

Selskab for Medicinsk Studenterforskning præsenterer

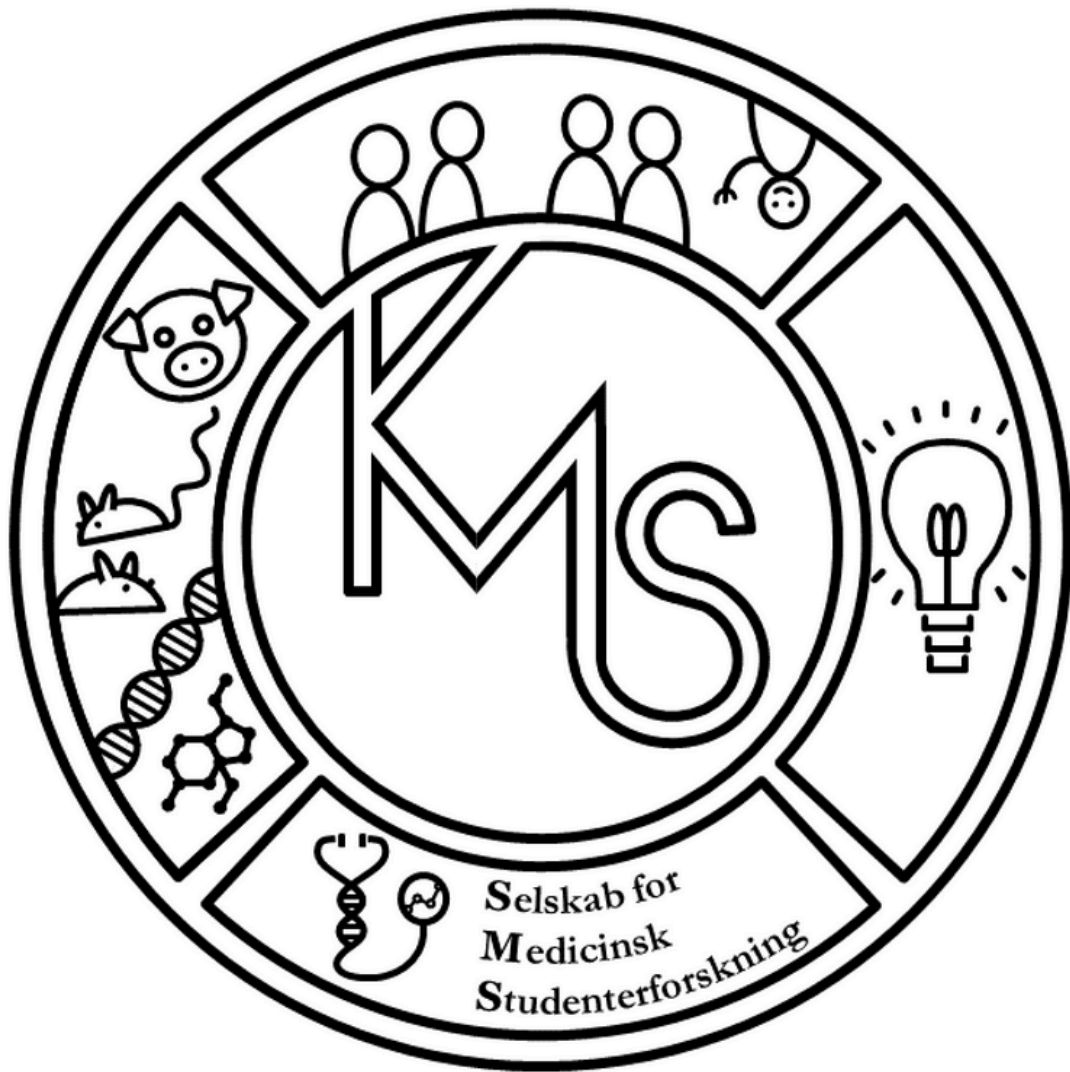
Kongres for Medicinsk Studenterforskning

ABSTRACTS



Sandbjerg Gods, Sønderborg

12.-15. Marts 2026



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Velkommen

Velkommen til Kongres for Medicinsk Studenterforskning 2026!

På vegne af Selskab for Medicinsk Studenterforskning vil jeg byde hjerteligt velkommen til den **17. nationale Kongres for Medicinsk Studenterforskning!**

Vores forening har i løbet af det sidste år arbejdet intenst på at gøre denne kongres mulig, og vi glæder os utrolig meget til at møde jer og høre om jeres forskning. Formålet med kongressen er at give jer studenterforskere mulighed for at præsentere jeres projekter i trygge og inspirerende rammer, og at give jer mulighed for at møde hinanden på tværs af universiteter og forskningsområder.

For nogle er det første gang, I får anledning til at præsentere jeres forskning, mens andre allerede har mange præsentationer under kappen. Derfor prioriterer vi at skabe et miljø, hvor det er helt naturligt at lave fejl, lære og udvikle sig, og det håber vi, I vil støtte op om. Ingen af os kan levere en perfekt præsentation, og derfor er vi taget helt til Sandbjerg Gods for at øve os - så husk at heppe på den, der præsenterer, og stil meget gerne nysgerrige spørgsmål til præsentationen.

Udover de faglige præsentationer har vi planlagt en række sociale aktiviteter, der skal give jer mulighed for at lære hinanden at kende. Selvom vi alle er eksperter inden for vores eget felt, opstår forskning ofte i mødet med nye perspektiver og samarbejdspartnere. Vi vil derfor opfordre jer til at tale med personer, I ikke kender endnu - I ved aldrig, hvem der kan blive jeres næste forskningspartner.

Vi vil gerne sige en stor tak til alle vores sponsorer, som har gjort det muligt at afholde kongressen igen i år. Endnu større tak skal lyde til medlemmerne af Selskab for Medicinsk Studenterforskning, som har lagt utallige timer i planlægningen. Uden deres engagement ville denne kongres ikke være mulig.

Vi håber, at I får en fantastisk kongres!

Med venlig hilsen
Eva Marie Gjørup
Formand, Selskab for Medicinsk Studenterforskning



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Studenterforskning

Program for KMS 2026

Program - torsdag d. 12. marts

16.45 – 17.30	Ankomst og indkvartering
17.30 – 17.45	Velkomsttale
18.00 – 19.00	Middag
19.00 – 20.00	Foredrag med Ronni Mikkelsen
20.00 – 22.00	Networking

Program - fredag d. 13. marts

07.00 – 08.00	Morgenløb eller yoga
08.00 – 09.00	Morgenmad
09.00 – 10.15	Oral session 1 – Intern Medicin og Kirurgi
10.15 – 10.45	Kaffe, vand og frugt
10.45 – 12.00	Oral session 2 - Grundforskning
12.00 – 13.00	Frokostbuffet
13.00 – 14.30	Poster sessioner 1 og 2 – Epidemiologi og Grundforskning
14.30 – 15.00	Tid til at kigge på posters og stille spørgsmål
15.00 – 15.30	Kaffe, vand og kage
15.30 – 16.45	Oral session 3 – Gynækologi, Obstetrik og Pædiatri
16.45 – 17.15	Frivillig gåtur
16.45 – 18.00	Pause
18.00 – 19.00	Middag
20.00 – 22.00	Pub-Quiz

Program - lørdag d. 14. marts

07.00 – 08.00	Morgenløb eller morgenbadning & fællessang
08.00 – 09.00	Morgenmad
09.00 – 10.15	Oral session 4 – Epidemiologi
10.15 – 10.45	Kaffe, vand og frugt
10.45 – 12.00	Oral session 5 – Hjerte-Lunge-Kar
12.00 – 13.00	Frokostbuffet
13.00 – 14.30	Poster sessioner 3 og 4 – Intern Medicin og Kirurgi og Hjerte-Lunge-Kar
14.30 – 15.00	Tid til at kigge på posters og stille spørgsmål
15.00 – 15.30	Kaffe, vand og kage
15.30 – 16.45	Oral session 6 – Psykiatri og Neurologi
16.45 – 18.45	Pause
18.45 – 19.00	Velkomstdrink
19.00	Gallamiddag og -fest
03.00	Natmad

Program - søndag d. 15. marts

Senest 09.00	Udtjekning
08.00 – 10.00	Morgenmad
10.30 – 11.45	Foredrag med Simon Tilma Vistisen
11.45 – 11.50	Afslutningstale
11.50 – 12.00	Udlevering af sandwiches til turen
12.00	Afrejse

Tak

Selskab for Medicinsk Studenterforskning vil gerne takke alle sponsorerne for deres flotte bidrag, uden hvilke Kongres for Medicinsk Studenterforskning 2026 ikke var mulig.

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Anna Mosborg Petersen

Julie Haugaard

Tobias Overmark

Johanne Ravn Petersen



Chairs

Oral session 1 – Intern Medicin og Kirurgi

Line Moll

Isabella Christiane Hansen

Oral session 2 – Grundforskning

Louiza Bohn

Aimi Hamilton

Poster session 1 – Epidemiologi

Bodil Hammer Bech

Guillian Birindwa

Poster session 2 – Grundforskning

Tue Kragstrup

Samuel Loft Stückler Sandegaard

Oral session 3 – Gynækologi, Obstetrik og Pædiatri

Christina Friis Jensen

Anne Katrine Leonhard

Oral session 4 – Epidemiologi

Alma Becic Pedersen

Emma Skovgaard Pedersen

Oral session 5 – Hjerne-Lunge-Kar

Jacob Budtz-Lilly

Line Kølner-Auguston

Poster session 3 – Intern Medicin og Kirurgi

Ninna Aggerholm Pedersen

Line Sahlholdt Hansen

Poster session 4 – Hjerne-Lunge-Kar

Simone Juel Dragsbæk

Thomas Jensen

Oral session 6 – Psykiatri og Neurologi

Andreas Aalkjær Danielsen

Lennart Madsen

Oral session 1: Intern Medicin og Kirurgi

Session: O1.1: Intern Medicin og Kirurgi

Nanna Kold Rikhof

Fecal Microbiota transplantation Intervention on microbiota Composition and insulin sensitivity in diabetes - FeMIC

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(1) Medical Diagnostics Center, Regional Hospital Central Jutland (HEM)

(2) Steno Diabetes Center Aarhus

(3) Department of Clinical Medicine, Aarhus University

Background: Increasing evidence links gut microbiota to type 2 diabetes mellitus (T2DM) pathogenesis, suggesting it as a potential therapeutic target. Fecal microbiota transplantation (FMT) from lean donors has transiently improved insulin sensitivity in individuals with T2DM and prediabetes. This study aims to evaluate the effects of oral encapsulated FMT versus placebo on glycemic metabolism and gut microbiota composition in people with T2DM.

Materials and methods: The study is a randomized, blinded, placebo-controlled trial with 16 adults with type 2 diabetes. Participants will be randomly assigned to receive oral FMT or placebo. During the intervention period of 6 weeks, participants will receive a total of two rounds of FMT/placebo with 1 week interval. The primary outcome, insulin resistance, will be measured pre and post intervention by oral glucose tolerance test and HOMA-IR. Gut microbiome will be analyzed by 16S rRNA gene sequencing.

Results: Inclusion of patients to the study is expected to start in December 2025 and the intervention period will begin at the end of January 2026. If available, preliminary results will be presented at the time of the conference.

Conclusion: No conclusion can be made at this point in the ongoing study.

Acknowledgements: This study is funded by the Regional Hospital Central Jutland (HEM) Research Foundation and Rosa & Asta Jensen's Foundation.

Keywords: Gut Microbiota Type 2 Diabetes Fecal Microbiota Transplantation Insulin Resistance

Session: O1.2: Intern Medicin og Kirurgi

Julie Haugaard

Absence of Avascular Necrosis and Growth Disturbances in 24 Pediatric Femoral Fractures Treated With Pedinails

Julie Haugaard Andersen^{1,2}, Ida Kruse Jensen^{1,2}, Martin Gottliebsen^{1,2}, Lise Langeland Larsen^{1,2}, Mathias Hauge Bünger^{1,2}, Bjarne Møller-Madsen^{1,2}, Jan Duedal Rølfing^{1,2}, ,

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(2) Danish Paediatric Orthopaedic Research, dpor.dk

Background: Femoral fractures in children are relatively uncommon but constitute the most frequent orthopedic injury requiring hospitalization. Treatment depends on age, weight, fracture type, and location. Rigid intramedullary nailing (RIN) using PediNails are increasingly used in paediatric patients. However, data on complications and clinical outcomes remains limited. Potential risks include avascular necrosis of the femoral head (AVN) and growth disturbances of the proximal femur

Materials and methods: This retrospective cohort study included children under 15 years of age treated operatively with RIN using PediNail for femoral fractures at a single institution between 2019 and 2025. Medical records, pre- and postoperative radiographs, and follow-up visits were reviewed to assess complications and clinical outcomes.

Results: Twenty-four patients were included (median age 9.9 years, range 6–12), predominantly male (88%). Follow-up was completed in 67% of patients, with a median duration of 459 days. Radiographic union was confirmed in 95.8% of cases. No cases of AVN, malunion, nonunion, or proximal femoral growth disturbances were observed. Two patients experienced clinically significant complications: one developed osteomyelitis, and one had leg length discrepancy of more than 15 mm requiring corrective surgery.

Conclusion: In this cohort, RIN with PediNail was well tolerated, with no cases of AVN or proximal femoral growth disturbances. These findings support PediNail as a viable treatment option for pediatric femoral fractures, including selected children under 11 years. Further prospective studies are needed.

Keywords: Orthopedics, Pediatric, Femoral fractures

Session: O1.3: Intern Medicin og Kirurgi

Mette Godthaab Zeuner

Peripheral Lymphatic Function in Patients with Systemic Sclerosis

Mette Godthaab Zeuner (1,2), Frederik Cosedis Enevoldsen (1,2), Flemming Secher Kromann Nielsen (3), Lars Thrane (2), Ellen-Margrethe Hauge (1,2) , Esben Uggerby Næser (1,2)

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(2) Department of Clinical Medicine, Aarhus University

(3) Department of Radiology, Aarhus University Hospital

Background: Systemic sclerosis (SSc) is a multisystem autoimmune disease characterized by early dysfunction of the microcirculation and tissue fibrosis. Emerging evidence suggests that lymphatic dysfunction may contribute to SSc pathogenesis, but its functional relevance is unclear. We aimed to compare peripheral lymphatic function and capillary filtration in SSc and controls, and to evaluate their associations with disease-specific characteristics.

Materials and methods: Near-Infrared Fluorescence imaging and plethysmography were used to assess lymphatic function and capillary filtration in the upper left extremity of patients with SSc and controls. Lymphatic function was quantified by estimating the average contraction frequency. Capillary filtration was assessed by determining capillary filtration rate. Associations with cutaneous involvement (total mRSS) and microvascular characteristics were analyzed using Spearman correlations and Mann–Whitney tests.

Results: In total 30 patients with SSc and 30 age- and sex-matched controls were included. Patients had fewer superficial lymphatic vessels (median [IQR]: 4 [4-5] vs. 5 [4-6], $p = 0.008$), while contraction frequency and capillary filtration rate were similar to controls. Higher mRSS was associated with increased basal lymphatic contractions, suggesting compensatory pumping in fibrotic tissue. Vessel count correlated positively with nailfold capillary density and negatively with Raynaud severity.

Conclusion: SSc is characterized by structural loss of superficial lymphatic vessels paralleling microvascular involvement. Increased basal lymphatic contractions with higher mRSS indicate compensatory lymphatic activity in fibrotic tissue.

Acknowledgements: This study was funded by the Independent Research Fund Denmark and The Danish Rheumatism Association.

Keywords: Systemic Sclerosis, Lymphatic function, Microcirculation, Capillary filtration, Near-infrared Fluorescence imaging.

Session: O1.4: Intern Medicin og Kirurgi

Katrine Hell Hansen

Characteristics and comorbidity among individuals with urinary incontinence

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(2) Department of Urology, Aarhus University Hospital

(3) Department of gynecology and obstetrics, Aarhus University Hospital

Background: Urinary incontinence (UI) is a major global health issue and affects women twice as often as men. While the prevalence of most types of UI increase with age, and will increase further due to demographic aging, UI remains an underprioritized area in research. Our aim is to categorize individuals who report UI according to their self-reported health and identify factors and clusters of symptoms associated with low self-reported health among individuals with UI.

Materials and methods: We will conduct a cross sectional study with baseline data from the Better Health in Late Life cohort combined with data from nationwide population-based health registries. Participants will be categorized according to self-reported UI and further stratified according to level of self-reported health. We will compute the prevalence of available lifestyle factors, chronic diseases, comorbidities, according to self-reported urination symptoms.

Results: Among the 114 283 respondents, 3 950 reported daily urgency UI, whereas 18 284 reported occasional urgency UI. Similarly, 5 410 respondents reported daily stress UI, and 27 336 reported it to be occasionally. 2 130 and 8 705 respondents reported experiencing other types of UI on a daily or occasional basis. We hypothesize that individuals with UI who report poor health will have a higher prevalence of psychological distress combined with characteristic patterns of lifestyle and comorbidity.

Conclusion: As of november 2025 a statistical analysis plan has been developed and the first data analysis are expected to begin by the end of the month. We expect to present preliminary findings at KMS 2026.

Acknowledgements: This project is supported by a grant from Det Frie Forskningsråd. The authors declare no conflict of interest.

Keywords: Urinary incontinence, self-reported health, comorbidities

Session: O1.5: Intern Medicin og Kirurgi

Noa Larsen Ohana

CT Referral Patterns and Cancer Detection in Patients Referred by General Practitioners with Non-Specific Symptoms and Signs of Cancer: A Retrospective Study

Josefine Axelsen(1), Maja Wilkinson(1), Ole Graumann(1,2), Kim Sivesgaard(1,2), Thomas Buus(1,2), Peter Vedsted(3,4), Anette Midtgaard (2), Stine Bisgaard Greve(1), Solveig Kärk Abildtrup Larsen(1,2)

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Background: Many cancer patients do not present with organ-specific alarm symptoms when first assessed at their general practitioner (GP) and Denmark therefore introduced a national cancer patient pathway (CPP) for patients presenting with non-specific signs or symptoms of cancer (NSSC) in 2011-2012. This study aimed to characterise referral symptoms of patients referred with NSSC or vague symptoms in relation to radiological findings and final diagnoses.

Materials and methods: This retrospective cohort study included all patients referred by GPs to Aarhus University Hospital for a CT TAP due to NSSC or vague symptoms from May to August 2024. Referral symptoms and radiology reports were compared with each patient's subsequent diagnoses in their electronic medical records.

Results: On CT TAP, 20.6% had findings suspicious for cancer, most frequently lung cancer. Overall, 9.2% received a malignant diagnosis, most commonly pancreatic cancer, lung cancer, colorectal cancer or lymphoma while 11.3% received a benign diagnosis. The most frequent referral symptoms were weight loss (50.8%), pain (44.6%), and fatigue (38.6%). CT TAP demonstrated a sensitivity of 95.5% and a specificity of 87.1%.

