounced anasarca. Laboratory values showed a normal creatinine of 71 µmol/l, CRP in normal range, low albumin with 22 g/l, and a marked proteinuria of 8.5 g per day. Upon diagnosis of nephrotic syndrome, the dosage of the renin–angiotensin–aldosterone system blockade was increased, and diuretic therapy was initiated. Kidney biopsy revealed minimal change glomerulonephritis. Due to lack of clinical improvement, the patient was hospitalized for intravenous diuretic therapy and immunosuppressive therapy with rituximab 1g as glucocorticoids as first line treatment were contraindicated due to type 1 diabetes. Unexpectedly, laboratory testing revealed manifest hypothyroidism with TSH of 68 mU/L, FT4 of 13.2 pmol/l and FT3 of 2.4 pmol/L, despite chronic levothyroxine therapy (125 ug/day). We interpreted this as renal loss of thyroid hormones due to the nephrotic syndrome and increased the substitution to 200 ug/day. A second dose of rituximab was given 3 weeks after the first dose. On follow-up one week later, the proteinuria declined to 3g/d, anasarca disappeared the patient lost 8kg. The TSH decreased to 44.6 mU/l.

Clinical implications: Thyroid dysfunction in nephrotic syndrome is common (21-23%) (4) and results from massive urinary protein loss, including thyroid hormone-binding proteins such as thyroxine-binding globulin and transthyretin. This leads in reduced circulating thyroid hormone levels and hypothyroidism, especially in preexisting thyroid disease with diminished functional reserve. Hypothyroidism may further increase the water retention, deteriorating the edema. Moreover, it predicts poorer treatment response and outcomes (5). In our patient, proton pump inhibition might also have contributed due to diminished resorption of levothyroxine. Taken together, thyroid function should be closely monitored in patients with nephrotic syndrome.

E-POSTERS – SWISS SOCIETY OF GENERAL INTERNAL MEDICINE (SSGIM)

P1

Aromatherapy and phytotherapy for sleep quality in hospitalized patients with somatic medical conditions: a systematized review

L. Abdelnour[1], C. Berna Renella[2], M. Méan[3]

[1]*Student at Lausanne University Hospital (CHUV) and University of Lausanne, Faculté de Biologie et de Médecine (FBM), Lausanne, Switzerland,* [2]*Lausanne University Hospital (CHUV) and University of Lausanne, Pain Center, Division of Anesthesiology, Lausanne, Switzerland,* [3]*Lausanne University Hospital (CHUV) and University of Lausanne, Department of Internal Medicine, Lausanne, Switzerland*

Background: Sleep disorders are common in hospitalized patients impairing recovery and increasing care needs. Although sedative-hypnotics are widely prescribed, they carry significant risks, especially in older adults. Aromatherapy and phytotherapy are promising non-pharmacological alternatives, yet their effects in hospitalized adults remains uncertain. This systematized review synthesizes evidence from randomized controlled trials (RCTs) on their effects on sleep quality and safety.

Methods: PubMed, Embase and CINAHL, as well as reference lists of included articles and relevant systematic reviews were searched for RCTs evaluating aromatherapy or phytotherapy for sleep quality in hospitalized adult patients with somatic conditions, published from January 2015 to February 2025. A web and mobile application for systematic reviews was used for screening (Rayyan, Qatar Computing Research Institute). The primary outcome was quality of sleep using different sleep quality scores. The protocol of this systematized review has been registered with PROSPERO (International Prospective Register of Systematic Reviews, CRD420251270641).

Results: The initial search identified 921 records. After duplicate removal, 694 records were screened by title and abstract, and 79 full-text articles assessed (figure 1). A total of 31 studies met the inclusion criteria. Among the included studies, 27 RCTs evaluated aromatherapy interventions. Lavender essential oil was most frequently studied, followed by *Rosa damascena, Chamomile, Citrus Aurantium, Peppermint, Sweet Orange, Almond, Jasmine, Neroli, Valerian* and one blended formulation. Four RCTs assessed phytotherapy, including *Crocus sativus L., Melissa officinalis L., Valeriana officinalis L.*, and the multi-herbal formula *Cheonwangbosimdan*. Table 1 shows the effects and safety of the most recent studies on lavender essential oil.

Conclusion & clinical implications: Both aromatherapy and phytotherapy appear to improve sleep quality in hospitalized patients, with more consistent evidence for aromatherapy, and especially lavender oil. Evidence for phytotherapy remains limited and heterogeneous, highlighting the need for further high-quality RCTs. Meanwhile aromatherapy may represent promising non-pharmacological and Smarter medicine-aligned alternatives to sedative medications in the hospital setting.

Data extraction

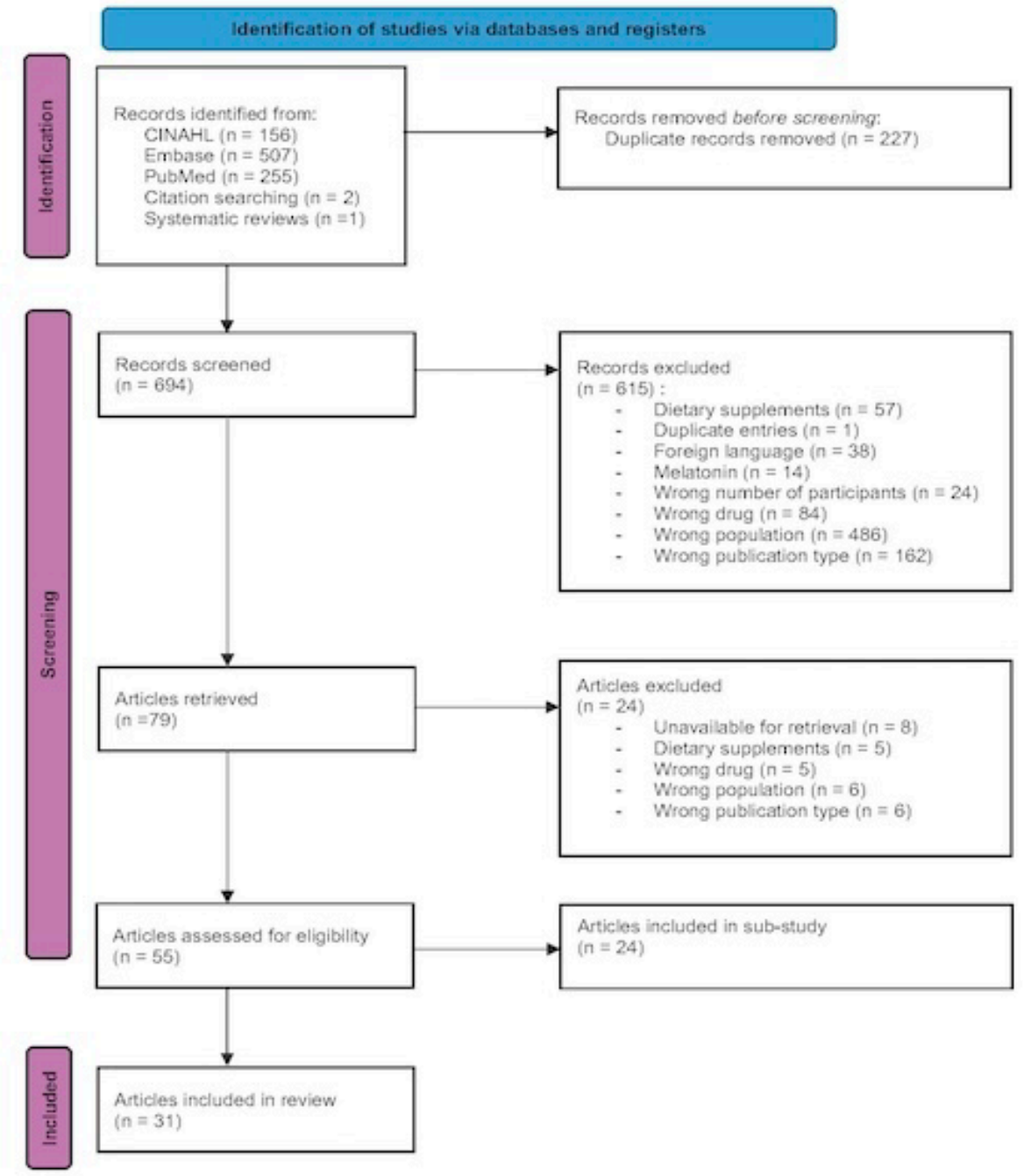


Figure 1. Extraction of the articles

Table 1 : A summary of relevant findings of included Lavender studies.

Authors, year and country	Patients characteristics	Sample size	Tested substance	Intervention	Impact of intervention	Adverse effects
Akkaya et al., 2024, Turkey	Hospitalized burn patients, 2nd and/or 3rd-degree burns covering 5–30% of total body surface	60	Lavender essential oil (Lavandula angustifolia) inhalation	2 groups, n=30 in each group : 1) Lavender inhalation, 2) Placebo inhalation	RCSQ: Sleep quality scores increased significantly in the lavender group; no significant change in the control group. VAS: Pain scores decreased in the lavender group; no significant change in the control group too. STAI: No significant change in anxiety scores	Adverse events were declared, there was none
Davari et al., 2021, Iran	Patients after coronary artery bypass graft (CABG) surgery, in an Open-Heart ICU	50	Lavender essential oil inhalation	2 groups, n=25 in each group : 1) Lavender group, 2) Control group : distilled water	SMHSQ : Sleep quality improved in the lavender group vs control. Physiological parameters: no between-group differences (systolic BP, HR, RR, O_2 saturation, body temperature)	Adverse events were not collected
Emami-Sigaroudi et al., 2021, Iran	Patients undergoing coronary artery bypass graft surgery (CABG)	97	Lavender and damask rose inhalation	3 groups : 1) Lavender group n=34, 2) Damask Rose group n=32, 3) Control group : routine nursing care n=31	PSQI: Better subjective sleep quality in intervention groups vs control; no difference between lavender and damask rose. Less sleep medication used in intervention groups. No significant change in other sleep parameters	Adverse events were not collected
Oshvandi et al., 2021, Iran	Hemodialysis patients, ≥ 1 year of HD and 3 sessions/week, RLS diagnosed with IRLSSG criteria	105	Lavender essential oil (1.5%) and Sweet orange essential oil (1.5%)	3 groups, n=35 in each group : 1) Lavender oil massage, 2) Sweet orange oil massage, 3) Control massage : massage without oil	PSQI: Scores decreased from baseline in both lavender and orange oil massage groups over 3 weeks, indicating improved sleep quality. IRLSSG: RLS scores also decreased, with greater improvement in the lavender group compared to control	Adverse events were not collected
Şahin et al., 2023, Turkey	Conscious cancer patients hospitalized in oncology or palliative care units	45	Lavender essential oil (100%) inhalation	3 groups, n=15 in each group : 1) Foot soak group, 2) Lavender oil group, 3) FL group (combined treatment of Lavender and Foot soak)	ISI: Scores decreased significantly in the Lavender and FL groups, with a greater reduction in the FL group. No significant change in the Foot soak group	Adverse events were declared, there was none
Uslu et al., 2024, Turkey	Abdominal surgery patients, ISI ≤ 7	130	Lavender essential oil (Lavandula angustifolia)	3 groups : 1) Warm Water (WW) bath only n = 46, 2) WW+lavender n = 40, 3) Control group : no intervention except care routine n=44	RCSQ: Sleep quality scores improved in the WW and WW + lavender groups; no significant change in the control group. VAS: Pain scores decreased in the WW and WW + lavender groups; no significant change in the control group too	Severe adverse events were declared, there was none
Yildirim et al., 2025, Turkey	Patients with hematological malignancies receiving chemotherapy, hospitalized ≥6 days	100	Lavender essential oil (Lavandula hybrida) inhalation	2 groups, n=50 in each group : 1) Lavender group, 2) Placebo inhalation group : physiological saline solution	RCSQ: Higher sleep quality in the lavender group compared to control. PFS: Significantly lower fatigue score in the lavender group compared to control	Adverse events were declared, there was none

Abbreviation	Meaning
BP / HR / RR	Blood Pressure / Heart Rate / Respiratory Rate
ICU	Intensive Care Unit
IRLSSG	International Restless Legs Syndrome Study Group
ISI	Insomnia Severity Index
PFS	Piper Fatigue Scale
PSQI	Pittsburgh Sleep Quality Index
RCSQ	Richards-Campbell Sleep Questionnaire
RLS	Restless Legs Syndrome
SMHSQ	St. Mary's Hospital Sleep Questionnaire
STAI	State-Trait Anxiety Inventory
VAS	Visual Analog Scale

P2

Determinants of unspecified hospital malnutrition (E46) in Switzerland, 2012–2022

T. Afifa[1,2], M.-V. Pedro[1]

[1]Lausanne University Hospital (CHUV) and University of Lausanne, Department of Medicine, , Internal Medicine, Lausanne, Switzerland, [2]University of Management and Technology, Department of Nutrition and Dietetics, School of Health Sciences, Lahore, Pakistan

Background: Hospital malnutrition remains an important yet insufficiently recognized clinical problem, contributing to poor outcomes and increased healthcare utilization. This study aimed to examine temporal trends and factors associated with unspecified malnutrition (ICD-10 E46) between 2012 and 2022 using national data from Switzerland.

Methods: A retrospective analysis of the Swiss Hospital Discharge Database was performed, including 604,905 malnourished adult hospitalizations with or without an ICD-10 E46. Demographic, regional, and clinical characteristics were assessed using bivariate and multivariate analyses. Multivariable logistic regression was used to study the relationship of E46 with patient outcomes, including ICU admission, in-hospital mortality, and length of stay.

Results: E46 was documented in 30.65% of the sample. The proportion of hospitalizations with unspecified malnutrition changed significantly over time ($p<0.001$) and remained stable after 2018. Regional variations were observed, with significantly higher odds in Tessin followed by Leman. E46 was found to be more frequently observed in the sample with higher in-hospital mortality (OR 1.06, 95% CI 1.04–1.09). Patients hospitalized for five days or less had more than double the odds of a malnutrition diagnosis compared with those with longer stays (OR 2.26, 95% CI 2.22–2.30).

Conclusion & clinical implications: Efforts to reduce the reliance on the non-specific E46 diagnosis should consider the demographic, clinical, and regional factors associated with its use. These findings highlight the need for standardized nutritional assessment across Swiss hospitals to mitigate adverse outcomes and optimize resource use.

P3

Long-term cardiovascular disease and mortality risk across cardiovascular-kidney-metabolic syndrome stages in the general population

N.s. Ahanchi[1], R. De La Harpe[2], B. Delabays[2], P. Vollenweider[2], J. Vaucher[2]

[1]Fribourg Hospital and University of Fribourg, Department of Medicine and Specialties, Internal Medicine, Fribourg, Switzerland, [2]Lausanne University Hospital and University of Lausanne, Department of Medicine, Internal Medicine, Lausanne, Switzerland

Background:

Cardiovascular disease (CVD), chronic kidney disease (CKD), and type 2 diabetes often coexist . The American Heart Association recently introduced the cardiovascular-kidney-metabolic (CKM) syndrome. This study aimed to investigate the longitudinal association between CKM stages and the risk of incident Cardiovascular disease (CVD), atherosclerotic CVD (ASCVD), and all-cause mortality (ACM) in the general population, and to examine whether these associations differ by sex.

Methods: We analyzed data from 5,752 adults enrolled in the population-based CoLaus|PsyCoLaus cohort and classified participants into CKM stages 0–4 at baseline. Stage 0: no CKM risk factors; Stage 1: excess/dysfunctional adiposity; Stage 2: metabolic risk factors and/or moderate- to high-risk CKD; Stage 3: very high predicted CVD risk per SCORE2 or very high-risk CKD; and Stage 4: clinical CVD. We applied Cox regression to incident outcomes.

Results: Among 5,752 participants (53.2% women; mean age: women 53.1 ± 10.7, men 52.3 ± 10.7 years), there were 580 CVD events, 381 ASCVD events, and 723 deaths over 14.3 years. CKM stage distribution differed by sex. In men, stages 0–4 were 9.9%, 13.3%, 62.6%, 9.4%, and 4.8%; in women 26.1%, 13.7%, 56.8%, 1.7%, and 1.7%. Versus stage 0, stages 2–3 showed higher risks of CVD (HR 1.69 and 3.21) and ASCVD (HR 1.57 and 2.81), and stages 2–4 were associated with higher ACM (HR 1.51, 1.78, and 2.11). Associations were stronger in men, especially at stage 3, while in women stage 3 was most strongly linked to ACM.

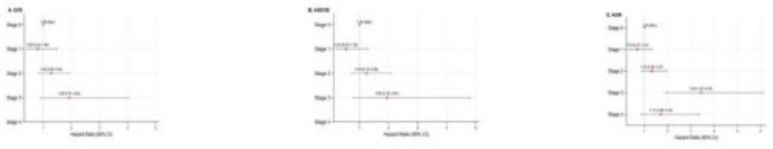
Conclusion & clinical implications: In this population-based cohort, higher CKM stages (2 to 4) were strongly associated with CVD, ASCVD, and ACM, with increased risks of CVD and ASCVD in men and of ACM in women, particularly at stage 3. Implementation of CKM in clinical practice has the potential to improve early identification of high-risk individuals in the general population.

Table 1. Baseline characteristics of the study population according to different stages of CKM syndrome

Characteristic	CKM stages					p for trend
	Stage 0	Stage 1	Stage 2	Stage 3	Stage 4	
Number (%)	1,066 (18.5)	778 (13.5)	3,429 (59.4)	309 (5.4)	186 (3.2)	
Age, years	46.9 ± 8.6	49.1 ± 9.5	54.0 ± 10.5	63.0 ± 8.7	62.8 ± 8.8	<0.001
Sex						
Male, n (%)	266 (25)	358 (46)	1685 (49.2)	253 (82.6)	134 (71.8)	<0.001
Female, n (%)	800 (75)	420 (54)	1,737 (50.7)	53 (17.3)	51 (28.1)	<0.001
Smoking status						
Current, n (%)	312 (29.2)	217 (27.8)	798 (42)	150 (49)	44 (24.3)	<0.001
Former, n (%)	297 (27.8)	235 (30.2)	1185 (34.6)	94 (30.7)	105 (58)	<0.001
Never, n (%)	457 (42.8)	326 (41.9)	1438 (23.4)	62 (20.3)	32 (17.7)	<0.001
Alcohol consumption						
Abstainers, n (%)	288 (27)	222 (28.5)	943 (27.5.4)	68 (22.2)	31 (17.1)	0.103
Moderate, n (%)	724 (68)	490 (62.9)	2099 (61.3)	183 (59.8)	111 (61.3)	0.003
Heavy, n (%)	54 (5)	66 (8.4)	379 (11.1)	55 (17.9)	39 (25.3)	<0.001
Education level						
Low, n (%)	438 (42.1)	406 (52.1)	1980 (57.9)	206 (67.3)	121 (66.5)	<0.001
Middle, n (%)	314 (29.1)	215 (27.3)	806 (24)	74 (23)	39 (21.5)	<0.001
High, n (%)	318 (29.8)	161 (20.7)	636 (18.1)	30 (9.7)	25 (12)	<0.001
MetS = n (%)	0 (0.0)	0 (0.0)	1067 (31.1)	197 (63.8)	101 (54.3)	<0.001
BMI, kg/m2	21.7 ± 1.9	25.9 ± 3.2	26.5 ± 4.5	28.5 ± 4.5	28.2 ± 4.4	<0.001
WC, cm	76.5 ± 7.4	88.4 ± 9.6	91.0 ± 12.7	101.1 ± 13.2	98.8 ± 13.2	<0.001
SBP, mmHg	112 ± 9	115 ± 8	133 ± 15.5	151 ± 21	137 ± 19	<0.001
DBP, mmHg	70 ± 6.5	72 ± 5.5	83 ± 10.0	87 ± 12.4	80 ± 11.1	<0.001
HDL,mg/dL	71.0 ± 15.6	64.4 ± 14.9	62.2 ± 17.2	51.9 ± 12.7	55.4 ± 15.3	<0.001
FBG, mg/dL	90 (86.4–93.6)	99 (91.8–104.4)	97 (91.8–104.4)	110 (97.2–135.0)	102.6 (93.6–115.7)	<0.001
TG, mg/dL	70.9 (53–88.6)	79.7 (70.9–106.3)	115.1 (79.7–159.4)	150.6 (106.3–221)	124.0 (95.2–177.1)	<0.001
hs-CRP, mg/L	0.7 (0.4–1.3)	1.1 (0.6–2.2)	1.4 (0.7–3.1)	2.2 (1.1–4.3)	1.8 (1.05–3.35)	<0.001
eGFR, mL/min/1.73m2	89.1 (13.2)	89.5 (13.9)	84.5 (15.1)	78.1(18.2)	77.7 (16.1)	<0.001
ACR , mg/g	4.9 (3.5 – 7.9)	4.8 (3.4 -7.6)	5.86 (3.8-10.8)	10.6 (5.9- 30.1)	9.1 (4.62- 25.7)	<0.001
Antidiabetic agents, n (%)	0 (0.0)	0 (0.0)	93 (3.3)	77 (27.8)	27 (15.0)	<0.001
Antihypertensive agents, n (%)	0 (0.0)	0 (0.0)	804 (24.0)	138 (44.7)	148 (79.0)	<0.001

Data are presented as mean ±SD, median (interquartile range), or n (%).BMI, body mass index; DBP, diastolic blood pressure; FBG, fasting blood glucose; HDL-C, high-density lipoprotein cholesterol; hs-CRP, high-sensitivity C reactive protein; LDL-C, low-density lipoprotein cholesterol; MetS, metabolic syndrome; SBP, systolic blood pressure; SD, standard deviation; TC, total cholesterol; TG, triglycerides; WC, waist circumference; eGFR, estimated glomerular filtration rate; ACR, urinary albumin-to-creatinine ratio (mg/g); Alcohol consumption: "abstainers": (0 unit/week), "moderate drinkers" (1–21/1–14 units/week for men/women) or "heavy drinkers" (>=21/>=14 units/week for men/women)

Women



Men

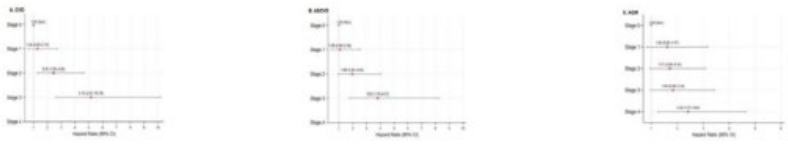


Figure 1. Sex specific Hazard ratios for cardiovascular events, atherosclerotic cardiovascular disease (ASCVD), and all-cause mortality by cardiovascular-kidney-metabolic (CKM) syndrome stages. CKM, cardiovascular-kidney-metabolic; ASCVD, atherosclerotic cardiovascular disease. ACM = all-cause mortality. *For CVD and ASCVD, CKM Stage 4 (prevalent clinical CVD) was excluded from the models, whereas it was included in analyses of ACM.

P4

Large increase in eligible adults after impact of revised 2025 ESC/EAS guidelines for the management of dyslipidaemias: a population-based study

N.s. Ahanchi[1], R. De La Harpe[2], B. Delabays[2], J. Barbier[1], P. Marques-Vidal[2], N. Rodondi[3,4], B. Gencer[5], P. Vollenweider[2], J. Vaucher[1,2]

[1]Fribourg Hospital and University of Fribourg, Department of Medicine and Specialties, Internal Medicine, Fribourg, Switzerland, [2]Lausanne University Hospital and University of Lausanne, Department of Medicine, Internal Medicine, Lausanne, Switzerland, [3]Bern University Hospital, University of Bern, Inselspital, Department of General Internal Medicine, Bern, Switzerland, [4]University Bern, Institute of Primary Health Care (BIHAM), Bern, Switzerland, [5]Lausanne University Hospital (CHUV) and University of Lausanne, Department of Cardiology, Lausanne, Switzerland

Background: In 2025, the ESC/EAS released a focused update on the management of dyslipidaemias replacing 2019/2021 guidelines. New guidelines introduced fixed LDL-cholesterol thresholds and substantially broadened eligibility for lipid-lowering therapy (LLT). The population-level consequences of these changes, particularly across sex, were not investigated.

Methods: We used data from a large prospective study established in 2003-2006 in Lausanne (Switzerland) with a follow-up until 2021 Participants aged 35–75 years, free of atherosclerotic cardiovascular disease (ASCVD) and not taking LLT at baseline, were classified into cardiovascular risk categories using SCORE2/SCORE2-OP with age-specific thresholds (according to 2019/2021 guidelines) and fixed thresholds (2025), including considering a statin for those with a risk < 2% if LDL ≥3.0 mmol/l. LLT eligibility was assigned according to each guideline, and incident ASCVD events were assessed during follow-up.

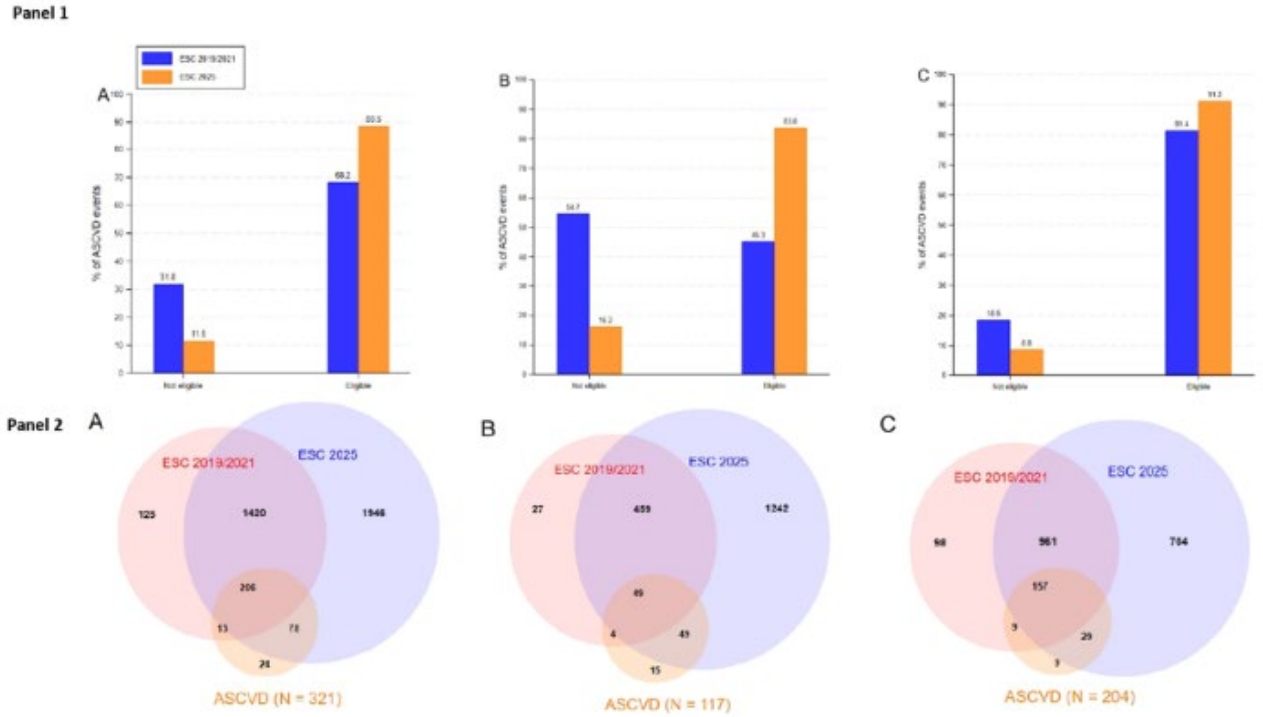
Results: Of 5,010 participants, LLT eligibility rose from 35.2% under the 2019/2021 guidelines to 72.9% under the 2025 guidelines . Sex-stratified analyses showed that the 2025 guidelines expanded eligibility more substantially among females (234% increase) than males (51%). During a median follow-up of 14.3 years, 321 ASCVD events occurred, and the proportion occurring in LLT-eligible individuals rose from 68.2% to 88.5% between the two guidelines. The percentage of ASCVD in LLT-eligible individuals increased from 45.3% to 83.8% in females and from 81.4% to 91.2% in males. Most ASCVD in men and overall occurred among eligible under both guidelines, whereas in females a large proportion occurred among those newly eligible under 2025 guidelines.

Conclusion & clinical implications: The 2025 ESC/EAS guidelines on management of dyslipidaemia drastically increase the number of people eligible for LLT, especially among females. However, with nearly three-quarters of adults aged 35–75 years meeting eligibility criteria under the 2025 guidelines, such extensive treatment coverage raises concerns about the lack of specificity of the thresholds, how to implement these guidelines in clinical practice, and their population-level and economic implications.

Table1. Baseline characteristics of participants eligible for LLT under the 2019/2021 and 2025 ESC/EAS guidelines

		ESC 2021/ 2019			ESC2025	
Characteristic	Total sample	Female	Male	Total sample	Female	Male
N	1,764 (35.20)	539 (30.56)	1,225(69.44)	3,650 (72.90)	1,799(49.29)	1,851(50.71)
Age, years	57.04 ± 10.73	61.49 ± 9.79	55.08 ± 10.54	53.55 ± 10.40	55.17 ± 10.22	51.97 ± 10.33
Smoking status						
Current, n (%)	770 (43.65)	235 (43.60)	535 (43.67)	1,016 (27.84)	474 (26.35)	542 (29.28)
Former, n (%)	519 (29.42)	96 (17.81)	423 (34.53)	1,190 (32.60)	490 (27.24)	700 (37.82)
Never, n (%)	475 (26.93)	208 (38.59)	267 (21.80)	1,444 (39.56)	835 (46.41)	609 (32.90)
Education level						
Low, n (%)	1,076 (61.10)	387 (72.12)	689 (56.26)	2,038 (55.87)	1,103 (61.38)	935(50.51)
Middle, n (%)	411 (23.23)	115 (21.19)	296 (24.12)	877 (24.03)	438 (24.32)	439 (23.74)
High, n (%)	277 (15.67)	37 (6.69)	240 (19.62)	735 (20.10)	258 (14.30)	477 (25.74)
Weekly alcohol use	4 (0-10)	2 (0–7)	8 (3–16)	4 (0-8)	2 (0–5)	7 (2–14)
BMI, kg/m2	26.94 ± 4.36	26.59 ± 5.06	27.10 ± 4.00	25.95 ± 4.32	25.43 ± 4.69	26.47 ± 3.85
WC, cm	94.38 ± 12.32	87.96 ± 12.73	97.21 ± 11.02	89.75 ± 12.61	84.20 ± 11.95	95.14 ± 10.75
SBP, mm Hg	137.42 ± 18.46	138.56 ± 20.39	136.92 ± 17.53	129.48 ± 17.83	126.69 ± 18.47	132.19 ± 16.74
DBP, mm Hg	83.14 ± 11.43	81.47 ± 11.27	83.88 ± 11.43	80.14 ± 11.06	78.44 ± 10.90	81.79 ± 10.97
LDL, mmol/L	3.79 ± 1.00	4.03 ± 1.08	3.69 ± 0.95	3.74 ± 0.74	3.74 ± 0.73	3.73 ± 0.74
HDL, mmol/L	1.45 ± 0.38	1.65 ± 0.40	1.37 ± 0.33	1.61 ± 0.42	1.78 ± 0.42	1.44 ± 0.35
TG, mmol/L	1.40 (1.00–2.00)	1.30 (1.00–1.70)	1.50 (1.00–2.20)	1.20 (0.90–1.70)	1.10 (0.80–1.40)	1.30 (0.90–1.90)
Glucose, mmol/L	5.55 (5.20–6.05)	5.40 (5.00–5.90)	5.60 (5.20–6.10)	5.40 (5.00–5.80)	5.20 (4.90–5.60)	5.50 (5.20–6.00)
TC, mmol/L	6.01 ± 1.14	6.32 ± 1.21	5.88 ± 1.08	5.97 ± 0.88	6.07 ± 0.85	5.88 ± 0.90
eGFR (mL/min)	84.66 (72.98–94.49)	78.77 (68.06–89.62)	87.17 (75.28–96.28)	85.51 (74.71–95.94)	81.92 (72.07–93.15)	88.67 (77.43–98.48)
ACR, mg/g	6.26 (4.04–12.25)	7.76 (4.89–14.56)	5.74 (3.74–10.92)	5.59 (3.81–9.91)	6.32 (4.34–10.88)	4.98 (3.49–8.73)
Antidiabetic, n (%)	84 (4.76)	23 (4.27)	61 (4.98)	81 (2.22)	23 (1.28)	58 (3.13)
Antihypertensive, n (%)	401 (22.73)	155 (28.76)	246 (20.08)	578 (15.84)	301 (16.73)	277 (14.96)

Data are presented as mean ±SD, median (interquartile range), or n (%). BMI, body mass index; DBP, diastolic blood pressure; eGFR, estimated glomerular filtration rate; ACR, urinary albumin-to-creatinine ratio (mg/g), HDL-C, high-density lipoprotein cholesterol; hs-CRP, high-sensitivity C reactive protein; LDL-C, low-density lipoprotein cholesterol; MetS, metabolic syndrome; SBP, systolic blood pressure; SD, standard deviation; TC, total cholesterol; TG, triglycerides; WC, waist circumference



Panel 1: Distribution of ASCVD events across lipid-lowering therapy (LLT) eligibility categories according to the 2019/ 2021 and 2025 ESC guidelines. **Panel 2**: Overlap between lipid-lowering therapy eligibility under the 2019/2021 and 2025 ESC guidelines and incident ASCVD. **A, B,** and **C** correspond to the total sample, females, and males, respectively.

P5

Omega-3-fatty-acid eicosapentaenoic acid (EPA) associates with reduced QTc in patients with atrial fibrillation

M. Allemann[1,2], P. Lee[3], C. Altomare[4], C. Balbi[1,2], A. Seeberger[1,2], E. Pavlidou[1,2], S. Aeschbacher[5], J. Kuhle[6], L. Bonati[7], J. Bardoczi[8,9], T. Reichlin[10], G. Camici[1,11], T.F. Lüscher[1,12], N. Rodondi[9,13], S. Osswald[14,15], M. Kühne[5], D. Conen[16], L. Barile[4], J.-H. Beer[1,2], on behalf of the Swiss-AF investigators

[1]University of Zurich, Center for Molecular Cardiology, Schlieren, Switzerland, [2]Kantonsspital Baden, Innere Medizin, Baden, Switzerland, [3]CERENEO, Center for Neurology & Rehabilitation, Vitznau, Switzerland, Vitznau, Switzerland, [4]Istituto Cardiocentro Ticino Ente Ospedaliero Cantonale, Laboratory for Cardiovascular Theranostics, Lugano, Switzerland, [5]University Hospital of Basel, Cardiovascular Research Institute Basel, Basel, Switzerland, [6]University Hospital of Basel, Department of Neurology, Multiple Sclerosis Center and Research Center for Clinical Neuroimmunology and Neuroscience Basel (RC2NB), Basel, Switzerland, [7]University Hospital of Basel, Department of Neurology and Stroke Center, Basel, Switzerland, [8]University of Bern, Institute of Primary Health Care (BIHAM), Bern, Switzerland, [9]Inselspital Bern, Department of General Internal Medicine, Bern, Switzerland, [10]University Hospital of Bern, Department of Cardiology, Bern, Switzerland, [11]University Hospital Zurich, Department of Research and Education, Zurich, Switzerland, [12]Imperial College and King's College, Royal Brompton & Harefield Hospitals, London, Switzerland, [13]University of Bern, Institute of Primary Health Care, Bern, Switzerland, [14]Cardiovascular Research Institute Basel (CRIB), Cardiovascular Research Institute Basel (CRIB), Basel, Switzerland, [15]University Hospital Basel, Cardiology Division, Department of Medicine, Basel, Switzerland, [16]McMaster University, Population Health Research Institute, Hamilton, United States

Background: Atrial fibrillation (AF) is the most common cardiac arrhythmia, with incidence increasing with age, partly due to age-related cardiac fibrosis and structural remodeling. Omega-3 fatty acids (n-3 FAs) have anti-arrhythmic and cardioprotective properties as shown in experimental and clinical studies, although results remain inconsistent.

Methods: Among 2'415 patients enrolled in the Swiss-AF cohort (ClinicalTrials.gov Identifier: NCT02105844), red-blood-cell n3-FA levels were quantified as percentages of total n3-FAs. Linear logistic regression models were used to analyse associations of n3-FAs with QTc. Model 1 was adjusted for age and sex, and model 2 fully adjusted for demographic and clinical covariates. Restricted cubic splines were used to assess potential non-linear associations of continuous n3-FAs concentration and QTc intervals. For the in vitro study, we treated hiPSC-derived cardiomyocytes with different doses of EPA and DHA. The QTc interval was measured using a Multielectrode array (MEA).

Results: Total n3-FA, EPA, and DHA inversely associated with QTc. In the fully adjusted model, only EPA (20:5 n-3) remained associated with QTc per doubling of concentration (β -3.20 ms, 95% CI -5.97 – -0.44, p=0.02) (Figure 1A). A trend toward shorter QTc across increasing EPA quartiles was observed (Figure 1B). Patients in the third quartile of EPA associated with shortest QTc intervals compared to the lowest (β: -6.68 ms, 95% CI -10.92 – -2.44, p<0.01) (Figure 1C). Spline analyses confirmed a modest non-linear association between EPA and QTc, with the lowest QTc at intermediate EPA level (Figure 1D). Our in vitro study revealed a dose-dependent reduction in QTc with EPA, but not with DHA; changes in heart rate were more modest in both (Figure E).

Conclusion & clinical implications: Higher circulating EPA levels are associated with shorter QTc intervals in patients with AF,

with evidence of a u-shaped relationship. In vitro data support the hypothesis, that n3-FA, particularly EPA, may beneficially modulate ventricular repolarization. Further studies are warranted to clarify the clinical relevance and mechanistic basis of EPA-mediated electrophysiological modulation in AF.

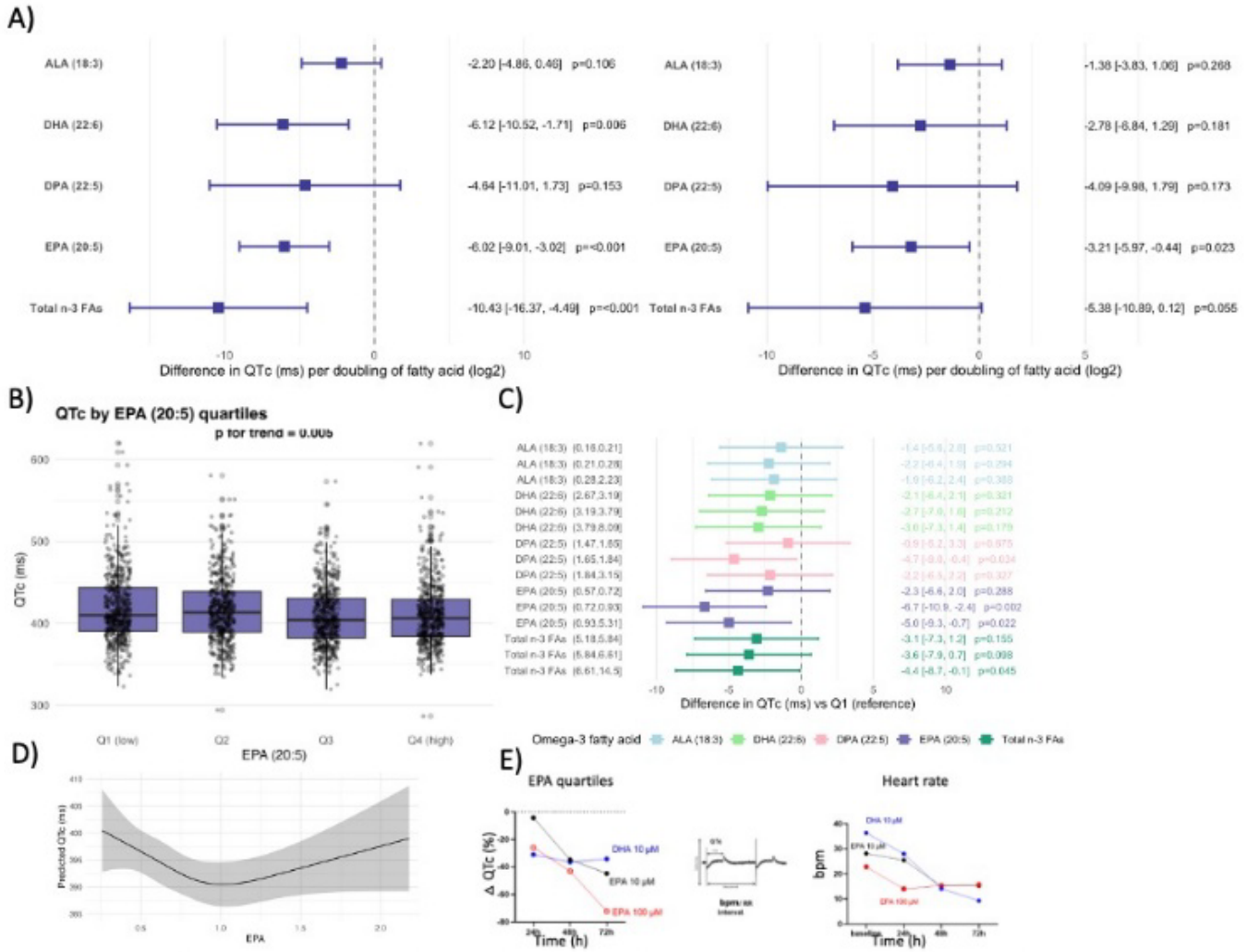


Figure 1. (A) Associations between individual n3-FAs and total n-3 fatty acids with QTc interval modeled as continuous exposures. Effect estimates represent the difference in QTc (ms) per doubling (log2) of fatty acid concentration. Model 1 is adjusted for age and sex; Model 2 is adjusted for age, sex, history of stroke, AF-type, diabetes, physical activity, arterial hypertension, diabetes, coronary artery disease, chronic kidney disease, smoking status, use of oral anticoagulation and antiplatelet medication Points indicate regression coefficients and horizontal lines indicate 95% confidence intervals. **(B)** Fully adjusted associations between quartiles of n3-FAs and QTc interval. Estimates represent the difference in QTc (ms) compared with the lowest quartile (Q1). Error bars denote 95% confidence intervals. Different colors correspond to individual n3-FAs. **(C)** Distribution of QTc interval across quartiles of EPA (20:5 n-3). Boxplots show median and interquartile range. **(D)** Restricted cubic spline showing the adjusted continuous association between EPA concentration and QTc interval. The solid line represents the adjusted mean QTc, and the shaded area represents the 95% confidence interval. **(E)** Experimental data illustrating changes in QTc and heart rate (bpm) over time following exposure to EPA and DHA at different concentrations.

P6

Thermal testicular contraception: a mixed-method approach exploring users and their partners' experiences

M. Badre[1], R. Rahban[2,3], E. Hautier[4], S. Arsever[4]

[1]University of Geneva, ,, Geneva, Switzerland, [2]University of Geneva, Department of Genetic Medicine and Developpement, Geneva, Switzerland, [3]Swiss Center for Applied Human Toxicology, ,, Basel, Switzerland, [4]Hôpitaux Universitaires de Genève, Département de médecine communautaire et de premier recours, Genève, Switzerland

Background: Limited contraceptive methods are available for male. Thermal testicular contraception (TTC) involves wearing a device which maintains the testis in supra-scrotal position for 15 hours per day, increasing the testicular temperature, hence inhibiting sperm production.

A few studies have shown promising results in terms of efficacy, safety and reversibility but no large-scale study confirmed these results and no device was homologated. A growing number of individuals are using this method.

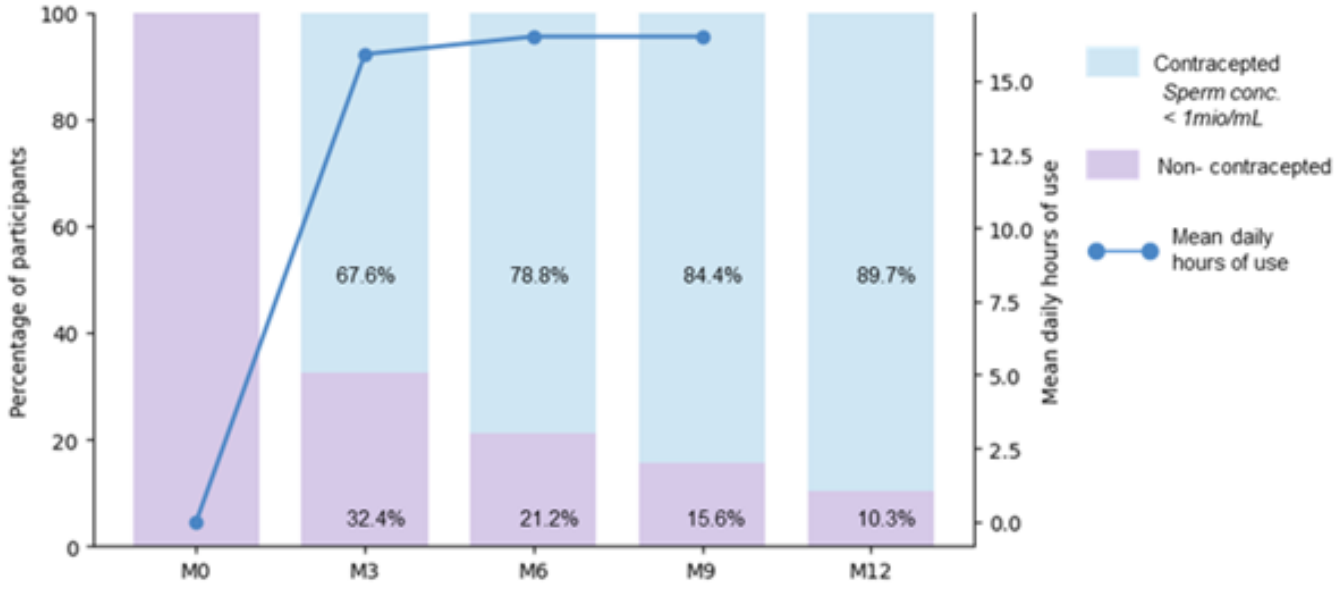
Methods: The objectives of this study were to describe the profile of TTC users, to explore their and their partner's experience during their first year of use, and to describe the effect of TTC on semen parameters and reported pregnancies.

We adopted a mixed-method approach. 34 participants were included in the quantitative part of the study and followed during 12 month. They completed questionnaires and underwent semen analysis, assessing sperm concentration and motility. The contraceptive threshold was defined as below 1 million sperm per mL. A total of 19 user participants (UP) and 12 of their partner's (PP) provided in-depth qualitative interview, which were analysed thematically. We present here the preliminary results of this study.

Results: UP had a mean age of 28.8 years, were mostly cisgender men (97.1%, with 1 non-binary person) and were highly educated. All UP started TTC with the silicone ring Androswitch. UP reported using their TTC devices according to recommendation, with 88% of them being contracepted at least once during the study (figure 1). No pregnancy was declared during the study, but many UP or PP were using alternative methods at some point (57.6% at 6 months, 31.2% at 9 months). Almost half of the UP reported sides effects (SE) at three months (47.1%), but only 6.7% at 9 months. Most prevalent SE were redness and itchiness. Qualitative data showed that they were deemed as acceptable. Overall, participant's satisfaction with TTC was high (>90%).

Conclusion & clinical implications: TTC was found to be a safe an acceptable contraception option on this small sample. These promising results should however be complemented by larger scale study exploring efficacy, safety and reversibility. Primary care physician should be able to offer counseling on TTC to people interested and refer them when needed.

Altogether, these findings underline the importance of further developing, studying, and promoting contraceptive options for males.



	M0 (n=34)	M3 (n=34)	M6 (n=33)	M9 (n=32)	M12 (n=29)
Mean daily hours of use	0 (±0)	15.9 (±1.5)	16.5 (±2.2)	16.5 (±1.9)	
Sperm concentration (Mio/mL)	130.4 (±82.6)	1.4 (±2.3)	4.2 (±14.2)	0.9 (±1.7)	0.7 (±1.7)
Contracepted					
1	0	23 (67.6%)	26 (78.8%)	27 (84.4%)	26 (89.7%)
0	34 (100%)	11 (32.4%)	7 (21.2%)	5 (15.6%)	3 (10.3%)

Figure 1 : TTC use and its effect on sperm concentration

P7

When cancer ends, the heart remains at risk: a systematic review and meta-analysis of prognostic factors

J. Ayoson[1,2], B. Casanova[1,2], N. Müller[1,2], R. Tomar[1,2], E. Hägler-Laube[3], M.M. Wertli[1,4]

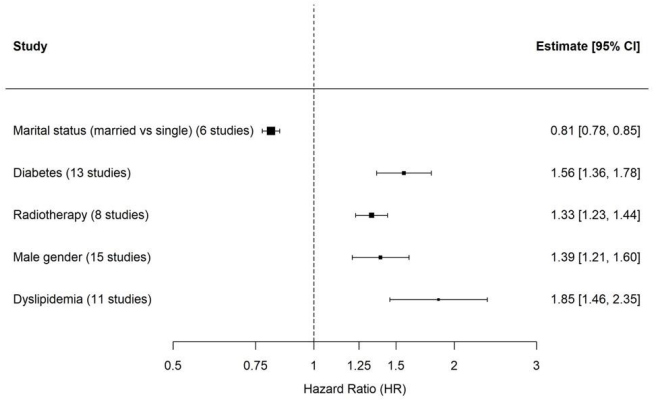
[1]Kantonsspital Baden, Department of Internal Medicine, Baden, Switzerland, [2]Kantonsspital Baden, Clinical Trial Unit, Baden, Switzerland, [3]Kantonsspital Baden, Division of Cardiology, Baden, Switzerland, [4]University Hospital Bern, University of Bern, Division of General Internal Medicine,, Bern, Switzerland

Background: Cardiovascular disease (CVD) is a leading cause of long-term morbidity and mortality among adult cancer survivors. This elevated risk reflects a complex interaction between traditional cardiovascular risk factors, cancer therapies, and cancer-related biological processes. The aim was to systematically identify and synthesize prognostic factors for cardiovascular disease (CVD), cardiovascular mortality, and heart failure in adult cancer survivors.

Methods: In this systematic review and meta-analysis, we searched MEDLINE, Embase, Web of Science, and the Cochrane Library for observational studies that assessed prognostic factors of adult cancer survivors with at least five years of follow-up after primary cancer diagnosis for CVD. The primary outcome was CVD, cardiovascular mortality, or heart failure. Titles, abstracts, and full texts were screened independently by two reviewers who assessed the study quality and extracted predefined data. Meta-analysis using random effects models was performed when at least three studies reported comparable outcomes and effect measures.

Results: Out of 3,247 records, 362 full-text articles were read in full text and assessed for eligibility. Finally, 197 studies were included in the qualitative synthesis. The main prognostic factors for cardiovascular mortality were radiotherapy (8 studies; HR 1.33, 95% CI 1.23–1.44), male sex (15 studies; HR 1.39, 95% CI 1.21–1.60), diabetes (13 studies; HR 1.56, 95% CI 1.36–1.78), and dyslipidemia (11 studies; HR 1.85, 95% CI 1.46–2.36). Being married resulted in a significantly lower CVD risk (6 studies; HR 0.81, 95% CI 0.78–0.85) **(Fig.1).**

Conclusion & clinical implications: Male sex, radiotherapy exposure, diabetes, and dyslipidaemia are key predictors of cardiovascular disease in adult cancer survivors, whereas married status is protective. Incorporating cardiovascular risk stratification into survivorship care is essential to improve long-term outcomes.



P8

Sex-associated healthcare expenditures related to cardiovascular risk factors: evidence from the CoLaus|PsyCoLaus study

J. Barbier[1,2], J. Schwarz[1], M. Amiguet[1], M. Guth[1], A.M. Lasserre[3,4], J. Vaucher[2,5], C. Clair[1]

[1]Unisanté, University Center for Primary Care and Public Health & University of Lausanne, Department of ambulatory care, Lausanne, Switzerland, [2]Fribourg hospital and University of Fribourg, Department of Medicine and Specialties, Fribourg, Switzerland, [3]Lausanne University Hospital and University of Lausanne, Department of Psychiatry, Lausanne, Switzerland, [4]Center for Addiction and Mental Health, Institute for Mental Health Policy Research, Toronto, Canada, [5]Lausanne University Hospital and University of Lausanne, Department of Medicine, Lausanne, Switzerland

Background: Traditional (e.g., smoking, hypertension) and non-traditional (e.g., sleep disorder, major depressive disorder (MDD)) cardiovascular risk factors (CVRF) represent a large share of healthcare expenditures (HCE) in Switzerland. However, their relationship is not well studied and might differ between women and men. We aimed to assess the association between CVRF and HCE in the overall population and separately in women and men.

Methods: We used data from the population-based Colaus|PsyCoLaus cohort study (N=6,733 participants, aged 35–75 years at baseline (2003)). Participants from the third follow-up (2018–2021) (N = 1,441; mean age 63.0 years; 58% women) were included in sex-stratified two-part regression models of annual total HCE, with CVRF as explanatory variables. We derived (1) the probability of incurring non-zero HCE ("Probability" part as odds ratio, 95% confidence interval (CI)) and (2) a multiplicative factor for the median level of expenditures among people with expenditures ("Level" part as cost ratio, 95% CI). CVRF were included in Model 1 separately, and as the composite cardiovascular score SCORE2(-OP) in Model 2.

Results: In women, non-traditional CVRF were more frequent, whereas traditional CVRF predominated in men. Median expenditures were higher in women than in men (CHF 3,466 (IQR 1,276–7,953) versus CHF 2,461 (IQR 404–6,467)). Overall, diabetes, obesity, sleep disorders, MDD, and higher SCORE2(-OP) risk categories were associated with higher HCE, whereas, surprisingly, hypertension was linked to lower HCE. In sex-stratified analyses, diabetes was associated with higher HCE in men. In women, obesity, sleep disorders, MDD, and higher SCORE2(-OP) risk categories were associated with higher HCE.

Conclusion & clinical implications: Patterns of association between CVRFs and HCE varied between women and men, with non-traditional CVRF and higher SCORE2(-OP) risk category associated with higher expenditures in women but not in men. These findings suggest that integrating sex-specific considerations into CVRFs assessment and prevention strategies could improve both clinical outcomes and the efficiency of healthcare resource allocation.

P9

Cardiometabolic risk factors in young adults: somatic cohort profile of the CoLaus|PsyCoLaus offspring study

J. Barbier[1,2], J. Signer[3], D. Wicht[3], B. Delabays[3], R. De La Harpe[3], P. Marques-Vidal[3], M. Preisig[4], P. Vollenweider[3], J. Vaucher[3]

[1]Unisanté, University Center for Primary Care and Public Health and University of Lausanne, Department of Ambulatory Care, Lausanne, Switzerland, [2]Fribourg hospital and University of Fribourg, Department of Medicine and Specialties, Fribourg, Switzerland, [3]Lausanne University Hospital and University of Lausanne, Department of Medicine, Lausanne, Switzerland, [4]Lausanne University Hospital and University of Lausanne, Department of Psychiatry, Lausanne, Switzerland

Background: Cardiovascular risk factors (CVRF) remain highly prevalent and have rapidly shifted in Europe (e.g., few smoking and increased overweight). Family-based, cross-age comparisons within a shared environment help elucidate transmission patterns and external influences. We aimed to describe the cardiometabolic profile of a novel community-based cohort of young adults, and to compare it with those of their parents.

Methods: We established a prospective cohort study, the CoLaus|PsyCoLaus Offspring study, by recruiting the children (aged 18–35 years) of participants from the CoLaus|PsyCoLaus cohort, based in Lausanne. Offspring and parents were recruited concomitantly (2019-2023) after parental consent to contact eligible children. Offspring were invited by a letter, followed by a phone call to schedule an in-person visit including a physical examination and blood/urine collection. We present a descriptive analysis of the first somatic data collection in offspring, including CVRF and sociodemographic variables, and compare the findings with those derived from their parents (CoLaus|PsyCoLaus third follow-up (FU3)).

Results: Out of the 2881 eligible offspring, 979 (34.0%) participated in the somatic part of the CoLaus|PsyCoLaus Offspring study. We included 830 participants in the analyses (51.3% women, mean age: 26.9 ± 4.5). Twenty percent were overweight and 7.5% obese. Hypertension prevalence was three times higher in males (12.0%) than females (4.2%). Diabetes was uncommon (0.5%). Elevated LDL cholesterol (≥2.6 mmol/L) was more frequent in males, and 32% of all participants were current smokers. Compared with offspring, CoLaus|PsyCoLaus FU3 participants (N= 3151, women 55.0%, mean age 65.0 ± 9.7) had a lower prevalence of smoking (17%).

Table 1: Cardiometabolic profile of CoLaus|PsyCoLaus Offspring and CoLaus|PsyCoLaus third follow-up participants

Conclusion & clinical implications: Using novel data from the CoLaus|PsyCoLaus Offspring study, we showed that excess weight was already common in young adults, while smoking was even more frequent than in their parents. These findings highlight the need for early prevention targeting modifiable CVRF from young adulthood. The prospective CoLaus|PsyCoLaus Offspring study is expected to serve as a valuable resource for investigating health and disease among young adults in Switzerland.

	CoLaus|PsyCoLaus cohort			
	Third follow-up (FU3)[1] (N=3151)		Offspring[1] (N=830)	
Variable	**Females (N=1735)**	**Males (N=1416)**	**Females (N=426)**	**Males (N=404)**
Age (years)	65.7 (SD±9.6)	64.2 (SD±9.6)	26.5 (SD±4.4)	27.4 (SD±4.5)
Marital status				
Married	756 (44%)	921 (65%)	45 (11%)	48 (12%)
Divorced	473 (27%)	269 (19%)	8 (1.9%)	2 (0.5%)
Single	306 (18%)	181 (13%)	372 (87%)	354 (88%)
Widowed	200 (12%)	45 (3.2%)	1 (0.2%)	0 (0%)
Household income (CHF)				
≤ CHF 90'000	NA	NA	214 (50%)	222 (55%)
> CHF 90'000	NA	NA	64 (15%)	82 (20%)
Do not wish to answer	NA	NA	15 (3.5%)	12 (3.0%)
Do not know	NA	NA	133 (31%)	88 (22%)
Having a professional activity	NA	NA	302 (71%)	289 (72%)
Body mass index (kg/m²)	25.8 (SD±5.0)	26.8 (SD±4.0)	23.1 (SD±4.5)	24.1 (SD±4.5)
BMI categories				
Normal (18-25 km/m2)	854 (49%)	499 (35%)	325 (76%)	279 (69%)
Overweight (25-30 kg/m2)	556 (32%)	645 (46%)	69 (16%)	95 (24%)
Obesity (≥30 kg/m2)	325 (19%)	272 (19%)	32 (7.5%)	30 (7.4%)
Blood pressure				
Hypertension	757 (44%)	815 (58%)	18 (4.2%)	50 (12%)
Systolic blood pressure (mmHg)	125.8 (SD±18.5)	131.8 (SD±16.8)	110.6 (SD±9.6)	123.1 (SD±10.6)
Diastolic blood pressure (mmHg)	76.6 (SD±10.1)	79.1 (SD±10.9)	72.5 (SD±9.0)	74.4 (SD±9.7)
Diabetes	108 (6.2%)	159 (11%)	3 (0.7%)	1 (0.2%)
LDL cholesterol (mmol/L)				
<1.4mmol/l	25 (1.4%)	51 (3.6%)	18 (4.2%)	13 (3.2%)
1.4–<1.8mmol/l	64 (3.7%)	63 (4.4%)	61 (14%)	37 (9.2%)
1.8–<2.6mmol/l	367 (21%)	370 (26%)	214 (50%)	184 (46%)
2.6–<3.0mmol/l	311 (18%)	224 (16%)	67 (16%)	70 (17%)
3.0–<4.9mmol/l	915 (53%)	684 (48%)	66 (15%)	99 (25%)
≥4.9mmol/l	53 (3.1%)	24 (1.7%)	0 (0%)	1 (0.2%)
Smoking status				
Former	631 (36%)	631 (45%)	51 (12%)	60 (15%)
Current	268 (15%)	227 (16%)	127 (30%)	142 (35%)

[1]FU3: follow-up 3; SD: standard deviation.

P10

Optimizing long-term follow-up of a statin discontinuation trial in multimorbid older adults: a mixed methods study

J.B. Bardoczi[1,2], E. D'Ospina[1,2], S. Atighetchi[1,2], F. Kühni[1], N. Rodondi[1,2], C.E. Aubert[1,2]

[1]Institute of Primary Health Care (BIHAM), General Internal Medicine, Bern, Switzerland, [2]University Hospital of Bern, Inselspital, Department of General Internal Medicine, Bern, Switzerland

Background: Non-adherence and loss to follow-up threaten the validity of clinical trials, particularly in studies of older adults with multimorbidity, where long-term participation is challenging. In this population, it is particularly important to ensure that study procedures and outcomes are acceptable, understandable, and aligned with patient priorities. We assessed experiences, barriers, and priorities of older patients in a statin deprescribing trial to optimize long-term follow-up.

Methods: We conducted a mixed-methods study between July and September 2025, involving participants from the STREAM trial (NCT05178420) a multicenter, randomized controlled trial evaluating the impact of discontinuing vs continuing statin therapy in older multimorbid adults in primary prevention, who had completed the two-year follow-up within the trial. Data were collected in parallel using a survey and semi-structured interviews. The survey included both closed- and open-ended questions, developed based on the Theoretical Domain Framework (TDF). Quantitative responses were summarized descriptively, and qualitative data coded using a combined deductive and inductive thematic approach. Results from both components were integrated in meta-inferences.

Results: Of the 320 STREAM participants completing the two-year follow-up, 256 (80%) answered the survey, and 20 participated in interviews. Mean age was 80 years (SD 4.6) with 56% male. Most respondents (87%) rated annual follow-up calls as clear and well organized, with 85% preferring phone contact. Ninety percent agreed that reminders facilitate participation, and most valued speaking with the same study staff. Qualitative findings reinforced the importance of clear communication, feedback, transparency about study progress, and practical suggestions such as earlier reminders, identifiable phone numbers, and continuity of contact to support long-term adherence. Overall, quantitative and qualitative findings were largely convergent.

Conclusion & clinical implications: Our study identifies simple, actionable strategies that can help increase the feasibility and acceptability of long-term follow-up procedures, and thus optimize adherence and trial success. This can reduce loss to follow-up and support a more patient-centered approach in future trials in older multimorbid adults.

Figure 1. Distribution of patient-rated importance of study outcomes. Importance was rated on a 1-10 scale (1=not important, 10=very important) and grouped into low (1-3), moderate (4-7), and high (8-10). Bars represent the percentage of participants.

