



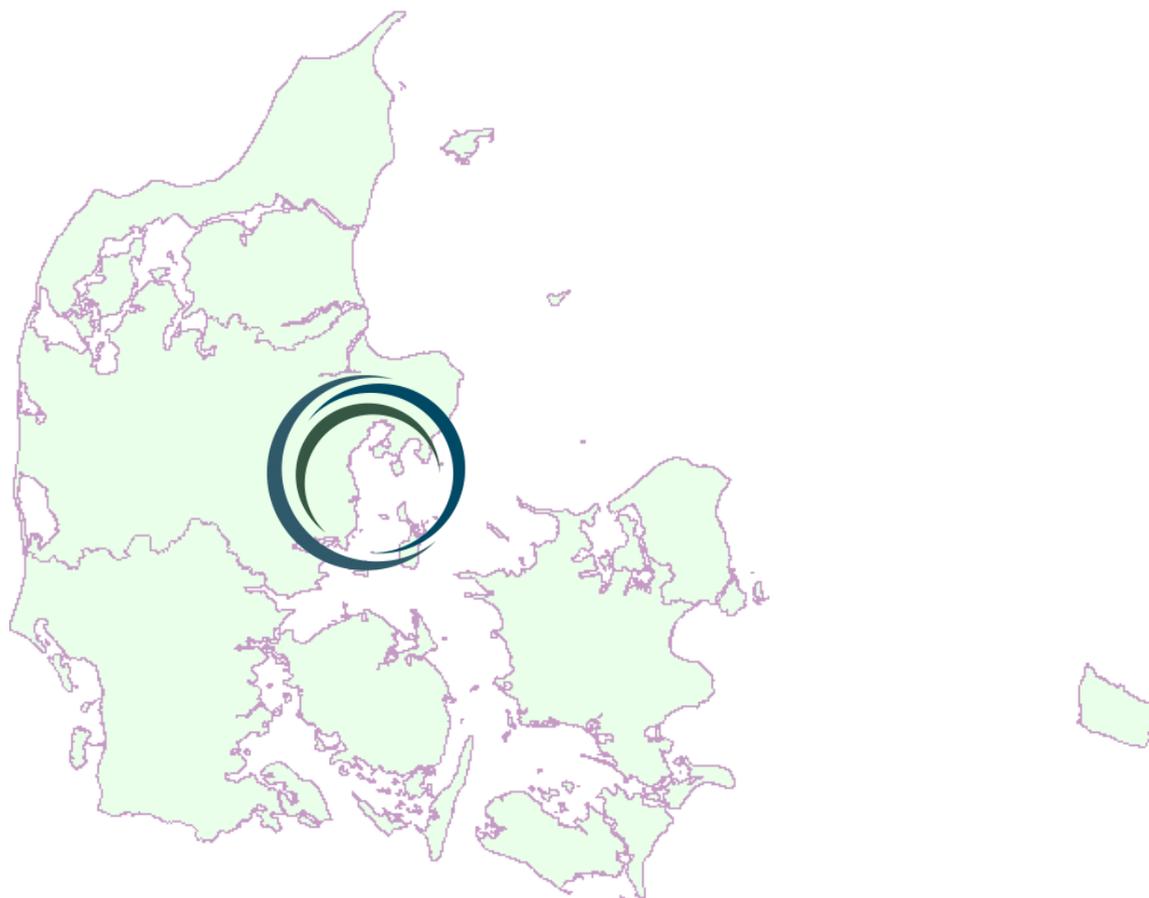
# DSKE

DANSK SELSKAB for KLINISK ERNÆRING

## **32. årsmøde i klinisk ernæring**

Helnan Marselis Hotel, Aarhus

Fredag 3. maj 2024



# Velkommen til 32. årsmøde i klinisk ernæring

Velkommen til 32. årsmøde i klinisk ernæring, afholdt af Dansk Selskab for Klinisk Ernæring (DSKE). Vi har glædet os til at dele ny viden om klinisk ernæring med dig!

## Videnskabelige oplæg

Vi har inviteret gode kolleger til at bidrage til det videnskabelige program. Samtidig vil vi gerne involvere dig i diskussionerne. Hav spørgelysten parat.

## Kliniske retningslinjer

DSKE tog sidste år hul på arbejdet med nationale kliniske retningslinjer i klinisk ernæring. I år præsenteres retningslinjen om væske og ernæring hos ældre.

## Frie foredrag og abstracts

Vi har modtaget 24 gode abstracts og valgt 12 til præsentation ved foredrag. Alle 24 abstracts er trykt her i årsmødebogen.

## Besøg udstillerne

Tak til vores udstillere, som igen i år er med til at muliggøre afholdelse af mødet i gode rammer, der styrker mulighed for netværksdannelse og vidensdeling. Besøg dem i pauserne.



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# Program, 32. årsmøde i klinisk ernæring, 3. maj 2024

- 08.30 – 09.30 **Ankomst**, registrering og morgenmad
- 09.30 – 09.35 **Velkomst og introduktion til dagen**  
*Henrik Højgaard Rasmussen, Aalborg Universitetshospital*
- 09.35 – 09.40 **Året i DSKE på 5 minutter**  
*Christian Lodberg Hvas, formand for DSKE*
- 09.40 – 09.45 **Introduktion til gennemgående case: En patientrejse**  
*Årsmødegruppen*
- 09.45 – 10.20 **Før kræftbehandling**  
Ernæringstilstand og kræftrisiko – *Signe Borgquist, Aarhus Universitetshospital og Aarhus Universitet*  
Præhabilitering før kræftkirurgi – *Rasmus Dahlin Bojesen, Sjællands Universitetshospital*
- 10.20 – 10.50 **Pause**
- 10.50 – 11.25 **Under kræftbehandling**  
Fysisk træning og ernæring – *Casper Simonsen, Københavns Universitet*  
Ernæring ved kræft: What's new? – *Kirstine Guld Frederiksen, Regionshospitalet Gødstrup*
- 11.25 – 12.00 **Efter kræftbehandling**  
Ernæring ved palliativ behandling – *Mette Asbjørn Neergaard, Aarhus Universitetshospital og Aarhus Universitet*  
Ernæring ved senfølger til kræftbehandling – *Janne Fassov, Aarhus Universitetshospital*
- 12.00 – 13.00 **Frokost**
- 13.00 – 13.05 **Ny klinisk retningslinje fra DSKE**  
Væskebehandling – *Mia Bundgaard Klausen, Aalborg Universitetshospital*
- 13.05 – 13.25 **Uddeling af Jens Kondrup Prisen 2024**
- 13.25 – 14.00 **Health economics in clinical nutrition**  
*Karen Freijer, Partnership Overweight Netherlands, Erasmus Medical Center, Rotterdam*
- 14.00 – 14.10 **Spørgsmål**
- 14.10 – 14.40 **Kaffe** og fordeling til frie foredrag
- 14.40 – 15.40 **Frie foredrag** i to grupper
- 15.40 – 16.00 **Prisuddeling**  
Bedste abstract; Nutricias forskningslegat i enteral klinisk ernæring
- 16.00 **Tak for i dag**

Efter årsmødet afholdes:

- 16.30 – 17.30 **Generalforsamling**, Dansk Selskab for Klinisk Ernæring

## Oplægsholdere ved årsmødet



### **Signe Borgquist**

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## **Frie foredrag**

### **Spor A (abstract 1-6)- Marselisborgsalen**

1. 14.40 – 14.50

**Investigating the relationship between bone health and total, plant, and animal protein intake in postmenopausal women - a cross sectional study**

*Rikke Sand Andersen, Københavns Universitet*

2. 14.50 – 15.00

**Early signs of dysphagia in older patients in the acute care setting – negative outcomes show early**

*Sabina Mikkelsen, Aalborg Universitetshospital*

3. 15.00 – 15.10

**Nutritional risk, dietary intake and nutrition impact symptoms in patients admitted to hospital for five or more days**

*Ines Raben, Sjællands Universitetshospital*

4. 15.10 – 15.20

**Protein-based oral rehydration solutions for patients with an ileostomy: a randomised, double-blinded crossover study**

*Charlotte Lock Rud, Aarhus Universitetshospital*

5. 15.20 – 15.30

**Prevalence of eating disorder symptomatology among outpatients referred to health promotion from somatic hospital departments**

*Signe Graungaard, Aalborg Universitetshospital*

6. 15.30 – 15.40

**Transferring Nutrition Care Responsibilities from Nursing Staff to Clinical Dietitians – Experiences from a Danish Pulmonology Ward**

*Marianne Boll Kristensen, Regionshospitalet Gødstrup*

## Frie foredrag

### Spør B (abstract 7-12)- Bøgesalen

7. 14.40 – 14.50

**Barriers and facilitators when implementing nutritional interventions to prevent or treat malnutrition among older adults – a scoping review**

*Tine Louise Launholt, UCL Vejle og Syddanmarks Universitet*

8. 14.50 – 15.00

**Nutritional risk predicts readmission within 30 and 180 days after discharge among older adult patients across a broad spectrum of diagnoses**

*Mette Kathrine Friis Iversen, VIA University College, Aarhus*

9. 15.00 – 15.10

**Effekten af lav Potentiel Renal Syrebelastende diæt på metabolisk acidose hos patienter med kronisk nyresygdom stadie 4 og 5**

*Anna Elvina Wittendorff Pedersen, Københavns Universitet*

10. 15.10 – 15.20

**Sammenhæng mellem p-retinol og livskvalitet hos patienter i levothyroxin-behandling for myxødem**

*Jane Nielsen, Københavns Universitet*

11. 15.20 – 15.30

**Nutritional intake and prevalence of malnutrition according to GLIM criteria in Danish hospitalized patients at nutrition risk – results of a cohort-study**

*Signe Frederikke Holmsted, Herlev og Gentofte Hospital*

12. 15.30 – 15.40

**Nutrition Impact Symptoms and taste changes in patients undergoing hemodialysis**

*Line Moldt Haack, Herlev og Gentofte Hospital*

## Abstracts

1.

### **Investigating the relationship between bone health and total, plant, and animal protein intake in postmenopausal women - a cross sectional study**

Rikke Sand Andersen<sup>1</sup>, Silje Fosse<sup>1</sup>, Ida Kirstine Jensen<sup>1</sup>, Sidse Ida Ingemann Rasmussen<sup>1</sup>, Caroline Filskov Petersen<sup>1</sup>, Maj Cramon<sup>2</sup>, Sadime Basak Kisi<sup>1</sup>, Jens Rikardt Andersen<sup>1</sup>, Mette Friberg Hitz<sup>2</sup>, Inge Tetens<sup>1</sup>

<sup>1</sup>University of Copenhagen, Department of Nutrition, Exercise and Sports

<sup>2</sup>National Centre for Bone Health, Zealand University Hospital, Denmark

**Background:** The importance of total, plant and animal protein on bone health is unclear. Therefore, the aim was to investigate the relationship between dietary protein and bone health, as well as the relationship between bone health and plant and animal protein.

**Methods:** Baseline data from the RENEW study (NCT04836637) included dietary data and dual energy X-ray absorptiometry scan of lumbar and femoral sites. Obvious mis-reporters regarding dietary intake were excluded. Correlation analyses were performed between T-scores and intake of dietary protein, plant protein, animal protein and plant to animal protein ratio. T-tests were performed to test differences in T-scores between lowest (Q1) and highest (Q4) intake of dietary protein, plant protein, animal protein and plant to animal protein ratio.

**Results:** Altogether, 340 participants were included. Plant to animal protein ratio was negatively correlated with femoral T-score ( $p=0.01$ ). Animal protein was positively correlated with lumbar T-score ( $p=0.03$ ) and femoral T-score ( $p=0.02$ ). Higher intake of dietary protein and animal protein in Q4 resulted in higher lumbar T-score ( $p=0.03$ ,  $p=0.04$ , respectively) and femoral T-score ( $p=0.02$ ,  $p=0.003$ ) respectively compared to Q1. Higher plant protein and plant to animal ratio in Q4 resulted in lower femoral T-score ( $p=0.04$ ,  $p=0.008$ , respectively) compared to Q1.

**Conclusion:** Our findings suggest that it is beneficial for postmenopausal women to have a relatively higher consumption of total and animal protein intake and a higher animal to plant protein ratio for bone health.

The RENEW study is financially supported by Innovation Fond Denmark (Grand Solutions 2019, \*Grant No. 9090-00017B

**ESPEN: Submitted**

2.

### **Early signs of dysphagia in older patients in the acute care setting – negative outcomes show early**

Sabina Mikkelsen<sup>1</sup>, Botilla Dalsgaard Jensen<sup>1</sup>, Pernille Mølgaard Rosenvinge<sup>2</sup>, Robert Mariusz Modlinski<sup>2</sup>, Maria Dissing Olesen<sup>2</sup>, Simon Hosbond Poulsen<sup>2</sup>, Mette Holst<sup>1,2</sup>

<sup>1</sup>Centre for Nutrition and Intestinal Failure, Department of Gastroenterology, Aalborg University Hospital

<sup>2</sup>Department of Clinical Medicine, Aalborg University, Aalborg

**Rationale:** Dysphagia is a prevalent and serious problem among geriatric patients and has been associated with adverse outcomes both for the individual and for society. However, little research has been done related to the long term outcomes among patients with early signs of dysphagia. This study aimed at investigating long term clinical outcomes associated with early signs of dysphagia (SD) in geriatric patients in an acute care setting.

**Methods:** In this prospective observational study with 18-month follow-up, the patients were screened in an acute care setting. The included patients were grouped based on swallowing function: SD or normal swallowing (NS). Medical records were retrieved on 332 patients with complete screening from baseline to 18 months after admission.

**Results:** Patients with early SD experienced a higher mortality (41.3%) compared to NS (23.3%) ( $p<0.001$ ). However, the higher risks for both mortality and readmissions were seen already within the first 90 days after screening. Using a multivariate hazard model, risk factors for mortality were identified as SD, increasing age, nutritional risk, low performance status, increasing number of comorbidities, and inflammation markers. Another multivariate hazard ratio model showed that low performance status, a high number of comorbidities, and low hemoglobin were risk factors for readmissions within the 18 months follow-up period.

**Conclusion:** Early signs of dysphagia are associated with mortality after 18 months, but readmissions were mostly pronounced within 90 days. Early screening in older patients in general is relevant to implement timely nursing care prevention and diagnosis.