Conclusion: Most common symptoms were weight loss, pain and fatigue. CT TAP showed high sensitivity and alignment between suspected and confirmed cancers. Cancer detection was lower than previously reported. Patients with vague symptoms (non-CPP) need further research, as very few were diagnosed with cancer.

Acknowledgements: This research did not receive any specific grant from funding agencies, commercial or non-profit sectors.

Keywords: Neoplasms, General Practice, Signs and Symptoms, Tomography, Referral and Consultation

Session: O1.6: Intern Medicin og Kirurgi

Maja Sundahl Wilkinson

Retrospective study of eGFR and post-contrast acute kidney injury

Maja Sundahl Wilkinson (1,2), Ole Graumann (1,2), Erik Wrange (1,2), Solveig Kärk Abildtrup Larsen (1,2) In collaboration with Choose Wisely Denmark (Vælg Klogt)

(1) Department of Radiology, Aarhus University Hospital

(2) Aarhus University Radiology Research Unit, Denmark

Background: Post-contrast acute kidney injury has traditionally been perceived as a complication of iodinated contrast media (CM) administration. Recent research challenges this assumption. The objectives of this pilot study are to determine the incidence of acute kidney injury (AKI) following computed tomography (CT) and to examine the association across different levels of baseline renal function. Lastly to use this study to form a full-scale study.

Materials and methods: This retrospective pilot study included all CT scans performed at Aarhus University Hospital over a five-year period identified through the institutional data warehouse. Cases were grouped by CM exposure and compared across baseline eGFR categories. AKI was defined as either a $\geq 50\%$ decline in eGFR or a new AKI diagnosis within 14 days after CT. AKI incidence rates were compared across pre-CT eGFR categories.

Results: A total of 251.284 CT scans were included, of which 58% received CM. The overall AKI incidence was 0.60%. AKI occurred more frequently in the non-CM group (0.73%) than in the CM group (0.51%) (RR 1.43 [95% CI 1.29-1.58; $p < 0.001$]). Lower baseline eGFR was associated with higher AKI risk regardless of CM exposure. Notable differences in baseline characteristics indicated substantial selection bias between CM groups.

Conclusion: This study found no association between CM administration and AKI and further found that risk of AKI appears to be inversely associated with baseline eGFR. These findings support the emerging evidence questioning routine eGFR testing before CM-enhanced CT.

Acknowledgements: The authors declare no conflicts of interest.

Keywords: eGFR, Contrast media, Post-contrast acute kidney injury, Computed tomography

Isabella Jørgensen

Effects of one year semaglutide treatment on human osteocytes in iliac crest biopsies

Isabella Jørgensen (1,2), Morten Svarer Hansen (1,2,3), Julie Bjerrelund (1,2), Morten Frost (1,2), Eva Maria Wölfel (1,2)

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(2) Clinical Institute, University of Southern Denmark, Odense, Denmark

(3) Department of Endocrinology, University Hospital of Southern Denmark, Esbjerg, Denmark

Background: Semaglutide is a glucagon-like peptide-1 (GLP-1) receptor agonist used as an anti-diabetic and weight-loss drug. Weight loss induced by semaglutide is accompanied by bone mass loss. Bone mass is maintained by bone remodelling, a process orchestrated by mechanosensing cells, the so-called osteocytes. The role of osteocytes in weight-loss induced bone loss is not well understood. Here, we study the effect of one year semaglutide treatment on osteocytes in iliac crest biopsies.

Materials and methods: From a randomised placebo-controlled trial which investigated the impact of semaglutide on bone in 45-85 years old participants with osteopenia (SOBER trial), we obtained 18 biopsies for histological analyses (10 placebo, 8 semaglutide). Osteocyte viability was assessed using Mayer's haematoxylin staining. The expression of SOST, a gene encoding the protein sclerostin known to inhibit bone formation, was assessed using histological SOST staining.

Results: We analysed iliac crest biopsies from SOBER trial where the semaglutide induced 9% weight loss was accompanied by bone loss. We found no significant differences in osteocyte viability in the semaglutide group compared to the placebo group evaluated in the trabecular and endocortical bone compartment. In the quantification of SOST positive osteocytes in the endocortical bone compartment, we did not see any significant differences between the semaglutide and placebo group.

Conclusion: In our cohort of healthy individuals receiving semaglutide, osteocyte viability and SOST expression are not affected in iliac crest biopsies. Further analyses are required to determine e.g. the osteocytic network and whether this holds true in other cohorts e.g. patients with type 2 diabetes.

Acknowledgements: This project is supported by "OUH Fund for Pre-graduate Stipends" and "A.P. Møller fonden". A special thanks to the participants in the SOBER trial, and especially for the participants who volunteered undergoing trans iliac crest biopsies, which made this study possible. The SOBER trial was funded by The Region of Southern Denmark, Novo Nordisk Foundation and Gangsted Foundation.

Keywords: Bone, GLP-1 receptor agonist, Osteocytes, Weight loss.

Oral session 2: Grundforskning

Session: O2.1: Grundforskning

Mads Zippor

Exploring the Cellular Mediators of Nematode-Mediated Innate Immune Reprogramming

Mads Zippor (1, 2), Frøya Eliasson (1, 2), Anton Blom Handberg (1, 2), Andrew R Williams (3), Bradley Whitehead (1, 2), Peter Nejsum (1, 2)

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(3) Department of Veterinary and Animal Sciences, Faculty of Health and Medical Sciences, University of Copenhagen, Frederiksberg, Denmark

Background: Helminths are potent modulators of the host immune system, often inducing a regulatory environment. While the impact on the peripheral immune response is well-documented, the effect of intestinal nematodes on central myelopoiesis, which dictates the long-term functional output of innate immune cells, remains largely unexplored. We, therefore, investigated the capacity of the porcine intestinal nematode *Trichuris suis* to modulate central myelopoiesis and the cellular mediators involved.

Materials and methods: Pigs were infected with *Trichuris suis* for seven weeks, followed by flow cytometric analysis of bone marrow from the hip to assess central immune changes. Additionally, RNA sequencing and immunohistochemistry of the intestine will be performed to compare the peripheral immune response to the central changes.

Results: Infected pigs exhibited increased myelopoiesis with a significant expansion of CD163⁺ monocytes, suggesting a central shift toward an anti-inflammatory phenotype. Furthermore, elevated frequencies of granulocytes, B1 cells, plasmacytoid dendritic cells, and a subset of mature c-kit⁺ granulocytes were observed.

Conclusion: Together, these findings characterize a distinct shift in myelopoiesis during *Trichuris suis* infection. This central remodelling of the innate immune system may explain altered host responsiveness to unrelated inflammatory challenges, such as vaccinations and coinfections.

Keywords: Innate Immunity, Helminths, Immunomodulation

Session: O2.2: Grundforskning

Frøya Hopen Eliasson

Trichuris muris as a Potential Inducer of Trained Tolerance

Frøya Eliasson (1,2), Mads Zippor (1,2), Bradley Whitehead (1,2), Peter Nejsum (1,2)

(1) Department of Infectious Diseases, Aarhus University Hospital

(2) Department of Clinical Medicine, Aarhus University

Background: Trained tolerance is the attenuated responsiveness of innate immune cells following epigenetic and metabolic reprogramming, a de facto innate immune memory. Unlike trained immunity, which enhances responsiveness and can be induced by bacterial and fungal exposures, helminths may instead drive trained tolerance. Understanding whether helminths reshape myeloid development may reveal new host–parasite interactions, including effects on infection susceptibility and vaccine responses.

Materials and methods: Ten female C57BL/6NRj mice were infected with 200 embryonated *Trichuris muris* eggs, alongside ten uninfected controls. After 21 days, mice were euthanised and bone marrow was collected. Bone marrow cells were differentiated into macrophages and stimulated with toll-like receptor agonists. Tumor necrosis factor and Interleukin-10 secretion was quantified by enzyme-linked immunosorbent assay. Flow cytometry will be used to assess bone marrow immune composition.

Results: Experiments and analyses are in process, and results will be presented at KMS. Preliminary observations indicate a potential priming effect in bone marrow-derived macrophages from mice infected with *T. muris*.

Conclusion: No conclusion has been made yet.

Acknowledgements: This project is funded by the Independent Research Fund Denmark.

Keywords: Trained immunity, Helminth infection, Macrophages

Session: O2.3: Grundforskning

Sørine Tomine Neumann

Endothelial activation markers for prediction of acute toxicities in patients treated with chimeric antigen receptor T (CAR-T) cells for hematological cancer

Sørine T. Neumann, Monica D.M. Tran, Marianne Ifversen, Søren L. Pedersen, Claus H. Nielsen, Denise Horan, Klaus Müller, Katrine Kielsen

Rigshospitalet, Rigshospitalet, Rigshospitalet, Rigshospitalet, Rigshospitalet, Rigshospitalet, Rigshospitalet, Rigshospitalet

Background: CAR-T therapy is a new treatment for hematological cancers, where autologous T cells are genetically modified to recognize tumor cells. CAR-T has improved survival but remains challenged by cytokine-release syndrome (CRS) and immune effector cell-associated neurotoxicity syndrome (ICANS). Endothelial dysfunction is thought to play a key role in the pathogenesis of CRS and ICANS. We investigate the significance of endothelial dysfunction markers for predicting the development of CRS and ICANS.

Materials and methods: This study includes 38 patients treated with CAR-T cell therapy for B-ALL (n=14) and B-NHL (n=24) at Rigshospitalet from 2019-2025. Patients had a median age of 42.8 years (range: 1-71), and 18% were females. All patients received standard lymphodepleting chemotherapy (LDT). Endothelial markers were analyzed by Luminex and ELISA before the start of LDT, on day 0, +4, +7, +14, +21, +90 after CAR-T infusion, and on the first day of CRS and ICANS diagnosis.

Results: 32 patients (84%) developed CRS (severe CRS: n=6) on median day +1 after CAR-T infusion (range: 0-12), and 14 patients (37%) developed ICANS (severe ICANS: n=5) on median day +6 (range: 1-14). Three patients died before day +90 due to relapse or treatment-related mortality. We have measured biomarkers reflecting different aspects of endothelial dysfunction including endothelial damage, adhesion, glycocalyx shedding, cell-cell contacts and coagulation. Results will be ready for KMS 2026.

Conclusion: Conclusions of the study will be presented at the 2026 KMS.

Acknowledgements: This study is funded by Børnecancerfonden.

Keywords: CD19 CAR-T cell therapy, endothelial toxicities, hematological cancer, cytokine-release syndrome, immune effector cell-associated neurotoxicity syndrome

Session: O2.4: Grundforskning

Johanna Hornhaver

Effects of vasopressin V_{1a} receptor stimulation on the development of urinary tract infections in mice

Johanna Hornhaver (1), Laura Vang Sparsø (1), Aimi D.K. Hamilton (1), Sebastian Bachmann (2), Helle Prætorius (1)

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(2) Institute of Cell Biology and Neurobiology, Charité

Background: Urinary tract infections (UTIs) are among the most common bacterial infections in humans, most often caused by uropathogenic *E. coli* (UPEC). Currently, antibiotics are the only effective treatment. Growth of UPEC can be inhibited by urinary acidification and secretion of antimicrobial peptides from the kidneys' α -intercalated cells. This study aims to investigate whether stimulating these cells can prevent UTIs in mice.

Materials and methods: UTI was established by surgical injection of UPEC ($2 \cdot 10^8$ in 20 μ l saline) into the bladder of anaesthetised 8-week-old female Balb/C mice. The mice were then randomised to one or two intraperitoneally administered doses of V_{1a} receptor agonist AO-4-67 (2 μ g/kg) or saline. Twenty-four hours post-surgery, urine, bladder, kidney, and blood samples were collected to assess infection by counting colony forming units (CFU).

Results: One dose of AO-4-67 significantly decreased CFU in the urine (59.38 ± 69.75 vs 180.5 ± 98.5 CFU $\cdot \mu$ l⁻¹, $p=0.0025$). A tendency towards decreased bacterial load in bladder ($722.5(229.4-2961)$ vs $1466(839.2-3158)$ CFU $\cdot \mu$ l⁻¹, $p=0.0559$) and decreased risk of pyelonephritis (OR=0.24 (95%CI 0.05-1.40), $p=0.2138$) was seen. In the two-dose experiment, we saw no significant difference in CFU in urine, bladder, or kidney between groups. However, the mice in two-dose experiment suffered a significant weight loss.

Conclusion: One dose of AO-4-67 seems to increase bacterial clearance from the urinary tract of mice. However, two doses do not enhance this effect. Instead, it causes a failure to thrive in the animals. Therefore, the V_{1a} receptor agonist is not an immediate candidate for the prevention of UTIs.

Acknowledgements: The project has received funding from the Independent Research Fund Denmark

Keywords: Urinary tract infection, *E. coli*, kidney, mouse model

Session: O2.5: Grundforskning

Anna Louise Venning Grandjean

Effects of a novel STING inhibitor in an adenine-induced chronic kidney disease mouse model

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Background: Chronic kidney disease (CKD) affects an estimated 13,4% of the world's population, yet there remains a lack of treatment options. One driver of CKD pathology is chronic inflammation. Stimulator of interferon genes (STING), a part of the innate immune system that responds to DNA found in the cytosol, has previously been implicated in CKD pathology. This study aims to elucidate the effects of a novel targeted STING degrader to ameliorate disease severity in an adenine diet-induced CKD model.

Materials and methods: 32 male C57BL/6J mice were fed control or 0.2% adenine diet (AD) for 6 weeks and given daily subcutaneous injections (3 mg/kg) of the STING degrader SP2H (Sulis Therapeutics) or vehicle (n=8/group). For electrolyte analysis, weekly blood samples were collected, and 24-hour urine was obtained by housing mice in metabolic cages. At termination kidneys were collected for analysis by RT-qPCR, western blotting or histology.

Results: Preliminary data show mice on AD significantly increase their water and food intake and urine and faeces output, compared to control diet. From the third week of the study mice on AD had significantly lower body weights compared to control diet ($P < 0.0001$, two-way ANOVA). No significant difference was observed between SP2H or vehicle treated groups in body weight, drinking volume or urine output. mRNA levels of KIM1 (injury marker) were significantly lower in kidneys from SP2H treated mice on AD.

Conclusion: Preliminary analysis suggests a modest effect of STING inhibition on hallmarks of CKD at the 6-week timepoint. Ongoing analysis will elucidate the time dependent effects of STING inhibition by SP2H on CKD pathology.

Acknowledgements: This study was financed by the Karen Elise Jensens Foundation.

Keywords: Chronic kidney disease, STING, adenine, in vivo animal experiment

Session: O2.6: Grundforskning

Anton Blom Handberg

Regulation of hypothalamic inflammation in obese mice by Heligmosomoides Polygyrus worm infection.

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Background: Previous animal studies have demonstrated that infection with *Heligmosomoides polygyrus* (*H. poly*) induces weight loss in obese mice. Although *H. poly* secretes products with immunomodulatory properties, the mechanisms underlying helminth-mediated weight regulation remain unclear. Given the central role of the hypothalamus in regulating energy balance and body weight, we hypothesized that *H. poly* infection modulate hypothalamic inflammation, thereby contributing to metabolic regulation in obesity.

Materials and methods: 24 male C57Black mice treated with Low- or high-fat diet or High-fat+*H. poly* infection, diet 14 weeks, and infection 4 weeks. Hypothalamus was harvested, immunohistochemically stained for GFAP (Astrocyte marker) and IBA-1 (Microglia marker) and analyzed in Fiji. 29 additional mice underwent cognitive tests; Y-Maze, elevated plus maze, open field test and Novel object recognition test. LPS activated Immortalized microglia treated with *H. poly* soluble product underwent qPCR for inflammatory markers.

Results: When compared to High-fat, the Low-fat and Infection had a lower cell count of both astrocytes and microglia in the hypothalamus. Analysis of cognitive tests are still underway, but preliminary findings indicate increased anxiety and decreased spatial memory in High-Fat, when compared with Low-fat and Infection. qPCR results are being analyzed, but preliminary cytokine assay from mice hypothalamus on similar treatment, displayed an increase in inflammatory markers.

Conclusion: All though further detailed investigation is required to validate the results and these studies are under progress, analysis of preliminary studies indicate a biological effect of high-fat diet, that's mitigated by gut-worm infection with *H. poly*.

Acknowledgements: This project was funded by Danmarks Frie Forskningsfond and the Lundbeck foundation.

Keywords: Parasitology, Inflammation, Weight-Gain, Behavioural study.

Session: O2.7: Grundforskning

Simon Filip Pascu

An in vitro study investigating carbohydrate matrix production of specific oral bacteria by combining FISH and FLBA

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Background: The dental biofilm matrix is a key determinant of virulence and plays a central role in caries development. While glucans have been extensively studied, galactose- and fucose-based carbohydrates have recently been identified as major matrix components. This study examines the spatial relationships between these carbohydrates and the bacterial genera *Streptococcus* and *Veillonella* in dental biofilms to identify likely matrix producers.

Materials and methods: Combined fluorescence in situ hybridization (FISH) and fluorescence lectin binding analysis (FLBA) are performed on a salivary model of dental biofilm grown in the presence and absence of sucrose. The spatial relationship between glucose- (GLC), galactose- (GAL) or fucose-based (FUC) matrix components and the bacterial genera *Streptococcus* and *Veillonella* will be assessed by confocal laser scanning microscopy (CLSM) and subsequent digital image analysis.

Results: Biofilms grown with sucrose contained more streptococci (83.6% vs. 32.3%) and higher levels of all matrix components investigated normalized to bacterial biovolume (GAL: 233.7% vs. 27.3%, FUC: 256.0% vs. 45.3%, GLC: 234.0% vs. 1.0%). *Veillonella* spp. were more abundant without sucrose (16.6% vs. 3.1%). Colocalization for all matrix components investigated was significantly higher with streptococci than with *Veillonella* spp. under both growth conditions (all $p < 0.0001$).

Conclusion: The results suggest that streptococci are not only involved in the production of glucans, but also of galactose- and fucose-based matrix carbohydrates. *Veillonella* spp. are less likely to play a significant role in the production of these carbohydrate matrix components.

Acknowledgements: Funded by the Danish Dental Association.

Keywords: Caries, Biofilms, Fluorescence in situ Hybridisation, Dentistry

Poster session 1: Epidemiologi

Session: P1.1: Epidemiologi

Svend Storm Rasmussen

Comparison of Doctor-Patient Communication in Video Consultations and Face-to-Face Consultations: An Observational Study in General Practice

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Background: Doctors' communication is essential, improving satisfaction, adherence, health outcomes and reducing complaints. Trust and shared decision-making rely on strong communication, and training has lasting benefits. Video consultations increase access but may hinder emotional understanding and reduce patient participation. How digital consultations change communication is still unclear. The Four Habits Coding Scheme assesses four core habits and dialogue pattern analysis will

Materials and methods: The study uses 150 recorded consultations from nine general practitioners, equally split between video and face-to-face formats. Eligible patients were adults, Danish speaking, without cognitive impairment. After verbal consent, consultations were recorded on secure, approved systems and stored encrypted. Communication quality is assessed with the Four Habits Coding Scheme and dialogue pattern analysis will be performed by first-author.