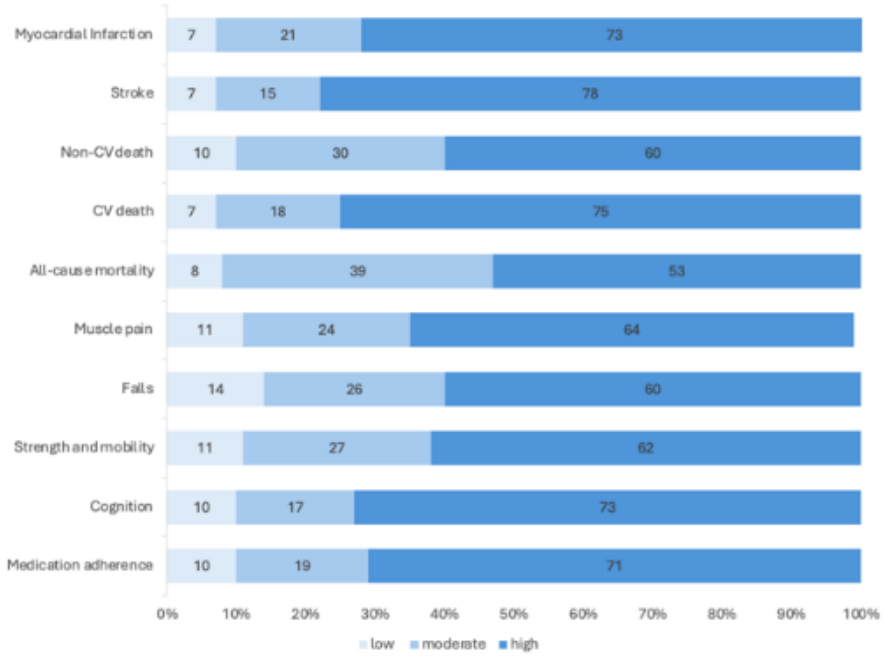
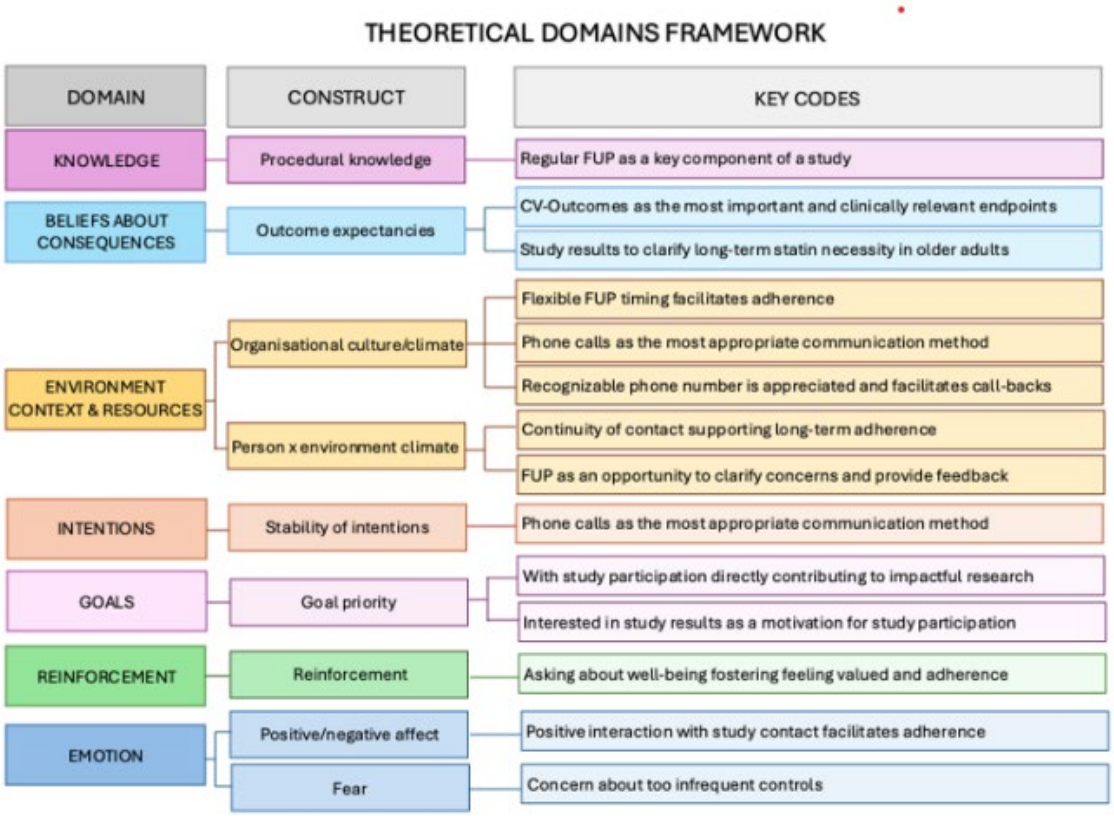


Figure 2. Main domains identified in the qualitative analysis with key codes

* FUP=follow-up time; SMS=short message service; CV=cardiovascular



P11

Temporal trends of ischemic heart disease incidence and cardiovascular risk factors over 15 years: a population-based cohort of middle-aged adults

A. Barrier[1], J. Barbier[2,3], R. De La Harpe[4], S. Fournier[1], O. Muller[1], P. Vollenweider[4], J. Vaucher[2,4]

[1]Lausanne University Hospital and University of Lausanne, Department of Cardiology, Lausanne, Switzerland, [2]Fribourg hospital and University of Fribourg, Department of Internal Medicine and Specialties, Fribourg, Switzerland, [3]Unisanté, University Center for Primary Care and Public Health & University of Lausanne, Department of Ambulatory Care, Lausannesui, Switzerland, [4]Lausanne University Hospital and University of Lausanne, Department of Internal Medicine, Lausanne, Switzerland

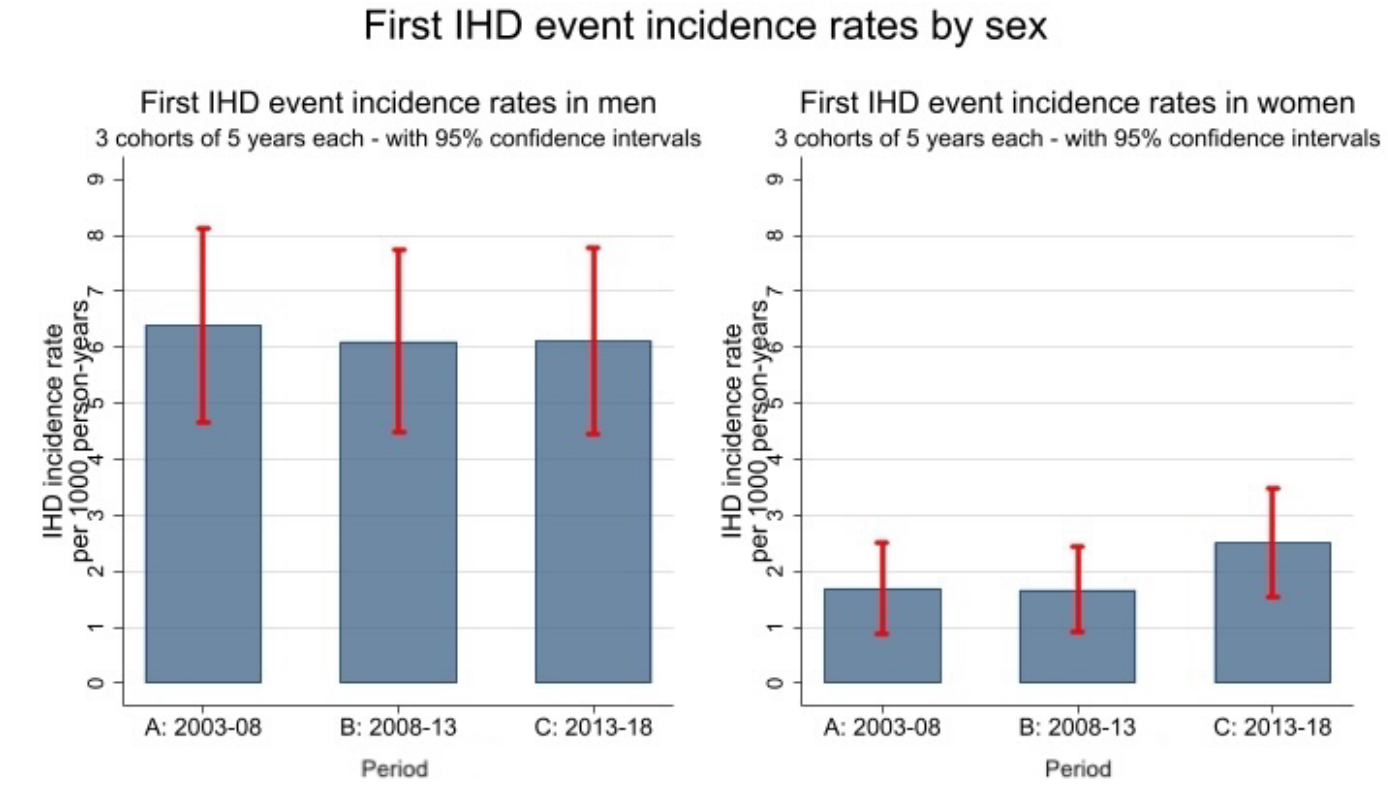
Background: Although cardiovascular prevention and risk factor management have substantially changed in recent decades, ischemic heart disease (IHD) remains common in middle-aged and older adults. We sought to quantify 15-year changes in both cardiovascular risk factor (CVRF) prevalence and IHD incidence among adults aged 50-75 years.

Methods: We used data of the prospective CoLaus|PsyCoLaus study (Lausanne, Switzerland). CVRF prevalence was assessed cross-sectionally at baseline (2003-2006) and at the third follow-up (FU, 2018-2021) among participants aged 50-75 years at each time point. Incident IHD cases (first event only) were determined using adjudicated events and compared across three successive 5-year periods (A: 2003-2008, B: 2008-2013, C: 2013-2018), overall and stratified by sex.

Results: At baseline, 3644 participants were included (55.1% women; mean age ± standard deviation (SD): 60.8 ±6.9 years). Hypertension (HTA), diabetes, smoking and obesity prevalences were 52.0%, 9.4%, 23.1% and 18.6% respectively. At FU, 2567 participants were included (54.1% women; mean age ± SD: 61.7 ±7.1 years) with lower prevalences of HTA (43.1%), diabetes (8.3%) and smoking (17.7%), but a higher prevalence of obesity (19.0%). Over 56,580 person-years, 218 incident IHD events occurred (2.85 per 1000 person-years) with stable incidence rates across periods of time spanning 15 years, overall and when stratifying by sex.

Conclusion & clinical implications: Favourable 15-year trends in several CVRF in community-dwellers did not translate into reduced IHD incidence, pointing to a sustained coronary disease burden in adults aged 50-75 years. Future studies should investigate whether IHD incidence remains elevated in different contexts and/or detection of IHD improved.

Figure 1: Sex-stratified ischemic heart disease incidence rates (95% CI) per 1000 person-years across three periods



P12

Socio-economic pattern in polypharmacy and medication review among older adults: a population-based study

J. Bochud[1]

[1]*Université de Fribourg, #PopHealthLab, Fribourg, Switzerland*

Background: Polypharmacy, defined as the daily use of five or more medications, is common among older adults, and is a risk factor for falls, hospitalizations, morbidity, and mortality. It represents a growing challenge for primary care. To optimize treatments and reduce these risks, different healthcare professionals perform medication reviews. We described the prevalence of polypharmacy and medication review among older adults in Switzerland, and their association with socio-economic status.

Methods: We performed a secondary analysis of the 2024 International Health Policy Survey in Switzerland. A representative sample of 2'634 community-dwelling Swiss adults aged 65 and over completed the survey. We estimated the prevalence of polypharmacy (regular use of ≥ 5 prescribed medications) and of medication review in the last 12 months as reported by participants. Socio-economic status was defined by income and education. We assessed the associations between participants' characteristics, polypharmacy, and medication review using stratified analyses and prevalence ratios (PRs) estimated with modified Poisson regression. Weighted estimates were used to account for the survey's sampling design.

Results: A total of 2'152 participants were included (51% women; mean age: 75 years [min: 65; max: 101]). Some 20% reported taking ≥ 5 prescribed medications daily. Polypharmacy prevalence increased with age (from 14% at ages 65–74 to 32% at ≥ 85), multimorbidity (PR = 6.5 versus no multimorbidity), number of physicians consulted in the last 12 months (PR = 6.5 for ≥ 4 versus 0 physician), lower education level (PR = 1.4 for primary versus tertiary), and lower income (PR = 1.3 for CHF < 5000 versus ≥ 9000). Among participants with polypharmacy, 84% reported a medication review in the past 12 months. Review rates were similar across levels of education and were more frequent among those with lower income (PR = 1.2 for CHF < 5000 versus ≥ 9000).

Conclusion & clinical implications: Polypharmacy is frequent among older adults in Switzerland, and more prevalent among those with lower socio-economic status. Most older adults with polypharmacy reported having a medication review in the past year, regardless of socio-economic status. Interventions, such as those targeting and monitoring polypharmacy to optimize medications use, may provide benefits for older patients in Swiss primary care.

P13

Hospital at home versus inpatient care: costs and effectiveness

K. Brändle[1], A. Licht[1], J. Scheller[1], E. Kaufmann[2]

[1]*Hospital at Home AG, Hospital at Home, Zollikon, Switzerland,* [2]*Biostatistics, Statistik, Schwerzenbach, Switzerland*

Background: Rising healthcare costs and pressure on inpatient capacity challenge hospital-based care. Hospital at Home (HaH) provides hospital-equivalent treatment for acutely ill patients at home as an alternative to inpatient care. While international experience exists, Swiss real-world evidence is lacking. This study is the first in Switzerland to compare HaH and inpatient care regarding costs, safety, and patient-related outcomes.

Methods: The primary hypothesis of this observational study claims the costs of HaH treatment being equivalent or cheaper

than those of regular stationary treatment at the clinic Hirslanden. The secondary hypothesis assumes that care at HaH is safe, has a low complication rate and high level of patient satisfaction. The study population consists of 100 patients each of the two types of treatment. Multivariate tests of equivalence and superiority are used to test for cost equivalence and cost-effectiveness, respectively. Secondary endpoints like mortality, rehospitalization, complications, satisfaction, duration and post-treatment factors like follow-up examinations, referrals to other institutions etc. are analyzed in a descriptive explorative way.

Results: A total of 200 patients (100 Hospital-at-Home, 100 inpatient) are planned for inclusion. The study will assess differences in total treatment costs and cost components between care models. Potential cost differences are expected to be driven by differences in resource efficiency, including the use of infrastructure, diagnostics, coordination, and hospital-based services. Clinical outcomes, safety indicators, and patient-reported outcomes will be analysed comparatively between groups.

Conclusion & clinical implications: This study will provide Swiss real-world evidence on the economic and clinical performance of Hospital-at-Home compared with inpatient care. The results may inform the role of HaH as a complementary care model within acute care pathways and contribute to evidence-based discussions on hospital capacity management, resource allocation, and future reimbursement models.

P14

Impact of pulmonary function severity in acute heart failure

S. Carballo[1], A. Galatola[1], N. Garin[2], J. Stirnemann[1], D. Carballo[3]

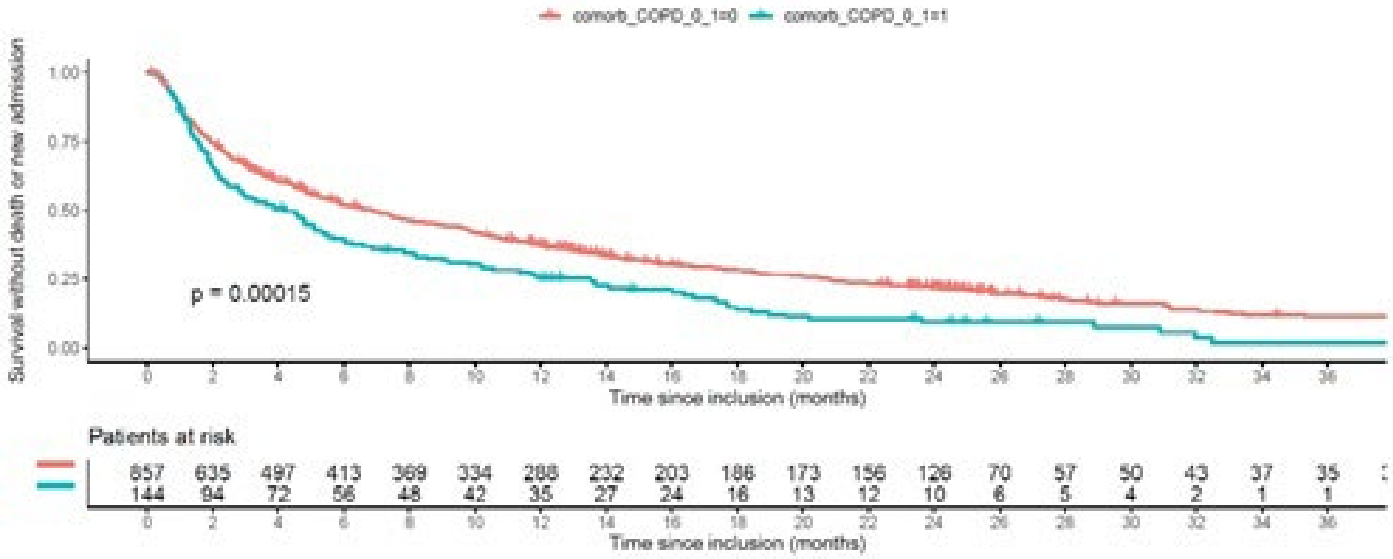
[1]Hôpitaux Universitaires de Genève, Médecine, Genève, Switzerland, [2]Centre hospitalier de Rennaz, Médecine, Rennaz, Switzerland, [3]Hôpitaux Universitaires de Genève, Cardiologie, Genève, Switzerland

Background: Chronic obstructive pulmonary disease (COPD) is a risk factor for mortality in patients with heart failure, but the importance of pulmonary function severity on patient prognosis remains debated. Our objective was to study the severity criteria in patients with acute heart failure (ADHF) and concomitant COPD.

Methods: Analysis of patients recruited in a prospective registry of acute heart failure at the University Hospitals of Geneva, consisting of consecutive patients admitted with ADHF. Patients had symptoms of HF based on the European Society of Cardiology (ESC). Additional inclusion criteria were elevated BNP levels > 100 ng/L, or NT-pro-BNP levels > 300ng/l. Outcomes were collected at 3 months, 12 months and 24 months and yearly afterwards, and included mortality, readmission, clinical state, and medication.

Results: The medical records of 1003 patients recruited from a prospective acute heart failure cohort at Geneva University Hospitals were analyzed. Of these 1003 patients, 144 (14.4%) had COPD. Over a mean follow-up period of 24 months after their inclusion in the study, 613 patients died, including, of which 102 patients (70.8%) were in the COPD group and 511 patients (59.6%) in the non-COPD group (p <0.0001). In multivariate Cox regression analyses, COPD was a significant risk factor for all outcomes. The percentage of predicted FEV1 was not associated with the primary outcome of the study (HR 0.8, 95% CI 0.59–1.09, p = 0.15) or with secondary outcomes.

Conclusion & clinical implications: Mortality in patients with heart failure is high, and the association of COPD with this condition worsens the prognosis for these patients. COPD complications such as pulmonary hypertension, chronic hypoxemia, and right ventricular dysfunction observed in patients with this disease may explain why this condition is a risk factor for worse outcomes in our study. There appears to be a particularly important impact of pulmonary hypertension.



P15

Physical activity, deductibles and individual health expenditures

S. Casso[1], P. Marques-Vidal[2], P. Vollenweider[2]

[1]*Université de Lausanne, Faculté de Biologie et de Médecine, Lausanne, Switzerland,* [2]*Centre Hospitalier Universitaire Vaudois, Département de médecine, Service de médecine interne, Lausanne, Switzerland*

Background: In an increasingly expensive health system like the Swiss one, there is growing interest in finding the factors that drive these expenditures. The aim of the study was to investigate the association between physical activity (PA) and individual health expenditures as the primary outcome and between PA and insurance deductible choice as the secondary outcome.

Methods: Data were collected from the third follow-up (2018–2021) of a prospective cohort study based in Lausanne, Switzerland. Physical activity was collected through an accelerometer worn by participants and converted to moderate-to-vigorous PA (MVPA) time/week. Information about deductibles was self-reported, while health expenditure data were obtained directly from compulsory health insurers. Multivariable analyses were adjusted for cardiovascular risk factors. Additionally, health expenditures analyses were adjusted for deductible categories.

Results: Out of the 3,751 participants, 858 had deductible data, while 360 had data for individual health expenditures. Health expenditures analyses showed higher expenditures in the <150 min/week of MVPA group, 4118 vs. 1987 CHF in the more active group. Multivariable analysis showed a borderline significant effect for MVPA (p=0.073), while age, female sex, and low deductible choice were associated with higher health expenditures. Sex-stratified analyses showed a significant effect of MVPA on health expenditures for women, but not for men. Unadjusted deductible analyses showed that participants with <150min/week of MVPA tended more to choose lower deductibles (300-500 CHF) compared to the other group, while the adjusted analysis was nonsignificant.

Conclusion & clinical implications: Our study showed that MVPA has a direct influence on health expenditures only for women, with a decrease of 10% of individual health expenditures for every extra 30 minutes/week. In addition, sociodemographic and clinical factors drive deductible choice, while MVPA doesn't appear to influence it.

P16

Professional identity formation: a coaching pilot program for senior medical students

R. Naimi[1], C. Christin[1], A. Diana[1], N. Junod Perron[1]

[1]*Geneva University, Faculty of Medicine, Geneva, Switzerland*

Background: As part of a project aiming at supporting the development of medical students' professional identity, we developed and evaluated the impact of a pilot coaching program at the Faculty of Medicine, Geneva, Switzerland.

Methods: Twenty-three senior medical students (coachees) and nineteen physicians (coaches) joined the program between April and June 2025. Coaching training for coaches included two workshops and two online group intervision sessions. We evaluated the program through an online survey including a validated questionnaire (Carney et al.) (Likert scale 1-5) and conducted separate focus groups and interviews with coaches and coachees.

Results: Thirteen students (56%) and fifteen coaches (79%) completed the questionnaire. Both groups evaluated the coaching process positively regarding identification of goals and values, expression of weakness and challenges, development of a shared agenda for progress and definition of objectives (Mean scores > 4.45 (SD 0.60)). Topics raised by coachees mainly included career orientation, stress management, study/life balance, building confidence and emotional debriefing. While coaches' main concerns were about feeling legitimate, coachees particularly valued the coaches' legitimacy and neutral stance. Benefits were increased confidence, autonomy, and self-affirmation and expressed emotions such as appeasement and gratefulness.

Conclusion & clinical implications: A structured and optional coaching program pairing senior physicians with medical students was highly valued and supported key aspects of professional identity development. However, it only included participants who felt comfortable in engaging in this type of reflective work. Maintaining voluntariness appears essential to preserve psychological safety and engagement. Future work must explore how to involve students who would benefit but are unlikely to enroll spontaneously

P17

Impact of health insurers' cost monitoring and economic audits on quality of care and equity in Swiss primary care

P. Cottet[1], O. Corpataux[1], P.-Y. Rodondi[1], C. Podmore[1]

[1]*Université de Fribourg, Institut de Médecine de Famille, Fribourg, Switzerland*

Background: In Switzerland, primary care physicians (PCPs) are routinely subject to insurer cost monitoring based on statistical comparisons, with some identified as outliers and exposed to formal economic audits with potential financial consequences. While intended to promote cost-effective care, concerns suggest unintended effects on clinical practice, equity, and workforce sustainability. No national study has examined their scope or impact on PCPs' practice, well-being, or work satisfaction.

Methods: We conducted a national, cross-sectional mixed-methods study. Semi-structured interviews with 11 PCPs (audited and non-audited) and key stakeholders were analysed using thematic content analysis to develop an anonymous, multilingual online survey. The survey was distributed nationwide by postal invitation to all 11,441 practicing Swiss PCPs listed in the national medical register. Quantitative analyses include descriptive statistics and multivariable regression to assess determinants of audits, reported practice changes, perceived impacts on care quality and equity, and professional consequences. Quantitative analyses are ongoing.

Results: Survey data collection is nearing completion, and quantitative analyses are ongoing. Preliminary findings suggest that routine cost monitoring already prompts anticipatory behavioural changes in a substantial proportion of PCPs. In contrast, formal economic audits are associated with higher levels of stress, perceptions of unfairness, and more marked changes in clinical practice among audited physicians. Reported responses include reduced working hours, increased referral rates, and selective avoidance of patients with higher care needs. Participants also report declining professional satisfaction and express concerns about potential negative effects on access to care for vulnerable populations.

Conclusion & clinical implications: PCPs report that economic control mechanisms in Swiss primary care influence clinical behaviour and professional wellbeing along a continuum from routine cost monitoring to formal audits. These findings raise important questions about unintended consequences for care quality and equity. This study provides the first nationwide evi-

dence to inform policy reforms balancing economic accountability with the preservation of high-quality, equitable primary care.

P18

Knowledge and perception of tick exposure and Lyme borreliosis in Switzerland

M. Covi[1], L.H. Gould[2], E. Colby[3], J.H. Stark[4], C. Nuttens[5]

[1]Pfizer AG, Vaccines & Antivirals Medical Affairs, Zürich, ZH, Switzerland, [2]Pfizer Inc., Global Vaccines Medical Affairs, Pfizer Research & Development, New York, NY, United States, [3]Pfizer Inc., Global Real-World Evidence, New York, NY, United States, [4]Pfizer Inc., Global Vaccines Medical Affairs, Pfizer Research & Development, Cambridge, MA, United States, [5]Pfizer SAS, Global Vaccines Medical Affairs, Pfizer Research & Development, Paris, France

Background: Lyme borreliosis (LB), the most common tick-borne disease in Europe, is caused by various genospecies of *Borrelia burgdorferi sensu lato* and is transmitted to humans through the bite of infected *Ixodes spp* ticks. In Switzerland, data on public knowledge and risk perception of LB, including parents' views on their children's risk, are limited. In 2022, we surveyed adults in 20 European countries on tick awareness and LB concern. This abstract presents the results for Switzerland.

Methods: We used an existing survey panel to conduct an online survey of adults aged 18-65 years old, with recruitment quotas on age, gender, and region. The survey included questions about LB knowledge, perception of tick exposure, and outdoor activities. We conducted descriptive analyses with weighting to adjust for the complex survey design.

Results: Of 1'403 respondents, 98% were aware of ticks and 70% of LB. Among those aware of both, 79% considered LB a severe disease, 33% were concerned about contracting LB, and 27% perceived themselves at risk of contracting LB. Overall, 51% had experienced a tick bite at least once in their lifetime, and 47% always or often conduct tick checks. 560 respondents were parents. Within this subgroup and among those aware of ticks and LB, 53% were concerned or very concerned about their child contracting LB, 44% believed their child was at high or very high risk of contracting LB, and 52% felt confident that their child could avoid exposure to ticks by using prevention measures such as bug spray and long pants.

Conclusion & clinical implications: There is broad awareness of ticks and LB, but with 70% Switzerland ranked lowest in LB awareness among the 20 European countries surveyed. Despite spending considerable time outdoors, even respondents who are aware of ticks and LB do not regularly use preventive measures. Checking for ticks and wearing protective clothing were more frequently reported than avoiding tick-infested areas or using insecticides. Contracting LB thus remains a relevant public health concern in Switzerland.

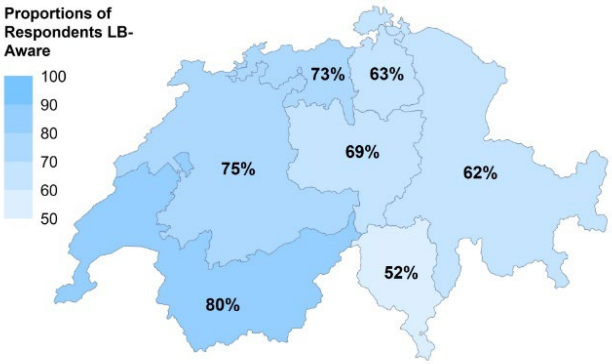


Fig. 1 LB awareness by region.

P19

Bridging the gap: tailoring transitional care pathways for complex and vulnerable youth

S.N. Da Graca Vera Cruz Mandinga[1], A. Toumanova[2], C. Soroken[3], A.-L. Hariel[3]

[1]Department of Primary Care Medicine, Geneva University Hospitals, Switzerland, Department of Primary Care Medicine, Genève, Switzerland, [2]Geneva University Hospitals, Department of Primary Care Medicine, Genève, Switzerland, [3]Geneva University Hospitals, Department of Woman, Child and Adolescent Medicine, Genève, Switzerland

Background: At the Geneva University Hospitals (HUG), approximately 3,000 patients over age 10 with chronic diseases are managed in pediatric care, yet a structured transition pathway to adult services is lacking. This gap affects youth in complex or vulnerable situations, leading to delayed access to specialized adult care, rushed transfers under unstable clinical conditions .The **TRANSAT** project aims to improve hospital-based transitional care through an adaptable pathway for high-need young patients.

Methods: A multidisciplinary working group was formed, including key stakeholders from pediatrics, internal medicine, neuropsychiatry, the disability program, the rare diseases center, and parent-partners. The objectives were to characterize high-need populations, define complexity criteria (institutional and expert-based), and identify specific needs, current care practices, and existing tools. Six structured meetings were held, supported by a targeted literature review on transition models for complex patients

Results: Target populations identified include youth with physical or intellectual disabilities, multiple or rare chronic conditions, and complex life trajectories (e.g., migration). Specific needs were documented across nine key domains, such as sexuality, family dynamics, mobility, communication, social and administrative procedures. Although no universal definition of complexity was established, consensus emerged on the need for a flexible, individualized transition approach. One operational priority identified was the introduction of a multidisciplinary transition case meeting, led by a designated coordinator.

Conclusion & clinical implications: While clinical intuition often guides the recognition of complexity, systematically incorporating a structured, multidisciplinary intervention into a generic pathway is essential to ensure continuity and quality of care for the most complex patients. Evaluating its impact on patients and caregivers will be the next step

P20

End-of-life goals documentation and overnight decision-making in internal medicine

P. Darbellay Farhoumand[1,2], C. Buclin[1,2], A. Berner[1,2], S. Carballo[1,2], N. Garin[1,3], O. Grosgurin[1,2], C. Marti[1,2], J.-L. Reny[1,2], J. Serratrice[1,2], D. Courvoisier[4,5,2], T. Agoritsas[1,6,2]

[1]Geneva University Hospitals, Division of General Internal Medicine, Geneva, Switzerland, [2]Université de Genève, Faculté de Médecine, Genève, Switzerland, [3]Riviera Chablais Hospital, Division of Internal Medicine, Rennaz, Switzerland, [4]Geneva University Hospitals, Quality of Care Division, Genève, Switzerland, [5]Geneva University Hospitals, Division of Rheumatology, Geneva, Switzerland, [6]McMaster University, Department of Health Research Methods, Evidence, and Impact, Hamilton, Canada

Background: Clear documentation of end-of-life goals in the electronic health record is essential to ensure care aligned with patients' values and to guide urgent decision-making during off-hours. In its absence, residents may face high-stakes decisions under time pressure, potentially increasing emotional strain and uncertainty.

Methods: In a prospective real-time observational study conducted in the General Internal Medicine Division of the University Hospitals of Geneva, residents' overnight clinical activity was analysed during 66 evening and night shifts. For all patients requiring medical interventions, demographic and clinical data were extracted from the electronic health record (EHR), including documentation of end-of-life goals. Documentation status was categorized as updated, documented but outdated, or absent. Analyses were descriptive.

Results: Among 589 patients who required at least one overnight medical intervention, 258 (43.8%) had clearly updated end-of-life goals documented in the electronic health record. In 218 patients (37.0%), goals were documented but not updated, while for 113 patients (19.2%) no end-of-life preferences were recorded. Patients were predominantly old and multimorbid, with a median age of 69 years [IQR 56–79], 253 (42.9%) women, and a mean Charlson Comorbidity Index (CCI) of 5.0 (SD 2.8); 255 (43.3%) had severe comorbidity (CCI ≥6).

Conclusion & clinical implications: Despite an electronic incentive in EHR, many inpatients lacked up-to-date end-of-life goals. These highly comorbid patients had a predicted 10-year survival below 20% based on their mean CCI. This shifts sensitive decisions to overnight residents under time pressure and fatigue, increasing emotional strain. Systematic daytime documentation and regular review of goals of care, with structured team communication, may reduce decisional burden and help ensure care consistent with patients' values.

P21

Inside the night shift: clinical problems managed by internal medicine residents

P. Darbellay Farhoumand[1,2], C. Buclin[2,1], A. Berner[2,1], S. Carballo[2,1], N. Garin[3,2], O. Grosgurin[2,1], C. Marti[2,1], J.-L. Reny[4,1], J. Serratrice[2,1], D. Courvoisier[5,6,1], T. Agoritsas[2,1,7]

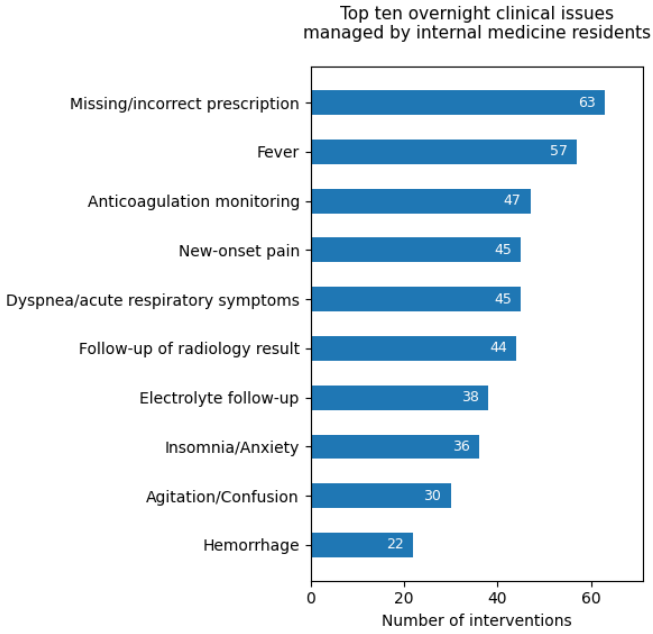
[1]Université de Genève, Faculté de Médecine, Genève, Switzerland, [2]Geneva University Hospitals, Division of General Internal Medicine, Geneva, Switzerland, [3]Riviera Chablais Hospital, Division of Internal Medicine, Rennaz, Switzerland, [4]Hôpitaux universitaires de Genève/Service de Médecine Interne Générale, Médecine, Genève, Switzerland, [5]Geneva University Hospitals, Quality of Care Division, Genève, Switzerland, [6]Geneva University Hospitals, Division of Rheumatology, Geneva, Switzerland, [7]McMaster University, Department of Health Research Methods, Evidence, and Impact, Hamilton, Canada

Background: Night shifts are a core component of internal medicine training, yet little is known about the concrete clinical problems residents manage overnight. Identifying the most frequent issues is essential to improve anticipatory planning, continuity of care, and training priorities in General Internal Medicine.

Methods: We conducted a prospective real-time observational study in the Division of General Internal Medicine of the Geneva University Hospitals. Trained observers shadowed residents during 66 evening and night shifts (632 hours) and recorded all interventions using a light-weight electronic portable device. Each intervention was assigned a primary clinical motive, grouped into five predefined categories: abnormal vital signs, new-onset problems or symptoms, follow-up of existing issues, organizational process-related issues, and communication needs. Analyses were descriptive.

Results: Among 753 medical interventions, the most frequent categories were new-onset problems or symptoms (257, 34.1%) and follow-up of existing issues initiated during daytime care (252, 33.5%). Abnormal vital signs accounted for 139 interventions (15.9%). Organizational process-related issues, such as missing or incorrect prescriptions, represented 93 cases (12.4%), while communication needs with patients or relatives were uncommon (12, 1.6%). Frequent symptom-driven problems included fever, pain, dyspnea or acute respiratory symptoms, agitation or anxiety, and bleeding events. (Figure displays the top ten issues that residents encountered during on-call shifts)

Conclusion & clinical implications: Overnight clinical activity was driven as much by follow-up of daytime care as by new medical issues. Residents frequently managed test results, treatment adjustments, and evolving symptoms, underscoring the importance of continuity of care. As reduced weekly duty hours increase care fragmentation, anticipatory planning, clear management plans, and qualitative handovers are essential. Training should include targeted symptom control inspired by this case-mix, and secure handover techniques.



P22

Is there a causal association between thyroid function and heart failure? a Mendelian randomization study

K. Dembowska[1,2], H. Alwan[1,3], A. Teumer[4,5], M. Medici[6], B.O. Åsvold[7,8], N. Rodondi[1,9]

[1]University of Bern, Institute of Primary Health Care (BIHAM), Bern, Switzerland, [2]University of Bern, Graduate School for Health Sciences, Bern, Switzerland, [3]Lausanne University Hospital, University of Lausanne, Department of Endocrinology, Diabetes and Metabolism, Lausanne, Switzerland, [4]University Medicine Greifswald, Department of Psychiatry and Psychotherapy, Greifswald, Germany, [5]DZHK (German Center for Cardiovascular Research), Partner Site Greifswald, Greifswalddeu, Germany, [6]Erasmus Medical Center, Rotterdam, Department of Internal Medicine, Academic Center for Thyroid Diseases, Rotterdam, Netherlands, [7]Norwegian University of Science and Technology, HUNT Center for Molecular and Clinical Epidemiology, Department of Public Health and Nursing, Trondheim, Norway, [8]St. Olavs Hospital, Trondheim University Hospital, Department of Endocrinology, Trondheim, Norway, [9]Inselspital, Bern University Hospital, University of Bern, Department of General Internal Medicine, Bern, Switzerland

Background: Observational studies have reported an association between thyroid function and the risk of heart failure (HF), but the direction and causality of this association remain unclear. We aimed to investigate whether genetically predicted variations in thyroid function are associated with HF and its subtypes.

Methods: We conducted a 2-sample Mendelian Randomization (MR) analysis to assess the causal effects of genetically predicted thyroid function (N participants = 271,040) on HF

(139,533 events and 1,568,809 controls) and its non-ischemic subtypes (i.e., non-ischemic HF (noniHF), non-ischemic heart failure with preserved (noniHFpEF), and reduced ejection fraction (noniHFrEF)), using data from the ThyroidOmics consortium on thyroid function and the Hermes consortium on HF.

Results: Genetically predicted higher free triiodothyronine (FT3) levels were associated with increased risk of HF (OR per 1-SD increase: 1.15, 95% CI 1.03–1.29), noniHF (OR: 1.29, 95% CI 1.05–1.58), and noniHFpEF (OR: 1.73, 95% CI 1.15–2.60). TSH levels were associated with noniHF (OR per 1-SD increase: 0.96, 95% CI 0.93–1.00), and TSH below the reference range was associated with HF (OR: 1.01, 95% CI 1.00-1.04) and noniHF (OR: 1.02, 95% CI 1.01-1.04). No evidence was found for a causal effect of FT4 levels on HF risk or genetic predisposition to HF on thyroid function.

Conclusion & clinical implications: Genetically predicted higher thyroid function was associated with increased risk of HF, noniHF, and noniHFpEF, supporting a possible causal nature of the association between thyroid function and heart failure.

P23

Pharmacological hypertension treatment and control in Swiss primary care

S. Di Gangi[1], T. Grischott[1], S. Markun[1], O. Senn[1], J.M. Burgstaller[1], T. Rosemann[1], FIRE Team Study Group

[1]*Universitätsspital Zürich - Universität Zürich, Institut für Hausarztmedizin, Zürich, Switzerland*

Background: Arterial hypertension (HTN) is the leading modifiable risk factor for cardiovascular diseases. Global surveys suggest that almost half of patients with HTN are not optimally managed in primary care. Therefore, actionable insights are needed to target inadequately managed HTN in this setting. This study aims to describe the epidemiology of the adult HTN population in primary care, and to improve understanding of uncontrolled HTN, including treatment trajectories, and clinical outcomes.

Methods: This observational study used data from patients aged ≥18 years in a large Swiss primary care database. Variables of primary interest were HTN prevalence in 2018 and annual incidence rates from 2018 to 2025 among patients with primary care physician (PCP) contacts both at least one year before and in the respective year under consideration. We further investigate HTN subpopulations stratified by the number of antihypertensive medication classes, blood pressure (BP) control (i.e., systolic BP <140 mmHg and diastolic BP <90 mmHg), drug utilization and treatment patterns.

Results: A total of 140,268 HTN patients were identified; prevalence in 2018 was 37% (70% in the population aged 65+); mean (95% CI) one-year incidence rate in 2018-2025: 4.02% (3.98%, 4.05%). During 2018-2025, 118,260 patients had BP measured. Of these, 71% had an antihypertensive treatment (median duration: 485 days [IQR: 365, 1295]) and 52% of them had uncontrolled HTN (last consultation). Resistant HTN (uncontrolled HTN and ≥3 antihypertensive medication classes, including a diuretic) represented 10% of treated patients. Most patients (77%) were first treated with monotherapies, including 19% beta blockers (BB). After one month of treatment, uncontrolled HTN was more common under monotherapies (49%) than under other combinations (47%), p=0.015.

Conclusion & clinical implications: Among patients under pharmacological treatment, about half had uncontrolled HTN during 2018-2025, suggesting a need for novel strategies, including non-pharmacological interventions. Monotherapies, particularly BB, were often used as a first-line treatment, indicating room for improvement in treatment choice and optimization of care according to ESH guidelines. PCPs should strive to detect HTN, inform patients about treatment options and control BP to prevent long-term illness and death.

P24

Determinants of urgent care pathways in Switzerland: the central role of general practitioners

L. Diaz Hernandez[1], R. Fischer[1], A. Zeller[1]

[1]*Universität Basel, Universitäres Zentrum für Hausarztmedizin beider Basel, Liestal, Switzerland*

Background: Switzerland offers many options for urgent but non-life-threatening care, from general practitioners (GPs) and emergency departments (EDs) to walk-in clinics, specialists, telemedicine, and pharmacies. This study explores how people choose among these pathways and how demographics, socioeconomic factors, access, and GP attachment shape their decisions, aiming to improve coordination and reduce unnecessary emergency use.

Methods: We conducted a cross-sectional, population-based online survey among adults residing in Switzerland. Participants reported their most recent urgent care encounter and the setting first contacted. The primary outcome was the choice of care setting: GP (reference), ED, walk-in clinic, or specialist practice. Explanatory variables included sociodemographic characteristics, household income, insurance deductible, residential setting, perceived access barriers, and presence of a regular GP. Multinomial logistic regression was used to estimate adjusted odds ratios (ORs) with 95% confidence intervals (CIs). Sensitivity analyses included lasso variable selection and bivariate comparisons.

Results: Among 1,239 respondents, 54% sought urgent care. GPs were the most common first contact (50.7%; 95% CI 46.9–54.5), followed by EDs (16.6%; 13.8–19.5), specialists (14.4%; 11.7–17.1), and walk-in clinics (7.2%; 5.2–9.2). Lack of a regular GP strongly increased use of walk-in clinics (OR 17.7; 95% CI 5.5–56.8) and direct specialist visits (OR 4.2; 1.3–14.3). Higher income and lower deductibles raised ED use, while geographic barriers increased walk-in clinic use (OR 2.8; 1.3–6.3). Most consulted their GP beforehand, underscoring its central advisory role.

Conclusion & clinical implications: Attachment to a regular GP is a key determinant of urgent care pathways in Switzerland. Strengthening continuity in primary care may support more coordinated care, guide patients toward appropriate services, and help reduce potentially avoidable use of emergency settings.

P25

Sex-specific clinical presentation, management, and outcomes in giant cell myocarditis: insights from an individual patient data meta-analysis of 901 patients

A. Donlagic[1], A. Geiser[1], T.-D. Ly[1], G. Tzimas[1], P. Monney[1], P. Pascale[1], O. Muller[1], H. Lu[1], P. Antiochos[1]

[1]*Lausanne University Hospital, Cardiologie, Lausanne, Switzerland*

Background: Giant Cell Myocarditis (GCM) is a rare, fulminant inflammatory cardiomyopathy. While sex-specific disparities in presentation and outcomes are well-established in other autoimmune conditions – often conferring a survival advantage to women – data regarding sex differences in GCM remain scarce. We performed the largest individual patient data (IPD) meta-analysis to date to comprehensively investigate the impact of biological sex on clinical phenotype, management, and prognosis.

Methods: We conducted a systematic review of all published GCM cases (case reports, cohorts, trials) via PubMed, Embase, and Cochrane databases without language or date restrictions. A unified IPD database was constructed. The primary comparison was between female and male patients regarding demographics, clinical presentation (heart failure, arrhythmia, shock), biomarkers, echocardiography, management strategies, and outcomes. Continuous variables were compared using Student's t-test or Mann-Whitney U test, and categorical variables using Chi-square or Fisher's exact test.

Results: The cohort included 901 patients (461 women [51%], 440 men [49%]). Age was similar (50 vs 48 years, p=0.36). Women had a higher prevalence of Hashimoto's thyroiditis (5.0% vs 0.9%, p=0.004). Remarkably, the clinical phenotype was identical: heart failure (69% vs 66%), VT (36% vs 33%), and cardiogenic shock (31% vs 30%) did not differ (all p>0.05). Admission LVEF (33% vs 31%) and biomarkers were also comparable. However, management disparities existed: men were more likely to receive no immunosuppression (25% vs 17%, p=0.008), while women received more ICDs (22% vs 13%, p<0.001). Long-term rates of death (32% vs 34%, p=0.26) and transplantation (40% vs 36%, p=0.86) were similar.

Conclusion & clinical implications: In this large IPD meta-analysis, GCM displays a striking "biological equality," manifesting with identical fulminant severity, hemodynamic profiles, and mortality rates in both sexes. This contrasts with the female dominance typical of other autoimmune disorders. Interestingly, men were less likely to receive immunosuppression, whereas women were more frequently implanted with ICDs, suggesting potential sex-specific biases in management strategies despite identical clinical phenotypes.

P26

Barriers and facilitators to appropriate management of elevated blood pressure in acutely hospitalised adults: a mixed methods study

A. Eckert[1], T. Ziswiler[1], L. Bee[1], L. Bolt[1], C.E. Aubert[1,2]

[1]Inselspital, Bern University Hospital, General Internal Medicine, Bern, Switzerland, [2]Institute of Primary Health Care (BIHAM), University of Bern, Bern, Switzerland

Background: Inappropriate initiation or intensification of antihypertensive medication in acutely hospitalised patients remains common despite potential risks and limited benefits. To change practices, we need to better understand associated barriers and facilitators. The aim of this study was to assess nurses and resident barriers and facilitators in managing elevated blood pressure (BP) in patients hospitalised on acute general internal medicine (GIM) wards, as a first step to improve quality of care.

Methods: We conducted an online survey including close- (5-point Likert-scale) and open-ended questions among nurses and residents working on acute GIM wards of Bern University Hospital from February-April 2025. The survey was based on the Theoretical Domains Framework (TDF) version 2 and aimed to identify barriers and facilitators influencing appropriate management of elevated BP during hospitalisation. Close-ended questions were analysed using descriptive statistics. We classified a mean score <3 as major barrier, 3.00-3.99 as moderate barrier, and ≥4 as facilitator. Open-ended questions were analysed using a mixed inductive and deductive approach based on the TDF. Quantitative and qualitative findings were integrated in meta-inferences.

Results: Among 79 nurses and 39 residents, TDF domains identified as major barriers to appropriate management of elevated BP in acutely hospitalised patients included Beliefs about consequences, Reinforcement and Emotion. Knowledge, Skills, Social/professional role and identity, Beliefs about capabilities, Goals and Intentions were identified as facilitators. Qualitative analysis identified eight thematic domains: professional competence, knowledge, resource management, process quality, structural orientation, therapeutic safety, interprofessionality, emotions, and patient-staff relationship. In meta-inferences, knowledge was consistently identified as a facilitator, while lack of time (resource management) emerged as a major barrier.

Conclusion & clinical implications: This study highlights barriers and facilitators to appropriate management of elevated blood pressure in patients hospitalised on acute GIM wards as perceived by nurses and residents. Findings will support the design of targeted interventions to optimise blood pressure management during hospitalisation and reduce potential overtreatment as well as associated harms.

Table 1 Barriers and facilitators identified from nurses' (N=58) answers to the open-ended questions in the profession-specific online survey.

Nurses		
Domain	Themes	
	Barriers	Facilitators
Professional competence & knowledge	• Lack of knowledge	• Access to current research and guidelines • Expert knowledge about blood pressure and method of measurement • Patient education / information • Training
Resource management	• Lack of time • Time pressure • Understaffed • High workload	• Sufficient time
Process quality	• Frequent blood pressure measurements without clear indication • BP measurement without contextualization.	• Regular monitoring • Re-measurement in calm conditions • Manual re-measurement when extremely high • Re-measure blood pressure if above the limit, not notify the doctor immediately • Measuring devices in every room
Structural orientation	• Limits prescribed without information on consequences • Standard limit prescriptions	• Clear rules/guidelines/procedures • Current, visually appealing, and quickly accessible documents • Clear limits / prescriptions
Therapeutic safety	• Lack of reduction of frequency of BP measurements • Lack of prescriptions for reserve medication, timeconsuming search for information • Standard inappropriate prescriptions of blood pressure limits • Unable to reach physician on call	• Information on reserve medications
Inter-professionality	• Lack of interprofessional collaboration. • Verbal statements contradict the written prescription.	• Interprofessional collaboration
Patient-HCP relationship	• Too little communication with the patient.	

Abbreviations: HCPs: Health care professionals

Legend: 58/79 (73%) nurses provided answer to open-ended questions.

Table 2 Barriers and facilitators identified from residents' (N=26) answers to the open-ended questions in the profession-specific online survey.

Residents		
Domain	Themes	
	Barriers	Facilitators
Professional competence & knowledge	• Guidelines from the clinic difficult to find • Lack of contextualization of BP values by staff • Assumption by nursing staff that elevated BP values must be lowered.	• Own knowledge • Pocket card, regular teaching • Training/teaching
Resource management	• Stress in hospital daily business • Time pressure • Lack of time	
Process quality	• BP value provided after the visit • Too frequent measurements	• Correct BP measurement • Contextualization of measurements
Structural orientation		• Clear guidelines
Therapeutic safety	• Polypharmacy and drug interactions. • BP limit prescriptions	
Inter-professionality		• Open communication • Ward rounds with standardized procedures • Clear handovers to emergency/out-of-hours services regarding already implemented measures for conspicuous values.
Emotions	• Blood pressure values obtained from patients and nurses are given greater weight than individualized nursing assessments based on clinical experience. • Nursing staff is unsettled by abnormal values.	
Patient-HCP relationship	• Strong patient desire for antihypertensive treatment. • Patient expressing the need to "do something" when BP values are elevated.	• Patient satisfaction

Abbreviations: HCPs: Health care professionals

Legend: 26/39 (67%) residents provided answer to open-ended questions.

P27

Do general practitioners recognize excessive alcohol consumption and is the message "Less is Better" acceptable to them?

J. Muradbegovic[1], T. Favrod-Coune[1]

[1]*Unit of dependencies, Primary Care Division, Geneva University Hospitals, Switzerland*

Background: Alcohol low-risk drinking guidelines advise on frequency and quantity not to be exceeded, to limit significant health risks. These limits have been consistently lowered since those established in the 1990s (14 standard drinks SD (10 grams) per week for women, 21 for men, at least one alcohol-free day per week and not exceeding 4 and 5 drinks respectively on a single occasion). The WHO now stated there is no safe level of alcohol consumption and the less alcohol consumed, the better for health.

Methods: Online survey conducted in 2025 among primary care physicians at Geneva University Hospitals (HUG) over 5 weeks, with 2 reminders.

Using 3 clinical vignettes, they assessed whether they consider alcohol consumption excessive, and if they would advise reduction or cessation.

1. a healthy 43-year-old woman drinking within latest Swiss FOPH guidelines (<5 SD/week, alcohol-free days, max 4/occasion).

2. a 54-year-old woman with cardiovascular comorbidities and family history of breast cancer drinking within the same limits.

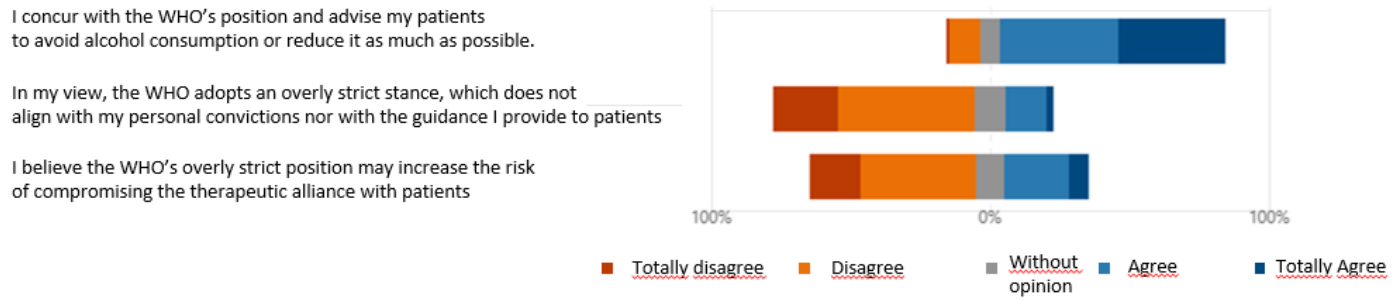
3. a 56-year-old male patient with comorbidities drinking 11-15 SD/week without alcohol-free days.

Physicians were also asked if they endorsed the new WHO recommendations ("no safe level") and would convey them to patients

Results: We obtained 84 responses (~50% participation; 60% women, 40% men). Vignette 1: 25% of physicians found the patient within low risk drinking limits, 33% noted excessive consumption. 72.6% perceived an increased risk of alcohol-related comorbidity. Advice: 78% reduction, 14% abstinence. Vignette 2: 73.8% saw increased risk, 3.5% deemed consumption excessive, 46.2% at low risk. Recommendations: 54.6% reduction, 27.3% abstinence. Vignette 3: Only 2.4% considered it at no-risk, 88% excessive drinking, 72% at increased risk to health consequences. Advice: 80% reduce drinking, 17% abstain.The results of the three questions posed to the physicians are presented in the following figure.

Conclusion & clinical implications: Doctors already advise reducing consumption for patients who are within old limits and otherwise healthy. However, when health risks were present,

their advice shifted towards consumption changes. Regarding new recommendations, a majority of them align with the "the less, the better" message and are ready to communicate it. This survey highlights the need to disseminate updated alcohol guidance. Future research should include other specialties and outpatient settings, and explore public opinion.



P28

Colonoscopy completion within 90 days of a positive faecal test in an organized colorectal cancer screening program: a mixed-methods study

J.-A. Fenwick[1], P. De Palma[1], L. Dias[1], D. Horisberger-Panchaud[1], R. Freund[1], J.-L. Bulliard[1], C. Schneider[1], S. Godat[2], K. Selby[1]

[1]Unisanté, Centre universitaire de médecine générale et santé publique, Departement des policliniques, Lausanne, Switzerland, [2]Centre Hospitalier Universitaire Vaudois (CHUV), Gastro-entérologie et hépatologie, Lausanne, Switzerland

Background: Colorectal cancer (CRC) screening with non-invasive tests requires timely follow-up with diagnostic colonoscopy to be effective. Screening programs often face challenges in meeting their target of completing diagnostic colonoscopy within an appropriate interval after a positive faecal immunochemical test (FIT). This study aimed to identify barriers and facilitators affecting timely colonoscopy completion within 90 days of a positive FIT.

Methods: This mixed methods study combined a retrospective, quantitative multivariate analysis of program participant characteristics potentially associated with >90-day delay in colonoscopy completion between 2021 and 2024 (year of the test, method of inclusion into the program, age, sex, region and rurality of residence), with qualitative interviews. We interviewed participants in the Vaud CRC screening program with a >90-day delay, general practitioners, gastroenterologists, and pharmacists to explore systemic, provider, and patient-level factors influencing colonoscopy completion.

Results: Of 1977 participants with a positive FIT, 23% did not have a colonoscopy within 90 days. The adjusted proportion was higher among those aged 65-69 years (27%) than those in younger categories (21 or 22%, p=0.048), higher in one of ten districts (35%, p=0.001) and lower in those with a rural residence (17%, p=0.05). We interviewed 10 participants and 10 health professionals. The main barriers to colonoscopy completion included: participants mindset about the importance of timely follow-up and low level of information, which may be reinforced by physicians who want to be reassuring. The main facilitators included: appropriate gastroenterologist appointment prioritisation and screening program reminders.

Conclusion & clinical implications: Wait times were explained by participants' mindset and lack of awareness, as well as older age (65-69 years) which may be linked to a higher number of comorbidities and difficulties arranging a colonoscopy. Our results support the need for global interventions to improve time and compliance to diagnostic colonoscopy and have led to changes to result letters sent by the program after a positive FIT result.

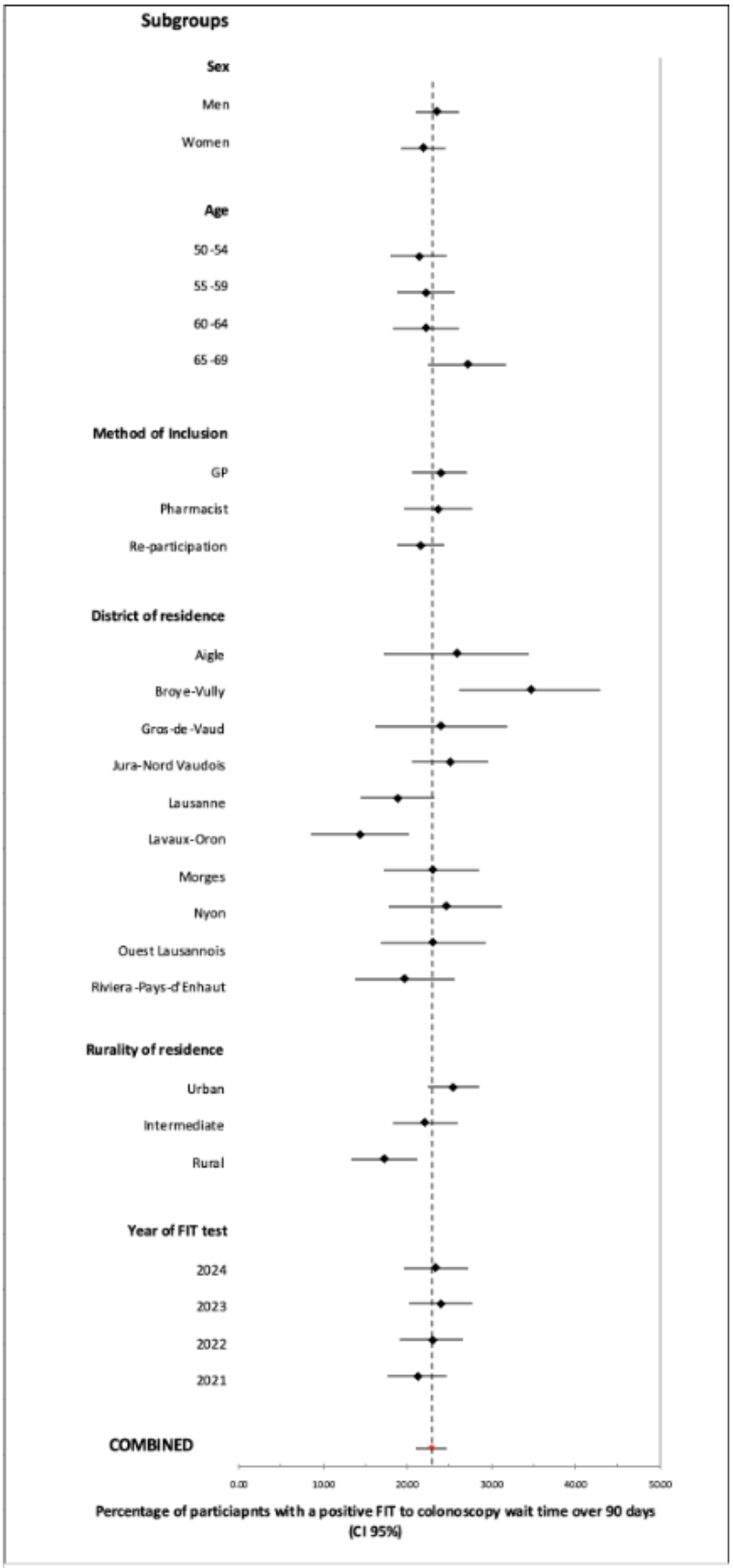


Figure 1. Adjusted estimate of participants with a positive faecal immunochemical test who have not had a colonoscopy within 90 days of their result, stratified by subgroup based on year of FIT test, method of inclusion, age group, sex, district and residence location (n=1977).

P29

Factors associated with inhaler satisfaction in patients with chronic obstructive pulmonary disease

C. Forsell[1], P. Suter[2,3], J. Vaucher[1,4], G. Grandmaison[1]

[1]University and Hospital of Fribourg, Division of General Internal Medicine, Fribourg, Switzerland, [2]University and Hospital of Fribourg, Division of Pulmonary Medicine, Fribourg, Switzerland, [3]Inselspital, Bern University Hospital, University of Bern, Department of Pulmonary Medicine, Allergology and Clinical Immunology, Bern, Switzerland, [4]Lausanne University Hospital and University of Lausanne, Division of General Internal Medicine, Lausanne, Switzerland

Background: The satisfaction of patients with their inhalers is linked to improved adherence in chronic obstructive pulmonary disease (COPD) and, potentially, to better control of the disease. However, satisfaction with inhalers has not yet been studied in relation to inhaler misuse, which remains highly prevalent. It is therefore important to identify factors associated with inhaler satisfaction in order to enhance treatment adherence.

Methods: We used data from a single-center observational study including 137 hospitalized patients with COPD at Fribourg Hospital between March 2022 and April 2023. The data included demographic and clinical features, inhaler properties, patient-reported inhaler satisfaction, prescription-related aspects, and assessments by trained physiotherapists of inhaler technique and peak inspiratory flow (PIF). Satisfaction was assessed with a 7-point Likert scale (1=Strongly disagree, 7=Strongly agree) for each inhaler. Associations with satisfaction were explored using a logistic regression model adjusted for relevant confounders and accounting for clustering at the patient level, with candidate predictors obtained from literature and univariable analyses.

Results: In 137 hospitalized patients with COPD (median age 72.0 years [interquartile range 66-79]; 62% male), 255 inhalers were analyzed. Overall, patients reported high satisfaction with their inhalers (mean score 5.72 ± 1.33; median 6). In multivariable ordinal logistic regression analysis, we observed that higher satisfaction was associated with devices used for more than 12 months (odds ratio (OR)=2.77, 95% confidence interval (CI) 1.48-5.18, p=0.001) and inhalers containing an inhaled corticosteroid (ICS)(OR=1.90, 95% CI 1.05-3.45, p=0.035). In contrast, inhaler misuse, defined by the presence of a critical error or insufficient PIF for the inhaler, was associated with lower satisfaction (OR=0.56, 95% CI 0.33-0.96, p=0.035).

Conclusion & clinical implications: In this observational study, patients were generally satisfied with their inhalers. Satisfaction was higher for devices used for more than 12 months and for those containing an ICS. Inhaler misuse was associated with lower satisfaction, highlighting the importance of monitoring inhaler technique, choosing devices based on each patient's PIF, and providing personalized education to optimize COPD management.

P30

Evaluating the effect of an e-learning program designed to teach health care practitioners to inform patients with a model drawn from motivational interviewing: a pilot randomized controlled trial

C. Fortini[1], N. Rodriguez[1], J. Studer[1], N. Bertholet[1], J.-B. Daeppen[1], J. Gaume[1]

[1]CHUV, Psychiatrie, Lausanne, Switzerland

Background: Providing information is an essential yet complex element of what is considered today good provider-patient communication. Motivational Interviewing (MI) provides a framework to convey information to patients. We tested the effect of a 1.5-hour e-learning course that presents an MI-based model for information-giving (Figure 1) on practitioners' skills to inform patients.

Methods: Thirty-two physicians and nurses at Lausanne University Hospital participated in a pilot randomized controlled trial to assess the impact of the e-learning on performance during an encounter with a simulated patient (SP). Participants were randomized (1:1) to complete the e-learning before (intervention) or after (control) the SP encounter. Encounters were coded using an adapted version of the validated Motivational Interviewing Treatment Integrity (MITI) coding scale. Analyses compared group differences and explored effects by clinical experience.

Results: The intervention group demonstrated significantly better communication behaviors, using less persuasion and more collaborative strategies (such as asking permission before informing, checking understanding or asking for the patient's reaction to the received information) when providing information to patients compared to the control group. No significant effects were found on empathy and partnership, use of open questions, number of neutral information giving and persuasion with permission. Nevertheless, the intervention's effects varied by clinical experience level, with less experienced practitioners showing greater effects in empathy, partnership, seeking collaboration and use of open questions.

Conclusion & clinical implications: The e-learning program impacted the way practitioners delivered information to patients and shows promise as being effective for skill development, particularly among less experienced staff. This study proposes a novel framework for conceptualizing and teaching information delivery as a structured, interactive process. A short online format may enhance training accessibility and, ultimately, support better patient outcomes.

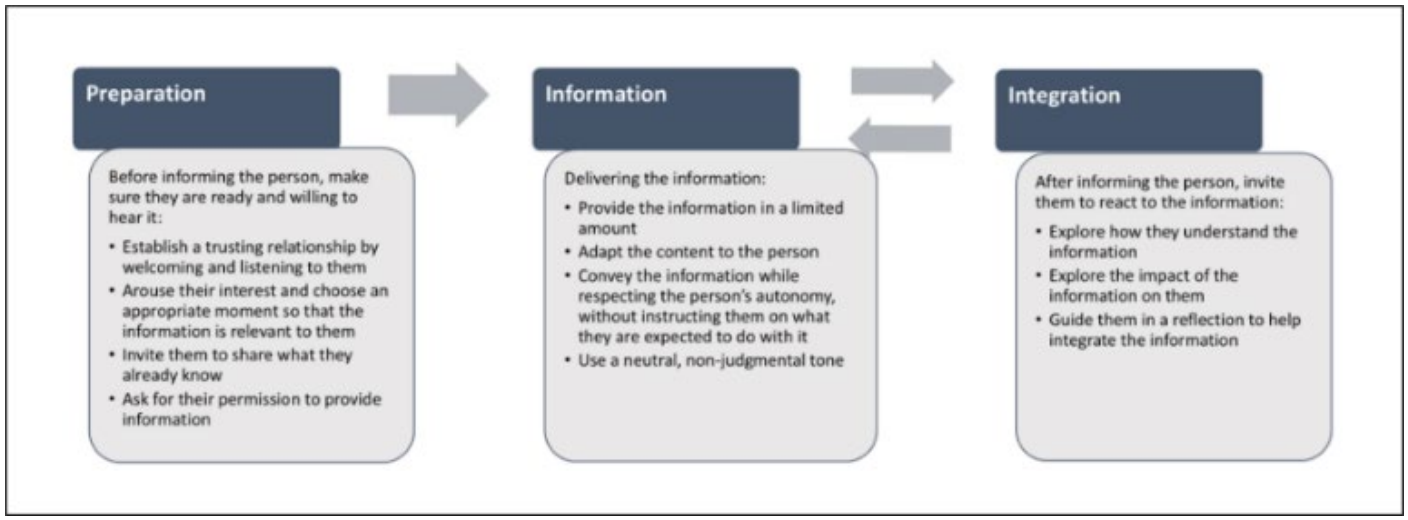


Figure 1. Information-delivery model

P31

10-years prospective study on the impact of diet on incident osteoporosis, fracture risk and degraded microarchitecture in postmenopausal women. the OsteoLaus cohort

F. Freundler[1], A. Lanyan[1], P. Marques-Vidal[2], O. Lamy[2]

[1]Université de Lausanne, Faculté de Biologie et Médecine, Fribourg, Switzerland, [2]CHUV, Médecine Interne, Lausanne, Switzerland

Background: Osteoporosis is a major public health problem affecting 50% of postmenopausal women, representing a considerable economic burden. Diet is a key modifiable risk factor for this disease, but research often yields conflicting results, highlighting the value of longitudinal studies. This 10-years prospective study of the OsteoLaus cohort analyzed the effect of diet on osteoporosis.

Methods: The OsteoLaus cohort, a sub-study of CoLaus, included 1467 postmenopausal women aged between 50 and 80 years. Incident osteoporosis was defined based on incident : 1) major osteoporotic fractures (MOF) ; 2) bone mineral density (BMD) with a T-score > -2.5 ; or 3) degraded trabecular bone score (TBS). BMD and TBS were assessed by Dual Energy X-ray Absorpsiometry. Dietary intake was assessed via a validated food frequency questionnaire. Association to the 10-years incidence of osteoporosis (BMD), MOF, and degraded TBS was calculated using bivariate and multivariate analysis.

Results: 43.6% of total participants were included in the 10-year BMD analysis, 54.5% for MOF and 47.6% for TBS.18.9% developed osteoporosis. In bivariate analyses, they ate more calories (1666 vs 1555 kcal, p=0.0138), and fat/sugar (0.1 vs −0.2, p=0.047) and complied more to ≥3 Swiss Society for Nutrition (SSN) guidelines (38.8% vs 29.5%, p=0.047). 19.1% had MOF. In bivariate analyses, they ate more calories (1657 vs 1569 kcal, p=0.013) and fruits (320 vs 252 g/day, p=0.036), and had higher ≥3 SSN compliance (40.5% vs 30.6%, p=0.018). 51.5% developed degraded TBS. In bivariate analyses, they had higher fat/sugar intake (0.0 vs −0.2, p=0.049).