**ESPEN: submitted**

### 3.

#### **Nutritional risk, dietary intake and nutrition impact symptoms in patients admitted to hospital for five or more days**

Ines Raben<sup>1</sup>, Jonas Anias Svendsen<sup>2</sup>, Matias Holskou<sup>3</sup>, Anja Weirsøe Dynesen<sup>2</sup>

<sup>1</sup>Unit for Clinical Nutrition, Medical Department, Zealand University Hospital, Køge

<sup>2</sup>Centre for Health and Rehabilitation, University College Absalon, Slagelse

<sup>3</sup>Zealand University Hospital, Nykøbing Falster, Fjordvej 7, Nykøbing F

**Rationale:** To follow up on good nutrition practise regular audits on practise of nutrition screening, nutrition therapy and monitoring of dietary intake is of outmost importance. Thus, the study aimed to investigate nutritional risk, nutritional coverage, and nutrition impact symptoms (NIS) in hospitalized patients.

**Methods:** The study was cross-sectional including adult patients admitted for  $\geq 5$  days on November 1, 2023. Data were collected from medical records to estimate prevalence of nutritional risk (NRS-2002). Data on dietary intake and NIS were collected by interview from patients at nutritional risk.

**Results:** 104 patients (48% females) were included of which 53 (51%) were at nutritional risk. Patients at nutritional risk and not at risk differed in terms of length of admission (median 9 (IQR: 7-17) vs. 7 days (6-11),  $p=0.015$ ) and BMI (median 22.3 (IQR: 20.3-27.7) vs. 25.9 (22.9-29.7),  $p=0.015$ ). The patients at nutritional risk had a median coverage of energy of 60 % (IQR: 38-87) and of protein of 45% (IQR: 36-82). In total, 42% had an energy intake of  $\geq 75\%$  of the estimated requirement, while  $\geq 75\%$  of the estimated protein requirement was met by 28% of the patients. The most prevalent (50%) NIS affecting dietary intake was 'diarrhea, constipation or discomfort from the stomach'.

**Conclusions:** The study highlights the significant prevalence of nutritional risk among hospitalized patients, with one in every two patients identified as at risk. Despite guidelines and efforts to provide adequate nutrition therapy, nutritional needs were not met, particularly regarding protein.

**ESPEN: Submitted**

### 4.

#### **Protein-based oral rehydration solutions for patients with an ileostomy: a randomised, double-blinded crossover study**

Charlotte Lock Rud<sup>1,2</sup>, Mark Krogh Hvistendahl<sup>3</sup>, Bente Langdahl<sup>2,4</sup>, Frederik Kraglund<sup>1</sup>, Simon Mark Dahl Baunwall<sup>1</sup>, Simon Lal<sup>5</sup>, Palle Bekker Jeppesen<sup>3</sup>, Christian Lodberg Hvas<sup>1,2</sup>

<sup>1</sup>Department of Hepatology and Gastroenterology, Aarhus University Hospital

<sup>2</sup>Department of Clinical Medicine, Aarhus University

<sup>3</sup>Department of Intestinal Failure and Liver Diseases, Rigshospitalet, Copenhagen

<sup>4</sup>Department of Endocrinology and Internal Medicine, Aarhus University Hospital

<sup>5</sup>Intestinal Failure Unit, Salford Royal NHS Foundation Trust, Salford, United Kingdom

**Rationale:** Patients with an ileostomy are at increased risk of dehydration and sodium depletion. We aimed to investigate if protein type or protein hydrolysis affects absorption from iso-osmolar oral rehydration solutions (ORS) in patients with an ileostomy.

**Methods:** This was a randomised, double-blinded, active comparator-controlled 3x3 crossover intervention study. We developed three ORS with whey protein isolate, caseinate or whey protein hydrolysate. The ORS contained 40-48 g protein/L, 34-45 mmol sodium/L and had an osmolality of 248-270 mOsm/kg. The patients ingested 500 mL/d during three 4-week periods with a  $>2$ -week washout. The primary outcome was wet-weight ileostomy output.

**Results:** Thirteen patients were included in the analyses. Wet-weight ileostomy output did not change and there was no difference between interventions ( $p=0.38$ ). A series of statistically significant improvements was observed following intake of whey isolate ORS, including decreased faecal losses of energy (-365 kJ/d, 95% confidence interval (CI), -643 to -87,  $p=0.012$ ), magnesium (-4.0 mmol/L, 95%CI, -7.4 to -0.7,  $p=0.020$ ), plasma aldosterone (-4,674 pmol/L 95%CI, -8,536 to -812,  $p=0.019$ ), and eGFR (2.8 mL/min/1.73m<sup>2</sup>, 95%CI, 0.3 to 5.4,  $p=0.03$ ).

**Conclusion:** Ingestion of 500 mL/d of three protein-based iso-osmolar solutions resulted in unchanged and comparable ileostomy outputs in patients with an ileostomy. Following whey isolate ORS, we observed discrete improvements in a series of absorption proxies in both faeces and blood. The protein-based ORS were safe and well-tolerated. Future studies are warranted to explore if different compositions or doses of protein-based ORS can improve absorption in patients with an ileostomy.

ClinicalTrials.gov study identifier: NCT04141826.

**ESPEN: Submitted**

## 5.

### **Prevalence of eating disorder symptomatology among outpatients referred to health promotion from somatic hospital departments**

Signe Graungaard<sup>1</sup>, Tobias Lund Christensen<sup>1</sup>, Lise Nørregaard Søndergaard<sup>1</sup>, Gry Kjaersdam Telléus<sup>2</sup>

<sup>1</sup>*Department of Health Promotion, Aalborg University Hospital*

<sup>2</sup>*Psychiatry, Unit for Psychiatric Research, Aalborg University Hospital*

<sup>3</sup>*Institute of Communication and Psychology, Psychology, Aalborg University*

**Background and aims:** All eating disorders (EDs) lead to a significant decrease of health status, psychosocial functioning and quality of life (QoL). Individuals with untreated binge eating disorder (BED) tend to gain weight over time, which may contribute to serious health issues. In somatic hospital departments, some outpatients have reduced compliance with lifestyle changes. This may, to some extent, be due to patients with an undiagnosed ED receiving the incorrect treatment. In this cross-sectional study, we aimed to investigate the prevalence of EDs among patients referred to lifestyle courses.

**Results:** A total of 136 patients referred from somatic hospital departments to lifestyle changes in a specialized hospital unit were included in the study. The response rate was 69.4%. Self-reported ED or sub-clinical symptoms of ED according to the Eating Disorder Examination Questionnaire (EDE-Q) were found in 17.65%. Of these, 11.03% fulfilled the self-reported criteria for an ED (BED, 7.35%; bulimia nervosa, 3.68%). Patients with an ED or subclinical ED symptoms had elevated grazing behaviour compared to those without ED symptomatology. A statistically significant difference in QoL was also found.

**Discussion and conclusions:** The prevalence of self-reported ED or subclinical ED symptoms in patients referred to a lifestyle course is substantial. This ED group had reduced QoL and larger grazing behaviour compared to patients without ED symptomatology. Thus, the prevalence of undiagnosed EDs among patients within somatic hospital departments may be substantial, underlining the importance of screening and further research within this topic.

