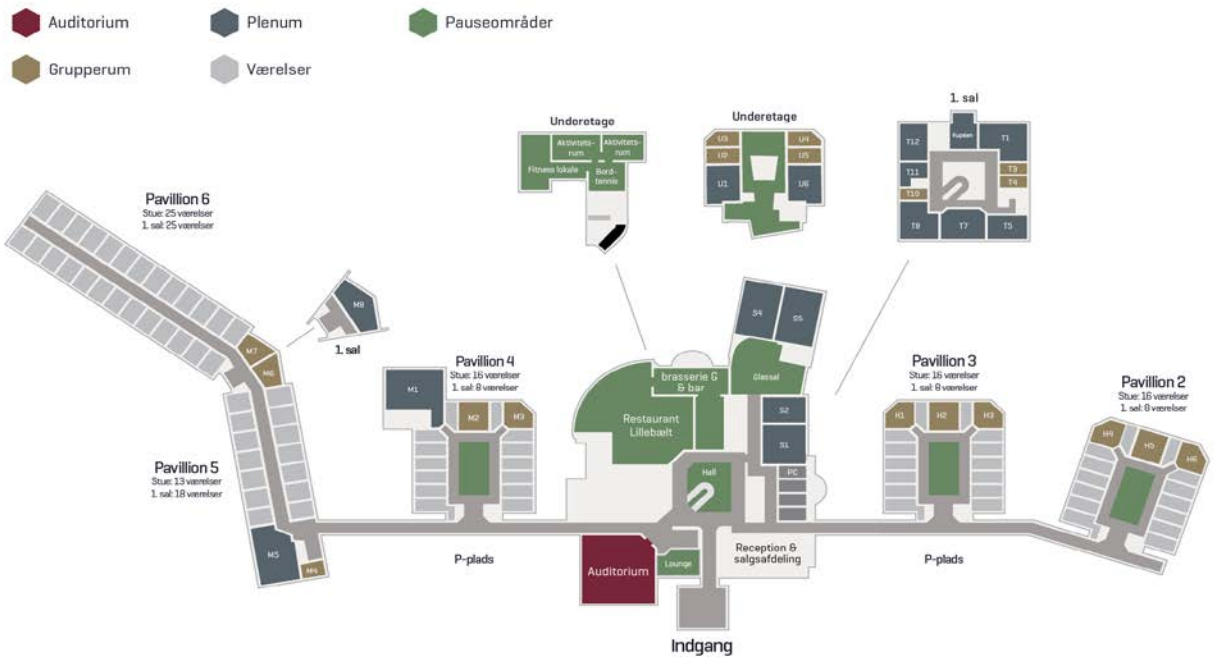
Åben Forskerdag 2019

Program & Abstracts

TRINITY Hotel & Conference Centre
Gl. Færgevej 30, Snoghøj, Fredericia

25. april 2019

Plantegning over Trinity



Program

08.30 – 09.00 **Ankomst og morgenmad**

09.00 – 09.10 **Velkommen**
i Auditoriet ved dekan Ole Skøtt, Det Sundhedsvidenskabelige Fakultet, SDU og koncerndirektør Kurt Espersen, Region Syddanmark

09.10 – 10.00 **Keynote lecture – "Et Sundere Syddanmark"**
I Auditoriet ved direktør Kim Brixen, OUH og lektor Kristian Hvidtfelt Nielsen, centerleder, center for videnskabsstudier, AU

10.00 – 10.30 **Kaffe**
Networking og mulighed for at snakke med forskellige forskerstøtteenheder

10.30 – 12.00 **Workshops**
Præsentation og diskussion af forskningsprojekter

Lokale T5, T7, T8, U1 og Auditoriet

12.00 – 12.45 **Frokost i restauranten**
Networking og mulighed for at snakke med forskellige forskerstøtteenheder

12.45 – 13.45 **Workshops**
Præsentation og diskussion af forskningsprojekter

Lokale T5, T12, U1

13.45 – 14.00 **Kaffe**
Networking og mulighed for at snakke med forskellige forskerstøtteenheder

14.00 – 15.15 **Ph.d.cup**
I Auditoriet - Vært: Bent Nørgaard, kommunikationsrådgiver, Ekspert i gennemslagskraft.

Ph.d.-studerende dyster om et rejselegat for bedste forskningsformidling på 4 minutter. Forud for dysten har de Ph.d.-studerende fået coaching af Bent Nørgaard i formidling. Dommere og publikum finder vinderen.