Results: Results are pending.

Conclusion: Conclusion will rely on the pending results.

Acknowledgements: The authors express their gratitude to all study participants. A special thanks to my supervisors, Anette Fischer Pedersen and Christian Emil Brinck. This study was funded by Lundbeckfonden (160,000 DKK) and P. Carl Petersen Fond (60,000 DKK)

Keywords: Doctor-patient-communication Video consultations (VCs) Four Habits Coding Scheme (4HCS) Dialogue pattern analysis Communication training

Session: P1.2: Epidemiologi

Anna Mosborg Petersen

A cross-sectional study of the correlation between cardiovascular autonomic neuropathy and diabetic peripheral neuropathy in a Greenlandic population

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Background: The increasing prevalence of type 2 diabetes mellitus (T2DM) in Greenland is associated with an increase in diabetic complications, especially diabetic peripheral neuropathy (DPN) and cardiovascular autonomic neuropathy (CAN). Although they share pathophysiological factors, their relationship remains unclear. Better understanding may enable earlier diagnosis and improved prevention, which is particularly important in Greenland, where accessible diagnostics are crucial to enhance quality of life.

Materials and methods: To address this, a cross-sectional study of a sub-cohort of the ongoing study "Diabetic Neuropathy in Greenlandic Inuit: Clinical and Genetic Aspects" was conducted. In total, 158 Greenlanders with T2DM, regardless of disease complexity, underwent examination for DPN and CAN. DPN was defined by a VPT ≥ 25 V measured on the hallux bilaterally by a biothesiometer. CAN was defined by ≥ 2 abnormal CARTs measured by Vagus™.

Results: The prevalence of DPN and CAN was 23.5% and 19.7%, respectively. Among 137 individuals assessed for both DPN and CAN, no significant association was found between DPN and CAN, as determined by a Chi-square test of independence ($\chi^2 = 0.026$, $p > 0.05$). In addition, no notable difference in the prevalence of CAN was found between individuals with DPN and without DPN (20% vs. 18.7%). Likewise, no difference in the prevalence of DPN was observed in those with CAN and without CAN (23.1% vs. 21.6%).

Conclusion: This study found that the prevalence of DPN and CAN among Greenlanders with a median T2DM duration of 9 years was comparable to previous studies using stricter criteria for neuropathy. No significant association between CAN and DPN was found, supporting the need to screen for both neuropathies.

Acknowledgements: A special thanks to my supervisors for their guidance and assistance throughout this project. I also thank Steno Diabetes Center Greenland and Novo Nordisk Foundation.

Keywords: Type 2 diabetes, Diabetic complications, Neuropathy, Epidemiology.

Session: P1.3: Epidemiologi

Signe Søndergaard Høgh

Time from imaging to surgery and risk of non-resectability in pancreatic cancer patients

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Background: Pancreatic cancer is an aggressive malignancy with a 5-year survival rate under 10%. Surgical resection is offered to 20% of all patients as the only potentially curative treatment. However, 20-25% of the patients have vascular involvement or metastases discovered during surgery, making surgical treatment impossible. This is associated with a poor prognosis since only half of the patients will make it to chemotherapy, additionally, it contributes to increased healthcare costs with no benefit.

Materials and methods: Study design: A cohort study Data source: Danish Pancreatic Cancer Database (DPCD) Study population: All patients recorded in the DPCD with a surgical during 2015-2024 (n~2,500) Exposure: Time from most recent CT of the abdomen until surgery Outcome: Risk of non-resectability Analysis plan: Logistic regression model to estimate the risk of non-resectability. Building a literature- and practice-informed directed acyclic graph to identify potential confounders, colliders, and mediators to address.

Results: Results have not been obtained yet. We aim to clarify the optimal time from most recent imaging material to the date of surgery. This could ultimately reduce the number of patients undergoing unnecessary surgery and help to reduce healthcare costs. We hypothesize that the risk of non-resectability increases with increasing time from imaging to surgery, particularly beyond four weeks.

Conclusion: No conclusion has been made yet.

Acknowledgements: This project is funded by Department of Surgery research funds. The authors declare no conflict of interest.

Keywords: Pancreatic cancer, futile laparotomy, surgical resection, metastasis rate, preoperative imaging

Session: P1.4: Epidemiologi

Line Jakobsen Moestrup

The interaction effect between severe mental disorders and hip fracture on the risk of postoperative infection

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Background: Hip fracture (HF) is a major public health concern worldwide. HF patients have a high risk of postoperative complications, whereas postoperative infections (POI) are the most common. Almost 30% of HF patients have one or several mental disorders (MD) and MDs are associated with increased POI risk. It remains unclear whether severe MDs interacts with HF surgery to increase POI risk beyond their individual effects.

Materials and methods: We will conduct nationwide cohort study using data from Danish medical databases. The study includes cohort of HF patients aged ≥ 65 years operated during 2004-2021. The comparison cohort are individuals from the general population matched on age, sex, alive and without earlier HF on the index date (=surgery date of HF patients). Exposure is any MD and subcategories of MDs based on diagnosis codes F00-F48. The outcomes are hospital- and community-treated infections within 30 days after surgery.

Results: We hypothesize that the interaction of HF and MDs increases the risk of infection beyond what is explained by their additive effect. Up to date, we identified cohort of HF patients. Next steps are to identify comparison cohort and link MDs and POI data to both cohorts. As a measure of interaction on absolute scale, the interaction contrast will be calculated. As a measure of interaction on relative scale, the attributable fraction will be calculated.

Conclusion: An analysis plan has been developed. Data management is 80% ready. Statistical analysis will be done during December 2025-February 2026. Results will be presented at the conference.

Acknowledgements: Independent Research Fund Denmark (Grant nr. 4308-00074B)

Keywords: Hip fracture, mental disorders, postoperative infections

Session: P1.5: Epidemiologi

Albina Salihu

ICSI in women with advanced age (≥ 40) in combination with reduced sperm quality: A nationwide register-based study.

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Background: Infertility and declining fertility rates represent an increasing challenge worldwide. 11% of the Danish birth cohort is born after medically assisted reproduction, of which half are IVF/ICSI treatments. Studies suggest that advanced maternal age and decreased sperm quality, both separately, have a negative effect on in vitro fertilization/intracytoplasmic sperm injection (IVF/ICSI) outcomes. Thus, little is known about the combined effect of advanced maternal age and decreased sperm quality.

Materials and methods: The study is a nationwide register-based cohort study that investigates all IVF/ICSI cycles between 2015-2024 of all 18 participating clinics in Denmark. Data will be collected from the Danish Medical Data Center (DMDC). In addition, data from DMDC will be supplemented with data from the Danish Birth Registry, the IVF Registry, the Laboratory database, and the Danish National Patient Registry. The main outcome is live birth rates.

Results: The study is in its initial phase, and data analysis has not yet been conducted. If available, preliminary results will be presented at the KMS 2026.

Conclusion: No conclusion has been made yet. We hypothesize that ICSI in women with advanced age in combination with decreased sperm quality has a low success rate.

Acknowledgements: The project is financially funded by MERCK A/S.

Keywords: ICSI, advanced maternal age, sperm quality

Session: P1.6: Epidemiologi

Agnete Ejstrud

Endometriosis and Pelvic Pain in Women with Mayer-Rokitansky-Küster-Hauser (MRKH) Syndrome: A Nationwide Population-Based Study

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Background: Mayer-Rokitansky-Küster-Hauser syndrome (MRKHS) is a congenital disorder characterized by uterovaginal agenesis in women with a normal female karyotype. Current literature describes cases of endometriosis in MRKHS, particularly in those with functional endometrium in uterine remnants. However, no population-based studies have quantified the risk of endometriosis or pelvic pain issues in this patient group.

Materials and methods: This nationwide population-based cohort study utilizes the DanMRKH cohort of 277 validated MRKHS cases identified in the Danish National Patient Registry from 1977-2023, each matched with 100 comparators by sex and age. The primary outcome is hospital-recorded endometriosis, while secondary outcomes include lower abdominal/pelvic pain, benign hysterectomy and laparoscopy procedures, and prescriptions of hormonal contraceptives and analgesics. Time-to-event analyses will assess associations.

Results: This study aims to investigate the risk of endometriosis and pelvic pain issues among Danish women with MRKHS. Preliminary results are expected to be ready for presentation at KMS2026.

Conclusion: This will be the first population-based study on the risk of endometriosis and pelvic pain issues among women with MRKHS. Findings may inform clinical care and contribute to the broader understanding of endometriosis pathogenesis.

Acknowledgements: This project has received funding from Lundbeckfonden. No conflicts of interest to declare.

Keywords: Mayer-Rokitansky-Küster-Hauser syndrome, endometriosis, pelvic pain, müllerian agenesis, rare diseases, epidemiology

Session: P1.7: Epidemiologi

Anders Boysen Dall

Clinical Validation of Patient-Reported Cognitive Assessment Tools for Adverse Effects of Electroconvulsive Therapy in Patients with Depression

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Background: While electroconvulsive therapy (ECT) is highly effective for several severe psychiatric conditions, its cognitive adverse effects are challenging to monitor, as objective assessments are often resource-intensive. This study seeks to examine the reliability and validity of two patient-reported outcome measures (PROMs) - the Squire Subjective Memory Questionnaire (SSMQ) and the Global Self-Evaluation of Memory (GSE-My) - for capturing cognitive change in patients undergoing ECT for depression.

Materials and methods: In a prospective observational design, participants complete the SSMQ and GSE-My at four timepoints: prior to treatment initiation, following the sixth ECT session, upon completion of the treatment series, and at a two-month follow-up. These PROMs are compared with clinician-rated cognitive tests, including the Screen for Cognitive Impairment in Psychiatry and the Columbia Autobiographical Memory Interview—Short Form. Psychometric analysis will be performed.

Results: Enrollment of participants and data collection began in early October 2025. Preliminary findings will be presented at Kongres for Medicinsk Studenterforskning 2026.

Conclusion: PROM-based monitoring of cognitive adverse effects could provide clinicians with timely, actionable information to guide treatment adjustments.

Acknowledgements: This project is funded by the Lundbeck Foundation.

Keywords: Psychiatry, Electroconvulsive Therapy, Psychometrics

Session: P1.8: Epidemiologi

Ida Marie Wibrand

Temporal trends in Epilepsy Incidence in Denmark

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Background: Epilepsy is one of the most common neurological disorders, affecting approximately 50 million people worldwide. Despite its high prevalence and significant personal and societal burden, knowledge about temporal changes in incidence and age-specific risk factors remain incomplete. Denmark, with its comprehensive nationwide health registers and decades of follow-up, offers a unique opportunity to examine long-term trends in epilepsy incidence and the potential factors driving them.

Materials and methods: This nationwide population-based cohort includes all individuals born and residing in Denmark at cohort entry (January 1, 1977 or date of birth). Using linked national registers, persons are followed until first epilepsy diagnosis, death, emigration, or December 31, 2022. Epilepsy is defined by ICD codes. We will estimate age- and sex-specific temporal trends in epilepsy incidence and explore potential drivers, focusing on perinatal and birth-related factors.

Results: We expect to include approximately 7 million individuals and identify several hundred thousand incident epilepsy cases. Analyses will provide age- and sex-specific incidence estimates and quantify temporal changes across nearly five decades. We further strive to evaluate potential perinatal risk factors and their impact on these trends

Conclusion: This study will provide key insights into the epidemiology of epilepsy by identifying temporal incidence trends in Denmark and relating them to underlying aetiology. Findings may inform prevention, early intervention, and healthcare planning.

Acknowledgements: We gratefully acknowledge financial support from the Lundbeck Foundation. The study was conducted as part of a research year at Aarhus University (Department of Neurology) with additional support from the National Center for Register-based Research.

Keywords: Epilepsy, Epidemiology, Public health, Register-based study, Temporal trends

Session: P1.9: Epidemiologi

Anna Frøbert Welinder

Complications during lumbar selective nerve root block: a scoping review

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Background: Background: Selective Nerve Root Block (SNRB) is widely used for managing radicular pain, serving both therapeutic and diagnostic purposes. A complete list of all reported complications associated with SNRB has never been reported. Aim: To map the existing evidence on complications associated with lumbar SNRB.

Materials and methods: A scoping review was conducted of peer-reviewed studies on complications associated with transforaminal or foraminal lumbar SNRB in adults with degenerative spine conditions. A systematic search was performed across six databases on 9th of September 2024. Two independent reviewers screened studies for eligibility.

Results: Of 6,939 screened studies, 118 met inclusion criteria, comprising 15,817 patients and 72,518 SNRB procedures. In total, 4,439 complications (145 types) were reported. Most were mild/moderate (5.2%); severe events were rare. The adjusted complication rate was 5.4% per procedure and 5.8% per patient, with intravascular injection, vasovagal reactions, and central steroid effects most common.

Conclusion: Discussion and conclusion: The SNRB procedure has a low complication rate, with serious complications being rare. This scoping review highlights the heterogeneous complication data in publications. Standardized guidelines for SNRB complication reporting are warranted.

Acknowledgements: Funding: None Conflict of interest: Nothing to declare

Keywords: Lumbar selective nerve root block (SRNB) Complications CTCAE classification Scoping review

Poster session 2: Grundforskning

Session: P2.1: Grundforskning

Rakel Jakobsen

Polymyxin B as a Reverse Adjuvant for Gram-Negative Bacterial Outer Membrane Vesicles: Detoxification and Enhanced Uptake In Vitro

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Background: Outer membrane vesicles (OMV) play a significant role in host–pathogen interactions and contribute to inflammation in Gram-negative infections. Polymyxin B (PMB) is a peptide-based antibiotic that binds and neutralizes lipid A in lipopolysaccharide (LPS), but whether this also modulates OMV immunogenicity and uptake is unclear. We hypothesized that PMB can detoxify native OMVs by masking LPS, thereby reducing proinflammatory responses in antigen-presenting cells while preserving vesicle uptake.

Materials and methods: OMVs were isolated from a laboratory strain of *E. coli* (DH5 α) and incubated with 15 μ g/mL PMB. Vesicle integrity and size distribution were assessed using NTA and cryo-TEM. OMVs were DiO-labelled and incubated with human peripheral blood mononuclear cells, and uptake in CD14⁺ monocytes was quantified by flow cytometry. Murine bone marrow-derived dendritic cells (BMDC) were stimulated with OMVs \pm PMB, and cytokine secretion of TNF- α and IL-10 was quantified by ELISA.

Results: OMVs exhibited consistent size distribution and intact morphology prior to PMB exposure, confirming successful vesicle production and isolation. Following incubation with PMB, uptake of DiO-labelled OMVs in human CD14⁺ monocytes were significantly enhanced. Furthermore, co-treatment with OMV and PMB markedly reduced OMV-induced TNF- α secretion in murine BMDCs, while IL-10 levels were preserved. No cytotoxicity was observed.

Conclusion: PMB modulates the inflammatory and cellular uptake properties of native OMVs by reducing their proinflammatory activity and enhancing uptake by immune cells, presuming less nephrotoxicity related to PMB. These findings support the potential use safer OMV-based vaccine platforms

Acknowledgements: I thank my supervisors for their guidance and support. This project is funded by: P. Carl Petersens Fond.

Keywords: Polymyxin B – Outer Membrane Vesicles – Lipid A Neutralization – Immunomodulation – Cellular Uptake – Cytokine Response

Session: P2.2: Grundforskning

Ida Berg

Biomarkers of neuronal dysfunction in children undergoing haematopoietic stem cell transplantation

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Background: Haematopoietic stem cell transplantation (HSCT) is a life-saving treatment for children with severe malignant and non-malignant diseases, but neurocognitive sequelae are a major concern. This project investigates biomarkers of neuronal dysfunction in the early phase of paediatric HSCT to understand the immediate impact of this treatment on neuronal function. We hypothesize that HSCT, including the cytotoxic treatment and acute complications increases plasma biomarkers of neuronal dysfunction.

Materials and methods: The study takes advantages of the SCORE cohort, a prospectively included cohort of more than 170 paediatric patients undergoing HSCT. Serially collected blood samples taken and clinical data are available in a database and a biobank covering the period 2010-2025. The neurobiomarkers Neurofilament Light Chain protein (NfL) and Glial Fibrillary Acidic Protein (GFAP) will be measured in plasma via single-molecule array (Simoa) technology.

Results: The study is in its initial phase and the results are currently in progress. The findings may increase the insights into how elevations in neuro-biomarkers relates to specific components of the treatment, including type and intensity of chemotherapy and irradiation. Results will be presented at the conference in the final poster.

Conclusion: By investigating the levels of biomarkers of neuronal dysfunction we aim to increase insights into the biological mechanisms underlying neurological impairment post HSCT. We believe that results of this study will advance our understanding of the effects of paediatric HSCT on the brain.

Acknowledgements: This project is funded by Børnecancer Fonden og Kræftens Bekæmpelse.

Keywords: Paediatric haematopoietic stem cell transplantation, neurobiomarkers, neurocognitive sequelae

Session: P2.3: Grundforskning

Mila Uldall Sørensen

The NCK Adaptor Protein Modulates T-cell Mediated Inflammation in Psoriasis: A Potential Therapeutic Target on the Horizon

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Background: Psoriasis is a chronic immune-mediated skin disease affecting millions worldwide. T-cell-driven cytokine production fuels keratinocyte hyperproliferation and inflammation. Although current biologics help many patients, limited responses and adverse events remain a challenge. The adaptor protein Nck modulates T-cell receptor signaling and cytokine output, and may contribute to psoriasis pathogenesis, representing a potential therapeutic target.

Materials and methods: Methods include three work packages. PBMCs from healthy donors and psoriasis patients will be stimulated \pm an Nck inhibitor, and cytokine genes analyzed by qPCR. Nck expression and localization will be evaluated by immunohistochemistry and qPCR in paired lesional and non-lesional skin. Finally, psoriatic skin biopsies will be cultured \pm inhibitor in an ex vivo model, followed by RNA sequencing to assess transcriptomic changes.

Results: We anticipate that Nck expression will be upregulated in lesional psoriatic skin compared to non-lesional skin, and that Nck inhibition will reduce T-cell activation and pro-inflammatory cytokine production in vitro. Furthermore, ex vivo treatment with an Nck inhibitor is expected to attenuate inflammatory gene expression in psoriatic skin biopsies.

Conclusion: This project aims to elucidate the role of Nck in psoriasis pathogenesis. By linking Nck-mediated T-cell signaling to psoriatic inflammation, our findings may establish Nck as a novel therapeutic target and pave the way for new treatment strategies beyond current biologics.