## 6.

### **Transferring Nutrition Care Responsibilities from Nursing Staff to Clinical Dietitians – Experiences from a Danish Pulmonology Ward**

Marianne Boll Kristensen<sup>1</sup>, Ingeborg Krarup Rask<sup>1</sup>, Kirstine Guld Frederiksen<sup>1</sup>, Lone Viggers<sup>1</sup>

<sup>1</sup>*Department of Nutrition, Gødstrup Hospital, Herning, Denmark*

**Rationale:** Daily nutrition care in Danish hospitals typically falls under nursing staff responsibility, with clinical dietitians only involved when requested. At a pulmonology ward, responsibility for nutritional screening, nutrition care and daytime meal ordering was transferred from nursing staff to clinical dietitians. The study explored how this was experienced by both groups, as well as potential effects on patients' dietary intake.

**Methods:** Semi-structured individual interviews were conducted with nine nursing staff and five clinical dietitians. Interviews were recorded, transcribed, and analysed using qualitative content analysis. Three days' dietary intake in 32 patients at nutritional risk was compared to data collected in a previous study (n=68).

**Results:** Common themes among nursing staff and dietitians were 'Improved Quality of Nutrition Care' and 'Proximity Enhances Collaboration', with both groups describing the dietitian's transition from a guest to a colleague. While nursing staff experienced relief from task delegation, they felt less aware about patients' nutrition. However, they found reassurance in knowing that dietitians handled this aspect. Adjusting to dietitians' meal ordering disrupted routines, highlighting the importance of coordination. For dietitians, screening and meal ordering were meaningful tasks although not the most professionally challenging. Adopting another role toward patients was, however, a personal challenge. With dietitians involved, 79% of patients met  $\geq 75\%$  of energy requirements compared to 58% under nursing staff responsibility (p=0.023). Corresponding protein intake numbers were 49% versus 34% (p=0.172).

**Conclusions:** Transferring nutrition care responsibilities to clinical dietitians can enhance nutrition care quality and be mutually perceived as meaningful. Effective coordination is crucial.

**ESPEN: Submitted**

## 7.

### **Barriers and facilitators when implementing nutritional interventions to prevent or treat malnutrition among older adults – a scoping review**

Tine Louise Launholt<sup>1,2</sup> (corresponding author), Palle Larsen<sup>3</sup>, Lena Aadal<sup>4,6</sup>, Hanne Kaae Kristensen<sup>3,5</sup>

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<sup>4</sup>*Hammel Neurorehabilitation and Research Centre, Hammel*

<sup>5</sup>*KI, OUH, Research Unit for CIMT - Center for Innovative Medical Technology, Odense*

<sup>6</sup>*Department of Clinical Medicine, Aarhus University, Aarhus*

**Rationale:** Malnutrition among community-dwelling older adults is a prevalent condition, especially among those receiving health care services. Effective management requires early identification and multimodal interventions; however, malnutrition is a complex problem, and studies report a significant gap between recommended nutritional interventions and actual practices.

Therefore, this study aimed to examine existing evidence on barriers and facilitators in the implementation of nutritional interventions among older adults living in non-institutional municipal healthcare settings.

**Methods:** A scoping review, following the guidance from JBI and addressing the PRISMA-SCR checklist. The study included evidence from diverse sources that address barriers and/or facilitators from a stakeholder perspective which influence the implementation of nutritional interventions for malnutrition prevention or treatment among older adults ( $\geq 65$  years) in non-institutional municipal healthcare settings. Stakeholders were older adults, informal caregivers, or health care professionals (HCP).

**Results:** 37 articles were included, and 10 categories identified. Facilitators were 1) Lack of knowledge and awareness among HCP, 2) Lack of resources 3) Lack of collaboration and communication, 4) Missing links between healthcare settings, 5) Poor insight among older adults and informal caregivers. Barriers were 6) Education and training of HCP, 7) Selfcare, 8) Person-centered care 9) Technology in nutritional care, and 10) Social and psychological factors.

**Conclusion:** Findings from this review indicate a great need for implementation strategies if nutritional care practice is to be improved.

**ESPEN: Submitted**

## 8.

### **Nutritional risk predicts readmission within 30 and 180 days after discharge among older adult patients across a broad spectrum of diagnoses**

Mette Kathrine Friis Iversen<sup>1,2</sup>, Annette Buhl<sup>1,2</sup>, Anette Schnieber<sup>1,2</sup>

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<sup>2</sup>*VIA University College, Research Centre for Health and Welfare Technology, Aarhus*

**Background and aims:** Older adult patients who are at nutritional risk during hospital admission are at higher risk of readmission. There is a lack of studies investigating this relationship across different older adult patient groups while using recommended instruments and adjusting for relevant confounders. Thus, the aim of the present study was to investigate whether nutritional status according to the Nutrition Risk Screening 2002 during hospitalization predicted readmission among older adult patients within 30 and 180 days across a broad spectrum of wards and diagnoses when adjusting for relevant confounders.

**Materials and methods:** The present study is a cohort registry study including older adult patients ( $\geq 65$  years) hospitalized during a 5-year period. Logistic regression analyses with readmission within 30 days ( $n=8,371$ ) and 180 days ( $n=7,981$ ) as the dependent variable were performed.

**Results:** Older adult patients at nutritional risk during the index admission were 1.44 times more likely to be readmitted within 30 days ( $p<0.001$ ), and 1.47 times more likely to be readmitted within 180 days ( $p<0.001$ ), when adjusting for age, sex, discharge destination, diagnosis group, and length-of-stay.

**Conclusions:** Our results highlight the importance of focusing on nutritional status in older adults as a factor in readmission prevention, including ensuring that practices, resources, and guidelines support appropriate screening procedures. Because nutritional risk predicts readmission both in a 30-days and 180-days perspective, the results point to the importance of ensuring follow-up on the screening result, both in the hospital context and after discharge

## 9.

### Effekten af lav Potential Renal Syrebelastende diæt på metabolisk acidose hos patienter med kronisk nyresygdom stadie 4 og 5

Anna Elvina Wittendorff Pedersen<sup>1</sup>, Julie Friis Christensen<sup>1</sup>, Henriette Watson Hansen<sup>1</sup>, Linea Cecilie Brandi<sup>1</sup>, Mads Vaarby Sørensen<sup>2</sup>, Peder Berg<sup>2</sup>, Ditte Hansen<sup>3</sup>, Lisbet Brandi<sup>4</sup>, Jens Rikardt Andersen<sup>1</sup>, Louise Salomo<sup>4</sup>

<sup>1</sup>Institut for Idræt og Ernæring, Københavns Universitet; <sup>2</sup>Biomedicinsk afdeling, Aarhus Universitet, Aarhus;

<sup>3</sup>Nefrologisk afdeling, Herlev-Gentofte Hospital, Herlev; <sup>4</sup>Nefrologisk afdeling, Nordsjællands Hospital, Hillerød

**Rationale:** Metabolisk acidose (MA) er associeret med progression af kronisk nyresygdom (CKD). Studier har vist at en diæt med lav "potential renal syrebelastning" (PRAL) kan medføre stigninger i plasma-total-CO<sub>2</sub> (p-tCO<sub>2</sub>). Forsøget undersøgte om lav PRAL-mixed-diæt har effekt på MA, samt diætens gennemførlighed for CKD-patienter.