15.15 – 15.45 **Keynote lecture – Region Syddanmarks Strategi for Sundhedsforskning**
i Auditoriet ved koncerndirektør Kurt Espersen, Region Syddanmark

15.45 – 16.00 **Prisuddeling**
i Auditoriet - overrækkelse af rejselegat til vinderen af Ph.d.cup. Tak for i dag

Workshop oversigt

Et Sundere Syddanmark – Auditoriet - 10.30-12.00

Chairman: Niels Wedderkopp

Hudkræft

Forfatter(e)	Sofie Hody, Anna Vamdrup, Bekka Christensen, Vibeke Koudahl
Oplægsholder	Sofie Hody
Lægmandsbeskrivelse	Med dette projekt vil vi gerne undersøge hvordan patienter med hudkræft kan forbedre deres egen behandlingsforløb ved hjælp af mobiltelefonen. Hudkræft er den mest udbredte kræftform i Danmark med godt 14.000 nye tilfælde om året. Sygdommen rammer især mennesker over 60 år og kaldes også ”almindelig hudkræft”. Mere end 160.000 danskere følges til udredning, behandling eller kontrol for almindelig hudkræft. Antallet forventes at vokse, bl.a. fordi andelen af over 65-årige i befolkningen forventes at stige i de kommende år. Hudkræft kan være placeret overalt på kroppen, men vil især vise sig, hvor huden er udsat for sollys, d.v.s. i og omkring ansigtet. Det er vigtigt, både for behandlingen og patientens livskvalitet, at sygdommen opdages og behandles tidligt. Ubehandlet vil hudkræft vokse og kan med tiden udvikle sig med blødende og smertefulde sår. I 2018 blev der henvist over 700 nye patienter med hudkræft til behandling ved plastikkirurgisk afdeling i Vejle. Hovedparten af patienterne behandles kirurgisk med en operation i lokalbedøvelse, men på nuværende tidspunkt planlægges operationen ved patientens første besøg, den såkaldte forundersøgelse, og patienten skal derfor møde op på sygehuset mindst 2 gange. En stor del af patienterne med hudkræft er ældre mennesker, for hvem turen til hospitalet kan være svær at overkomme. Ved hjælp af en særlig APP kan patienterne på forhånd indsende et foto af deres hud. Ved hjælp af disse fotos kan lægerne planlægge behandlingen således at en stor del af patienteren kan nøjes med et enkelt besøg på sygehuset, hvor de bliver undersøgt og opereret ved samme lejlighed. Med projektet her vil vi undersøge hvordan APP’en kan bruges i praksis til gavn for både patienter og læger.

ADHD

Forfatter(e)	Niels Bilenberg (ovl., professor), Stine Kamionka (AC-medarbejder, kommende PhD-studerende), Charlotte Jacobsen (socialrådgiver)
Oplægsholder	Niels Bilenberg
Lægmandsbeskrivelse	ADHD er en forstyrrelse af opmærksomhedsfunktionen, med hyperaktivitet og impulsivitet. Tilstanden forekommer hos ca. 3 % af alle børn og forsætter ind i voksenalderen hos ca. 2 ud af 3 børn. Lidelsen kaster ofte en skygge over livsforløbet. De mange udfordringer betyder at der er behov for hjælp og støtte flere steder fra. For at denne hjælp og støtte skal virke bedst muligt, er det vigtigt at den tværfaglige indsats koordineres mellem psykiatrien (regionen) og kommunen. ADHD-centret i Børne- og ungdomspsykiatri, Odense, har skabt en model for sammenhængende tværsektorielle borger/patientforløb for børn, unge og unge voksne med ADHD. Modellen kaldes REHAB-samarbejdet og går i al sin enkelhed ud på at have bestemte måder at samarbejde på ud fra en fælles/delt behandlingsplan. Forskningsprojektet undersøger om børn og unge der tilbydes udredning for ADHD og opfølgning efter REHAB-modellen (i tre forsøgskommuner) opnår et bedre funktionsniveau end samme målgruppe der ikke inkluderes i REHAB (i tre kontrolkommuner). Det er ændring i patient/pårørende-rapporteret funktion og livskvalitet som er målet for sammenligningen. Projektet kan bidrage med ny vigtig viden om hvordan der kan etableres en konkret samarbejdsmodel for borgere med ADHD-lignende vanskeligheder, samt belyse hvad en tværsektoriel samarbejdsmodel skal indeholde for at hjælpe borgere med ADHD til en mere stabil hverdag og bedre mulighed for at udleve deres potentiale.