Acknowledgements: This project was funded by the Psoriasis Foundation. I thank supervisors Claus Johansen and Thomas Emmanuel, as well as laboratory technicians Annette Blak Rasmussen, Hang Pham Jensen and Kristine Møller for technical assistance without whom this project would not have happened. I also acknowledge the Department of Dermatology and the Department of Clinical Medicine, Aarhus University Hospital.

Keywords: Psoriasis T-cell activation Nck adaptor protein TCR signaling Cytokine regulation Translational dermatology

Session: P2.4: Grundforskning

Arora Sigurdardottir Sigurdal

Visualizing Neuron-Tumor Synapses in Human Resected Glioblastoma and Metastatic Brain Tumor Tissue

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Background: Glioblastoma (GBM) and brain metastases are highly aggressive tumors with poor prognosis. New research shows that GBM and metastatic cells form synapse-like connections with neurons. The activity of surrounding neurons, seems to promote the tumor growth through the neuron-to-tumor synapses, therefore facilitating tumor spread and resistance. Understanding these connections could be a key in developing new, much needed, targeted therapies ultimately improving patient outcomes.

Materials and methods: To better understand the neuron–tumor cell interaction, human tumor-infiltrated brain tissue will be examined. The tissue will be immunostained with markers identifying neurons, tumor cells, and synapses. Using expansion microscopy, the tissue is then physically expanded, allowing for nanoscale-resolution imaging. This method boosts signal detection by decrowding biomolecules, making it possible to visualize the neuron-tumor cell synapses.

Results: The results will be images of neuron-tumor synapses. Data collection is ongoing. Preliminary results will be presented at Kongres for Medicinsk Studenterforskning 2026.

Conclusion: Conclusion is pending.

Acknowledgements: This project is supported by Lundbeckfondens Neurokirurgiske skolarstipendie.

Keywords: Brain tumor, Glioblastoma, Synapses, Expansion Microscopy

Session: P2.5: Grundforskning

Laura Agerley Rørsgaard

Characterization of calcinosis cutis in systemic sclerosis and dermatomyositis using multimodal ex vivo analysis

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Background: Calcinosis cutis (CC) is a painful deposition of calcium phosphate in the skin and subcutis, occurring in systemic sclerosis (SSc) and dermatomyositis (DM). CC contributes to morbidity and reduced quality of life, yet no standard therapy exists. The mineral composition and structural features of CC lesions in SSc and DM remain insufficiently characterized.

Materials and methods: Within the multicenter CURING CALCINOSIS study, several ex vivo CC lesions from six patients with SSc and DM are collected. CC lesions are evaluated by microCT for volume, surface area, internal voids, and density. Mechanical testing assesses fragility and stiffness. Mineral composition is analyzed using infrared spectrometry.

Results: Pilot analyses confirm that microCT enables high-resolution 3D assessment of CC architecture and that infrared spectrometry is feasible for characterizing mineral composition. Preliminary data will be presented on KMS 2026 if ready.

Conclusion: The study applies a multimodal approach to characterize CC in SSc and DM. Pilot data illustrates the feasibility of combining microCT, mechanical testing, and spectrometry. Systematic mapping of morphology and composition may provide insight into pathogenesis and support future treatment strategies.

Acknowledgements: This research is made possible by Sklerodermifonden, Comparative Medicine Lab, Aarhus University, Department of Biomedicine, Aarhus University, Department of Clinical Biochemistry, Aalborg University Hospital and CURING CALCINOSIS at Department of Dermatology, Aarhus University Hospital

Keywords: calcinosis cutis systemic sclerosis dermatomyositis dermatology imaging

Session: P2.6: Grundforskning

Amalie Quist Rousing

Cystic Fibrosis in the Kidney: Assessing CFTR Modulator Efficacy via Urine Bicarbonate Excretion following a Short Therapy Interruption

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Background: Renal CFTR function is essential for urinary HCO₃⁻ excretion and is markedly impaired in people with CF (pwCF). Challenged urinary HCO₃⁻ excretion may serve as a simple in vivo biomarker of CFTR function, assessing CFTR dysfunction and therapy-induced rescue. This study investigates changes in challenged urine HCO₃⁻ excretion in pwCF treated with elexacaftor/tezacaftor/ivacaftor (ETI), before, during, and after a short therapy interruption, and its association with ETI plasma concentrations.

Materials and methods: PwCF underwent a 90-min oral NaHCO₃- challenge test before, during, and after a randomized ETI interruption (12, 36, or 60 hours). Baseline urine and blood and post-challenge urine samples were collected at each visit. Urine and blood acid-base parameters and ETI plasma concentrations were measured. Currently, 15 pwCF have completed all three visits, and 23 have completed the initial visit. We aim to include a total of 30 pwCF.

Results: Preliminary data show lower mean 90-minute HCO₃⁻ excretion in pwCF compared to healthy controls (4 vs. 11.2 mmol). In pwCF, HCO₃⁻ excretion decreased (Δ : 1.9 mmol, 95% CI: 0.8-2.9) and urine titratable acid excretion increased (Δ : 1.6 mmol, 95% CI: 3-0.2) during ETI interruption. Higher pre-test plasma base excess and HCO₃⁻ were associated with 29% and 40% higher HCO₃⁻ excretion per mmol/L, respectively. ETI plasma concentration results are pending.

Conclusion: Challenged urine HCO₃⁻ excretion is highly sensitive to short-term ETI therapy changes, supporting its dynamic reflection of CFTR function and its use as an in vivo biomarker in pwCF.

Acknowledgements: We thank all pwCF and healthy control participants for their participation in the study. K.S. Sørensen, I. Høj, Y. Yehdego, A. Søndergaard og S. Schieber for expert assistance. We also thank Novo Nordisk Fonden for funding the study.

Keywords: Cystic fibrosis CFTR Renal acid-base Acid-base physiology

Session: P2.7: Grundforskning

Freja Vigen Christiansen

Mapping Cells in Glioblastoma

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Background: Glioblastoma (GBM) is an aggressive brain cancer marked by a highly heterogeneous cellular environment and resistance to treatment. We aim to refine the description of GBM cell populations, including their interactions with a particular focus on how they relate to the surrounding immune cells.

Materials and methods: We performed spatial transcriptomics on tumor core and infiltration zone tissue from six GBM patients employing the CosMx Human 6K Discovery Panel, profiling approximately 6 000 genes at single-cell level. Analyses were performed in Python and R on the GenomeDK cluster. After initial quality control, we focused on identifying the major cell types in the analysed GBM.

Results: Annotating cell types in spatial transcriptomics is challenging due to sparse transcript counts and the limited gene number, requiring careful and validated strategies. We tested several approaches, including marker-based scoring and mapping based on a GBM atlas through multiple modalities. Cell composition seems to differ across patients, and we are currently correlating the annotations with corresponding H&E-stained tissue to confirm with morphological features.

Conclusion: Defining the cell types enables downstream neighbourhood and gene set enrichment analyses of tumor and immune populations. We are soon extending the study with a new CosMx dataset from 16 patients to further investigate GBM microenvironmental interactions with immune cells.

Acknowledgements: I am grateful to my supervisors Prof. Jens R. Nyengaard, PhD-student Kata Molnar and Associate Prof. Anders R. Korshøj for their guidance and support, and to Laboratory Technician Trine W. Mikkelsen for her dedicated assistance in the laboratory. This Research year was financially supported by the Danish Cancer Society.

Keywords: Glioblastoma, spatial transcriptomics, bioinformatics, neuroscience

Session: P2.8: Grundforskning

Emma Paydari

Prognostic significance of tumour-associated macrophages in ER+ and ER- breast cancers

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Background: Breast cancer (BC) is the most common malignancy in women. In recent years, there is increased attention to the cell types in the tumour microenvironment including tumour-associated macrophages (TAMs). However, there is still limited evidence on the role of TAMs as a prognostic and/or predictive biomarker in BC. This study will characterise the distribution of M1 and M2 subsets in oestrogen receptor positive and oestrogen receptor negative BCs and evaluate how TAMs are associated with prognosis.

Materials and methods: Multiplex fluorescent immunohistochemical panels will be developed distinguishing between M1 and M2 macrophages. The M1 panel will include CD68, CD11c and iNOS, while the M2 panel will include CD68, CD163 and CD206. The panels will be tested on tissue microarray blocks from a cohort of > 1300 node-positive BC patients and correlated with associated clinical follow-up data. Endpoints considered will be local recurrence, distant recurrence, breast cancer-specific mortality and overall mortality.

Results: An optimisation of macrophage markers has been performed leading to the above mentioned M1 and M2 panels. The clinical testing on BC tissue microarray blocks will start in February 2026. Therefore, no results are obtained yet, but preliminary results will be presented at the KMS 2026.

Conclusion: Preliminary results have shown successful optimisation of the M1 and M2 panels, which are now ready for testing in the clinical material from the well-described cohort of BC and subsequently correlated with clinical data.

Keywords: Breast Cancer, Tumour-associated macrophages, Oestrogen receptor positive breast cancer, Oestrogen receptor negative breast cancer, Multiplex fluorescent immunohistochemistry

Oral session 3: Gynækologi, Obstetrik og Pædiatri

Session: O3.1: Gynækologi, Obstetrik og Pædiatri

Nadia Hedegaard Hansen

The PEPP study: Pregnancy's Effect on Physical fitness and Pain

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Background: Pregnancy is a period of significant physiological adaptations in order to support fetal development, but may also influence maternal physical performance and health. Understanding the impact of these on physical fitness and pain perception is essential for tailoring health recommendations and exercise guidelines for pregnant women. This study aims to examine changes in physical fitness parameters and pain perception from pre-pregnancy, in each trimester and after pregnancy.

Materials and methods: This is a prospective, longitudinal, observational study, examining 20 women pre-pregnancy, in each trimester of pregnancy, and after pregnancy. The experimental protocol includes questionnaires, blood samples, assessments of pain threshold and tolerance, thenar muscle thickness, fingergrip, handgrip, and elbow flexor strength, and estimation of VO₂-max. Additionally, physical activity levels are measured for seven days. A control group of 20 women undergoes the same protocol for comparison.

Results: The study is ongoing (recruitment began December 2024). Preliminary results comparing pre-pregnancy and 1st trimester (pregnant, n=15; control, n=11) indicate a decrease in thenar thickness (p=0.022), energy level (p=0.004) and handgrip strength (p=0.097) from pre-pregnancy to 1st trimester in the pregnant group compared to the non-pregnant group. More preliminary results including both 2nd and 3rd trimester are expected to be available by KMS 2026.

Conclusion: There are no overall conclusions thus far, as data is still being collected. However, preliminary results indicate that several physical parameters are affected from prepregnancy to 1st trimester of pregnancy.

Acknowledgements: Thank you to A. P. Møller Fonden, Helga og Peter Kornings Fond, and Dagmar Marshalls Fond for supporting the project. Thank you to Department of Clinical Medicine - Comparative Medicine Lab and Department of Public Health for enabling the project by making both equipment, space, and guidance available. There are no conflicts of interest.

Keywords: Pregnancy, physical fitness, physical activity, pain

Session: O3.2: Gynækologi, Obstetrik og Pædiatri

Mathilde Kristine Kristensen

Effectiveness of an Innovative and Non-Invasive Treatment in Promoting HPV Clearance and Regression of Cervical Intraepithelial Neoplasia: A Randomized Controlled Trial.

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Background: Current management strategies for cervical intraepithelial neoplasia (CIN1-3) aim to prevent cervical cancer (CC). Treatment for CIN2+ is cervical excision, which carries risks. A watchful waiting approach is used for CIN1/2, with potential persistence of Human Papilloma Virus (HPV) and progression, while also imposing a psychological burden. This study evaluates if a vaginal gel promotes regression of CIN1/2 and HPV clearance. Including patient satisfaction, compliance, and vaginal microbiome.

Materials and methods: This is designed as a randomized controlled trial. Women aged 30-50 years with HPV and CIN1/2 (n=70), will be randomized 1:1: 1. Intervention group (n=35); Vaginal gel applied daily for 21 days each month over 3 months, followed by every other day over an additional 3 months. 2. Control group (n=35); conventional watchful waiting. Follow-up at 6 months with cervical cytology, HPV and vaginal microbiome sampling, colposcopy guided cervical biopsies, and patient-reported questionnaires.

Results: This project commenced on 1. September 2025 and the recruitment will start in January 2025 and until all 70 eligible participants are included. The primary outcomes are histopathological regression of CIN1 and CIN2 and HPV clearance at 6 months. Secondary outcomes are patient satisfaction, treatment compliance, questionnaires regarding the level of anxiety and stress related to CC prevention and vaginal microbiome composition and diversity before and after treatment with the gel.

Conclusion: This project has potential to offer an effective, non-invasive, innovative management strategy for HPV infection and CIN1/2 lesions - going to the global goal of eliminating CC. Moreover, this approach has potential to reduce the psychological burden and healthcare costs related to CC prevention.

Acknowledgements: This project was supported with funding for the salary of a research year student of 120,000 dkk from the Danish Cancer Society and funding to initiate the project from UNICCA – University Research Clinic for Cancer Screening, Department of Public Health Programmes, Randers regional Hospital.

Keywords: Cervical Cancer Prevention, Human Papilloma Virus (HPV), Innovative Treatments, Non-Invasive Treatments, Women's Health.

Session: O3.3: Gynækologi, Obstetrik og Pædiatri

Johanne Hørning Risager

Cerclage practice: A nationwide 22-year cohort of procedures, patients, and pregnancy outcomes

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Background: A cervical cerclage aims to prevent spontaneous preterm birth in women with a weak cervix by surgically placing a band around the cervix to provide mechanical support. The procedure can be performed transvaginally (TVC) or transabdominally (TAC). International guidelines on cerclage indications differ, which will be reflected in its clinical use. Few studies exist to describe population-based practices. This study aims to describe national cerclage practice in Denmark over 22 years.

Materials and methods: The study was a nationwide, registry-based cohort study of cerclage procedures performed in Denmark from 1997 to 2018. Data from Danish health registries were combined to identify 1) cerclage procedures and 2) singleton pregnancies with a cerclage in situ and birth >22 weeks. We described cerclage incidences, patient characteristics, pregnancy exposures, and outcomes. Results were stratified according to type of cerclage: early TVC (placed <18+0 weeks), late TVC (18+0-25+6 weeks), and TAC.

Results: The study included 2,363 cerclages; 1264 early TVCs, 666 late TVCs, and 433 TACs. The number of cerclage procedures performed from 1997-1999 was 247, compared with 489 cerclages from 2015-2017. The incidences for each type of cerclage varied over time. In 1,979 singleton pregnancies with a cerclage, birth <34 weeks occurred in 140/1131 (12.4%) pregnancies with early TVC, 178/443 (40.2%) with late TVC, and 28/405 (6.9%) with TAC.

Conclusion: The number of cerclages doubled over the study period due to an increase in late TVC and TAC procedures. Birth <34 weeks was lowest in TAC pregnancies.

Acknowledgements: The study was funded by the Novo Nordic Foundation (Grant ref.: NNF21OC0071037)

Keywords: Obstetrics, preterm birth, cerclage, weak cervix, epidemiology, clinical practice

Session: O3.4: Gynækologi, Obstetrik og Pædiatri

Sandra Egholm Andersen

Title: Day-to-Day Analysis of Postoperative Courses in Children Operated for Brain Tu-mors: Causes of Prolonged Hospitalization and Complications

Sandra Egholm Andersen(1), Clara Matilde Holck Wæhrens(1), Jon Foss-Skiftesvik(2), Astrid Marie Sehested(1), Christine Dahl Christensen(1), Mimi Kjærsgaard(1), Jane Skjøth-Rasmussen(2), Marianne Berntsen(3), Martin Kryspin Sørensen(3), René Mathiasen(1)

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Background: Brain tumors in are biologically and clinically heterogeneous. This complexity imposes high demands on both surgical treatment and postoperative care. The postoperative course can be associated with a range of complications that prolong hospitalization. The purpose of this study is to map the day-to-day postoperative course for children operated for brain tumors at RH. This study focuses on identifying the complications and factors that prevent discharge and cause prolonged hospitalization.

Materials and methods: This retrospective study included patients under the age of 18 surgical treated for a brain tumor at RH from 2017-2024. A daily registration was performed for each hospitalization day (Day 0 = surgery day), covering clinical status, complications, interventions, and reasons for continued hospitalization. Discharge data included date of discharge, total length of stay and discharge destination. Clinical data were extracted from the electronic health record system Sundhedsplatformen (EPIC).

Results: A total of 179 postoperative courses were analyzed on a day-to-day basis. Postoperative complications occurred in 76.5% of cases, with cerebrospinal fluid (CSF) leakage being the most common complication (26.3%). The impact of these complications on total length of stay, along with several other contributing factors, will be examined further

Conclusion: Conclusions of the study will be presented at the 2026 KMS

Acknowledgements: This study was founded by Børnecancerfonden

Keywords: pediatric, brain tumor, postoperative, length of stay

Mathilde Frost Køtter

Diagnostic intervals in children, adolescents and young adults with primary bone sarcoma: a systematic review

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Background: Primary bone sarcomas are rare but highly lethal in young people, and survival has stagnated. Early diagnosis may reduce metastatic disease and improve care experiences, yet symptoms are non-specific and delays common. Evidence for diagnostic timeliness in children, adolescents and young adults (0-39 years) remains limited.

Materials and methods: We conducted a PRISMA-guided systematic review (PROSPERO CRD420250650464) of studies from high-income countries reporting at least one predefined diagnostic interval in patients aged 0-39 years with primary bone sarcoma. Data were extracted and synthesized narratively due to heterogeneity. Risk of bias was assessed using a custom domain-based tool.

Results: Twenty-six studies (9 450 patients) were included. Median total diagnostic intervals ranged from 28-150 days, patient intervals 13-84 days, and diagnostic intervals 15-123 days. Older age and axial tumor sites were consistently linked to longer delays. Evidence for effects of gender, symptoms, and first healthcare contact was inconsistent. No study found an association between interval length and survival.

Conclusion: Diagnostic intervals for young people with bone sarcoma are long and highly variable. Older age and axial tumor sites appear to prolong diagnosis. Standardized, prospective reporting is needed to identify actionable targets for earlier recognition.

Acknowledgements: This work was supported by Børnecancerfonden through a pregraduate research fellowship. The authors declare no conflicts of interest.

Keywords: Bone sarcoma, diagnostic delay, adolescents and young adults, diagnostic intervals, early diagnosis, systematic review

Session: O3.6: Gynækologi, Obstetrik og Pædiatri

Emma Kristine Mylund Eliassen

Breast Cancer survivors' experiences with sexual health prior to vaginal laser treatment - a qualitative study

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Background: Breast cancer survivors (BCSs) are a growing population, and 50–75% experience genitourinary syndrome of menopause (GSM) with sexual dysfunction. Vaginal dryness, dyspareunia, and reduced desire intersect with altered body image and impact sexual health negatively. Treatment options are limited as hormone therapy is often contraindicated or avoided. Vaginal laser therapy is a non-hormonal new intervention, yet BCS' perspectives on sexual health prior laser treatment remain underexplored.