**Metoder:** Seks ugers kontrolleret interventionsforsøg sammenlignede to ugers habituel-diæt med to ugers interventions-diæt og et opfølgingsbesøg, to uger efter endt intervention. Studiet inkluderede ikke-dialysekrævende patienter med CKD-stadie 4 og 5, og kronisk MA. Interventionen var en mixed-diæt, der reducerede PRAL med minimum 10 mmol/dag i forhold til habituel PRAL, under professionel diætetisk vejledning. Det primære endepunkt var ændringer i p-tCO<sub>2</sub>(mmol/l). Sekundære endepunkter inkluderede relevante biomarkører fra døgn-urin, plasma og fysiske test. Diætsammensætning blev analyseret via tre-dages fotodokumentation. Data blev analyseret per protokol med mixed-effects model for gentagende målinger.

**Resultater:** 12 patienter blev inkluderet med gennemsnitsalder 71,5 år, gennemsnit baseline eGFR:

19mL/min/L/1,73m<sup>2</sup>, p-tCO<sub>2</sub>: 33,3mmol/L, urin-natrium: 146mmol/dag og urin-albumin/kreatinin ratio (UACR): median 901%.

To ugers intervention ændrede ikke p-tCO<sub>2</sub> sammenlignet med habituel diæt (95%CI -1:1 p<0,93). Under interventionen faldt PRAL fra i gennemsnit 7,2 mmol/dag til -12 mmol/dag (sammenlignet med habituel diæt: -16 mmol/dag, 95%CI -20:-11 p<0,001). Sammenlignet med habituel diæt var der en gennemsnitlig reduktion af systolisk blodtryk med 5 mmHg (95%CI -9:-2 p<0,05), UACR med 13% (95%CI -21:-3 p<0,01) og urin-natrium med 36 mmol/dag (95%CI -48;-24 p<0,001).

**Konklusion:** Der var ikke en effekt på MA, på trods af god kompliance. En lav PRAL-diæt er gennemførlig i praksis. Sekundært blev systolisk blodtryk, urin-natrium og UACR reduceret.

**ESPEN: Submitted**

## 10.

### Sammenhæng mellem p-retinol og livskvalitet hos patienter i levothyroxin-behandling for myxødem

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**Baggrund:** Standardbehandling af patienter med myxødem er levothyroxin-tabletter. Trods normale hormonplasmaværdier oplever en del patienter, at myxødemsymptomerne persisterer med nedsat livskvalitet til følge. I den hypothyroide periode er mangel på mikronæringsstoffer velbeskrevet, og da A-vitamin indgår som co-enzym i signalering og aktivering af DNA-transskriptionen af thyroideahormonerne, kunne der hypotetisk være en forbindelse mellem persisterende symptomer og mangel på A-vitamin.

**Formål:** At undersøge om der er en dosis-respons-sammenhæng mellem A-vitaminstatus og livskvalitet hos patienter i levothyroxinbehandling.

**Metoder:** Data og serum er indsamlet i et interventionsstudie (CATALYST) med 226 myxødem patienter. Baseline data inkluderende p-fritT<sub>3</sub>, p-fritT<sub>4</sub> og p-TSH er anvendt i dette studie. Plasma er analyseret for retinol. Livskvalitet er målt med ThyPRO-39, der indeholder 11 skalaer for selvurderet thyroideasymptomer og livskvalitet.

**Resultater:** Korrelationskoefficienten og p-værdien mellem p-retinol og ThyPRO-39-composite score var henholdsvis 0,047 og 0,496. Efter justering for confoundere rygning, alkohol, alder og køn var korrelationskoefficienten 0,111 (p=0,118). Efter justering for relevante confoundere var der positiv korrelation mellem p-retinol og fritT<sub>4</sub> og fritT<sub>3</sub> (p=0,048 og 0,032), men ikke med TSH.

**Konklusion:** Der fandtes ingen sammenhæng mellem A-vitaminstatus og livskvalitet hos patienter med velbehandlet myxødem. Mekanismen bag den positive korrelation mellem A-vitaminstatus og thyroidea-hormonerne samt den kliniske relevans heraf er uvis.

Studiet er støttet af Grosser L.F. Foghts fond og Musikforlæggerne Agnes og Knut Mørks fond

**ESPEN: Submitted**

## 11.

### **Nutritional intake and prevalence of malnutrition according to GLIM criteria in Danish hospitalized patients at nutrition risk – results of a cohort-study**

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**Background and aim:** A cohort study conducted in 2019 at our hospital revealed that patients at nutrition risk had a low coverage of nutritional requirement<sup>1</sup>. Since then, a more protein dense digital food concept has been implemented<sup>2</sup>. To encourage patient involvement, intake of requirements can be followed by a nutritional barometer. Primary aim of this study was, to investigate the effect of this initiative on nutritional coverage in nutritional at-risk patients. Secondary, the prevalence of malnutrition according to GLIM was investigated.

**Methods:** The study, was performed at Herlev Hospital, in September 2023. Patients >18 and hospitalized for >4 days were enrolled. Exclusion criteria: admission to the intensive, palliative, emergency, or maternal ward. Patients at nutrition risk (NRS-2002) underwent a 24-h dietary recall to assess nutritional coverage. To assess malnutrition the GLIM criteria were assessed. Muscle mass was measured using calf circumference and p-CRP to assess stress metabolism.

**Results:** 124 (F:52%) patients were included. Median age 75y (IQR:66-83), 81 (65%) were at nutrition risk. 69 at-risk patients had their dietary intake assessed. Compared to the 2019 study a higher prevalence achieved 75% of energy- and protein requirement, respectively (E:70% vs. E:36%, p<0.001, P:51% vs. P:24%, p<0.001). 58 at risk patients could be assessed for malnutrition. Of these 43 (74%) were diagnosed as malnourished.

**Conclusions:** Implementing a digital food concept with focus on patient empowerment may have a positive effect on nutritional coverage. However, more effort is needed to secure nutritional intake, especially protein. A high prevalence of patients is decidedly malnourished.

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**ESPEN: Submitted**

## 12.

### **Nutrition Impact Symptoms and taste changes in patients undergoing hemodialysis**

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**Introduction:** To gain a greater understanding on how the dietary guidance in patients undergoing hemodialysis can be optimized, we aimed to obtain the prevalence of Nutrition Impact Symptoms(NIS), taste changes, and the relation with nutritional and functional variables.

**Methods:** A cohort study including patients in hemodialysis from Herlev Hospital. The following data were collected; sex, age, BMI (low BMI≤20.5 kg/m<sup>2</sup>), self-evaluated function(ECOG) (low function 3-4), and Hand grip strength(HGS) (low HGS, Men<27, Women<16 kg). NIS were obtained using the EATEN-NIS-questionnaire including 16 questions on NIS-Present(NIS-P) and NIS-Limiting intake(NIS-L) (yes/no). Additionally, NIS-L were given points from 1-10 (NIS-points). Patients with taste changes present, were asked about type.

**Results:** We included 134 patients (66% men). Median age 71 years (IQR:71-79), BMI 25.0 kg/m<sup>2</sup> (IQR: 21.5–28.6), and NIS-points 9 points (IQR: 0-28). The most frequent NIS-P were; tiredness n=97(76%), dry mouth n=78(60%), and early satiety n=73(57%). Taste changes were present in n=40(33%), and no taste was most frequent n=15(65%). The most frequent NIS-L were; no appetite n=59(45%), early satiety n=57(44%), and tiredness n=45(35%). A lower level of function was found in patients with more NIS-points (27 vs. 5 points, p<.0001). No significant difference was found between NIS-points and BMI (19 vs. 6 points, p=0.116), or HGS (16 vs. 8 points, p=0.941).