The only multivariate association was incident osteoporosis (BMD) and calories (1751 vs 1636 kcal, p=0.04).

Conclusion & clinical implications: Only total caloric intake was significantly linked with incident osteoporosis (BMD) in this 10-year prospective study. No association emerged from multivariate MOF or TBS analyses. Statistical power was likely limited by high exclusion rates and participants dropout. Furthermore, dietary habits and medical care may have changed during follow-up. Future multivariate models should examine overlooked confounding factors affecting bone health.

P32

Measuring the unmeasurable: comparing fatigue, symptoms, and function in post COVID-19 condition

S. Frey[1], E. Weber[1], S. Christen[1], S. Stickel[1]

[1]Stadtspital Waid Zürich, Klinik für Innere Medizin, Zürich, Switzerland

Background: Post COVID-19 Condition (PCC) cannot be diagnosed by laboratory tests or imaging and relies on clinical evaluation. It is defined by non-specific symptoms within 3 months after SARS-CoV-2 infection, persisting for at least 2 months[1]. Fatigue, the main symptom, is patient-reported. Questionnaires such as FAS[2], FUNCAP55[3], and PHQ-15[4] assess fatigue, functional limitations, and somatic symptoms, but no consensus exists on the optimal tool. We analyzed their relationships to evaluate symptom burden.

Methods: Patients diagnosed with PCC were included in this cross-sectional analysis. All participants completed the Fatigue Assessment Scale (FAS), the Functioning Assessment Short Form-55 (FUNCAP55), and the Patient Health Questionnaire-15 (PHQ-15). Spearman rank correlation coefficients were calculated to examine associations between fatigue severity, functional limitations, and somatic symptom burden.

Results: 28 patients (20 female, 8 male; mean and median age 43 years, range 17–62) completed all questionnaires. FUNCAP55 showed very weak to no correlation with FAS (ρ = −0.14) and a weak correlation with PHQ-15 (ρ = −0.34). The correlation between FAS and PHQ-15 was negligible (ρ = −0.002). Overall, correlations between fatigue severity, somatic symptom burden, and functional limitations were low, indicating that functional impairment is largely independent of reported fatigue and somatic symptoms.

Conclusion & clinical implications: FAS, PHQ-15, and FUNCAP55 assess distinct dimensions of PCC. Fatigue severity and somatic symptoms do not predict functional limitations, and functional impairment shows little correlation with either. In clinical and insurance settings, it remains unclear whether any single tool reflects overall disability in PCC. Key features such as fatigue and post-exertional malaise (PEM) are not captured by one instrument, supporting a multidimensional assessment.

P33

Multimodal nutrition and exercise intervention including a smartphone application: effects on muscle outcomes in patients with advanced cancer

L. Gafner[1], E.G. Gerrits[2], M. Rühlin[1], Y. Krepp[3], R. Benkelmann[3], B. Rohrbach[4], C.J. Ackermann[4], A. Tan[1], M. Schmocker[5], D. Gisi[5], P.J. Meffert[6], M. Pless[7], P.E. Ballmer[8], C. Britschgi[7], L.J. Storck[1,3]

[1]Kantonsspital Winterthur, Zentrum für Allgemeine Innere Medizin, Zentrum für Ernährungsmedizin/-therapie, Winterthur, Switzerland, [2]Kantonsspital Winterthur, Zentrum für Allgemeine Innere Medizin, Klinik für Innere Medizin und Zentrum für Ernährungsmedizin/-therapie, Winterthur, Switzerland, [3]Klinikum Konstanz, Medizinische Klinik, Konstanz, Germany, [4]Spital Thun, Onkologie und Hämatologie, Thun, Switzerland, [5]Kantonsspital Winterthur, Institut für Therapien und Rehabilitation, Winterthur, Switzerland, [6]CORVUS, Statistische Beratung, Altkalen, Germany, [7]Kantonsspital Winterthur, Klinik für Medizinische Onkologie und Hämatologie, Winterthur, Switzerland, [8]GESKES-SSNC, Past President, Winterthur, Switzerland

Background: A combined intervention consisting of nutritional counseling and structured physical exercise may improve quality of life (QoL) as well as muscle mass and strength in patients with advanced cancer who face a substantial risk of malnutrition. Mobile Health (mHealth) technologies enable remote monitoring and facilitate trial participation by limiting additional hospital visits.

Methods: After randomization, the intervention group participated in a multimodal program with dietary counseling, exercise, and protein supplementation, while the control group received standard care. Both groups used a smartphone app for data recording. Assessments were conducted at baseline, after the three-month intervention, and at six months to evaluate sustainability. The primary endpoint was QoL at three months (Functional Assessment of Cancer Therapy-General; FACT–G). Secondary endpoints included nutritional status, protein and energy intake, physical function, clinical outcomes, and fatigue. Muscle mass was assessed via bioelectrical impedance analysis (BIA), and muscle function using handgrip strength and the 60-second sit-to-stand test.

Results: 73 patients with advanced lung or gastrointestinal (GI) cancer were enrolled at three study centers in Switzerland and Germany (62% male, 38% female; mean age 63.8 ±11.9 years; mean BMI 25.5 ±4.5 kg/m^2). After three months, QoL improved in both groups, with no significant between-group difference (p=0.734). The intervention group had significantly improved coverage of individual energy (p=0.043) and protein (p=0.002) requirements. There were no significant differences in muscle mass (p=0.954), handgrip strength (p=0.381), or the 60-second sit-to-stand test (p=0.642).

Conclusion & clinical implications: Our results confirm the feasibility of the multimodal therapy in patients with advanced cancer. While the primary endpoint, QoL, was not met, the intervention group showed significantly increased coverage of individual energy and protein requirements (secondary endpoints).

Explanations for the subtle differences regarding muscle outcomes may include cohort heterogeneity, selection bias, and increased motivation among the control group, who also used the study app.

	Baseline Control	Baseline Intervention	Δ 3 months Control	Δ 3 months Intervention	p =	95% CI
QoL (FACT-G), points	82.4 (±12.8)	84.3 (±12.0)	3.29	2.17	0.734	-5.5, 7.7
Coverage energy requirements, %	92.0 (±30.3)	88.1 (±25.6)	-13.8	2.4	**0.043**	-31.9, -0.5
Coverage protein requirements, %	88.7 (±39.6)	86.1 (±28.0)	-9.1	20.0	**0.002**	-47.0, -11.2
Muscle mass (BIA), kg	28.7 (±7.7)	29.6 (±6.0)	0.45	0.47	0.954	-0.91, 0.86
Handgrip strength, kg (stronger hand)	33.5 (±10.3)	36.8 (±12.2)	0.00	0.86	0.381	-2.8, 1.1
60 s sit-to-stand, repetitions	22.1 (±8.9)	25.1 (±7.6)	1.24	0.19	0.642	-3.5, 5.6

P34

Genotype vs. phenotype: which best predicts clopidogrel active metabolite in hospitalized patients?

F. Gaspar[1,2,3], J. Terrier[4,5,6], P. Fontana[7,6], P. Gosselin[5,6], Y. Daali[4], J.-L. Reny[5,6], M. Guidi[1,8], C. Csajka[1,2,3]

[1]Lausanne University Hospital, Center for Research and Innovation in Clinical Pharmaceutical Sciences, Lausanne, Switzerland, [2]University of Geneva, School of Pharmaceutical Sciences, Geneva, Switzerland, [3]University of Geneva, University of Lausanne, Institute of Pharmaceutical Sciences of Western Switzerland, Geneva, Lausanne, Switzerland, [4]Geneva University Hospitals, Division of Clinical Pharmacology and Toxicology, Geneva, Switzerland, [5]Geneva University Hospitals, Division of General Internal Medicine, Geneva, Switzerland, [6]University of Geneva, Geneva Platelet Group, Geneva, Switzerland, [7]Geneva University Hospitals, Division of Angiology and Haemostasis, Geneva, Switzerland, [8]Lausanne University Hospital, Service of Clinical Pharmacology, Lausanne, Switzerland

Background: Clopidogrel is a prodrug requiring CYP2C19 activation to inhibit platelets. Exposure to its active metabolite (clopiH4) varies due to genetic, physiological, and environmental factors. In polymorbid patients, genotype often fails to predict metabolic capacity. This study aimed to identify determinants of clopiH4 exposure and quantify the relative association of CYP2C19 genotype versus *in vivo* metabolic phenotype with clopiH4 exposure in hospitalized patients.

Methods: We analyzed data from 100 hospitalized patients enrolled in the OptimAT study (NCT03477331), including clopiH4 plasma concentrations, demographics, renal/liver function, comedications, and comorbidities. CYP2C19 genotype (PCR-based) and its metabolic phenotype (in using an *in vivo* probe included in the Geneva cocktail) were assessed and compared. A population pharmacokinetic model characterized clopiH4 concentration–time profiles and variability. Simulations explored the impact of dosing strategies across phenotype-defined groups.

Results: The clopiH4 concentration–time profile was adequately described with substantial interindividual variability. A marked discordance between CYP2C19 genotype and in vivo metabolic phenotype was observed (Figure1): 6% of patients were classified as poor metabolizers (PMs)by genotype, whereas 62% were identified as PMs by metabolic phenotyping. Phenotypic PMs had 54% lower clopiH4 exposure than normal metabolizers, while genotype was not associated with exposure. Overall metabolic phenotype explained most variability. Simulations suggested that higher clopidogrel doses (900mg loading/225mg daily) may improve exposure in some patients (Figure2).

Conclusion & clinical implications: Our findings confirm substantial variability in clopidogrel active metabolite exposure among hospitalized patients, much of which is not captured by

genotype alone. The pronounced discordance between genotype and metabolic phenotype highlights the limitations of genotype-guided approaches. While phenotypic assessment of CYP activity better reflects metabolism, significant unexplained variability remains. These data support a more individualized strategy combining CYP2C19 genotype and phenotype.

Figure1:CYP2C19 genotype versus phenotype

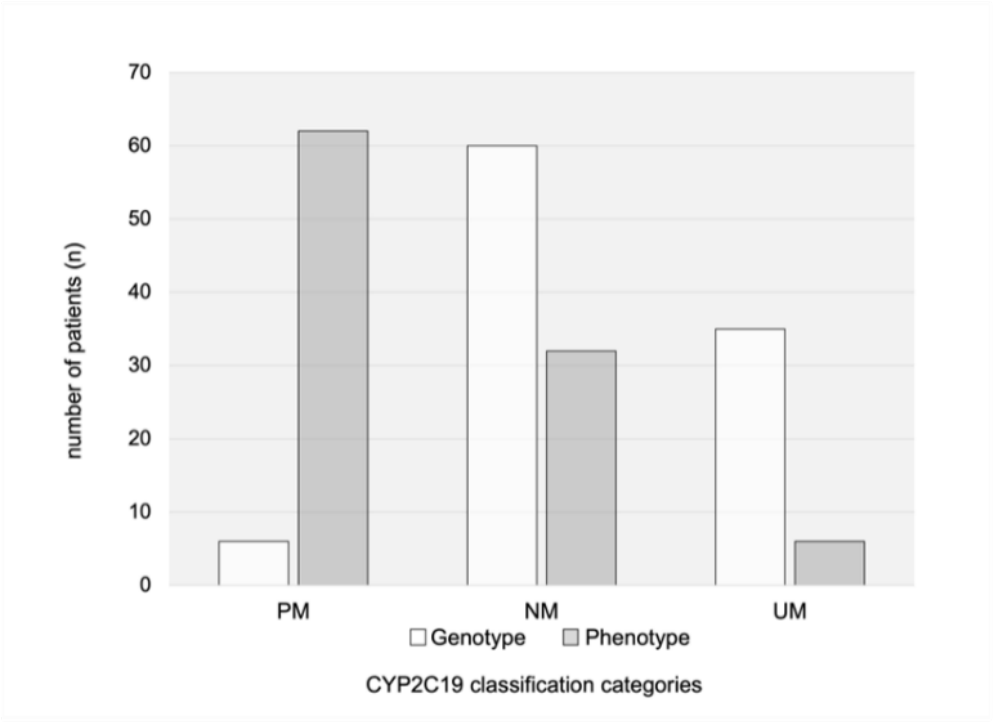
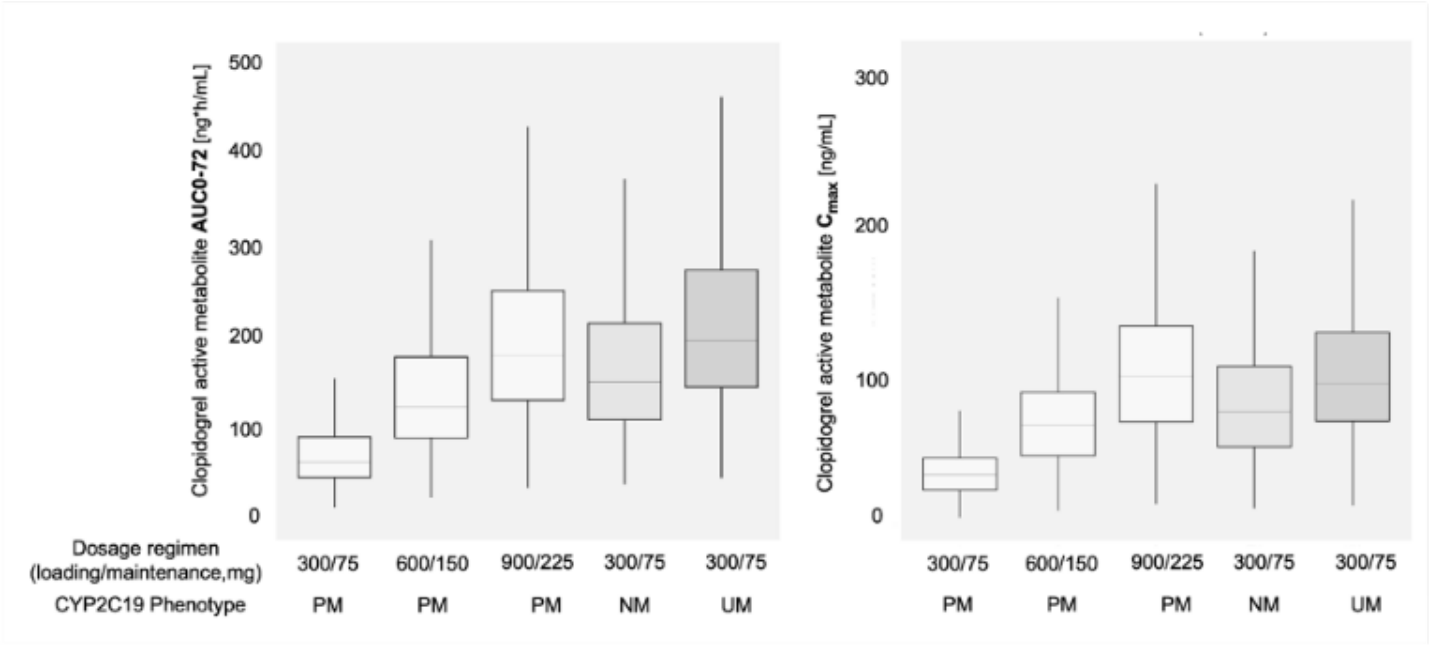


Figure2: Predicted clopiH4 AUC0–72 and Cmax by CYP2C19 activity



P35

Teaching through play: development of an escape room in internal medicine

C. Gerber[1], M. Monti[1]

[1]*CHUV, Médecine interne, Lausanne, Switzerland*

Background: Clinical reasoning skills is a crucial component of medical students' training. Among innovative teaching methods, game-based learning is rapidly expanding. We developed an escape room focused on the diagnostic approach applied to a complex clinical situation of acute confusional state, including the identification of critical differential diagnoses. We present the design, implementation, and student evaluation of this educational intervention.

Methods: The game is conducted face-to-face with a group of students (4–8) and a game master (senior resident) and lasts 90 minutes (introduction, gameplay phase, debriefing session). The game master facilitates clinical reasoning, provides assistance in case of impasse, delivers immediate feedback, and ensures a learning-conducive environment. Through a series of puzzles, students are required to interpret clinical and paraclinical data related to an acute confusional state, formulate diagnostic hypotheses, and propose a management strategy. The session concludes with a debriefing and an evaluation using a questionnaire covering 12 dimensions related to the session, assessed on a 5-point Likert scale (from "strongly disagree" to "strongly agree").

Results: 30/31 students who participated in one of the 5 sessions completed the evaluation questionnaire. 100% of students recommended the activity to others, reported learning from their peers, and reported acquiring new knowledge. 90% felt actively engaged, and 9% reported being able to collaborate effectively with their teammates. Game elements were not perceived as distracting from learning by 93% of participants. 100% of participants enjoy playing games in general.

Conclusion & clinical implications: The implementation of an escape room addressing a complex clinical presentation of acute confusional state proved to be a positive experience, with high levels of student participation and satisfaction. Although assessed subjectively, the perceived impact on learning was positive. This innovative approach may represent a complementary educational tool in medical training and could be applied to other topics in hospital-based internal medicine

P36

Increasing collaboration and gatekeeping between primary care physicians and community pharmacists through pharmacist-assisted medical teleconsultations

C. Godot[1,2], I. Popovic[1,2], B. Bugnon[1,2], F. Gachet[3], A. Bricheux[4], N. Bornand[5], J. Aeberli[6], I. Foriel-Destezet[7], H. Spechbach[8], O. Braillard[4], M.P. Schneider[1,2]

[1]*Institute of Pharmaceutical Sciences of Western Switzerland, University of Geneva, Geneva, Switzerland,* [2]*School of Pharmaceutical Sciences, University of Geneva, Geneva, Switzerland,* [3]*Pharma24, Academic Outpatient Pharmacy, Geneva, Switzerland,* [4]*Primary Care Medicine Division, Geneva University Hospitals, Geneva, Switzerland,* [5]*Digital health program, Canton of Geneva, Geneva, Switzerland,* [6]*eHealth and Telemedicine Department, Geneva University Hospitals, Geneva, Switzerland,* [7]*Patient Partners, Geneva University Hospitals, Geneva, Switzerland,* [8]*Ambulatory Emergency Care Unit, Geneva University Hospitals, Geneva, Switzerland*

Background: Overcrowded emergency departments impair care quality and raise healthcare costs. A pilot study assessed the feasibility of pharmacist-assisted medical teleconsultations (PATC) in a community pharmacy. By providing timely and on-site medical recommendation when family physicians are unavailable, PATC offers an alternative pathway for semi-urgent conditions. This study presents the development of PATC implementation strategies, as an interprofessional care model, and patients' satisfaction.

Methods: The implementation and evaluation of PATC was co-developed by an interprofessional team involving pharmacists, physicians, health economists, a patient partner and a health authority representative. It follows a hybrid type-2 implementation-effectiveness design and is structured into several work packages (WP). The implementation WP is developed throughout the project and has a focus on designing implementation strategies based on a context analysis. A second WP assesses population adoption through service evaluation using patients' satisfaction collected after the PATC and rated on a 5-point scale (1 = very bad; 5 = very good).

Results: During the first project phase, 9 pharmacies joined, enrolling 193 patients (Feb 24 to Dec 25). The 3 most frequent triage activities were otalgia, upper respiratory tract infection and genital symptoms. A multichannel communication strategy was implemented including posters, flyers, a website, and newsletters. Key macro-level strategies involved integrating PATC into the new centralized call center (CeSaGe) and Info-Med – a triage decision-support tool. The development of an interprofessional community of practice facilitated collaboration, trust and the elaboration of shared interprofessional clinical guidelines. Initial patient satisfaction results (n=141) showed a median score of 5 out of 5 [IQR: 5–5].

Conclusion & clinical implications: Successful implementation of a new care practice requires a bundle of contextually adapted implementation strategies. It relies on a comprehensive knowledge of literature on implementation strategies, understanding of the primary care context, and continuous data collection, supported by robust digital technology. In 2026, 25 additional pharmacies will join, patient data collection will continue, and next steps will focus on user feedback and digital medical devices to expand the clinical scope.

P37

Patient perspectives on perioperative code status discussions: a mixed-methods study

F. Gössi[1,2], M. Bäni[2], L. Jäger[2], A. Arpagaus[1,2], S. Gross[2], C. Becker[2], S. Hunziker[2]

[1]*University Hospital Basel, Division of Internal Medicine, Basel, Switzerland,* [2]*University Hospital Basel, Medical Communication and Psychosomatic Medicine, Basel, Switzerland*

Background: Perioperative cardiac arrest differs from other in-hospital cardiac arrests with respect to causes, management, and outcomes. Although guidelines emphasize shared decision-making, discussions and documentation of code status preferences in the perioperative setting remain inconsistent. Data on patients' perspectives regarding perioperative code status decisions are limited.

Methods: We conducted a prospective multicenter bedside survey of postoperative inpatients from five surgical specialties at three Swiss hospitals between July and September 2025. Patients able to provide informed consent were interviewed using a structured questionnaire. The primary outcome was patient-reported preference for resuscitation in the event of perioperative cardiac arrest, categorized as do-not-resuscitate or full code.

Results: 219 patients were included in the analysis. Forty-nine patients (22.4%) reported a preference for do-not-resuscitate status during surgery. Compared with patients preferring resuscitation, these patients were older, more frail, had a higher comorbidity burden, and had a higher perioperative risk. Despite being more likely to report the presence of an advance directive, patients preferring do-not-resuscitate status were

less likely to have a documented code status in the electronic health record (66.7% vs. 94.2%). Overall, only 39.0% of patients reported that resuscitation preferences had been discussed preoperatively. The majority of patients (74.3%) expected physicians to address resuscitation preferences before surgery,

Conclusion & clinical implications: Postoperative patients reported heterogeneous preferences regarding perioperative resuscitation and varying expectations toward preoperative discussions. The findings illustrate the complexity of perioperative resuscitation planning and may support informed decision-making, including for internal medicine physicians involved in interdisciplinary emergency care and inpatient management of multimorbid patients.

P38

What does "Do everything" mean? – an international survey of emergency providers

J. Griese[1], F. Gössi[2], L. Ünlü[1], N. Azad[1], R. Bingisser[1], M. Holland[3], S. Hunziker[4], C. Nickel[1]

[1]University Hospital Basel, Department of Emergency Medicine, Basel, Switzerland, [2]University Hospital Basel, Division of Internal Medicine, Basel, Switzerland, [3]University of Greater Manchester, School of Health, Science and Society,, Bolton, UK, United Kingdom, [4]University Hospital Basel, Medical Communication and Psychosomatic Medicine, Basel, Switzerland

Background: The phrase "do everything" is frequently encountered during handovers or discussions of critical illness but may not accurately reflect patients' values, goals, or their understanding of available treatment options. However, empirical evidence on its prevalence, perceived helpfulness, and interpretation among emergency providers remains limited.

Methods: Web-based cross-sectional survey distributed to emergency providers via social media across multiple countries and healthcare systems. Data were collected anonymously. The survey included five closed-ended and three open-ended questions. Free-text responses were analyzed thematically by two independent reviewers. The study population included 1,170 emergency providers: 445 (38.0%) emergency physicians, 408 (34.9%) paramedics, 216 (18.5%) emergency nurses, and 99 (8.5%) pre-hospital physicians. Median age was 34 years (IQR, 29–42), 463 (39.6%) participants were female, and the median postgraduate experience was 8 years (IQR, 4–15).

Results: Most participants (n = 1,123, 96.0%) had heard the phrase "do everything," and 543 (46.4%) reported having used it in clinical practice. While 245 (20.9%) perceived the phrase as potentially helpful, 1,115 (95.3%) indicated it could be problematic. Respondents highlighted several problematic aspects, including ambiguity, subjective interpretation, misaligned expectations, and the risk of overtreatment inconsistent with patients' values or prognostic realities. Potentially helpful contexts included facilitating rapid decision-making and streamlining communication during time-critical situations. A total of 362 (30.9%) participants reported knowledge of a definition.

Conclusion & clinical implications: "Do everything" is widely recognized and frequently used among emergency providers but is predominantly perceived as problematic due to its ambiguity and potential to foster unrealistic expectations or overly aggressive care. These findings highlight the need for clearer, goal-directed communication that helps clinicians translate "do everything" into treatment goals and limitations aligned with patients' values.

P39

Adaptation and validation of three scales measuring health literacy, digital health literacy and health-related quality of life in French sign language

L. Grosjean[1], P. Bodenmann[1], N. Roos[1], T. Sebaï[2], B. Drion[3], D. Fleurion[3], V.S Grazioli[1]

[1]Unisanté, University Center for Primary Care and Public Health & University of Lausanne, Vulnerabilities and social medicine, Lausanne, Switzerland, [2]HUG, Service de Médecine de Premier Recours, Genève, Switzerland, [3]Groupement des Hôpitaux de l'Institut Catholique de Lille, Unité de Accueil et de Soins des Personnes Sourdes, Lille, France

Background: In Switzerland, there are an estimated 10,000 Deaf people. Most Deaf people use sign language to communicate and identify with the Deaf community. Despite the widespread use of validated questionnaires measuring key health dimensions in clinical and research settings, their adaptation into French sign language (FSL) is lacking. This study aims to validate three scales adapted in FSL, ensuring their validity for use in both French-speaking Switzerland and France.

Methods: This project will take the form of a multi-center, quantitative, cross-sectional observational study, conducted using a community-based participatory approach. Three scales measuring health literacy (HLS19-Q12), digital health literacy (HLS19-DIGI) and health-related quality of life (WHOQOLBREF) will be translated and culturally adapted into FSL following Smeijers' methodology. The psychometric properties of the three adapted scales will be validated through factor analysis, assessment of internal consistency and evaluation of convergent validity. The sample, recruited from health units for Deaf patients, will include 310 participants among Deaf individuals in French-speaking Switzerland and in France. The questionnaire will be online.

Results: Based on existing literature on the validation of the three selected scales we anticipate that the three adapted scales will reach adequate psychometric properties. Cronbach alphas will reach >0.7 (for each scale et subscale) and there will be significant associations between the scores obtained at the adapted scales and measures used to establish the convergent validity. The results are also expected to indicate lower levels of health literacy, digital health literacy and health-related quality of life among Deaf individuals compared with hearing individuals.

Conclusion & clinical implications: This project is expected to result in three FSL-adapted scales with established psychometric validity. These adapted scales will address important gaps in both scientific and practice fields by enabling accurate assessment of health-related quality of life and health literacy in this population. Findings will also describe health literacy and quality of life in Deaf populations across Switzerland and France. Doing so will contribute to improving health equity in this population.

P40

Hepatic portal venous gas in CT-Scans: clinical significance and a new score to predict mortality in a large case series

P. Grossert[1], N. Linder[2], I. Tarantino[3], S. Henz[1]

[1]H-OCH Kantonsspital St.Gallen, Allgemeine Innere Medizin, St. Gallen, Switzerland, [2]H-OCH Kantonsspital St.Gallen, Radiologie, St. Gallen, Switzerland, [3]H-OCH Kantonsspital St.Gallen, Chirurgie, St. Gallen, Switzerland

Background: Hepatic portal venous gas is a rare finding in abdominal CT-scans (computed tomography), often associated with severe disease. The goal of this study was to correlate radiological with clinical parameters and course of disease, as

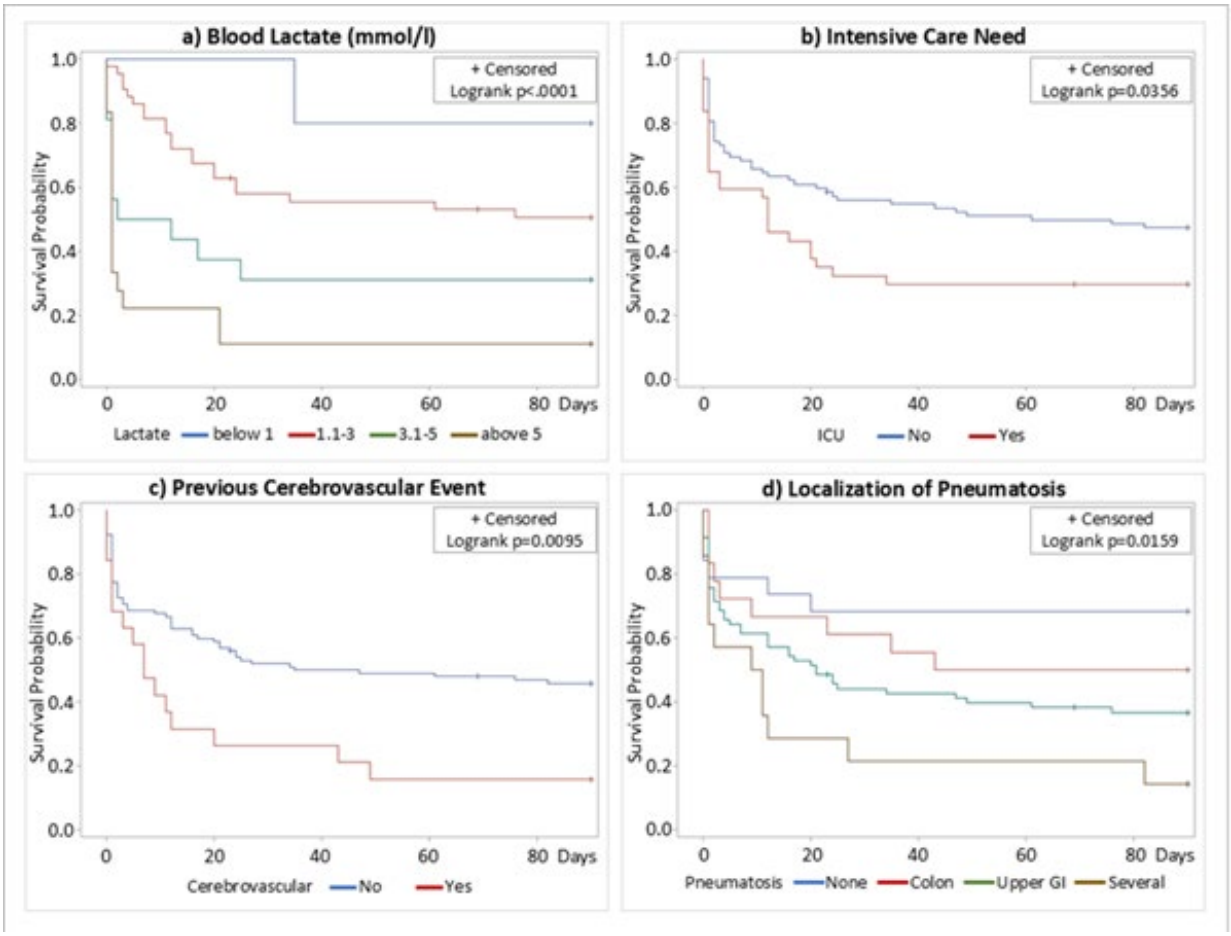
well as to define a prognostic score for mortality at the point of the CT-scan.

Methods: Our radiological network performs 70% of all CT-scans in a well-defined area of eastern Switzerland serving 600'000 inhabitants. 294'000 abdominal CT-scans were performed between 2008 and 2024 and we screened the reports for the occurrence of portal venous gas by text string searches and manual review of all hits. In confirmed cases the images were reviewed and clinical information was extracted from electronic hospital sources. Prognostic parameters were evaluated using logistic regression.

Results: 121 cases were confirmed. Detection of hepatic portal venous gas increased from 0.3 cases to 2.0 cases per 100'000 inhabitants per year. Patients were aged 69.9 ø, 35% were female. The presumed aetiology was ischemic in 34%, mechanical obstruction in 15%, postoperative in 17%, non-occlusive mesenterial ischemia in 12% and others in 22%. Overall, 90-day mortality was 60%. 69 patients (57%) were urgently operated. Their mortality was 49% as opposed to 75%. A prognostic model was derived using 75 patients. Multivariate predictors of 90-day mortality included higher age, higher serum lactate, a history of stroke, need for intensive care, and female gender. A mortality prediction score was established and tested in a separate cohort (N=46).

Conclusion & clinical implications:

Hepatic portal venous gas is associated with high mortality. A simple score may help to estimate the prognosis. The continuous rise in yearly cases over time may be attributed to more examinations and better-quality CT-scans, but still underestimate the true incidence.



Hepatic Portal Venous Gas Prognostic Score

Choose Line			Read 1 Field according to Lactate, Age and Gender						Add Points for ICU/TIA			Look up Mortality	
LACTATE			AGE Men			AGE Women			ICU-Stay	Stroke/TIA		SCORE	Mortality
mmol/l	mg/dl		< 70	70-80	>80	< 70	70-80	>80					
1	9	→	1	3.5	6	3.5	6	8.5				1	<10%
2	18	→	2	4.5	7	4.5	7	9.5				2	
3	27	→	3	5.5	8	5.5	8	10.5				3	10%
4	36	→	4	6.5	9	6.5	9	11.5				4	20%
5	45	→	5	7.5	10	7.5	10	12.5	+ 5	+ 5	=	5	30%
6	54	→	6	8.5	11	8.5	11	13.5				6	40%
7	63	→	7	9.5	12	9.5	12	14.5				7	50%
8	72	→	8	10.5	13	10.5	13	15.5				8	60%
9	81	→	9	11.5	14	11.5	14	16.5				9	70%
10	90	→	10	12.5	15	12.5	15	17.5				10	80%
>=11	>=100	→	12	15	17	14	17	19				11	90%
												>=12	>90%

P41

Rising cases of shiitake-induced flagellate dermatitis: a European review

N. Gueddi[1], J. Simon[2], M. Coen[2]

[1]Hôpitaux Universistaires de Genève, Médecine interne générale, Genève, Switzerland, [2]Hôpitaux Universitaires de Genève, Médecine interne générale, Genève, Switzerland

Background: Shiitake (*Lentinula edodes*) is an edible mushroom traditionally consumed in Asia and is known to cause flagellate dermatitis, particularly when eaten raw or undercooked. With globalization and the rising popularity of Asian cuisine, an increasing number of cases have been documented in Europe. This article aims to review published European cases of shiitake-induced flagellate dermatitis and describe their epidemiological characteristics, clinical features, diagnostic workup and management.

Methods: A narrative review of the PubMed database was performed to identify European case reports and case series of shiitake-induced flagellate dermatitis published between the inception of PubMed and 2025. Non-European cases, allergic contact dermatitis and reports lacking clinical descriptions were excluded.

Results: Between 1991 and 2025, 42 European publications reported 120 cases of shiitake-induced flagellate dermatitis, with a marked male predominance and ages ranging from 7 to 86 years. France accounted for most cases, including two large case series (15 and 59 patients), followed by Germany (10), Italy (9), England (8), and Spain (7). Other countries reported isolated cases. Dermatitis typically occurred 24–48 h after ingestion of raw or undercooked shiitake, presenting as pruritic linear erythematous eruptions mainly on the trunk and limbs. Systemic symptoms were rare. Laboratory and histological findings were mostly nonspecific. Management relied on antihistamines, corticosteroids and avoidance of shiitake with resolution within weeks.

Conclusion & clinical implications: Shiitake-induced flagellate dermatitis is an increasingly recognized condition in Europe. Diagnosis is primarily clinical, based on the characteristic eruption and a compatible dietary history. Systemic manifestations are uncommon. Management is supportive as the condition is self-limiting and the benefit of pharmacological treatment remains uncertain. Clinician awareness is essential for prompt diagnosis and appropriate dietary counseling.

P42

Career decisions for senior physician roles in general internal medicine category B training hospitals

A. Guettler[1], P. Mattmann-Lacolla[2], F. Liberatore[3]

[1]See-Spital Horgen, Medizin, Horgen, Switzerland, [2]Spital Männedorf, Medizin, Männedorf, Switzerland, [3]ZHAW, Winterthurer Institut für Gesundheitsökonomie, Winterthur, Switzerland

Background: Increasing subspecialisation can fragment inpatient care despite rising multimorbidity. Category B regional hospitals provide substantial early General Internal Medicine training and depend on senior physicians for both patients care and resident education. We examined career intentions and determinants for senior physician roles, with emphasis on category B hospitals.

Methods: We conducted an online cross-sectional survey of General Internal Medicine resident and senior physicians in German-speaking Switzerland (January–April 2024; SurveyMonkey®). Heads of department in 50 hospitals forwarded the survey link. Two questionnaires captured demographics, intended career path. Facilitators and barriers to senior physician roles and to working in category B hospitals were assessed.

Results: 31% of future general practitioners and 22% of future specialists did not intend to take a senior physician role in GIM. Of residents planning this step, 42% would choose a category B hospital. Senior physicians in category A versus B hospitals did not differ in age, experience, or intended duration of senior physician-ship, but career goals did. Free-text responses indicated that residents valued experience gain, whereas senior physicians emphasized content of role. Key deterrents were shifts, workload, and lack of recognition. Category B hospitals were valued for autonomy, holistic care, and organizational culture, while limited subspecialty support, clinical spectrum, shift burden, and staff shortages were key concerns.

Conclusion & clinical implications: Key priorities include improving working conditions, enhancing recognition and salary of GIM, and aligning workforce planning. Category B hospitals should provide an excellent working and training environment for residents, ensure attractive working conditions for senior physicians, anticipate turnover in their recruitment strategy, and create an adequate number of senior consultant positions to offer clear career prospects and support for senior physicians.

P43

Problematic substance use among rejected asylum seekers receiving emergency assistance: a PhotoVoice study

E. Hangartner[1], L. Grosjean[1], B. Pahud Vermeulen[1], A. François[1], E. Bergamini[1], D.J. Campbell[2], M.-A. Durand[3], A. Soumah[1], V.S. Grazioli[1], P. Bodenmann[1]

[1]Department of Vulnerabilities and Social Medicine, Unisanté, University Center for Primary Care and Public Health & University of Lausanne, Lausanne, Switzerland, [2]Departments of Medicine, Community Health Sciences & Cardiac Sciences, Cumming School of Medicine, University of Calgary, Calgary, Canada, [3]Department of Ambulatory Care, Unisanté, University Center for Primary Care and Public Health & University of Lausanne, Lausanne, Switzerland

Background: Rejected asylum seekers receiving emergency assistance (EA) face severe social disadvantages and vulnerability. The challenges faced are even greater when combined with problematic substance use (PSU). This may result in reduced quality of life (QoL) and impaired ability to access care. We sought to understand their self-report health-related QoL, and their experiences, as this knowledge is key to designing tailored interventions and reducing health inequities.

Methods: A prior qualitative exploration, with professionals from the fields of addiction or migration, pointed a participatory approach, for which PhotoVoice (PV) appeared well suited. This method uses photographs and narratives to explore sensitive topics. Rejected asylum seekers receiving EA, recruited through a peer worker, joined a PV project and completed the WHOQOL-BREF questionnaire to assess health-related QoL, a semi-structured interview (SSI) or a focus group (FG) to share experiences related to PSU through photography. Two PV workshops included an initial training session, followed by a second session discussing the photographs using the SHOWED framework. SSI and FG data were double-coded (33%) and preliminarily analyzed inductively.

Results: The exploration among professionals highlighted basic population needs and the importance of a simple and visual approach. Regarding PV, 18 (17 men, 1 woman) were included, 16 (90%) participated in the first workshop and 13 (72%) in the second. Descriptive statistics (n=17) showed lower QoL scores than general population norms usually around 70 across domains, with participants scoring 45,4 in physical health, 49,8 in

psychological health, 46,4 in social and 41,7 in environmental domains. The photographs and texts generated powerful insights that initiated the discussion. SSI and FG revealed three main themes: (1) Migration and asylum trajectories; (2) Difficult lived experiences; and (3) Substance use as an adaptation strategy.

Conclusion & clinical implications: Findings revealed that a participatory approach such as PV methodology enabled the expression of complex asylum-trajectory experiences through visual and textual narratives. It highlighted how difficult lived experiences contributed to adaptation processes that sometimes involved problematic substance use. These results provide an understanding of the challenges faced by this population and insights for developing tailored interventions to tackle health inequities.

P44

Temporal trends in incidence and outcomes of disseminated intravascular coagulation in a Swiss nationwide cohort

N. Hasler[1], C. Gregoriano[1], R. Laager[1], P. Schütz[1], A. Kutz[1]

[1]Kantonsspital Aarau, Allgemeine Innere Medizin, Aarau, Switzerland

Background: Disseminated intravascular coagulation (DIC) is a life-threatening disorder involving systemic activation of coagulation. Nationwide data on DIC are scarce, and temporal trends in incidence and outcomes have not been evaluated in Switzerland. We assessed temporal trends in the incidence and in-hospital outcomes of DIC in a Swiss nationwide cohort.

Methods: We conducted a nationwide retrospective cohort study using inpatient claims data from January 1, 2012, to December 31, 2023. Adult patients hospitalized with a main or secondary diagnosis of DIC, identified using ICD-10 GM codes, were included. Underlying disorders contributing to DIC were defined according to International Society of Thrombosis and Haemostasis guidance. The primary outcomes were all-cause in-hospital mortality and 30-day mortality, length of hospital stay (LOS), intensive care unit (ICU) admission, and ICU LOS. Outcomes were stratified by underlying disorder.

Results: 20,108 hospitalizations with DIC were identified, with the incidence rate increasing from 11.3 to 29.5 per 100,000 inhabitants between 2012 and 2023 (P<.01). The most frequent underlying disorder was pregnancy complications (49.9%) which increased from 37.7% in 2012 to 59.1% in 2023 (P<.01). 33.1% of DIC was associated with severe infections. Over the study period, in-hospital mortality declined from 28.6% to 13.1% (P<.01). The highest in-hospital mortality was observed in DIC associated with solid tumors (48.7%) and tissue damage (47.2%), whereas pregnancy-associated DIC exhibited the lowest mortality (0.1%). In-hospital and 30-day mortality, ICU admission, and LOS decreased significantly over time(P<.01), while ICU LOS was unchanged.

Conclusion & clinical implications: From 2012 to 2023, the incidence of DIC in Switzerland increased, largely due to a rise in pregnancy-associated cases. Over the same period, mortality declined substantially, likely reflecting improved recognition and earlier management of coagulopathy.

P45

Establishing a national deep vein thrombosis network in Ghana: results from a prospective multi-center study

L. Huebl[1,2], I.K. Owusu[3], C. Kokuro[3], Y. Adu-Boakye[3], B.C. Nkum[3], I.N. Ogyefo[3], E. Acheamfour-Akowuah[3], M. Labaran[3], S.F. Odoom[3], R.K. Nyamekye[4], D.O. Minkah[5], H.K. Andoh[6], A. Doku[7], F. Agyekum[8], S.Y. Nani[7], A. Steele-Dadzie[9], K. Dzefi-Tettey[10,11], Y.A. Awuku[12], A.G. Boadu[13], A. Atiku[14], J. Aguyire[14], J.A. Khalid[15], H. Heidari[16], T. Özkan[17], K.A. Eberhardt[18], M. Ramharter[1,2], C. Rolling[19], T. Rolling[1,20,21], C.D. Vinnemeier[1,2], M. Heinemann[1,2,22]

[1]University Medical Center Hamburg-Eppendorf, I Department of Medicine, Hamburg, Germany, [2]Bernhard Nocht Institute for Tropical Medicine, Department of Tropical Medicine, Hamburg, Germany, [3]Komfo Anokye Teaching Hospital, Department of Medicine, Kumasi, Ghana, [4]Agogo Presbyterian Hospital, Department of Medicine, Agogo, Ghana, [5]Kumasi South Hospital, Department of Medicine, Kumasi, Ghana, [6]Bono Regional Hospital, Department of Medicine, Sunyani, Ghana, [7]Korle-Bu Teaching Hospital, Department of Medicine and Therapeutics, Accra, Ghana, [8]University of Ghana Medical School, College of Health Sciences, University of Ghana, Department of Medicine and Therapeutics, Accra, Ghana, [9]Korle-Bu Teaching Hospital, Polyclinic/Family Medicine Department, Accra, Ghana, [10]Korle-Bu Teaching Hospital, Department of Radiology, Accra, Ghana, [11]School of Medicine, University of Health and Allied Sciences, Department of Radiology, Ho, Ghana, [12]University of Health and Allied Sciences, Department of Medicine, Ho, Ghana, [13]Cape Coast Teaching Hospital, Department of Internal Medicine, Cape Coast, Ghana, [14]Tamale Teaching Hospital, Department of Internal Medicine, Tamale, Ghana, [15]Effia Nkwanta Regional Hospital, Department of Internal Medicine, Takoradi, Ghana, [16]Medical University of Vienna, Medicine, Vienna, Austria, [17]Charité-Universitätsmedizin Berlin, Department of Emergency and Acute Medicine, Berlin, Ghana, [18]Medical Faculty and University Hospital Düsseldorf, Heinrich-Heine-University Düsseldorf, Department of Gastroenterology, Hepatology and Infectious Diseases, Düsseldorf, Germany, [19]University Medical Center Hamburg-Eppendorf, Department of Oncology and Haematology, Hamburg, Germany, [20]Kepler University Hospital, I Division of Infectious Diseases and Tropical Medicine, Department of Internal Medicine 4 - Pneumology, Linz, Austria, [21]Johannes Kepler University, Medical Faculty, Linz, Austria, [22]University Hospital, University of Zurich, Department of Internal Medicine, Zurich, Switzerland

Background: Venous thromboembolism (VTE), including deep vein thrombosis (DVT) and pulmonary embolism (PE), is a leading cause of morbidity and mortality worldwide. Nevertheless, data on VTE in sub-Saharan Africa are scarce. This observational study was carried out in a national capacity development project aiming to improve the diagnosis and treatment of patients with DVT in Ghana.

Methods: Between 2018 and 2022, a "National DVT Network" comprising nine hospitals across Ghana was established. The initiative involved capacity building, including a train-the-trainers approach, mentorship, awareness workshops and campaigns. In each hospital, dedicated “DVT teams” were established and provided with technical infrastructure to enable DVT diagnosis. Epidemiological data were collected from patients with suspected DVT in two study phases.

Results: A total of 1422 adult patients with suspected DVT were screened at nine Ghanaian hospitals (Figure 1). DVT was confirmed by ultrasound in 626 patients (44%), including 619 with lower extremity DVT (LEDVT) and 10 with upper extremity DVT; 59 patients had PE (Figure 2). Anticoagulants were administered to 223 out of 1422 patients (16%) before the onset of suspicious symptoms, including 25% (37/146) of inpatients with active cancer and 27% (8/30) with a history of DVT. Study phase 2 (2020-2022) included 930 patients, of whom 379 had VTE. Anticoagulation was given to 96% (365/379) of VTE patients. Eighty-one out of 930 patients died (9%), mainly in hospital. In-hospital mortality was higher in VTE patients (17%, 65/379 vs. 4%, 16/551, p<0.001).

Conclusion & clinical implications: The prevalence of DVT among Ghanaians with clinical suspicion is high, suggesting DVT is a common disorder in Ghana. While DVT prevalence in suspected cases is typically below 20% in high-income countries, the high diagnostic yield of duplex ultrasound in our study

suggests underdiagnosis. This highlights the need for a DVT network program and improved nationwide healthcare access for suspected DVT cases. Limited DVT prophylaxis remains another major challenge and requires strengthening.

P46

External validation of the Cleveland Clinic model for risk assessment of venous thromboembolism in medical inpatients

R. Hofstetter[1], O. Stalder[2], C. Baumgartner[1,3], T. Tritschler[1], D. Aujesky[1], M. Méan[4]

[1]Inselspital, Bern University Hospital, Department of General Internal Medicine, Bern, Switzerland, [2]University of Bern, Department of Clinical Research, Bern, Switzerland, [3]Inselspital, Bern University Hospital, Department of Infectious Diseases, Bern, Switzerland, [4]CHUV, Lausanne University Hospital, Division of Internal Medicine, Lausanne, Switzerland

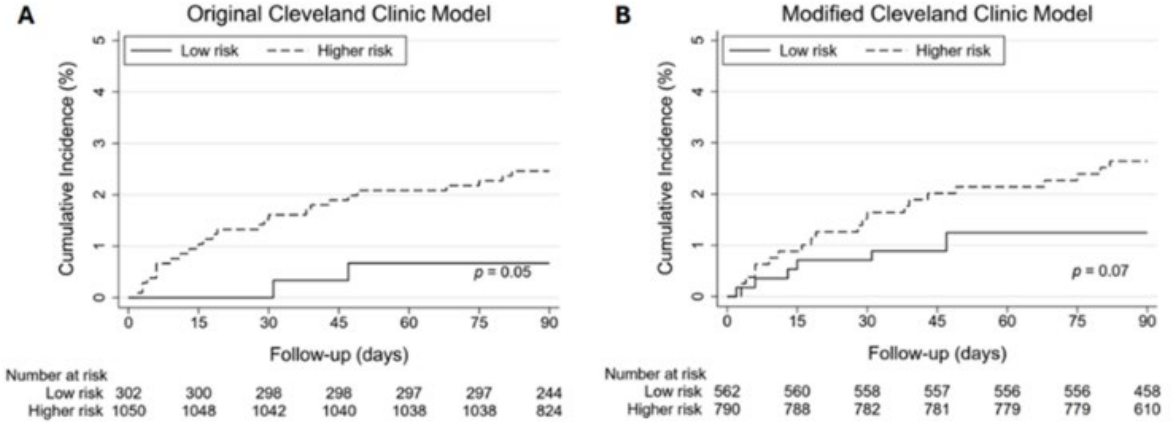
Background: Venous thromboembolism (VTE) is a major cause of morbidity and mortality in medical inpatients. Identifying patients at increased VTE risk using validated risk assessment models (RAMs) is essential to optimize thromboprophylaxis. This study aimed to independently validate the novel Cleveland Clinic Model (CCM) and to compare its prognostic accuracy with the Padua Prediction Score (PPS) and the International Medical Prevention Registry on Venous Thromboembolism (IMPROVE) score.

Methods: We used data from the prospective Risk Stratification for Hospital-Acquired Thromboembolism in Medical Patients (RISE) cohort of patients admitted for >24 hours to general internal medicine wards at 3 Swiss university hospitals (Lausanne, Bern, and Geneva) from 06/2020-01/2022. The outcome was symptomatic VTE within 90 days. Patients were stratified into higher and low VTE-risk groups based on each RAM. We compared test characteristics across 2 versions of the CCM (original and modified version derived using 45-day follow-up and without the variables decubitus ulcer and mechanical ventilation), the PPS, and the IMPROVE score, and compared 90-day cumulative incidence using Kaplan-Meier curves, and drew calibration plots for both CCMs.

Results: Of 1352 medical inpatients, 28 (2.1%) experienced VTE within 90 days. The 90-day VTE cumulative incidence was 2.46% in higher-risk vs. 0.67% in low-risk patients (P=0.05) according to the original CCM (**Figure**). For predicting 90-day VTE, the original CCM showed the highest sensitivity (92.9%) but lowest specificity (22.7%; **Table**). Discriminative power was poor across all RAMs (areas under the receiver operating characteristics curve 60%). In the calibration plots, both CCM versions underestimated the risk of VTE.

Conclusion & clinical implications: The CCM, similar to the other two RAMs investigated in this study (PPS, IMPROVE score), showed limited accuracy for predicting VTE up to 90 days among medical inpatients. Our results underscore the difficulty in estimating the risk of VTE using simple RAMs in the heterogenous population of medical inpatients.

Figure. 90-day cumulative incidences of VTE in low- vs. higher-risk patients based on the Cleveland Clinic Models



Panel A. Original Cleveland Clinic Model. The cumulative incidence of venous thromboembolism was 0.67% (95% confidence interval [CI]: 0.17–2.65%) for low-risk patients and 2.46% (95% CI: 1.68–3.59%) for higher-risk patients (P=0.05 by the log-rank test). **Panel B.** Modified Cleveland Clinic Model. The cumulative incidence of venous thromboembolism was 1.24% (95% CI: 0.6–2.59%) for low-risk patients and 2.64% (95% CI: 1.73–4.03%) for higher-risk patients (P=0.07 by the log-rank test).

Table. Prognostic accuracy of VTE risk assessment models for predicting 90-day VTE

Risk Assessment Model	Low risk	Higher risk	*P*-value	Sensitivity, %	Specificity, %	AUC
	N event/N patients			(95% CI)		
Original CCM	2/302	26/1050	0.079	92.9 (77.4-98.0)	22.7 (20.5-25.0)	0.58 (0.55-0.60)
Modified CCM	7/562	21/790	0.119	75.0 (56.6-87.3)	41.9 (39.3-44.6)	0.59 (0.56-0.61)
PPS	10/706	18/646	0.071	64.3 (45.8-79.3)	52.6 (49.9-55.2)	0.58 (0.56-0.61)
IMPROVE score	17/949	11/403	0.276	39.3 (23.6-57.6)	70.4 (67.9-72.8)	0.55 (0.52-0.58)

Abbreviations: CCM, Cleveland Clinic Model; CI, confidence interval; IMPROVE, International Medical Prevention Registry on Venous Thromboembolism; PPS, Padua Predictions score; VTE, venous thromboembolism

*Adjusted for study site and use of pharmacological thromboprophylaxis, treated as a time-varying covariate.

P47

Functional hypoparathyroidism with severe hypocalcemia due to PPI-induced hypomagnesemia: a case report

M.F. Wittwer[1], G. Adelakun[1], E. Potlukova[1], F. Burkhalter[2]

[1]Universitäres Zentrum Innere Medizin, Klinik Innere Medizin, Liestal, Switzerland, [2]Universitäres Zentrum Innere Medizin, Klinik Nephrologie, Liestal, Switzerland

Case presentation: A 70-year-old woman presented to the emergency department with recurrent vomiting, diarrhea, and progressive confusion that developed after a fall earlier that morning. Medical history included left-sided hemiparesis with mild neuropsychological deficits following a subarachnoid hemorrhage 25 years earlier, coronary artery disease, hypothyroidism, and chronic hypokalemia, for which she had been receiving potassium supplementation for the past three years. Additional medications included pantoprazole. On arrival, she was afebrile and confused, with a Glasgow Coma Scale score of 10, blood pressure of 152/79 mmHg, and a pulse rate of 63/min. Neurological examination revealed mild left-sided hemiparesis without other focal deficits, apart from aphasia and confusion. A cranial CT scan showed no evidence of acute cerebral pathology. Laboratory tests revealed severe hypocalcemia (total calcium 1.32 mmol/L) with an ionized calcium level of 0.68 mmol/L, low intact parathyroid hormone (iPTH) level of 1.98 pmol/L, normal 25-hydroxyvitamin D level, hypokalemia (2.4 mmol/L), and severe hypomagnesemia (0.12 mmol/L). The ECG was normal. A diagnosis of hypomagnesemia-induced hypocalcemia was made. The patient received immediate intravenous magnesium, calcium, and potassium, along with continuous electrolyte replacement. Pantoprazole was discontinued. Confusion resolved rapidly, and after 72 hours her electrolyte levels normalized: magnesium 0.72 mmol/L, potassium 3.4 mmol/L, ionized calcium 1.21 mmol/L, and iPTH increased to 7.61 pmol/L. These values remained stable after discontinuation of continuous supplementation. Parathyroid hormone (PTH) secretion is dependent on cyclic adenosine monophosphate, for which magnesium acts as a cofactor. In severe hypomagnesemia, impaired PTH secretion results in hypocalcemia. Chronic proton pump inhibitor use can induce hypomagnesemia and thereby contribute to persistent hypokalemia, ultimately leading to functional hypoparathyroidism with subsequent severe hypocalcemia. In our case, long-term pantoprazole therapy was discontinued, and oral supplementation with magnesium, calcium, vitamin D, and potassium was initiated.

Clinical implications: Chronic proton pump inhibitor (PPI) therapy as a potential cause of profound hypomagnesemia with secondary hypokalemia. Severe hypomagnesemia as a cause of functional hypoparathyroidism leading to hypocalcemia. Intravenous magnesium replacement is essential for the correction of hypomagnesemia-induced hypocalcemia.

P48

Renal denervation in a dialysis patient with resistant hypertension: a promising therapeutic approach

G. Adelakun[1], C. Lenherr[1], L. Lauder[2,3], F. Mahfoud[2,4], F. Burkhalter[1], K. König[1]

[1]Cantonal Hospital Baselland, Clinic of Nephrology, University Center of Internal Medicine, Liestal, Switzerland, [2]University Hospital Basel, Department of Cardiology, University Heart Center, Basel, Switzerland, [3]University Hospital Basel, Cardiovascular Research Institute Basel (CRIB), Basel, Switzerland, [4]University Hospital Basel, Cardiovascular research institute Basel (CRIB), Basel, Switzerland

Case presentation: We present the case of a 50-year-old woman undergoing chronic haemodialysis with severe, treatment-resistant arterial hypertension with recurrent hypertensive crisis. Relevant comorbidities included coronary artery disease and multiple sclerosis. Despite treatment with seven antihypertensive drugs, she had a mean 24-hour ambulatory blood pressure of 185/96 mmHg. The hypertension was primarily attributed to renoparenchymal disease. There were no indications of medication non-adherence, and renovascular disease was excluded using duplex sonography of the renal arteries. As the patient was not willing to take further medications, she was offered catheter-based renal denervation (RDN). After shared decision making, transradial RDN was performed using a dedicated radiofrequency catheter system. A total of 20 ablations were applied to the right and 32 to the left renal artery. Post-intervention, blood pressure initially remained unchanged. However, a marked reduction was observed six weeks later, with home systolic blood pressure measurements intermittently below 100 mmHg. Antihypertensive medications were gradually reduced to a dual antihypertensive therapy while adequate blood pressure control was maintained.

Clinical implications: In patients with chronic kidney disease (CKD), sympathetic activity progressively increases with declining renal function, reaching its highest levels in end-stage renal disease (ESRD). From a pathophysiological perspective, interrupting the renal sympathetic pathways with RDN is therefore a promising treatment option for CKD patients with resistant hypertension. As sham-controlled RDN trials only included patients with an estimated glomerular filtration rate ≥ 40 mL/min/m², current guidelines do not recommend the use of RDN in patients with more advanced chronic kidney disease outside clinical studies, until further evidence becomes available. However, in line with this case, small single-center studies suggest the safety and efficacy of RDN in patients with more advanced chronic kidney disease. Therefore, RDN could represent a viable therapeutic option in carefully selected patients with ESRD, including those receiving dialysis.

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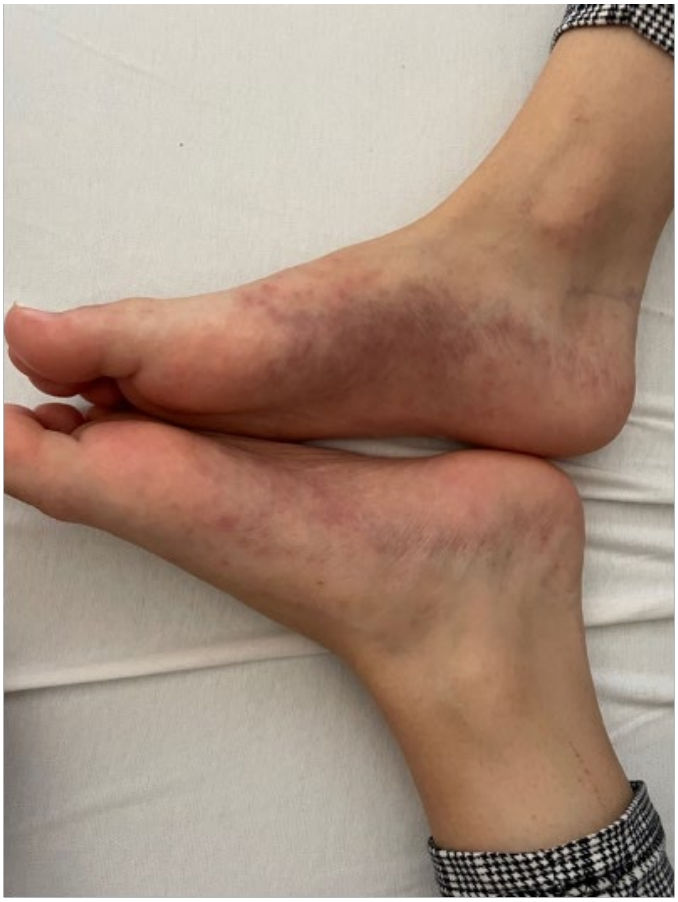
Isaacs syndrome associated with polyarteritis nodosa

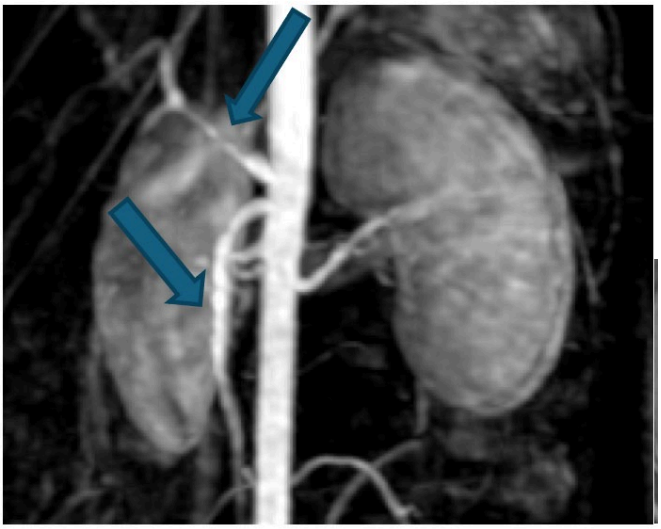
L. Aubry[1], T. Badoux[2], T. Reygaerts[3], G. Grandmaison[1]

[1]Hôpital Cantonal de Fribourg, Médecine interne, Villars-sur-Glâne, Switzerland, [2]Hôpital Cantonal de Fribourg, Neurologie, Villars-sur-Glâne, Switzerland, [3]Hôpital Cantonal de Fribourg, Rhumatologie, Villars-sur-Glâne, Switzerland

Case presentation: Isaacs syndrome (IS) is a peripheral nerve hyperexcitability (PNH) disorder caused by immune-mediated dysfunction of voltage-gated potassium channels (VGKCs). Patients present diffuse fasciculations, muscle cramps, neuropathic pain, hyperhidrosis and dysautonomia. Diagnosis is based on clinical features, PNH on electroneuromyography (ENMG), and the presence of serum autoantibodies targeting VGKC complex such as CASPR2 or LGI1. The estimated prevalence is 1/1'000'000, with only 200 cases described. IS is frequently associated with an underlying disease such as oncological conditions, most commonly thymoma, and autoimmune diseases. We present a case of IS associated with polyarteritis nodosa (sPAN) in a young woman, an association which was, to our knowledge, never described. An healthy female in her 20s presented non-traumatic lower back pain radiating to the anterior thighs. She developed B symptoms (fatigue, night sweats, and an 11kg weight loss). Concurrently, she experienced urinary symptoms, severe constipation, continuous muscle contractions, numbness and coldness in her third and fourth fingers, insomnia, anxiety, palpitations and short episodes of oppressive retrosternal pain. Besides continuous fasciculations in all examined muscle groups, neurological examination was unremarkable. Palpable purpuric lesions were present on both feet and the palmar face of both hands. Blood work

demonstrated inflammatory syndrome. Sacroiliac and dorsolumbar magnetic resonance imaging (MRI) excluded sacroiliitis and spondylitis. ENMG demonstrated fasciculations in all tested muscles, including doublets and triplets, and myokymic discharge. Anti-CASPR2 antibodies were highly positive. Histopathology of the purpuric lesions demonstrated necrotizing vasculitis of the subcutaneous vessels, obliterated by neutrophilic inflammatory infiltrates. ANA were highly positive and ANCA were negative. Abdominal MR angiography demonstrated calibre irregularities of the superior mesenteric artery and hypovascular areas in the left kidney, consistent with small foci of infarcts, supporting our hypothesis of referred ischemic back pain. We diagnosed sPAN and associated IS and administred intravenous methylprednisolone followed by cyclophosphamide cure. After two years follow-up, she had not had a relapse.





Clinical implications: To our knowledge, this case report is the first to describe the co-occurrence of IS with sPAN.

A unexplained back pain could be referred ischemic renal or mesenteric pain.

P50

The platypnea-orthodeoxia syndrome: a super easy bedside test leads to a rare symptom complex

M. Barraud[1], S. Egli[1], C. Berlier[2], E. Weber[1]

[1]Stadtspital Waid, Innere Medizin, Zürich, Switzerland, [2]Stadtspital Waid, Pneumologie, Zürich, Switzerland

Case presentation: A 75-year-old patient was hospitalized because of progressively worsening exertional dyspnea over the past weeks. Due to shortness of breath, he had been unable to leave his apartment. Cough, fever and orthopnea were denied, although he reported that the dyspnea would worsen in an upright position. His medical history contained a coronary heart disease, a cerebrovascular insult (no enduring neurologic deficits) and chronic alcohol use disorder. On admission the physical examination and vital parameters were normal. Laboratory investigations showed an elevated CRP (19mg/dl), a normocytic anemia (114g/l) and a normal NT-proBNP. A CT-Scan showed signs of emphysema and was otherwise unremarkable. The arterial blood gas analysis showed hyperventilation with hypoxemia and elevated alveolar-arterial gradient of 7.8kPa. Pulse oximetry revealed a significant decrease of oxygen saturation in upright position (81% vs. 97% lying down). Following the differential diagnosis of a platypnea-orthodeoxia syndrome (POS) the transthoracic echocardography (TTE) and a CT-Scan did not show a right-left shunt. However, in the following transesophageal echocardiography (TEE) we diagnosed a persistent foramen ovale with severe right-left shunt, which we identified as the cause for the POS.

Clinical implications: In case of dyspnea of unknown cause, POS is an important differential diagnosis. It is characterized by dyspnea in upright position (platypnea) and arterial desaturation (orthodeoxia, drop of SaO2>5%) while in the upright position. Most of the cases are due to a cardiac shunt (1), followed by intrapulmonary shunts (e.g. arteriovenous malformations (AVM), hepatopulmonary syndrome). Those are the most important differential diagnosis. TTE is the first line diagnostic step of POS: The appearance of bubbles in the left atrium within 3 cardiac cycles suggests an intracardiac shunt. A delayed microbubble opacification of the left atrium (after 3–6 cardiac cycles) suggests an intrapulmonary shunt. Symptomatic intracardiac shunts can be closed through surgery or percutaneous intervention. In case of AVM, pulmonary artery embolization is the therapy of choice. The hepatopulmonary syndrome is treated with supplemental oxygen (2). In severe cases, liver transplantation is the only definitive therapy.