Materials and methods: Guided by Gadamer's philosophical hermeneutics, we conducted semi-structured in-depth interviews with 15 purposively sampled BCSs (aged 41–74, single and partnered) at Aarhus University Hospital. Data was analyzed using a five-step hermeneutic approach inspired by Kvale and Brinkmann.

Results: Three themes emerged: (1) Cessation of sexual desire - a sudden loss of sexual desire, both physical and emotional (2) Becoming an eunuch - feeling "castrated" or "half a woman," loss of sexuality and sensuality leading to distress and loneliness and (3) Wanting to regain mutual partnership but being incapable due to physical changes, emotional strain, conflicts, intimacy avoidance, and mismatched needs.

Conclusion: Findings in the study underline the need for a more proactive, holistic, and patient-centered approach across oncology and women's health services to support sexual rehabilitation and generate future patient-centered interventions.

Acknowledgements: The project is supported by Aarhus Universitets Forskningsfond.

Keywords: Qualitative research, women's health, sexual health, breast cancer

Agathe Placatka

Symptom reporting in children of mothers with health anxiety using real-time data

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Background: Health anxiety (HA) is characterized by persistent illness-related worries despite medical reassurance. Intergenerational transmission of illness worries may contribute to HA in children, but the underlying mechanisms remain unclear. Studies relying on retrospective questionnaires are prone to recall bias and may not capture symptom fluctuations. Real-time assessment methods such as Experience Sampling Method (ESM) offer a promising approach by collecting data as experiences occur.

Materials and methods: This study includes 124 children aged 8-17 of 49 mothers with severe HA, 44 mothers with rheumatoid arthritis (RA), and 31 healthy mothers. The children completed real-time questionnaires assessing their symptoms, worries, and context four times daily for one week using ESM. Retrospective self-report questionnaires on the same topics were also completed. Multilevel modeling will be used to assess group differences and correlations between real-time and retrospective data.

Results: Data analyses are ongoing. Preliminary results will be presented at the KMS 2026. It is hypothesized that: 1) Children of mothers with HA (case group) will report higher levels of symptoms and worries than a) children of mothers with RA and b) children of healthy mothers. 2) Real-time data will show more pronounced differences between the case group and both control groups compared to data from retrospective self-report questionnaires.

Conclusion: This study will expand the understanding of how maternal health anxiety affects children's self-reported symptoms and clarify whether and how real-time data collection provides additional insights beyond traditional retrospective assessments.

Acknowledgements: This pre-graduate research project is funded by the Lundbeck Foundation's Scholarship in Psychiatry, the Internal Research Fund at the Department of Child and Adolescent Psychiatry, Aarhus University Hospital and the Region Midt Psychiatric Research Foundation.

Keywords: Health anxiety, Children and adolescents, Experience Sampling Method (ESM)

Oral session 4: Epidemiologi

Session: O4.1: Epidemiologi

Emilie Kromann-Thomsen

Pregnancy Outcomes in Individuals with Tuberous Sclerosis Complex

Emilie Kromann-Thomsen (1,2), Ninna Bager Rasmussen (1,2) Nis Brix (1,2), Tine Brink Henriksen (1,2), Mette Møller Handrup (1,2)

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Background: Tuberous Sclerosis Complex (TSC) is a rare but severe genetic disorder, predisposing to tumor growth in several organs. Severity varies among individuals and can change over time. During pregnancy, TSC may pose risks to maternal and fetal health, possibly causing more complications, but knowledge remains limited. Previous studies suggest increased rates of preterm birth, and cesarean delivery, but most are limited by small samples.

Materials and methods: This matched cohort study matches each patient with TSC to 10 healthy controls. Patients are part of the TSClife cohort, which is based on the Danish National Patient Register and genetic databases. Pregnancies are identified in the Danish Medical Birth Registry, and we expect to include around 150 pregnancies among female patients with TSC, along with their matched controls.

Results: Preliminary descriptive results are anticipated to be available by the time of presentation. We aim to investigate associations between maternal TSC and adverse pregnancy outcomes, including preterm birth, low birth weight, cesarean section, stillbirth, neonatal morbidity, and neonatal mortality, while exploring whether TSC status of the child, maternal psychiatric disorders, and mTOR inhibitor use affect these risks.

Conclusion: This study will investigate associations between maternal TSC and adverse pregnancy outcomes, thereby strengthening our understanding of TSC-related pregnancy complications. The findings will improve patient counseling and management and help guide future reproductive care strategies.

Acknowledgements: This study gratefully acknowledges funding from the Grosserer L. F. Foghts Foundation.

Keywords: Tuberous Sclerosis Complex, Pregnancy outcomes, Danish registers, Rare diseases

Sofie Hoppe S e

Quality of Care for Children Under Five Presenting with Respiratory Symptoms in a Secondary Hospital in Pemba: A Prospective Cohort Study

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Background: Respiratory infections are a leading cause of death among newborns and children under five in low- and middle-income countries. Limited data on hospital management hinder efforts to improve antibiotic use and respiratory care. Aim: To describe oxygen therapy and antibiotic use among newborns and children under five admitted with respiratory symptoms at a district hospital on Pemba Island, Tanzania, and assess alignment with WHO recommendations.

Materials and methods: A prospective cohort study was conducted from February to June 2025. All newborns and children under five admitted with respiratory symptoms were included. Standardized clinical observations and chart reviews were performed during hospitalization, with follow-up interviews 14 days post-discharge.

Results: Of 223 eligible patients, 170 were included, 27 (15.9%) newborns and 143 (84.1%) children aged 1–54 months (median 9 months). Oxygen therapy was provided to 30 (17.6%), 18 (66.7%) neonates and 12 (9.4%) children via sterilized nasal prongs. Median duration of oxygen therapy was 2 days [IQR 2–3] for neonates and 3 days [IQR 1–5] days for children. Due to limited availability of pulse oximeters, only 11 (36.7%) of the 30 subjects had continuous pulse oximetry. Oxygen flow rates remained unchanged despite fluctuations in saturation. Daily trials without oxygen in room air were not performed in any stable cases. All twenty-seven (100%) neonates and 141 (98.6%) children received IV antibiotic treatment during admittance. Median duration of IV AB treatment was 3 days [IQR 2–5] for neonates and 3 days [IQR 2–4] days for children.

Conclusion: A considerable proportion of newborns and children under five did not receive treatment fully aligned with WHO recommendations. The findings highlight challenges in implementing standardized protocols and indicate opportunities to improve guideline adherence and optimize oxygen and antibiotic use in low-resource hospital settings.

Session: O4.3: Epidemiologi

Viktoria Carmen Schioldann-Nielsen

Is parental low fecundity associated with a higher risk of low fertility in sons and daughters? A cohort study

Viktoria Carmen Schioldann-Nielsen (1), Mette Viola Stokholm (1), Camilla Lomholt Kjersgaard (1), Cecilia Høst Ramlau-Hansen (1), Anne Hjort Thomsen (1)

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Background: Fertility rates are declining globally, highlighting the need to understand determinants of poor reproductive health. While psychosocial factors are suggested to be main contributors, the biological ability to conceive may also play a role. Research suggests that reproductive health may be transmitted across generations, linking low parental fecundity to poor reproductive capacity in adulthood. We examine the association between parental fecundity and fertility outcomes in the next generation.

Materials and methods: We use the Health Habits for Two Cohort (n=11,144), a Danish birth cohort established in 1984–1987, linking self-reported parental fecundity, measured as time to pregnancy, with registry-based fertility outcomes of adult sons and daughters. We will estimate hazard ratios for age at first child using sex-stratified Cox models, and odds ratios for total number of children using ordinal logistic regression. Analyses adjust for potential confounders identified a priori using Directed Acyclic Graphs.

Results: No results are available yet (November 2025). Data preparation and analyses are ongoing. Results will be presented at the KMS conference in March 2025.

Conclusion: No conclusion has been made yet.

Acknowledgements: This work is supported by the Independent Research Fund Denmark (DFF) and the European Research Council for the Synergy project BIOSFER.

Keywords: Time to pregnancy, reproductive epidemiology, intergenerational transmission, number of children, age at first child.

Session: O4.4: Epidemiologi

Thomas Møller Marcussen

Using Artificial Intelligence Tools as Second Reviewers for Data Extraction in Systematic Reviews: A Performance Comparison of Two AI Tools Against Human Reviewers

Tue Helms Andersen (1), Thomas Møller Marcussen (1), Anne-Ditte Termansen (1), Trine Witzner Hessel Lawaetz (1), Ole Nørgaard (1)

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Background: Systematic reviews are essential but time-consuming and expensive. Large language models (LLMs) and artificial intelligence (AI) tools could potentially automate data extraction, but no comprehensive workflow has been tested for different review types. The objective of the study was to evaluate Elicit's and ChatGPT's abilities to extract data from journal articles as a replacement for one of two human data extractors in systematic reviews.

Materials and methods: Human-extracted data from three systematic reviews (30 articles in total) was compared to data extracted by Elicit and ChatGPT. The AI tools extracted population characteristics, study design, and review-specific variables. Performance metrics were calculated against human double-extracted data as the gold standard, followed by a detailed error analysis.

Results: Precision, recall and F1-score were all 92% for Elicit and 91%, 89% and 90% for ChatGPT. Recall was highest for study design (Elicit: 100%; ChatGPT: 90%) and population characteristics (Elicit: 100%; ChatGPT: 97%), while review-specific variables achieved 77% in Elicit and 80% in ChatGPT. Elicit had four instances of confabulation while ChatGPT had three. There was no significant difference between the two AI tools' performance (recall difference: 3.3% points, 95% CI: -5.2%–11.9%, $p = 0.445$).

Conclusion: AI tools demonstrated high performance in data extraction compared to human reviewers, particularly for standardized variables. We propose adopting AI-assisted extraction to replace the second human extractor, with another human instead reconciling discrepancies between AI and the human extractor.

Acknowledgements: All authors are employed at Steno Diabetes Center Copenhagen, a public hospital and research institution under the Capital Region of Denmark, which is partly funded by a grant from the Novo Nordisk Foundation. The funders had no role in any part of this study.

Keywords: research methodology, data extraction, large language models, artificial intelligence

Session: O4.5: Epidemiologi

Jonas Bjerre van den Bos

“Impact of mental disorder history on the risk of subsequent major osteoporotic fractures in patients with incident hip fracture”.

Jonas B. van den Bos (1), Simon S. Jensen (1), Rikke Sommer Haaber (1), Rob Nelissen (1), Alma B. Pedersen (1)

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Background: Denmark has one of the world’s highest hip fracture (HF) rates, which cause high mortality, reduced quality of life, and greater risk of new major osteoporotic fractures (MOF). Around 30% of HF patients have a mental disorder. Both HF and mental disorders are closely linked to somatic comorbidities, lifestyle factors and post-fracture complications. The role of these factors as well as the role of mental disorders in the risk of subsequent MOF remains unknown.

Materials and methods: We will conduct a nationwide registry-based cohort study including patients with incident hip fracture (HF) from the Danish Multidisciplinary Hip Fracture Register. Exposure is categorized mental disorders recorded within 10 years before HF. The primary outcome is subsequent major osteoporotic fracture (MOF) within 2 years, accounting for death as a competing risk. Stratification analyses by age, sex, cohabitation, comorbidities, and lifestyle will be conducted. Secondary outcome is mortality.

Results: We hypothesize that mental disorders in patients with HF will increase the risk of subsequent MOF, and that the risk is largely explained by pre-fracture somatic comorbidity burden, poor lifestyle factors, and post-fracture complications.

Conclusion: The first results will be available by the end of 2025.

Acknowledgements: This project was supported by a grant from the Independent Research Fund Denmark (Den Frie Danske Forskningsfond). We thank the fund for its financial support, which made this study possible.

Keywords: Hip fracture, Mental disorders, Major osteoporotic fractures, Registry-based cohort study

Julie Maria Jühne

Effectiveness of HPV Vaginal Self-sampling versus Clinician-based Sampling in the Danish Cervical Cancer Screening programme - a prospective cohort study

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Background: Persistent high-risk human papillomavirus (hrHPV) infection can lead to cervical intraepithelial neoplasia (CIN1-3) and cervical cancer (CC). Screening has reduced the CC incidence. In Denmark however, 50% of the CC cases arise in non-participants(25%) and therefore hrHPV vaginal self-sampling has been offered to non-participants in the screening program. This study aimed to assess the effectiveness of offering self-sampling as an alternative screening option compared to clinician-based sampling.

Materials and methods: This prospective cohort study included 122 640 women (23-64y) residing in the Central Denmark Region whom received a second screening reminder. The reference group consisted of 60 840 women, who were offered only clinician-based screening. The intervention group included 61 800 women who were offered a choice between clinician-based screening and self-sampling (opt-in). Data was retrieved from the Danish Pathology Databank.

Results: Our preliminary results showed a slightly lower screening uptake within 365 days ($p=0.004$) of 30.8%, in the reference group, and 31.6% in the intervention group. In the intervention group, most women chose clinician-based sampling (80.9%) over self-sampling (19.1%). Self-sampling uptake was highest among women aged 60-64 (39.7%) and lowest among women aged 23-29 (13.4%). Data on the compliance to follow-up and the benefit-harm ratio will be presented at the conference.

Conclusion: Conclusion will be presented at the congress.

Keywords: Cervical cancer, Screening, Self-sampling, Women's Health

Kirsten Felicity Greve

Epidemiology, clinical presentation and outcomes of progressive multifocal leukoencephalopathy: a nationwide population-based cohort study

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Background: Progressive multifocal leukoencephalopathy (PML) is a severe, debilitating disease caused by reactivation of John Cunningham (JC) virus in immunocompromised individuals. PML is mainly described in patients with HIV infection, followed by haematological malignancies. Despite emerging therapies, patient outcomes remain poor. Our aim was to describe epidemiology, clinical characteristics and outcomes of patients with PML in Denmark between 2004-2023.

Materials and methods: This study identified all individuals assigned an ICD-10 code for PML or having a positive polymerase chain reaction for JC virus in cerebrospinal fluid or brain biopsy in Denmark from 1 January 2004 to 31 December 2023. Clinical data were obtained by medical record review. All-cause mortality was described by Kaplan Meier plots and predictors of mortality were identified using modified multivariable Poisson regression.

Results: Our cohort included 89 patients with an incidence of 0.078 per 100 000 person-years. Predisposing conditions were haematological malignancies 38/89 (43%), HIV infection 18/89 (20%), autoimmune diseases 13/89 (15%) and other 20/89 (22%). Treatment was administered in 61/89 (69%) patients. Immune reconstitution inflammatory syndrome was observed in 15/89 (17%) patients. Mortality rate at 1-year was 53/89 (60%). Multivariable analysis revealed no significant predictors of mortality.

Conclusion: PML incidence has increased in Denmark with new diagnostics and immunotherapies. Haematological malignancies now predominate over HIV. No clear mortality predictors were identified. These data highlight the poor prognosis and need for improved therapeutic strategies.

Acknowledgements: A research grant from the Novo Nordisk Foundation was received to fund the first author's salary.

Keywords: Epidemiology; JC virus; progressive multifocal leukoencephalopathy; CNS-infections;

Oral session 5: Hjerne-Lunge-Kar

Session: O5.1: Hjerne-Lunge-Kar

Camilla Yde Hvelplund

Investigating the prevalence of frailty in patients with idiopathic pulmonary fibrosis

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Background: Frailty is a condition commonly observed in older adults, and is often associated with impaired function of daily living. It is frequently used to evaluate whether an elderly individual is suitable for certain medical treatments. This study investigates the prevalence of frailty among patients with idiopathic pulmonary fibrosis, a chronic progressive lung disease associated with age, and explores the potential of frailty in this population.

Materials and methods: Patients were included from The Center for Rare Lung Diseases, Aarhus University Hospital. Inclusion criteria were age ≥ 65 , and a diagnosis of IPF. Frailty was assessed using the Clinical Frailty Scale. Questionnaires on symptoms and quality of life were administered. Different factors were assessed as possible predictors of frailty.

Results: Of 47 patients, 21% were frail. Frail patients had lower FVC% ($p = 0.022$), higher L-PF impacts score ($p = 0.002$), SOBQ score ($p < 0.001$), FAS score ($p = 0.002$), and had more comorbidities ($p = 0.015$) and a shorter 6-MWT distance ($p < 0.001$) than the non-frail patients. In 3 multivariate regression models, adjusting for age and comorbidities, FVC% (OR = 0.93, $p = 0.001$), quality of life (OR = 1.21, $p < 0.01$), and fatigue (OR = 1.2, $p < 0.001$), were identified as independent predictors of frailty.

Conclusion: Frailty is more common among patients with IPF than in the general population. Frailty in an IPF population can be predicted by fatigue, quality of life, and FVC%.

Keywords: Interstitial lung disease, frailty, symptoms, idiopathic pulmonary fibrosis

Session: O5.2: Hjerter-Lunge-Kar

Benjamin Hørning Risager

Characteristics and Outcomes after General Anesthesia in Elderly Patients: A Nationwide Cohort Study

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Background: The life expectancy of people in developed countries is rising, and the proportion of elderly patients is growing. This represents a new challenge for the healthcare system. The aim of this study was to describe the elderly patient population undergoing general anesthesia (GA) in Denmark.

Materials and methods: This was a national registry-based observational cohort study of adult patients undergoing GA in Denmark in 2020-2021. The primary outcome was 30-day mortality. We described patient and procedure characteristics stratified by age and outcomes according to procedure type. For continuous age, we used logistic regression models with restricted cubic splines to yield predicted probabilities with 95% confidence intervals for 30-day mortality with adjustment for patient and procedure characteristics.

Results: A total of 453 133 cases of GA in 328 951 unique patients in Denmark during 2020 and 2021 were included in this study. 36 893 of these cases were for patients above 80 years of age. Mortality at 30 days after general anesthesia was 1.8% overall with a higher proportion in higher age groups. While mortality was low for cases aged between 18 and 65 years, the spline regression showed a rapid increase in the predicted probability of 30-day mortality for each additional year after 65 years.

Conclusion: Mortality remained relatively low for patients below 65 years of age but increased rapidly for each year after 65 years of age. This study describes the elderly patient population undergoing general anesthesia in Denmark, advancing our understanding of this growing patient group.

Acknowledgements: The authors have no conflicts of interest or funding to declare.

Keywords: General anesthesia, elderly patients, patient characteristics, procedure characteristics, mortality

Victoria Bloch Blytt Sandstad

Respiratory complications following allogeneic hematopoietic stem cell transplantation in children with primary immunodeficiencies.