**Conclusion:** In patients undergoing hemodialysis NIS-P and NIS-L were prevalent. The most frequent taste change was “no taste”. Patients with more NIS-points had a lower self-evaluated functional status. This emphasizes the importance of providing the patients guidance in coping with NIS.

**ESPEN: Submitted**

### 13.

#### **Kvalitetsundersøgelse på Endokrinologisk Ambulatorium på Slagelse Sygehus - udeblivelser uden afbud**

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**Baggrund:** Udeblivelsesprocenten på danske sygehuse er ikke undersøgt siden 2003, hvor den var 3-4%. Udeblivelser uden afbud er et stigende problem i det danske sundhedsvæsen og koster mange ressourcer. Årsager til udeblivelser er mange, og det samme er konsekvenserne for de udeblevne patienter. Derfor er det relevant at undersøge, hvilke forbedringsforslag, der vil kunne reducere udeblivelser.

**Formål:** Formålet med kvalitetsundersøgelsen er at undersøge omfanget af udeblivelser på Endokrinologisk Ambulatorium på Slagelse Sygehus. Derudover er formålet at undersøge, hvad der karakteriserer de udeblevne patienter i forhold til de patienter, der møder op. Dette gøres med henblik på at afdække, hvilke forbedringsforslag, der vil kunne reducere omfanget af udeblivelser.

**Metode:** For at afdække omfanget af udeblivelser samt hvilke patienter, der udebliver mest, analyseres et dataudtræk fra Sundhedsplatformen. Yderligere anvendes fokusgruppeinterview af relevant personale, telefonisk spørgeskemaundersøgelse af patienter samt tidligere undersøgelser for at vurdere årsager til udeblivelser samt forbedringsforslag. Slutteligt fremlægges resultaterne fra undersøgelsen til et møde med ambulatoriets ledelse for at diskutere eventuelle forbedringsforslag.

**Resultater:** Udeblivelsesprocenten på Endokrinologisk Ambulatorium på Slagelse Sygehus er 8% baseret på udeblevne aftaler. Det er yngre patienter med type 1-diabetes, der bor i en radius af 30 kilometer til Slagelse Sygehus, som udebliver mest. Størst udeblivelses% til aftaler med diætist. Forslag til at reducere udeblivelser er bl.a. synliggøre at det er muligt at modtage påmindelser, flere sammedags-screeninger, flere telefoniske aftaler, bedre information om hvad diætistaftaler indebærer, individualisering af patientforløb, udvidet åbningstid og trussel om afslutning af forløb ved udeblivelse uden afbud. Forslagene skal målrettes alle patienter tilkøbet Endokrinologisk Ambulatorium.

### 14.

#### **Frequency of patients discharged with tube feeding in a Danish University Hospital**

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**Rationale:** Enteral nutrition/tube feeding is recommended to patients at nutritional risk or malnourished who cannot meet their nutrient requirements by normal dietary intake. Tube feeding is infrequently documented in the medical record. We have little knowledge of the frequency of inpatients and outpatients receiving tube feeding in Denmark. This study aimed to investigate the frequency of tube feeding and number of patients discharged with tube feeding in a Danish University hospital.

**Method:** In a period of 4 months clinical dieticians recorded the number of nutritional plans made for tube feeding in Zealand University Hospital in Koege and Roskilde (600 beds). Medical, surgical, oncological, neurological and nephrological departments participated. Children and ICU were excluded. Descriptive statistics were used.

**Results:** In total 95 new nutritional plans of tube feeding were recorded (56% men, median age of 74 years (range 18-100)). The patients had a median hospitalization of 3 days (range 0-29) at start of tube feeding. The patients were tube fed for 5 days (range 1-46) during hospital stay. 47 patients were discharged receiving tube feeding (49%). The dieticians were contacted by patients/home care at 11 occasions after discharge (12%).

**Conclusion:** In 4 months 95 patients received a nutritional plan of tube feeding. Among those 49% of the patients were discharged with tube feeding. We need further knowledge about length of tube feeding, complications, outcome and need for follow up after discharge.

**ESPEN: Submitted**

15.

**A plant-based diet is feasible in patients with Crohn's disease**

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**Background:** Incorporating plant-based diets as a supplement to medical treatment may have a beneficial impact on patients with Crohn's disease, however, intervention research is required. Objective: To investigate the feasibility of a plant-based diet intervention. Secondly, the purpose was to investigate whether such diet may reduce disease activity and enhance quality of life.

**Materials and methods:** This study was designed as a single arm feasibility study. Outpatients with Crohn's disease in biological therapy were guided over twelve weeks towards a dietary lifestyle change.

**Outcome measures:** Feasibility concerning recruitment, retention rate and compliance. Secondary outcomes were measures of patient reported outcome questionnaires (PROMS). Paired t-tests were used to examine changes in CO<sub>2</sub> emissions, anthropology, biomarkers, and patient-reported data. Δ-values were used to investigate difference between dietary intake and requirements. Linear regressions examined the association between biomarkers and PROMS.

**Results:** In total, 15 participants completed the intervention with easy recruitment and a retention rate at 87.6%. A clinically positive tendency was seen towards improved symptom scores for disease (HBI; p=0.33 and IBDQ; p=0.33) but not for fatigue (IBD-F; p=0.24). Adverse effects were decreased protein intake (p=0.01) and slightly reduced muscle mass. It remains unclear to what extent the intervention contributed to the improved self-reported effects although perception of disease activity was improved.

**Conclusion:** This study demonstrates that it is possible to retain patients in following a plant-based diet. However, the dietary change required ongoing dietetic support with a focus on anti-inflammatory agents and the still unattainable protein requirements.

16.

**Barriers and facilitators to nutritional care for community-dwelling older adults – a qualitative observational study.**

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**Rationale:** Malnutrition among home-living older adults receiving health care services is a prevalent condition. Although recommended nutritional interventions exist, there seems to be a gap between recommended nutritional care and actual practice, probably due to the complexity of malnutrition. Therefore, this study aimed to uncover barriers and facilitators in the management of nutritional care among older adults living in a Danish non-institutional municipal healthcare setting.

**Methods:** Participant observations and informal interviews were conducted among 9 health care workers and 2 dietitians in their daily homecare practice in a district of a Danish municipality. The transcribed data were analyzed using qualitative content analysis via NVIVO 14 software.

**Results:** From the different barriers and facilitators found, 7 focus areas were selected and found usable in the development of a feasible nutritional intervention. The areas were 1) Systematic weighing, 2) Knowledge among health care workers and older adults, 3) Communication and collaboration, 4) Structured follow up, 5) Meal structure / serving interval, 6) Diet composition and 7) The social aspect.

**Conclusion:** 7 relevant focus areas with barriers and facilitators to nutritional care were found. The areas were presented and discussed by relevant stakeholders at a co-creative workshop on 27 February 2024 and will be used in the development of a feasible nutritional intervention.

**Disclosure of Interest:** None to declare.

**ESPEN:** Submitted

## 17.

### **Early nutritional intervention in general practice in case of suspected malignant disease – a feasibility study**

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**Rationale:** The aim was to investigate the feasibility of a complex early nutritional intervention in ten general practices on referral to hospital due to suspected malignant disease. Furthermore, the aim was to explore the impact of the intervention on the patients' health.