P51

Behçet's syndrome beyond the boundaries of the ancient Silk Road

A. Becher[1], E. Bächli[1], L.C. Huber[1], A. Göldi[1]

[1]University Hospital Zurich, Department of Internal Medicine, Zurich, Switzerland

Case presentation: A healthy 45-year-old woman presented with blurred vision, painful oral and genital lesions, and fever accompanied by night sweats that had started few days ago. Her medical history was notable for recurrent stress-associated oral aphthae, which occurred two to four times per year and lasted up to three weeks, resolving spontaneously. She

also experienced a single episode of genital ulcerations of unclear etiology approximately 20 years earlier. The patient was of Taiwanese descent but had been adopted and grown up in Switzerland. Both her Taiwanese parents and her seven siblings were reported to be healthy. Clinical examination confirmed painful oral and genital ulcerations. Laboratory testing showed elevated C-reactive protein (CRP) levels (94mg/L) [normal <5mg/l], but no other abnormalities. Vital signs were normal. Due to suspected herpes simplex virus infection, valaciclovir was initiated one day prior to presentation. Ophthalmological examination revealed posterior uveitis. Shortly after admission, the patient experienced pain in the metatarsophalangeal, ankle, and knee joints. Extensive testing for viral, bacterial, and sexually transmitted infections yielded negative results. Autoimmune serology was also negative. Positron emission tomography–CT (PET-CT) revealed bilateral synovitis with joint effusions and signs of previous sacroiliitis, but no evidence of metabolically active vasculitis. After exclusion of infectious causes, Behçet's syndrome and spondyloarthropathy were considered in the differential diagnosis of an autoimmune or autoinflammatory disorder. Systemic corticosteroid therapy led to significant improvement of joint symptoms and mucocutaneous lesions, though visual impairment improved only slightly. Subsequent testing revealed positivity for HLA-B51 (human leukocyte antigen B51) and negativity for HLA-B27.

Clinical implications: According to the International Criteria for Behçet's Disease, the patient achieved a score of six points, fulfilling the diagnostic criteria for Behçet syndrome. Our case is notable for its rare manifestation of Behçet syndrome in Switzerland, with an atypical late-onset at the age of 45 years in a Taiwanese patient, outside the traditional geographical scope of the ancient silk road. This case highlights the diagnostic challenges of Behçet's syndrome in areas with a low prevalence of the disease and emphasizes the importance of early recognition and treatment to prevent irreversible vision loss.

P52

Pressure in the pulp: acute chest pain post-root canal treatment

K. Bertschy[1], R. Valek[2]

[1]Spital Bülach, Innere Medizin, Bülach, Switzerland, [2]Spital Bülach, Intensivstation, Bülach, Switzerland

Case presentation: A 58-year-old previously healthy woman presented to the emergency department with acute retrosternal chest pain occurring approximately two hours after undergoing a routine dental root canal treatment of the lower left premolar. On physical examination, palpable subcutaneous emphysema was noted involving the cervicofacial region and extending to the upper anterior chest. Vital signs were stable without respiratory distress. Initial chest radiography revealed the presence of mediastinal free air, indicating pneumomediastinum, which was subsequently confirmed by computed tomography of the thorax demonstrating extensive air tracking within the mediastinum. An iatrogenic pneumomediastinum was diagnosed. The patient was managed conservatively with supplemental oxygen, 24-hour clinical observation, and a short course of oral antibiotics. Chest pain resolved during observation, subcutaneous emphysema regressed completely, and the patient was discharged without further complications.

Clinical implications: Pneumomediastinum following dental procedures is an iatrogenic complication, most commonly associated with the use of high-speed, air-driven dental instruments. During such procedures, pressurized air may be inadvertently introduced into the oral soft tissues and subsequently dissect along cervical fascial planes, extending into the mediastinum. The resulting presentation may mimic life-threatening causes of acute chest pain, including myocardial infarction, pulmonary embolism, or aortic dissection. Although the clinical course is typically benign and self-limited, clinicians should remain vigilant for potential complications, including pneumothorax, tension pneumomediastinum, and rarely secondary infections such as mediastinitis, cellulitis, or necrotizing fasciitis due to bacterial translocation. This case highlights the importance of thorough procedural history taking and underscores iatrogenic pneumomediastinum as an uncommon but clinically relevant differential diagnosis in patients presenting with acute chest pain after dental interventions

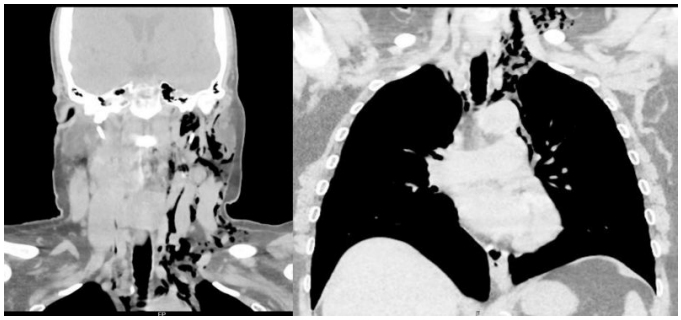


Fig 1. Computed tomography demonstrates air tracking into the mediastinum

P53

A worth-"Weil" vacation: a case of severe leptospirosis and its associated clinical and laboratory changes

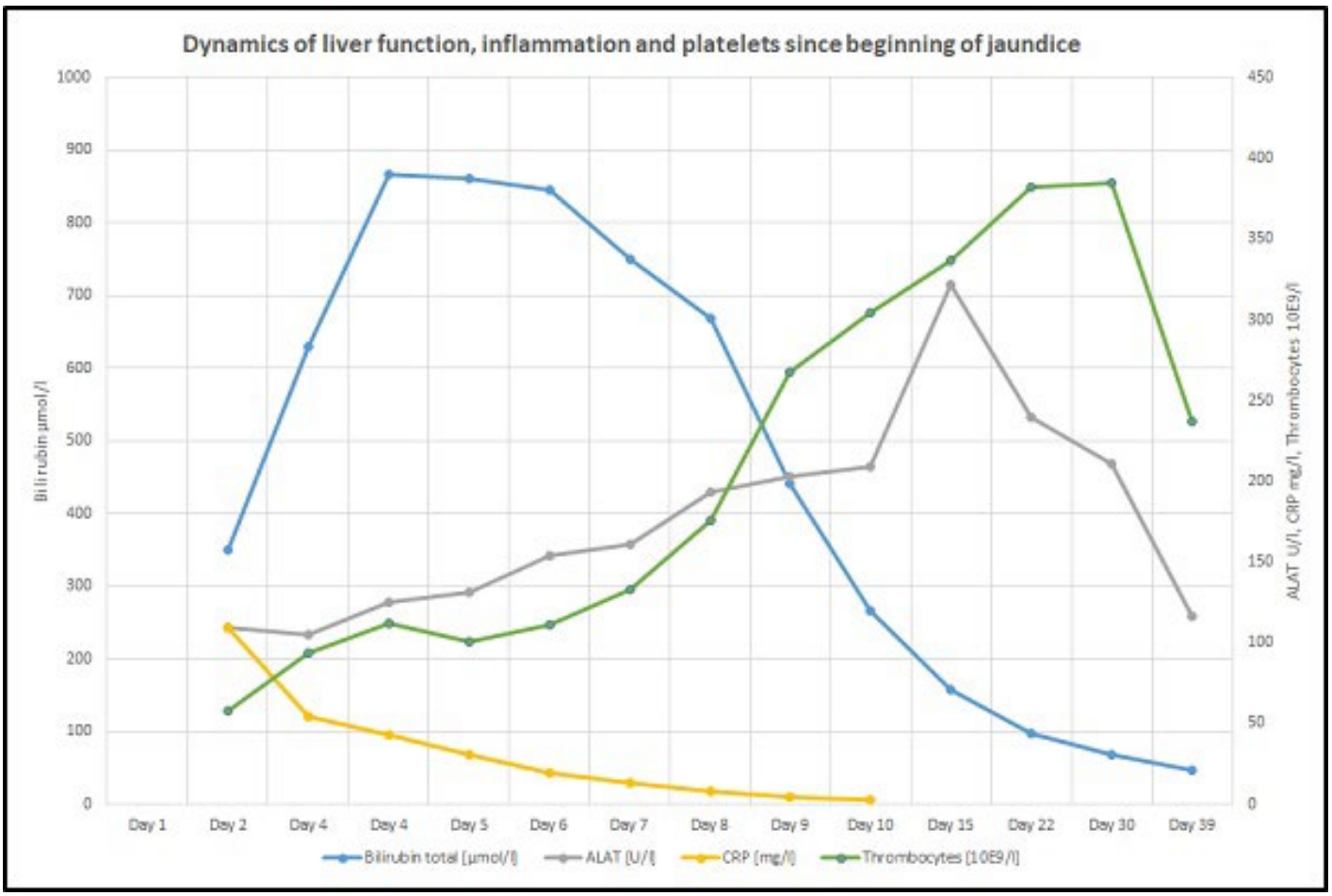
T. Böni[1], L. Röllin[1], A. Turk[1]

[1]See-Spital, Medizinische Klinik, Horgen, Switzerland

Case presentation: A 22-year-old male presented with rapid onset of malaise and myalgia, occurring simultaneously with indolent jaundice and discreet conjunctivitis. He had returned from Greece 4 weeks before. His medical history was unremarkable. Lab results showed mildly increased liver enzymes with a marked elevation of bilirubin, leucocytosis with elevated CRP, bicytopenia and a reduced kidney function with hyponatremia and hypokalemia. Ultrasound excluded cholestasis or hepatic abnormalities. An infectious workup was ordered. The patient was hospitalized under initiation of supportive measures and we started empiric antibiotic therapy with ceftriaxone. Initially we considered leptospirosis due to the striking discrepancy between the mild elevation of transaminases and the pronounced hyperbilirubinemia as well as the severe myalgia. After a further, significant increase of bilirubin and persistent kidney injury, the patient was transferred to a central hospital for early evaluation of a liver transplantation and biopsy. Our further differential diagnoses at that time included Wilson's disease or autoimmune hepatitis. After 5 days, *Leptospira interrogans* infection was confirmed serologically (positive IgM, negative IgG) and subsequently by urine PCR. The antibiotic regime was deescalated to doxycycline after clinical improvement.

Clinical implications: There is a wide range of possible predictors associated with severe leptospirosis but validation is lacking. Diagnostic testing includes PCR test in the blood during the first 4-6 days of symptoms, or after 7 days in the urine. Serologic tests can be false negative at presentation and a second sample should be obtained 7-14 days after the first antibody test. Early antibiotic therapy with oral doxycycline is recommended for mild cases, intravenous Penicillin G or Ceftriaxone for severe cases, ideally administered before a confirmed diagnosis is available. This approach can significantly shorten both the duration of the illness and the incidence of complications, such as acute kidney injury, pulmonary haemorrhage or fulminant hepatic failure. It is understood, that early antibiotic treat-

ment reduces the burden of antibody opsonization of viable organisms and subsequent local and systemic inflammation resulting in less damage to multiple organs.



Graph 1: bilirubin over time in relation to ALAT, CRP and platelets since beginning of apparent jaundice. Antibiotic treatment was from day 2-10. Serologic confirmation was available on day 7.

P54

Small dose, big pressure: clinically relevant hypertension under low-dose venlafaxine

A. Bruschetti-Thomi[1], C. Gallino[2], L. Berwert[3], A. Gallino[4,5]

[1]Ente Ospedaliero Cantonale, Hospital of Lugano, Department of Internal Medicine, Lugano, Switzerland, [2]Hospital General Universitario Gregorio Marañón, Cardiovascular Research Unit, Madrid, Spain, [3]Ente Ospedaliero Cantonale, Hospital of Bellinzona, Division of Nephrology, Department of Internal Medicine, Bellinzona, Switzerland, [4]Ente Ospedaliero Cantonale, Hospital of Bellinzona, Cardiovascular Research Unit, Bellinzona, Switzerland, [5]University of Zurich, Internal Medicine, Cardiology, Zürich, Switzerland

Case presentation: A woman in her 60s with hypercholesterolaemia was treated with venlafaxine 75 mg daily for a minor depressive disorder. She had no history of hypertension, and repeated blood pressure measurements over the preceding year were normal (110/65 mmHg). Concomitant medication (ezetimibe, low-dose quetiapine and transdermal oestradiol) had been unchanged for several years.

After a mild worsening of depressive symptoms, the venlafaxine dose was increased to 150 mg daily. Three months later, the patient developed new-onset pulsatile headaches associated with marked blood pressure elevations on repeated self-measurements (up to 165/110 mmHg), accompanied by transient paraesthesia of the nasolabial fold. Ambulatory blood pressure monitoring (ABPM) revealed hypertensive peaks up to 191/101 mmHg. Antihypertensive treatment with amlodipine reduced peak values but did not achieve full blood pressure control.

Neuroimaging was unremarkable, and an extensive diagnostic work-up (renovascular, endocrine and structural aetiologies) excluded secondary causes of hypertension. The clinical picture was interpreted as an abortive hypertensive crisis. Venlafaxine was discontinued and subsequently reintroduced at 75 mg daily, resulting in progressive blood pressure normalisation. A repeat ABPM six weeks later showed normotensive daytime and nocturnal values, allowing discontinuation of antihypertensive therapy. During follow-up, the patient remained normotensive and clinically stable on low-dose venlafaxine.

Clinical implications:

Venlafaxine-associated hypertension is often considered uncommon at low-to-moderate dosages. This case demonstrates that clinically significant hypertension may occur even at 150 mg daily in previously normotensive patients, highlighting the need for clinical vigilance even at dosages perceived as safe.

When unexpected hypertension occurs in concomitance with recent introduction or dosage increase of venlafaxine, even at low dosages, dose reduction should be considered as first-line

management if clinically feasible. Although venlafaxine-associated hypertension is a recognised adverse effect and usually considered clinically relevant only at high dosages, this case shows that even low-to-moderate doses may precipitate clinically significant hypertension. Systematic blood pressure monitoring should therefore be an integral part of venlafaxine treatment, even at relatively low dose.

P55

Juvenile hemochromatosis presented in adulthood - a novel hepcidin gene mutation

R.M. Buzzi[1], A. Hoetker[2], F. Vallelian[1]

[1]University Hospital Zurich, Department of Internal Medicine, Zürich, Switzerland, [2]University Hospital Zurich, Institute for Diagnostic and Interventional Radiology, Zürich, Switzerland

Case presentation: A 41-year-old male patient from Senegal presented with progressive systemic complaints. Pubertal development had been normal, and there was no known family history of iron overload disorders. From the age of 37 years, he developed increasing fatigue, progressive arthralgia of the hand and foot joints, and reduced libido. Over time, a marked reduction of body hair on the extremities and thorax was observed. Laboratory evaluation revealed markedly elevated serum ferritin and transferrin saturation in the absence of metabolic abnormalities or inflammatory markers. Viral hepatitis, HIV, hemolysis, and monoclonal gammopathy were excluded. Liver MRI with iron quantification demonstrated severe hepatic iron overload (467 µmol/g; normal <36 µmol/g) without steatosis. Liver biopsy confirmed pronounced hepatocellular and biliary siderosis (grade 4/4) with mild portal inflammation and portal fibrosis. MRI of the sella revealed an atrophic pituitary gland without mass lesion, consistent with iron-related hypogonadism. Testing for common HFE mutations was negative. Exome sequencing identified a previously undescribed homozygous 1-base-pair deletion in exon 3 of the HAMP gene (p.Cys72 Serfs*), resulting in a premature stop codon and predicted loss of function. The findings were consistent with autosomal-recessive juvenile hemochromatosis type 2B. Therapeutic phlebotomy was initiated, targeting a ferritin level below 50 µg/L. Despite the presence of mild anemia during treatment, iron depletion was continued under close monitoring. Iron parameters normalized, anemia resolved, and symptoms partially improved. A follow-up liver biopsy demonstrated reduced hepatic iron deposition (grade 3/4) and complete regression of fibrosis, confirming effective disease control.

Clinical implications: Although juvenile hemochromatosis typically manifests before the third decade of life, this case illustrates that clinical presentation may occasionally be delayed and present with nonspecific systemic and endocrine manifestations. For general internists, persistent hyperferritinemia with high transferrin saturation despite negative HFE-testing should prompt consideration of extended genetic testing, as early diagnosis of rare hepcidin pathway defects allows effective treatment and prevents irreversible organ damage. Importantly, mild anemia does not necessarily contraindicate therapeutic phlebotomy in patients with iron overload, as anemia may reflect impaired iron utilization rather than true iron deficiency.

P56

Dropped head syndrome revealing systemic sclerosis: a case report

S. De Almeida[1], S. Perez Codesido[2], J. Serratrice[1], K. Bouras[2], O. Togninalli[3], A. Sol[1], L. Schaller[1], P. Memaj[1]

[1]Hopitaux Universitaires de Genève, Département de Médecine, Service de Médecine Interne Générale, Genève, Switzerland, [2]Hopitaux Universitaires de Genève, Département de Médecine, Service d'Immunologie et d'Allergologie, Genève, Switzerland, [3]Hopitaux Universitaires de Genève, Département Diagnostique, Service de Radiologie, Genève, Switzerland

Case presentation: A 55-year-old homeless woman was referred to the emergency department for deterioration of general condition and neglect. She had an unspecified neuropsychiatric disorder and exhibited marked psychomotor slowing. On examination, she presented a muscular weakness of the neck with a drooping head, limited mouth opening without trismus, and sclerodactyly. Rodnan skin score was 10 (normal: 0), accounting for lower-limb edema. Biological data showed an iron deficiency anemia (Hemoglobin: 72 g/L) associated with multiple nutritional deficiencies, including folate, vitamins C and D. Mild hemolytic features were present, consistent with a pseudo–thrombotic microangiopathy secondary to folate deficiency, associated with KDIGO stage III acute kidney injury without nephrotic-range proteinuria. Urinary sediment was bland. Creatine phosphokinase (CK) levels and liver enzymes were normal. Renal ultrasound was unremarkable. Antinuclear antibodies were strongly positive at a titer >1:5000, with a homogeneous, clumpy, and punctate nucleolar pattern associated with positive anti-fibrillarin antibodies. A nailfold capillaroscopy showed a desert capillary bed, with an isolated megacapillary and microhaemorrhage, corresponding to a late stage according to Cutolo's classification (Fig. 1). Cervical muscle MRI demonstrated diffuse myositis involving the posterior spinal and cervical muscles (Fig. 2), supporting the diagnosis of dropped head related systemic sclerosis.

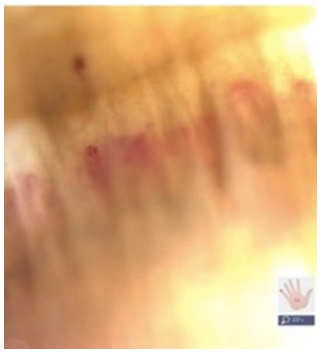


Fig. 1: Nailfold capillaroscopy: desert capillary bed, isolated megacapillary and microhaemorrhage

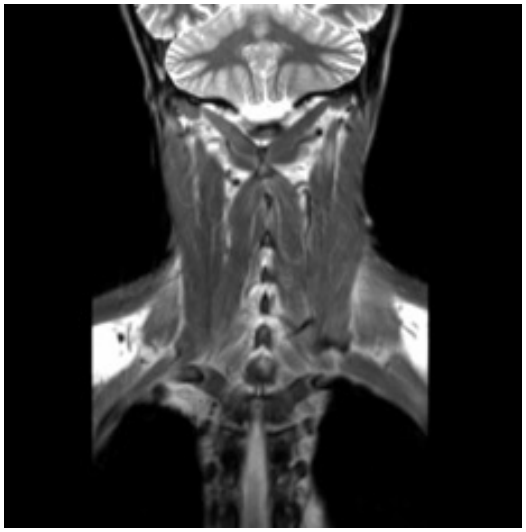


Fig. 2 T2 TSE STIR coronal image of the cervical area: high T2/STIR signal intensity in muscles diffusely. No asymmetry muscular fatty atrophy

Clinical implications: Dropped head syndrome in the context of systemic sclerosis remains poorly known. Previous studies have found the presence of necrotizing myopathy with inflammatory cell infiltration in muscle biopsy of patients with scleroderma-myositis, and only one previous case with normal CK levels in the literature. The present case adds to the growing, albeit still scarce, body of reported cases, alongside the review by Shimada and al. published in 2021 in Rheumatology International and the case described by Rosato and al. in 2009 in Joint Bone Spine. The accumulation of such cases is crucial to improve early recognition, optimize management, and mitigate its detrimental impact on daily living.

P57

Mental health disorder as a red flag in emergency medicine: the case of overshadowing

S. De Lucia[1], A. Mitrea[2], F. Azzouz[2], D. Lambert[2], S. Garcin[1], M. Kosel[2]

[1]Hôpitaux Universitaires de Genève, Médecine de premier recours, Genève, Switzerland, [2]Hôpitaux Universitaires de Genève, Psychiatrie, Genève, Switzerland, [3]Hôpitaux Universitaires de Genève, Médecine aiguë, Genève, Switzerland

Case presentation: People with mental health disorders have a higher incidence of acute and chronic physical diseases than general population. Thus, the existence of mental illness in a patient should be considered a red flag, alerting the clinician and prompting them to investigate the patient at least as thoroughly as they would any other patient. However, in the litterature the opposite is observed. Patients with mental health conditions are often given less attention, their complaints are given less consideration, and they are sometimes even neglected outright. This bias was given the term of “diagnosis overshadowing.” Through the description of a case that occurred in our hospital, we will describe the main problems and ways to avoid common pitfalls.

A 32-year-old woman was admitted to our psychiatric ward for catatonia. On the third day of her stay, the nursing team reports a sudden drop in oxygen saturation to 90% (baseline 100%), accompanied by tachycardia. An ambulance was called, the emergency physician assessed the patient and performed an ECG showing sinus tachycardia. A diagnosis of dehydration was made on site, and it was decided not to take the patient to the emergency room. Subsequently, the psychiatric team performed tests, which showed a modest elevation in transaminases, neutrophiles, and CRP, and elevated D-dimers (2020 ng/ml). A chest angiogram confirmed the psychiatrists' hypothesis of pulmonary embolism.

Clinical implications: This case is a good illustration of diagnostic overshadowing, which patients with mental disorders and/or mental retardation often face. Mental health professionals are also victims of such biases, due to a lack of credibility among their physically health peers. This phenomenon is most often multifactorial, related to clinicians (stereotypes; stigmatization; poor communication skills; lack of training) and to healthcare structures. This can lead to negative outcomes, such as delays in treatment, missed opportunities to deliver the right treatment, and an increased risk of unfavorable, potentially lethal outcomes. As this phenomenon is now well described and constitutes discrimination against a vulnerable minority, it must be taken into account in the training of all general practitioners and emergency physicians.

P58

Targeted tuberculosis screening in refugee populations in Switzerland: an epidemiological approach

S. Durieux-Paillard[1], C. Cantero[2]

[1]HUG, Service de medecine de premier recours . Unité santé asile et refugiés, Geneva 14, Switzerland, [2]HUG, Service de pneumologie Consultation tuberculose et mycobacteries, Geneva 14, Switzerland

Case presentation:

Tuberculosis (TB) causes 1.24 million deaths annually worldwide, representing the leading cause of mortality from a single infectious agent according to the World Health Organization. In Switzerland, TB incidence decreased from 7.9/100,000 in 2016 to 5.4/100,000 in 2023, with rates closely correlated to asylum seeker (AS) influx. Federal asylum reception centers employ symptom-based screening conducted by nurses; however, diagnostic accuracy varies substantially with clinical experience. During migration surges, accelerated recruitment of underexperienced staff may compromise screening efficacy, underscoring the necessity for epidemiologically-informed strategies to optimize case detection among populations from TB-endemic regions. The number of new TB cases raised from 421 in 2024 to 523 in 2025 (+ 24.3%). 2025 federal statistics by applicants ‘origin are not yet available, but there is a rise of people from Horn of Africa. At Geneva University Hospitals, active TB cases (excluding latent infection) increased from 38 in 2024 (18 males, 20 females) to 53 in 2025 (30 males, 23 females), representing a 39.5% rise. Notably, East African cases surged : only 2 patients originated from this region in 2024 (1 Somali, 1 Sudanese), compared to 10 in 2025 (6 Eritrean, 4 Somali). All 2025 East African cases were AS with diverse clinical manifestations, including extrapulmonary disease (leg osteomyelitis, pleural empyema). Demographic data are presented in Table 1.

Table 1: TB cases diagnosed in Geneva University Hospitals in 2024-2025.

	2024	2025
Gender		
Male	18	30
Female	20	23
Age		
< =30	8	25
31-65	23	15
>65	7	13
Nationality		
East Africa	2	10
Other Africa	5	5
Mahgreb	1	2
Switzerland	6	11
Other Europe	5	13
South America	4	2
Afghanistan	3	0
Other	16	10
Country of birth		
East Africa	2	12
other Africa	7	6
Mahgreb	2	4
Switzerland	2	6
Other Europe	7	13
South America	5	3
Afghanistan	3	0
Other	10	9

Clinical implications: The disproportionate increase in TB cases among East African AS necessitates adaptation of screening protocols in reception centers and in the cantons. Current symptom-based assessments inadequately detect extrapulmonary and paucisymptomatic presentations. We propose implementing specific screening algorithms for arrivals from high-burden countries, particularly Eritrea and Somalia. This targeted approach would enhance early detection and minimize transmission. Furthermore, healthcare providers in primary care and emergency departments should maintain heightened clinical suspicion for TB in recently arrived AS presenting with constitutional symptoms, unexplained fever, or localized pain, regardless of respiratory complaints. Systematic training programs for reception center personnel should emphasize recognition of subtle clinical indicators and appropriate referral pathways, ensuring diagnostic consistency despite staff turnover during migration surges.

P59

Look twice: is it really a pleural effusion?

A. Eckert[1], D. Nasiri[2], K. Gioutsos[3], T. Dobrocky[4], R.T. Schär[2], C. Roten[1]

[1]Inselspital, Bern University Hospital, General Internal Medicine, Bern, Switzerland, [2]Inselspital, Bern University Hospital, Neurosurgery, Bern, Switzerland, [3]Inselspital, Bern University Hospital, Thoracic Surgery, Bern, Switzerland, [4]Inselspital, Bern University Hospital, Diagnostic and Interventional Neuroradiology, Bern, Switzerland

Case presentation: A 76-year-old woman with neurofibromatosis type 1 (NF1) presented to the emergency department after a fall with head impact. Clinical examination revealed a right frontal hematoma with a small laceration. Cranial CT showed a non-space occupying chronic right-sided subdural hematoma with subtle acute bleeding. On eFAST, a large pleural fluid collection was found in the right upper lobe, corresponding on CT as a large cyst described initially as pleural effusion (Fig. 1). A chest tube was inserted followed by thoracoscopic exploration and partial resection of the cyst. Pleural fluid analysis revealed a transudate and excluded infection. However, persistent thoracic drainage continued. After reevaluation of the imaging by neuroradiologists, intracranial hypotension was suspected. Spine MRI demonstrated a large right-sided thoracic cystic lesion communicating directly with the spinal thecal sac via enlarged neural foramina, consistent with a thoracic meningocele by NF1 (Fig. 2). Subsequent pleural fluid analysis was positive for beta-trace protein, confirming cerebrospinal fluid leakage. Following interdisciplinary discussion (internal medicine, neuroradiology, neuro- and thoracic surgery) surgical treatment was not an option due to the patient's age, complex anatomy, fragile texture and size of the cyst with multiple connections to the thecal sac. The chest tube was removed. The patient remained asymptomatic during follow-up.

Clinical implications: This case highlights an intrathoracic meningocele initially misdiagnosed as a pleural effusion, illustrating the diagnostic challenges posed by rare diseases when clinical manifestations are atypical or mimic common conditions. Anchoring and representativeness bias led clinicians to focus on frequent causes of pleural effusion, while premature closure reinforced early assumptions. Availability bias further limited consideration of this rare entity. Diagnostic momentum resulted in invasive procedures despite an oligosymptomatic patient. Rare diseases carry a high risk of misdiagnosis due to clinical heterogeneity, low prevalence, and limited clinical exposure. Early specialist involvement, multidisciplinary collaboration and critical reassessment are essential to counteract cognitive bias and ensure accurate, patient-centered care.

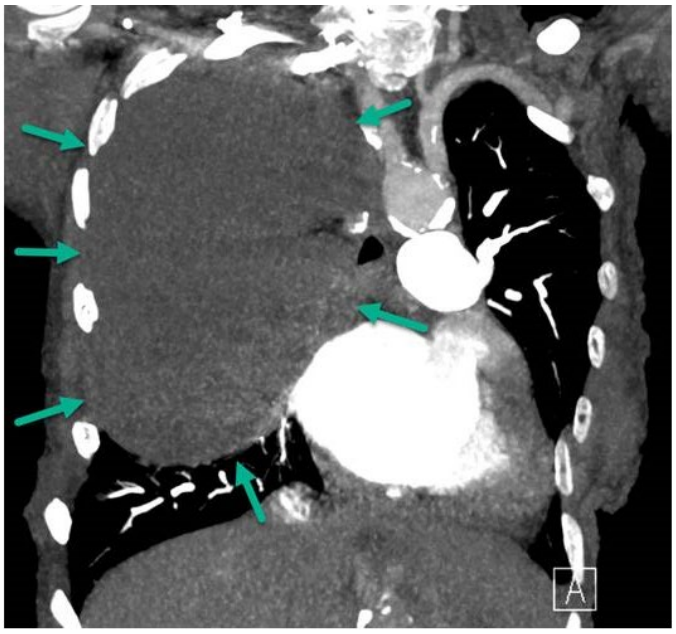


Fig. 1. Thoracic cyst (green arrow) with reduction in lung volume and contralateral mediastinal displacement.

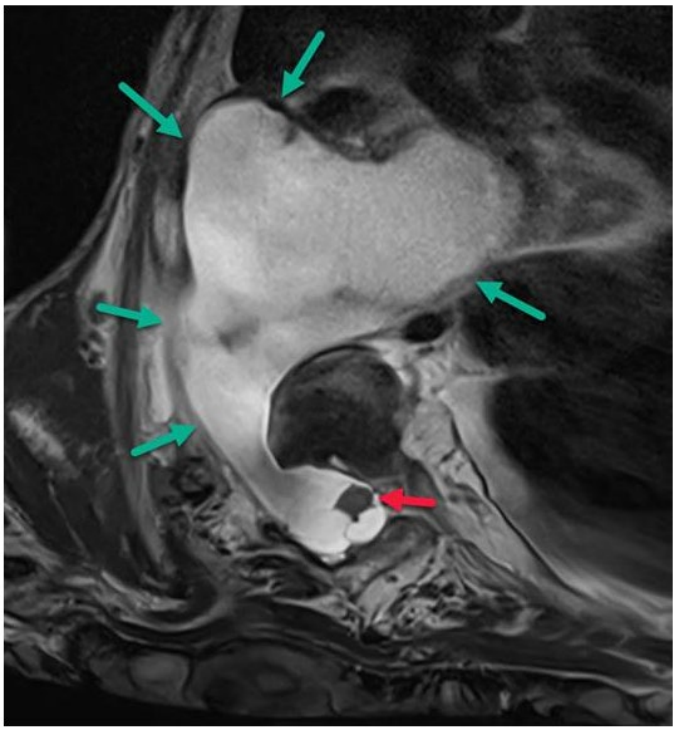


Fig. 2. Thoracic cystic lesion (green arrow) communicating with the spinal thecal sac (red arrow).

P60

Beyond the bladder: fatal disseminated mycobacterial infection after intravesical Bacillus Calmette-Guérine (BCG) instillation for urothelial cancer

S. Ewald[1], S. Broder[1], J. Pikelis[2], P. Kohler[3]

[1]Kantonsspital St. Gallen, Allgemeine Innere Medizin, Hausarztmedizin und Notfallmedizin, St. Gallen, Switzerland, [2]Kantonsspital St. Gallen, Klinik für Medizinische Onkologie und Hämatologie, St. Gallen, Switzerland, [3]Kantonsspital St. Gallen, Infektiologie, Infektionsprävention und Reisemedizin, St. Gallen, Switzerland

Case presentation: A 74-year old male presented with a three-month history of fever, unintentional weight loss, non-productive cough and fatigue. Symptoms emerged shortly after initiation of intravesical BCG instillation following transurethral bladder resection for urothelial carcinoma leading to premature discontinuation of therapy. Relevant history included curative chemo-immunotherapy for a squamous cell carcinoma of the lung two years prior and incidental prostate adenocarcinoma, surgically removed without further treatment due to reduced general condition. At time of presentation, physical examination was unremarkable. Laboratory evaluation revealed pancytopenia, normal PSA, elevated transaminases, INR, and C-reactive protein. Due to lack of clinical response to empiric broad-spectrum antibiotics, further investigations were pursued. Thoracoabdominal computed tomography (CT) demonstrated minimal infiltrate at the site of previous lung cancer irradiation and two suspicious but stable liver metastases. Bronchoscopy was not feasible due to poor condition; echocardiogram remained unremarkable. Bone marrow aspiration and biopsy showed no signs of hematologic malignancy or leishmaniasis; PCR for *M. tuberculosis* complex and for atypical mycobacteria were negative. Blood and bone marrow cultures were obtained, and empiric tuberculostatic treatment with rifampicin, isoniazid, ethambutol and vitamin B6 was initiated given the temporal association with BCG instillation. Despite treatment, the patient deteriorated rapidly and started refusing to eat or speak. A cerebral CT revealed no acute pathology. Following discussions with the family, best supportive care was initiated. The patient died within one week. Subsequent differentiation of premortem blood cultures confirmed growth of *Mycobacterium bovis*.

Clinical implications: Intravesical *Bacillus Calmette-Guérine* (BCG) instillation remains the gold standard for secondary prophylaxis and treatment of high-risk non-muscle invasive bladder cancer. Despite its favorable safety profile, intravesical BCG therapy carries a risk of severe infectious complications. Clinicians should consider a disseminated BCG infection in patients presenting with unexplained B-symptoms following BCG instillation. Early recognition and timely initiation of appropriate anti-mycobacterial therapy are critical to reduce morbidity and mortality. Increased awareness of this rare complication is critical for prompt diagnosis and optimal patient outcomes.

P61

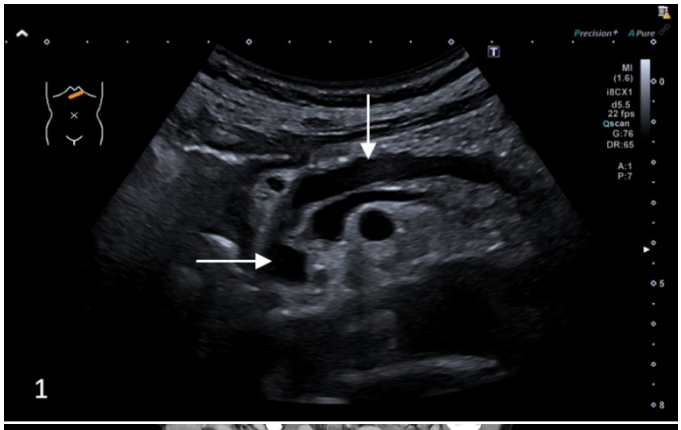
IgG4-related disease presenting with multiorgan involving pseudotumors – a case presentation

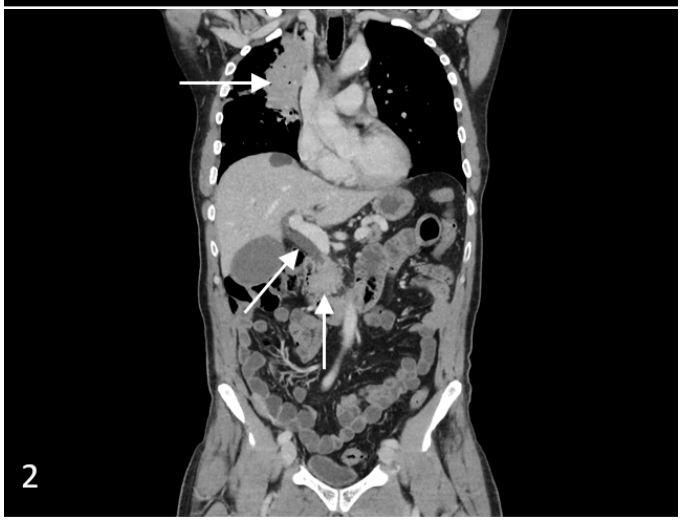
N. Galliker[1], R. Escher[1], G. Waldegg[1]

[1]Spital Emmental, Innere Medizin, Burgdorf, Switzerland

Case presentation: A man in his early 70s was referred to the emergency department by his primary care physician due to incidentally detected significantly elevated liver enzymes and cholestatic laboratory values. Sonography revealed a mass in the head of the pancreas, computer tomography a consolidation in the right upper lung. Inflammatory markers were not elevated. The initial clinical suspicion was a neoplastic process; however, both pancreatic and lung biopsies failed to reveal malignant cells. After a thorough reevaluation of the clinical presentation, the histology, and exclusion of other potential diagnoses in an interdisciplinary team, a diagnosis of pseudotumors and cholangiopathy due to IgG4-related disease (IgG4-RD) was confirmed by fulfilling the inclusion and exclusion criteria. The patient was subsequently treated with steroids.

Clinical implications: This case underscores the importance of not assuming malignancy based on imaging findings alone. IgG4-RD can present with weight loss, tumor-like masses and multiple organ involvement that mimics malignancy, highlighting the need for a careful diagnostic workup that includes not only histological evaluation but also clinical presentation and laboratory findings. In this case, exclusion of malignancy, along with these diagnostic steps, was crucial in reaching the correct diagnosis. This case emphasizes the necessity of a broad differential diagnosis and a multidisciplinary approach in managing complex, atypical presentations.





1 Sonographic image demonstrating dilation of the pancreatic duct (vertical arrow) and the common bile duct (CBD) (horizontal arrow).

2 CT image showing a pseudotumor in the head of the pancreas (vertical arrow), associated with dilation of the common bile duct (diagonal arrow) and consolidation in the right upper lung (horizontal arrow).

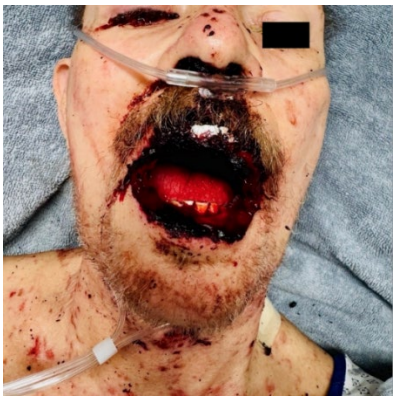
P62

Late-onset severe mucocutaneous immune-related adverse event after pembrolizumab exposure during ongoing systemic corticosteroid therapy

A. Giagoni[1], M. Thiene[2], M. Haefner[3], A. Schmidt[2]

[1]Spital Bülach, Klinik Medizin, Bülach, Switzerland, [2]Spital Bülach, Klinik Medizin - Kompetenzzentrum Palliative Care, Bülach, Switzerland, [3]Tucare Bülach, Zentrum für Tumor- und Bluterkrankungen, Bülach, Switzerland

Case presentation: A 60-year-old male patient with TTF-1-positive lung adenocarcinoma receiving palliative maintenance chemo-immunotherapy was referred for admission with a four-day history of progressive, non-pruritic, painless maculopapular exanthema involving trunk and extremities, accompanied by rapidly evolving vesiculobullous lesions of the nasal and labial mucosa. At presentation, lesions had progressed to hemorrhagic crusts with active mucosal bleeding and additional oral and conjunctival involvement. Relevant comorbidities included multiple paraneoplastic complications, most notably marantic endocarditis and recurrent ischemic strokes, requiring chronic anticoagulation. The eruption occurred 9 weeks after the last pembrolizumab dose and during tapering of systemic corticosteroids initiated for immune-mediated hepatitis 4 weeks earlier. Given the clinical presentation, differential diagnoses included infection, erythema multiforme, other drug eruptions and bullous autoimmune dermatoses. Due to bleeding risk, skin biopsy was obtained from the thigh and showed near-complete epidermal necrosis with subepidermal cleft formation. Clinicopathological correlation supported an SJS/TEN-like reaction, a rare but potentially life-threatening adverse event of immune checkpoint inhibitors (ICI) (1,2,6) and was consistent with a late-onset severe cutaneous immune-related adverse event (irAE, CTCAE grade 3). (4) Systemic corticosteroids were re-escalated to the initial dose; management otherwise consisted of supportive care (wound and mucosal care, fluid/electrolyte monitoring), parenteral nutrition, and transfusion support. (4,5) Cutaneous and mucosal lesions gradually regressed, with stabilization to the patient's baseline. Pembrolizumab was permanently discontinued. (4,5)



Clinical implications: SJS/TEN-like severe mucocutaneous immune-related adverse events may occur late after ICI exposure and even under ongoing systemic corticosteroid therapy. (1,2,6) In general internal medicine, clinicians should consider SJS/TEN-like reactions in rapidly progressive mucocutaneous eruptions even weeks after ICI exposure and during ongoing corticosteroids. This case illustrates the importance of maintaining diagnostic awareness of severe irAEs and integrating temporal associations with clinical findings, as delayed recognition may contribute to significant morbidity and mortality. (1)

Informed consent: Written informed consent for publication of the case presenation and the images was obtained from the patient.

P63

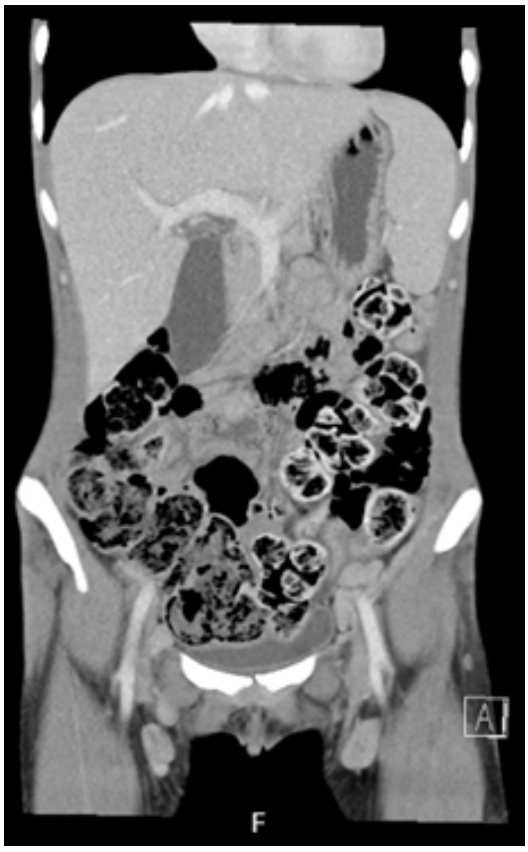
Acute intermittent porphyria mimicking severe coprostasis in a patient on opioid maintenance therapy

C. Glatzle[1], F. Gerstendörfer[1], A. Arpagaus[1], F. Gössi[1]

[1]Universitätsspital Basel, Innere Medizin, Basel, Switzerland

Case presentation:

A 30-year-old, severly underweight (BMI 13.4 kg/m²) woman with a history of persistent intravenous drug use presented to the emergency department with severe abdominal pain, constipation and vomiting for several days. Vital signs on admission were normal. Abdominal examination was unremarkable except for mild, diffuse tenderness. Past medical history included a diagnostic laparoscopy with appendectomy 12 years prior as well as several emergency department visits for abdominal or back pain. The patient was on opioid maintenance therapy, consisting of a daily dose of 50 mg levomethadone and 340 mg diacetylmorphine. Laboratory tests showed hypoosmolar hyponatremia, consistent with syndrome of inappropriate ADH secretion (SIADH). An abdominal computed tomography revealed marked fecal loading consistent with opioid-induced coprostasis.



Medical management was complex due to psychosocial factors, recurrent episodes of reduced alertness after substance use, hyponatraemia, nutritional support and pain control. Persistant abdominal pain and the absence of a clinical response to laxative therapy led to a reassessment of the initial diagnosis of severe coprostasis. Analysis of a spot urine sample demonstrated markedly elevated delta-aminolevulinic acid and porphobilinogen, confirming the diagnosis of acute intermittent porphyria (AIP). Treatment with hemin combined with high-calorie enteral nutrition led to pain relief, resumption of oral intake, and normalization of serum sodium levels.

Clinical implications: Delayed diagnosis remains a major clinical challenge in AIP and is attributable to several factors, including the rarity of the disease and the nonspecific nature of symptoms, which often overlap with those of other conditions, leading to misdiagnoses. As diagnostic tests for AIP are simple to perform, they should be performed at a low threshold when clinical suspicion is present. Additionally, this case report highlights the impact of diagnostic overshadowing on clinical decision-making, leading to delayed or inadequate medical care. The risk of diagnostic overshadowing is particularly high in patients with complex clinical presentations or unexplained symptoms, especially when there is a preexisting mental illness. This case highlights the value of diagnostic reassessment during treatment.

P64

Chylous ascites as a rare complication of severe anorexia nervosa?

A. Göldi[1], S. Blümel[2], L.C. Huber[1], F. Vallelian[1]

[1]Universitätsspital Zürich, Klinik und Poliklinik für Innere Medizin, Zürich, Switzerland, [2]Universitätsspital Zürich, Klinik für Gastroenterologie und Hepatologie, Zürich, Switzerland

Case presentation: A 24-year female patient with restrictive type anorexia nervosa (AN) presented with painless, distended abdomen starting ten days prior. Since her last consultation 18 days ago (body weight 28.3 kg, BMI 11.1 kg/m^2), she gained 7.8 kg. Vital signs were stable (BP 86/68 mmHg, 61 bpm, 36.2 °C), clinical examination revealed mild bilateral ankle edema and massive abdominal distension with ascites. Laboratory tests revealed normal hemoglobin and coagulation. Additionally, elevated transaminase levels (AST 166 U/l, ALT 92 U/l), severe hypoalbuminemia (22 g/L) and hypoproteinemia (34 g/l) were present. Paracentesis of the ascites yielded 3.8 L milky fluid, revealing chylous ascites with triglyceride level of 191 mg/dL and chylomicrons. The serum ascites albumin gradient was 1.9 g/dL, ascites protein low (not measurable). Cytology showed macrophage predominance without evidence of bacterial peritonitis, mycobacterial infection, or malignancy. Screening for autoimmune or viral hepatitis was negative. Ultrasound showed no signs of portal hypertension and liver elastography was nearly normal (median stiffness 7.2 kPa). Computerized tomography scan of the abdomen showed no cirrhosis or neoplastic lesions. In total, four paracenteses were performed within two months. We established a low-fat diet with medium-chain triglycerides accompanied by intensive nutritional counseling.

Clinical implications: Chylous ascites in AN is previously undescribed. In our case, liver biopsy was not performed. However, in the absence of chyle leak, malignancy, cirrhosis, infection or cardiac disease we propose a relation to severe malnutrition and refeeding. Potential mechanisms include hepatic lymphatic congestion due to severe malnutrition, intestinal lymphangiectasia, impaired lymphatic drainage secondary to profound hypoalbuminemia, and nutritional hepatopathy with altered hepatic architecture. During continuous low-fat diet with medium-chain triglycerides, resolution of ascites was achieved within 3 months.

P65

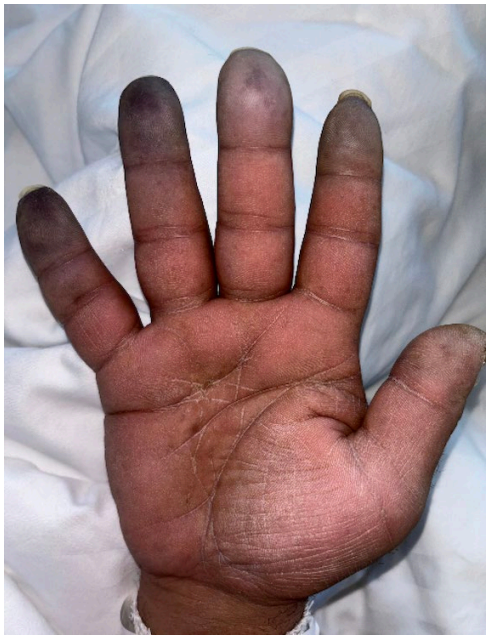
Rapidly progressive digital ischemia and cardiac involvement in mixed connective tissue disease (MCTD)

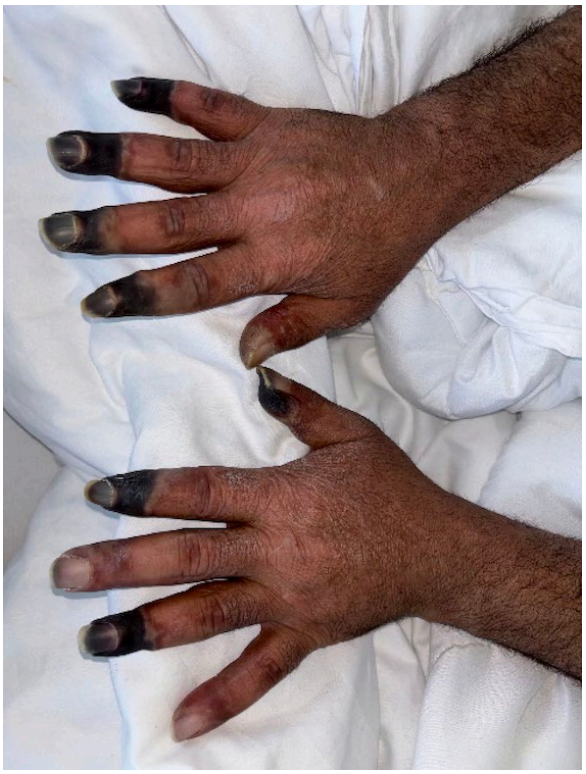
C.-S. Burkhardt[2], M. Trendelenburg[2], F. Gössi[2]

[1]University Hospital Basel, Division of Internal Medicine, Basel, Switzerland

Case presentation: A 46-year-old man was referred for evaluation of persistent fever with markedly elevated inflammatory markers (CRP 267 mg/L). He reported swelling of both hands for five months and right shoulder pain for three weeks. One week before admission, he noted bluish discoloration of the distal fingers. Physical findings included pronounced bilateral hand swelling ("puffy fingers") with acrocyanosis, cold distal phalanges. Nailfold capillaroscopy demonstrated a scleroderma-pattern microangiopathy. Imaging studies, blood cultures, and bone marrow biopsy showed no evidence of infection or malignancy. During hospitalization, acrocyanosis rapidly progressed to digital ischemia and necrosis. Serologic testing revealed highly positive ANA (>1:5120) and anti–U1-RNP IgG (182 U/mL), supporting the diagnosis of MCTD. MPO-ANCA positivity (10 U/mL) and type II cryoglobulinemia (0.17 g/L) were present without evidence of complement activation (normal C3 and C4). Given elevated troponin (90 ng/L) and NT-proBNP (13,520 ng/L), MRI showed diffuse myocardial edema consistent with inflammatory myocarditis. Despite vasodilatory therapy, digital ischemia progressed, prompting initiation of high-dose glucocorticoids and cyclophosphamide, with subsequent clinical stabilization and cessation of disease progression.

Clinical implications: Mixed connective tissue disease (MCTD) is a systemic autoimmune disorder defined by overlapping connective tissue disease features and high titers of anti–U1-ribonucleoprotein antibodies. Raynaud phenomenon, arthritis, and puffy hands are the most common clinical manifestations. Vasculitis in connective tissue disease is uncommon but may lead to severe ischemic complications. This case illustrates that MCTD can progress to severe manifestations, including digital necrosis and myocarditis, underscoring the importance of early diagnosis and timely initiation of immunosuppressive therapy. Concomitant serologic findings suggestive of vasculitis, such as ANCA or cryoglobulin positivity, may reflect potentially aggravating factors associated with a more severe disease course and distinct clinical features.





P66

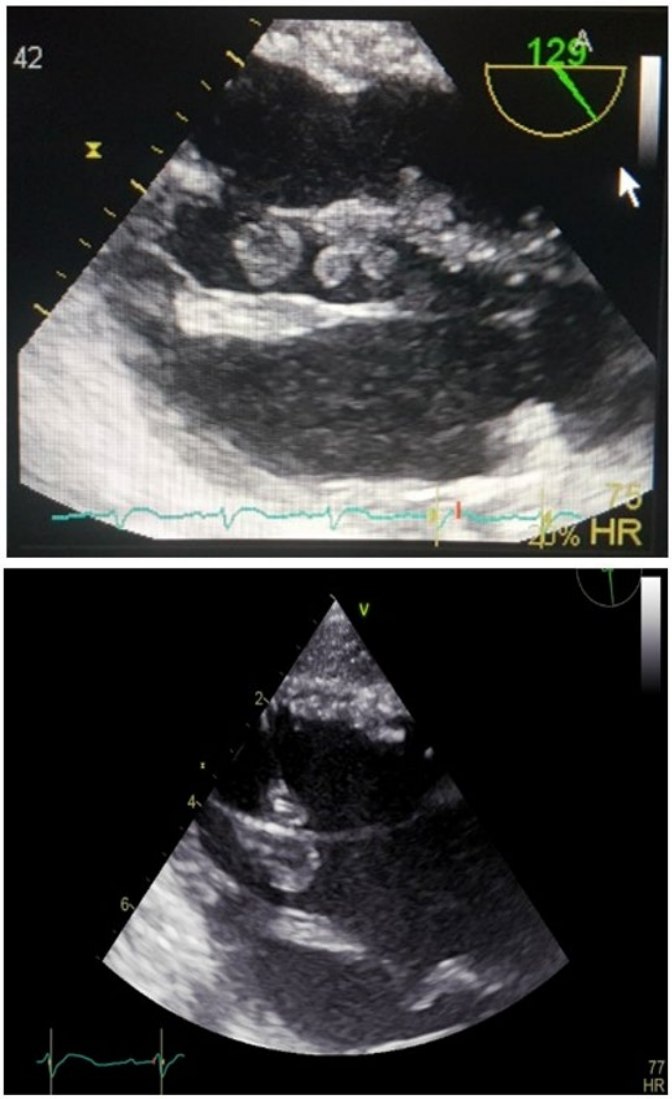
Pacemaker endocarditis due to Staphylococcus lugdunensis: good outcome without open heart surgery

M. Potin[1], J.-J. Goy[2]

[1]*Hirslanden Clinique Cecil, Unité de Médecine Interne, Lausanne, Switzerland,* [2]*Hirslanden Clinique Cecil, Unité de Cadiologie, Lausanne, Switzerland*

Case presentation: An 83 year old patient complained for headache and fatigue. He was treated for hypertension and intermittent atrial fibrillation with coumadin. A pacemaker was implanted 6 months before for sick sinus syndrome. BP was 150/75, pulse was 88 bpm. The temperature was 38°C. A 2/6 ejectional murmur was present. Pulmonary auscultation was normal as the rest of the status. A baseline ECG showed normal sinus rhythm with RBBB. Chest X-ray and cerebral CT scan were normal. CRP was elevated at 203 mg/l, leukocytes at 15 G/l and Hb at 103 g/l. Blood cultures (4/4) were positive for Staphylococcus lugdunensis. Echocardiography showed large masses (one more than 21 mm) entrapping the pacemaker leads (see images) confirming the leads infection and the endocarditis. Intravenous treatment of Gentamicin and flucloxacillin was initiated. Percutaneous removal of the pacemaker was done without the need of open surgery which was initially plannified according to the large size of vegetations. Outcome was favorable. After 6 weeks of treatment a new pacemaker was implanted.

Clinical implications: This case report provides several characteristics aspects of pacemaker endocarditis: classical host risk factors (old age, chronic anticoagulation, chronic renal insufficiency) without any device or related risk factors and without local pocket signs of infection. Fever, heart murmur, serologic inflammation and positive blood cultures for CNS staphylococcus made us rapidly do a transthoracic echocardiography which showed large pacemaker vegetations. Rapid initiation of parental antibiotics permitted to proceed to percutaneous removal of the full implanted device (leads and battery) without the need to proceed to open heart surgery. There was no evidence of systemic infectious embolization, notably pulmonary, neither initially or following percutaneous removal of the leads.



P67

Beyond the skin: a systemic storm in epidermolysis bullosa acquisita

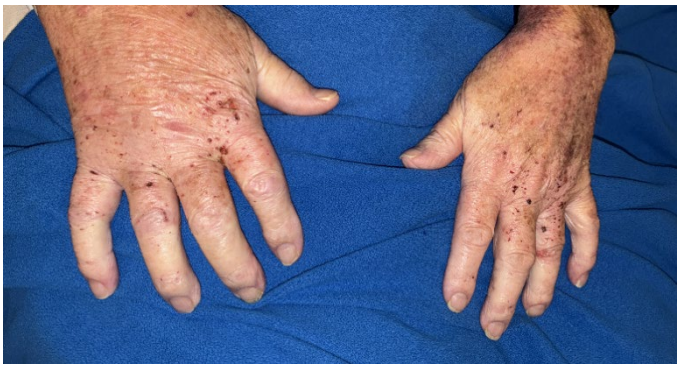
J. Hambrecht[1], R. Mansky[1], J. Hafner[2], L.C. Huber[1], E. Bächli[1]

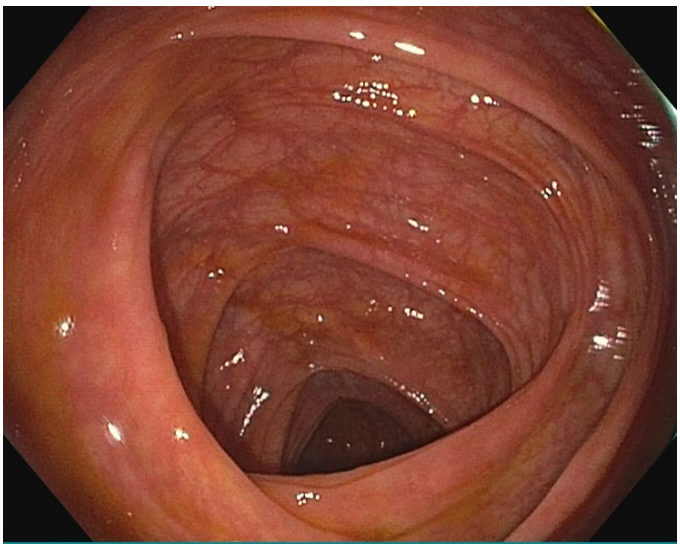
[1]*University Hospital Zurich, Department of Internal Medicine, Zurich, Switzerland,* [2]*University Hospital Zurich, Department of Dermatology, Zurich, Switzerland*

Case presentation: An 80-year-old man with a history of epidermolysis bullosa acquisita was admitted following several weeks of secretory diarrhea, progressive weakness, and weight loss. On examination, livid-erythematous discoloration and scattered bloody erosions were present on both legs, along with hematomas, erythematous maculae, and crusted erosions on the hands, arms and elbows. (Figure 1). Initial laboratory tests revealed acute kidney injury (creatinine 308 µmol/L; eGFR 16 mL/min), severe hypokalemia (2.1 mmol/L), hypomagnesemia, hypoalbuminemia (22 g/L), and elevated inflammatory markers. Despite aggressive fluid and electrolyte replacement,

renal function continued to deteriorate. Further evaluation revealed a long-segment deep vein thrombosis involving the left femoral, popliteal, tibial, and peroneal veins, and therapeutic anticoagulation was initiated. Coagulation studies revealed thrombocytopenia, elevated D-dimer levels, reduced fibrinogen levels, and prolonged prothrombin/ activated partial thromboplastin time. These findings fulfilled the diagnostic criteria for disseminated intravascular coagulation (DIC). Gastroscopy revealed dysimmune esophagitis, interpreted as an extracutaneous manifestation of epidermolysis bullosa acquisita. (Figure 2). Immunosuppressive therapy with prednisone and rituximab was initiated. Despite these measures, renal failure progressed. The patient developed oliguria and severe metabolic acidosis, followed by progressive deterioration with refractory hypotension and hypoxemia consistent with vasoplegic shock. The patient died after therapy was switched to best supportive care.

Clinical implications: This case illustrates that epidermolysis bullosa acquisita, involving autoantibodies against type VII collagen (a major component of anchoring fibrils in the skin and other organs), can manifest as a systemic autoimmune disorder. Gastrointestinal involvement, electrolyte-wasting diarrhea, thromboembolic disease, and disseminated intravascular coagulation can progress rapidly to multiorgan failure. Our case underscores the importance to view epidermolysis bullosa acquisita from a systemic perspective. Timely recognition of extracutaneous manifestations requires close collaboration among different medical specialties.





P68

Palmo-plantar rash associated with high fever

P. Kesselring[1], R. Rodak[1], N. Fehr[1], M. Hoffmann[1,2]

[1]Kantonsspital Olten, Innere Medizin, Olten, Switzerland, [2]Kantonsspital Olten, Fachbereich Infektiologie / Infektionsprävention, Olten, Switzerland

Case presentation: A 40-year-old man presented in September 2025 with a 7-day history of intermittent fever up to 40 °C, severe headache, arthralgia, and a maculopapular rash with palmoplantar involvement, sparing scalp and mucous membranes. History revealed travel to northern Sicily with exposure to mosquitoes and stray dogs six weeks before symptom onset. The patient reported a monogamous relationship; all family members were asymptomatic. Vaccinations followed the Swiss basic schedule. Examination confirmed a non-petechial generalized palmoplantar rash without eschar (Fig. 1). Inflammatory markers were elevated, notably ferritin (3330 µg/L); ultrasound showed mild splenomegaly. Serology for syphilis and HIV was negative. Due to possible mosquito and tick exposure, testing for rickettsioses, tularemia, and Coxiella was performed. Only Rickettsia IgG was borderline (titre 1:80), IgM negative. After one week of doxycycline, fever resolved within days with complete clinical recovery. Follow-up serology confirmed Mediterranean Spotted Fever (MSF) by seroconversion of R. rickettsii/conorii IgG (titre 1:320) and IgM (1:200).

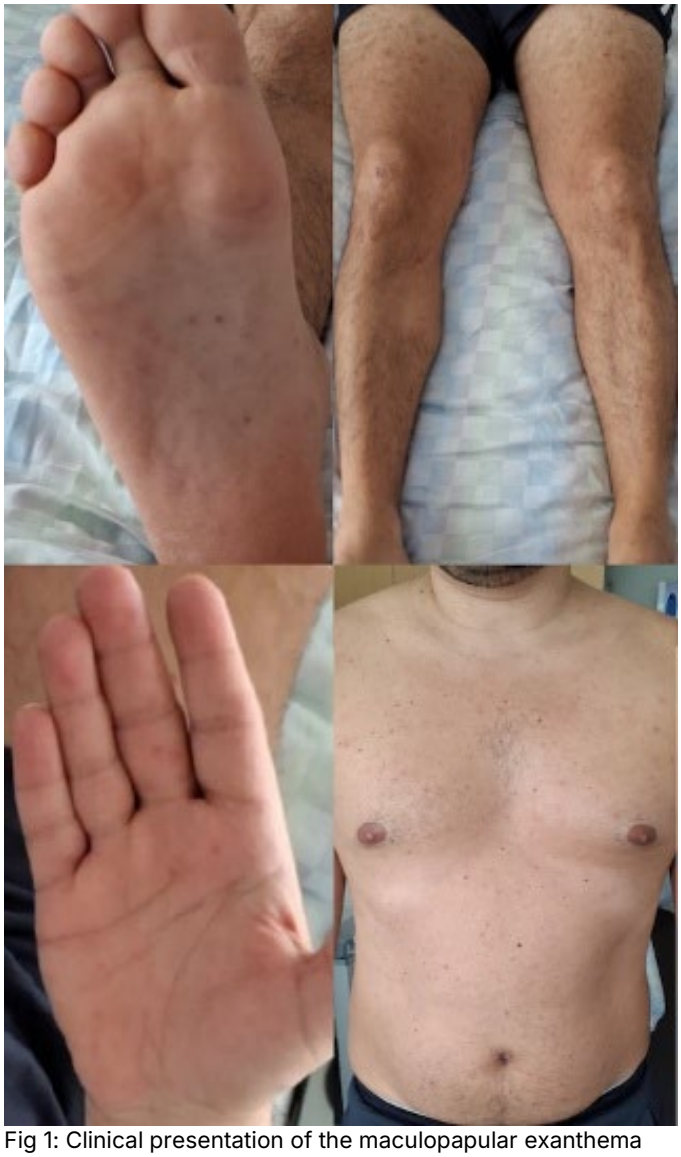


Fig 1: Clinical presentation of the maculopapular exanthema

Clinical implications: MSF should be considered in a patient returning from endemic regions with the clinical triad of high fever, headache and a maculopapular rash involving palms and soles, even in the absence of a classical eschar (tache noire) [1]. Our case report highlights to include MSF in the differential diagnosis even up to >21 days after exposure, because anamnesis may prove unreliable and the earliest symptom (tache noire) may go unnoticed. Rickettsia are transmitted by dog ticks. The high seroprevalance in Sicilian dogs is associated with the highest human incidence rate in Italy [2,3], and our patients' history is consistent with the epidemiological exposure risk. The decision of treatment initiation should not be based on serological results, because sero-conversion (IgM) occurs only >7-14 days after symptom onset, with a range of 10-28 days for IgG. Seroconversion in a second sample confirms the diagnosis, but early treatment initiation may delay or hamper the subsequent antibody response [4].