Svangerskabsforgiftning – hvorfor?

Forfatter(e)	Forfattere: Johannes Jakobsen Sidelmann Lektor, PhD[1]; Jørgen Brodersen Gram Forskningsleder, professor, overlæge, dr. med[1], Jan Stener Jørgensen, Professor, overlæge[2], Yaseelan Palarasah, lektor, Ph.d.[3]; Anne Cathrine Godtfreden MD[4] [1]Enheden for Tromboseforskning, Institut for Regional Sundhedsforskning SDU, Klinisk Biokemisk afdeling SVS Esbjerg [2]Gynækologisk Obstetrisk afdeling, OUH [3] Enheden for Tromboseforskning, Institut for Regional Sundhedsforskning SDU, Afdelingen for Cancer og Inflammationsforskning, Institut for Molekylær Medicin SDU [4]Gynækologisk Obstetrisk Afdeling, SVS Esbjerg
Oplægsholder	Oplægsholder: Anne Cathrine Godtfredsen
Lægmandsbeskrivelse	Hvert år bliver ca. 2500 gravide kvinder i Danmark ramt af svangerskabsforgiftning. I værste fald betyder det at de gravide bliver særdeles syge og at børnene bliver født alt for tidligt. Både mødrene og børnene kan have svære akutte komplikationer, og vil også have en øget risiko for alvorlig sygdom senere i livet. Årsagen til svangerskabsforgiftning er endnu uklar, og en bedre forståelse af årsagen vil utvivlsomt føre til nye behandlingsmuligheder. På nuværende tidspunkt er den ultimative behandling at afslutte graviditeten. Man har i tidligere undersøgelser vist, at der er en øget udskillelse af unormale æggehvidestoffer (misfoldede proteiner) i urinen fra gravide med svangerskabsforgiftning. Projektet her vil belyse, om der er misfoldede proteiner i blod og moderkagen fra gravide med svangerskabsforgiftning sammenholdt med raske gravide. Derud over vil vi undersøge, om de misfoldede proteiner udløser aktivitet i en bestemt del af blodets størkningsmekanisme og derved starter en række uhensigtsmæssige reaktioner hos gravide med svangerskabsforgiftning. For at kvinder kan overveje deltagelse i projektet, skal der udarbejdes informationsmateriale til patienterne, som sker i samarbejde med tidligere patienter med svangerskabsforgiftning samt Hjerteforeningen. Vi vil i vores projekt forsøge at finde en ny årsagssammenhæng for udviklingen af svangerskabsforgiftning. Dermed kan vi sandsynligvis bedre mulighederne for behandling af de gravide, der lider af denne sygdom. Det vil forhåbentligt betyde, at færre kvinder med svangerskabsforgiftning skal føde/forløses før tid, og dermed at færre børn fødes for tidligt.

Findes kuren mod gigt i vores tarme?