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Pediatric Hematopoietic Stem Cell Transplantation and Immunodeficiency,
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Background: Primary immunodeficiencies are rare life-threatening diseases affecting immune function, often presenting with recurrent infections, hyperinflammation, and autoimmunity. Respiratory complications in children with PIDs are a major clinical burden, affecting quality of life and contributing significantly to morbidity and mortality, accounting for 30-65% of deaths. We describe the respiratory trajectory, looking at associations between pre-HSCT respiratory symptoms and later respiratory outcomes.

Materials and methods: A national population-based, retrospective cohort study of pediatric patients with PID, who underwent allogeneic HSCT (2000-2024). Clinical data were extracted from medical records. Pulmonary function test was performed within 24-months of follow-up. Pre-HSCT disease severity was assessed by the Immune Deficiency and Dysregulation Activity score. Severity of respiratory symptoms was assessed by 4 respiratory severity groups (0-3), based on symptoms and respiratory support plus CT and PF tests.

Results: Pre-HSCT, 32.6% were in RSG \geq 2. By 6-months, it was 68.4% ($p=0.011$) and by 24-months, 16.3% ($p=0.034$). Median FEV1 z-scores improved from -1.0 pre-HSCT to -0.17 at 24-months ($p=0.014$). 5.3% developed bronchiolitis obliterans syndrome. Of 95, 13.7% died, four deaths were respiratory-related. Pre-HSCT RSG were not associated with BOS, respiratory-related death or OS (all $p\geq 0.05$). However, poorer OS was associated with high IDDA-scores ($p=0.014$) and mechanical ventilation ($p=0.00084$) pre-HSCT.

Conclusion: Mild respiratory symptoms were common pre-HSCT but decreased post-HSCT and for patients not requiring mechanical ventilation, respiratory severity was not related to post-HSCT BOS, respiratory-related mortality, or OS. Further studies should address early systematic lung monitoring.

Keywords: Hæmatopoietisk stamcelletransplantation (HSCT), Primære immundefekter (PID), Respiratoriske komplikationer, Lunger, Pædiatri, allogen knoglemarvstransplantation

Session: O5.4: Hjerne-Lunge-Kar

Julie Mellgaard

Fibrinolytic Capacity in patients with Acute Venous Thromboembolism: A Prospective Observational Study

Julie Mellgaard (1,2) Kathrine Abildskov Friis (2,3) Magnea Petra Heimisdóttir (1,2) Erik Lerkevang Grove (2,3) Julie Brogaard Larsen (1,2)

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Background: Hypofibrinolysis is associated with an increased thrombosis risk. Growing evidence suggests that patients with venous thromboembolism (VTE) - including deep vein thrombosis (DVT) and pulmonary embolism (PE) - frequently show abnormalities in fibrinolytic function. Currently, a lack of specific routine assays limits the detection of disturbed fibrinolysis in clinical practice. Our lab has developed a modified ROTEM(R) using tissue plasminogen activator (tPA) to assess whole blood fibrinolysis.

Materials and methods: This single-center prospective cohort study will enrol 120 acute VTE-patients and 120 healthy plasma donors. DVT is confirmed by ultrasound and PE by computed tomography angiography. Blood samples from VTE-patients will be obtained within 48 hours of diagnosis. Healthy donors will be giving a blood sample once. Fibrinolytic capacity will be assessed using the ROTEM(R)-tPA assay, complemented by routine coagulation parameters.

Results: This research year project commenced on the 1st of September 2025. Trial is ongoing. Currently 86 patients and 91 controls are enrolled (17-11-2025). The aim is to investigate fibrinolytic capacity in patients with acute VTE compared with healthy controls using the ROTEM(R)-tPA assay. Preliminary results will be presented at KMS 2025 if available.

Conclusion: This study aims to evaluate fibrinolytic capacity in acute VTE patients compared with healthy donors using the ROTEM(R)-tPA assay. Understanding these alterations may allow earlier detection of fibrinolytic impairment and guide personalized risk stratification and treatment.

Acknowledgements: This study is funded by a scholarship from The Independent Research Fund Denmark. We gratefully acknowledge the laboratory assistance provided by bioanalysts Tine Kusk Jørgensen and Vivi Bo Mogensen.

Keywords: Venous thromboembolism, endogenous fibrinolysis, ROTEM-tPA, clot formation and lysis assay

Session: O5.5: Hjerter-Lunge-Kar

Magnea Petra Heimisdóttir

Fibrinolytic Capacity in Patients with acute STEMI: A Prospective Observational Study

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Background: Emerging evidence suggests that impaired endogenous fibrinolysis contributes to thrombotic events and adverse outcomes in patients with ST-elevation myocardial infarction (STEMI), with increased risks of recurrent myocardial infarction and cardiovascular mortality. We aim to characterize fibrinolytic capacity with a modified thromboelastometry assay (ROTEM(R)) in acute STEMI patients compared to healthy controls.

Materials and methods: This single-center prospective cohort study will include 50 patients presenting with STEMI at the Department of Cardiology, Aarhus University Hospital, and 120 healthy volunteers. Blood samples will be obtained at diagnosis, and fibrinolytic capacity will be assessed using ROTEM(R) assay modified with tissue plasminogen activator (tPA). 30-day mortality and major adverse cardiovascular events will be registered.

Results: This research year project commenced on 1st September 2025. Inclusion is ongoing and currently 28 STEMI patients have been included (15-11-2025). Preliminary results will be presented at KMS 2026.

Conclusion: This study will be the first to apply ROTEM(R)-tPA to assess fibrinolysis in STEMI patients. The findings may enable earlier identification of impaired fibrinolysis, facilitating personalized risk stratification and therapeutic approaches in this high-risk population, ultimately enhancing outcomes.

Acknowledgements: This study is funded by the Independent Research Fund Denmark. Special thanks are given to Tine Kusk Jørgensen and Vivi Bo Mogensen for their assistance in the laboratory.

Keywords: Acute Myocardial Infarction, STEMI, Endogenous Fibrinolysis, ROTEM-tPA

Session: O5.6: Hjerne-Lunge-Kar

Naja Pedersen

Effects on cardiac function of sodium lactate treatment after hypoxia-ischemia in a newborn piglet model.

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Background: Neonatal hypoxia–ischemia (HI) is a leading cause of neonatal mortality and morbidity, frequently accompanied by cardiac dysfunction that may exacerbate secondary organ injury. Lactate is a key myocardial fuel during oxygen-limited states, yet its therapeutic potential in HI remains unclear. In this study, we examined whether hypertonic sodium lactate (HSL) improves cardiac function compared with supportive treatment in a newborn piglet model of moderate-to-severe global HI.

Materials and methods: Thirty newborn piglets (<24 h old) were anaesthetised, mechanically ventilated, and subjected to 45-minutes global HI. One hour after HI, animals were randomised to HSL or supportive treatment only. Echocardiography was performed at baseline and 1h, 6h, 18h, and 24h after HI. We assessed systolic and diastolic function, overall cardiac function, and pulmonary hemodynamics. Quantitative analysis including Doppler flows and myocardial strain analysis will be done in TOMTEC software.

Results: Echocardiographic data were successfully acquired at all scheduled time points from 25 animals (83.3%), while data from baseline, 1 h, and 6 h were available from 29 animals (96.6%). Analysis of images is ongoing.

Conclusion: The study is ongoing, and results will be reported upon completion.

Acknowledgements: The project has been supported by the following foundations: Novo Nordisk Foundation, Laerdal Foundation, Aase og Ejnar Danielsens Fond, Dagmar Marshalls Fond, Arvid Nilssons Fond, A.P. Møller og Hustru Chastine Mc-Kinney Møllers Fond til almene Formaal, Simon Spies Fonden.

Keywords: Cardiology Neonatology Hypertonic sodium lactate Hypoxia-Ischemia

Poster session 3: Intern Medicin og Kirurgi

Session: P3.1: Intern Medicin og Kirurgi

Ditte-Emilie Toft Sørensen

The BEGIN body composition substudy: Correlating PEA POD with simple anthropometric measurements in 3-month-old infants

Ditte-Emilie Toft Sørensen (1,2,3), Sune Rubak (1,2), Mia Elbek Schjørring (1,2,3), Marie Tholstrup Philipsen (1,2), Cecilie Madsen (2), Kurt Kristensen (1,2,3)

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Background: Early body composition is an important marker of metabolic health and growth trajectories. Air displacement plethysmography (PEA POD) is the gold standard for assessing infant body composition, but its use is limited to specialized research settings. To enable broader clinical application, simpler anthropometric measures may serve as valid proxies for estimating fat and lean mass.

Materials and methods: ~200 infants from the BEGIN study (Bifidobacterium Infantis to Newborns) will be invited to a 3-month followup at Steno Diabetes Center Aarhus. Body composition will be assessed using PEA POD (fat mass and fat-free mass) and compared with anthropometric measurements (skinfold thicknesses, circumferences, length, and sagittal abdominal diameter) using paired sample t-tests. Agreement between PEA POD and anthropometric estimates will be evaluated with Pearson correlation and Bland-Altman analyses.

Results: Data collection will be ongoing at the time of the conference. If preliminary results are available at the time of the conference, these will be presented.

Conclusion: This study will provide reference data for validating simpler, low-cost tools to assess infant body composition in clinical and research settings.

Acknowledgements: This research year project is funded by Arla Foods.

Keywords: Air Displacement Plethysmography, PEA POD, body composition, anthropometric measurement, metabolic health, infant

Session: P3.2: Intern Medicin og Kirurgi

Alexander Fonager Mirz

Helicobacter Pylori infections and the risk of neurological disorder

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Background: *Helicobacter pylori* (HP) is a highly prevalent bacterium colonising the gut of about half of the world's population. It is a well-established cause of gastric ulcers and gastric cancer. Recently, an association between HP colonisation and increased risk of neurological disorders such as Parkinson's and Alzheimer's disease has been suggested. To investigate this further, our large-scale cohort study will assess whether the incidence of neurological disorders is associated with HP colonisation.

Materials and methods: Our study cohort comprises 72000 patients who underwent the urea breath test between 2002-2020 and will be linked to national registry data. Additional data from the Danish Microbiology Database on HP testing will be included. Individual-level linkage to national health registers will capture information on neurological diseases, comorbidities, prescriptions, and socioeconomic factors. Hazard ratios for neurological disorders will be calculated comparing patients with and without HP colonisation

Results: Data analysis will begin on February 1st, 2026. Any preliminary results will be presented at the congress if available.

Conclusion: This is the first nationwide study to assess the relationship between *H. pylori* infection and risk of neurological disorders

Acknowledgements: The study was supported by the Lundbeck Foundation and the Novo Nordisk Foundation (NNF16OC0019126 and NNF22OC0075033).

Keywords: *Helicobacter pylori*, gut-brain-axis, registry-based study, neurological disease

Session: P3.3: Intern Medicin og Kirurgi

Andrea Rosenvang Mathiesen

Impact of Bladder Dysfunction on Kidney Transplant Outcome: Urological Strategies to Improve Graft Survival

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Background: Kidney transplantation is the superior treatment of renal failure, improving both lifespan and quality of life. However, post-transplant bladder health is a largely unexplored field. Poor bladder health impairs quality of life, graft function and mortality, and as the average age of transplant recipients increases, the risk of lower urinary tract dysfunction increases. Many patients are anuric prior to transplantation, limiting urologic work-up, thus a clear guideline is needed.

Materials and methods: A retrospective study will establish important connections between risk factors and bladder dysfunction post-transplant. Afterwards, a prospective study will evaluate the effect of extended urologic follow-up in groups at risk. Lastly, an algorithm will be developed to identify patients at risk of bladder dysfunction.

Results: This project will be initiated in 2026. We expect that increased focus on urological symptoms and targeted treatment of patients at risk for bladder dysfunction will lead to an improvement in QoL and in graft survival.

Conclusion: Other than improving QoL and prolonging graft survival on a patient-level, the need for dialysis or re-transplantation decreases on a societal level. The costs and environmental footprint associated with dialysis will be reduced, and the pool of available organs will increase.

Acknowledgements: This project has received funding from Karen Elise Jensens Fond and Simon Spies Fonden.

Keywords: kidney transplantation, clinical trial, urology, LUTS, bladder health

Session: P3.4: Intern Medicin og Kirurgi

Eva Johanne Dimon Hansen

Helicobacter Pylori Infection and Risk of Psychiatric Disorders

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Background: Infection of the stomach with *Helicobacter pylori* (*H. pylori*) affects approximately half of the world's population and can cause stomach ulcers and gastrointestinal cancer. Emerging evidence links gut microbiota, including *H. pylori*, to psychiatric disorders via the gut–brain axis, but evidence is conflicting and causality remains unclear. This study aims to examine if *H. pylori* infection and *H. pylori* eradication therapy are associated with the incidence of psychiatric disorders.

Materials and methods: This is a cohort study of 72,000 individuals tested for *H. pylori* by urea breath test in Central Denmark Region and Danish Microbiology Database 2002–2023. Results will be linked to registers on psychiatric diagnoses, prescriptions, comorbidities, vital status and socioeconomic factors. Incidence rates and hazard ratios of psychiatric disorders will be compared for positive versus negative tests using Cox regression. Among positives, psychiatric risk will be compared by eradication treatment.

Results: This project starts in February 2026. Therefore no results or conclusions are currently available (January 2026).

Conclusion: This is the first nationwide study to assess the relationship between *H. pylori* infections and risk of psychiatric disorders.

Acknowledgements: The study was supported by the Novo Nordisk Foundation (NNF16OC0019126 and NNF22OC0075033).

Keywords: *Helicobacter pylori*, Psychiatric disorders, Gut–brain axis, Cohort study

Session: P3.5: Intern Medicin og Kirurgi

Kimia Kheirmand

Topical JAK Inhibitor in Early-Stage CTCL: A Proof-of-Concept Open-Label Pilot Study

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Background: Cutaneous T-cell lymphoma (CTCL), most commonly manifesting as mycosis fungoides (MF), is a chronic malignancy with limited curative options. JAK/STAT dysregulation promotes malignant T-cell proliferation, inflammation, and skin-barrier damage. Systemic JAK inhibitors show encouraging outcomes in inflammatory skin conditions, but pose cardiovascular risks. Early-stage MF is confined to the skin; therefore, topical JAK inhibition may provide local benefit with minimal systemic exposure.

Materials and methods: This open-label, investigator-initiated phase I pilot study includes 15 adults with stable stage IA–IIA MF. Participants undergo a 4-week screening phase, 16 weeks of twice-daily topical delgocitinib, and a 4-week follow-up. Assessments include mSWAT, patient-reported outcomes, TEWL, microbiome profiling, skin biopsies for spatial transcriptomics, CITE-seq, histology, and blood-based immune analyses.

Results: This descriptive proof-of-concept trial primarily evaluates safety and tolerability, with outcomes assessed through clinical presentation, patient-reported scores, mSWAT, and skin-barrier measurements. Mechanistic analyses will examine changes in malignant T-cell activity, tumor microenvironment, and barrier function. The study is in its initial phase, and results are not yet available; preliminary findings will be presented if available.

Conclusion: If delgocitinib proves to be safe and tolerable and improves outcomes in patients with early-stage MF, this approach could pave the way for a new era of CTCL management by offering patients a non-toxic, accessible, and effective topical alternative to systemic or phototherapy-based regimens.

Acknowledgements: The authors thank the Alfred Benzon Foundation for funding this project, as well as our collaborators, namely Professor Niels Ødum and his group at the University of Copenhagen, and Professor Emmanuella Guenova at Johannes Kepler University Linz. We also thank our colleagues at the Department of Molecular Medicine, Aarhus University Hospital.

Keywords: Dermatology; Mycosis fungoides; Cutaneous T-cell lymphoma; JAK inhibitor; Cancer

Session: P3.6: Intern Medicin og Kirurgi

Abas Jafari

Burning Mouth - but What About Taste? Exploring Gustatory Function in Burning Mouth Syndrome

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Background: Burning mouth syndrome is a chronic oral pain condition of unclear origin. Besides the burning sensation, many patients report altered taste. Biopsies have shown atrophy of small nerve fibers in the tongue epithelium, including a reduced innervation of the taste papillae, suggesting that taste changes may reflect neuropathic involvement. This study aims to examine whether taste function is affected in individuals with burning mouth syndrome.

Materials and methods: This study compares taste function in BMS patients, healthy controls matched for age and sex, and individuals with oral mucosal pain and hyposalivation. Twenty-four participants will be included in each group. Taste function is assessed with the validated Taste Drop Test, where solutions representing the four basic tastes are applied in randomized order and increasing concentrations. Sensitivity scores are used to compare detection ability between the groups.

Results: The study is ongoing. Preliminary results will be presented if available.

Conclusion: This study is expected to clarify whether alterations in taste function distinguish BMS patients from healthy individuals. Such insight may improve diagnostic evaluation and support a more targeted approach to the management of BMS.

Acknowledgements: This work is funded by the Danish Dental Association by awarding a research scholarship to Research Year Student Abas Jafari.

Keywords: Burning mouth syndrome, Gustatory function, Taste-Drop-Test, Neuropathic pain.

Session: P3.7: Intern Medicin og Kirurgi

Klara Marie Breiner Evensen

Comparison of zinc acetate formulations (Galzin vs. ET-700) for the treatment for Wilson disease: A pharmacodynamic $^{64}\text{CuCl}_2$ PET/CT study in healthy participants

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Background: Wilson disease (WD) impairs copper excretion, causing toxic accumulation in the liver and brain. Zinc acetate reduces intestinal copper absorption, but the standard regimen of Galzin 50 mg x 3 daily is burdensome. ET-700 is a 75 mg extended-release formulation designed for twice-daily dosing that may improve adherence without reducing efficacy. This study compares the effects of Galzin and ET-700 on intestinal copper absorption using ^{64}Cu PET/CT in healthy volunteers, with placebo as control.

Materials and methods: This double-blind, randomised, placebo-controlled trial will enrol 36 adults receiving Galzin x 3 daily, ET-700 x 2 daily, or placebo for four weeks. Healthy volunteers are used as copper absorption is normal in both volunteers and WD patients. The primary endpoint is the change in hepatic ^{64}Cu standard uptake value between pre- and post-intervention PET/CT scans. Secondary endpoints include plasma and urinary copper and zinc, ceruloplasmin, exchangeable copper, and metallothionein expression.

Results: Participant recruitment is expected to begin in Q1 2026 following regulatory approval. Preliminary results will be presented at KMS, if available at the time.

Conclusion: This study will directly compare immediate- and extended-release zinc acetate formulations using ^{64}Cu PET/CT imaging. Demonstrating comparable suppression of intestinal copper absorption with a simplified twice-daily regimen could support improved adherence and quality of life for WD patients.

Acknowledgements: This study is funded by Eton Pharmaceuticals, the owner of ET-700. The authors declare no economic, institutional, or personal conflicts of interest.