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2. Migliore S et al. Animals 2020; 10:2444. PMID: 33419379

3. Giammanco GM et al. J Clin Microbiol 2005; 43: 6027-31. PMID: 16333093

4. Fournier PE et al. Clin Diagn Lab Immunol 2002; 9: 324-8. PMID: 11874871

P69

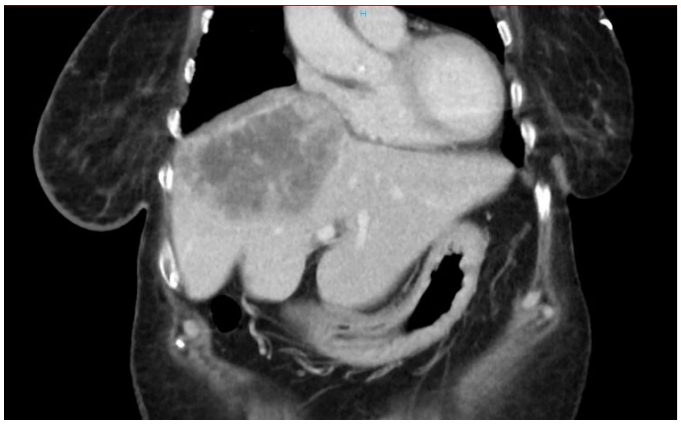
Unexplained dyspnea – when the horse turns out to be a zebra

L. Knaus[1], M. Gerhard[1], U. Käch[2], A. Turk[1]

[1]Seespital Horgen, Department of Internal Medicine, Horgen, Switzerland, [2]Kantonsspital Winterthur, Department of Cardiology, Winterthur, Switzerland

Case presentation: A 70-year-old female patient with a history of breast cancer with pulmonary, osseous, and hepatic metastases as well as hypertensive heart disease presented to the emergency department with progressive dyspnea. Clinical examination was unremarkable and laboratory results were within normal limits with only a mildly elevated NT-proBNP. At another hospital, she had already undergone computed tomography to rule out pulmonary embolism as well as transthoracic echocardiography, both without pathological findings. A trial of diuretic therapy neither resulted in weight loss nor in any improvement of dyspnea. During her stay on the ward, it was noted that her oxygen saturation was 98% in the supine position but dropped to 88% when sitting upright, receiving three liters per minute of supplemental oxygen in both positions. The positional dependence of her dyspnea was the key finding leading to the diagnosis of platypnea–orthodeoxia syndrome. The contrast-enhanced echocardiography showed a pathological bubble study confirming the diagnosis. The underlying pathophysiological mechanism is a position-dependent right-to-left shunt. In our case, the underlying anatomical defect was a patent foramen ovale. The functional component was attributed to extensive hepatic metastases causing position-dependent compression of the right atrium, thereby dynamically modulating the degree of shunting.

Clinical implications: This case illustrates that rare diagnoses must be considered when clinical findings do not fit typical patterns. The discordance between unremarkable imaging studies and severe positional hypoxemia as well as careful history taking and thorough clinical examination were key to establishing this diagnosis. Platypnea–orthodeoxia syndrome is an uncommon cause of dyspnea. Its diagnosis requires contrast-enhanced echocardiography with a bubble study to detect a possible underlying intracardiac shunt. The therapy depends on the underlying cause.



P70

From enteritis to arteritis - a rare complication of Salmonella sp

P. Kumarakulasingham[1], R. Fulchini[1], P. Rochat[1], A. Kistler[1]

[1]Kantonsspital Frauenfeld, Innere Medizin, Frauenfeld, Switzerland

Case presentation:

A 53-year-old patient presented to the emergency department with fever, vomiting and chills for one day. Three weeks prior, he had suffered from an episode of diarrhea lasting about 10 days, during which salmonella sp. grew in a stool sample, which were not treated with antibiotics. His past medical history was remarkable for diabetes mellitus type 2, MASLD with cirrhosis and arteriosclerosis. We initiated IV treatment with Amoxicillin-Clavulanate, and changed to ceftriaxone after blood culture grew Salmonella sp.. Due to new left lower abdominal pain, an FDG-PET was performed, revealing suspicion of arteritis of the left internal iliac artery. Since fevers persisted, a CT scan of the abdomen with angiography was obtained, which showed a thrombosed mycotic aneurysmal dilatation of the left internal iliac artery extending into the pudendal and superior gluteal arteries, consistent with Salmonella-associated arteritis. An HIV test was negative. Following surgical repair (resection of the aneurysm with end-to-end anastomosis) in addition to continued antibiotic therapy the patient recovered.

Clinical implications: Salmonella enteritis is usually self-limiting and resolves spontaneously. However, patients >50 years of age, particularly those with endovascular abnormalities or implanted prosthetic material, as well as immunocompromised patients (e.g. HIV, transplant recipients), are at increased risk for *Salmonella* bacteraemia and extra intestinal infections. Therefore, antibiotic treatment is warranted in such cases. In established Salmonella sepsis, even under antibiotic therapy a high index of suspicion for complications such as endocarditis, osteomyelitis, or arteritis, is required. Aortitis in patients with Salmonella sepsis is a rare but serious condition that should not be overlooked. If left untreated, mycotic aneurysms are almost uniformly fatal. The literature reports a mortality rate exceeding 90% in untreated or ruptured cases. Even with conservative (antibiotic only) therapy, 1-year mortality can approach 85%, with a median survival time of only a few weeks. Thus, early diagnosis and a combined approach of targeted antibiotic therapy and surgical intervention are essential to reduce mortality. The most common complications of Salmonella enterica infection include sepsis, focal organ infections, and abscesses.

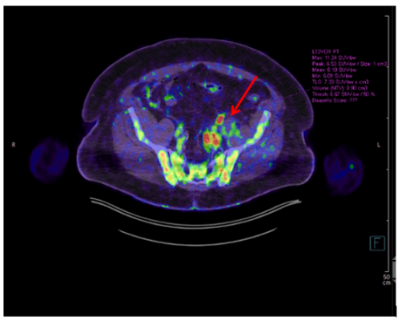


Figure 1: FDG-PET on hospital day 6 revealed increased glucose metabolism in the vessel wall of the left internal iliac artery with a short-segment thrombotic change and posterior extension into the proximal superior gluteal artery, as well as caudal extension into the proximal internal pudendal artery.

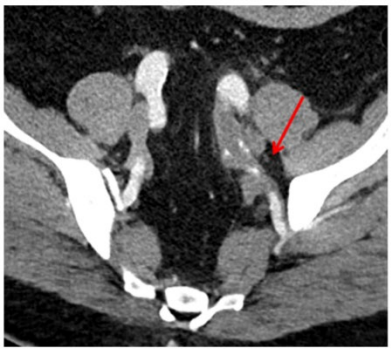


Figure 2: A CT scan obtained on hospital day 10 shows an aneurysm of the left internal iliac artery.

P71

Reporting of D-dimer testing in venous thromboembolism diagnostic management studies: a scoping review

R.V. Hofstetter[1], C.E. Marx[1,2], N. Kraaijpoel[3], E.J. Favaloro[4], P.M. Bossuyt[5], P. Meijer[6], S. Kitchen[7], K. De Wit[8], H. Robert-Ebadi[9], G. Le Gal[2,10], D. Aujesky[1], R. Selby[11], T. Tritschler[1,10]

[1]Inselspital, Bern University Hospital, Department of General Internal Medicine, Bern, Switzerland, [2]University of Ottawa and the Ottawa Hospital Research Institute, Department of Medicine, Ottawa, Canada, [3]Erasmus MC, Department of Internal Medicine, Rotterdam, Netherlands, [4]Westmead Hospital, Institute of Clinical Pathology and Medical Research (ICPMR), Westmead, Australia, [5]Amsterdam University Medical Centres, Department of Epidemiology & Data Science, Amsterdam, Netherlands, [6]ECAT Foundation, Thrombosis and Haemostasis, Voorschoten, Netherlands, [7]UK National External Quality Assessment Service (NEQAS), Blood Coagulation, Sheffield, United Kingdom, [8]Queens University, Department of Emergency Medicine and Medicine, Kingston, Canada, [9]Geneva University Hospitals, Division of Angiology and Hemostasis, Geneva, Switzerland, [10]Ottawa Hospital Research Institute, Inflammation and Chronic Disease Program, Ottawa, Canada, [11]University of Toronto, Departments of Laboratory Medicine & Pathobiology and Medicine, Toronto, Canada

Background: D-dimer testing is central to venous thromboembolism (VTE) diagnostic algorithms. However, inter-assay variability and limited interchangeability reduce comparability across studies and may affect interpretation and transferability. Adequate reporting of assay characteristics is therefore essential for reproducibility and clinical applicability. This scoping review aimed to summarize the reporting of essential characteristics of D-dimer testing in VTE diagnostic management studies.

Methods: We systematically searched MEDLINE and Embase from 01/1999 to 08/2024 for VTE diagnostic management studies that evaluated diagnostic algorithms including D-dimer testing and followed patients for ≥4 weeks after VTE was excluded. The primary outcome was reporting of D-dimer assay characteristics: assay name, manufacturer, type of D-dimer unit, magnitude of unit, analytical performance of the assay, and VTE exclusion threshold, including adjustment of threshold if applicable (e.g. age or clinical pretest probability-adjusted thresholds). Secondary outcomes were reporting of patient numbers and failure rates per assay.

Results: Of 9,670 screened articles, 58 studies were included. Sample sizes ranged from 191 to 5,400, with follow-up of 1-6 months. Assay name was fully reported in 52/58 (90%), manufacturer in 49/58 (85%), unit magnitude in 42/46 (91%), and unit type in 8/46 (17%) studies. Detection limit was reported in 3/58 (5.2%) studies; other analytical performance parameters were unreported. 19 quantitative assays were used across 19 threshold-unit combinations. Among 17 studies using multiple assays, 9 reported patient numbers per assay and one reported assay-specific failure rates.

Conclusion & clinical implications: Key characteristics of D-dimer testing are inconsistently reported in VTE diagnostic management studies. While assay name, manufacturer, units, and thresholds are often provided, unit type and assay-specific details are frequently missing. As assays are not interchangeable, incomplete reporting limits implementation, reproducibility, and generalizability. To address these challenges, minimal reporting standards are needed.

Table 1. Reported items for D-dimer test in VTE diagnostic management studies

Item	Reported in n (%) studies	
	not	partially/fully
Assay name	4 (7)	54 (93)
Manufacturer	8 (14)	50 (86)
Type of unit*	37 (80)	9 (20)
Magnitude of unit*	3 (7)	43 (93)
Analytical performance		
Sensitivity†	58 (100)	0 (0)
Specificity‡	58 (100)	0 (0)
Reference range	58 (100)	0 (0)
Detection limit	55 (95)	3 (5)
Total precision	58 (100)	0 (0)
Linearity	58 (100)	0 (0)
Potential interference from FDPs	58 (100)	0 (0)
VTE exclusion threshold/cutoff*	3 (7)	43 (93)

Abbreviations: FDPs, fibrin and/or fibrinogen degradation products; VTE, venous thromboembolism.

*Not applicable in 12 studies due to the use of qualitative assays.

†7/58 (12%) studies reported the sensitivity of the assays used, based on previous studies.

‡4/58 (7%) studies reported the specificity of the assays used, based on previous studies.

P72

Elevated thyrotropin and cardiovascular risk: does age matter? an individual participant data analysis among large prospective cohort studies

O. Hysaj[1], O. Efthimiou[1], R.P Peeters[2], D.C Bauer[3], J. Gussekloo[4], F. Azizi[5], A. Köttgen[6], J.P. Walsh[7], M. Iacoviello[8], R.P. Dullaart[9], J.A. Sgarbi[10], H. Völzke[11], I.M. Benseñor[12], S. Valdés[13], B.O. Åsvold[14], A. Pingitore[15], N. Rodondi[1,16], A.R. Cappola[17]

[1]University of Bern, Berner Institut für Hausarztmedizin (BIHAM), Bern, Switzerland, [2]Academic Center for Thyroid Diseases, Erasmus University Medical Center, Department of Internal Medicine, Rotterdam, Netherlands, [3]Epidemiology and Biostatistics, University of California, Department of Medicine, San Francisco, United States, [4]Leiden University Medical Center, Department of Public Health and Primary Care, Leiden, Netherlands, [5]Shahid Beheshti University of Medical Sciences, Endocrine Research Center, Research Institute for Endocrine Sciences, Tehran, Iran, Islamic Republic of, [6]Johns Hopkins Bloomberg School of Public Health, Department of Epidemiology MD,, Baltimore, United States, [7]Medical School, University of Western Australia, Discipline of Internal Medicine Australia, Perth, Australia, [8]University of Foggia, Department of Medical and Surgical Sciences, Foggia, Italy, [9]University of Groningen, Department of Internal Medicine, University Medical Center Groningen, Groningen, Netherlands, [10]Faculdade de Medicina de Marília, Division of Endocrinology and Metabolism, São Paulo, Brazil, [11]University Medicine Greifswald, Institute for Community Medicine, Clinical-Epidemiological Research, Greifswald, Germany, [12]University Hospital, University of São Paulo, Center of Clinical and Epidemiological Research, São Paulo, Brazil, [13]Hospital Regional Universitario de Málaga/Universidad de Málaga, Department of Endocrinology and Nutrition, Malaga, Spain, [14]HUNT Center for Molecular and Clinical Epidemiology, Norwegian University of Science and Technology, Department of Public Health and Nursing, NTNU, Trondheim, Norway, [15]Institute of Clinical Physiology, National Council Research (CNR), Pisa, Italy, [16]Inselspital, Bern University Hospital, University of Bern, Department of General Internal Medicine, Bern, Switzerland, [17]University of Pennsylvania, Perelman School of Medicine, Philadelphia, United States

Background: Thyrotropin (TSH) is the primary test for detecting thyroid dysfunction. TSH levels above the reference range are common, especially in older adults, though treatment recommendations vary across guidelines. Whether the TSH reference range should be reassessed and whether it should differ by age remains uncertain.

Methods: We included prospective cohorts from the Thyroid Studies Collaboration and conducted systematic searches of MEDLINE and EMBASE (inception to July 2025) for studies reporting baseline TSH levels between 0.45–19.99 mIU/L, categorized as euthyroid (0.45–4.49) and elevated (4.5–6.9, 7.0–9.9, 10.0–19.9 mIU/L). Outcomes were incident CHD events and mortality, stroke, stroke mortality, and overall mortality. Within each cohort, Cox proportional hazards models were used, followed by random-effects meta-analysis. Models were adjusted for age, sex, and further adjusted for cardiovascular risk factors. Interaction terms assessed effect modification by age and sex.

Results: Among 232496 participants from 40 cohorts, 14881 (6.4%) had TSH levels of 4.5–19.9 mIU/L. In age- and sex-adjusted analyses, compared with the euthyroid group, participants with a TSH of 7.0-9.9 mIU/L had an increased risk of CHD mortality (HR 1.22, 95% CI 1.02, 1.47) and stroke mortality (HR 1.65, 95% CI 1.11, 2.46), and those with a TSH of 10.0-19.9 mIU/L had an increased risk of CHD 1.18 (1.02, 1.37), CHD mortality 1.44 (1.21, 1.70), and stroke mortality 1.69 (1.11, 2.58). No increased risk of any outcome in participants with a TSH of 4.5-7.0 mIU/L. Analyses simultaneously stratified by age and TSH category suggested effect modification only for TSH group 10.0-19.9 mIU/L for CHD mortality, with higher risk in those aged <65 y (p 0.03).

Conclusion & clinical implications: Cardiovascular risk increases in adults with TSH ≥7.0 mIU/L, but not in those with levels of 4.5–6.9 mIU/L compared with euthyroid adults, regardless of age. These findings do not support increased cardiovascular risk from leaving TSH levels (4.5–6.9 mIU/L) untreated.

P73

Hospital flow management: quantitative analysis of stays reclassified as "waiting for rehabilitation care (B beds)"

B. Krasniqi[1], C. Maglieri[2], C. Praz[3], M. Cosma Rochat[4], E. Deschamps[4], M. Caci[4], V. Kraege[1,2]

[1]University of Lausanne, Faculty of Biology and Medicine, Lausanne, Switzerland, [2]Lausanne University Hospital, Innovation and Clinical Research Directorate, Lausanne, Switzerland, [3]Lausanne University Hospital, Nursing Directorate, Lausanne, Switzerland, [4]Lausanne University Hospital, Medical Directorate, Lausanne, Switzerland

Background: After acute care (A), some patients require inpatient or home-based rehabilitation (RH). They are placed on waiting lists, often remaining in A wards, occupying "waiting for B-beds" (WBB). This delays access to specialized RH, inappropriately occupies A wards needed for higher-acuity patients and penalizes hospitals financially. We aimed to assess if WBB patients had been correctly classified, if alternatives would have been possible, and what factors prolonged WBB length of stay.

Methods: We conducted a retrospective descriptive study in a French-speaking tertiary hospital, using data extracted from electronic health records of patients discharged from a WBB in any department between January 1st and February 29th, 2024. RH (CTR, READOM) and acute care criteria (AEPf) were used to analyze our sample.

Results: We analyzed 376 cases, totaling 2,529 WBB days, mean age 77 [29-102] years, 52% women, 51% in the Medicine Department. Most (73%: 273) had a genuine need for inpatient RH. Among them, 66% (181) faced either organizational (48%, e.g. delayed insurance requests) or external barriers (40%, e.g. RH center refused by patients and families, socio-economic constraints, single room required), preventing timely transfer to RH. In addition, 23% (87) of reclassifications could be improved; among these, 56% (49) could have been discharged home directly (23 to await RH, 26 to remain home without any RH need); 16 patients (18%) would have benefited from extended acute care and 12 (14%) from a placement in a medico-social facility (C Bed).

Conclusion & clinical implications: Most delays in RH transfer stem from downstream saturation and, in some cases, from a mismatch between the complexity of patients' conditions and the restrictive admission criteria of RH centers. Optimization requires better anticipation of administrative requests, stronger coordination with patients, families and RH centers to address complex situations, and earlier discharge home when appropriate, with the option of awaiting RH from home to reduce hospital bed occupancy.

P74

Characteristics of safety reports associated with off-label medication use in Switzerland: a 22-year WHO VigiBase analysis

A. Li[1], L. Gasparovic[2], S. Neuner-Jehle[1], O. Senn[1], T. Rosemann[1], S. Weiler[1,2]

[1]University of Zurich, Institute of Primary Care, Zurich, Switzerland, [2]ETH Zurich, Pharmacoepidemiology, Zurich, Switzerland

Background: Off-label prescribing is widespread in clinical practice and is associated with an increased risk of adverse drug reactions (ADRs). However, Swiss data on the characteristics associated with cases of off-label medication use is scarce. This study systematically evaluates Swiss Individual

Case Safety Reports (ICSRs) related to off-label drug use over 22 years, focusing on patient demographics, implicated drug classes, indications, and seriousness.

Methods: All Swiss reported to WHO VigiBase between 2003 and May 2025 containing the MedDRA preferred term "off label use" were included, excluding congenital or birth defect cases. Descriptive statistics and age-stratified analyses (children <18, adults 18–64, elderly ≥65, unknown) assessed patient sex, seriousness, suspected drugs, and ATC classification.

Results: A total of 5,342 ICSRs with 7,515 suspected drugs were analyzed. Reporting increased over time, both absolutely and relative to all reports. Median patient age was 50 years; sex was balanced. Overall, 46% were classified as serious, with proportions rising with age (children 36%, adults 48%, elderly 68%). Most suspected drugs belonged to ATC groups antineoplastic/immunomodulating agents (L, 48%), nervous system drugs (N, 14%), and systemic anti-infectives (J, 13%). Frequently suspected active ingredients included rituximab, pembrolizumab, azathioprine, and infliximab. Pediatric reports were underrepresented in view of frequent off-label prescribing in clinical practice. Elderly patients showed higher polypharmacy and serious outcomes.

Conclusion & clinical implications: Off-label ADR reports in Switzerland mainly involve antineoplastic, immunomodulating, and nervous system drugs. Elderly patients are at highest risk for serious ADRs and polypharmacy, while pediatric ADRs might be underrepresented. These findings emphasize the importance of increased awareness for ADRs in off-label use, highlighting the need for targeted monitoring and cautious prescribing in vulnerable populations - particularly older adults.

Figure 1. Annual number of total and serious ADR cases related to off-label use in Switzerland (2006-May 2025).

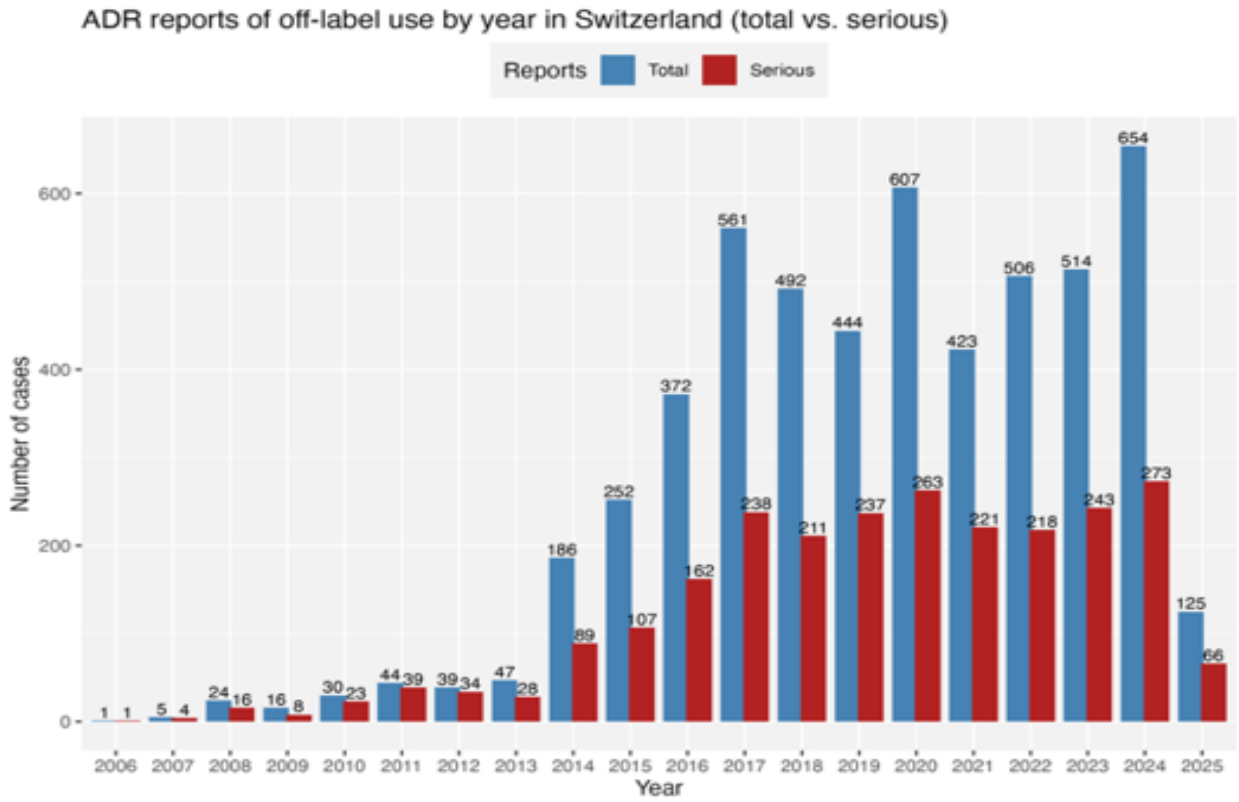


Table 1. Demographic Characteristics of Off-label related ADR Cases in Switzerland

Characteristics	Children (age < 18)	Adults (age 18 – 64)	Elderly (age >= 65)	Unknown	Total
Number of ICSRs, n (%)	366 (6.85)	1697 (31.77)	822 (15.39)	2457 (45.99)	5342 (100)
Median age (IQR), years	11 (5-15)	44 (33–54)	74 (70–80)	NA (NA-NA)	50 (32–67)
Gender, n (%) *					
Male	160 (43.72)	745 (43.90)	374 (45.50)	739 (30.08)	2018 (37.78)
Female	182 (49.73)	871 (51.33)	393 (47.81)	1013 (41.23)	2459 (46.03)
Unknown	24 (6.56)	81 (4.77)	55 (6.69)	705 (28.69)	865 (16.19)
Seriousness, n (%)					
Yes	132 (36.07)	821 (48.38)	561 (68.25)	967 (39.36)	2481 (46.44)
No	234 (63.93)	876 (51.62)	261 (31.75)	1490 (60.64)	2861 (53.56)
Seriousness criteria, n (%)					
Caused/prolonged hospitalization	41 (11.20)	244 (14.38)	193 (23.48)	122 (4.97)	600 (11.23)
Disabling/incapacitating,	0 (0.00)	11 (0.65)	7 (0.85)	6 (0.24)	24 (0.45)
Life threatening	12 (3.28)	45 (2.65)	29 (3.53)	26 (1.06)	112 (2.10)
Death	11 (3.01)	91 (5.36)	130 (15.82)	149 (6.06)	381 (7.13)
Other medically important condition	94 (25.68)	616 (36.30)	366 (44.53)	797 (32.44)	1873 (35.06)
Reporter qualification, n (%)					
Physician	256 (70.33)	1162 (69.08)	553 (67.60)	1531 (62.59)	3502(65.95)
Other Health Professional	74 (20.33)	374 (22.24)	193 (23.59)	446 (18.23)	1087 (20.47)
Consumer / Non Health Professional	42 (11.54)	309 (18.37)	162 (19.80)	761 (31.11)	1274 (23.99)
Pharmacist	22 (6.04)	88 (5.23)	49 (5.99)	168 (6.87)	327 (6.16)
Lawyer	0 (0.00)	1 (0.06)	0 (0.00)	0 (0.00)	1 (0.02)
Off-label type, n (%)					
Off label use	298 (81.42)	1274 (75.07)	579 (70.44)	1733 (70.44)	3884 (72.71)
Off label use in unapproved indication	20 (5.46)	294 (17.32)	137 (16.67)	479 (19.50)	930 (17.41)
Off label dosing amount	0 (0.00)	9 (0.53)	1 (0.12)	19 (0.77)	29 (0.54)
Off label dosing	9 (2.46)	59 (3.48)	63 (7.66)	95 (3.87)	226 (4.23)
Off label dosing frequency	5 (1.37)	65 (3.83)	31 (3.77)	92 (3.74)	193 (3.61)
Off label use in unapproved age group	37 (10.11)	2 (0.12)	5 (0.61)	33 (1.34)	77 (1.44)
Off label use in unapproved route	1 (0.27)	6 (0.35)	11 (1.34)	12 (0.49)	29 (0.54)

Notes: Because multiple off-label types and reporter qualification could be assigned to a single ICSR, the total number may exceed the number of cases

Totals may exceed 100% for the same reason.

ICSRs are Individual Case Safety Reports, IQR is interquartile range

* Percentages may not total 100% due to rounding.

P75

Self-compassion and self-reflection as essential interactive competencies in medical under- and postgraduate training: a vertical framework

F. Liaudet[1], S. Felber[2], A. Pless[3], K. Schnabel[4], S. Eychmüller[2]

[1]University of Bern, Faculty of Medicine, Bern, Switzerland, [2]University of Bern, University Center for Palliative Care, Bern, Switzerland, [3]University of Bern, Institute of Primary Health Care (BIHAM), Bern, Switzerland, [4]University of Bern, Institute for Medical Education (IML), Bern, Switzerland

Background: Interactive competencies are essential for high-quality health care and include intrapersonal skills such as self-reflection and self-compassion (see figure 1). Self-reflection supports the learning process, while self-compassion fosters emotional resilience. These competencies are rarely defined as essential elements of medical training. We aimed to develop a core outcome set of interactive competencies for medical curricula (www.profilesmed.ch) focusing on self-reflection and self-compassion.

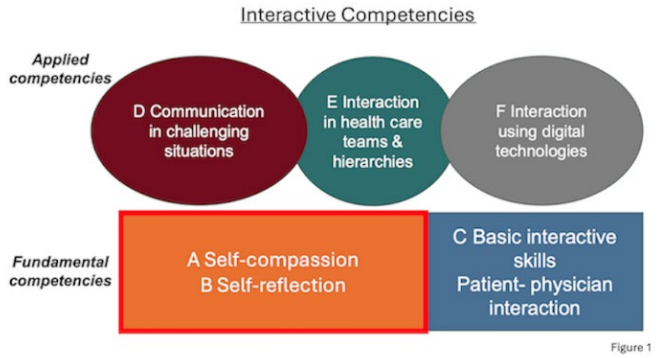


Figure 1

Methods: A single-center, multi-method study was conducted at the University of Bern, Switzerland, using an adapted COMET methodology and reported in line with CO-STAR. As part of a bigger project on learning outcomes in interactive competencies, an initial set of outcomes was derived from a scoping review on self-reflection and self-compassion. Stakeholders (n=30, including students, early-career residents, teaching staff, patient representatives, national experts) prioritized outcomes in a two-round modified Delphi with anonymized ratings and feedback. After a horizontal curriculum mapping on these topics, a face-to-face consensus meeting defined the final outcome list for further vertical integration throughout the six year curriculum.

Results: 30 stakeholders completed Delphi round 1, and 29 completed round 2. Agreement was high and prioritization stable for all outcomes regarding self-compassion and self-reflection which are: 3 outcomes for self-compassion including practice in self-care techniques and early recognition of burnout symptoms; 6 outcomes for self-reflection including the recognition of one's own behavioral patterns in interactions and dealing with one's own mistakes and uncertainties. Stakeholders emphasized that self-compassion and self-reflection should be learned and developed vertically from medical school to postgraduate training as fundamental interactive competencies.

Conclusion & clinical implications: We established a consensus-based core outcome set and vertical framework for interactive competencies with explicit outcomes for self-reflection and self-compassion. Both topics reached high consensus as being fundamental for professionalism in medical care and as an essential requirement for partnership-centered interaction with patients, family carers, team members and within hierarchies.

P76

Epidemiology and outcomes of brain abscesses in a Dutch bacterial meningitis cohort

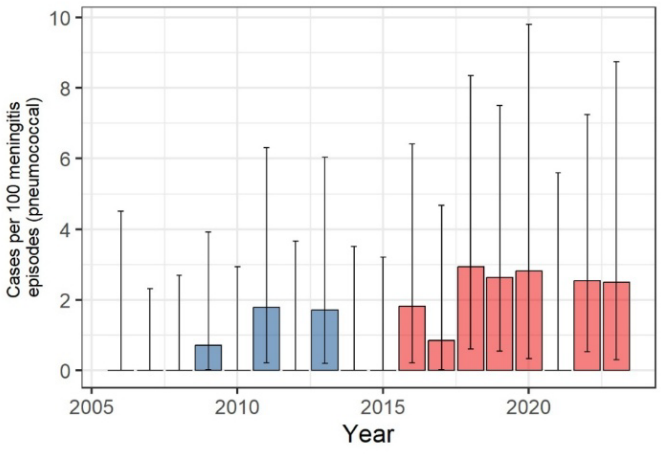
F.D Liechti[1,1], E.H. Drost[1], M.W Bijlsma[1], M.C Brouwer[1], D. Van De Beek[1]

[1]Inselspital, Bern University Hospital, Department of General Internal Medicine, Bern, Switzerland, [2]Amsterdam UMC, University of Amsterdam, Department of Neurology, Amsterdam, Netherlands

Background: Brain abscesse are an uncommon but potentially devastating complication of bacterial meningitis. Due to its rarity, data on causative pathogens, clinical characteristics, management strategies, and outcomes are limited. Improved understanding is clinically relevant, as a brain abscess may alter diagnostic evaluation, antibiotic duration, need for neurosurgical intervention, and prognosis in meningitis patients.

Methods: We studied adult patients (≥16 years) with community-acquired bacterial meningitis included in the nationwide prospective MeninGene cohort in the Netherlands between January 2006 and October 2023. Inclusion was based on clinical features of meningitis with either a positive CSF culture or CSF findings meeting Spanos criteria. Patients were identified through the Netherlands Reference Laboratory for Bacterial Meningitis or direct physician reporting. Brain abscess was identified from discharge letters and radiology reports; cranial CT or MRI scans were reviewed for confirmation. Patients without neuroimaging were assumed not to have a brain abscess.

Results: Among 2,918 meningitis episodes, 56 were complicated by brain abscess (prevalence 1.9%, 95% CI 1.5–2.5). Prevalence of brain abscesses was 3.6% in non-pneumococcal meningitis, with highest prevalence among episodes caused by the *Streptococcus anginosus* group (11/21, 52.4%). In contrast, prevalence was lower in pneumococcal meningitis despite the high absolute number of cases (21/1,917, 1.1%). Total prevalence increased from 2006–2014 to 2015–2023 with a ratio of 1.8 (95% CI 1.7–2.1), predominantly in pneumococcal cases (Figure). In patients with abscesses, 14-day survival was 94%; however, 71% of patients had an unfavourable outcome. Neurosurgical intervention was required in 16%, and all patients received prolonged antibiotic therapy.



Conclusion & clinical implications: Brain abscesses are a rare but clinically significant complication of bacterial meningitis. While *Streptococcus pneumoniae* caused most cases, non-pneumococcal streptococci carried the highest abscess risk. Despite favourable short-term survival, long-term neurological outcome was frequently poor. These findings highlight the importance of early neuroimaging, awareness of high-risk pathogens, and multidisciplinary management to optimise outcomes.

P77

External validation of an electrocardiogram-based convolutional neural network model for the early diagnosis of occlusion myocardial infarction: a prospective multicenter cohort study

P. Lopez Ayala[1,2,3], T. Zimmermann[3,4], J. Boeddinghaus[3], I. Strebel[3], L. Koechlin[3,5], E. Kaplan[3], M. Christ[6], K. Slankamenac[7], F. Bürgler[1], A. Angelini[2], N. Geigy[1], E. Potlukova[2], F. Mahfoud[3], C. Müller[3], for the APACE Investigators

[1]Kantonsspital Baselland, Notfall, Liestal, Switzerland, [2]Kantonsspital Baselland, Innere Medizin, Liestal, Switzerland, [3]Universitätsspital Basel, Cardiovascular Research Institute Basel, Basel, Switzerland, [4]Universitätsspital Basel, Intensivstation, Basel, Switzerland, [5]Universitätsspital Zürich, Herzchirurgie, Zürich, Switzerland, [6]Luzerner Kantonsspital, Notfall, Luzern, Switzerland, [7]Universitätsspital Zürich, Notfall, Zürich, Switzerland

Background: The Queen of Hearts (QoH) model is an electrocardiogram (ECG)-based convolutional neural network (CNN) model for the early diagnosis of occlusion myocardial infarction (OMI), showing good diagnostic performance. Because model derivation was performed in a retrospective cohort of patients presenting to a cardiovascular facility with acute coronary syndrome, external validation in an emergency department (ED) setting in unselected patients is mandatory before its implementation.

Methods: To externally validate the performance of the QoH model and compare it with standard ischemic ECG features and high-sensitivity cardiac troponin T (hs-cTnT), we conducted an international diagnostic study prospectively enrolling unselected ED patients presenting with chest pain. Final diagnoses were centrally adjudicated. The primary endpoint was OMI, defined as angiographic evidence of an acute culprit lesion with a TIMI flow 0-1, or TIMI flow 2-3 with a peak hs-cTnT ≥1000 ng/L. TIMI flow grades were assessed from coronary angiography reports and images by two interventional cardiologists. Model performance was assessed by means of discrimination (area under the receiver operating characteristic curve [AUC]) and calibration.

Results: Among 4728 patients, OMI was the final diagnosis in 300 (6.3%) patients. Patients with OMI had a higher probability score (40.4% vs 0.12%, Figure 1a). Model discrimination was high (AUC 0.88; 95% CI:0.85-0.90), outperforming ischemic ECG features, Figure 1b. The calibration plot showed risk underestimation at low and overestimation at high predicted probabilities, improving after recalibration, Figure 2. The originally derived rule-in probability ≥50% triaged 222 (4.7%) patients towards rule-in (specificity 98.2% [97.8-98.5]; positive predictive value [PPV] 64.0% [57.5-70.0]), resulting in a better performance compared to the European Society of Cardiology hs-cTnT rule-in cutoff ≥52 ng/L (specificity 93.1% [92.4-93.8]; PPV 41.8% [37.7-46.1])

Conclusion & clinical implications: In ED patients with chest pain, an ECG-based CNN model demonstrated high diagnostic accuracy for detecting OMI, outperforming ischemic ECG features. Rule-in performance was good and superior to the established ESC single-measurement hs-cTnT strategy. This model could help identify the up to 35% of NSTEMI with an occluded coronary artery requiring rapid reperfusion, missed by current ECG criteria, thereby enabling faster therapeutic intervention and improved outcomes.

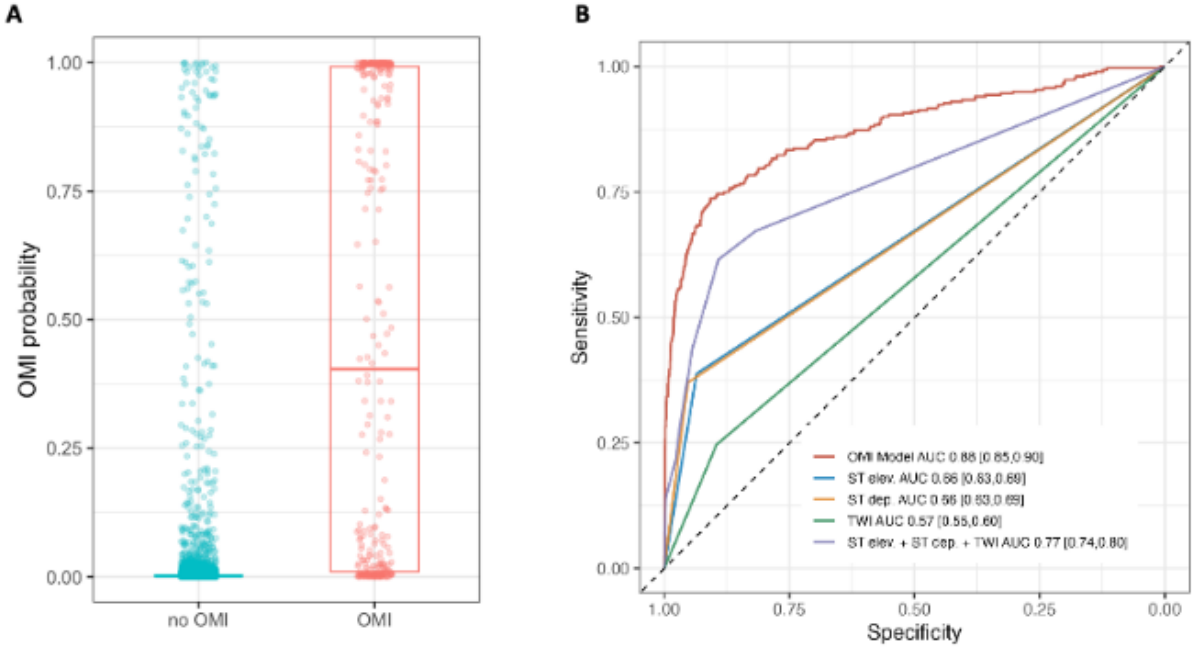


Figure 1. Diagnostic performance of the Queen of Hearts convolutional neural network model to detect occlusion myocardial infarction (OMI). (A) Distribution of predicted probabilities and (B) area under the receiver operating characteristic curve showing the discrimination of the CNN model, ST-elevation, ST-depression, T-wave inversion and a combination of ECG features for diagnosing OMI

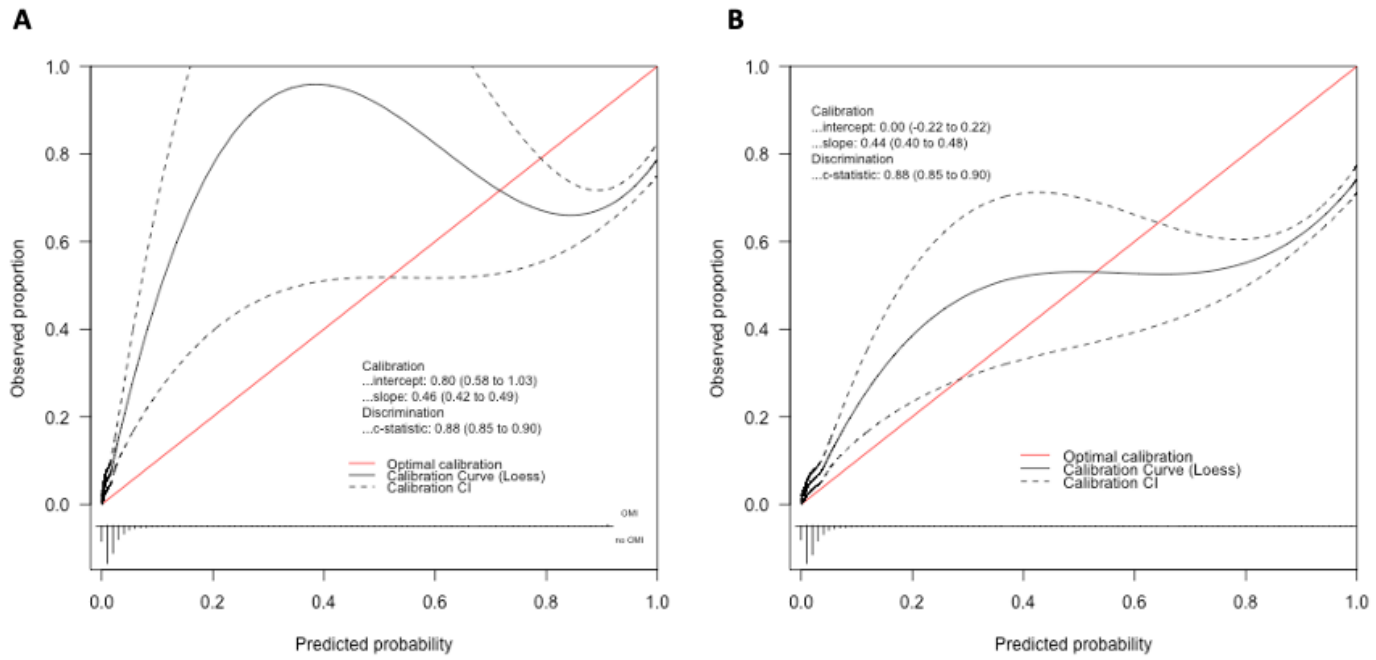


Figure 2. Calibration curves for the CNN model (A) without recalibration and (B) after recalibration of the intercept. The calibration plot assesses the agreement between predicted and observed probabilities. The red line is the optimal calibration, the black solid line is the calibration curve, and the black dashed lines are the 95% CIs of the calibration curve.

P78

Trends of length of hospital stay in general internal medicine at the Cantonal Hospital Baselland between 2022 and 2024

S. Golaz[1,2], G. Lüthi-Corridori[1,2,3], M. Boesing[1,2], J. Leuppi[1,2], E. Potluková[4,2]

[1]Kantonsspital Baselland, University Institute of Internal Medicine, Liestal, Switzerland, [2]University of Basel, Faculty of Medicine, Basel, Switzerland, [3]Harvard T.H. Chan School of Public Health, Executive and Continuing Education - PCCR, Bostonusausa, United States, [4]Kantonsspital Baselland, Department of Internal Medicine, University Center of Internal Medicine,, Liestal, Switzerland

Background: Within the SwissDRG reimbursement system, hospitals are incentivized to reduce length of hospital stay (LOHS), while maintaining care quality. Although national LOHS has stabilized, department-level data from Swiss general internal medicine remains limited. We aimed to describe recent LOHS trends and associated patient characteristics in a large cantonal internal medicine department.

Methods: We conducted a retrospective, observational, single-center cohort study including all consecutive adult patients admitted on an emergency basis to the Department of Internal Medicine at the Cantonal Hospital Baselland (KSBL), Liestal and in Bruderholz sites, between January 2022 and December 2024. Data were extracted from the institutional clinical information system. The primary outcome was LOHS. Analyses were descriptive, stratified by calendar year, age, diagnostic burden, admission mode, and discharge destination. After exclusion of cases with missing data, 20 321 hospitalizations were analyzed.

Results: Between 2022 and 2024, mean LOHS decreased by 1.1 days, reaching 5.7 days (SD 5.32) in 2024. The largest reduction was observed in patients aged ≥70 years (–1.4 days, mean 6.5 days). LOHS decreased most among ambulance-admitted patients (–1.3 days), of whom 66.7% were ≥70 years old. LOHS increased with diagnostic burden; but patients with ≥10 diagnoses demonstrated the largest reduction over time (–1.5 days), reaching 8.2 days (SD 6.40), with 76.4% aged ≥70 years. Discharge to rehabilitation was associated with the longest stays (14.0 days) but also the largest absolute reduction (–2.6 days), while nursing home discharges showed an above-average decrease (–1.5 days), with a mean LOHS of 7.9 days (SD 6.34) in 2024.

Conclusion & clinical implications: LOHS in general internal medicine at KSBL decreased substantially between 2022 and 2024, particularly among older, multimorbid patients and those requiring complex discharge pathways. As analysis were descriptive, causal mechanisms could not be identified. Nevertheless, stable patient characteristics suggest efficiency gains without reduced care complexity. Further research is needed to identify organizational strategies to reduce LOHS while maintaining high-quality, patient-centered care.

P79

Beyond the ward walk: objective vs. subjective physical activity and their divergent associations with well-being in Swiss general internal medicine residents

M. Mancinetti[1], V. Kraege[2], F. Peier[3], J. Vaucher[1,4]

[1]HFR and University of Fribourg, General Internal Medicine, Fribourg, Switzerland, [2]CHUV - Université de Lausanne, Direction Innovation et Recherche Clinique, Lausanne, Switzerland, [3]HFR and University of Fribourg, Clinical research, Fribourg, Switzerland, [4]CHUV - Université de Lausanne, Service de médecine interneschwe, Lausanne, Switzerland

Background: Swiss General Internal Medicine residents (GIM) are active, but their physical activity (PA) is often incidental ward walking rather than intentional exercise. While PA supports well-being, it is unclear if total distance walked or subjective perception of being active offers better protection against distress, or enhances professional fulfillment. This study exam-

ined the correlations between objective daily step counts, subjective PA reports, physician distress, and professional fulfillment.

Methods: We conducted a cross-sectional analysis of the participants from the COMET study, a longitudinal cohort of Swiss GIM residents. PA was assessed via two metrics: 1) objective total daily step counts reported from the smartphone health applications (3-month average, without standardization of use), reflecting cumulative movement both inside and outside the workplace; and 2) subjective scores from the International Physical Activity Questionnaire (IPAQ). We measured well-being and burnout using the Professional Well-Being Index (PWBI), and job satisfaction, using the Professional Fulfillment Index (PFI). We used multivariable linear regression models to assess the association adjusting for age and gender.

Results: A total of 284 participants completed the questionnairesl. The median age of the participants was 30 years, and 63.7% of the participants were women. Total objective step count activity, showed no significant correlation with with distress as measured by the PWBI (p=0.14) or professional fulfillment (p>0.60). Higher subjective PA scores, as measured by the IPAQ, were significantly associated with lower levels of distress (p>0.001). Regression models confirmed that higher subjective PA was associated with lower PWBI scores, indicating less distress and better well-being (p<0.001). Further, no significant association was found between professional fulfillment and either objective step counts (p>0.60) or subjective PA (p=0.12).

Conclusion & clinical implications: Objective total daily step counts were not associated with GIM residents' well-being, even accounting for extraprofessional PA. Only self-reported PA was associated with reduced distress. Overall, neither objective nor self-reported PA were associated with professional fulfillment. These findings suggest that while intentional exercise helps improve general health and job-related coping, it is not a substitute for addressing the underlying structural causes of professional dissatisfaction.

P80

Could chocolate consumption improve the quality of sleep?

P. Patriota[1], J. Ivanisevic[2], P. Marques-Vidal[3]

[1]NutriViva Sàrl, -, Vevey, Switzerland, [2]Lausanne University, Metabolomics group, Lausanne, Switzerland, [3]Lausanne University Hospital (CHUV), Medicine, Internal Medicine, Lausanne, Switzerland

Background: Dietary habits and diet quality have been associated with sleep, but there is still a lack of evidence on which specific nutrients modulate sleep patterns. Tryptophan is an essential amino acid that can affect sleep via its role in melatonin synthesis. The Kynurenine/Tryptophan ratio has been associated with better sleep quality, but which foods influence this ratio has not been investigated. We assessed whether the Kynurenine/Tryptophan ratio is associated with dietary intake.

Methods: Cross-sectional study using data from the CoLaus|HypnoLaus study, Lausanne, Switzerland. Blood levels of Tryptophan and Kynurenine were assessed by liquid chromatography-mass spectrometry. Dietary intake was assessed using a validated food frequency questionnaire.

Results: Data from 2,138 participants (57.2% females, mean age 54.1±8.7 years) was analysed. Men were had higher Tryptophan and Kynurenine levels than women. In the multivariable-adjusted analysis, the Kynurenine/Tryptophan ratio was negatively associated with fish (standardized beta coefficient : -0.053) and alcoholic beverages (-0.063) consumption, and positively associated with cookies and sweets consumption (0.076). Among the sweets group, positive associations were found with chocolate bread (0.045), chocolate (0.060), and honey or jam (0.070) consumption.

Conclusion & clinical implications: In a population-based study, we found that the Kynurenine/Tryptophan ratio was positively associated with chocolate-based foods and negatively with alcohol consumption. Consuming chocolate or sweets foods and abstaining from alcohol consumption could provide better sleep by increasing the Kynurenine/Tryptophan ratio.

P81

Vaccination in Switzerland: perceptions and attitudes

D. McCarthy-Pontier[1], P. Eggimann[2], T. Steffen[3], T. Rosemann[4]

[1]Moderna Switzerland GmbH, Medical Affairs, Basel, Switzerland, [2]Medical Society of French-speaking Switzerland, FMH, Fribourg, Switzerland, [3]Steffen Consulting GmbH, Basel, Basel, Switzerland, [4]Universitätsspital Zürich, Institut für Hausarztmedizin, Zürich, Switzerland

Background: Although vaccinations prevent severe influenza and COVID-19, coverage in risk groups in Switzerland remains low.

Methods: We conducted two online surveys among 601 individuals aged ≥65 years ("patients") and 130 health care professionals (HCPs) to explore perceptions, awareness, and vaccination attitudes.

Results: 62% of patients were unaware that annual COVID-19 vaccination is recommended for them and 43% were unaware for Influenza. Only 20% of patients expressed readiness to receive a COVID-19 vaccine, compared with 37% for influenza. The most important driver of vaccination uptake was a recommendation by an HCP.

Conclusion & clinical implications: These findings highlight the persistent gaps in risk perception and awareness among older adults in Switzerland and underscore the critical role of HCPs in improving vaccination uptake.

P82

Parenthood, caregiving and female fertility among general internal medicine physicians in Switzerland

I. Egger[1], S. Weidlinger[2], J. Zdanowicz[3], K. Kublickiene[4], C. Nater[5], S. Streit[1], J. Moor[6,1]

[1]University of Bern, Institute of Primary Health Care (BIHAM), Bern, Switzerland, [2]University Women's Hospital, Inselspital Bern, Department of Gynecological Endocrinology and Reproductive Medicine, Bern, Switzerland, [3]University Women's Hospital, Inselspital Bern, Department of Gynecology and Obstetrics, Bern, Switzerland, [4]Karolinska Institutet, CLINTEC Division of Renal Medicine, Stockholm, Sweden, [5]University of Bern, Institute for Psychology, Bern, Switzerland, [6]University of Zurich, Chair for Gender Medicine, Schlieren, Switzerland

Background: Balancing work and family life is a particular challenge for physicians, yet finding a good balance is crucial given that childcare responsibilities and institutional support strongly influence career trajectories. This study examined female fertility and gender differences in family founding, working hours and childcare or domestic responsibilities among physicians in Switzerland.

Methods: Design of the study was a secondary analysis of an anonymous, cross-sectional survey data of the Swiss internal medicine workforce. Main outcomes were the desire to have children, past or current intent to delay childbearing, self-reported female infertility, number of children, maternal age at first birth, and employer respect of pregnancy-related working-hour limits. We also assessed relative domestic and childcare responsibilities compared to respondents' spouse. Group comparisons used Welch's t-tests and chi-square tests, and associations with workload used linear regression models.

Results: This analysis included 682 physicians, 278 (41%) men and 404 (59%) women. The prevalence of female infertility was 27.7%, exceeding Swiss general population estimates of 10-15% (p<0.001). Mean age at first birth among physician-mothers was 31.3 years, comparable to the Swiss average (p=0.388). Women physicians had fewer children than men (p=0.006), were more frequently (69.8%) currently delaying having children compared to men (51.6%, p<0.001), and among parents more women (42.2%) than men (21.8%) had delayed having children (p<0.001). Of women who had been pregnant (n = 123), 57% reported that working-hour limits were not respected. Self-reported childcare or domestic responsibilities were higher in female physicians than male physicians.

Conclusion & clinical implications: Women reported having fewer children and more frequently postponing having children than men, and high prevalence of infertility. These findings imply potential career-related or physician-specific risk factors for female infertility, e.g. shiftwork or stress-related menstrual cycle disturbances. Improving scheduling, enforcing maternity protection and promoting equitable norms of caregiving and domestic responsibilities could enhance reproductive and professional outcomes for female physicians.

P83

Longitudinal gendered mental health trajectories among resettled Syrian refugee mothers in Switzerland

K. Morisod[1,2], K. Nguyen[1], V.S. Grazioli[1,2], D. Spini[3], E. Abboche[4], C. Abdulghafour[1], P. Bodenmann[1,2]

[1]Center For Primary Care and Public Health (Unisanté), Department of Vulnerabilities and Social Medicine, Lausanne, Switzerland, [2]University of Lausanne (UNIL), Chair of Medicine for Populations in Situation of Vulnerability, Lausanne, Switzerland, [3]University of Lausanne (UNIL), Faculty of Social and Political Sciences, Lausanne, Switzerland, [4]Hôpital du Valais, Centre hospitalier du Valais romand, Pôle de psychiatrie et psychothérapie, Sion, Switzerland

Background: Syrian forced migrant families resettled in Europe face high burdens of depression, anxiety, and post-traumatic stress, with mothers often carrying a disproportionate psychosocial load linked to caregiving demands, disrupted roles, and persistent post-migration stressors. This study aimed to describe longitudinal mental health trajectories among Syrian refugee mothers in Switzerland and to examine how migration program and family functioning shape their vulnerability over time.

Methods: A five-year longitudinal study followed 115 Syrian forced migrants from 34 families living in the canton of Vaud, comparing those admitted through two programs: the Swiss Resettlement Program (SRP) with a specific Consultation for Migrant Families and the standard asylum process (non-SRP). Repeated assessments (up to five waves, 2019-2023) included the Mini International Neuropsychiatric Interview (M.I.N.I.) for psychiatric diagnoses, Patient Health Questionnaire-9 (PHQ-9), PTSD Checklist (PCL-5), Generalized Anxiety Disorder-7 (GAD-7), and SF-12 mental health component, plus Family Assessment Device (FAD). Hierarchical linear modelling examined changes in general mental health by migration program and family role, focusing on mothers.

Results: Psychiatric disorders were highly prevalent among adults, with Syrian SRP mothers showing 63% current major depressive disorder and 58% anxiety disorders (non-SRP mothers: 53% both). Both SRP and non-SRP mothers exhibited persistently poor general mental health throughout the 5-year study, starting with similarly low mean SF-12 scores (47.3 vs 47.2, respectively) and declining further to 41.8 and 41.1 by final assessment, with similar trajectories as confirmed by hierarchical linear modelling of repeated measures data. Family functioning improved substantially across both groups, with mean FAD scores falling from dysfunctional levels (>2.4) to healthy functioning (<1.5), but offered mothers no protection against worsening mental health.

Conclusion & clinical implications: Syrian refugee mothers show no trajectory differences between SRP and non-SRP groups despite initial resettlement advantages and the specific Consultation for Migrant Families, with persistently poor mental health unaffected by improved family functioning. Primary care must prioritize sustained women-centered interventions, while maintaining family support to prevent chronic distress and enhance integration for these mothers.

P84

Beyond survival: a cross-sectional analysis of guideline recommendations for cognitive, sexual, and psychological problems in cancer survivors

N. Mueller[1,2], J. Ayoson[1,2], N. Schneider[1,2], B. Casanova[1,2], L. Kleijkers[1,2], L. Siragusa[1,2], S.I Rothschild[1,3], K. Gut-Fischer[1], E. Haegler-Laube[1,4], M.M. Wertli[1,4]

[1]Cantonal Hospital of Baden, Department of Internal Medicine, Baden, Switzerland, [2]Cantonal Hospital of Baden, Clinical Trial Unit, Baden, Switzerland, [3]Cantonal Hospital of Baden, Division of Oncology and Hematology, Baden, Switzerland, [4]University of Bern, University Hospital Bern, Division of General Internal Medicine, Bern, Switzerland

Background: In primary care, an increasing number of cancer survivors seek care for long-term sequelae. In particular, cognitive, sexual, and psychological problems are common and important survivorship concerns. The aim was to assess current guideline recommendations for managing these issues in adult cancer survivors.

Methods: A systematic search of PubMed, the Cochrane Library, and professional society websites was conducted in January 2025. Guidelines published in English between 2000 and 2024 addressing cognitive, sexual, or psychological issues in adult cancer survivors were included. Two reviewers assessed guideline quality using Appraisal of Guidelines for Research and Evaluation II instrument and standardized recommendations using the Grading of Recommendations Assessment, Development, and Evaluation (GRADE) framework.

Results: Of 418 guidelines screened, we included 13 (12 (92.3%) moderate quality; 1 (7.7%) low quality). For cognitive impairment, a strong recommendation was issued for non-pharmacologic strategies, including physical activity and cognitive behavioral therapy (CBT) (**Table**). Psychological problems should be screened using validated instruments and managed through physical activity, CBT, and coping strategies, with antidepressants recommended for moderate to severe symptoms. Guidelines recommended for sexual health care, proactive screening and counseling. First-line strategies were non-pharmacologic (lubricants, pelvic floor therapy, psychosexual counseling), while pharmacologic options (e.g., udenafil) were recommended using shared decision-making.

Conclusion & clinical implications: Cognitive, sexual, and psychological concerns should be proactively screened and managed in cancer survivors. Non-pharmacological interventions are the main stay of management and patients can be counseled in primary care practices. Given the low level of evidence for most recommendations, there is an urgent need to assess the efficacy of assessments and intervention in survivorship care.

Table. Guideline recommendations for cognitive impairments, psychological problems and sexual health in cancer survivors

Health Problem	Recommendation	Key Interventions Recommended	Strength / Level of Evidence (LOE)
Cognitive impairment	Routine assessment using validated tools and prioritization of non-pharmacologic management	Screen for cognitive problems and contributing factors; physical activity; CBT and cognitive rehabilitation when QoL or work is impaired; pharmacologic agents only in selected cases	Strong recommendation LOE moderate–high
Psychological problems	Routine screening with validated instruments and early referral to psychological care	DT, PHQ-9, HADS, GAD-7; psycho-oncology services; physical activity; CBT, mindfulness, coping strategies; SSRIs/SNRIs for moderate–severe symptoms	Strong recommendation LOE moderate
Sexual health	Proactive screening and counselling with first-line non-pharmacologic interventions and shared decision-making	Routine assessment; lubricants, moisturizers, pelvic floor therapy; CBT and psychosexual counselling; PDE5 inhibitors for men; vaginal estrogen or DHEA for selected women	Strong recommendation for screening and counselling; non-pharmacologic therapy first line; Conditional recommendation for pharmacologic options

Legend: CBT (Cognitive Behavioral Therapy), DT (Distress Thermometer), QoL (Quality of Life), PHQ-9 (Patient Health Questionnaire-9), HADS (Hospital Anxiety and Depression Scale), GAD-7 (Generalized Anxiety Disorder 7-item scale), SSRI (Selective Serotonin Reuptake Inhibitor), SNRI (Serotonin-Norepinephrine Reuptake Inhibitor), PDE5 inhibitors (Phosphodiesterase Type 5 Inhibitors), DHEA (Dehydroepiandrosterone)

P85

A standardized inpatient clinical hypnosis consultation service: utilization and effectiveness for patient relief

H. Wozniak[1], J. Muradbegovic[2], M. Coen[3]

[1]Hôpitaux Universitaires de Genève, Département de Médecine Aigue, Genève, Switzerland, [2]Hopitaux Universitaires de Genève, Département de Médecine de Premier Recours, Genève, Switzerland, [3]Hopitaux Universitaires de Genève, Département de médecine, Genève, Switzerland

Background: In Switzerland, medical hypnosis requires a specific postgraduate training. In Geneva University Hospitals, a formal medical hypnosis program was created in 2017, to support the management of common symptoms (acute pain, anxiety) in hospitalized patients. Real-world data on the impact of hospital-based hypnosis remain limited. The Edmonton Symptom Assessment System (ESAS), a validated multidimensional symptom scale, was used to evaluate the effect of hypnosis on symptom burden.

Methods: This retrospective observational study encompassing all inpatient hypnosis consultations carried out over a five-month period (May to October 2025). Outpatient and pediatric consultations were excluded. For each session, we extracted age, sex, indication for hypnosis, session duration, and ESAS total scores before and after the hypnosis session. Indications were grouped into anxiety/stress, pain, preparation for invasive procedures, and other (e.g., sleep problems, dyspnea). Continuous variables are reported as median (interquartile range [IQR]) and categorical variables as n (%).Pre–post ESAS changes were assessed using the paired Wilcoxon signed-rank test (two-sided $p<0.05$).

Results: Among 1,570 consultations, 692 met the inclusion criteria and 159 had complete ESAS data. Patient characteristics were similar between consultations with and without ESAS documentation. The median age was 61 years, and 69.8% of patients were women. Most consultation requests originated from anesthesiology (25.16%) and internal medicine (20.13%). The most frequent indication was anxiety or stress-related symptoms (51.57%), followed by pain (29.56%). The median session duration was 30 minutes (IQR 20–60). In the subgroup with ESAS data, the total ESAS score decreased from 18 (IQR 10–27) before the session to 7 (IQR 2–18) after the session ($p<0.01$), indicating a significant reduction in symptom burden.

Conclusion & clinical implications: Large-scale implementation of inpatient hypnosis consultations is feasible and addresses a broad range of clinical indications. Hypnosis was associated with immediate and clinically meaningful improvement in patient-reported symptoms. These findings support the integration of hypnosis as a complementary intervention in hospital care and highlight the need for systematic outcome collection to further assess its impact.

P86

The role of non-physician medical staff in managing uncomplicated urinary tract infections in Swiss primary care: current practices and future perspectives

A. Nadig[1], N. Heinz[2], C. Meyer-Massetti[3,4], S.P. Jenkinson[3], C. Steinbrüchel[5], D. Drewniak[2], S. Neuner-Jehle[1,6], O. Senn[1], A. Plate[1]

[1]University of Zurich and University Hospital Zurich, Institute of Primary Care, Zürich, Switzerland, [2]University of Zurich, Institute of Biomedical Ethics and History of Medicine, Zurich, Switzerland, [3]University of Bern, Institute of Primary Health Care BIHAM, Bern, Switzerland, [4]University of Bern, Institute of Pharmacology PKI, Bern, Switzerland, [5]City of Zurich, Senior Health Centres of the City of Zurich GFA, Zurich, Switzerland, [6]University of Luzern, Center of Primary and Community Care, Luzern, Switzerland

Background: Uncomplicated urinary tract infections (uUTIs) are one of the most common reasons for antibiotic prescribing in primary care. Besides general practitioners (GPs), non-physician medical staff (NPMS) are increasingly involved in patient management through patient education, assessment and treatment. However, the extent and nature of involvement in uUTI management in Swiss primary care remain unclear. Therefore, this exploratory study sought to gain insights into current practices.

Methods: In this qualitative study we conducted semi-structured interviews with NPMS, such as medical practice assistants (MPA), medical practice coordinators (MPK) and advanced practice nurses (APN), working in Swiss GP practices across seven cantons in German-speaking regions. The interviews explored participants' current tasks in the management of patients with uUTIs as well as their current and perceived

future roles. Interviews were conducted via Zoom Communications video calls, audio-recorded, transcribed verbatim, and analysed thematically following the six-phase approach of Braun and Clarke.

Results: Findings from 27 interviews (15 MPA/MPK, 12 APN) indicate that the management of patients with uUTIs varies according to the level of education and professional experience, practice routines, degree of standardisation, and the supervising GP's approach. In addition to administrative and laboratory tasks, many MPAs/MPKs are involved in telephone triage and assume a patient counselling role. In contrast, APNs manage uUTIs largely independently, including the prescription of antibiotics, with supervision by GPs. Most MPAs/MPKs expressed a desire for greater involvement and responsibility, contingent upon receiving specific teaching and appropriate supervision by GPs.

Conclusion & clinical implications: The findings indicate that NPMS play an important role in the context of antibiotic stewardship. Their involvement extends beyond administrative and routine tasks to include active participation in patient assessment, counselling, triage, and, in the case of APNs, clinical management including supervised antibiotic prescribing. This together with their willingness in extended competencies underscores the relevance of NPMS as key contributors to responsible antibiotic use in Swiss primary care.

P87

A home care nurses' perspective on hospital to home care transition models

S. Neurauter[1], R. Tomar[1], L. Pfisterer[1], S. Brown[1,2], N. Müller[1], J. Ayoson[1], M. Wertli[1,3]

[1]Kantonsspital Baden, Department of Internal Medicine, Baden, Switzerland, [2]Careum School of Health, University of Applied Sciences, Zurich, Switzerland, [3]University Hospital Bern and University of Bern, Department of General Internal Medicine, Bern, Switzerland

Background: Care transition from hospitals to home is a challenge in increasingly multimorbid patients. Hospital readmissions reach 25% in the eldest and frail patients. Thus, a hospital-to-home model aimed to improve continuity of care during the transition process. Home care services (Spitex) are essential for post-discharge support in Switzerland. In this study, we evaluated the perspective of Spitex nurses of the eastern part of the Canton Aargau on the hospital-to-home care model by the local hospital.

Methods: During an ongoing randomized care-transition study at the Baden cantonal hospital in Switzerland (KSB Hospital@Home), we conducted an online survey among local home care nurses, which was sent out through E-Mail at their Spitex organizations. In 41 questions with space for open-ended answers, we assessed their views on current discharge processes and perspective on hospital-to-home care transition models.

Results: Out of 46 respondents, the majority assessed the current collaboration between the hospital and home care nurses as good (41%), very good (4%) or satisfactory (13%). Main areas requiring improvement were delayed or missing medical reports (52%), overwhelmed patients or relatives (41%) or missing medication prescriptions (41%). Further, patients had rarely (20%) or only sometimes (35%) the required medication at home after a discharge. Thus, in case of uncertainties, 61% expressed at least sometimes desire for a dedicated hospital hotline. Nurses were familiar with the KSB hospital at home study in 57%. Interestingly, most home care nurses preferred a longer intervention (22% 1 week, 30% 2 weeks, 7% 1 month, and 7% more than 1 month).