Forfatter(e)	Maja S. Kragsnæs[1,2] maja.skov.kragsnaes@rsyd.dk, Jens Kjeldsen[3], Jens Kristian Pedersen[1], Hans Christian Horn[1], Heidi L. Munk[1], Finn Møller Pedersen[3], Dorte K. Holm[4], Hanne Marie Holt[5], Vibeke Andersen[2,6], Karsten Kristiansen[7,8] Robin Christensen[1], Torkell Ellingsen[1,2] torkell.ellingsen@rsyd.dk. [1]Gigtafdelingen OUH, [2]Syddansk Universitet og Odense Patient data Explorative Network (OPEN),[3]Afdelingen for Medicinske Mavetarmsygdomme OUH, [4]Klinisk Immunologisk afdeling OUH, [5]Klinisk Mikrobiologisk afdeling OUH,[6]Center Sønderjylland Sygehus Sønderjylland Åbenrå, [7]Genomforskning og Molekylær Biomedicin Københavns Universitet, [8]Institute of Metagenomics, BGI-Shenzhen, Shenzhen, China.
Oplægsholder	Maja Skov Kragsnæs, læge og ph.d. stud. ved Reumatologisk afdeling C, Odense Universitetshospital (OUH).
Lægmandsbeskrivelse	Gigt er den mest udbredte kroniske sygdom i Danmark. Over 700.000 mennesker i Danmark er berørt – også børn og unge rammes. Alle aspekter af livet påvirkes når man har gigt: Livsudfoldelse, familierelationer, uddannelsesmuligheder og arbejdsevne. Det er en livslang sygdom og vi har ingen kur. I de seneste år er der kommet en stigende interesse for at årsagen til gigt kan findes i vores tarme. Flere studier peger på, at en 'dårlig' sammensætning af tarmens bakterieflora kan spille en central rolle for udviklingen og forløbet af gigt. Formålet med dette forskningsprojekt, FLORA, er at finde ud af om kuren mod gigt skal findes i vores tarme. Vi vil undersøge om tilførslen af donor-tarmbakterier kan være en potentiel ny og sikker behandling til patienter med gigt. FLORA er et blindet lodtrækningsforsøg, hvor 80 gigtpatienter med betydelig gigtaktivitet trods pågående behandling med immundæmpende medicin (methotrexat) vil blive inkluderet. Mens den ene halvdel får overført tarmbakterier fra en rask donor, vil den anden halvdel blive behandlet med vand (placebo). Deltagerne vil herefter blive fulgt i seks måneder for at vurdere om en tarmbakterie-overførsel er mere effektiv end placebo (vand) til at få gigten i ro. Videnskabsetisk komité og Datatilsynet har givet tilladelse til at forsøget kan udføres. Gigtpatienter spiller en aktiv rolle i forskningsprocesserne. Behandlingssvigt evalueret af patient og læge efter seks måneder (NCT03058900). De første 20 gigtpatienter er blevet inkluderet i FLORA og har tålt tarmbakterie-overførslen godt. I en sideløbende interview-undersøgelse har de første ti deltagere enstemmigt sagt, at de ville vælge at få lavet proceduren igen, hvis den viser sig at have en gunstig effekt på deres gigt. Vi rekrutterer fortsat til FLORA. De første 20 deltagere har ikke oplevet uventede bivirkninger eller haft komplikationer til tarmbakterie-overførslen. **Læs mere på www.gigtforskning.dk.**

Translationel forskning - Lokale U1 - 10.30-12.00

Chairman: Uffe Holmskov

In vivo characteristics of different individuals can be traced in osteoclast activity *in vitro*

Author(s)	*Anaïs MJ Møller[a] (Anais.Marie.Julie.Moller@rsyd.dk), Jean-Marie Delaissé[a], Jonna S. Madsen[b], Luisa M. Canto[c], Silvia R. Rogatto[c], Troels Bechmann[d], Kent Søe[ae]* *a) Kl. Cellebiologisk Afd., SLB/OUH* *b) Kl. Biokemisk og Imm. Afd., SLB* *c) Kl. Genetisk Afd., SLB* *d) Onkologisk Afd, SLB* e) *OPEN, OUH, Odense.*
Speaker(s)	Anaïs Møller
Background and Aim	With age, bone resorption slowly begins to exceed new bone formation during remodeling. The overall consequences of this negative bone balance are a decrease in bone quality and thereby bone strength. It is normal for women to gradually lose bone density from the age of about 35, but after menopause bone resorption rates speed up. The reason for this is primarily believed to be due to the estrogen deficiency and possibly by increasing levels of follicle stimulating hormone. In this project, we wish to investigate if menopause-induced increase in osteoclast activity is merely due to changes in gene expression caused by hormonal/cytokine signaling following menopause or if the osteoclast precursors are also more permanently reprogrammed. Does menopause/age induce long term changes in osteoclast precursors that can be traced through the activity of osteoclasts *in vitro*?
Design and Methods	Inclusion criteria: 50 healthy female blood donors ranging between 40 and 67 years of age. Exclusion criteria: prior bisphosphonate treatment due to osteoporosis, fractures within the last 2 years. Bone markers were measured (bone formation marker (PINP) and bone degradation marker (CTX)), demographic information was collected such as; age, BMI, menopausal status, smoking, other medication etc. In addition, peripheral blood monocytes from each donor were differentiated into OCs, using the cytokines MCSF and RANKL, for 9 days. At this stage images were taken and media collected to determine the number, size and maturity of the OCs generated. The matured OCs were then re-seeded on bone slices and left for 3 days. Finally, the resorptive activity of osteoclasts from each donor was quantified and CTX in the conditioned media was measured. Additionally, DNA methylation analyses by pyrosequencing were performed on 9 premenopausal women and 9 that had been postmenopausal for more than 10 years.
Primary variables	In vitro bone degradation
Preliminary results	Multiple linear regression analyses found that the independent variables, which best explain the bone resorptive activity of OCs *in vitro* are; PINP *in vivo* ($p=0.027$), age of the donor ($p=0.005$) and number of nuclei per OC *in vitro* ($p<0.001$). These independent variables explain 61% of the observed variance in the resorptive activity of OCs. In another multiple linear regression analyses also "years since menopause" came out as a predictor ($p=0.018$). Pyrosequencing of genes encoding TRAcP5 and DC-STAMP show that single