Keywords: Hepatic Disease, Wilson Disease, Zinc, Copper

Session: P3.8: Intern Medicin og Kirurgi

Linnea Sehested Skaftø

Women's motivations for and experiences with membrane sweeping to promote spontaneous onset of labor: A Qualitative study

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Background: Studies have shown how women often feel hesitant about induction of labor interventions and that most women prefer spontaneous onset of labor. Membrane sweeping (MS) is a simple, commonly used procedure to promote spontaneous onset. However, little is known about the lived experience. This insight is essential to support women-centered counseling and inform clinical practice. This study explores women's motivations for and experiences with MS and its perceived impact on the birth experience.

Materials and methods: This is a qualitative study. A thematic analysis will be conducted based on interviews via six interconnected steps as reported by Braun and Clark. The interviews will follow a semi-structured guide created for the study. We aim to recruit 15 women, who have undergone MS recently. It will include topics such as motivation for and experiences with MS, expectations, decision-making processes, procedural knowledge, relationships with healthcare providers, and the perception of induction.

Results: The study is in its initial phase. Therefore, no data or results have not been obtained to be presented at the congress. Thus, the protocol will be presented at KMS 2026.

Conclusion: No conclusion has been made yet. We hope the future insights will impact clinical practice and counseling. By basing findings on women's own experiences, the results can guide to more empathetic and tailored communication and contribute to care that truly reflects women's needs and values.

Acknowledgements: This study is part of the ongoing SWEEP trial, a multicenter randomized controlled trial, coordinated by Department of Obstetrics and Gynecology, Aarhus University Hospital. SWEEP will investigate a range of quantitative outcomes regarding membrane sweeping. The SWEEP trial study has received funding from 'Sundhedsdonationer'.

Keywords: Gynecology and Obstetrics, membrane sweeping, qualitative study, semi-structured interview, SWEEP trial

Session: P3.9: Intern Medicin og Kirurgi

Shan Awzhin Ali

Curative Surgery or Comfort Care? A Comparative Survival Analysis in Elderly Colon Cancer Patients

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Background: Surgical resection is the gold standard treatment for colon cancer. In elderly patients, treatment decisions are often complicated by patient frailty and the risk of severe complications, presenting a dilemma between curative surgery and best comfort care. With an ageing population, colon cancer in the elderly is an increasing challenge. This study investigates survival and oncological outcomes in Danish colon cancer patients aged 75 years, comparing curative surgery with best comfort care.

Materials and methods: This retrospective cohort study uses Business Intelligence data from the Central Denmark Region and includes patients aged 75 years who were diagnosed with colon cancer between 2010-2024 (approximately 3 000 patients). Using multivariate models, survival estimates will be adjusted for key prognostic factors, including age, comorbidities, and cancer stage. Survival estimates will comprise overall, cancer-specific, and relative 1- and 5-year survival.

Results: As of January 2026, VID approval from the Central Denmark Region has been granted, however, no results have been generated yet. Statistical analyses will be performed during spring 2026. Preliminary results will be presented if available.

Conclusion: We expect that our results will increase the knowledge on survival in the elderly, thus supporting the development of evidence-based treatment guidelines for colon cancer patients aged 75 years. This is warranted to help guide clinicians in choosing between surgical resection and best comfort care.

Acknowledgements: This project is funded by the Danish Cancer Society.

Keywords: Colon cancer, Elderly, Survival, Prognostic factors, Treatment, Guidelines

Session: P3.10: Intern Medicin og Kirurgi

Elisabeth Kjeldgaard Levinsen

The effect of Trofosfamide on Soft Tissue Sarcomas in a Palliative Context

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Background: Soft tissue sarcomas (STS) are rare cancers with 250 new cases annually in Denmark and over 80 subtypes. Five-year survival is 75% for localized disease, while prognosis is poor in unresectable or metastatic STS, with median overall survival of 12.8 months on first-line doxorubicin. Treatment includes surgery, radiotherapy and chemotherapy. In Denmark, treatment with trofosfamide is approved, but evidence on efficacy and tolerability is limited, warranting further population-based studies.

Materials and methods: This retrospective cohort study includes Danish patients aged ≥ 18 years with unresectable or metastatic STS treated palliatively with trofosfamide between 2008 and 2025. Primary endpoint is overall survival (OS), defined as time from STS diagnosis to death. Secondary endpoint is duration of response (DoR), defined from trofosfamide initiation to progression or new treatment. Analyses will be mainly descriptive; OS will be estimated by Kaplan–Meier and compared using log-rank tests and Cox regression.

Results: Results are not yet ready but will hopefully be presented at the congress.

Conclusion: No conclusion yet unfortunately.

Acknowledgements: We have received funds from Kræftafdelingens Forskningsfond, Aarhus Universitetshospital.

Keywords: Soft tissue sarcomas

Session: P3.11: Intern Medicin og Kirurgi

Peter Lange Jørgensen

Acid/base homeostasis in patients with an ileostomy: evaluation of urinary net acid excretion

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Background: With improved colorectal cancer survival and rising inflammatory bowel disease incidence, more people live with an ileostomy following colectomy. Patients with an ileostomy are chronically dehydrated with increased risk of chronic kidney disease. Preliminary data show higher urinary net acid excretion (NAE) in patients with ileostomy than healthy controls, indicating excessive intestinal bicarbonate. The prevalence and clinical impact of elevated urinary NAE remain unknown.

Materials and methods: This cross-sectional study aims to estimate the proportion of ileostomy patients with elevated NAE compared with healthy controls using 24-hour and spot urine samples. Net endogenous acid production, calculated from urinary urea (carbamide) and potassium, and venous blood gas analysis will help determine whether elevated NAE reflects chronic intestinal bicarbonate loss driving renal compensation.

Results: We hypothesize that the prevalence of increased NAE in patients with ileostomy is high compared with healthy controls due to excessive intestinal bicarbonate loss via the ileostomy. Data acquisition is ongoing.

Conclusion: If confirmed, findings from this study will form the basis for future studies addressing the consequences of elevated NAE and guide targeted interventions to correct it. Ultimately, NAE may provide a practical, clinic-ready biomarker to evaluate acid/base status in people living with an ileostomy.

Acknowledgements: The project was funded by the Borregaard Clinical Ascending Investigator Grant allocated to Clinical Professor Christian Lodberg Hvas. Otherwise the authors declare no conflicts of interest. Thank you to M. V. Sørensen, J. G. Leipziger and P. Berg for analyzing the urine samples and conceptualizing the project. Thank you to my supervisors C. L. Hvas, C. L. Rud and M. Redsted for invaluable guidance. Finally thank you to the LMT Lab for assisting with the project.

Keywords: Ileostomy, acid/base balance, net acid excretion, Intestinal insufficiency

Session: P3.12: Intern Medicin og Kirurgi

Maja Drejer

Clinical risk assessment of chemotherapy induced acute toxicities in Allogeneic Hematopoietic Stem Cell Transplantation (HSCT) by use of an endothelial stress scoring index (EASIX)

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(3) Institute of Clinical Medicine, University of Copenhagen

Background: HSCT can effectively cure high risk leukemia but is challenged by severe acute toxicities, including Hepatic Sinusoidal Obstruction Syndrome (SOS). SOS is caused by damage to the endothelial lining of the hepatic sinusoids induced by chemotherapy given prior to graft infusion, causing vascular obstruction and high mortality. Unclear and imprecise diagnostic criteria delay treatment. This study will evaluate Endothelial Activation and Stress Index (EASIX) as an early diagnostic biomarker for SOS.

Materials and methods: The EASIX score integrates three factors associated with endothelial damage: elevated lactate dehydrogenase (LDH) and creatinine, and reduced platelet counts. EASIX will be calculated in 171 children previously undergoing HSCT, based on daily measurements of the EASIX components from before the start of HSCT until day +30 post-transplant, and then weekly to day +100. EASIX scores will be related to SOS-status based on data retrospectively collected from the case records.

Results: The results are currently being generated and will be presented at the conference.

Conclusion: The conclusions derived from this study is anticipated to add important new insights into the role of EASIX in pediatric HSCT, being among the largest studies in this setting.

Acknowledgements: I would like to sincerely thank my supervisors for their invaluable guidance and support throughout this project. We also appreciate the financial support from “Kræftens Bekæmpelse”, which made this research possible.

Keywords: Pediatric, oncology, leukemia, stem cell transplantation, biomarker

Poster session 4: Hjerte-Lunge-Kar

Session: P4.1: Hjerte-Lunge-Kar

Lea Kramer Knudsen

General practitioners' commitment to an environmentally sustainable transition of health care: A Danish survey study

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Background: Climate change is considered the greatest global health threat of the 21st century. Although healthcare is essential for population health, it contributes to substantial greenhouse gas emissions. In Denmark, general practitioners (GPs) manage most patient contacts, prescribe most reimbursable medications, and initiate referrals across the healthcare system, placing them in a key position to drive sustainable change. This study aims to explore GPs' perspectives on the green transition in GP.

Materials and methods: This study uses a survey-based design to explore environmental sustainability in GP, informed by a behavioural change model and themes from a previous qualitative study performed by the group. The survey includes approximately 20 items across three domains: knowledge, motivation, and workplace behaviour. It will be pilot tested for validity, relevance, acceptability, and feasibility, and if needed revisions re-tested in a new group of GPs.

Results: The study is at its initial phase, and the results are yet to be obtained. Preliminary results will be presented if available.

Conclusion: Building on themes identified in a previous qualitative study, this survey explores these perspectives in a larger GP population, potentially strengthening the evidence base for environmentally sustainable, bottom-up changes in Danish healthcare.

Acknowledgements: The project is financially supported by the Lundbeck Foundation. The authors declare no conflict of interests.

Keywords: Sustainable Healthcare, Environmentally Sustainability, General Practice, Danish Healthcare System, Behaviour Change.

Session: P4.2: Hjerte-Lunge-Kar

Christine Wiese

Optimization of ex vivo tumor infiltrating lymphocyte expansion in non-small cell lung cancer

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Background: Recent advances in cancer immunotherapy have shown promise in using a patient's own tumor-infiltrating lymphocytes (TILs) as treatment. TILs can be isolated from a tumor biopsy, expanded ex vivo, and given back to the patient in a large quantity, to fight the cancer. We investigate whether expanding TILs from minimally invasive procedures, like fine needle aspirations (FNAs), is a doable approach. Furthermore, we evaluate if TIL expansion products can be improved using different growth cytokines

Materials and methods: Blood sample, resected tumor tissue and FNA is collected from non-small cell lung cancer patients undergoing surgery at the Department of Cardiothoracic and Vascular Surgery, Aarhus University Hospital. TILs are expanded ex vivo for 21 days stimulated with either IL-2, IL-15 or both, then analyzed for T cell frequencies and phenotype using spectral flow cytometry.

Results: Sample collection and expansion is ongoing. Preliminary data demonstrate that TIL expansion is achievable from FNAs and that the combination of cytokines may have advantage on total yield of TILs production. A T cell marker panel for spectral flow cytometry is currently being built, which will be used to evaluate the expansion rate, T cell cell type composition and activation status.

Conclusion: We have observed that it is possible to expand TILs from both tumor tissue and FNAs, and numerous T cell growth cytokines may be useful in ex vivo expansion. Analysis of how the sampling method and choice of interleukin affects the expansion rate, T cell composition and activation will be presented.

Acknowledgements: The study has received funding from DFF

Keywords: Tumor infiltrating lymphocytes, cancer cell therapy, flow cytometry

Session: P4.3: Hjerte-Lunge-Kar

Anna Sommer Harrits

The association between chest compression pause duration for ventilations and ventilation success during in-hospital cardiac arrest: Protocol for a prospective multicenter study

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Background: Manual ventilation is a key component of cardiopulmonary resuscitation (CPR). However, manual ventilation quality during CPR is often poor, while higher ventilation quality is associated with improved survival. It remains unknown how long chest compressions should be paused to allow for efficient ventilation. We aim to investigate the association between the duration of chest compression pauses for ventilations and ventilation success when using a bag-valve-mask during in-hospital resuscitation.

Materials and methods: We will collect data from hospitals in the Central Denmark Region, combining transthoracic impedance data from defibrillators with ventilation measurements from the ongoing VENT-IHCA study. We will align these data sources using timestamps and data pattern matching, enabling the assessment of pause durations and ventilation success for each ventilation attempt. The primary outcome will be the association between the pause duration and the fraction of pauses with two successful ventilations.

Results: Patient inclusion has begun at five hospitals in the Central Denmark Region. We expect data collection to be completed by August 1st, 2026.

Conclusion: This study will be the first to evaluate the association between chest compression pause duration and ventilation success using direct ventilation measurements. Identifying an optimal pause duration may improve ventilation quality, ultimately contributing to improved overall survival for patients.

Acknowledgements: This study has received funding from Randers Regional Hospital. The authors have no conflicts of interest to declare.

Keywords: In-Hospital Cardiac Arrest, Cardiopulmonary Resuscitation, Manual Ventilation

Session: P4.4: Hjerte-Lunge-Kar

Josefine Axelsen

Clinical and economic outcomes of endovascular aortic and iliac repair - a single-center study

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Background: Endovascular repair of aortic and iliac aneurysms and dissections has increasingly replaced open surgical repair (OSR). Although endovascular repair has shown an early survival benefit compared to OSR, this advantage is not sustained long term. Furthermore, endovascular repair is associated with substantial costs. The aim of this study is to assess the clinical outcomes of patients undergoing elective endovascular repair and quantify total costs.

Materials and methods: This retrospective cohort study includes all patients treated with endovascular repair for intact aortic, iliac, or aortoiliac aneurysms or dissection at Aarhus University Hospital between 2020 and 2025. Data on patient demographics, comorbidities, procedure details, follow-up outcomes, and costs will be collected. Relevant statistical analyses will be performed using R.

Results: Preliminary results will be presented at KMS 2026 if ready.

Conclusion: No conclusion yet.

Keywords: Abdominal aortic aneurysm; endovascular aneurysm repair; endovascular procedures; cost analysis; survival; complications

Session: P4.5: Hjerte-Lunge-Kar

Sofie Larsen Bindzus

Congenital Pulmonary Airway Malformations & DICER1 mutations

Sofie Larsen Bindzus (1), Dalia Karzoun (1), Signe Thim (1), Sune Rubak (1)

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Background: CPAM (congenital pulmonary airway malformations) is the most frequent congenit lung malformation, involving cystic or adenomatous areas of the lungs. Clinical presentation ranges from asymptomatic to incompatible with life. Management of asymptomatic CPAM are discussed, partly due to potential malignant transformation into pleuropulmonary blastoma (PPB), a rare pediatric lung cancer associated with DICER1-mutations. The prevalence of DICER1 mutations amongst Danish children with CPAM is unknown.

Materials and methods: The national cross-sectional study includes children from Aarhus University Hospital, Odense University Hospital and Rigshospitalet with a postnatally confirmed CPAM diagnosis in year 2000 to 2023. Eligible participants are identified via electronic medical records. Peripheral blood samples or resected lung tissue are analysed for germline or somatic DICER1 variants using next-generation sequencing at the Department of Molecular Medicine, Aarhus University Hospital.

Results: Recruitment is ongoing. Results are expected to be ready for presentation at KMS 2026.

Conclusion: No conclusions have been made yet. The results of the study is expected to contribute to management guidelines for asymptomatic children with CPAM in Denmark.

Acknowledgements: The study is funded by FAF-fonden. The investigators declared no conflict of interest.

Keywords: Pediatric pulmonology, CPAM (congenital pulmonary airway malformations), DICER1, CLM (congenital lung malformations)

Session: P4.6: Hjerte-Lunge-Kar

Sarah Stærke-Balling

Neuroprotective effects of hypertonic sodium lactate after a hypoxic ischemic insult – a newborn piglet model

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Background: Hypoxic-ischemic encephalopathy (HIE) remains a major cause of neonatal death and disability, yet effective and widely applicable treatments remain limited. Hypertonic sodium lactate (HSL) has shown promising neuroprotective effects in rodent models of hypoxia–ischemia (HI), suggesting this as a novel therapy. This study aims to assess the neuroprotective effects of HSL in a larger animal model of moderate-to-severe HI.

Materials and methods: Thirty piglets (<24 h, both sexes) were enrolled in this randomized controlled study. A 45-min global HI insult was induced and standardized by amplitude integrated electroencephalography and mean arterial blood pressure criteria. One-hour post-insult, piglets were randomised 1:1 (same litter, same sex) to HSL or supportive care only. Brain injury was assessed at 32 h post-insult by magnetic resonance imaging and spectroscopy (MRI/S), and at 34 h by histological analysis of brain tissue.

Results: Data analysis is ongoing. Potential treatment effects on MRI parameters including apparent diffusion coefficient, blood oxygenation–level–dependent signal, and cerebral perfusion measured by arterial spin labelling, will be reported in comparison with untreated controls.

Conclusion: This study will provide evidence of feasibility and neuroprotective potential of HSL in neonatal HI.

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Keywords: Neonatology, Brain injury, Hypertonic sodium lactate, Magnetic resonance imaging, Piglets

Session: P4.7: Hjerte-Lunge-Kar

Andrea Bremholm Andersen

Prevention of Metabolic, Cardiovascular and Microangiopathic Complications in Patients with Type 2 Diabetes by Increased Intake of Dietary Anthocyanins and Fibers

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Background: Type 2 diabetes (T2D) is associated with increased platelet count and reactivity, contributing to elevated cardiovascular risk. Bilberries, rich in anthocyanins, have shown beneficial effects on inflammation and vascular function. Oats, a key source of β -glucan, are hypothesized to reduce oxidative stress and reduce cholesterol levels. This study aims to assess whether a 12-week dietary supplementation with bilberries and/or oats improves platelet function in T2D patients.

Materials and methods: This double-blind, randomized, placebo-controlled study includes 100 T2D patients randomized to consume either a 1) bilberry, 2) oat, 3) bilberry/oat, or 4) control beverage for 12 weeks. Blood samples are drawn on day 0 and after 12 weeks. Platelet activation is measured as soluble P-selectin (ELISA) and aggregation by impedance aggregometry (Multiplate (R)) following stimulation with agonists. Changes from baseline and between groups are analyzed using linear regression.

Results: Participant recruitment and laboratory analyses are still ongoing. As of now (November 10, 2025) 10 patients have been included.

Conclusion: We expect this study to help clarify whether bilberries and/or oats can beneficially modulate platelet function in T2D. Positive results may promote dietary strategies to lower cardiovascular risk in patients with diabetes.

Acknowledgements: Funding is provided by Plantefonden.

Keywords: Type 2 Diabetes; Platelet Function; Nutrition; Anthocyanins; β -Glucan

Session: P4.8: Hjerte-Lunge-Kar

Simon Kromann-Thomsen

INSPIRE CHILD: Investigating Novel Strategies in Pediatric Immune Responses and Microbiome Environment: Comprehensive Lung Disease Investigation in Children

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Background: Childhood lung diseases cause significant morbidity and may impair lifelong respiratory health. Bronchoalveolar lavage (BAL) provides direct access to the airway environment in children and enables detailed characterization of local inflammation. Emerging evidence links airway microbiome patterns and immune signatures to specific pediatric disease phenotypes, yet large-scale multi-omics studies in children are still lacking.