Conclusion & clinical implications: Although local home care nurses reported an overall good collaboration with the local hospital, important areas that required improved discharge management have been identified: timeliness of discharge information, availability of medications and other material, communication in case of uncertainty. Home care nurses would prefer a longer hospital to home service from the hospital. This finding requires further studies to understand the needs of home care nurses.

Table: Baseline characteristics of the home care nurses (Spitex)

Characteristics		N (%)
Respondents		46 (100)
Age		
	≥50 years	13 (28.2)
	<50 years	16 (34.8)
Sex		
	Female	28 (60.9)
	Male	2 (4.3)
Work schedule		
	Full-time	11 (23.9)
	Part-time	20 (43.5)
Work experience		
	>20 years	16 (34.8)
	≤20 years	14 (30.4)
Position at Spitex		
	Team leader	7 (15.2)
	Nurse practitioner	2 (4.3)
	Registered nurse	11 (23.9)
	Healthcare assistant	9 (19.6)
	In training	1 (2.2)
Daily number of patient visits		
	>12	9 (19.6)
	≤12	16 (34.8)

P88

Optimizing dosing strategies in oral iron supplementation (OPTIDOSE) – a randomized controlled open-label trial

H.G. Pfister-Meyer[1], G. Gül[2], M. Meyer[3], C. Studer[4], D. Lehnick[5,6], B.L. Hug[1,4]

[1]Luzerner Kantonsspital LUKS, University Teaching and Research Hospital, Allgemeine Innere Medizin, Luzern, Switzerland, [2]Zuger Kantonsspital, Department of Obstetrics and Gynecology, Baar, Switzerland, [3]Luzerner Kantonsspital LUKS, University Teaching and Research Hospital, Department of Obstetrics and Gynecology, Luzern, Switzerland, [4]University of Lucerne, Center for Primary and Community Care, Luzern, Switzerland, [5]Clinical Trials Unit Central Switzerland, Biostatistics and Methodology, Luzern, Switzerland, [6]University of Lucerne, Faculty of Health Sciences and Medicine, Luzern, Switzerland

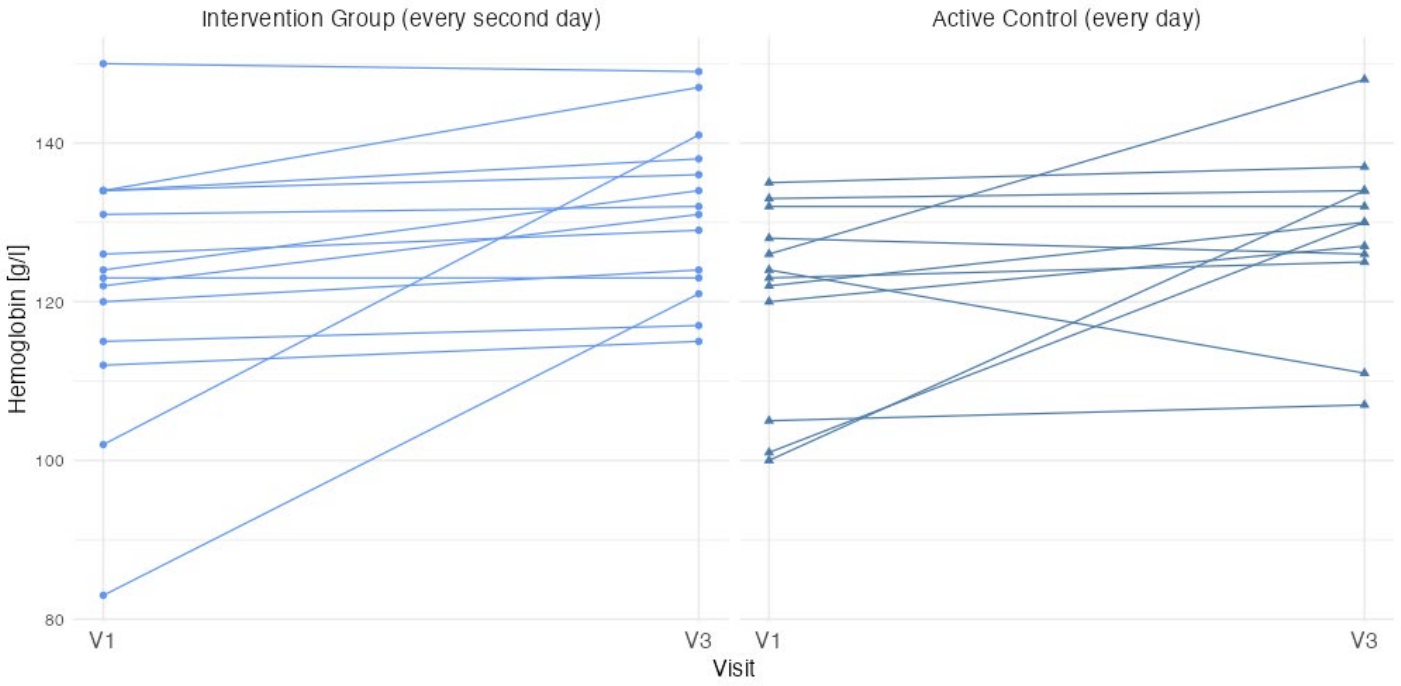
Background: Anemia affects nearly two billion people globally, with approximately two-thirds due to iron deficiency. Although guidelines recommend daily oral iron supplementation, recent studies suggest that an interval of at least 48 hours between

iron doses may improve fractional iron absorption. This study aimed to compare the treatment effect of a daily single-dose with an every-second-day double-dose treatment strategy to identify an optimal dosing strategy for treating iron deficiency.

Methods: This randomized, open-label exploratory trial in adults with iron deficiency compared two iron supplementation regimens: a daily single-dose (80 mg iron sulfate) versus every-second-day double-dose (160 mg iron sulfate) over 12 weeks (clinicaltrials.gov: NCT 06238895). The trial, conducted from March 2024 to September 2025, was prematurely terminated due to slow recruitment. Participants were randomly allocated to the treatment groups using computer-generated randomization. The primary outcome was change in hemoglobin, secondary outcomes included changes in iron parameters. Continuous outcome parameters were analyzed using ANCOVA, adjusting for baseline values of each parameter.

Results: Of the 29 participants randomized, 28 were female and 4 were pregnant. A total of 26 participants were included in the intention-to-treat analysis (2 in the intervention group and 1 in the control group provided no post-baseline assessments), the mean age was 41 years. After 12 weeks, the change in hemoglobin was +7.67 g/l (SD 13.73) for the active control versus +9.07 g/l (SD 13.08) for the intervention group. The adjusted mean difference in hemoglobin between the two groups was 2.31 g/l (95% CI -5.56 to 10.19). The change in ferritin after 12 weeks was +22.08 mcg/l (SD 12.82) in the active control vs. +22.00 mcg/l (SD 17.76) in the intervention group. The adjusted mean difference in ferritin was 0.91 mcg/l (95% CI -12.33 to 14.15).

Conclusion & clinical implications: No clinically relevant difference was found in the changes of hemoglobin or ferritin between daily single-dose and every-second-day double-dose iron supplementation over 12 weeks. Both regimens effectively improved hemoglobin and ferritin levels among participants with corresponding baseline deficiencies. Given that alternate-day dosing may reduce gastrointestinal side effects, clinicians may consider either regimen based on patient preference and tolerance.



P90

Primary care led interventions of advance care planning among community dwelling adults – a systematic review

J. Bonanno[1], A. Schmid[1], P.-Y. Rodondi[1], C. Podmore[1]

[1]*Université de Fribourg, Institut de Médecine de Famille, Fribourg, Switzerland*

Background: Advance care planning (ACP) helps adults clarify and communicate values, goals, and preferences for future medical care and is linked to more value-concordant care. Primary care, with its longitudinal and trust-based relationships, is well suited to ACP. Yet most evidence comes from hospitals or disease-specific settings. This systematic review addresses this gap by synthesising interventional ACP evidence generated in primary care for community-dwelling adults.

Methods: We conducted a narrative systematic review in accordance with PRISMA guidelines. PubMed, CENTRAL, PsycINFO, and CINAHL were searched for randomized controlled trials and implementation studies evaluating ACP interventions led in primary care among community-dwelling adults. Data extraction and synthesis are guided by established frameworks: the Behavior Change Technique Taxonomy to classify intervention components; Sudore et al.'s framework to organize ACP outcomes; Proctor et al.'s taxonomy to capture implementation outcomes; and the Theoretical Domains Framework to identify barriers and facilitators. Screening, data extraction, and quality appraisal are performed independently by two reviewers.

Results: 3436 title and abstracts have been screened. Full-text assessment of 161 articles is ongoing. The final results will include a PRISMA flow diagram, a descriptive summary of included studies, and a structured synthesis of intervention characteristics, ACP outcomes, and implementation outcomes. Barriers and facilitators to implementation will be mapped across theoretical domains, and implementation strategies will be linked to contextual determinants in primary care settings.

Conclusion & clinical implications: This review will provide an integrated synthesis of evidence on primary care-led ACP interventions for community-dwelling adults. By linking intervention components, implementation strategies, and contextual determinants, the findings will support clinicians, researchers, and policymakers in designing and scaling feasible, patient-centred ACP approaches in primary care, contributing to more consistent uptake and reduced research-to-practice gaps.

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Managing diabetes in the context of homelessness: a qualitative study of professionals experiences in the Canton of Vaud, Switzerland

G. Pozzoli[1], C. Bondolfi[1], D.J.D. Campbell[2], C. Wylie[1], P. Bodenmann[3], V. Grazioli[1]

[1]Unisanté, Center for Primary Care and Public Health, Department of Vulnerabilities and Social Medicine, Lausanne, Switzerland, [2]Cumming School of Medicine, University of Calgary, Departments of Medicine, Community Health Sciences & Cardiac Sciences, Calgary, Canada, [3]Center for Primary Care and Public Health, Chair of Medicine for Vulnerable Populations, Department of Vulnerabilities and Social Medicine, Lausanne, Switzerland

Background: People experiencing homelessness (PEH) with diabetes face major barriers to disease management. While international evidence highlights the complexity of diabetes care in this population, Swiss data remain scarce. This study explored professionals' experiences caring for PEH with diabetes in the Canton of Vaud, Switzerland, focusing on encountered obstacles, adaptive strategies to address them, and perceived needs to improve quality of care for this population.

Methods: We conducted a qualitative, exploratory, pragmatic, descriptive study involving 21 professionals (e.g., nurses, social workers) providing care to PEH and/or people with diabetes in the Canton of Vaud. Participants were recruited through purposive quota sampling across hospitals, emergency shelters and community healthcare centers, until data saturation was reached. Participants took part in individual, face-to-face semi-structured interviews. Data were analyzed using inductive and deductive thematic analysis to identify key patterns related to barriers, adaptive practices and unmet needs.

Results: Three themes emerged from data analysis. First, professionals reported multiple barriers to diabetes care among PEH, including housing instability, food insecurity, lack of health insurance, difficulties with medication storage, limited access to specialist care, and communication challenges related to low health literacy and language barriers. Second, they described context-specific, adaptive strategies, such as outreach work, interprofessional collaboration, patient education and social support for administrative procedures. Lastly, they identified perceived future needs, including the need for diabetes-and-homeless-specific services, regular access to medication and storage, adapted nutrition and decentralized care outside urban centres.

Conclusion & clinical implications: This first Swiss study on diabetes care for PEH highlights the need for integrated, flexible and context-adapted models of care combining medical and social interventions. This work suggests a need for enhanced outreach services, improved access to insulin storage and diabetes-appropriate food, more tailored provider training, and development of multidisciplinary, low-barrier diabetes programs tailored to the lived realities of PEH.

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Treating uncertainty: antibiotic use without evidence of bacterial infection in older inpatients

J. Regina[1], M. Altarelli[1], T. Brahier[2], F. Amato[3], A. Mari[3], C.E. Aubert[4], J. Stirnemann[5], J. Ehrsam[6], S. Bassetti[7], F. Vallelian[8], N. Boillat[2], M. Méan[1]

[1]Lausanne University Hospital, Department of General Internal Medicine, Lausanne, Switzerland, [2]Lausanne University Hospital, Department of Infectious Diseases, Lausanne, Switzerland, [3]Ecole polythechnique Fédérale de Lausanne (EPFL), Swiss Data Science Center, Lausanne, Switzerland, [4]Inselspital, Bern University Hospital, Department of General Internal Medicine, Bern, Switzerland, [5]Geneva University Hospital, Division of Internal Medicine, Genève, Switzerland, [6]University of Geneva (UNIGE), Department of Radiology and Medical Informatics, Genève, Switzerland, [7]Universitatsspital Basel, Division of Internal Medicine, Basel, Switzerland, [8]Universitätsspital Zürich, Division of Internal Medicine, Zurich, Switzerland

Background: Older adults are at increased risk of infection, but also of antibiotic-associated adverse drug events. In hospitalized older adults, non-specific presentations complicate bacterial infection diagnoses and may lead to antibiotic overprescription. Data on inappropriate antibiotic prescribing and decision-support tools in this population remain limited. We aimed to assess the proportion of elderly inpatients receiving antibiotic without confirmed bacterial infection in Swiss university hospitals.

Methods: We used data from the LUCID National Data Stream, including consenting patients admitted to internal medicine wards of the five Swiss university hospitals (2014-2024). We included patients aged ≥75 years receiving antibiotics at admission and hospitalized for more than 48 hours. We excluded patients transferred from other hospitals, with immunosuppression, or receiving prophylactic antibiotics. The primary outcome was proxy criteria for bacterial infection, defined by an ICD-10 bacterial infection code and at least 48 hours of antibiotic therapy. We compared characteristics of stays meeting versus not meeting proxy criteria using chi-square or Mann–Whitney U tests, with sensitivity analyses excluding viral diagnoses and COVID-19 waves.

Results: Among 14'155 stays of older inpatients with antibiotics at admission, 12'013 (9'278 patients) were included in the analysis (Figure 1). The median age was 82.4 years [IQR 78.6–87.1], 43.4% were female, and patients had a median of 13 comorbidities [IQR 9–18]. The median length of stay was 7.8 days [IQR 5.1–12.1]. Overall, 29.2% of stays did not meet proxy criteria for bacterial infection. This proportion remained similar after excluding viral diagnosis and COVID-19 waves (27.8% and 29.5%, respectively). Table 1 compares characteristics of stays with and without bacterial infection.

Conclusion & clinical implications: Around a third of older inpatients treated with antibiotics did not meet proxy criteria suggestive of bacterial infection, indicating potential antibiotic overuse. These findings highlight diagnostic uncertainty in this population, underscoring the need for stewardship strategies and decision-support tools to safely reduce unnecessary antibiotic exposure and limit adverse drug events.

Figure 1. Study Flowchart and Primary Outcome

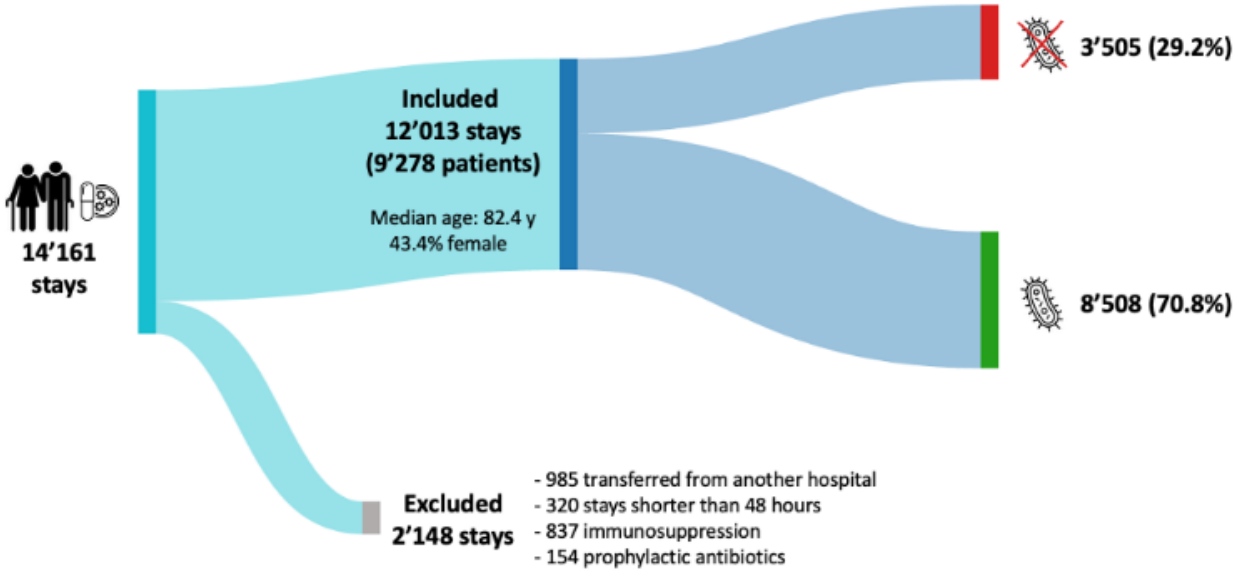

Table 1. Characteristics of stays with and without proxy criteria for bacterial infection

Variable	No bacterial infection	Bacterial infection	p-value
Number of stays	3505	8508	
Demographic characteristics at admission			
Age (years)	82.56 [78.60, 87.17]	82.37 [78.66, 87.09]	0.680
Female sex	1538 (43.9)	3677 (43.2)	0.427
Length of stay (days)	7.58 [4.56, 12.06]	7.87 [5.51, 12.11]	<0.001
Vitals parameters at admission			
Systolic blood pressure (mmHg)	136 [118.0, 154.00]	132 [115.00, 150.00]	<0.001
Diastolic blood pressure (mmHg)	73.00 [62.00, 84.00]	70 [60.00, 82.00]	<0.001
Temperature (°C)	36.90 [36.40, 37.60]	37.20 [36.60, 38.10]	<0.001
Heart rate (per minute)	85.00 [73.00, 98.00]	88.00 [76.00, 101.00]	<0.001
Saturation (%)	96.00 [94.00, 98.00]	95.00 [93.00, 97.00]	<0.001
Respiratory rate (per minute)	20.00 [17.00, 24.00]	20.00 [18.00, 25.00]	<0.001
Biological parameters at admission			
Hemoglobin (g/l)	123.00 [109.00, 137.00]	123.00 [109.00, 136.00]	0.383
Leucocytes (G/l)	9.52 [7.08, 12.80]	10.97 [8.08, 14.60]	<0.001
Platelets (G/l)	220.00 [172.00, 282.00]	220.00 [168.00, 284.00]	0.872
Potassium (mmol/l)	4.10 [3.80, 4.50]	4.10 [3.80, 4.50]	0.001
Sodium (mmol/l)	137.00 [135.00, 140.00]	137.00 [134.00, 140.00]	0.001
Creatinine (umol/l)	99.00 [76.00, 138.00]	101.00 [78.00, 139.50]	0.133
Total bilirubin (umol/l)	10.00 [6.00, 15.00]	10.00 [7.00, 16.00]	<0.001
C-reactive-protein (mg/l)	42.00 [10.00, 103.00]	70.00 [25.00, 146.00]	<0.001
Procalcitonin (ug/l)	0.22 [0.11, 0.68]	0.33 [0.17, 1.14]	<0.001
Comorbidities			
Heart failure	1045 (29.8)	2734 (32.1)	0.014
Chronic kidney disease	1209 (34.5)	3049 (35.8)	0.168
Cerebrovascular disease	332 (9.5)	738 (8.7)	0.174
Peripheral vascular disease	443 (12.6)	1174 (13.8)	0.096

Chronic pulmonary disease	602 (17.2)	1924 (22.6)	<0.001
Diabetes	891 (25.4)	2226 (26.2)	0.411
Dementia	391 (11.2)	874 (10.3)	0.161
Liver disease	145 (4.1)	262 (3.1)	0.004
Malignancy	273 (7.8)	607 (7.1)	0.225
Rheumatologic disease	111 (3.2)	271 (3.2)	1
Number of chronic conditions	13.00 [9.00, 17.00]	13.00 [9.00, 18.00]	<0.001
Antibiotics at admission			
Amoxicillin/clavulanic acid	1345 (38.4)	3229 (38.0)	0.681
Ceftriaxone	1069 (30.5)	2951 (34.7)	<0.001
Macrolides*	325 (9.3)	958 (11.3)	0.002
Quinolones°	194 (5.5)	409 (4.8)	0.106
Piperacillin/tazobactam	126 (3.6)	464 (5.5)	<0.001
Others	576 (16.4)	1032 (12.1)	<0.001
Antibiotic bitherapy at admission	139 (4.0)	548 (6.4)	<0.001
Results are expressed in median [interquartile range] or in numbers (percentage).			

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The Fast Doctors – but how good are they? an analysis of the Swiss board exam performance in general internal medicine

F. Rinaldo[1], M. Blum[2,3,4], A. Ehle Roussy[5], L. Gabutti[6,7], D.M. Haller[8], U. Käser[9], F. Muggli[10], S. Ritter[11], A. Ronga[12], M. Savopol[13], H. Späth[14], U. Stoller[15], J.H. Beer[16,17]

[1]Universität Bern, Fakultät für Humanmedizin, Bern, Switzerland, [2]Berner Institut für Hausarztmedizin (BIHAM), -, Bern, Switzerland, [3]Universitätsspital Bern, Universitätsklinik für Allgemeine Innere Medizin Inselspital, Bern, Switzerland, [4]Spitäler fmi, Allgemeine Innere Medizin, Interlaken, Switzerland, [5]Private Practice, General Internal Medicine, Bellevue, Switzerland, [6]Università della Svizzera italiana, Department of Internal Medicine, Lugano, Switzerland, [7]Bellinzona Regional Hospital, Department of Internal Medicine and Nephrology, Bellinzona, Switzerland, [8]University of Geneva, University Institute for Primary Care, Faculty of Medicine, Geneva, Switzerland, [9]Swiss Society of General Internal Medicine (SSGIM), Department of Quality, Continuing Education and Training, Bern, Switzerland, [10]Outpatient's Medical Clinic, General Internal Medicine, Vezia, Switzerland, [11]Spitalverbund Appenzell Ausserrhoden, Department of Internal Medicine, Herisau, Switzerland, [12]Unisanté, Département de médecine de famille, Lausanne, Switzerland, [13]Private Practice, General Internal Medicine, Fribourg, Switzerland, [14]Practice at the Wolfgraben, Internal Medicine, Langnau am Albis, Switzerland, [15]Hospital of Thun, Former head of the Department of medicine,, Thun, Switzerland, [16]University of Zurich, Center for Molecular Cardiology, Schlieren, Switzerland, [17]Kantonsspital Baden, Department of Internal Medicine, Baden, Switzerland

Background: The Board Exam in GIM is a major milestone in postgraduate training; it consists of 120 MC questions validated by the SSGIM examination board with the Institute of Medical Education of the University of Bern. A US study has shown a reduced patient mortality of the top exam candidates. Here, we hypothesized that rapid situation analyses and problem-solving are positive characteristics of medical doctors and therefore analysed the characteristics of the fastest and the best candidates.

Methods: We performed a retrospective analysis of the last six MC examinations in General Internal Medicine (GIM) conducted between 2023 and 2025 with a total of 3,835 candidates. Anonymized characteristics (age, sex, years of training, previous failures, professional aims of specialization) were obtained. The fastest 10 (i.e. the shortest completion times) and the 10 best performing candidates (highest scores of the 120 MC questions) were evaluated. Mean performance of all candidates per exam was obtained as reference (table 1). Narrative exit poll feedbacks were discussed by board members with the fast candidates.

Results: Interestingly, the fastest 60 candidates by completion time finished their exams in 2h 50min±17min (of possible 5h), their mean scores were numerically higher (88.4±17) than in the overall cohort (86.1±15;p=0.31), the failure rate was similar to the average (15%vs.14.4%;p=0.89). Fast candidates tended to be younger (31.2vs.33.1y;p=0.056), and sig more men were in this group (55%vs43%) compared to the mean of the entire population (p=0.045). Remarkably, the best candidate group was younger than average (30vs.33.1y;p<0.001) and more females (53%vs45%) were represented than in the fast group. Fast candidates justified leaving the exam early by their certainty that they had passed and by the fear that prolonged reflection might worsen results.

Conclusion & clinical implications: (1.) Our analysis surprisingly shows that fast performers score numerically 2.3 points higher than average and are of younger age, consist of more males and have similar failure rates as average; overall, they score 22 points below the best performers, in whom females represent the majority. (2.) Young, male, self-confident candidates may be ready to take more risks in the board exam.

Candidate Characteristics	Total cohort	Top 10 by completion time	Top 10 by score
Number of candidates	3835	60	60
Mean score, in points	86.1±15	88.4±17	110±2
Failure rate, %	14.4	15	0
Mean age, years	33.1±7	31.2±5	30±3*
Sex, % male	43	55*	47
Sex, % female	57	45	53

Table 1: Mean performance of candidates

* <0.05; ** <0.01, ns=non significant, compared to total cohort

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Collaboration between physicians and pharmacists to improve patient care and self-management in Switzerland: continuing efforts to implement the myCare start service

S. Rondeaux[1,2], S. Serhal[1,2], C. Lanier[3], N.D. Krauer[1,2], G. Benzakour[1,2], L. Solh Dost[1,2], K. Shamuratova[1,2], E. Pfarrwaller[3], J. Mielke[4], S. Allemann[5], A. Zeller[6], S.P. Jenkinson[7,8], F. Mulder[7,8,9], A. Panchaud[7], D.M. Haller[3], S. De Geest[4,10], M.P. Schneider[1,2]

[1]School of Pharmaceutical Sciences, Faculty of Sciences, University of Geneva, Geneva, Switzerland, [2]Institute of Pharmaceutical Sciences of Western Switzerland, University of Geneva, Geneva, Switzerland, [3]University Institute for Primary Care, Faculty of Medecine, University of Geneva, Geneva, Switzerland, [4]Institute of Nursing Science, Department of Public Health, University of Basel, Basel, Switzerland, [5]Pharmaceutical Care Research Group, Department of Pharmaceutical Sciences, University of Basel, Basel, Switzerland, [6]University Centre for Primary Health Care, University of Basel, Basel, Switzerland, [7]Institute of Primary Health Care (BIHAM), University of Bern, Bern, Switzerland, [8]Swiss Pharmacists' Association, pharmaSuisse, Liebefeld, Switzerland, [9]Graduate School for Health Sciences (GHS), University of Bern, Bern, Switzerland, [10]Academic Centre for Nursing and Midwifery, Department of Public Health and Primary Care, KU Leuven, Leuven, Belgium

Background: 30-50 % of patients face medication adherence challenges. The UK New Medicine Service (NMS), involving two patient-centred consultations with a community pharmacist within six weeks of treatment initiation, has shown to improve medication adherence. From 2023 to 2025, the NMS was adapted to the Swiss context and developed as an interprofessional service through the myCare Start-Implementation project (myCare Start-I). The aim is to present the development of its interprofessional components.

Methods: myCare Start-I is a biphasic implementation science project. Phase A included a mixed-methods contextual analysis of Swiss primary care, with interviews and surveys with patients, physicians, pharmacists, and pharmacy technicians, followed by a co-creation process alongside stakeholders, including physicians, to adapt the intervention, select implementation strategies and define interprofessional roles. Phase B, a hybrid type II effectiveness–implementation study, was launched in November 2025 to implement and to evaluate the optimised service's impact. The project is supported by an investigative team that includes pharmacists, physicians, nurses, a patient representative, implementation researchers, health economists, and statisticians.

Results: Pharmacists, physicians and patients were actively involved throughout the development of the service. In Phase A, key interprofessional adaptations included a physician-initiated referral process to enhance patient uptake and trust of the service, and structured pharmacist–physician feedback to facilitate interprofessional communication and optimise continuity of care. In Phase B, to facilitate collaboration in practice, participating pharmacists will be clustered with local physicians, and monthly interprofessional roundtables, offering education credits, are organised. Physician and pharmacist focused educational materials were also developed to assist in defining roles for each profession and support integration into practice.

Conclusion & clinical implications: Physicians are currently invited to collaborate in the ongoing implementation of myCare Start. By leveraging implementation science, myCare Start-I demonstrates how contextually tailored intervention components and implementation strategies can support the integration of collaborative medication initiation services in Swiss primary care. The project aims to generate robust scientific evidence to inform long-term integration and sustainable funding in Switzerland.

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Medical student's receptiveness to oral feedback during a summative OSCE

A. Schaub[1], B. Cerutti[1], P. Darbellay[1], M. Brelaz[1], S. Arsever[1], S. Genevay[1], E. Schiffer[1], N. Junod Perron[1]

[1]Geneva University, Faculty of Medicine, Geneva, Switzerland

Background: The medical education literature suggests that during summative OSCEs, medical students are not to be receptive to examiners' feedback and make only limited use of it. The aim of this study was to analyze the factors influencing medical students' receptiveness to five-minute oral feedback given during a summative OSCE exam (three stations) at the end of the third year of a six-year curriculum.

Methods: A prospective study was carried out for an OSCE exam involving 162 medical students and 56 examiners. Receptiveness to feedback was defined as the addition of four items: comfort with feedback (Likert 1-5), distress post feedback (inversed Likert 1-5), feedback usefulness for the next station (1-5), feedback usefulness for clinical work (Likert 1-5). Gender, learning style (Goal Orientation Scale subscales: learning, prove, avoid) , self-perceived stress level (Likert 1-10) and self perceived performance (Likert 1-8), objective performance (Score 1-100), chronological order of the stations were collected. A linear mixed effects model was used to investigate the link between receptiveness (4-20 score) and the factors previously mentioned.

Results: Student's receptiveness (to feedback; mean score 15.45±1.67 was associated with two learning style orientations, namely "learning" (+0.506 for an increase of one unit on the scale "learning"; p=0.003) and "avoid" (+0.319; p=.0236), with no evidence of an association with "performance" (-0.138; p=0.219), gender (p=.104) or the sequence of station (p=.329). There was weak evidence of a negative association between receptiveness and both objective (-0.008; p=.099) and self-perceived performance (-0.08; p=0.077).

Conclusion & clinical implications: Students' receptiveness to oral feedback during a summative OSCE was high and was primarily influenced by their learning style rather than by stress or perceived performance. The objective quality of the feedback, which may also impact of students' receptiveness is currently being assessed and will be added to the analysis.

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Impact of an intervention to increase mobility in older hospitalized medical patients (INTOMOB): a cluster randomized controlled trial

L. Schiffmann[1], P. Leist[1], L. Marti[1,2], L. Bee[1], J.I. Beck[1], L. Pfisterer[3], E. Geissbühler[1], F.L.M. Kühni[1], B. Moser[1], M. Trachsel[1], A. Schirlo[1], E. Hofmann[1], R.V. Hofstetter[1], J.-B. Rossel[4], J. Schmidt Leuenberger[5], D. Aujesky[1], M. Mancinetti[6], M.M. Wertli[1,3], C. Aubert[1,2]

[1]Universitätsspital Bern, Universitätsklinik für Allgemein Innere Medizin, Bern, Switzerland, [2]Universität Bern, Berner Institut für Hausarztmedizin (BIHAM), Bern, Switzerland, [3]Kantonsspital Baden, Allgemein Innere Medizin, Baden, Switzerland, [4]Universität Bern, Department of Clinical Research, Bern, Switzerland, [5]Universitätsspital Bern, Institut für Physiotherapie, Bern, Switzerland, [6]HFR Freiburg – Kantonsspital, Departement Innere Medizin, Freiburg, Switzerland

Background: Low mobility is common during an acute hospitalization and associated with adverse outcomes, such as loss of independency and death. Previous interventions that successfully increased hospital mobility required resources that are not available in everyday clinical practice, limiting their scalability.

The INTOMOB intervention was developed to address limitations of previous interventions and tested in a cluster randomized controlled trial.

Methods: Superiority, multicenter, parallel, partially blinded, cluster randomized controlled trial, with randomization at the ward level and 180-day follow-up. Patients were recruited on acute general internal medicine wards of three Swiss hospitals. Main eligibility criteria were age ≥60, living in the community, planned hospital stay ≥3 days. The intervention was compared to standard of care and included booklets and videos for patients, healthcare professional training, and posters in the wards. The primary outcome was life-space mobility at 30 days, a measure of how far and often a person moves within their environment, from bedroom to beyond their town (range 0-120). Secondary outcomes were measured at discharge, 30 days and 180 days.

Results: Among 383 patients (mean age 74.7, SD 8.2; 61.1% males) randomized to 12 clusters, 327 (85.4%) completed 30-day and 288 (75.2%) 180-day follow-up. Mean length of stay was 6.2 (SD 4.7) days. Life-space mobility at 30 days was not significantly different between control and intervention groups (adjusted difference 0.67, 95% CI -4.35 to 5.68). Hand grip was lower in the intervention group at discharge (adjusted difference -1.50, 95% CI -2.75 to -0.25), but this difference ceased to be significant after adjusting for covariates in a sensitivity analysis. There was no statistically significant difference in any other secondary outcomes (Table 1).

Conclusion & clinical implications: No statistically significant difference was observed between intervention and control groups. Focus on feasibility to make the intervention scalable to clinical practice or already high attention paid to patient mobility might have contributed to the results. Short stays might be another explanation, potentially shifting the problem to post-acute care. In light of this, future research must assess current impact of low mobility during acute care and how to balance intensity and scalability.

Measure	Measurement time point	Effect estimate (95% CI)
Primary outcome		
Life-space mobility (UAB Life-Space Assessment), AD	D30	0.67 (-4.35 to 5.68)
Secondary outcomes		
Life-space mobility (UAB Life-Space Assessment), AD	D180	-0.12 (-7.02 to 6.77)
Percent* in light activity, AD	During hospitalization	-0.50 (-1.53 to 0.53)
moderate activity, AD		0.54 (-0.48 to 1.55)
(very) vigorous activity, AD		-0.02 (-0.35 to 0.32)
Mobility (DEMMI), AD	Discharge	1.02 (-3.05 to 5.08)
Knee extensor muscle strength, AD		-0.04 (-0.12 to 0.04)
Hand grip strength, AD		-1.50 (-2.75 to -0.25)
ADLs (Barthel index), AD	D30	0.10 (-2.14 to 2.35)
	D180	0.94 (-2.02 to 3.89)
IADLs (Lawton index), AD	D30	0.15 (-0.39 to 0.68)
	D180	0.01 (-0.32 to 0.35)
Quality of life (EQ-5D-5L VAS), AD	D30	0.79 (-3.98 to 5.55)
	D180	-0.90 (-6.56 to 4.76)
Depression (PHQ-2), OR	D30	1.02 (0.60 to 1.73)
	D180	1.43 (0.65 to 3.14)
Falls efficacy scale, AD	Discharge	1.15 (-0.21 to 2.52)
	D30	0.56 (-2.68 to 1.56)
	D180	-0.07 (-2.12 to 1.98)
Number of falls, IRR	During hospitalization	1.38 (0.28 to 6.75)
	D30	0.95 (0.42 to 2.12)
	D180	0.82 (0.34 to 1.98)
Fall-risk increasing medication, OR	Discharge	0.92 (0.69 to 1.23)
	D30	1.18 (0.89 to 1.55)
	D180	0.94 (0.66 to 1.35)
New institutionalization, HR	D180	0.73 (0.22 to 2.45)
Emergency room visit, HR		1.11 (0.69 to 1.78)
Readmission, HR		1.16 (0.77 to 1.77)
Death, HR		1.17 (0.56 to 2.43)
Satisfaction** regarding nursing care	Discharge	-0.02 (-0.14 to 0.09)
medical care		0.02 (-0.19 to 0.22)
physiotherapy		0.03 (-0.11 to 0.18)
information		0.10 (-0.08 to 0.27)
patient autonomy		0.14 (-0.05 to 0.33)
support		0.12 (-0.04 to 0.27)

* Measured with ActiLife accelerometer.
** From 1 = dissatisfied to 5 = satisfied.
Abbreviations: **AD**, adjusted difference; **ADLs**, Activities of Daily Living; **CI**, confidence interval; **D**, day; **DEMMI**, De Morton Mobility Index; **EQ-5D-5L VAS**, European Quality of Life 5 Dimensions 5 Level Version, visual analogue scale; **HR**, hazard ratio; **IADLs**, Instrumental Activities of Daily Living; **IRR**, incidence rate ratio; **OR**, odds ratio; **PHQ-2**, Patient Health Questionnaire-2; **UAB**, University of Alabama.

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Sex-related differences in adverse drug reaction reporting in Switzerland: a 20-year national descriptive analysis

I. Scholz[1], F. Rodieux[1], S. Storre[1], T. Stammschulte[1]

[1]*Swissmedic, Swiss Agency for Therapeutic Products, Division Safety of Medicines, Bern, Switzerland*

Background: In databases of reports on adverse drug reactions (ADRs), the distribution of reports by sex is often unequal. This does not necessarily reflect sex related differences in the ADR risk but may be influenced by different drug exposure, prescribing patterns, healthcare utilization, and reporting behaviour. We investigated factors possibly contributing to sex-related differences in reports within the Swiss national pharmacovigilance database.

Methods: We analysed ADR reports submitted to the Swiss database between 1 January 2006 and 31 December 2025 focusing on sex-related reporting frequency, seriousness, and drug characteristics. Reports referring to vaccines or without information on sex and/or age were excluded. Analyses were stratified by sex and age groups [19 - 64, 65 – 74, 75 – 84, and >/= 85 years].

Results: A total of 58′143 reports were included. Among patients aged 19–64 years, reports more frequently concerned females (63%, n=22′253). The distribution was balanced in the 65–74 year age group, while females predominated in older patients (54% n=4′749 in 75–84; 61% n=2′132 in ≥85 years). The proportion of serious ADRs increased with age, from 63% (n=22′407) in patients aged 19–64-years to 74% (n=7′745) in those aged 65-74 years, 79% (n=7′024) in 75-84 years, and 85% (n=2′944) in patients aged ≥85 years. The most frequent suspected drugs differed by age and sex and are shown in table 1.

Conclusion & clinical implications: This analysis shows that the distribution of ADR reports by sex varies across adult age groups, with female patients predominating in most categories. These patterns likely reflect age-related differences in prescribing, drug exposure, and reporting behaviour. Notably, serious reports increase with advancing age, supporting the need for careful benefit–risk assessment and close monitoring in elderly patients.

Table 1 Most commonly suspected drugs (ATC group) by age group and sex of affected patients

Age group (years)	Sex	Most commonly suspected/interacting drug		
19 to 64	F	Intrauterine contraceptive	Selective immunosuppressants	Iron parenteral preparations
19 to 64	M	Antivirals for treatment of HIV infections	Antineoplastic agents	Selective immunosuppressants
65 to 74	F	Monoclonal antibodies	Protein kinase inhibitors used for neoplastic diseases	Other drugs affecting bone structure and mineralization
65 to 74	M	Monoclonal antibodies	Protein kinase inhibitors used for neoplastic diseases	Platelet aggregation inhibitors excl. heparin
75 to 84	F	Parathyroid hormones and analogues	Protein kinase inhibitors used for neoplastic diseases	Direct factor Xa inhibitors
75 to 84	M	Monoclonal antibodies	Protein kinase inhibitors used for neoplastic diseases	Direct factor Xa inhibitors
≥ 85	F	Direct factor Xa inhibitors	Vitamin K antagonists	Antineovascularisation agents
≥ 85	M	Direct factor Xa inhibitors	Vitamin K antagonists	Platelet aggregation inhibitors excl. heparin

P98

Obesity prevalence varies markedly by definition: multiple cross-sectional and prospective studies

E. Simó[1,2], M. Bouchud[3], C. Clair[3], A.M Lasserre[4,5], A. Berney[6], J. Vaucher[1,7], M.-P.F Strippoli[8], P. Vollenweider[1], P. Marques-Vidal[1]

[1]*CHUV, Department of medicine, Division of Internal Medicine, Lausanne University Hospital and University of Lausanne, Lausanne, Canton de Vaud, Switzerland,* [2]*La Paz University Hospital, Autonomous University of Madrid, Madrid, Spain,* [3]*Center for Primary Care and Public Health (Unisanté), University of Lausanne, Lausanne, Canton de Vaud, Switzerland,* [4]*Addiction Medicine, Department of Psychiatry, Lausanne University Hospital and University of Lausanne, Lausanne, Canton de Vaud, Switzerland,* [5]*Institute for Mental Health Policy Research, Centre for Addiction and Mental Health, Toronto, Canada,* [6]*CHUV, Department of Psychiatry, Psychiatric Liaison Service, Lausanne University Hospital and University of Lausanne, Lausanne, Canton de Vaud, Switzerland,* [7]*Fribourg Hospital, Department of internal medicine and specialties, Division of Internal Medicine, Fribourg Hospital and University of Fribourg, Fribourg, Canton de Fribourg, Switzerland,* [8]*Psychiatric Epidemiology and Psychopathology Research Center, Department of Psychiatry, Lausanne University Hospital and University of Lausanne, Prilly, Canton de Vaud, Switzerland*

Background: Several operational definitions of obesity coexist, notably those proposed by the World Health Organization (WHO), the National Institutes of Health (NIH), and the European Association for the Study of Obesity (EASO). These definitions rely on different anthropometric and clinical criteria and may therefore substantially influence obesity classification. We aimed to compare obesity prevalence and incidence according to these definitions and to explore age-related differences.

Methods: Data were derived from the CoLaus|PsyCoLaus study, a prospective population-based cohort conducted in Lausanne, Switzerland, including 6,733 adults aged 35–75 years at baseline. Obesity was defined using WHO (BMI ≥30 kg/m²), NIH (BMI combined with waist circumference), and EASO criteria (BMI, waist-to-height ratio, and obesity-related complications). Prevalence was assessed at baseline and three follow-ups. Incidence was calculated over a median follow-up of 14.5 years among participants without obesity at baseline.

Results: Obesity prevalence varied markedly across definitions. Mean prevalence was 17.4% using WHO criteria, compared with 33.9% and 37.5% using NIH and EASO definitions, respectively, mainly due to reclassification of overweight individuals. Differences increased with age: among participants aged ≥75 years, obesity prevalence reached 19.2% (WHO), 48.9% (NIH), and 55.9% (EASO).

During follow-up, obesity incidence among participants without obesity at baseline was 5.8% (WHO), 16.8% (NIH), and 20.6% (EASO). Using EASO criteria, obesity prevalence ultimately exceeded that of overweight.

Conclusion & clinical implications: Obesity prevalence and incidence differ substantially depending on the definition applied, with broader definitions identifying a much larger proportion of individuals as obese, particularly in older age groups. The choice of obesity definition has major consequences for clinical practice, prevention strategies, and healthcare planning. Broader definitions may improve risk identification but raise challenges regarding feasibility and potential overmedicalization in ageing populations.

P99

Effect of different obesity definitions on overall mortality: a Swiss prospective study

E. Simó-Garcia[1], M. Bochud[2], C. Clair[2], A.M. Lasserre[3,4], A. Berney[5,4], J. Vaucher[1,6,4], M.-P.F Strippoli[7,4], P. Vollenweider[1,4], P. Marques-Vidal[1,4]

[1]Lausanne University Hospital (CHUV), Medicine, Internal Medicine, Lausanne, Switzerland, [2]University of Lausanne, Center for Primary Care and Public Health (Unisanté), Lausanne, Switzerland, [3]Lausanne University Hospital (CHUV), Department of Psychiatry, Addiction Medicine, Lausanne, Switzerland, [4]University of Lausanne, Faculty of Biology and Medicine, Lausanne, Switzerland, [5]Lausanne University Hospital (CHUV), Department of Psychiatry, Psychiatric Liaison Service, Lausanne, Switzerland, [6]Fribourg Hospital, Service of Internal Medicine, Fribourg, Switzerland, [7]Lausanne University Hospital (CHUV), Department of Psychiatry, Psychiatric Epidemiology and Psychopathology Research Center, Prilly, Switzerland

Background: Several definitions for obesity have been proposed, but how much they impact mortality has been seldom assessed. We compared the association of obesity according to the World Health Organization (WHO), the National Institute of Health (NIH) and the European Association for the Study of Obesity (EASO) with overall mortality.

Methods: Prospective study using a population-based cohort of adults aged 35-75 years in Lausanne, Switzerland. Obesity was defined by WHO (Body mass index, BMI ≥30 kg/m^2), NIH [BMI and waist circumference ≥102 cm (men) or ≥88 cm (women)], and EASO (BMI, waist-to-height ratio ≥0.5 and ≥1 obesity-related complications: hypertension, type 2 diabetes, cardiovascular disease, chronic kidney disease). Youden index was defined as sensitivity (%) + specificity (%) -100.

Results: Data from 5,905 participants (47.1% men, mean age 52.8±10.8 years) was used. After a median [interquartile range] follow-up of 14.4 [10.7-14.6] years, 758 (12.8%) deaths occurred. After multivariable adjustment, the hazard ratios (95% CI) for participants with obesity relative to those with normal weight (BMI<25 kg/m^2) were quite similar for the WHO, NIH and EASO definitions (see table). The WHO definition had the lowest sensitivity but the highest specificity. Youden indexes evaluating the prognostic performance were 9.5, 17.7, and 23.8 for the WHO, NIH, and EASO, respectively.

Conclusion & clinical implications: The different definitions of obesity do not seem to differ regarding their association with overall mortality. The NIH and EASO definitions have a better prognostic performance, at the expense of extra data collection. Until a new inexpensive, easy to perform, replicate, interpret and standardize method to assess bodily fat is made available, health professionals should rely on the simpler, BMI-based WHO definition of obesity.

Table: Overall mortality as per definition of overweight and obesity, Colaus|PsyColaus study, Lausanne, Switzerland

	Person-Years	Events	Rate (95% CI)	Bivariate	P-value	Multivariable	P-value
WHO							
Normal	36659	283	7.7 (6.9 - 8.7)	1 (ref)		1 (ref)	
Overweight	26336	302	11.5 (10.2 - 12.8)	1.50 (1.28 - 1.77)	<0.001	0.99 (0.84 - 1.18)	0.953
Obesity	10056	173	17.2 (14.8 - 20.0)	2.25 (1.86 - 2.72)	<0.001	1.32 (1.08 - 1.60)	0.006
NIH							
Normal	36659	283	7.7 (6.9 - 8.7)	1 (ref)		1 (ref)	
Overweight	16711	146	8.7 (7.4 - 10.3)	1.15 (0.94 - 1.40)	0.184	0.83 (0.68 - 1.03)	0.088
Obesity	19667	329	16.7 (15.0 - 18.6)	2.19 (1.87 - 2.57)	<0.001	1.24 (1.06 - 1.47)	0.009
EASO							
Normal	36659	283	7.7 (6.9 - 8.7)	1 (ref)		1 (ref)	
Overweight	15223	86	5.6 (4.6 - 7.0)	0.74 (0.58 - 0.94)	0.015	0.77 (0.61 - 0.99)	0.040
Obesity	21169	389	18.4 (16.6 - 20.3)	2.41 (2.06 - 2.81)	<0.001	1.22 (1.04 - 1.44)	0.017

EASO, European Association for the Study of Obesity; NIH, National Institute of Health, and WHO, World Health Organization. Results are expressed as hazard ratios and (95% confidence intervals). Statistical analysis performed using Cox model adjusting for sex (male, female), age group ([35-45[, [45-55[, [55-64[and [65+), marital status (living alone, living in couple), educational level (mandatory education, apprenticeship, high school, university), smoking (never, former, current), and alcohol consumption (yes, no).

P100

Empowering medical students to manage exam stress: the role of self-hypnosis

A. Sommer[1], M. Coen[2,3]

[1]*Faculté de Médecine, Université de Genève, Genève, Switzerland,* [2]*Faculté de Médecine, Université de Genève, Unité de Développement et de Recherche en Education Médicale (UDREM), Genève, Switzerland,* [3]*Hôpitaux Universitaires de Genève, Service de Médecine Interne Générale (SMIG), Genève, Switzerland*

Background: Medical students are highly exposed to academic stress and anxiety, particularly during the final year of medical school, which is marked by federal licensing examinations. Limited formal training in stress management represents a gap in medical education. Self-hypnosis is a non-pharmacological intervention that promotes autonomy and may assist in managing exam-related stress. Since 2022, the University of Geneva has offered voluntary self-hypnosis workshops to sixth-year medical students.

Methods:This quasi-experimental, pre-post study with a historical comparison group evaluated self-hypnosis training among sixth-year medical students. Four questionnaires were specifically developed and administered at key time points: (1) pre-workshop assessment of participation motivations, (2) technique utilization as federal examinations approached, (3) self-hypnosis use and perceived effects during the examination period, and (4) a questionnaire to assess long-term use of self-hypnosis, administered to former participants now in residency. The primary outcome was examination-related anxiety. Secondary outcomes included satisfaction with the workshop and the perceived impact on examination performance.

Results: Ten students enrolled in the 2025 workshops; four former participants completed follow-up questionnaires. Among current participants, most practiced self-hypnosis during revision and examination periods (n=5/6). Benefits included reduced anxiety (n=5/6), improved concentration (n=2/6), and better sleep (n=1/6). All participants thought anxiety would be higher without self-hypnosis. 42.9% (3/7) saw a positive impact on exam performance; others reported neutral or no response; none reported negative effects. Most participants intended to continue long-term practice (n=6/7). Former participants reported less anxiety (n=3/4), better sleep (n=2/4), and continued benefit during residency (n=3/4). Satisfaction was high (n=5/6).

Conclusion & clinical implications: Self-hypnosis is a feasible and well-accepted intervention regarded as advantageous for addressing exam-related stress and anxiety among final-year medical students. Although its limited sample size, these findings suggest the incorporation of self-hypnosis into medical studies. Moreover, the use of self-hypnosis in residency suggests that it offers transferable skills applicable throughout medical careers. Research with larger sample sizes is required to substantiate these preliminary results.

P101

Impact of malnutrition on intensive care unit admission, mortality, and length of stay: evidence from a nationwide Swiss data analysis

A. Tanweer[1,2], P. Marques-Vidal[1]

[1]*Lausanne University Hospital (CHUV) and University of Lausanne, Department of Medicine, Internal Medicine, Lausanne, Switzerland,* [2]*University of Management and Technology, Department of Nutrition and Dietetics, School of Health Sciences, Lahore, Pakistan*

Background: Malnutrition is linked to adverse clinical outcomes worldwide, yet Swiss data after 2014 are limited. Updated evidence is essential to guide hospital policies and resource allocation. We aimed to quantify the association between documented hospital malnutrition and key clinical outcomes: ICU admission, in-hospital mortality, and prolonged length of stay (LOS).

Methods: Using data from 12,195,344 adult hospitalizations (2012–2022), we compared outcomes between hospitalizations with and without malnutrition diagnoses. Multivariable logistic regression adjusted for demographic factors, region, admission type, and CCI (Charlson's Comorbidity Index). LOS was categorized as >5 vs ≤5 days.

Results: Malnutrition was associated with substantially worse clinical outcomes. Adjusted odds of ICU admission were 70% higher among malnourished cases (OR 1.70; 95% CI: 1.68–1.71). In-hospital mortality was 37% higher (OR 1.37; 95% CI: 1.35–1.39). Prolonged LOS was strongly associated with malnutrition (OR 8.07; 95% CI: 8.00–8.14), indicating a strong burden on hospital resources. These associations persisted across sensitivity analyses and all malnutrition definitions. The magnitude of effect increased with age and comorbidity.

Conclusion & clinical implications: Malnutrition is a major determinant of adverse in-hospital outcomes in Switzerland. The eightfold increased likelihood of prolonged LOS highlights substantial economic implications. Integrating early nutrition screening and structured dietetic intervention could mitigate risk and reduce hospital costs.

P102

Regional inequities in documentation and management of hospital malnutrition across Switzerland: a nationwide study

A. Tanweer[1,2], P. Marques-Vidal[1]

[1]*Lausanne University Hospital (CHUV) and University of Lausanne, Department of Medicine, Internal Medicine, Lausanne, Switzerland,* [2]*University of Management and Technology, Department of Nutrition and Dietetics, School of Health Sciences, Lahore, Pakistan*

Background: Switzerland's decentralized health system may lead to differences in nutritional care delivery. Understanding regional disparities is essential for improving equity and standardization. We aimed to analyse regional variation in malnutrition diagnosis and management across seven administrative regions of Switzerland.

Methods: Nationwide hospital discharge data (2012–2022) were analysed using the seven administrative regions of Switzerland. Outcomes included malnutrition prevalence, dietetic consultation rates, and nutrition support provision. Multivariable models were adjusted for demographics and clinical complexity.

Results: Malnutrition prevalence varied more than two-fold across regions, highest in Leman (7.4%) and lowest in Central (3.5%) regions. These differences (OR 0.49, 95%CI (0.49 - 0.50) in Central against Leman taken as reference) persisted after adjustment for demographic and clinical factors. Dietetic consultation, enteral and parenteral support followed significant regional differences with more than 50% malnourished participants not receiving dietetic consultation in some regions.

Conclusion & clinical implications: Substantial regional disparities exist in both identification and management of malnutrition in Switzerland. These inequities may reflect differences in coding practices, resource availability, training, or clinical governance. National harmonization of nutrition screening and management pathways is needed.

P103

Epidemiology of malnutrition in hospitalized stroke patients in Switzerland, 1998–2022

A. Tanweer[1], P. Marques-Vidal[2]

[1]Lausanne University Hospital (CHUV) and University of Lausanne, Department of Medicine, Internal Medicine, Lausanne, Switzerland, [2]Lausanne University Hospital (CHUV) and University of Lausanne, Department of Medicine, , Internal Medicine, Lausanne, Switzerland

Background: Stroke is a leading cause of mortality and long-term disability worldwide, particularly for the ageing populations. Malnutrition is a frequently observed but under-recognized condition among the stroke patients. But the evidence on its long-term trends, determinants and in hospital consequences at population level remains limited.

Methods: We conducted a nationwide retrospective analysis of hospitalized stroke patients from the Swiss hospital discharge data for the years 1998-2022. Malnutrition was defined as the presence of relevant ICD-10 codes (E40-46). Associations between malnutrition and clinical outcomes such as Intensive Care Unit (ICU) admission, Length of Stay (LoS) and in hospital mortality were studied using bivariate and multivariate analyses adjusted for demographic and clinical characteristics.

Results: Malnutrition was identified in 3.5% of the 504,192 hospitalized stroke patients studied. The prevalence of malnutrition diagnosis increased from 0.17% in 1998 to 9.31% in 2022 (trend per year p<0.001). Older age (>70 years; OR 2.66 (1.96-3.62)), female sex (OR 1.36 (1.32-1.41)) and higher comorbidity burden (OR 4.97 (4.57-5.41)) were significantly associated with higher odds of malnutrition. Malnutrition was independently associated with higher ICU admission (OR 1.16 (1.11-1.21)) and an eight-fold increased likelihood of prolonged hospitalisation (OR 8.14 (7.64-8.67)), but lower in-hospital mortality (OR 0.81 (0.76-0.86)).

Conclusion & clinical implications: Hospital malnutrition among stroke patients appears increasingly prevalent yet underestimated. Our analysis supports that early malnutrition screening should be applied to all patients and adequate measures should be undertaken for reducing the patient as well as hospital burdens.

P104

Community pharmacists' perspectives on a hospital to home care transition model

R. Tomar[1], L. Pfisterer[1], S. Neurauter[1], S. Brown[1,2], N. Müller[1], J. Ayoson[1], M. Wertli[1,3]

[1]Kantonsspital Baden, Department of Internal Medicine, Baden, Switzerland, [2]Careum School of Health, University of Applied Sciences, Zürich, Switzerland, [3]University Hospital Bern and University of Bern, Department of General Internal Medicine, Bern, Switzerland

Background: Multimorbidity is increasingly prevalent and associated with higher hospital readmission rates. Care transition interventions, including hospital-to-home models, aim to improve continuity of care across settings. After patient discharge, community pharmacists play a key role in identifying and resolving medication-related issues. Our goal was to assess the perspectives of pharmacists from the eastern part of the Canton Aargau on a hospital to home care transition model by the local hospital.

Methods: We conducted an online survey among local community pharmacists, embedded within an ongoing randomized care-transition study at the Baden cantonal hospital in Switzerland, called KSB Hospital@Home. The questionnaire was sent to local pharmacies via E-Mail, containing 31 questions addressing discharge prescriptions, care coordination and views on Hospital@Home related interventions.

Results: Out of 18 respondents (**Table**, 67% managerial position), 72% see patients daily with prescriptions from the KSB. In case of questions, pharmacists are able to call the treating physician often (56%), sometimes (33%) or rarely (11%). Pharmacists perception of hospital at home services were positive (useful 78%, rather useful 17%). In a hospital at home service, pharmacists would prefer help with medication management (22%) or communication (33%). In particular a hotline would be helpful (72%). One area of concern was that patients were not able to understand or follow medication prescriptions. Particularly in the context of heart failure management patients have difficulties following dosing recommendations of diuretics according to weight.

Conclusion & clinical implications: Pharmacists reported difficulties to receive important information about medication changes and interactions from physicians of the hospital. Pharmacists found a transition model helpful to improve communication, transparency of reasons for medication changes, and background information for complex dosing to ensure adherence and improve patient satisfaction. Integration of pharmacist into care transition model may improve continuity of care after hospital discharge.

Table: Baseline characteristics of the community pharmacists

Characteristics		N (%)
Respondents		18 (100)
Age		
	≥60 years	3 (16.7)
	40-59 years	6 (33.3)
	≤40 years	9 (50.0)
Sex		
	Female	13 (72.2)
	Male	5 (27.8)
Work schedule		
	Full-time	6 (33.3)
	Part-time	12 (66.7)
Work experience		
	>20 years	8 (44.4)
	≤20 years	10 (55.6)
Position in pharmacy		
	Manager	12 (66.7)
	Staff	6 (33.3)

P105

General practitioners' acceptance of hospital at home care transition services provided by a local hospital: a survey

R. Tomar[1], L. Pfisterer[1], S. Neurauter[1], S. Brown[1,2], N. Müller[1], J. Ayoson[1], M. Wertli[1,3]

[1]Kantonsspital Baden, Department of Internal Medicine, Baden, Switzerland, [2]Careum School of Health, University of Applied Sciences, Zürich, Switzerland, [3]University Hospital Bern and University of Bern, Department of General Internal Medicine, Bern, Switzerland

Background: Care transition from acute care hospitals to home or other institutions is a challenge in increasingly multimorbid patients. Thus, hospital readmission rates are as high as 25%

in the eldest, multimorbid and frail patients. A hospital-to-home model aimed to improve continuity of care during the transition process. In this study, we assessed the acceptance and perception of care transition services provided by a local hospital among general practitioners of the eastern part of the Canton Aargau.

Methods: During an ongoing randomized care-transition study at the Baden cantonal hospital in Switzerland (KSB Hospital@Home), we conducted an online survey that assessed several questions addressing the engagement of stakeholders during implementation of such a service. The survey was sent out to general practitioners (GPs) through a newsletter of their professional society (mfe Aargau). In 32 questions, we asked about their opinion on the importance and how they would like to be involved in such a service.

Results: Out of 33 respondents (Table 1), 63% found care transition service provided by advanced nurse practitioners an important or very important service and 39% were aware of the KSB hospital@home study. The majority of GPs (57%) reported that other hospital at home treatments, are an important additional service that should be provided. When asking GPs about their role in such hospital at home services, 21% were willing to be substantially involved (treatment at home with home visits, antibiotic treatments, surveillance) and 70% reported that they would like to be involved on a case basis. Remote monitoring may be a helpful service for vital signs (24%). However, most GPs were skeptical because of technical, organizational and other reasons.

Table: Baseline characteristics of the general practitioners

Characteristics		N (%)
Respondents		33 (100)
Age		
	≥60 years	10 (30.3)
	50-59 years	5 (15.2)
	40-49 years	10 (30.3)
	30-39 years	2 (6.1)
	≤30 years	0 (0.0)
Sex		
	Female	17 (51.5)
	Male	10 (30.3)
Work schedule		
	Full-time	10 (30.3)
	Part-time	17 (51.5)
Work experience		
	>20 years	17(51.5)
	≤20 years	11(33.3)

Conclusion & clinical implications: GPs believe that care transition is an important area and services provided by the hospital to improve the transition process may be helpful. The majority of GPs were willing to provide active hospital at home treatments or to be involved on a case by case basis to care for patients at home. These findings indicate that despite an increasing shortage of GPs, GPs are willing to care for patients at home and play an important part also in hospital at home services.

P106

Physical activity and lung function association in a healthy community-dwelling European population – a prospective study

B. Touilloux[1,2], M. Gabriel[3], S. Collaud[4], P. Marques-Vidal[5,6], A. Casutt[2,7], V. Kraege[6,8], J. Vaucher[3,5]

[1]Division of Pulmonology, Department of Medicine and Specialties, Fribourg Hospital and University of Fribourg, Fribourg, Switzerland, [2]Division of Pulmonology, Department of Medicine, Lausanne University Hospital (CHUV), and University of Lausanne (UNIL), Lausanne, Switzerland, [3]Internal Medicine Division, Fribourg Hospital and University of Fribourg (UNIFR), Department of Medicine, Fribourg, Switzerland, [4]Sanamé, Cabinet médical, Morges, Switzerland, [5]Internal Medicine Division, Lausanne University Hospital, CHUV, Department of Medicine, Lausanne, Switzerland, [6]Lausanne University, Faculty of Biology and Medicine, Lausanne, Switzerland, [7]Division of Pneumology, Ospedale Regionale di Lugano, Ente Ospedaliero Cantonale, Department of Medicine, Lugano, Switzerland, [8]Lausanne University Hospital, CHUV, Innovation and Clinical Research Directorate, Lausanne, Switzerland

Background: Whether physical activity (PA) and inactivity are associated with a change in lung function (LF) remains to be established, due to controversial results and lack of prospective studies. We thus prospectively investigated the association of PA and inactivity with LF in the community.

Methods: We used data from an urban population in Lausanne, Switzerland. At follow-up (FU) 2 (2014-17), LF was measured by spirometry, and PA by wrist-worn accelerometers. Participants repeated spirometry at FU3 (2018-21). High PA was defined as moderate-to-vigorous PA (MVPA) >150 min/week and inactivity as >720 min of inactivity/day. We performed bivariate analyses using Spearman's correlation between MVPA and inactivity, and FEV1, FVC and MMEF (in mL and z-score). For analyses by category of MVPA and inactivity, we performed t-tests. We then conducted linear regressions between MVPA and inactivity (continuous or categorical), and FEV1, FVC and MMEF adjusted for age, BMI, sex, smoking status and initial volume.

Results: We included 1,381 participants (55.0% women) in the analyses. Mean loss in FEV1 and FVC was 34.8 mL and 43.4 mL per year, respectively. In bivariate analyses, no association was found between PA or inactivity and LF. In women, adjusted analyses reported that inactivity was associated with a higher decrease in FVC z-score (standardised beta coefficient 0.019), while high MVPA was associated with a lesser decline (-0.017). Nevertheless, none of the associations held after Benjamini-Hochberg correction for multiple testing.

Conclusion & clinical implications: In this population-based cohort, there was no association between objectively-assessed PA or inactivity and LF. Further studies should assess whether more specific PA patterns are associated with LF over time.

P107

Development and validation of a scale for assessing therapeutic communication in clinical settings

A. Villiger[1], C. Noble[1], S. De Kostine[2], A. Berner[3], A. Dufey[4], M. Nendaz[5,3], T. Agoritsas[3], N. Junod[5], M. Coen[5,3]

[1]Faculté de Médecine, Université de Genève, Genève, Switzerland, [2]Hôpital de la Tour, Service de Médecinte interne, Genève, Switzerland, [3]Hôpitaux Universitaires de Genève, Service de Médecine Interne Générale (SMIG), Genève, Switzerland, [4]Hôpitaux Universitaires de Genève, Service de Néphrologie, Genève, Switzerland, [5]Faculté de Médecine, Unité de Développement et de Recherche en Education Médicale (UDREM), Genève, Switzerland

Background: Communication significantly influences therapeutic outcomes. Hypnosis-based therapeutic communication (HBTC) employs non-verbal techniques, positive language, and avoidance of negative suggestions, particularly during invasive procedures. Despite growing recognition, no validated instrument exists to assess HBTC across diverse clinical settings. This study aimed to develop and validate a psychometrically sound HBTC assessment scale.

Methods: Prospective observational validation study conducted at Geneva University Hospitals. Phase 1, Scale Development. Literature review and expert consultation informed the development of a 6-item assessment tool evaluating communication techniques during procedures (mirroring, gestures, distraction, warnings, suggestions, minimizations). Each item was rated on a 5-point Likert scale. Phase 2, Validation. 36 participants (medical students, residents, chief residents, attending physicians) performed simulated arterial punctures. 2 trained raters independently scored video recordings. Psychometric properties were assessed using Cronbach's alpha (internal consistency) and intraclass correlation coefficient (inter-rater reliability).

Results:

The cohort comprised 36 participants (61% male, median age 29 years) distributed across training levels: medical students (33%), residents (44%), chief residents (17%), and attending physicians (6%). Seventeen percent reported prior hypnosis-based therapeutic communication (HBTC) training.

The TherCOM scale demonstrated excellent inter-rater reliability with an ICC of 0.77 (95% CI [0.72, 0.82]) for single measurements and 0.87 (95% CI [0.84, 0.90]) for average measurements (both p <.001).

Conclusion & clinical implications: The TherCOM scale is the first validated instrument to assess HBTC in general medical settings. Excellent inter-rater reliability supports research and educational use. Strengths: systematic development, expert validation, sampling across training levels. The 6-item structure captures key behaviors. Limitations: single-center design, lack of predictive validity assessment. Future research must correlate scores with patient outcomes and validate across diverse settings and procedures.

P108

Long-term blood pressure exposure, variability, and kidney function decline

S. Xie[1], P. Vollenweider[1], J. Vaucher[1,2], P. Marques-Vidal[1]

[1]Lausanne University Hospital (CHUV) and University of Lausanne, Internal Medicine, Lausanne, Switzerland, [2]Fribourg Hospital and University of Fribourg, Department of Medicine and Specialties, Fribourg, Switzerland

Background: Single-visit blood pressure (BP) measurements may not adequately reflect long-term hemodynamic stress on the kidneys. Cumulative BP exposure and visit-to-visit BP variability may better capture chronic BP burden, yet evidence linking these metrics to kidney function decline in the general population is limited.