	CpGs in their promotors are less methylated in post- vs premenopausal women (p=0.003 and p=0.04, respectively).
Conclusions	Thus, we conclude that monocytes are "reprogrammed" as women age and/or enter menopause in such a way that OCs generated from these monocytes *in vitro* can "remember" the age/menopausal status of the donor and become increasing more active. The mechanism for this "reprogramming" may very well be through alterations in DNA methylation levels of key OC genes.

Prognostic impact of natural killer cells and T cells in ovarian carcinoma

Author(s)	Jon Røikjær Henriksen[1, 3], Marianne Waldstrøm[2, 3], Frede Donskov[4], Anders Jakobsen[1, 3], Mette Hjortkjær[1], Karina Dahl-Steffensen[1, 3]. Departments of *1) Oncology and* *2) Pathology Vejle Hospital,* *3) Institute of Regional Health Research, University of Southern Denmark,* *4) Department of Oncology, Aarhus University Hospital.*
Speaker(s)	Jon Røikjær Henriksen
Background and Aim	Epithelial Ovarian Cancer (EOC) is a highly malignant disease with a fatal outcome for most patients. Immunological mechanisms have recent years proven important both regarding treatment and prognosis in cancer. Knowledge of the immunological properties in EOC is still sparse and an understanding at the basal prognostic level is needed. The aim of the present study was to investigate the prognostic impact of intratumoral PDL-1 expression, T cells, neutrophil granulocytes and natural killer (NK) cells in a population based cohort.
Design and Methods	The study cohort consisted of all women diagnosed with ovarian cancer in Denmark in 2005 (N= 496) with clinical characteristics registered in the DGCG (Danish Gynecologic Cancer Group) database. Of these, 412 had sufficient tumor tissue available for immunohistochemical analysis. Antibodies for PD-L1, T-cells (CD8), neutrophils (CD66b), and NK-cells (CD57) were used . Cell densities were analyzed using a digital image analysis method. The primary endpoint was overall survival (OS).
Primary variables	Immuncelletyperne NK celler, T celler, neutrofile granulocytter samt PDL-1 ekspression
Preliminary results	Large differences were seen across histological subgroups. Only in high-grade serous carcinoma (HGSC) significant prognostic results were found. In patients with high vs low levels of tumor infiltrating NK-cells the median OS was 45 vs 29 months, respectively (p= 0.0310). In HGSC patients the median OS was 37 vs 25 months (p=0.0008) for high vs low level tumor infiltrating T cells, respectively. In multivariate analysis NK-cells and T-cells remained independent markers of a favorable OS with hazard ratios of 0.72 (p= 0.020) and 0.67 (p=0.041) in favor of high T cell and high NK cell density respectively. A high level of PD-L1 expression was associated with improved OS (37 months vs 22 months in low expression patients, p=0.0006). PD-L1 was only borderline significant in the multivariate analysis (HR 0.77, p=0.061). Neutrophils had no significant association with OS
Conclusions	This national population based cohort study demonstrated a favorable prognostic impact of high levels of tumor infiltrating NK-cells and T-cells in patients with high grade serous carcinoma. PD-L1 expression had borderline prognostic significance. This may influence the future development of immunotherapy in ovarian carcinoma.