Materials and methods: INSPIRE CHILD is a prospective cohort study including ≥ 300 children aged 1-17 years undergoing bronchoscopy. The children present with differing lung diseases. BAL and blood are collected and analyzed. Microbiomes are mapped using both targeted sequencing and explorative long-read profiling. Cytokines are quantified with multiplex immunoassays, and immune cell phenotypes are assessed by flow cytometry. Clinical data cover imaging, lung function, medical treatment, and symptoms.

Results: The study is at its initial phase. Pilot analyses show high technical validity across microbiome, cytokine and immunophenotyping workflows. Preliminary data will be presented if available at the time of the conference.

Conclusion: INSPIRE CHILD will generate the first integrated multi-omics characterization of pediatric BAL samples from children with lung disease. The study is expected to identify biomarkers that improve diagnostic precision and support individualized treatment strategies in future childhood lung disease.

Acknowledgements: The project is supported by Aarhus University Hospital's Development Fund and by a grant from Familien Andresens Fond. We thank all collaborating clinical and laboratory teams for their contributions. The authors declare no conflicts of interest.

Keywords: Pediatric pulmonology; Bronchoalveolar lavage; Microbiome; Cytokines; Immunophenotyping; Multi-omics

Session: P4.9: Hjerte-Lunge-Kar

Mette Lunddorf

A pharmacokinetic study of Desmopressin - Minirin vs Sandoz

Mette Lunddorf (1,2), Sigurd Uldbjerg (1), Konstantinos Kamperis (1,2) Nicklas Bjerg Hougaard (1,2), Søren Rittig (1,2) and Cecilie Siggaard Jørgensen (1,2).

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(2) Department of Paediatrics and Adolescent Medicine, Aarhus University Hospital

Background: Nocturnal enuresis (NE) affects 7–10% of 7-year-olds and may persist into adulthood, causing psychosocial burden. Monosymptomatic NE is often linked to nocturnal polyuria due to insufficient vasopressin secretion. Desmopressin is first-line therapy. A new orodispersible tablet (ODT) formulation has shown delayed absorption in adults, raising concerns regarding efficacy and safety in children.

Materials and methods: This randomized crossover pharmacokinetic and pharmacodynamic study includes 22 children aged 8–14 years with nocturnal enuresis. Participants receive single doses of Minirin and Sandoz desmopressin ODTs in randomized order with washout. Primary outcome is AUC. Secondary outcomes include C_{max}, tC_{max}, urine osmolality, urine volume, and patient-reported acceptability.

Results: Results are not yet available, as data collection and analysis are ongoing. Pharmacokinetic, pharmacodynamic, and patient-reported outcome data will be analyzed upon study completion to evaluate potential differences between the two desmopressin formulations.

Conclusion: The conclusion of this study is pending, as data analysis has not yet been completed. The results will determine whether clinically relevant differences exist between the two desmopressin formulations regarding pharmacokinetics, safety, and acceptability in children with nocturnal enuresis.

Acknowledgements: This study is supported by Dagmar Marshalls Fond, A.P. Møller Fonden, Tømmerhandler Vilhelm Bangs Fond, and Frimodt-Heineke Fonden.

Keywords: Nocturnal enuresis. Desmopressin. Pharmacokinetics. Pediatrics.

Oral session 6: Psykiatri og Neurologi

Session: O6.1: Psykiatri og Neurologi

Albert Gosvig

A 10+ year follow-up on chemotherapy-induced peripheral neuropathy and pain in cancer patients after adjuvant oxaliplatin or docetaxel

Albert Bundgaard Gosvig (1) Nanna Finnerup (1) Nina Lykkegaard Gehr (1,2) Lise Ventzel (2) Kristine Tang Bennedsgaard (3)

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Background: Chemotherapy-induced peripheral neuropathy (CIPN) is a common late effect of taxane and plati-num agents. It manifests as "glove-and-stocking" sensory loss and pain, which are often associated with functional loss, anxiety, depression, and reduced quality of life. Understanding the true chro-nicity of CIPN is essential to improve long-term survivorship care and validate current treatment protocols.

Materials and methods: This study represents a 10-year or longer follow-up of established cohorts previously assessed at 1 and 5 years. Questionnaires including DN4q, MNSIq, EQ-5D, and HADS were sent to eligible pa-tients: 52 colorectal (oxaliplatin-treated) and 80 breast cancer (docetaxel-treated) survivors, along-side reference groups treated with surgery alone. We compared the prevalence of neuropathy, pain, and psychological distress between chemotherapy and reference groups.

Results: Data collection is complete. Statistical analysis is currently in progress. Final results regarding the prevalence and chronicity of CIPN, neuropathic pain intensity, and their impact on quality of life and psychological distress (anxiety/depression) in the 10-year follow-up cohort compared to refer-ence groups will be presented at the congress.

Conclusion: We hypothesize that neuropathic symptoms persist for 10 years post-treatment and significantly reduce patient quality of life. Depending on our results, we will highlight the need to reassess chemotherapy protocols: potentially lowering neurotoxic doses or exploring protective agents.

Acknowledgements: The Danish Cancer Society (Kræftens Bekæmpelse) and the Department of Oncology, Aarhus Uni-versity Hospital for funding the project.

Keywords: CIPN, Peripheral Neuropathy, Neuropathic pain, Chemotherapy, Oxaliplatin, Docetaxel

Session: O6.2: Psykiatri og Neurologi

Madeleine Rzepa Hopkirk

An epidemiological study on juvenile myasthenia gravis from 1985 to 2020: Effect of thymectomy.

Madeleine Rzepa Hopkirk¹, Josefine Jul Jarbæk Nielsen¹, Henning Andersen¹

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Background: Myasthenia Gravis (MG) is the most common neuromuscular transmission disorder. Juvenile Myasthenia Gravis (JMG) is a subgroup among MG patients below 18 years of age. Research within JMG is sparse, and no treatment guidelines exist in Denmark or internationally. Treatment strategies for JMG patients rely on experiences from the adult population. Thymectomy is well-established in adults with MG but less so in JMG patients. Therefore, we aimed to explore the effect of thymectomy in JMG patients.

Materials and methods: We identified children diagnosed with JMG (1985-2020) using the Danish National Patient Registry (N=121). We reviewed their medical records to validate the diagnosis and to summarize the characteristics and prognosis of the patients who had undergone thymectomy.

Results: 43 patients were classified as having a valid JMG diagnosis, of whom 24 had undergone thymectomy. The mean age at surgery was 13 years. Before surgery, 37.5% (N=9) of patients were suspected of having either thymoma or hyperplasia of the thymus based on diagnostic imaging. Histology showed that 71.43% (N=15) had hyperplasia, and no thymoma was found. The surgery had a great effect in 63.7% (N=14), and complete remission was achieved in 34.8% (N=8) of patients.

Conclusion: The study showed that thymectomy may have an important impact on clinical improvement and achieving remission among JMG patients.

Acknowledgements: Contribute to the Lundbeck Foundation for a scholarship to support this study.

Keywords: Neurology, thoracic surgery, pediatrics.

Kamilla Kørup Trosborg

A Normative Atlas of Brain Glucose Metabolism using Deuterium Metabolic Imaging

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(4) Department of Mathematics, Aarhus University

(5) GE Healthcare, Germany and Denmark

Background: Deuterium metabolic imaging (DMI) offers non-invasive magnetic resonance imaging (MRI) based assessment of metabolism in vivo, making it a relevant paraclinical tool for several diseases with neurological metabolic alterations. Here we present a normative reference atlas of brain glucose metabolism accounting for age and sex.

Materials and methods: DMI images were obtained for 30 healthy adults (aged 51-84 years, 15 female) with a 3T MRI scanner after ingestion of deuterated glucose. The images were parcellated to determine the regional distribution of deuterated water, glucose, lactate, and glutamate plus glutamine (Glx). Linear models were applied to investigate effects of age, sex, and exploratory adjustments. To evaluate the performance, the normative atlas was compared with ten Alzheimer's disease patients and five healthy controls.

Results: Brain regional differences were significant for all metabolites ($p < 10^{-15}$), with the highest values in the occipital lobes, except for lactate whose regional distribution pattern was less consistent. While lactate production showed no overall age-dependency, global Glx production decreased $13 \pm 4\%$ per decade. Including adjustments for weight, blood glucose increase, and time from glucose ingestion to DMI scan, enabled the discrimination between healthy subjects and Alzheimer's disease patients.

Conclusion: Brain glucose metabolism measured with DMI depends heavily on brain region and age whereas sex had only minor effects in this cohort. The normative atlas presented here provides a reference for future DMI studies of brain metabolism.

Acknowledgements: The authors would like to thank Tau Vendelboe for imaging assistance, and Kasper Kørup Balle-Trosborg for statistical advice. The funding was obtained as part of a grant from the Novo Nordisk Foundation.

Keywords: Brain metabolism. Deuterium metabolic imaging. Magnetic resonance. Alzheimer's disease.

Kristine Højgaard Hinzel

Advancing Metabolic Mapping of Dementia with Deuterium Metabolic Imaging (DMI): Initial experience of DMI in Mixed Dementia

Kristine H Hinzel (1), Nichlas V Christensen (1), Malene Aastrup (1), Kamilla K Trosborg (1), Janne K Mortensen (2), Hanne Gottrup (2), Per Borghammer (3), Mattias H Kristensen (1), Esben SS Hansen (1), Michael Vaeggemose (1,4), Lotte B Bertelsen (1), Christoffer Laustsen (1)

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(4) GE Healthcare, Brøndby Denmark

Background: Reduced cerebral glucose uptake is a hallmark of various dementia types. Deuterium metabolic imaging (DMI) has recently showed correlation with Fluorodeoxyglucose Positron Emission Tomography (FDG-PET) in detecting this in Alzheimer's Disease (AD). However, DMI provides broader insight into cerebral metabolism. This study investigates DMI's potential in differentiating glucose-metabolism in a mixed dementia cohort, including Vascular Cognitive Impairment and Dementia (VCID), besides AD.

Materials and methods: Preliminary data from one VCID and three AD patients were compared to a normative atlas of 30 healthy controls (HC). Magnetic resonance anatomical imaging (MRI) and DMI were performed 90-105 minutes post-deuterated-glucose-ingestion. Signal intensities in AD-relevant brain regions of metabolites (DHO, 2^{H} -glucose (Glu), 2^{H} -glutamat+glutamin (Glx)) were normalized to combined Glu and DHO peaks as done previously. Regional prediction deviation of AD and VCID data was compared to the HC atlas.

Results: Glx/(Glu+DHO)-ratios varied across patients. AD1 (76 y, M) was within 95 % prediction interval (PI), resembling the HC atlas. AD2 (65 y, M) showed low Glx-ratios (PI < -1.96) across most regions. AD3 (61 y, F) showed substantial deviation from the HC atlas, reflecting more pronounced pathology-related metabolic changes in this relatively young patient. The VCID case (75 y, M) closely resembled the HC atlas in Glx, in contrast to AD, indicating potential differentiation of VCID from AD.

Conclusion: These preliminary results indicate disease-specific metabolic shifts in AD versus VCID, suggesting region- and disease-specific metabolic shifts. Inclusion of additional dementia cases will validate these initial findings and evaluate DMI as a differential diagnostic tool and an FDG-PET supplement.

Acknowledgements: The authors would like to thank Tau Vendelboe for imaging assistance. This work is funded by Novo Nordisk Foundation (0084906). Michael Vaeggemose is an employee of GE Healthcare. No other co-authors have any financial interests or relationships to disclose in relation to the subject of this presentation.

Keywords: Deuterium Metabolic Imaging, Magnetic Resonance, Dementia, Brain, Glucose metabolism

Session: O6.5: Psykiatri og Neurologi

Volena Dimitrova

The DUNDRUM-3 and DUNDRUM-4: Assessing appropriate levels of therapeutic security in a Danish forensic psychiatric sample

Volena Nikolaeva Dimitrova^{1,2}, Harry Kennedy ^{2,4}, Nikoline Busk^{1,2}, Mie Fryd Nielsen¹, Morten Deleuran Terkildsen^{1,2,3}, Marie-Jeanette Dalberg¹, Anders Helles Carlsen¹, Lisbeth Uhrskov Sørensen^{1,2,5}

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(4) Trinity College, University of Dublin, Dublin, Ireland

(5). Sapienza Università Di Roma, Rome, Italy

Background: Forensic psychiatry must balance therapeutic needs and public safety by matching patients to appropriate security levels. In Denmark, most forensic patients are treated in general psychiatry, raising concerns about consistent risk management. Validated tools to assess progress and readiness for lower security are needed. This study aims to assess the agreement between DUNDRUM-3 and -4 ratings and actual therapeutic security levels.

Materials and methods: This cross-sectional study will include 500 in- and outpatients from two medium secure forensic psychiatric departments and one general psychiatric ward within the Central Denmark Region. Patients will be rated using the DUNDRUM-3/4 based on information extracted from the Electronic Patient Record. Associations between DUNDRUM scores and assigned security levels will be analysed using ordinal logistic regression. Discriminative validity will be assessed using ROC analyses with one-vs-rest AUCs.

Results: No results yet.

Conclusion: No conclusion yet.

Acknowledgements: No acknowledgments yet

Keywords: Forensic psychiatry Therapeutic security level DUNDRUM Toolkit DUNDRUM-3 DUNDRUM-4 Placement decisions

Mathilde Møller Særkjær

C-Terminal Agrin Fragment as a Biomarker in Myasthenia Gravis

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Background: Myasthenia gravis (MG) is an autoimmune disorder caused by antibodies targeting components of the neuromuscular junction (NMJ), leading to fluctuating muscle weakness. Complement-mediated NMJ destruction and ongoing remodelling contribute to disease pathology. The C-terminal 22 kDa fragment of agrin (CAF), which is produced by neurotrypsin cleavage, has been linked to NMJ damage and denervation, suggesting it may serve as a blood-based biomarker of disease activity and treatment response.

Materials and methods: This prospective observational study includes 120 participants: 60 MG patients at different disease stages and 60 healthy controls. A subset will attend additional visits for repeated sampling to evaluate longitudinal changes. CAF is measured by ELISA and correlated with MG scoring tools and antibody profiles. Clinical and biochemical variables are recorded. Statistical analyses will compare CAF levels between groups and evaluate their associations with clinical severity and treatment response.

Results: As data collection is ongoing, no results are yet available. Our primary hypothesis is that CAF blood concentrations are elevated in patients with myasthenia gravis compared with healthy controls and correlate with overall disease burden and treatment response. Preliminary results are anticipated to be presented at KMS 2024.

Conclusion: This study aims to clarify the potential of CAF as a blood-based biomarker in MG. Establishing correlations between CAF levels, disease activity, and treatment response could improve disease monitoring, enable earlier recognition of therapeutic effects, and support individualized treatment.

Acknowledgements: This project has received funding from Muskelsvindfonden and Brødrene Hartmanns Fond. The authors declare no financial conflicts of interest.

Keywords: Myasthenia Gravis, Neuromuscular Dysfunction, Blood-Based Biomarker.

Metha Gornitzka

Perceptual distortion: an unexplored characteristic of chronic migraine

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(3)

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Background: Migraine is the leading cause of disability worldwide in people under 50 and a major contributor to chronic pain. Perceptual Distortion (PD) - a body image disturbance affecting how one senses or perceives their own body - may contribute to maintenance of ongoing pain in several chronic pain disorders. However, PD has not been investigated in migraine. This project examines whether migraine patients experience craniofacial PD and if PD is associated with pain and headache characteristics.

Materials and methods: Patients suffering from migraine (18-65 years) will be invited to fill out a questionnaire enquiring about their i) headache and facial pain characteristics (intensity, frequency and location), ii) self-reports of PD in the face/head region to examine the prevalence, location and magnitude of PD, and iii) psychological self-report measures. PD will be defined as perceived change in the size/shape (i.e, feelings of swelling or reduction) of the painful head/face area.

Results: Data collection is currently still in progress and no results have been obtained as of November 2025. Preliminary results are expected to be presented at KMS 2026.

Conclusion: As of November 2025 no conclusions have been made. This project may help to better understand pain chronification and improve disease characterization in migraine. The future perspective will be to test neuromodulatory techniques to better understand and alleviate PD and pain.

Acknowledgements: The authors declare no conflict of interest.

Keywords: Migraine, Pain, Perceptual Distortion, Headache, Facial Pain

Deltagelse uden præsentation

Line Møller Nielsen, Aarhus Universitet

Hvilket forskningsfelt interesserer du dig mest for?

Klinisk forskning inden for gastroenterologi og hepatologi med fokus på kroniske leversygdomme, sygdomsmonitorering og patientrapporterede outcomes.

Hvor langt er du i forskningsprocessen?

Jeg er aktuelt i gang med et forskningsår på Aarhus Universitetshospital, hvor jeg arbejder med et klinisk forskningsprojekt inden for hepatologi med fokus på kroniske leversygdomme.

Heiða Kristinsdóttir, Aarhus Universitet

Hvilket forskningsfelt interesserer du dig mest for?

Jeg interesserer mig for leversygdomme, især PBC.

Hvor langt er du i forskningsprocessen?

Påbegyndte mit forskningsår i februar 2026.

Karl Emil Hausmann Bach, Aarhus Universitet

Hvilket forskningsfelt interesserer du dig mest for?

Behandling af galdesyre-diarré med Liraglutid/GLP-1-receptor agonister,

Hvor langt er du i forskningsprocessen?

Nyopstartet forskningsår.

Mathilde Mai Hønholt Jokumsen, Aarhus Universitet

Karen Lise Wendelboe, Aarhus Universitet

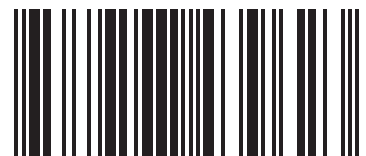
Nina Lund, Aarhus Universitet

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Benjamin Hørning Risager	O5.2	Mathilde Møller Særkjær	O6.6
Camilla Yde Hvelplund	O5.1	Metha Gornitzka	O6.7
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Elisabeth Kjeldgaard Levinsen	P3.10	Mila Uldall Sørensen	P2.3
Emilie Kromann-Thomsen	O4.1	Nadia Hedegaard Hansen	O3.1
Emma Kristine Mylund Eliassen	O3.6	Naja Pedersen	O5.6
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Jonas Bjerre van den Bos	O4.5	Sofie Hoppe Søe	O4.2
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Julie Haugaard	O1.2	Svend Storm Rasmussen	P1.1
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Julie Mellgaard	O5.4	Thomas Møller Marcussen	O4.4
Kamilla Kørup Trosborg	O6.3	Victoria Bloch Blytt Sandstad	O5.3
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