Methods: Data were derived from a prospective cohort study. Long-term BP burden and visit-to-visit BP variability were estimated from repeated BP measurements collected over follow-up. Kidney outcomes assessed during subsequent follow-up included estimated glomerular filtration rate (eGFR) slope and development of chronic kidney disease (CKD). Multivariable regression models were applied to examine associations, with additional analyses to evaluate robustness.

Results: Higher long-term BP exposure, particularly systolic BP, was consistently associated with a steeper annual decline in eGFR. In addition, greater visit-to-visit variability in both systolic and diastolic BP was associated with more rapid eGFR decline. With respect to incident CKD, cumulative systolic BP demonstrated the strongest association, whereas associations for cumulative diastolic BP and BP variability were generally weaker. No evidence of non-linearity or effect modification was observed, and findings were consistent across sensitivity analyses.

Conclusion & clinical implications: In a general population with preserved kidney function, greater long-term BP burden, particularly systolic BP exposure, is associated with subsequent kidney function decline and incident CKD. These findings suggest that cumulative BP metrics may provide additional prognostic value beyond single BP measurements.

P109

Long-term trends and outcomes of acute kidney injury in patients hospitalized for acute myocardial infarction

S. Xie[1], M. Pruijm[2], P. Marques-Vidal[1]

[1]Lausanne University Hospital (CHUV) and University of Lausanne, Internal Medicine, Lausanne, Switzerland, [2]Lausanne University Hospital (CHUV) and University of Lausanne, Service of Nephrology and Hypertension, Lausanne, Switzerland

Background: Acute kidney injury (AKI) is a common complication among patients admitted with acute myocardial infarction (AMI) and can worsen their clinical course. However, long-term information on its patterns and consequences during AMI hospitalization remains limited.

Methods: We conducted a retrospective analysis of all AMI hospitalizations recorded in a national administrative database between 1998 and 2022. AMI and AKI were identified using ICD-10 codes. Multivariable logistic regression was used to evaluate predictors of AKI, assess temporal changes, and examine its relationship with in-hospital outcomes. Additional analyses explored the influence of dialysis.

Results: We analyzed nearly 300,000 hospitalizations for AMI. The proportion of patients diagnosed with AKI increased steadily over time, whereas overall in-hospital mortality declined but remained substantially higher among those with AKI. Older age and chronic kidney disease were the strongest predictors of AKI, with diabetes and hypertension contributing more modest risks. AKI was linked to greater intensive care unit (ICU) use, longer hospital stays, and markedly higher mortality. Its relative impact was most pronounced in men, younger patients, and those without pre-existing kidney disease, and outcomes were poorest when dialysis was required.

Conclusion & clinical implications: AKI is a frequent complication during AMI hospitalization and is associated with substantially worse in-hospital outcomes. Recognizing high-risk patients and implementing preventive strategies may help reduce their impact.

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Long-term trends and outcomes of acute kidney injury in patients hospitalized for stroke

S. Xie[1], M. Pruijm[2], P. Marques-Vidal[1]

[1]Lausanne University Hospital (CHUV) and University of Lausanne, Internal Medicine, Lausanne, Switzerland, [2]Lausanne University Hospital (CHUV) and University of Lausanne, Service of Nephrology and Hypertension, Lausanne, Switzerland

Background: Acute kidney injury (AKI) is a frequent complication among patients hospitalized with stroke and can worsen their clinical course. However, information on how AKI in this setting has changed over time and how it relates to hospital outcomes is still limited.

Methods: We conducted a retrospective analysis of a national hospital dataset spanning 1998–2022, capturing nearly all acute-care admissions. Stroke diagnoses and AKI events were identified using ICD-10 classifications. Multivariable regression models were applied to examine factors associated with AKI and to evaluate its association with intensive care unit (ICU) utilization, hospital and ICU length of stay, and in-hospital mortality.

Results: Among nearly 440,000 patients hospitalized for stroke, the proportion coded with acute kidney injury increased steadily over the study period, while overall in-hospital mortality declined. Older age, emergency admission, and multiple cardiovascular comorbidities were independently associated with AKI, whereas female sex was linked to a lower risk. AKI was strongly related to greater use of intensive care, longer hospital and ICU stays, and substantially higher in-hospital mortality. The adverse impact was most pronounced in patients who required dialysis.

Conclusion & clinical implications: AKI represents a significant complication during stroke hospitalization and is linked to more intensive care needs and worse short-term outcomes. Identifying patients at risk and applying preventive measures may help mitigate its impact.

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Sex differences in inpatient resource use and outcomes after AMI and stroke subtypes in Switzerland

S. Yi[1,2], S. Peters[3], P. Marques-Vidal[1]

[1]Lausanne University Hospital (CHUV) and University of Lausanne, Department of Medicine, Internal Medicine, Lausanne, Switzerland, [2]University of Lausanne, Faculty of Biology and Medicine, Lausanne, Switzerland, [3]Imperial College London, The George Institute for Global Health, London, United Kingdom

Background: Sex-specific inequities in acute cardiovascular and stroke care may manifest not only in mortality but also in inpatient resource use.

Methods: We analysed national hospital discharge data for acute myocardial infarction (AMI), ischemic stroke, and haemorrhagic stroke. Using multivariable models, we compared women versus men (reference) for in-hospital management and outcomes. Length of stay and ICU hours were analysed with generalized linear models and reported as ratios of means (RoM) with 95% confidence intervals (CIs). ICU admission, procedures (AMI only), and in-hospital mortality were analysed with logistic regression and reported as adjusted odds ratios (aORs) with 95% CIs.

Results:

1. Women had longer hospital stays for AMI, ischemic stroke, and haemorrhagic stroke.
2. In AMI, women were less likely to receive PCI and CABG.
3. ICU admission was lower in women with AMI and ischemic stroke, but higher in haemorrhagic stroke.
4. Among ICU-admitted patients, ICU stay was shorter for AMI and ischemic stroke, but longer for haemorrhagic stroke.
5. Mortality showed no adjusted sex difference for AMI or ischemic stroke, whereas women had higher mortality after haemorrhagic stroke.

Conclusion & clinical implications:

1. Sex differences were consistent for longer hospital stay across all conditions and varied by condition/subtype for ICU use and mortality.
2. The combination of higher ICU utilisation and higher in-hospital mortality among women with haemorrhagic stroke identifies an area for pathway optimisation.
3. Lower use of invasive cardiac procedures in women with AMI warrants targeted review of decision-making.

Table 1. Adjusted sex differences in in-hospital management and outcomes among patients with AMI and stroke subtypes

Outcome	AMI	P–value	Ischemic stroke	P–value	Haemorrhagic stroke	P–value
Length of stay	1.09 (1.08–1.10)	<0.001	1.05 (1.04–1.05)	<0.001	1.11 (1.10–1.12)	<0.001
Interventions						
PCI	0.78 (0.77–0.79)	<0.001	—		—	
CABG	0.60 (0.57–0.63)	<0.001	—		—	
ICU admission	0.86 (0.85–0.88)	<0.001	0.92 (0.89–0.94)	<0.001	1.08 (1.05–1.12)	<0.001
Duration of ICU stay	0.96 (0.95–0.97)	<0.001	0.93 (0.91–0.95)	<0.001	1.20 (1.17–1.24)	<0.001
In-hospital mortality	0.99 (0.95–1.03)	0.549	1.02 (0.98–1.05)	0.402	1.28 (1.23–1.33)	<0.001

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Meal timings and subjective sleep: multiple cross-sectional, observational studies

C.M. Zakka[1], P. Marques-Vidal[1]

[1]*Centre hospitalier universitaire vaudois, Médecine interne, Lausanne, Switzerland*

Background: Sleep is essential for health and is influenced by several lifestyle factors, including diet. Previous studies have suggested that the timing and composition of the evening meal may affect sleep quality and duration; however, findings have been inconsistent. Our study aimed to assess the association between the size and timing of dinner before bedtime and sleep duration, sleep quality, and nightmares in a population-based setting.

Methods: Data were obtained from two survey waves (2014–2017 and 2018–2021) of the ongoing prospective CoLaus/PsyCoLaus study in Lausanne, Switzerland. Each participant completed a one-week, smartphone-based ecological momentary assessment (EMA). Dinner size was reported in the evening, and sleep duration and quality were assessed the following morning. Associations were analysed using mixed models that accounted for repeated measures. Two models were applied: one without adjustment and one adjusting for gender, age, marital status, educational level, body mass index categories, the presence of a diet, sleeping pill use and other covariates. Statistical significance was considered for a two-sided test with $p < 0.05$.

Results: A total of 943 and 1,055 participants contributed 4,281 and 4,688 EMA events in the 2014–2017 and 2018–2021 surveys. From 2014 to 2017, participants who ate a small or normal-sized dinner slept slightly longer than those who skipped dinner (adjusted mean±SE: 6.71±0.05 vs 6.49±0.08 h; $p=0.006$), but this association was not observed in 2018-2021 ($p=0.56$). No consistent association was found between meal size and sleep quality. In contrast, a longer delay between dinner and bedtime was associated with poorer sleep quality in both periods. Compared with eating <2 h before bedtime, eating 4–6 h earlier was associated with lower odds of good sleep quality (adjusted ORs: 0.26 and 0.13; both $p<0.001$). No association with nightmares was observed.

Conclusion & clinical implications: We found no consistent association between meal size and sleep quality or duration. Participants who ate less than two hours before going to bed reported better sleep quality, experiencing less difficulty falling asleep, fewer night-time awakenings, and waking up less early. Finally, no association was found between meal timing and nightmares. These findings suggest that meal timing may be more important than meal size for sleep quality.

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Workload, job satisfaction, and stress in Swiss general practice: results from the 5th workforce study 2025

A. Zeller[1], R. Fischer[1], L. Diaz Hernandez[1]

[1]*Universitäres Zentrum für Hausarztmedizin, Hausarztmedizin, Liestal/Basel, Switzerland*

Background: Sustaining a high-quality primary care system requires continuous monitoring of the working conditions and well-being of general practitioners (GPs) and paediatricians (Ps). Changes in workload, administrative demands and organisational pressures may affect job satisfaction, stress and long-term retention in practice. Using data from the Swiss Workforce Study 2025, the relationship between working conditions, job satisfaction and perceived stress was analysed.

Methods: The study was designed as a nationwide cross-sectional survey among GPs and Ps in Switzerland. Data were collected between January and May 2025 using a standardised four-page questionnaire available in paper and online formats and in German, French and Italian. The sample comprised 7,843 physicians identified via www.comparis.ch, and contact details were cross-checked against the national medical register (MedReg). Hospital-based physicians, specialists and non-registered physicians were excluded. After data cleaning, the final sample (77% GPs, 23% Ps) comprised 1,776 participants, corresponding to a response rate of 24%.

Results: Overall, 12.9% of GPs and 6.0% of Ps were still practising at the age of > 65 years. Approximately two-thirds of respondents reported a high level of job satisfaction, with Ps reporting slightly higher satisfaction levels than GPs. High job satisfaction was associated with a markedly reduced risk of stress (GPs: −72%, OR=0.280, $p<0.001$; Ps: −57%, OR=0.431, $p=0.012$). In contrast, administrative working hours were significantly associated with higher stress levels (GPs: OR=1.038 per hour, $p<0.001$). Direct patient consultation time declined notably between 2005 and 2025 (37.2 to 31.1 hours per week, $p<0.001$), while administrative working time increased significantly between 2020 and 2025 (8.6 to 9.5 hours per week, $p<0.001$).

Conclusion & clinical implications: A considerable proportion of primary health care is provided by GPs over 65, with one in eight GPs beyond retirement age. Administrative workload has risen notably over two decades and is a key driver of stress and dissatisfaction, while direct patient consultation time has declined markedly. These trends threaten workforce sustainability and require urgent policy action. It highlights the need for a coordinated, long-term approach to sustain the attractiveness and capacity of general practice.

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Sex-specific associations between sleep variability and hypertension: cross-sectional and prospective studies

R. Zhou[1], P. Marques-Vidal[1], G. Solelhac[2], R. Heinzer[2]

[1]*Centre hospitalier universitaire vaudois (CHUV), Internal Medicine, Lausanne, Switzerland,* [2]*Centre hospitalier universitaire vaudois (CHUV), Center for Investigation and Research in Sleep, Lausanne, Switzerland*

Background: Sleep has an important impact on cardiovascular disease, and sex differences may play a key role in sleep rhythm, physiological regulation, and the mechanism of hypertension. However, most existing studies focused on special populations, ignoring the potential heterogeneous effects of sleep variability in both sexes.

Methods: Data from CoLaus| PsyCoLaus second (2014–2017) and third (2018–2021) follow-ups were analyzed cross-sectionally and longitudinally. Objective sleep data was obtained by wrist accelerometer for 7 days, processed by GGIR algorithm, and subjective sleep data was obtained using ecological momentary assessment (EMA). Sleep variability was quantified by standard deviation, CV, and SD. All analyses were stratified by sex and controlled for potential confounders in a multivariable model.

Results: For the cross-sectional analyses, participants with hypertension tended to present with lower variability of sleep time on bivariate analysis, but the results were inconsistent (Table 1) and were not statistically significant after multivariable adjustment (Table 2). After a 5-year follow-up, males who developed hypertension presented with higher sleep variability as assessed by EMA, but not by accelerometry, while no differences were found between females who developed or did not develop hypertension.

Conclusion & clinical implications: No clear association was found between sleep variability and hypertension for both sexes, in both cross-sectional and prospective analyses. Sleep variability does not seem to be a determinant of hypertension.

		Second			Third	
	No hypertension	Hypertension	p-value	No hypertension	Hypertension	p-value
FEMALES						
GGIR algorithm	**N=859**	**N=514**		**N=591**	**N=435**	
Sleep time	420 ± 4	412 ± 5	0.15	405 ± 3	398 ± 3	0.09
SD of sleep time	58 ± 1	58 ± 2	0.72	63 ± 2	63 ± 2	0.93
Range of sleep time	161 ± 3	162 ± 4	0.83	177 ± 5	178 ± 5	0.95
CV of sleep time	16.7 ± 1	18.7 ± 1.4	0.26	16 ± 0.5	16.4 ± 0.6	0.61
Range of sleep onset	101 ± 2	96 ± 2	0.18	100 ± 2	102 ± 3	0.45
EMA	**N=244**	**N=131**		**N=262**	**N=183**	
Sleep time	399 ± 4	411 ± 6	0.12	406 ± 5	390 ± 6	0.04
SD of sleep time	57 ± 2	57 ± 4	1.00	58 ± 3	50 ± 3	0.07
Range of sleep time	150 ± 7	149 ± 9	0.88	143 ± 7	129 ± 8	0.20
CV of sleep time	15.6 ± 0.8	14.3 ± 1.2	0.39	15.8 ± 1.1	13.7 ± 1.3	0.23
Range of sleep onset	111 ± 6	114 ± 8	0.77	107 ± 6	99 ± 8	0.48
MALES						
GGIR algorithm	**N=597**	**N=601**		**N=388**	**N=495**	
Sleep time	396 ± 5	396 ± 5	0.97	390 ± 3	391 ± 3	0.70
SD of sleep time	57 ± 1	57 ± 1	0.79	59 ± 2	60 ± 2	0.61
Range of sleep time	160 ± 4	160 ± 4	0.94	169 ± 5	171 ± 5	0.73
CV of sleep time	16.8 ± 1.2	19.2 ± 1.3	0.19	15.7 ± 0.5	16.2 ± 0.5	0.49
Range of sleep onset	104 ± 2	101 ± 2	0.35	97 ± 3	98 ± 2	0.90
EMA	**N=157**	**N=160**		**N=158**	**N=219**	
Sleep time	397 ± 6	393 ± 6	0.64	401 ± 6	400 ± 5	0.92
SD of sleep time	49 ± 4	56 ± 4	0.22	50 ± 3	49 ± 3	0.86
Range of sleep time	120 ± 9	140 ± 9	0.17	127 ± 8	122 ± 7	0.63
CV of sleep time	13.3 ± 1.5	16.1 ± 1.5	0.21	13.3 ± 0.9	12.7 ± 0.8	0.65
Range of sleep onset	109 ± 7	100 ± 7	0.39	100 ± 7	98 ± 6	0.89

CV, coefficient of variation; EMA, ecological momentary assessment; SD, standard deviation. Results are expressed in minutes and as multivariable adjusted mean ± standard error. Comparisons performed using analysis of variance adjusting for age, (continuous), education (low, middle, high), smoking categories (never, former, current), BMI categories (normal, overweight, obese), alcohol consumption (none, 1-13/week, 14-27/week and 28+/week) and sleep-inducing drugs (yes, no).

		Second			Third	
	No hypertension	Hypertension	p-value	No hypertension	Hypertension	p-value
FEMALES						
GGIR algorithm	**N=859**	**N=514**		**N=591**	**N=435**	
Sleep time (min)	436 (399-468)	430 (393-466)	0.20	403 (371-440)	398 (363-433)	0.066
SD of sleep time (min)	52 (40-69)	50 (38-70)	0.24	57 (43-72)	53 (40-70)	0.038
Range of sleep time (min)	146 (110-196)	144 (105-201)	0.40	158 (119-205)	150 (110-195)	0.053
CV of sleep time (min)	12.3 (9.1-16.6)	12.1 (8.9-16.7)	0.90	13.8 (10.2-18.5)	13.5 (9.5-17.9)	0.15
Range of sleep onset (min)	99 (63-133)	94 (61-129)	0.26	97 (66-131)	97 (66-129)	0.92
EMA	**N=244**	**N=131**		**N=262**	**N=183**	
Sleep time (min)	415 (380-450)	410 (377-435)	0.46	409 (369-446)	403 (350-437)	0.085
SD of sleep time (min)	45 (32-70)	53 (34-76)	0.11	47 (31-68)	42 (29-57)	0.024
Range of sleep time (min)	120 (90-180)	120 (90-210)	0.10	120 (60-180)	120 (60-150)	0.079
CV of sleep time (min)	10.5 (7.7-17.8)	12.0 (7.9-19.4)	0.12	11.8 (7.5-17.2)	10.8 (6.7-15.1)	0.12
Range of sleep onset (min)	90 (60-150)	90 (60-150)	0.58	90 (60-120)	90 (60-120)	0.098
MALES						
GGIR algorithm	**N=597**	**N=601**		**N=388**	**N=495**	
Sleep time (min)	414 (370-452)	416 (376-455)	0.35	389 (356-428)	396 (356-437)	0.22
SD of sleep time (min)	53 (39-72)	50 (36-67)	0.024	55 (41-70)	51 (39-69)	0.084
Range of sleep time (min)	152 (108-202)	141 (100-190)	0.016	154 (114-201)	147 (108-199)	0.099
CV of sleep time (min)	13.1 (9.4-18.0)	12.2 (8.9-16.6)	0.010	14.0 (10.3-19.1)	13.2 (9.4-18.2)	0.057
Range of sleep onset (min)	102 (66-137)	95 (63-132)	0.10	94 (60-128)	89 (62-126)	0.59
EMA	**N=157**	**N=160**		**N=158**	**N=219**	
Sleep time (min)	407 (370-433)	408 (354-434)	0.60	405 (365-440)	405 (360-441)	0.70
SD of sleep time (min)	42 (27-64)	40 (27-66)	0.80	45 (29-64)	41 (29-58)	0.27
Range of sleep time (min)	120 (60-180)	90 (60-180)	0.73	120 (60-180)	120 (60-150)	0.36
CV of sleep time (min)	10.5 (6.5-16.1)	9.8 (6.9-18.6)	0.94	11.3 (7.1-15.9)	10.4 (6.7-14.1)	0.38
Range of sleep onset (min)	90 (60-150)	90 (30-120)	0.005	90 (60-120)	90 (60-120)	0.42

CV, coefficient of variation; EMA, ecological momentary assessment; SD, standard deviation. Data are presented as median (interquartile range) and between-group comparisons performed using Kruskal-Wallis test.

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Patterns and appropriateness of atypical antipsychotic prescriptions in acutely hospitalized medical patients: a retrospective study

A. Zimmermann[1], K. Fidan[1], T. Ziswiler[1], E. Hofmann[1], C. Schneider[1], C. Aubert[1,2]

[1]Inselspital, Bern University Hospital, Department of General Internal Medicine, Bern, Switzerland, [2]University of Bern, Institute of Primary Health Care (BIHAM), Bern, Switzerland

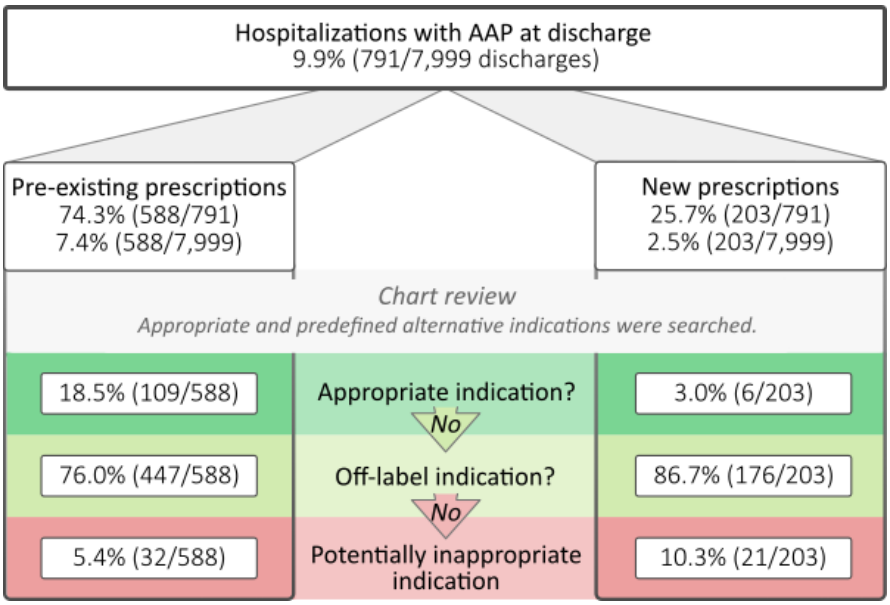
Background: Atypical antipsychotics (AAPs) are often prescribed for non-approved indications, despite uncertain effectiveness and potential adverse effects. The indications for and appropriateness of prescriptions during acute care hospitalizations, as well as prescribing patterns from admission to discharge, remain insufficiently characterized.

Methods: We conducted a retrospective manual chart review of hospitalizations in general internal medicine wards of Bern University Hospital with at least one AAP prescription at discharge. Hospitalizations with AAP prescriptions were categorized as *appropriate* (Swissmedic-approved indication), *off-label* (frequently used indications described as off-label based on international guidelines and meta-analyses), or *potentially inappropriate* (all other situations). Descriptive statistics were used to present prescribing patterns.

Results: Of 7,999 hospitalizations between 2022 and early 2024, 791 (9.9%) had at least one AAP prescribed at discharge. Among these, 203 (25.7%) hospitalizations had new prescriptions for AAP-naive patients, with six (3.0%) appropriate, 176 (86.7%) off-label and 21 (10.3%) potentially inappropriate. Nineteen percent of hospitalizations with pre-existing prescription were classified as appropriate (Figure 1). Hyperactive delirium (21.7%), suspected dementia (18.2%), and sleep problems (17.2%) were the most common off-label indications of new prescriptions.

Conclusion & clinical implications: Among hospitalizations with AAPs at discharge, one fourth had new prescriptions, most frequently with an off-label indication. In view of the limited evidence supporting efficacy and the potential for long-term harm, these findings highlight the importance of implementing targeted interventions to reduce off-label AAP prescribing at hospital discharge.

Figure 1. Prescribing patterns and appropriateness of AAPs



Legend: The flow chart illustrates the prevalence and appropriateness of AAP use at discharge.
Abbreviations: AAP, atypical antipsychotic

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Paraneoplastic hypereosinophilia revealing metastatic non-small cell lung cancer: a case report

J. Langhart[1], M. Coen[2], C. De Vito[3]

[1]Hopitaux Universitaires de Genève, Service de médecine interne générale / Service de pneumologie, Genève, Switzerland, [2]Hôpitaux Universitaires de Genève, Service de médecine interne générale, Genève, Switzerland, [3]Hôpitaux Universitaires de Genève, Service de pathologie, Genève, Switzerland

Case presentation: A 68-year-old man with multiple cardiovascular risk factors, including active smoking, presented to the emergency department with severe asthenia and progressively worsening dyspnea. Initial blood tests showed hypereosinophilia (AEC 8.38 $\times 10^9$/L), and elevated inflammatory markers (CRP 85 mg/L). Serologies for Strongyloides and Toxocara, autoimmune screening, and viral serologies (HIV, HBV, HCV) were negative. Tryptase and total IgE levels were within normal range. Echocardiography (TTE) revealed preserved left ventricular systolic function (EF 65–70%), normal right heart chambers and valves, and a minimal pericardial effusion (maximum 5 mm). A heterogeneous extracardiac structure measuring 1.5 cm was noted in the anterior mediastinum. Chest CT revealed a large mass associated with a significant right-sided pleural effusion (Figure 1). Diagnostic thoracentesis revealed an eosinophilic exudate. Cytological analysis confirmed the presence of metastatic non-small cell lung carcinoma (NSCLC). Bronchoscopy with cryobiopsy and EBUS-guided transbronchial biopsies confirmed NSCLC showing marked eosinophilic infiltration within the tumor (Figure 2). PD-L1 tumor proportion score (TPS)

was >50%, and molecular testing revealed no actionable mutations. The patient was referred to oncology and started on first-line platinum-based chemotherapy alongside pembrolizumab. Upon admission for his second chemotherapy cycle, one month later, peripheral eosinophilia was at 1.86 $\times 10^9$/L.

Figure 1A-B : Contrast-enhanced chest CT scan showing a large, heterogeneous, multilobulated right paramediastinal mass (10 × 5.5 × 11 cm) with right-sided pleural effusion.

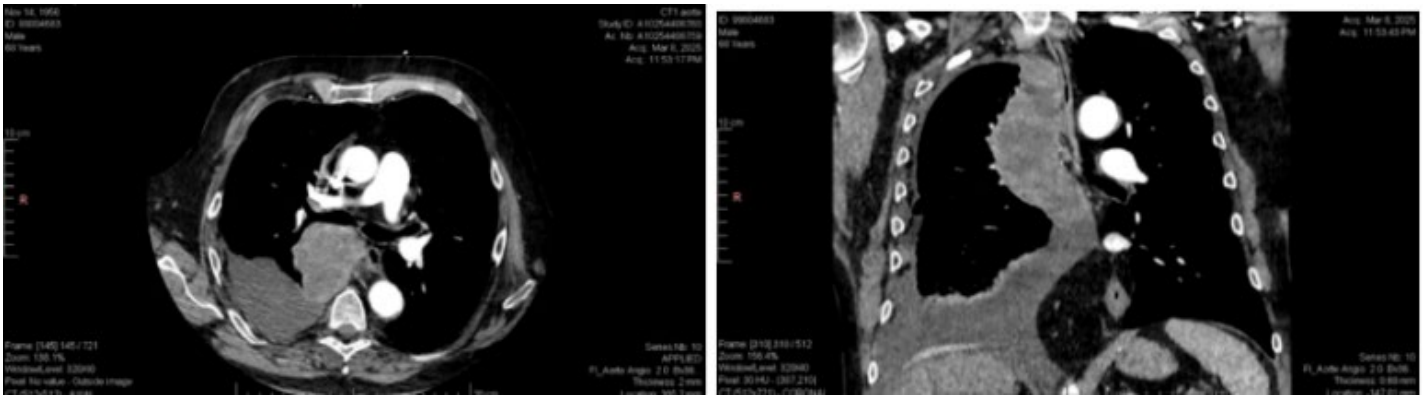
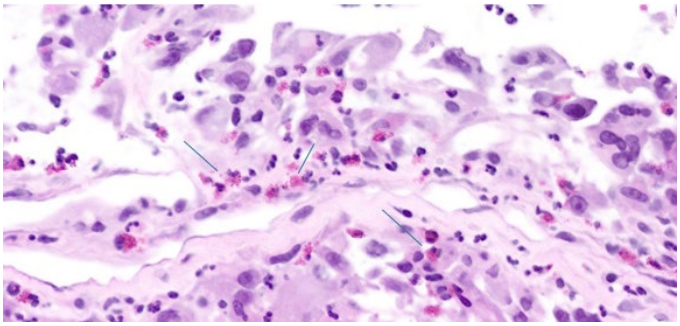


Figure 2 : Histopathological section of the lung mass (H&E stain, ×400) demonstrating dense eosinophilic infiltration within the tumor



Clinical implications: In cases of unexplained hypereosinophilia, it is essential to consider paraneoplastic etiologies, as eosinophil infiltration can lead to potentially life-threatening tissue injury. Organs commonly affected include the heart, lungs, gastrointestinal tract, central and peripheral nervous systems, and skin. Importantly, peripheral eosinophil counts do not necessarily correlate with tissue involvement, as recruitment depends on local expression of adhesion molecules and chemokines. Management of paraneoplastic eosinophilia focuses on treating the underlying malignancy. In the absence of clinical manifestations, even significantly elevated eosinophil counts do not warrant emergency therapy.

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IL-6 blockade in VEXAS syndrome: successful outcomes in three patients

E. Leggeri[1], F. Vallelian[1]

[1]*Universitätsspital Zürich, Klinik für Innere Medizin, Zürich, Switzerland*

Case presentation: VEXAS syndrome (Vacuoles, E1 enzyme, X-linked, Autoinflammatory, Somatic) is a recently described autoinflammatory disease caused by somatic mutations in the UBA1 gene in hematopoietic cells. It affects almost exclusively elderly men and is characterized by an overlap between systemic inflammation and clonal hematological disease. Latter is a hallmark and commonly includes macrocytic anemia, bone marrow vacuolization, and frequent association with myelodysplastic syndromes. We report three male patients (aged 72-76 years) with genetically confirmed VEXAS presenting with typical inflammatory manifestations involving skin, lung, eye, and lymph nodes, but distinct clinical phenotypes. Patient 1 presented predominantly with recurrent fever, weight loss, ocular and orbital inflammation, patient 2 with neutrophilic dermatoses, lymphadenopathy, and patient 3 with pulmonary infiltrates and hematological abnormalities. Initial treatment with high-dose corticosteroids led to transient clinical improvement but failed to achieve sustained disease control, and steroid tapering repeatedly triggered inflammatory relapses. Previous therapies, including methotrexate, IL-1 blockade (anakinra, canakinumab), and JAK inhibitors, were insufficient to maintain remission or allow steroid withdrawal. After initiation of IL-6 blockade with tocilizumab, all three patients showed rapid and sustained normalization of CRP, marked clinical improvement, and successful reduction of glucocorticoids to ≤10 mg prednisolone equivalent daily. During a follow-up of 10-14 months, all patients achieved complete remission, with stable hematologic parameters and acceptable safety.

Clinical implications: Standardized treatment strategies for VEXAS syndrome are currently lacking and management is largely based on case reports and small observational studies. This case series supports rising evidence that IL-6 inhibition is an effective and steroid-sparing therapeutic strategy in VEXAS syndrome across heterogeneous clinical phenotypes. Tocilizumab achieved durable control of systemic inflammation and allowed significant glucocorticoid tapering after failure other therapies. No major side effects were noted. Given the high morbidity associated with chronic inflammation and long-term corticosteroid exposure in VEXAS, early consideration of IL-6-targeted therapy may improve disease control and quality of life. Larger prospective studies are required to better define long-term efficacy, hematological outcomes, and safety.

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Acute kidney injury in a farmworker

L. Lindenberg[1], A. Kogias[1], C. Reiber[1], M. Haidinger[1], M. Fischler[1]
[1]Spital Bülach, Medizin, Bülach, Switzerland

Case presentation: A 20-year-old male presented to the emergency department with high fever (40 °C), fatigue, vomiting, and headache. He had moved from Romania to Switzerland four months ago to work on a farm for the summer season. On arrival he presented tachycardic (112/min), normotensive and with normal oxygen saturation. Clinical examination revealed no focal signs of infection, meningism or abdominal tenderness. However, laboratory testing showed markedly elevated inflammatory markers, slightly elevated bilirubin and acute kidney injury (AKI). A SARS-CoV-2 PCR test was positive, although with high cycle threshold (37.8). In the absence of radiological signs of pneumonia, the symptoms were initially attributed to COVID-19, and conservative management was chosen. During the first days of hospitalization, recurrent episodes of high fever – predominantly in the evening – were observed, and renal function continued to deteriorate to AKI stage III (FEUrea 203%), with no evidence of glomueronephritis or nephrotic syndrome. A second SARS-CoV-2 PCR test was negative, prompting reassessment of the initial diagnosis. Serologies to multiple intracellular bacteria and viruses were performed. Due to the clinical pattern with acute kidney injury, persistent fever with elevated inflammatory markers, headache and possible occupational exposure, leptospirosis was suspected and serologic testing was carried out. Despite negative results empirical therapy with ceftriaxone and doxycyclin was started, which led to a quick clinical improvement. The patient was discharged with oral doxycyclin and a scheduled follow-up in the infectious disease outpatient clinic. One week later he was afebrile but presented with bilateral conjunctivitis and elevated aminotransferases. Repeat serology for *Leptospira interrogans* revealed positive IgM antibodies, confirming the diagnosis of leptospirosis. No further treatment was required after completion of a one-week antibiotic course.

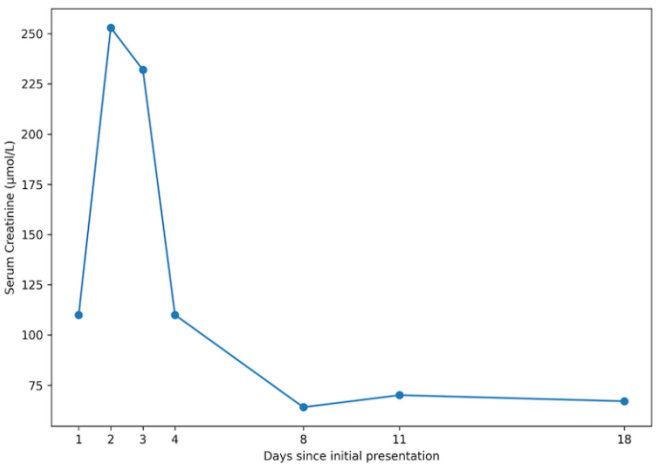

Figure 1. Serum creatinine course during hospitalization and follow-up.

Clinical implications: AKI in farmworkers is frequently caused by dehydration due to intense physical labor; however, as this case illustrates, the cause of renal failure may also be an infection. Moreover, this case highlights the importance of follow-up serological testing when leptospirosis is suspected, a globally prevalent zoonosis that often remains underdiagnosed. It also underscores the critical role of a thorough social and occupational history in identifying patients at increased risk of exposure.

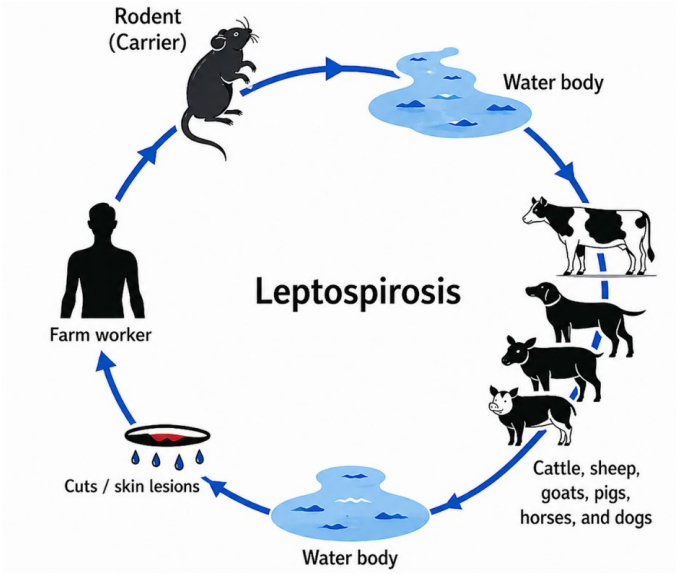

Figure 2. Infection cycle of leptospirosis. Adapted from: Gayathri R, Archana V, Ramya M. Molecular Diagnostic Methods for the Detection of Leptospirosis. J Pure Appl Microbiol. 2022;16(2):782-795. doi: 10.22207/JPAM.16.2.24 (published under the terms of the Creative Commons Attribution 4.0 International [CC BY 4.0] License).

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Morbus Osler - more than just nosebleeds

V. Martos[1], L.C. Huber[1], F. Vallelian[1]
[1]Universitätsspital Zürich, Klinik und Poliklinik für Innere Medizin, Zürich, Switzerland

Case presentation: A 79-year-old woman with recurrent epistaxis since childhood experienced several episodes of severe left-sided nasal bleeding beginning in December 2024. She required emergency treatment with endoscopic hemostasis and surgical arterial ligation. As she developed critical anemia, iron supplementation and blood transfusions became necessary. Her medical history included moderate aortic stenosis, episodes of narrow-complex tachycardia, and osteopenia. Family history revealed hereditary hemorrhagic telangiectasia (HHT) in her brother and his daughter. Clinical examination showed multiple telangiectasias up to 4 mm in diameter on the nose, cheeks, tongue, palate, and fingertips; additionally a nasal septal defect was present. Given the presence of recurrent epistaxis, telangiectasias in typical locations, and a positive family history, the Curaçao criteria were met for the diagnosis of HHT. Further genetic testing was not pursued due to the patient's advanced age and absence of offspring. As the patient maintained an active lifestyle and good quality of life, radiologic examinations were performed as preventive measures. Magnetic resonance imaging of the brain revealed a 5-mm dural arteriovenous malformation (AVM), paramedian to the left of the vermis, supplied by the posterior inferior cerebellar artery. Computed tomography of the thorax and upper abdomen demonstrated multiple AVMs measuring up to 3.5 cm in diameter in the lungs and up to 1.0 cm in the liver. After interdisciplinary consultation, a vascular intervention was planned to reduce the number of pulmonary AVMs.

Clinical implications: HHT, an autosomal-dominant vascular disorder, has an estimated prevalence of 1:5000-1:8000 and is frequently underdiagnosed. While epistaxis and facial telangiectasias are hallmark features, visceral AVMs may remain clinically silent until complications occur. Cerebral AVMs can lead to seizures or hemorrhagic stroke, hepatic AVMs to high-output heart failure, and pulmonary AVMs to paradoxical embolism and brain abscess. Preventive screening and timely vascular interventions are safe and effective to reduce morbidity. General practitioners should maintain a high index of suspicion in patients with recurrent epistaxis, even at advanced age.

Informed consent: Written informed consent for publication of the case presenation and the images was obtained from the patient.

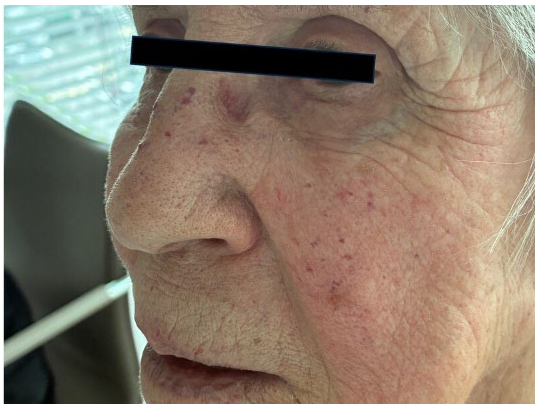


Image 1: Typical telangiectasia.

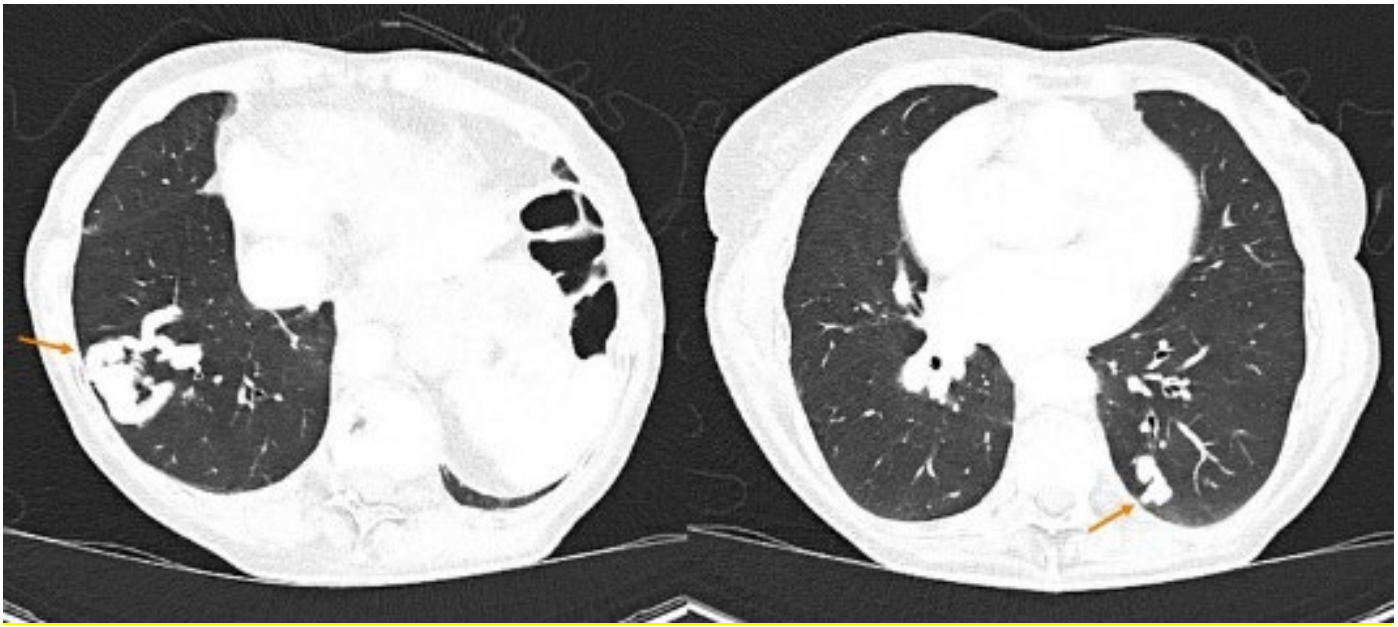


Image 2: Computed tomography of the chest. Long tubular arteriovenous malformations in both lower lobes (see arrow).

P120

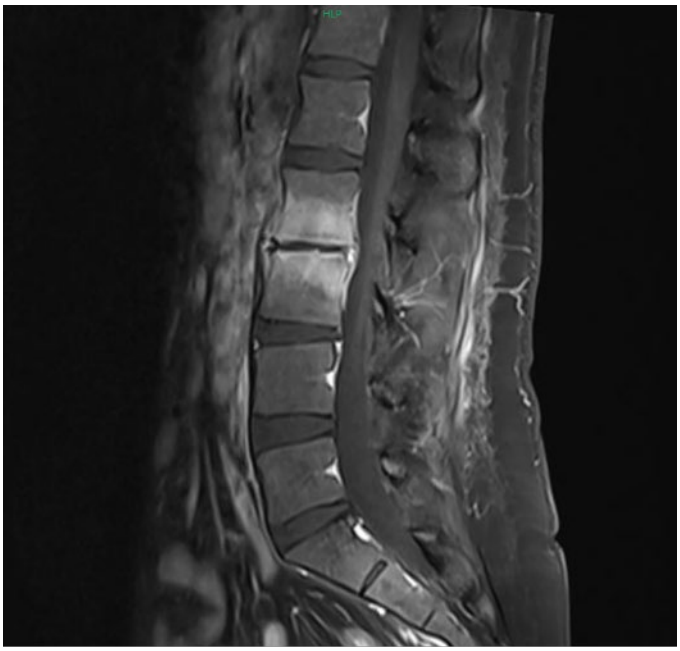
When bones inflame without infection: the rare case of adult chronic nonbacterial osteomyelitis

L. Miesgang[1], S. Ernst[1], A. Turk[1]

[1]*See-Spital Horgen, Innere Medizin, Horgen, Switzerland*

Case presentation: A 37-year-old female patient presented with persistent back pain lasting for approximately four months. Initially, she underwent infiltration therapy for suspected osteochondrosis, but the pain worsened, leading to further investigation via MRI. This scan revealed inflamed lesions in the vertebral body and surrounding soft tissue, prompting an initial diagnosis of spondylodiscitis, potentially linked to the prior infiltration. Despite the progression of inflammation observed in subsequent MRI scans, multiple diagnostic punctures failed to identify any microbial pathogens, leading to the exclusion of spondylodiscitis. Laboratory tests showed only a mild increase in white blood cell count, with no significant rise in other inflammatory markers. After exclusion of alternative diagnoses and in the absence of additional clinical features characteristic of SAPHO (Synovitis, Acne, Pustulosis, Hyperostosis, Osteitis) syndrome, chronic nonbacterial osteomyelitis (CNO) was considered the most likely diagnosis. The patient was treated with a TNF inhibitor and reported a rapid improvement within just four weeks of the first dose. Unfortunately, she was lost to follow-up thereafter.

Clinical implications: CNO is a rare autoinflammatory bone disorder in adults, characterized by sterile osteitis with sclerosis and hyperostosis. Diagnosis is one of exclusion, based on chronic relapsing bone pain and characteristic imaging findings after ruling out malignancy, infection, axial spondyloarthritis and hypophosphatasia. Expert consensus recommends MRI or CT with nuclear imaging for initial evaluation, with whole-body imaging for diagnostic and prognostic purposes.The 2025 EULAR/ACR pediatric CNO criteria demonstrate high sensitivity (82%) and specificity (98%) and may provide a framework for standardized classification in adults. The relationship with SAPHO syndrome remains debated, with many experts considering it an adult CNO phenotype with dermatologic manifestations. Management follows a stepwise approach, with NSAIDs or COX-2 inhibitors as first-line therapy and intravenous bisphosphonates or TNF-α inhibitors as second-line options. Recent international consensus recommendations aim to standardize diagnosis and management and support evidence-based care in adults with CNO.



P121

Neurologic crisis or nutritional emergency: a case of severe anorexia nervosa

J. Nehring[1], T. Weidmann-Hügle[2], A. Gross[3], C. Probst[4], S. Schär[1], H. Tkachenko[1], A. Spinner[1], E. Cocco[5], E. Potluková[1]

[1]Kantonsspital Baselland Liestal, Universitäres Zentrum Innere Medizin, Liestal, Switzerland, [2]Kantonsspital Baselland Liestal, Klinische Ethik, Liestal, Switzerland, [3]Psychiatrie Baselland Liestal, Ambulanz für Essstörungen, Liestal, Switzerland, [4]Kantonsspital Baselland Liestal, Anästhesie und Intensivmedizin, Liestal, Switzerland, [5]Kantonsspital Baselland, Ernährungsberatung, Liestal, Switzerland

Case presentation: A 45-year-old man was transferred from an acute-care hospital with hypoglycemia (2.0 mmol/L), hypothermia (nadir 32°C), and a neuropsychiatric syndrome. Over 10 days, he developed gait ataxia, hyperreflexia, increased tone, dysarthria, and oculomotor dysfunction with impaired saccades, together with perseveration and short-term memory impairment. Alertness dropped during hypoglycemia (Glasgow Coma Scale (GCS) 11). Pancytopenia was present. Computed tomography angiography, brain magnetic resonance imaging, and cerebrospinal fluid analysis were nondiagnostic. He developed acute urinary retention. On admission, bedside findings were striking: height 197 cm, weight 55 kg (body mass index (BMI) 14.2 kg/m²) and hypothermia to 34°C. He was disoriented (GCS 14), psychomotorically slowed, and uncooperative with intermittent physical aggression. Examination showed increased muscle tone without focal motor or sensory deficits. Due to impaired judgment with imminent self-harm risk, involuntary admission and intensive care monitoring were required. Chest imaging showed bilateral pneumonia, suspected aspiration related to reduced alertness. No pathogen was identified. Although a primary neurologic disorder was initially suspected, we prioritized a starvation-related etiology and started nasogastric tube feeding with parenteral thiamine and refeeding monitoring with phosphate, potassium, and magnesium supplementation. Neurologic and behavioral abnormalities resolved within six days of starting enteral feeding. After discontinuation, severe hypoglycemia recurred (nadir 1.4 mmol/L), worsened by low intake and a marked drive to exercise. Tube feeding was restarted, and glucose levels stabilized. Psychiatric assessment confirmed severe restrictive anorexia nervosa. A prior diagnosis (January 2021) and inpatient psychosomatic treatment were documented, yet starvation was not initially considered the primary driver. He was enrolled in our interprofessional eating-disorder treatment program and BMI increased to 15.8 kg/m² within four weeks.

Clinical implications: In profoundly underweight patients, starvation-related disease should remain high on the differential even when neurologic signs are dramatic. Early somatic stabilization with structured refeeding, including parenteral thiamine and electrolyte monitoring, and activity limitation can be decisive. Management is optimized through an interprofessional program involving general internal medicine, specialized psychiatry, nursing, and dietetics.

P122

The missing connection: a rare case of sporadic Burkitt lymphoma in an elderly hepatitis B and C positive Caucasian woman

L. Portmann[1], A. Knoll[1], A. Asoyan[1]

[1]Klinik St. Anna, Klinik für Innere Medizin und Nephrologie, Luzern, Switzerland

Case presentation: A 76-year old female refugee from Ukraine presented to our emergency department with progressive fatigue, vertigo and melaena. She was hemodynamically stable but anaemic (haemoglobin of 76g/l). While sonographic examination revealed right-sided obstructive uropathy, abdominal computed tomography confirmed a large tumour mass of the right kidney, retroperitoneal lymphadenopathy, multiple peribronchial as well as solitary pleural, hepatic, and peritoneal lesions, and a thickening of the small intestinal wall suspicious for lymphoma. The patient required several blood transfusions owing to active bleeding of the proximal small intestine, classified as Forrest III haemorrhage originating from a duodenal ulcer. Histopathological examinations of a renal and a duodenal ulcer biopsy demonstrated infiltration by a Burkitt lymphoma. Viral screening revealed a chronic hepatitis C and an occult hepatitis B infection. Following prophylaxis with tenofovirala-fenamid against Hepatitis B reactivation, our patient underwent dose-adjusted chemotherapy for aggressive lymphoma. Treatment of hepatitis C with direct-acting antiviral agents was postponed until after treatment of the hematological disease.

Clinical implications: The Burkitt lymphoma is a highly aggressive Non-Hodgkin-Lymphoma (1). Its annually incidence in Europe is roughly 5 per 1 million inhabitants (2). Burkitt lymphoma occurs endemically around the equator, prevalently in EBV-positive children and in association with malaria (1). Most cases in the northern hemisphere occur in middle-aged population under immunosuppression (either drug-induced after organ transplantation or in autoimmune diseases, or HIV-associated). Here, we report a rare case of Burkitt lymphoma in an elderly Caucasian woman without immunosuppression and with no evidence of HIV or EBV infection. To date, an epidemiological study from the US has shown a significant increase of Burkitt lymphoma in older individuals with hepatitis C infection (3). While B-cell lymphomas, particularly diffuse large B-cell lymphoma, have been associated to hepatitis B infection, no such association has been establishes for Burkitt lymphoma (4).

P123

When sepsis is not sepsis: TAFRO syndrome as a cause of multisystem failure

A. Reichert[1], B. Helmchen[2], F. Vallelian[1]

[1]*Universitätsspital Zürich, Medizinische Poliklinik, Zürich, Switzerland,* [2]*Universitätsspital Zürich, Pathologie & Molekularpathologie, Zürich, Switzerland*

Case presentation: A 27-year-old, female patient was admitted with severe systemic inflammatory response syndrome (SIRS), diarrhea pleural effusions, normochromic anemia, and renal insufficiency. Despite extensive microbiological, immunological and radiological testing, no infectious focus, malignancy or autoimmune disease was found. Upon readmission for recurrent febrile pancytopenia, progressive renal dysfunction, and generalized anasarca, FDG-PET-CT revealed generalized lymphadenopathy. Bone marrow biopsy revealed mild reticulin fiber proliferation. Lymph node biopsy showed lymphoplasmacytic proliferation, while renal biopsy demonstrated glomerular thrombotic microangiopathy with a membranoproliferative pattern of injury. This combination of findings supported the diagnosis of TAFRO syndrome (thrombocytopenia, anasarca, fever, reticulin fibrosis, organomegaly), a rare and life-threatening variant of multicentric Castleman disease characterized by systemic inflammation and multiorgan dysfunction. High-dose methylprednisolone pulse therapy (250 mg/day) was initiated alongside empirical cefepime with gradual hematologic recovery and renal improvement. The clinical course was complicated by a post-biopsy retroperitoneal hematoma with Page kidney phenomenon and stress-induced cardiomyopathy (Takotsubo syndrome), both resolving with conservative management. Following interdisciplinary review, IL-6–targeted therapy with siltuximab was initated, resulting in marked clinical and biochemical improvement, stabilization of organ function, and sustained remission.

Clinical implications: This case highlights the diagnostic challenges of TAFRO syndrome in general internal medicine. In patients with sepsis-like presentations, cytopenias, capillary leak, lymphadenopathy, and acute kidney injury, consideration of TAFRO syndrome is essential to enable timely initiation of targeted IL-6 blockade.

P124

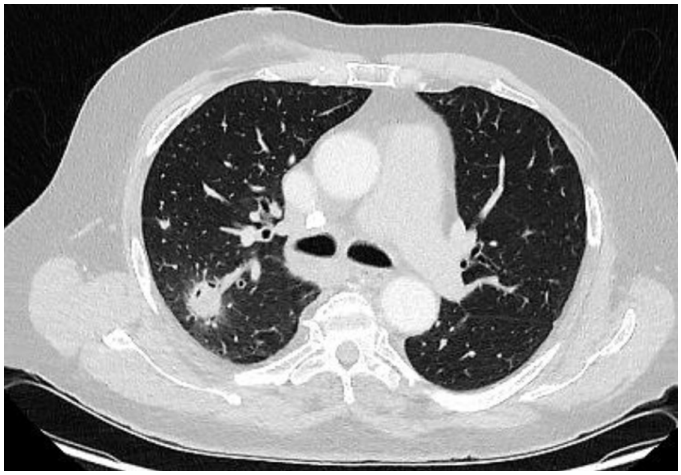
Pulmonary tularemia mimicking lung cancer

M. Reichert[1], E. Weber[1], S. Höller[2], D. Gruber[3]

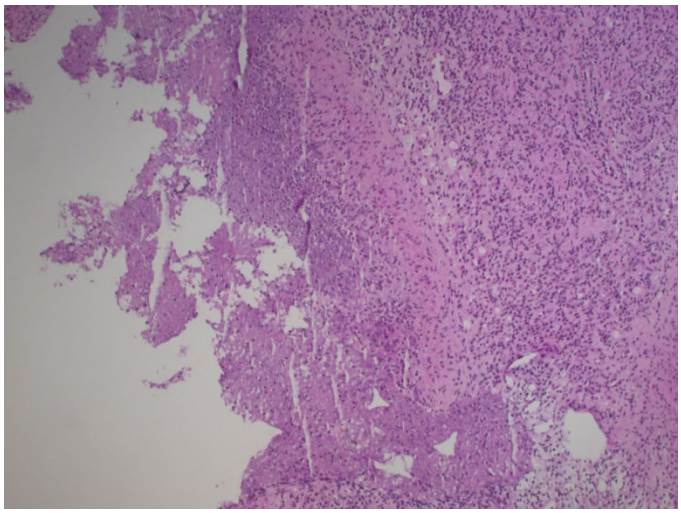
[1]*Stadtspital Zürich, Klinik für Innere Medizin, Standort Waid, Zürich, Switzerland,* [2]*Stadtspital Zürich, Institut für klinische Pathologie, Zürich, Switzerland,* [3]*Stadtspital Zürich, Abteilung für Pneumologie, Zürich, Switzerland*

Case presentation: An 84-year-old male patient presented to our emergency department (ED) with worsening symptoms of pneumonia (cough, fever, malaise) while receiving antibiotic therapy. The symptoms had started 10 days prior to his presentation at our clinic. His General Physician put him on antibiotics without symptoms improving. Despite escalation of the therapy the patient's condition worsened while inflammatory markers remained high. At the time of presentation at our ED, the CT scan of the thorax showed a high suspicion of lung cancer with a pulmonary nodule in the right upper lobe with ipsilateral hilar and mediastinal lymph node enlargement. The PET/CT scan indicated high FDG-uptake in the above-mentioned lesions, consistent with lung cancer. Surprisingly the biopsies of the affected lymph nodes showed no evidence of malignancy. One week later renewed biopsies of the enlarged lymph nodes and additional biopsies of the lesion in the right upper lobe were scheduled. These biopsies again showed no malignant cells but now contained necrotising granulomas on a background of silico-anthracotic lymph node parenchyma upon which additional testing was performed. While tuberculosis could be excluded with PCR and negative acid-fast stains, PCR for Francisella tularensis was positive. Complementary serologic testing showed high IgG und IgM antibody titers for Francisella tularensis. By this time the patient's condition had already improved spontaneously. Nonetheless antibiotic treatment with Doxycyclin was initiated because of the risk of disease relapse. The patient was possibly infected a few days prior to his first symptoms, when visiting a woodland tavern, which kept pet rabbits.

Clinical implications: Tularemia is caused by the gram-negative bacteria Francisella tularensis and is seeing rising numbers in Europe due to higher awareness of the disease and more readily available invasive testing. Pulmonary tularemia can cause symptoms of pneumonia but is also known to mimic lung cancer as demonstrated in this case. Negative biopsies in suspected lung cancer should prompt further diagnostics, especially if necrotic tissue is found. The most relevant infectious agents in this setting are tularemia and tuberculosis.



Pulmonary lesion in the right upper lobe



Cryobiopsy of subcarinal mediastinal lymph node with necrotic debris surrounded by granulomatous reaction

P125

When nutrition gets under the skin: a modern case of scurvy

S. Bender[1], C. Richter[2,1], L. Lenherr Ramos[2,1], S. Nobbe[2,1], A. Kistler[1]

[1]Kantonsspital Frauenfeld, Klinik für Innere Medizin, Frauenfeld, Switzerland, [2]Kantonsspital Frauenfeld, Dermatologie, Frauenfeld, Switzerland

Case presentation: A 43-year-old underweight woman presented to the emergency department with large, variably aged hematomas on both legs, diffuse ecchymoses, petechiae, and profound weakness progressing to functional bed confinement, as well as an extension deficit of the left knee. Additional findings included gingivitis with gingival recession and intermittent febrile episodes. Laboratory evaluation revealed bicytopenia (anaemia and leukopenia with normal platelet count), hypoalbuminemia, and elevated inflammatory markers.Due to the presence of petechiae, the patient's general practitioner had previously planned further haematological and immunological work-up to exclude coagulopathy or vasculitis.

Dermatological examination, however, demonstrated characteristic perifollicular haemorrhages and corkscrew hairs on dermoscopy, raising suspicion of severe vitamin C deficiency. Skin biopsy showed perifollicular erythrocyte extravasation, mucin deposition, and a lymphohistiocytic infiltrate, supporting the clinical diagnosis of scurvy. Laboratory testing confirmed a severe vitamin C deficiency along with multiple additional vitamin and mineral deficiencies.

The patient reported a long-standing history of extremely restrictive eating behavior due to pronounced gastrointestinal intolerances, for which no underlying cause had been identified despite extensive investigations. Treatment was initiated in an interdisciplinary setting and included high-dose supplementation of vitamin C, vitamin D3, vitamin B12, folic acid, and iron, along with gradual nutritional rehabilitation.

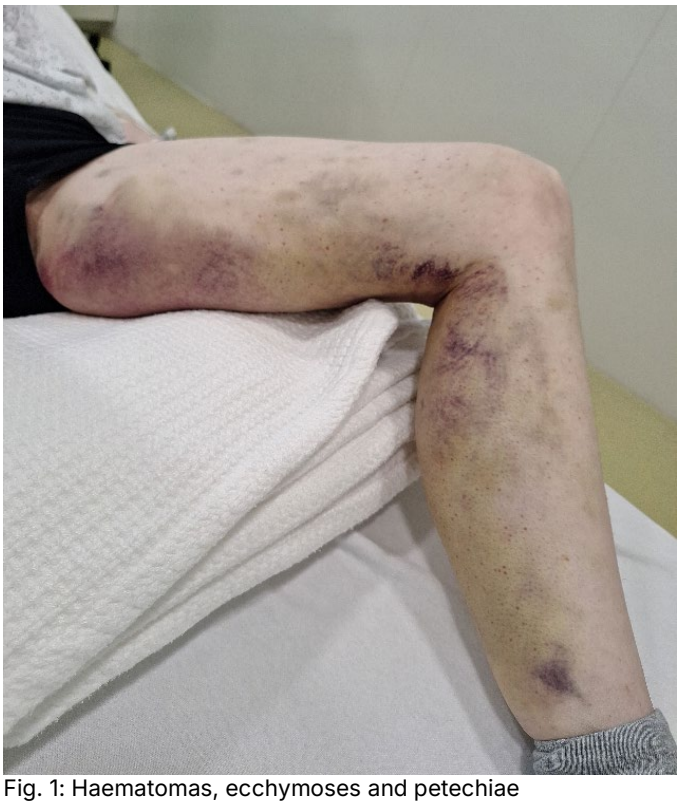


Fig. 1: Haematomas, ecchymoses and petechiae

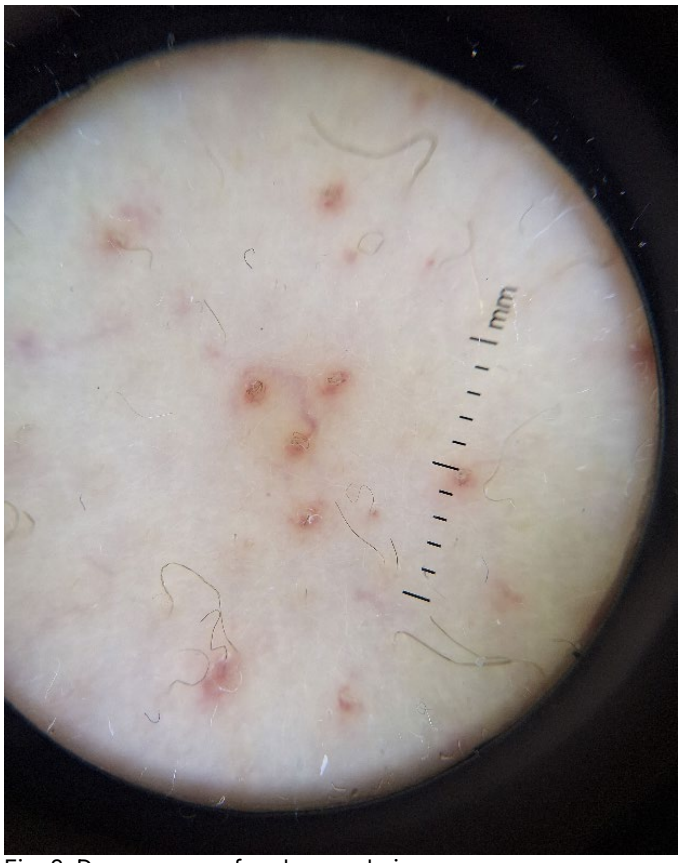


Fig. 2: Dermoscopy of corkscrew hairs

Clinical implications: This case highlights the relevance of a thorough nutritional history and careful physical examination in General Internal Medicine. Scurvy has become very rare in industrialized countries but still occurs today in patients with severely restrictive dietary habits and may lead to multisystem manifestations. Severe vitamin C deficiency impairs collagen synthesis, resulting in marked vascular fragility and clinically impressive, extensive hematomas. It should thus be considered in the differential diagnosis of unexplained bleeding tendency in the presence of normal platelet count and function and normal coagulation parameters. Early recognition is crucial, as treatment is simple, effective, and rapidly leads to clinical improvement.

P126

From erectile dysfunction to POEMS syndrome: a diagnostic odyssey

H. Röder[1], M. Bertschinger[2], A. Schmid[3], C. Keller[1], E. Pappa[1]

[1]Kantonsspital Winterthur, Fachbereich Endokrinologie und Diabetologie, Winterthur, Switzerland, [2]Kantonsspital Winterthur, Klinik für Medizinische Onkologie und Hämatologie, Winterthur, Switzerland, [3]Kantonsspital Winterthur, Infektiologie & Spitalhygiene, Zentrum für Allgemeine Innere Medizin, Winterthur, Switzerland

Case presentation: POEMS syndrome is a rare paraneoplastic disorder characterised by multisystem involvement. The acronym stands for polyneuropathy, organomegaly, endocrinopathy, monoclonal plasma cell disorder, and skin changes. Due to its heterogeneous presentation, diagnosis is often delayed and, particularly in early stages, the disorder can be misdiagnosed. We describe a case of a 56-year-old male patient, that initially consulted a urologist due to loss of libido and erectile dysfunction, and was subsequently referred for further evaluation to our outpatient clinic due to hypothyroidism, fatigue, and peripheral edema. His medical history included chronic HIV infection,

prediabetes and overweight. The patient reported a 12 kg unintentional weight loss, erectile dysfunction, fatigue, muscle weakness, and sensory disturbances of the feet. Clinical examination revealed hyperpigmentation, nail changes, hypertrichosis, peripheral edema, and distal sensorimotor polyneuropathy of the lower extremities. Endocrinological evaluation demonstrated primary hypothyroidism and hypergonadotropic hypogonadism. Infectious disease consultation confirmed a chronic, well-controlled HIV infection. Given the presence of multisystem clinical signs and symptoms, a FDG-PET/CT scan was performed to investigate potential underlying causes, which showed a solitary osteolytic lesion of the left parasymphyseal pubic bone. Further laboratory tests revealed a mild anemia, thrombocytosis, while serum and urine protein analyses demonstrated a lambda-restricted monoclonal protein and amarkedly elevated VEGF. Bone marrow aspiration and biopsy showed megakaryocytic hyperplasia with low-grade infiltration of atypical monoclonal plasma cells. CT-guided biopsy of the osteolytic lesion revealed infiltration by lambda-restricted clonal plasma cells. Furthermore, the radiographic imaging featured retroperitoneal lymphadenopathy and hepatosplenomegaly. Thus, the diagnostic criteria for POEMS syndrome were met. A plasma-cell directed therapy with daratumumab, lenalidomide and dexamethasone (Dara-Rd) was initiated and a radiotherapy of the single osteolysis was performed. Clinical and laboratory finding improved dramatically.