HOXA9 methylation in circulating tumor DNA as a prognostic biomarker in patients with platinum-resistant recurrent ovarian cancer

Author(s)	L. Faaborg[1,3] (louise.faaborg.larsen@rsyd.dk), J.R. Henriksen[1,3] (Jon.Henriksen@rsyd.dk), R.F. Andersen[2] (Rikke.Fredslund.Andersen@rsyd.dk), P. Adimi[1] (Parvin.Adimi@rsyd.dk), A. Jakobsen[1,3] (Anders.Jakobsen@rsyd.dk), K.D. Steffensen[1,3] (Karina.Dahl.Steffensen@rsyd.dk) *1) Department of Oncology, Vejle Hospital* *2) Department of Clinical Biochemistry, Vejle Hospital* *3) Institute of Regional Health Research, University of Southern Denmark*
Speaker(s)	Louise Faaborg
Background and Aim	Recurrent platinum-resistant ovarian cancer (OC) remains a challenge with few or no treatment options. Methylation of the HOXA9 gene has been found in plasma of patients with OC. It does not, however, occur in blood from healthy individuals. The aim of this study was to evaluate if HOXA9 methylation could predict and identify patients who benefit from palliative chemotherapy.
Design and Methods	Plasma from 27 patients with platinum-resistant recurrent OC was analyzed by digital PCR with a HOXA9 methylation-specific assay at baseline and before cycle two. The fractional abundance of methylated HOXA9 was calculated and the patients with values increasing above the 95% confidence interval of baseline values was compared with patients having stable or decreasing values.
Primary variables	The primary endpoint was progression free survival (PFS).
Preliminary results	At baseline 22 patients (81.5%) had measurable HOXA9 methylation in plasma. The group of patients (N=4) with a significant increase in HOXA9 methylation after the first cycle had a median PFS of 1.4 months. In contrast, the group with stable or decreasing HOXA9 (N=23) had a median PFS of 5.4 months (p=0.0019). The hazard ratio was 0.17 (p=0.007) in an univariate Cox regression analysis.
Conclusions	A significant increase in HOXA9 methylated DNA after the first treatment cycle can be used as an early marker to predict poor outcome in platinum-resistant recurrent OC. Analyzing circulating HOXA9 methylation is a promising non-invasive detection test for monitoring solid tumors.

GLA:D® Back: Group-based patient education and exercises to support self-management of persistent/recurrent back pain. Development, theories and scientific evidence

Author(s)	P Kjær (pkjaer@health.sdu.dk)[1,2] A Kongsted[1,3] I Ris[1] Allan Abbott[4] Charlotte DN Rasmussen[5] Ewa M Roos[1], Søren T Skou[6] Tonny E Andersen[6], and Jan Hartvigsen[1,3] 1) *Department of Sports Science and Clinical Biomechanics, SDU* 2) *Health Sciences Research Centre, UCL University College,* 3) *Nordic Institute of Chiropractic and Clinical Biomechanics,* 4) *Department of Medical and Health Sciences, Linköping University,* 5) *National Research Centre for the Working Environment,* 6) *Department of Physiotherapy and Occupational Therapy, Næstved-Slagelse-Ringsted Hospitals, Region Zealand, Department of Psychology, SDU*
Speaker(s)	Per Kjær
Background and Aim	Clinical guidelines recommend that people with back pain be given information and education about their back pain, advice to remain active and at work, and exercises to improve mobility and physical activity. However, guidelines rarely describe how to best deliver the evidence. The aim was to present the development process, the theories, and underlying evidence for 'GLA:D® Back' - a group education and exercise programme that translates guideline recommendations into a clinician-delivered programme for people with persistent/recurrent back pain.
Design and Methods	GLA:D® Back was developed using an iterative process, which included the establishment of a rationale and objectives for the programme, an explanation of the theory and evidence for the interventions, and the production of programme materials. Based on the evidence, a multidisciplinary team of expert researchers and clinicians prioritised common elements that were hypothesised to improve back pain beliefs and management skills for patients with persistent/recurrent LBP and these were used to create GLA:D® Back. The GLA:D® Back was tested on 160 people with persistent/recurrent back pain.
Primary variables	Following feedback from the clinicians and patients involved, the programme was modified and refined.
Preliminary results	The developed two patient education PowerPoint presentations included information on pain mechanisms, pain modulation, active coping strategies, imaging, physical activity, and exercise that emphasised a balance between demands on the back and the individual's capacity to respond. The exercise programme included 16 one-hour sessions over 8 weeks, each comprising a warm-up session and eight types of exercises for general flexibility and strengthening of back extensor muscles, hip abductors and extensors, trunk rotators, rectus and oblique abdominal muscles and leg muscles, and each with four levels of difficulty. The aims of the exercises were to improve overall back fitness and, at the same time, encourage patients to explore variations in movement by incorporating education content into the exercise sessions.
Conclusions	We successfully developed GLA:D® Back for people with persistent/recurrent back pain.