**Methods:** On referral to hospital based on the suspected malignant disease and at least 2 kg of unintended weight loss (UWL), general practitioners (GPs) included patients. Based on instructions, general practice nurses provided nutritional guidance to patients. The project employees followed up on the participants at monthly intervals from baseline, after one month and three months. If the participants did not have cancer, the follow-up ended after diagnosis. Data was based on self-reported data and physical measurements. Recruitment, retention, and outcomes were used to investigate feasibility.

**Results:** In total 27 participants were assessed for eligibility by the GPs within nine months. The intervention was found less feasible concerning recruitment, but the intervention was feasible concerning retention (retention rate=95.8%). The study was in some degree feasible concerning outcomes, as there were few missing data. Among the included participants, 50% were women and the median age was 73 years (ranging: 27-85 years). Mean UWL at inclusion was 5.4 kg and 66.7% had a UWL  $\geq$ 5% of body weight. Five of the included participants had a cancer diagnosis at baseline. Overall, energy intake, protein intake, muscle mass and percent body fat increased among 87.5%, 62.5%, 75.0% and 62.5% of the participants from baseline to month three.

**Conclusion:** The early nutritional intervention was likely feasible, but recruitment in general practice requires improvement. The nutritional intervention had a positive effect on the participants' dietary intake, muscle mass and percent body fat.

**ESPEN: submitted**

## 18.

### **Exploring diet-induced ketosis with exogenous ketone supplementation as a potential intervention in Post-Traumatic Stress Disorder: a feasibility study**

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**Background:** Post-Traumatic Stress Disorder (PTSD) is a severe and pervasive mental disorder, and patients experience numerous distressing symptoms and impairments that significantly impact their lives. PTSD is strongly associated with a wide range of metabolic abnormalities that affect the entire body. Existing treatment options are often ineffective.

**Aim:** This study aimed to examine if a 4-week ketogenic diet supplemented with exogenous ketones was feasible in adult patients with PTSD.

**Methods:** The intervention consisted of a ketogenic diet with  $\beta$ HB salt to obtain  $\beta$ HB  $\geq$  0,5 mmol/L. PTSD symptoms were measured with the PTSD Checklist for DSM-5 (PCL-5). QoL was measured with the RAND 36-Item Health Survey 1.

**Results:** Three of four eligible patients were included. Two patients completed the 4-week intervention and one patient completed 2 weeks. Ketosis was maintained in 87% of days. There were no serious adverse reactions, and adverse reactions in a total of 70% of days, the most frequent being headache followed by fatigue. The participant-perceived degree of adverse reactions was low to moderate. PCL-5 decreased by 20 points (70 to 50) in patient 1 and by 10 points (50 to 40) in patient 2. QoL improved in six of eight RAND-36 subscales in patient 1 and three of eight in patient 2.

**Conclusion:** To the best of our knowledge, this feasibility study is the first examining a ketogenic diet intervention in patients with PTSD. Ketosis was attained fast and maintained, patients were compliant and there were clinically meaningful improvements in PTSD symptoms and QoL.

**ESPEN: Submitted**

## 19.

### Use of complementary and alternative medicines in patients with gastrointestinal symptoms after treatment of cancer in the pelvic organs

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**Rationale:** Use of Complementary and Alternative Medicine (CAM) is increasing in patients with cancer. There is limited data on CAM intake in patients with sequelae following cancer treatment.

**Aim:** We aimed to identify the prevalence and type of CAM use, and to investigate the association with sequelae in cancer survivors.

**Methods:** Cancer survivors referred to our clinic were participated in a questionnaire study. Gastrointestinal symptoms and impact on quality of life were obtained from the following questionnaires: Gastrointestinal Symptom Rating Scale-Irritable Bowel Syndrome, the Low Anterior Resection Syndrome Score, self-rated bowel function, and the EuroQol five-dimensional five-level questionnaire. Patients were asked to identify use of CAM before treatment at the clinic. **Results:** A total of 183 patients (128 (70%) women) were included. Patients had been treated for colon-, rectal-, anal, cervical- and ovarian cancer. A total of 139 (76%) were regular CAM users, with 55% using at least one or two supplements. The most used CAMs were vitamin and minerals (48%), calcium with vitamin D (34%). More than 56% used fish oil, psyllium and probiotics, while 41 (22%) used acupuncture and zonotherapy. Usage of non-vitaminmineral supplements and/or medical practices to alleviate symptoms were 65 (42%) and 37 (93%). The use of CAMs was more common among women compared to men (84% vs 56%),  $P=0.001$ ). The intake was most frequent among patients older than 65 years ( $p 0.05$ ).

**Conclusion:** 76% used CAM. Vitamins and minerals, fish oil, psyllium and acupuncture were the most used CAM to alleviate adverse effects to cancer treatment.

**ESPEN: Submitted**

## 20.

### Is bioimpedance analysis accurate in transgender males?

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**Background & aims:** Accurate fat mass (FM) and muscle mass (MM) assessment is an informative marker of an individual's health. However, the optimal method for assessing body composition in transgender males remains to be determined. Here, we aim to compare body composition estimates in transgender males by bioimpedance analysis (BIA) using the reference settings for males and females and by dual x-ray absorptiometry (DXA) scans.

**Methods:** We conducted a cross-sectional study investigating the body composition of 10 transgender males undergoing hormonal therapy using BIA and DXA scans.

**Results:** BIA yielded significantly different estimates of body composition depending on the use of either female or male settings ( $p<0.05$ ). BIA underestimated the FM independent of using the male or female setting compared to DXA estimates by  $6.5\pm 1.0\%$  ( $p<0.01$ ) and  $5.4\pm 2.0\%$  ( $p<0.01$ ), respectively. BIA overestimated the MM, especially for the trunk area [BIA (female) vs. DXA;  $6.6\pm 1.8$  kg,  $p<0.01$ , BIA (male) vs. DXA;  $5.6\pm 1.0$  kg,  $p<0.01$ ]. When estimating FM using BIA, the female setting came closest to the estimates made by DXA scans for the extremities, although the male setting proved a more precise estimate for the trunk region, possibly due to mastectomy. Regarding MM, the BIA male setting best resembled the DXA scan estimates.

**Conclusions:** We observed a significant difference in body composition estimates when using BIA with either female or male settings in transgender males. In general, BIA underestimated the FM and overestimated the MM compared to DXA. Therefore, we encourage caution when interpreting body composition estimates in transgender persons.

**ESPEN: Submitted**

## 21.

### **Nutritional status in individuals with Parkinson's disease in a rehabilitation program**

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**Rationale:** Parkinson's disease (PD) stands out as the world's fastest-growing neurodegenerative condition. Studies indicate that nutritional issues are prevalent among PD patients, yet comprehensive investigations of their nutritional status are missing.

This project aims to evaluate the nutritional status of PD patients during rehabilitation, including assessing nutritional risk, diagnosing malnutrition, evaluating the risk of dysphagia, and recognizing nutrition impacts symptoms.

**Method:** In a pilot cross-sectional study at Sano, 44 PD patients (54.5% men, median age 68.5 years) participated.

Methods used for collecting data included NRS-2002, EAT-10, GLIM-criteria, and nutrition impact symptoms. Data were analysed using descriptive statistics, including frequency and number.