Clinical implications: This case highlights the importance of interdisciplinary collaboration in rare diseases, such as POEMS syndrome. Early recognition of the underlying cause of a multisystem disease can reduce diagnostic delay and significantly improve patient outcomes.

P127

When you hear hoofbeats...horses, zebras and unicorns

K. Schmidt[1], T. Öttl[1]

[1]Gesundheitszentrum Fricktal, Spital Rheinfelden, Medizin, Rheinfelden, Switzerland

Case presentation: A 57 year-old asian patient was brought to our ER with worsening of general condition and weight loss, complaining about emesis, cough and night sweats. Pre-existing conditions were a psoriasis arthritis, CKD, pancytopenia, asthma and DM II, she was on immunosuppressants. Lab work showed an inflammatory constellation, a CT Scan showed mediastinal lymphadenopathy and multiple hypodense spleen lesions. After a spleen puncture we started antibiotics after consultation of our infectious disease-collegues of the Kantonsspital Aarau (KSA). The histopathological analysis showed necrotic tissue. A vascular, infectious or malignant origin could neither be ruled out nor confirmed. It was not possible to cultivate a pathogen. Further lab work showed an elevated ß2 microglobulin. Serologies and cultures for multiple pathogens remained negative. A second spleen puncture again showed extensive necrosis, suggesting an infection. Because of worsening condition and rising inflammatory markers, we transfered the patient to the KSA. Here, a PET-Scan was suggestive of lymphoma. A BAL and a needle biopsy of the mediastinal lymph nodes showed no evidence of malignant lymphatic cells but extensive necrosis, rather suggesting infection. The clinical condition worsened, culminating in an IHAC, caused by inflammation with cardiogenic and septic shock. ROSC was established after 25 minutes and the patient was transferred to the ICU. Finally, in a mediastinoscopy, a lymph node biopsy was conducted. The analysis of the whole lymph node showed “necrotizing granulomatous lymphadenitis” consistent with Kikuchi-Fujimoto disease, a very rare systemic disease characterized by subacute, necrotizing, lymphadenopathy with tenderness, often accompanied by fever, night sweats, myalgia, leukopenia, and anemia. It is a mostly self-limiting benign disease that does often not require treatment. Possible treatment is mostly symptomatic and includes NSAIDs, in severe cases steroids. In our patient, steroid treatment was started and she showed a steady improvement of her condition. Eventually able to return home, she was withdrawn from steroids in outpatient care.

Clinical implications: Dr. Woodward was right when he said: “When you hear hoofbeats behind you, don’t expect to see a zebra”. Nonetheless, (very) rare diseases exist. So sometimes, when you hear hoofbeats, it is a zebra or even a unicorn. This case reminds us to gradually increase the scope and complexity of diagnostics while using limited resources rationally.

P128

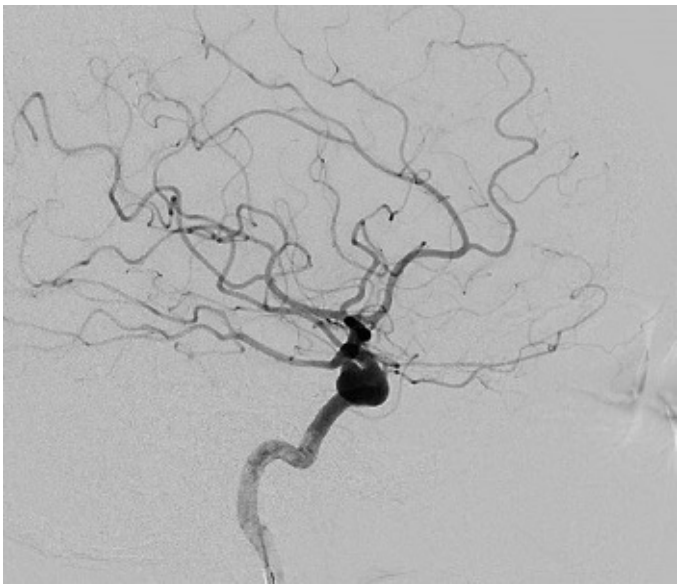
Under pressure: two cerebral aneurysms causing trouble to the pituitary

L.T. Schraml[1], F. Von Bredow[2], R. Felser[1], T. Züger[3]

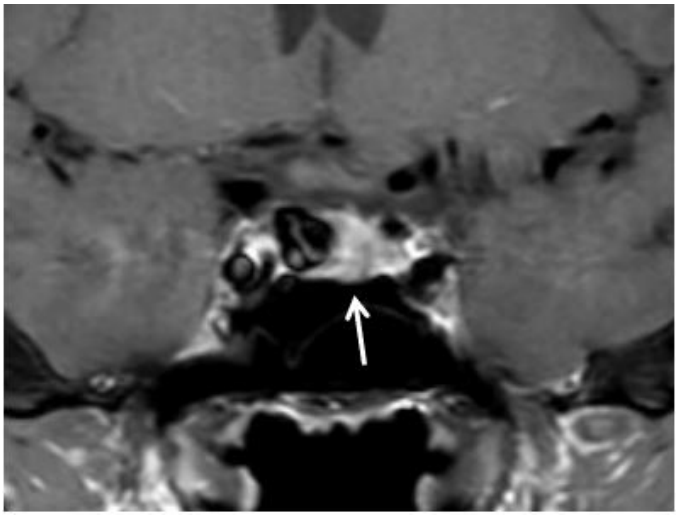
[1]Kantonsspital Olten, Innere Medizin, Olten, Switzerland, [2]Kantonsspital Olten, Neuroradiologie, Olten, Switzerland, [3]Kantonsspital Olten, Endokrinologie, Olten, Switzerland

Case presentation: A 60-year-old woman presented to the emergency department due to disabling fatigue for at least two weeks. On admission, vital signs were normal as well as physical findings except for hypovolemic fluid balance. Laboratory findings showed mild hypoosmolar hyponatremia (sodium 128 mmol/l). Random cortisol was 7 nmol/l, adrenocorticotropic hormone (ACTH) levels were suppressed. Additionally, transient somatotropic and partial gonadotropic insufficiency were observed. Thyreotropic axis and antidiuretic hormone (ADH) secretion were intact. Prolactin level was 2-3 times above the upper normal range. After intravenous administration of 100 mg hydrocortisone the patient's condition improved rapidly, all symptoms regressed completely under oral medication with hydrocortisone 30 mg per day. Retrospective assessment of a patient's cerebral MRI, performed few months prior to hospital admission, showed a mass in the pituitary fossa with contact to the internal carotid artery (ICA). Therefore, additional imaging with pituitary MRI as well as computed tomography angiography (CTA) and digital subtraction angiography (DSA) was performed - showcasing one 10.6 mm intrasellar aneurysm originating from the right ICA as well as one 6 mm intrasellar aneurysm originating from the left ICA, compressing the pituitary from both sides. Following interdisciplinary board decision at University Hospital Basel, minimally invasive treatment of the bigger aneurysm with a flow diverter is being planned.

Clinical implications: Patients presenting with insidiously progressive symptoms such as fatigue, nausea or orthostatic dysfunction should be evaluated for possible adrenal insufficiency. Initial screening includes measurement of morning serum cortisol levels and, depending on the clinical context, assessment of ACTH followed by dynamic testing as indicated. In the absence of an identifiable cause in the patient's medical history (e.g. steroid use), secondary adrenal insufficiency should prompt consideration of a compressive sellar or parasellar mass lesion, warranting cerebral imaging. While pituitary adenomas represent the most common etiology, this case illustrates that rare compressive processes may also result in hypopituitarism, including secondary adrenal insufficiency and moderate hyperprolactinemia caused by pituitary stalk compression (stalk-effect).



DSA showing a 10.6 mm intrasellar aneurysm originating from the right ICA.



Compression of the pituitary (arrow) from both sides is visible in coronal MRI.

P129

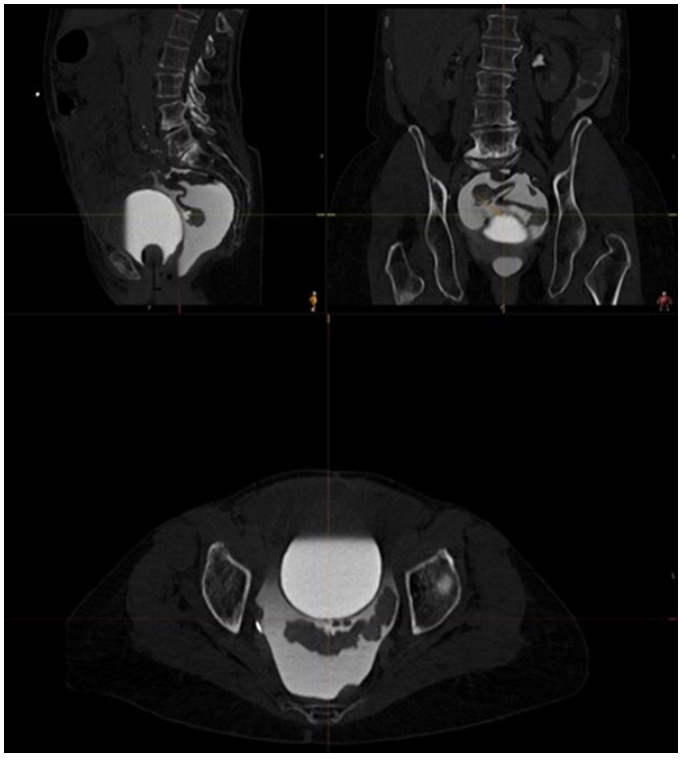
Urinary ascites mimicking renal failure: a diagnostic odyssey in a post-radiation patient

B. Schreiber[1], N. Hosek[2], S. Burgener[1]

[1]Kantonsspital Graubünden, Innere Medizin, Chur, Switzerland, [2]Kantonsspital Graubünden, Nephrologie, Chur, Switzerland

Case presentation: A female in her sixties presented with recurrent severe abdominal pain for over 18 months, which has led to multiple hospitalizations and exploratory surgeries in different hospitals before. She reported a history of voiding difficulty and the need to use manual suprapubic compressions. Her medical history was significant for Wertheim-Meigs hysterectomy and pelvic radiation for cervical cancer 23 years prior. CT angiography revealed 4-quadrant ascites and edematous thickening of the small bowel. Serum creatinine was elevated, rising up to 193 µmol/L during admission. Cystatin c was within the normal range at 0.84 mg/L. An ascitic fluid puncture yielded yellow fluid with a high serum-ascites albumin gradient of 2.7 g/dL. The ascites creatinine level was 725 µmol/L with an ascites-to-serum creatinine ratio of 3.76**.** A CT cystogram demonstrated contrast extravasation from the posterior bladder wall into the peritoneum. The patient was diagnosed with recurrent spontaneous rupture of the urinary bladder (SRUB) secondary to chronic radiation cystitis and bladder overdistension by neurogenic bladder dysfunction. A conservative management strategy was selected and a transurethral catheter resulted in the rapid resolution of abdominal pain and normalization of serum creatinine within 24 hours.

Clinical implications: *Pseudo-Renal Failure:* In urinary ascites the solutes move down their concentration gradient from the peritoneal fluid back into the systemic circulation. Therefore, serum creatinine rises rapidly followed by a dramatic correction once the bladder is drained, confirming the functional integrity of the kidneys. Cystatin c is freely filtered at the glomerulus and subsequently reabsorbed and metabolized in the proximal tubule. Additionally, cystatin c has a low peritoneal diffusion capacity. Hence urinary ascites does not lead to a rise in cystatin c, which can help differentiate pseudo- from true renal failure. – *Analyzes of Ascites:* The serum-ascites albumin gradient plays a crucial role in differentiating ascites. Reflecting the low albumin content of urine, a high SAAG is, besides portal hypertension, also typical for uroperitoneum. Nevertheless, the key finding in the diagnosis is the ascites-to-serum creatinine ratio. – *Conclusion:* Spontaneous rupture of the urinary bladder (SRUB) is an important differential diagnosis in patients with acute abdomen, ascites and elevated serum creatinine, especially following a history of pelvic radiation.



P130

Secondary hemophagocytic lymphohistiocytosis with competing triggers: a diagnostic race against time

L. Selberg[1]

[1]*Spital Bülach, Department of Internal Medicine, Bülach, Switzerland*

Case presentation: A 69-year-old male was admitted due to persistent fever, dry cough, and dyspnea. The patient exhibited sinus tachycardia (130 bpm), persistent fever (38.3°C) despite antipyretics, and CT imaging revealed new bilateral, lobulated ground-glass opacities with early consolidation and pleural effusions, all together radiologic suspected for *Pneumocystis jirovecii* pneumonia (Figure 1) and was transferred to general ward with oxygen therapy and empirically antibiotics. His medical history included a well-controlled B-cell chronic lymphocytic leukemia (B-CLL), which was diagnosed in 2015 and treated during winter with IVIG. Laboratory values are summarized in Table 1. There were no blasts in the peripheral blood smear. Bone marrow biopsy showed subtotal infiltration by clonal B-lymphocytes with trilinear displacement, without significant hemophagocytosis or Richter transformation. Shortly after admission, he developed acute respiratory failure, requiring ICU transfer. Hemophagocytic lymphohistiocytosis (HLH) progression was diagnosed on second day of hospitalization based on six of eight HLH-2004 criteria: fever, splenomegaly, cytopenia, hypertriglyceridemia/hypofibrinogenemia, hyperferritinemia, and elevated soluble IL-2 receptor (sCD25). Despite intensive measures including intubation, renal replacement therapy, blood product transfusions, antimicrobial escalation, IVIG, and high-dose steroids, the patient rapidly progressed to multiorgan failure and died within hours.

Clinical implications: Early identification of hemophagocytic lymphohistiocytosis, regardless of its underlying trigger, is essential to prevent rapidly clinical decline. Fatal outcomes, as in this case, must be actively prevented through early diagnostic and targeted treatment.This case highlights the diagnostic and therapeutic challenges of secondary HLH with unclear trigger. Etiology could be infections, autoimmune diseases, malignancies, or immunotherapy. In this patient, both progressive B-CLL and possible *Pneumocystis* pneumonia were possible triggers. Therapeutic strategies differ: malignancy-associated HLH needs etoposide, while infection-triggered HLH requires treatment of the underlying infection and supportive care. Despite fast diagnosis, critical conditions precluded emergency transfer to a HLH-referral center. This underscores the urgent need for early recognition and initiation of HLH-specific therapy, particularly in non-specialized centers as in this case. Time-critical decisions may alter outcomes.

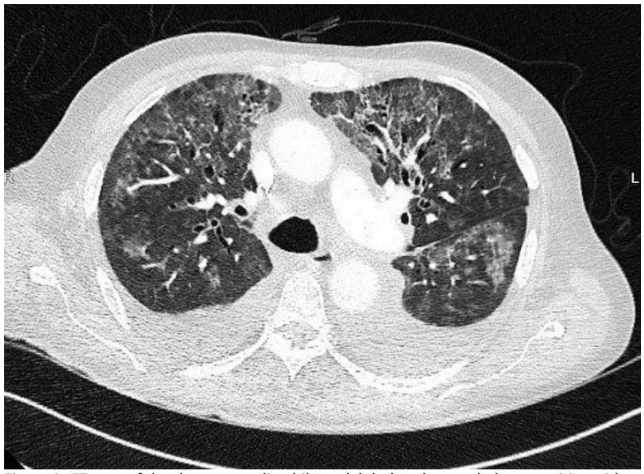


Figure 1: CT-scan of the thorax revealing bilateral, lobulated ground-glass opacities with early consolidation and pleural effusions

	Reference Range	21.- 24. June 2024
Hemoglobin (g/dl)	12 - 16	**6,9**
Erythrocytes (T/L)	4,6 - 6,2	3,8
Platelets (G/L)	150 - 350	**34**
Leukocytes (G/L)	4,5 - 10,5	29,0
CRP (mg/l)	< 10	**156**
Serum creatinine (µmol/l)	46 - 92	188
Total bilirubin (µmol/l)	< 22	35,8
ASAT (U/l)	< 36	1.120
ALAT (U/l)	< 35	353
GGT (U/l)	12 - 43	87
ALP (U/l)	< 115	237
LDH (U/l)	120 - 246	563
Fibrinogen (mg/dl)	220 - 496	**89**
Ferritin (µg/l)	18 - 464	**30.400**
Triglycerides (mmol/l)	< 1,7	**7,0**
Soluble IL-2 Receptor (CD25) (U/ml)	< 2.400	**33.648**

Table 1: Summary of laboratory findings

P131

Induced hepatitis and immune thrombocytopenia in a healthy traveler: a lesson in diagnostics

L. Selberg[1]

[1]*Spital Bülach, Department of Internal Medicine, Bülach, Switzerland*

Case presentation: A 27-year-old, previously healthy flight attendant presented with fever (up to 39.9°C), bilateral headache, and dark urine. She had no respiratory, gastrointestinal, or urinary symptoms apart from the changes in urine-color. She was in reduced general condition with normal vital signs besides a sinus tachycardia (115/bpm). Initial laboratory findings showed mild pancytopenia (platelets 79 G/L, WBC 3.3 G/L, Hb 11.5 g/dL), and elevated CRP (159 mg/L). She was discharged with suspected viral infection and antipyretics and rest. Two days later, she returned exhibiting ongoing fever, chills, and general weakness. Laboratory findings showed worsening thrombocytopenia (25 G/L), hepatitic transaminase elevation, LDH (875 U/L), and bilirubinuria (Table 1). Due to recent work-related travel to South America and Tanzania, extensive infectious screening was performed. She never knowingly had Dengue or Malaria, HIV and HCV/HBV/HEV/HAV were excluded. Dengue IgG was positive, while IgM and NS1 were negative. Epstein-Barr virus (EBV) serology was consistent with past infection. Cytomegalovirus (CMV) IgM and IgG were positive; low IgG avidity (0.09) and detectable CMV PCR (116 IU/mL) confirmed a primary CMV infection. The patient was not treated with antivirals as symptoms and lab abnormalities improved during the following short hospital stay.

Clinical implications: Identify cytomegalovirus as a potential cause of hepatitis-like lab abnormalities in immunocompetent individuals. It should be noted that CMV can lead to severe secondary immune thrombocytopenia (ITP) as well as triggering overlapping serologies of other viral infections (EBV, dengue). This case illustrates a rare, notable symptomatic primary CMV infection in an immunocompetent adult, presenting with fever, hepatitis-like lab changes, and severe thrombocytopenia. While typically asymptomatic in immunocompetent patients, CMV can lead to significant systemic responses, including ITP. Cross-reactivity in viral serology (e.g. EBV, dengue) complicates interpretation, especially with polyclonal IgM responses in herpesvirus infections. Accurate diagnosis requires a combination of serology, IgG avidity testing, and PCR for CMV, serology and EBNA-1 IgG for EBV, and serology and NS1 Ag for Dengue. CMV should be considered in febrile patients with liver enzyme ele-

vation and thrombocytopenia, even without immunosuppression. Prompt diagnosis avoids unnecessary invasive procedures and warrants appropriate management.

	Reference Range	27.07.23	29.07.23
Leukocytes (G/L)	4.5 - 10.5	3.3	3.5
Lymphocyte fraction (%)	25 - 50	58	62
Hemoglobin (g/dl)	12 - 16	11.5	11.8
Platelets (G/L)	150 - 350	79	25
CRP (mg/l)	< 10	159	258
Serum creatinine (µmol/l)	46 - 92	50	67
Total bilirubin (µmol/l)	< 22		18.8
ASAT (U/l)	< 36		138
ALAT (U/l)	< 35		155
GGT (U/l)	12 - 43		120
ALP (U/l)	< 115		217
LDH (U/l)	120 - 246		875
Lipase (U/l)	< 300		35
PCT (ng/ml)	< 0.5		0.5
Extended Laboratory Testing			
Dengue rapid test IgG	negative		positive (reactive)
Dengue rapid test IgM	negative		negative
Dengue rapid test NS1 antigen	negative		negative
CMV IgG avidity (%)	< 15		9
CMV IgG (kU/L)	< 12		47
CMV IgM	negative		positive
CMV PCR quantitative (IU/mL)	< 34.5		116
EBV VCA IgG	negative		positive
EBV VCA IgM	negative		weakly positive
EBV EBNA-1 IgG	negative		positive

Table 1: Laboratory data during hospital stay

P132

When EBV turns warm: a rare case of severe warm-type AIHA in a young adult

L. Selberg[1]

[1]*HOCH St. Gallen, Department of Internal Medicine, St. Gallen, Switzerland*

Case presentation: In January 2025, a previously healthy 25-year-old male presented at our emergency department with recurrent syncope. He had been diagnosed three weeks earlier with acute Epstein-Barr virus (EBV) infection, confirmed serologically and managed symptomatically. Over time, clinical and laboratory parameters initially improved but several atraumatic syncopal episodes occurred. In the emergency department, the patient was tachycardic (110 bpm, sinus rhythm), normotensive, and afebrile. Laboratory analysis showed severe anemia (Hb 43 g/L), elevated LDH and bilirubin, as well as undetectable haptoglobin, a constellation typical for hemolysis (Table 1). Accompanying laboratory findings showed elevated liver enzymes with normal leukocytes, platelets and slightly elevated CRP, imaging revealed marked splenomegaly (20 cm). EBV serology showed VCA IgM and IgG positivity with negative EBNA-1 IgG, suggesting primary EBV infection. Parvovirus B19 and substrate deficiency could be excluded. Direct Coombs testing was positive for IgG-type warm autoantibodies (Table 2). Surprisingly, there was no reticulocytosis despite severe anemia with a reticulocyte production index (RPI) of 0.2 raising suspicion for possible malignancy. Following bone marrow aspiration, the patient showed excessive erythropoiesis without evidence of malignancy. The patient received red cell transfusions and high-dose corticosteroids. Due to slow gain in hemoglobin, therapy was escalated with Rituximab. At the 4-month follow-up, the patient was asymptomatic with normalized hemoglobin levels.

Clinical implications: This case highlights a rare, with less than 10% of EBV-associated hemolytic anemias, but severe manifestation of EBV-induced warm autoimmune hemolytic anemia (AIHA) in an immunocompetent adult. AIHA due to cold-reactive antibodies is a known complication following infections like Epstein-Barr virus. Warm AIHA is far less common but should be considered, as this case demonstrates. Notably, a delayed reticulocyte response may obscure early marrow activity. The missing elevated reticulocyte production index was unexpected and likely illustrates a gradual marrow output. The patient was not sufficiently responsive to corticosteroids, thus requiring Rituximab and a cumulative six red cell transfusions. This shows that warm AIHA triggered by EBV can be clinically significant and potentially life-threatening even for healthy and young adults, underlining the importance of fast, correct diagnoses and targeted management.

	Reference Range	20. - 22. Jan. 2025
Leukocytes (G/L)	4.5 - 10.5	5,8
Lymphocyte fraction (%)	25 - 50	37,5
Hemoglobin (g/dl)	12 - 16	4,3
Platelets (G/L)	150 - 350	224
Reticulocytes absolute (T/L)	0,023 - 0,160	0,029
RPI		0,2
CRP (mg/l)	< 10	69
Serum creatinine (µmol/l)	46 - 92	80
Total bilirubin (µmol/l)	< 22	38
ASAT (U/l)	< 36	71
ALAT (U/l)	< 35	94
GGT (U/l)	12 -043	207
ALP (U/l)	< 115	143
LDH (U/l)	120 - 246	700
Haptoglobin (g/l)	0,3 - 2	< 0,1
Vitamin B12 (ng/l)	180 - 900	336
Folate (µg/l)	3,0 - 20	6,0
IgG serum (g/l)	6,9 - 14	11,5
IgA serum (g/l)	0,7 - 3,7	2,4
Ferritin (µg/l)	30 - 330	1003
Soluble transferrin receptor (nmol/l)	12 - 27	44,3

Table 1: Laboratory findings

Extended laboratory testing	20. - 22. Jan. 2025
Antibody screen	negative
Direct Coombs test	positive
Anti-IgG	positive
Anti-IgA	negative
Anti-IgM	negative
C3c	negative
C3d	negative
Eluat	negative
EBV VCA IgG	positive
EBV VCA IgM	positive
EBV EBNA-1 IgG	negative

Table 2: Extended laboratory testing

P133

Gastric retention of a handcrafted cocaine packet in a body packer: when gastrotomy is the only way out

J. Simon[1], L. Wolf[1], H. Wolff[2], L. Getaz[2], A. Senchyna[2]

[1]Hôpitaux-Universitaires-de-Genève, Département de Médecine, Genève, Switzerland, [2]Hôpitaux-Universitaires-de-Genève, Département de médecine communautaire et de premier recours, Genève, Switzerland

Case presentation: A 41-year-old man with a history of laparotomy and colectomy following a gunshot wound was brought to the emergency department under police escort for suspected body packing (i.e., concealment of illicit drug packets). Initial computed tomography (CT) confirmed the presence of seven drug packets: one located in the stomach, one in the small bowel, and five in the rectum. On admission, clinical examination and vital signs were normal.The patient was admitted to the hospital prison unit for close monitoring. Within 24 hours, six packets containing cocaine were spontaneously expelled. The packets were poorly handcrafted, wrapped in a limited number of layers of cellophane and party balloon latex, conferring a high risk of rupture. After three negative stools, a repeat CT scan performed on day 5 showed persistent gastric retention of the last packet. The patient subsequently developed epigastric discomfort, sweating, and abdominal fasciculations without neurological impairment; anxiety was retained after exclusion of cocaine intoxication. A third CT scan on day 7 confirmed absence of progression of the gastric packet. Given the high rupture risk, endoscopic extraction was deemed unsafe. Prompt surgical management with gastrotomy allowed safe extraction of the retained packet. Postoperative recovery was uncomplicated and the patient was discharged to prison. Follow-up gastroscopy at three months demonstrated complete mucosal healing.

Clinical implications: This case illustates the importance of careful monitoring of body packers, as rare but potentially fatal complications may occur. Although artisanal drug packets have become uncommon, they remain highly susceptible to non-progression and rupture within the gastrointestinal tract. Previous abdominal surgery may further impair transit and contribute to retention. Management of body packers requires careful individualised assessment based on packet type, number, and location, prior gastrointestinal history, and close CT-based monitoring to ensure complete evacuation. When gastric retention of a packet is confirmed, prompt surgical evaluation is warranted to allow safe extraction and prevent potentially fatal cocaine intoxication.

P134

Brucellosis as an unusual cause of shoulder pain: a case report

A.S. Spinner[1], I. Danier[2], M. Saner[3], F. Franzeck[1], E. Potluková[1]

[1]Kantonsspital Baselland, Universitäres Zentrum Innere Medizin, Liestal, Switzerland, [2]Kantonsspital Baselland, Notfallzentrum, Liestal, Switzerland, [3]Kantonsspital Baselland, Universitäre Klinik Orthopädie & Traumatologie, Liestal, Switzerland

Case presentation: A 46-year-old man presented with an allergic reaction after taking muscle relaxants for worsening right shoulder pain that had developed after surgical repair of shoulder trauma one year earlier. The pain initially improved but had recently worsened. One month prior, he had suffered from epididymitis. While clinical examination revealed no abnormalities, leukocytes and CRP were increased (13.9×10^9/L and 132 mg/L, respectively). Apart from recent travel to Kosovo, no relevant exposure history, including unpasteurized dairy products or animal contact, was identified. Given the unexplained inflammatory syndrome, blood and urine cultures were obtained, and computed tomography revealed hepatomegaly, while shoulder imaging was unremarkable. Joint aspiration resulted in a dry tap; however, cultures from the needle tip and concurrent blood cultures demonstrated slow growth of Gram-negative rods, later identified as *Brucella melitensis*. Brucellosis with shoulder arthritis and suspected preceding urogenital involvement was diagnosed, and health authorities were notified. The patient received doxycycline and rifampicin for six weeks, with adjunctive gentamicin during the first 14 days. Follow-up was favorable and included serial quantitative serological monitoring, screening of household contacts, and chemoprophylaxis for laboratory personnel with high-risk exposure.

Clinical implications: Brucellosis is among the most widespread bacterial zoonoses worldwide, endemic in parts of the Middle East, the Mediterranean, Latin America, and Africa. *Brucella melitensis*, primarily associated with sheep and goats, is the most virulent species in humans. Transmission occurs through direct animal contact, ingestion of unpasteurized dairy products, or inhalation of infectious aerosols. Although rare in Switzerland (<10 cases/year), brucellosis should be considered in patients with fever of unknown origin after travel to endemic areas or animal exposure. Lacking pathognomonic features, brucellosis represents a diagnostic challenge, with clinical courses ranging from acute to chronic and manifestations including constitutional symptoms, osteoarticular and urogenital involvement, hepatosplenomegaly, and endocarditis. Although microbiological cultures remain the diagnostic gold standard, serological testing plays a central role in the diagnosis of brucellosis, and strict biosafety measures are required. Treatment entails prolonged combination antibiotic therapy with close follow-up to monitor for relapse.

P135

Caught by the cat's claw: a suspected herb–drug interaction leading to acute dizziness and hypotension

M. Sunic[1], V. Fisi[2], C. Bourquin[3,2], F. Liechti[1]

[1]Inselspital, Bern University Hospital, Department of General Internal Medicine, Bern, Switzerland, [2]Inselspital, Bern University Hospital, Department of General Internal Medicine, Clinical Pharmacology and Toxicology, Bern, Switzerland, [3]University of Bern, Institute of Pharmacology, Bern, Switzerland

Case presentation: A 66-year-old male with metabolic syndrome presented with acute-onset dizziness upon awakening. He was receiving triple antihypertensive therapy (amlodipine, enalapril, and hydrochlorothiazide [HCT]). The night before, he consumed approximately 15 mL of Peruanian pisco liquor infused with cat's claw (*Uncaria tomentosa*). After ingestion, he had a single episode of loose stool and went to bed. Upon awakening, he developed swaying vertigo associated with nausea, emesis, and new-onset hypotension (71/47 mmHg). The symptoms were not reproduced by isolated head movements or when supine. On admission, he was normotensive and hemodynamically compensated without orthostatic hypotension. Neurologic examination was unremarkable. Laboratory results and neuroimaging were unremarkable. Due to persisting symptoms and impaired mobility, he was admitted; symptoms markedly regressed over the following day.

Clinical implications: Central or peripheral vestibular disorders, as well as orthostatic hypotension, were excluded. A possible association between observed symptoms and ingestion of cat's claw was inferred based on the limited available literature, which includes only a few human pharmacokinetic studies, making clinical relevance difficult to assess. *Uncaria tomentosa* is used for its anti-inflammatory and immunomodulatory properties. Reported adverse effects mainly include nausea, diarrhea, and nonspecific gastrointestinal symptoms. While pharmacovigilance databases show no clear signal for dizziness or

hypotension, isolated reports describe headache, dizziness, vomiting, and potential blood pressure–lowering effects, with limited supporting clinical evidence. Pharmacodynamic interactions, particularly with antihypertensives, have been proposed. Experimental data indicate that *Uncaria tomentosa* leads to increased plasma concentrations of concomitantly administered medications. In the present case, amlodipine, a major cytochrome P450 3A4 substrate, may have contributed to hypotension and dizziness, while enalapril and HCT may have been influenced by reduced transporter-mediated elimination. In a patient receiving multiple cardiovascular medications, a combination of direct effects of the herbal product, interaction-mediated augmentation of antihypertensive therapy, and individual susceptibility provides a plausible explanation for the clinical presentation. This case underscores the importance of thorough medication history-taking including herbal supplements.

P136

From muscle gain to heart pain

C. Wenker[1], D. Marono[2], E. Potlukova[1]

[1]Kantonsspital Baselland, Innere Medizin, Bruderholz, Switzerland, [2]Kantonsspital Baselland, Kardiologie, Bruderholz, Switzerland

Case presentation: A 35-year-old man presented to the emergency department with two brief episodes of palpitations, shortness of breath and anxiety, each lasting approximately two minutes. The first episode occurred the previous evening without exertion and the second the following morning after stepping out of the shower. The patient engaged in regular strength training three to four times a week and apart from 8 pack-years history was otherwise healthy. The physical examination was unremarkable. Resting electrocardiogram and continuous rhythm monitoring showed no abnormalities. High-specific troponin T level was increased to 30 ng/L, without dynamics after one and three hours. Given the unexpected troponin level, transthoracic echocardiography was performed and demonstrated anteroapical hypokinesia. A coronary computed tomography angiography revealed a high-grade proximal stenosis of the left anterior descending artery (LAD). During invasive coronary angiography, a stent was implanted into the 75–80% stenosis of the proximal LAD. Postinterventionally, transient ST-segment elevations occurred. Repeated echocardiography showed complete resolution of the wall motion abnormalities. A detailed medical history revealed regular intake of branched-chain amino acid (BCAA) supplements, which have been associated with an increased risk of coronary heart disease. Apart from smoking, there were no other cardiovascular risk factors. The patient's LDL levels were 3.0 mmol/l and lipoprotein(a) was 23 nmol/l. The patient was discharged on dual antiplatelet therapy with aspirin and ticagrelor, as well as high-intensity statin. He was advised to discontinue BCAA supplementation.

Clinical implications: Acute coronary syndrome is rare in young, physically active patients and may therefore be overlooked, particularly when symptoms are atypical. In this patient, the ESC cardiovascular risk score would have classified him as low risk, which may contribute to delayed consideration of an ischemic etiology. This case highlights that acute coronary syndrome must be considered in a symptomatic patient with elevated cardiac biomarkers, regardless of age or calculated baseline risk. Early multimodal cardiac imaging is crucial for establishing the correct diagnosis. A detailed medical history, including the use of dietary supplements and performance-enhancing substances, is essential, as these are frequently perceived as harmless but may contribute to premature coronary artery disease.

P137

Case report: severe vasculitis flare after long-standing remission: anti-proteinase-3-positive granulomatosis with polyangiitis strikes again

D. Westmeyer[1], J. Gromann[1], T. Breidthardt[1], M. Di Chiara[2]

[1]Luzerner Kantonsspital, Innere Medizin, Luzern, Switzerland, [2]Luzerner Kantonsspital, Rheumatologie, Luzern, Switzerland

Case presentation: A 68-year-old man with granulomatosis with polyangiitis (GPA) on maintenance therapy with mycophenolate mofetil presented with fever, subacute non-productive cough, generalized weakness, arthralgia and distal neuropathic pain. Physical examination showed distal sensory deficits, palpable purpura on the lower legs and hands, splinter hemorrhages and joint pain with active and passive movement. The patient was in relatively preserved general condition despite markedly elevated inflammatory markers (CRP 262 mg/L, leukocytes 20 G/L). Renal function was intact, but urinalysis revealed dysmorphic erythrocytes. CT imaging showed multiple pulmonary nodules, splenic infarction and maxillary sinusitis. The initial differential diagnosis included endocarditis, a bloodstream infection with septic emboli and a flare of GPA. Extensive diagnostic workup including bronchoscopy with bronchoalveolar lavage, blood and sputum cultures and transthoracic echocardiography showed no infectious etiology. Skin biopsy confirmed leukocytoclastic small-vessel vasculitis. Elevated Proteinase 3-associated Antineutrophil Cytoplasmic Antibodies (PR3-ANCA) supported a GPA flare. High-dose glucocorticoids followed by rituximab were initiated. Inflammatory markers decreased and the patient improved slightly, until he developed hemodynamically relevant mesenteric hemorrhage requiring emergency surgical repair. A few days later, renal bleeding was observed after sudden right-sided flank pain. This was effectively treated by interventional embolization. Cyclophosphamide was added to immunosuppressive therapy. At the time of abstract submission, the patient remains hospitalized.

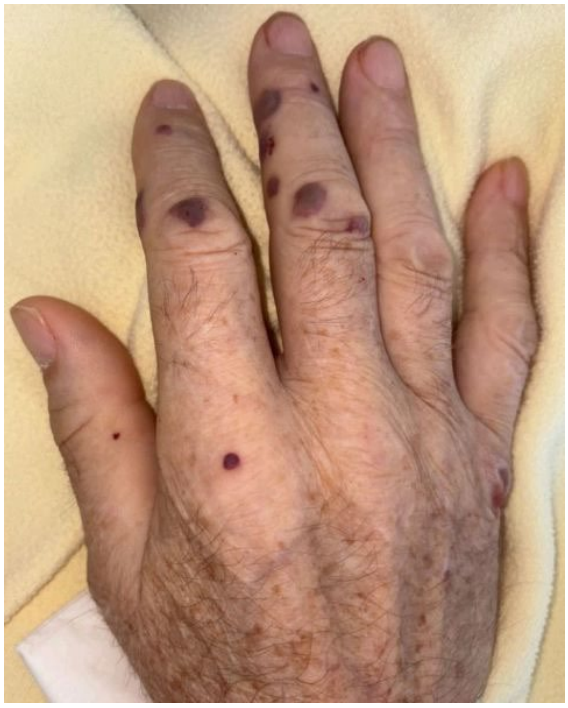


Figure 1: Purpura skin lesions

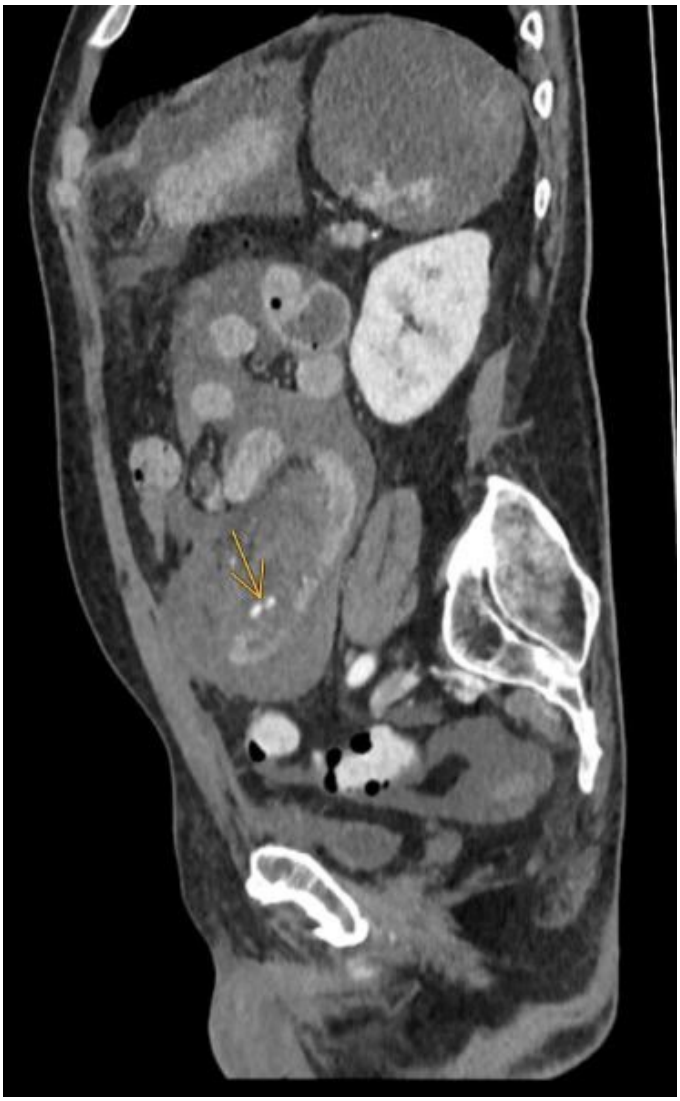


Figure 2: CT scan (sagittal view) showing mesenteric hemorrhage (arrow) and splenic infarction

Clinical implications: This case highlights the multiorgan involvement of GPA and the risk for life-threatening flares even after years of maintenance therapy. Beyond the well-recognized risks of pulmonary hemorrhage and rapidly progressive glomerulonephritis, other severe complications may occur. Splenic infarction, particularly in PR3-ANCA-positive GPA, may be underrecognized. Gastrointestinal bleeding, especially from medium-sized vessels, is very rare in GPA; we report a case involving both. Rapid exclusion of infectious causes, timely histopathological and serological confirmation and prompt aggressive immunosuppressive therapy are essential in suspected GPA flares.

P138

Hidden behind the back: Brucella spondylodiscitis as a rare cause of acute low back pain

N.E. Winkler[1], C. Rekeczki[1], M. Haidinger[1]

[1]*Spital Bülach, Klinik Medizin, Bülach, Switzerland*

Case presentation: A 52-year-old man with obesity, metabolic syndrome, recurrent nephrolithiasis, and recently treated epididymoorchitis presented with sudden, severe low back pain radiating to the left flank. Examination revealed lumbar tenderness and a positive Lasègue sign without neurological deficits or fever. Labs showed CRP 137 mg/L with normal leukocytes and a urin with little bacteria. Abdominal CT with contrast confirmed bilateral nephrolithiasis but no obstruction or infection focus; POCUS was unremarkable. Persistent pain, elevated inflammatory markers of unknown course, and epidemiological clues prompted MRI of the thoracolumbar spine, revealing spondylodiscitis at T9/10 with epidural abscess and osseous destruction. CT-guided biopsy PCR detected Brucella DNA; blood cultures were negative or considered contaminants. The patient received triple antibiotic therapy (gentamicin, rifampicin, doxycycline), and left the hospital against medical advice with a dual antibiotic therapy (rifampicin and doxycycline) for ≥12 weeks, achieving clinical improvement without neurological complications.

Clinical implications: This case highlights the diagnostic challenge of rare systemic infections presenting as seemingly benign back pain. Multifocal brucellosis can mimic common conditions such as epididymoorchitis or nonspecific lumbar pain; initial labs and imaging may be inconclusive. A structured, internist-led approach – considering epidemiological risk factors, close monitoring, and early imaging – is critical for timely diagnosis and effective therapy.

Conclusion: Rare zoonoses such as brucellosis should be considered in patients with persistent back pain and elevated inflammatory markers, even in non-endemic regions. Early recognition allows targeted, multidisciplinary management and prevents severe complications.

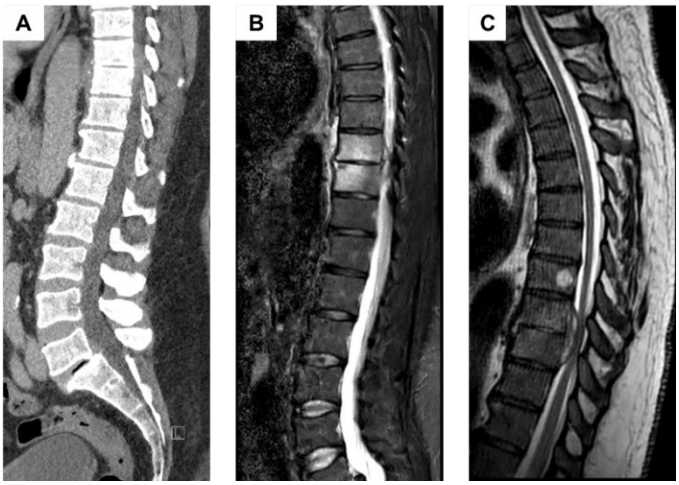


Figure: (A) No evidence of spondylodiscitis on CT. (B) MRI revealed spondylodiscitis at T9/10 with marked vertebral marrow edema, and (C) epidural abscess along the posterior vertebral margin, causing significant left paramedian spinal cord compression.

E-POSTER – GUEST SOCIETY: SWISS SOCIETY FOR GERIATRICS (SFGG/SPSG)

P140

Chemobrain: an elusive yet troublesome diagnosis. the case of one patient

Y. Apostolova[1], P. Temperli[1], A. Deslex[1], R. Dreher[1]

[1]Centre de la Mémoire de la Côte, EHC Service de Gériatrie, Rolle, Switzerland

Case presentation: A 59-year-old man complaining of poor concentration, memory loss relating to recent events, and fatigue, was referred to a Memory Clinic. The patient had no recent change of medication or new evolving symptoms. The patient was in good general health apart from a thoracic lymphoma (stage IAEX, IPI 0/5) treated by six cycles R-CHOP multichemotherapy and local radiotherapy 4 years ago.

The neuropsychological examination (NPS) revealed an attention disorder as well as difficulties with verbal anterograde episodic memory learning (RL-RI16 with deficient retrieval), and fatigability.

A central nervous system MRI-scan revealed no specific, lesions, atrophy, or changes in hippocampal volume.

Further work up during the NPS pointed to an undiagnosed, pre-existing, attention deficit and hyperactivity disorder (ADHD).

In the absence clinical, laboratory, or radiological evidence suggestive of an alternative diagnosis, the patient was diagnosed with a chemo-brain. Thus, no additional diagnostic work up, nor specific measures, were proposed for the immediate treatment of the patient, but a follow-up visit was advised.

Clinical implications: Up to 75% of patients undergoing cancer therapy may experience cognitive symptoms such as cancer-related cognitive impairment (CRCI) or 'chemobrain' at different lengths of time after their cancer treatment. In patients with a cancer history, especially with high-risk for relapse factors, direct central nervous system metastatic disease and paraneoplastic syndromes must be ruled out before considering the exclusion diagnosis of CRCI. Furthermore, psychiatric conditions including depression and anxiety need to be ruled out.

Research suggests that certain patients are more susceptible to cognitive impairment following cancer treatment due to genetic predisposition, cognitive reserve, cancer biology or other conditions such as depression.

Attention deficit hyperactivity disorder (ADHD) is being investigated as an additional risk factor for various pathologies, such as dementia but no direct relation has been established with chemobrain. Further research is needed to elucidate potential associations between the CRCI and ADHD.

CRCI poses a challenge in clinical practice, as there are currently no clear protocols for investigating or treating it. Screening for suspected predisposing factors, such as ADHD, could help improve our knowledge of the CRCI presentation, and provide invaluable guidance for its prevention, diagnosis and treatment.

E-POSTERS – GUEST SOCIETY: SWISS SOCIETY OF CLINICAL PHARMACOLOGY AND TOXICOLOGY (SSCPT)

P141

Factors contributing to proton pump inhibitors deprescribing failure in internal medicine in-patients

C. Kotoula[1,2], L. Schreck[1], A. Anandarathakrishnan[1], C. Meyer-Massetti[1,3], C.E. Aubert[3,4], M. Haschke[1], E. Liakoni[1]

[1]Inselspital, Bern University Hospital, Clinical Pharmacology and Toxicology, Department of General Internal Medicine, Bern, Switzerland, [2]University of Bern, Graduate School for Health Sciences, Bern, Switzerland, [3]University of Bern, Institute of Primary Health Care (BIHAM), Bern, Switzerland, [4]Inselspital, Bern University Hospital, Department of General Internal Medicine, Bern, Switzerland

Background: Proton pump inhibitors (PPI) are used to treat gastro-intestinal acid-related disorders and are often overprescribed or continued unnecessarily. Long-term use can be associated with adverse reactions such as infections and nutrient malabsorption. Deprescribing is recommended when indication is unclear or treatment unnecessarily prolonged. This study investigated potential factors of PPI deprescribing failure and prescription patterns in general internal medicine in-patients.

Methods: Retrospective study at the Insel Hospital Group. Included were patients ≥18 years admitted to the internal medicine wards in February 2022 with an established PPI therapy on admission or a new PPI prescription during hospitalization. PPI therapy duration and indication were retrieved from the electronic health records. Appropriate use was defined based on product information and guidelines. Descriptive statistics and multivariate regression models were used for data evaluation.

Results: Among 102 patients (37% female, 76% ≥60 years), 69 (68%) had PPI on admission and 33 (32%) a new prescription in hospital, with documented appropriate use in 49% (34/69) and 48% (16/33), respectively. At discharge, 90/102 patients (88%) had a PPI, 44 (49%) of which with documented appropriate use. Deprescribing was done in 17 of 63 cases (27%) without documented appropriate use and was less likely in women (OR=0.1, 95% CI:0.002-0.6, p<0.001) and patients with PPI on admission (OR=0.2, 95% CI:0.02-0.9, p=0.04). Reasons for continuing PPI in the other 46 cases included unmet bleeding prophylaxis criteria while on anticoagulants (n=23) or corticosteroids (n=14), outdated indications (n=6) and unclear re-evaluation plans (n=5).

Conclusion & clinical implications: Most PPI prescriptions were continued during hospitalization and at discharge. In about half of the patients appropriate PPI use could not be confirmed. Knowledge and information gaps (e.g. insufficient indication, documentation or communication) may have contributed to deprescribing failures. Regular medication reviews by general practitioners, pharmacists and hospital clinicians could improve deprescribing practices and ensure appropriate PPI use.

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Tracking CYP2C19 activity through extracellular vesicle using metabolomics

E. Maret[1], C. Samer[1], A. Thomas[2], Y. Daali[1]

[1]Hôpitaux Universitaires de Genève, Département d'anesthésiologie, pharmacologie, soins intensifs et urgences, Genève, Switzerland, [2]Centre Universitaire Romand de Médecine Légale, Unité de toxicologie et chimie forensiques, Lausanne, Switzerland

Background: Extracellular vesicles (EVs) offer a promising, non-invasive approach to study drug-metabolizing enzymes (DME), particularly CYP450s. While most studies assess EV mRNA levels (Achour, Gosselin, et al.; Achour, Al-Majdoub, et al.), metabolomics may provide a more robust evaluation of DME activity. Here, we quantified omeprazole after oral intake and its metabolite within EVs to explore the potential of EV-based metabolomics for predicting CYP2C19 activity.

Methods: Whole blood was withdrawn from a healthy donor 2 hours after intake of 40mg omeprazole. Blood was processed within 2 hours via 3 centrifugation steps. EVs were isolated using size exclusion chromatography (QEV10, Izon) from 10ml processed plasma. Collected fractions were characterized by total protein concentration (Micro BCA) and EV marker expression (LAMP2). Fractions 11-16 were pooled (12ml) and filtered using an Amicon 30K Filter. EVs were lysed and metabolites extracted. Omeprazole (OME, 345.1147 MW, 4.416 RT) and hydroxy-omeprazole (OH-OME, 361.1097 MW, 4.692 RT) were quantified using untargeted metabolomics (LC-HRMS) in isolated EVs and total plasma. Results were compared to biobanked samples.

Results: After omeprazole intake and to confirm active CYP2C19 metabolism, OME and its metabolite were quantified in plasma using LC-MS. OME reached an intensity of 5.52×10^{8} and OH-OME 3.85×10^{8}. Surprisingly, only OH-OME was detected in EVs with an intensity of 1.26×10^{2} after LAMP2 normalization. Supported by rigorous isolation and lysis protocols, these results provide evidence for the selective encapsulation of the CYP2C19-derived metabolite within EVs. In addition, biobanked samples were investigated. Only one sample showed the presence of OH-OME in EVs (5.89×10^{2}) reflecting potential omeprazole intake before blood donation, further confirmed by the presence of OME (8.64×10^{6}) and OH-OME (4.67×10^{7}) in the corresponding plasma sample.

Conclusion & clinical implications: Our results indicate that active metabolic processes, here of CYP2C19 activity through OME metabolism, can be detected by investigating EV cargo. Although the encapsulation mechanism remains poorly understood, the absence of detectable OME within the EVs suggests a stringent selective process. These findings encourage further investigation of EV metabolites for CYP450 biomarker discovery and highlight their potential application in personalized medicine.

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Using explainable artificial intelligence to understand the pharmacodynamics of cannabinoid 1 receptor agonists

V. Schöning[1], K. Grafinger[2], D. Pasin[3], C.P. Stove[4], H. Gréen[5,6], W. Weinmann[2], F. Hammann[1]

[1]University Hospital Bern, Inselspital, Clinical Pharmacology and Toxicology, Bern, Switzerland, [2]University of Bern, Institute of Forensic Medicine Bern, Bern, Switzerland, [3]Hyperion Data, N/A, NSW, Australia, [4]Ghent University, Department of Bioanalysis, Ghent, Belgium, [5]Linköping University, Department of Biomedical and Clinical Sciences, Linköping, Sweden, [6]Linköping University, Division of Clinical Chemistry and Pharmacology, Linköping, Sweden

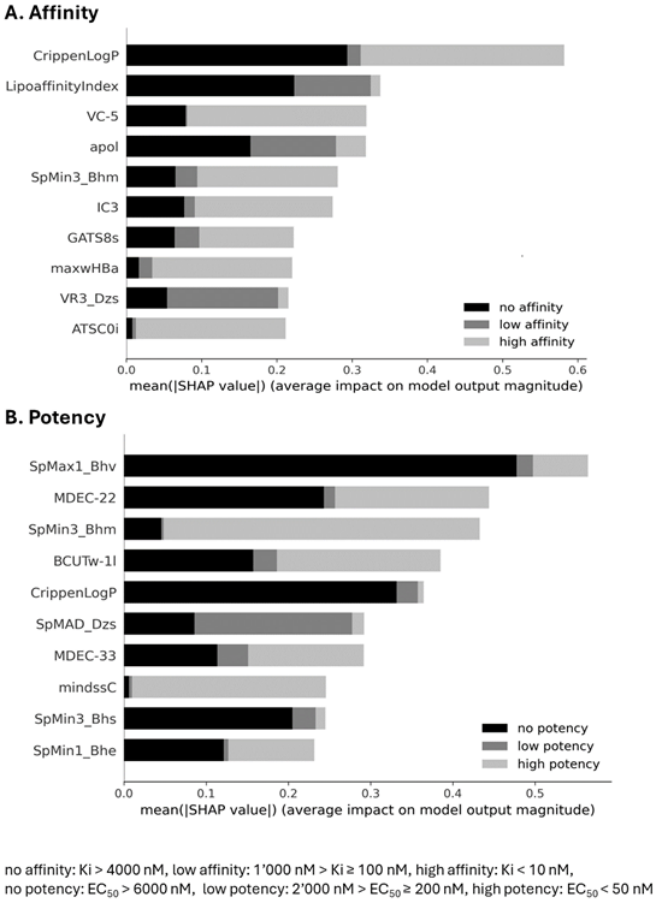
Background: Binding affinity and potency are distinct but pharmacologically related properties in ligand-receptor interaction. Understanding how physicochemical and structural properties impact these endpoints is essential for regulating fast-moving markets of recreational drugs such as new psychoactive substances (NPS).

This study investigates how molecular features affect cannabinoid 1 receptor (CB_1) binding affinity and potency of synthetic cannabinoid receptor agonists, an NPS class.

Methods: Within the scope of a larger project (SNF_10000358), we compiled publicly available xenobiotics with *in vitro* affinity and potency information for CB_1 using PubChem and PubMed. We trained several machine learning classification models with molecular descriptors and molecular fingerprints. We used SHAP (Shapley Additive exPlanations) to explain the predictions of the best performing models. For molecular descriptors, we used PaDEL descriptors and the XGBoost model and directly evaluated the SHAP values. For fingerprinting, we used ECFP (extended connectivity fingerprints, Morgan fingerprints with radius of 3) in combination with Random Forest, and mapped the SHAP values to their corresponding atoms and displayed the influence as heatmap.

Results: The summary plots (Fig. 1) display the ten most important molecular descriptors and their influence on model prediction. Five classes of molecular descriptors mainly influence affinity prediction: atom type electrotopological state, autocorrelation, Barysz matrix eigenvectors, Burden modified eigenvalues, and topological charge. For potency, Burden modified eigenvalues, atom type electrotopological state, autocorrelation, Barysz matrix, and molecular distance edge contribute to the model's prediction. The heatmaps (Fig. 2) indicate the influence of single atoms on predictions using fingerprint descriptors. The presence and position of the hydroxyl group changes the SHAP values of the nitrogen and the pentyl tail.

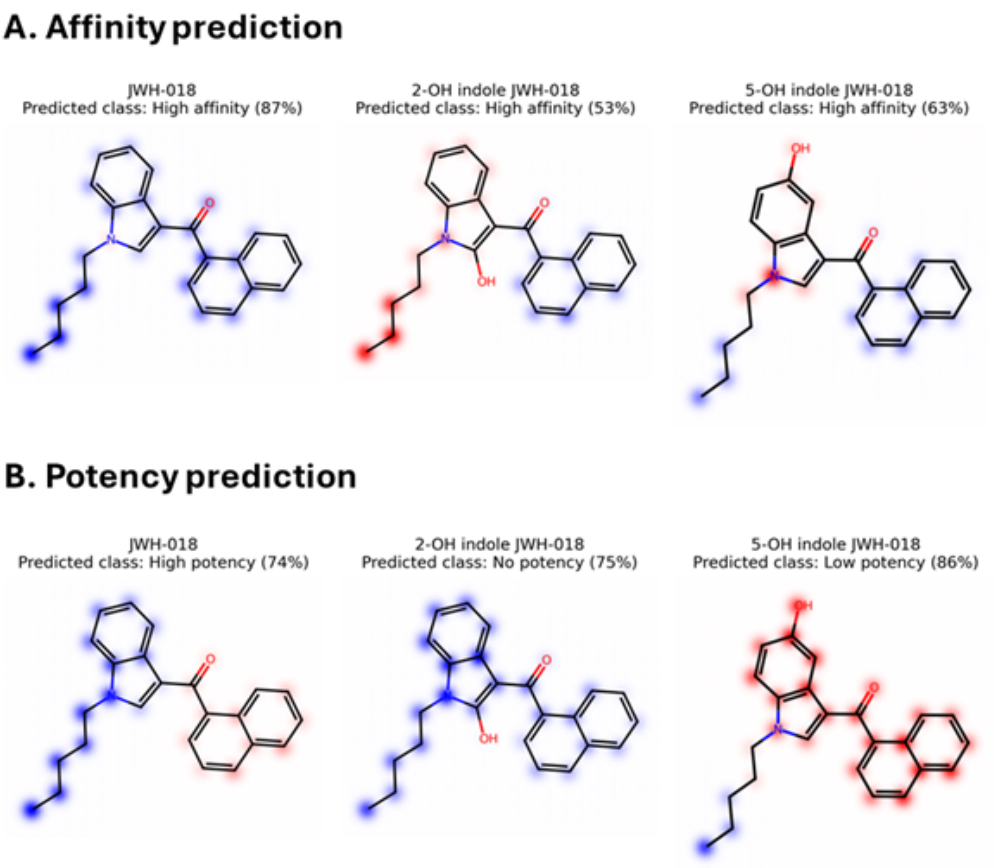
Fig. 1: Summary plots for the ten most important features



no affinity: Ki > 4000 nM, low affinity: 1'000 nM > Ki ≥ 100 nM, high affinity: Ki < 10 nM,
no potency: EC_{50} > 6000 nM, low potency: 2'000 nM > EC_{50} ≥ 200 nM, high potency: EC_{50} < 50 nM

Conclusion & clinical implications: Affinity relies mainly on lipophilicity and membrane-partitioning descriptors, whereas potency depends on a broader combination of lipophilicity, shape, branching, and electronic descriptors. Taken together, while lipophilicity is necessary to reach the membrane-embedded receptor (affinity), achieving a response (potency) additionally requires the correct steric, electronic, and topological configuration to activate CB_1.

Fig. 2: Mapping of fingerprint SHAP values to atoms.



Atoms associated with positive contributions by the model are highlighted in red, while atoms with negative contributions are highlighted in blue.
The model probability of the predicted class is indicated in brackets.

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Acute analgesic effects of DMT on experimentally induced acute nociceptive pain, hyperalgesia and allodynia in healthy participants

S. Vogt[1], L. Erne[1], T. Ehrsam[1], M.E. Liechti[1]

[1]*Universitätsspital Basel, Klinische Pharmakologie & Toxikologie, Basel, Switzerland*

Background: Preliminary evidence suggests that serotonergic psychedelics may have therapeutic potential for chronic pain disorders. However the potential analgesic properties of these compounds are insufficiently characterized. We therefore investigated the effects of N,N-dimethyltryptamine (DMT), a classic serotonergic psychedelic, on different pain dimensions using an electrical pain model in healthy volunteers that produces acute nociceptive pain and features of central sensitization.

Methods: We conducted a double-blind, randomized, placebo-controlled crossover trial with 17 healthy participants. DMT (1.2 mg/min) and ketamine (positive control, 1 mg/min) were administered as a continuous infusion over 55 minutes. Electrical pain stimulation was applied during and after drug administration. Outcome measures included pain ratings, assessments of hyperalgesia and allodynia, subjective effects, adverse effects and pharmacokinetics.

Results: DMT infusions significantly reduced nociceptive pain and hyperalgesia compared with placebo. The extent of the reduction was comparable to that observed with ketamine. Maximal and stable antinociceptive effects were reached within 20–30 minutes for DMT. After infusion cessation, antinociceptive effects returned to placebo levels within 30 minutes.

Conclusion & clinical implications: DMT reduced experimentally induced acute nociceptive pain and hyperalgesia in healthy volunteers. These findings support further investigation of serotonergic psychedelics in chronic pain conditions involving central sensitization.

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Euglycemic non-diabetic ketoacidosis associated with dapagliflozine in a geriatric patient with malnutrition

V. Alber[1], C. Douest[1], L. Corazza[1], H. Lemaire[1], D. Zekry[1], M. Besson[2], N. Exquis[2]

[1]Hôpitaux universitaires de Genève, Service de médecine interne de l'âgé, Genève, Switzerland, [2]Hôpitaux universitaires de Genève, Service de pharmacologie et toxicologie cliniques, Genève, Switzerland

Case presentation: We present a 93-year-old woman, known for heart failure with preserved ejection fraction (HFpEF) treated with dapagliflozin 10 mg daily for one year. She had severe protein-energy malnutrition (PEM) with 13% weight loss in one month (BMI 16 kg/m2) related to poor oral intake. She had no history of diabetes (glycated haemoglobin 4.9%) or alcohol use. The Clinical Frailty Scale was 5. She was admitted for profuse diarrhoea. Investigations revealed an euglycaemic high–anion gap metabolic acidosis (pH 7.14, bicarbonate 13.5 mmol/L) with elevated ketones (ketonemia 1.3 mmol/L, glucose 8.8 mmol/L), hyperlactatemia (5 mmol/L), and severe hypokalaemia (2 mmol/L) with ECG changes. Dapagliflozin-induced euglycaemic ketoacidosis was suspected and the drug was discontinued. Treatment with insulin-glucose infusion and potassium replacement led to normalization of ketonemia and acid–base status.

Clinical implications: Dapagliflozin-induced euglycaemic ketoacidosis is a rare but reported adverse event (0.01-0.1%). It is more frequently reported in type 1 diabetes wherein ketoacidosis is more prevalent than in type 2. The underlying mechanism involves an increased glucagon-to-insulin ratio and enhanced lipolysis, leading to ketogenesis, with maintained glucosuria (1,2). Ketosis may also be exacerbated by fasting or PEM with relative insulin deficit (2). This adverse effect is poorly described in non-diabetic patients. To our knowledge, only seven cases of ketoacidosis in non-diabetic patients treated with sodium–glucose cotransporter-2 inhibitors (SGLT2i) (dapagliflozin or empagliflozin) were published (3-8). Three of them involved patients older than 60 (range 26-83). The latency period ranged from 14 days and 5 months after initiation of SGLT2i at the standard dose 10 mg daily. In all the reported cases, the triggering factor was a reduction in oral intake (PEM or fasting), as observed in the present case. SGLT2i are now considered a cornerstone of HFpEF treatment, irrespective of diabetes status (9). While diabetes international societies emphasise the importance of withholding SGLT2i during periods of prolonged fasting (10), this precaution should also be considered when SGLT2i are prescribed for HFpEF. Although SGLT2i are generally well tolerated in elderly (11), caution and close monitoring are warranted in very frail or malnourished individuals, in whom the risks may outweigh the benefits (12,13).

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Evaluation of cefepime imputability in the development of a probable symmetrical drug-related intertriginous and flexural exanthema (SDRIFE), also called baboon syndrome

J. Vukovic[1], M. Righini[2], C. Samer[3], M. Besson[3]

[1]Hôpitaux Universitaires de Genève (HUG), Service de pharmacologie et toxicologie cliniques, Département de médecine aigüe, Genève, Switzerland, [2]Hôpitaux Universitaires de Genève (HUG), Service de gériatrie, Département de réadaptation et gériatrie, Genève, Switzerland, [3]Faculté de Médecine, Université de Genève/Hôpitaux Universitaires de Genève (HUG), Service de pharmacologie et toxicologie cliniques, Département de médecine aigüe, Genève, Switzerland

Case presentation: An 88-year-old woman with multiple cardiovascular comorbidities, chronic kidney disease stage G3b, monoclonal gammopathy of undetermined significance, anemia, osteoporosis, and a history of recurrent non-specified toxidermia to amoxicillin–clavulanate (AC) without severity criteria was hospitalized for bronchopneumonia of unknown etiology complicated by acute heart failure. To avoid AC, she received intravenous cefuroxime for 9 days, cefazolin for 1 day, and then cefepime for 5 days (1.5 g twice daily). The day after completing cefepime therapy she developed a symmetric erythematous eruption without systemic severity criteria involving inframammary, axillary, flank, and inguinal folds, consistent with SDRIFE. The eruption resolved within 12 days under topical corticosteroids. Skin biopsy revealed subcorneal pustules and spongiotic dermoepidermitis, supporting the diagnosis. Apart from chronic medications, the only concomitant drug was intravenous furosemide, which was reintroduced after resolution without recurrence of toxidermia.

Clinical implications: SDRIFE is a rare, benign, strictly cutaneous drug eruption representing a type IV hypersensitivity reaction after systemic drug exposure. β-lactam antibiotics, especially amoxicillin, are the most common triggers, whereas cephalosporins are rarely involved. To date, only one case of cefepime-induced SDRIFE has been reported. A limited number of cases have also been described with other agents. Onset typically occurs within hours to 48 h in previously sensitized patients; a latency exceeding 1 week makes SDRIFE unlikely. β-lactam cross-reactivity is mainly R1 side-chain dependent, occurring predominantly between aminopenicillins (amoxicillin, ampicillin) and aminocephalosporins (cefalexin, cefadroxil, cefaclor). In contrast cephalosporins with different R1 side chains (cefazoline, cefuroxime, cefepime) have a cross-reactivity risk below 2%. In this case, cefepime hypersensitivity most likely represents a newly acquired adverse drug reaction in a patient predisposed to multiple drug hypersensitivity rather than cross-reactivity with AC. Re-exposure to cefepime is contraindicated due to high risk of SDRIFE recurrence. Immunological testing may be considered to exclude rare T-cell mediated cross-reactivity, particularly with ceftriaxone which shares a similar R1 side chain. The suspected adverse drug reaction was reported to Swissmedic in accordance with pharmacovigilance requirements.

AUTHOR INDEX

The numbers refer to the numbers of the abstracts. Bold numbers indicate first authorship.

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