Mechanisms influencing the implementation of a programme for people with persistent/recurrent low back pain - GLA:D® Back

Author(s)	Inge Ris (iris@health.sdu.dk)[1], Per Kjær (pkjaer@health.sdu.dk)[1,2] Jan Hartvigsen[1,3], Alice Kongsted[1,3] 1) *Department of Sports Science and Clinical Biomechanics, SDU, Odense, Denmark* 2) *Health Sciences Research Centre, UCL University College, Odense, Denmark,* 3) *Nordic Institute of Chiropractic and Clinical Biomechanics, Odense, Denmark*
Speaker(s)	Per Kjær
Background and Aim	Back pain is the main cause of disability globally and is associated with poor general health, and increased utilisation of health care. Over half of those treated in primary care for back pain, report pain after one year, indicating low efficacy of current models of care. Therefore, the Danish Health Authority developed clinical guidelines for the management of low back pain in 2016 [1, 2]. To help implement recommendations from these guidelines, we developed the GLA:D® Back programme, which translates key messages into a patient education and exercise programme and taught to clinicians in primary care by two-day courses. Clinicians' implementation of this programme in their clinics is unclear and can be affected by several factors. We used the Determinants of Implementation Behavior Questionnaire (DIBQ), an instrument assessing 18 domains related to implementation processes, previously used in implementation studies to quantify these factors. Objectives: To quantify mechanisms that may influence the implementation process of GLA:D® Back in primary care management of people with low back pain.
Design and Methods	Design: Uncontrolled experimental design Participants: Physiotherapists and chiropractors (total 31) who participated in a 2-days GLA:D® Back course
Primary variables	Outcomes: DIBQ assessing selected domains associated with implementation of GLA:D® Back used upon completion of the GLA:D® Back course (DIBQ-expectations of elements influencing implementation process) and after 4 months (DIBQ-explicit elements influencing the implementation process).
Preliminary results	Participants experienced social context and factors related to organisation of their daily framework as strongest facilitators for implementation, followed by their intentions to implement the programme, knowledge and skills of the programme. The barriers towards implementation are less clear. The majority of clinicians strongly agreed to the implementation behaviors and after four month 10-15% agreed to a lower degree.
Conclusions	Clinicians' expectations of facilitators of the implementation process demonstrate high positive expectations on organisational and social context factors.

GLA:D® Back: Group-based patient education and exercises to support self-management of persistent/recurrent back pain. Feasibility of an implementation-effectiveness trial

Author(s)	Alice Kongsted (akongsted@nikkb.dk)[1,2], Jan Hartvigsen[1,2] Eleanor Boyle[1] Inge Ris[1], Per Kjær (pkjaer@health.sdu.dk)[1,3] Line Thomassen[1] Werner Vach[4] *1) Department of Sports Science and Clinical Biomechanics, University of Southern Denmark, Odense, Denmark* *2) Nordic Institute of Chiropractic and Clinical Biomechanics, Odense, Denmark* *3) Health Sciences Research Centre, UCL University College, Odense, Denmark* *4) Department of Orthopaedics and Traumatology, University Hospital Basel, Switzerland*
Speaker(s)	Per Kjær
Background and Aim	Clinical guidelines for management of low back pain (LBP) are not routinely implemented in practice and guidelines rarely offer tools for implementation. Therefore, we developed GLA:D® Back, an evidence-based intervention consisting of patient education and supervised exercises with the aim to support self-management of LBP. This pilot study tested the feasibility of implementing GLA:D® Back in clinical practice by training physiotherapists and chiropractors and providing access to ready-to-use patient education materials and exercise programmes. The pilot study should further inform the planning of a large-scale implementation-effectiveness study.
Design and Methods	Thirty-one clinicians from nine clinics participated in a feasibility study using a before-after design to compare LBP patients visiting the clinics prior to clinicians attending the GLA:D Back course (n=84) and those enrolled in GLA:D Back during 4-months after implementation (n=89).
Primary variables	Feasibility of implementation was evaluated in terms of adoption of the intervention and through interviews with clinicians. Patient data including pain, disability, and pain enablement were collected at enrolment and after 4 months.
Preliminary results	The intervention was adopted by all clinics. Clinicians' evaluations were positive and informed some modifications. Procedures for data collection were feasible, and patient-level outcomes with GLA:D Back were as good as or better than before implementation with disability improving 5.7 (95% CI 3.3; 8.1) versus 2.4 (95% CI -0.5; 5.3) points and pain enablement 5.5 (3.1; 7.9) versus 2.3 (-0.6; 5.2) points. Recruiting patients and achieving comparable pre- and post-groups was difficult.
Conclusions	Implementation of the GLA:D® Back intervention was feasible through a two-day clinician course. Due to patient recruitment challenges, it was not deemed possible to conduct an implementation-effectiveness trial as part of a nation-wide implementation, but implementation is now ongoing with process evaluation and monitoring of clinician-level and patient-level outcomes.