**Results:** In the nutritional screening, 22.7% (n=10) were at risk, with 15.9% (n=7) having moderate malnutrition and 6.8% (n=3) severe malnutrition according to GLIM-criteria.

Notably, 90.9% face at least one nutrition impact symptom, with 59.1% reporting symptoms hindering dietary intake.

Subjective assessments of nutrition impact symptoms revealed decreased appetite in 22.5% (n=9), swallowing difficulties in 35.0% (n=14), and early satiety in 20.0% (n=8) were identified as the most challenging.

Dysphagia risks were identified in 34.1% of participants. Difficulties swallowing pills and food being stuck in the throat were the most prevalent with 34,1% (n=15). Swallowing difficulties in malnourished patients were observed to be 58.3% (n=7).

**Conclusion:** This study underscores a significant malnutrition risk among PD patients in rehabilitation, emphasizing that nutrition impact symptoms such as swallowing difficulties, decreased appetite and early satiety are limiting dietary intake.

**ESPEN: Submitted**

## 22.

### **Kostsammensætning i et fleksibelt a la carte koncept – hvordan ser det ud, når patienten selv vælger?**

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**Rationale:** Flere danske sygehuse, herunder Regionshospitalet Gødstrup, har indført a la carte koncepter med større fleksibilitet for patienternes måltider. Selvom menuer planlægges med udgangspunkt i de nationale anbefalinger for kostformer på sygehuse, er det relevant at undersøge, om anbefalingerne også imødekommes i praksis, når patienten selv vælger. Dette studie undersøger sammensætningen i den mad patienter vælger fra et fleksibelt a la carte koncept og sammenligner med nationale anbefalinger.

**Metode:** Data for en 7-ugers periode blev indhentet fra det digitale madbestillings- og kostregistreringssystem, Min Mad, for patienter indlagt på somatiske afdelinger. Patienter på diæt blev ekskluderet, og kun hele indlæggelsesdage med  $\geq 2$  bestillinger blev medregnet. Data blev analyseret deskriptivt og resultater præsenteres i % eller median (Q1-Q3).

**Resultater:** 4465 dagsregistreringer blev inkluderet fordelt på 12% Normalkost (NK), 60% Sygehuskost (SK) og 28% Kost til småtspisende (KTS). Energiindhold i serveret NK, SK og KTS var hhv. 6639 (5214-8630), 7280 (5465-9364) og 6294 (4761-8024) kJ. Mens den anbefalede energiprocent fra protein og fedt i NK, SK og KTS er hhv. 15 og 32-33, 18 og 40 samt 18 og 50, var energiprocent i det serverede hhv. 16 (14-18) og 35 (31-39) i NK, 15 (13-17) og 45 (41-49) i SK og 15 (13-18) og 47 (42-51) i KTS.

**Konklusion:** NK opfylder anbefalingen for proteinindhold, men overskrider for fedt. SK og KTS er i modsætning til anbefalingerne forholdsvis ens og lave på protein. Dette tydeliggør vigtigheden af menuplanlægning og vejledning af patienter i at træffe hensigtsmæssige valg inden for a la carte konceptets rammer.

## 23.

### Agreement between clinical dietitians and Danish Health Authority Guidelines on hospitalized patients' energy requirement estimates

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**Rationale:** While clinical dietitians conduct individualized estimation of patients' energy needs based on multiple factors, generic guidelines often offer simple rules of thumb for estimating requirements per kg. body weight. The aim of this study was to assess agreement between energy requirements estimated by clinical dietitians and the rules of thumb in the 2022 nutrition guidelines (NG) from the Danish Health Authority in hospitalized patients at nutritional risk.

**Methods:** Data were collected at a pulmonology ward. Dietitians estimated energy requirement using Harris-Benedict equation multiplied with an activity factor and a stress factor according to disease severity (1.1-1.3). Estimate calculated according to NG was based on a stress factor as follows: 1.1-1.2=113 kJ/kg and 1.3=126 kJ/kg. A variation of  $\pm 10\%$  was regarded acceptable. Association between estimate discrepancy and body mass index (BMI) was assessed with linear regression.

**Results:** 40 patients were included, median age 76.5 [70-83] and mean weight 66 ( $\pm 16$ ) kg. We found a mean difference on -139 kJ [95% CI; -2108;1830] when comparing the dietitians' estimate with the NG estimate. Compared to dietitians' estimate, NG underestimated in 6 (15%) and overestimated in 11 (28%) cases. Discrepancy in estimates correlated with BMI ( $p < 0.001$ ), and BMI was  $\leq 18.5$  kg/m<sup>2</sup> in 5 out of 6 cases with underestimation and  $\geq 25$  kg/m<sup>2</sup> in 8 out of 11 cases with overestimation.

**Conclusions:** Energy requirement estimates differed  $\geq 10\%$  in 43 % of cases. Correlation between discrepancy and BMI indicate the importance of individual assessment in patients with under- or overweight.

## 24.

### Glukose variabilitet under prednisolon behandling af KOL patienter i exacerbation

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**Baggrund:** Patienter med KOL er hyppige på akut afdelingerne. Udover antibiotika og hostefremmende tiltag er prednisolon 37,5 mg/dag i 5 dage led i standardbehandlingen. Blandt de velkendte bivirkninger til prednisolon er forhøjet blodsukker.

**Formål:** At undersøge om standardbehandlingen har effekt på glukosevariabiliteten sammenlignet med patienter med lignende problemer behandlet uden steroider.

**Metoder:** 8 patienter med opblussen blev forsynet med kontinuerlig glukosemåler (interstitiel væske, FreeStyle Libre Pro Abbott) i 14 dage. Ingen havde kendt diabetes mellitus, blod sukker  $> 7$  mmol/L eller var i kronisk steroid behandling. Det primære endepunkt var glukose variabilitet beregnet som variationskoefficienten CV% beregnet som SD/mean. Sekundært endepunkt var glucose variabiliteten efter endt steroidbehandling. Secondary outcome was glucose variability after the cessation of prednisolon. Mann-Whitney og Friedman tests blev anvendt.

**Resultater:** 4 KOL patienter blev inkluderet i prednisolon gruppen og 4 med pneumoni, KOL-exa, emfysem, hæmophyser i kontrol gruppen. Variabiliteten var signifikant større i prednisolon gruppen analyseret pr døgn ( $P=0.002$ ), dagtid ( $P=0.006$ ) og natid ( $P=0.007$ ). Den relative øgning var mean 49%. Efter ophør med prednisolon var variabiliteten fortsat forhøjet om natten ( $P < 0.001$ ), men ikke set over hele døgnnet eller om dagen. I prednisolon gruppen sås i 144 tilfælde af glukose  $> 10$  mmol/L sammenlignet med 4 ( $P=0.029$ ). Variabiliteten nærmede sig langsomt kontrolgruppens efter behandlingsophør.

**Konklusioner:** KOL patienter i opblussen behandlet med 37,5 mg prednisolon i 5 dage oplevede en signifikant dårligere glukose regulering trods det beskedne antal patienter under behandlingen og i 1 uge efter ophør. Effekten aftog langsomt, men kunne fortsat ses efter 1 uge.

**ESPEN: Submitted**

## **Planlægningsgruppe, årsmøde i klinisk ernæring, fredag 3. maj 2024**

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