Psychiatric comorbidity in Back Pain Disorders – a cohort study

Author(s)	Ljungdalh PS[1], Garvik OS[2] Stenager E[3], Nørgård BM[2,] Schiøttz-Christensen B[1,] Iachina M[2] . 1) *Spine Center of Southern Denmark, Hospital Lillebaelt, Middelfart, and Department of Regional Health Research, University of Southern Denmark* 2) *Center for Clinical Epidemiology, OUH, and Research Unit of Clinical Epidemiology, OUH, Institute of Clinical Research, University of Southern Denmark* 3) *Unit of Psychiatric Research, Åbenrå, Institute of Regional Health Research, University of Southern Denmark.*
Speaker(s)	Pernille Sandberg Ljungdalh
Background and Aim	This aim of this study is to estimate the association between specific and unspecific back pain disorders (BPD) and psychiatric comorbid-ity at a single center in the secondary sector in Denmark. The hy-pothesis was that patients with unspecific BPD are more prone to having a psychiatric comorbidity compared to patients with specific BPD.
Design and Methods	The association between BPD and psychiatric comorbidity one year after back pain diagnosis was investigated using population-based registry data. No patients in the study population had psychiatric diagnoses in a period of 5 years prior to their back pain diagnosis. The population was defined as adult (>18 years of age) with a rele-vant BPD based on data from a single center with a standardized coding practice of specific and unspecific BPD
Primary variables	Age at time of BPD, sex (male/female), level of education, cohabi-tation status with another adult, children (up until the age of 25) living at home, somatic comorbidity via Charlson Comorbidity In-dex, psychiatric comorbidity.
Preliminary results	The OR for psychiatric comorbidity in patients with unspecific BPD compared to patients with specific BPD was 1.35, CI95% 1:10-1.65 (crude OR 1.55, 1.28; 1.87), when adjusting for relevant confound-ers. Furthermore, the time to occurrence of psychiatric comorbidity in patients with unspecific BPD were shorter compared to patients with specific BPD.
Conclusions	This study showed that patients with unspecific BPD compared to patients with specific BPD were more likely to develop psychiatric comorbidity. Comparing psychiatric comorbidity in patients with BPD to the background population on a national level would strengthen the results from this study.

Studying autism spectrum disorders (ASD) using three-dimensional brain-organoids model derived from patient-specific induced pluripotent stem cells (iPSC)

Author(s)	Morad Kamand[1], Mirolyba Illeva[1], Sheena Louise Forsberg[1], Åsa Fex Svenningsen[2], Morten Meyer[2], Tanja Maria Michel[1, 3] 1) *Department of Psychiatry, University of Southern Denmark, Odense, Denmark* 2) *Institute of Molecular Medicine, Department of Neuroscience research, University of Southern Denmark, Odense, Denmark* 3) *Odense Center for Applied Neuroscience BRIDGE, University of Southern Denmark, Psychiatry in the Region of Southern Denmark, Odense University Hospital*
Speaker(s)	Morad Kamand
Background and Aim	Autism spectrum disorder (ASD) is a complex neurodevelopmental disorder that is characterized by unusual sets of behaviors, including reiterative stereotyped behaviors, environmental hypersensitivity, and a deficiency in socialization and communication skills. The exact neuropathological causes underlining the disorders affecting the autistic brain remain unknown. A growing body of evidence suggest that alterations in the neurogenesis process during brain development are behind the unique phenotype that is seen in autistic patients. Several mouse models are used to mimic brain development and are used to study neurodevelopmental disorders. However, these animal models has a limitation as they are not genetically identical to humans. Therefore, information might be missed when using them as a model for autism.
Design and Methods	Induced pluripotent stem cells (IPSCs) derived from autistic patients, have the unique ability to differentiate into neurons in three dimensions (3D). Such cells represent a humanized model for studying brain disorders and are a powerful tool to better understand underlying etiologies.
Preliminary results	We have recently established ten iPSC lines derived from autistic patients (a cohort from southern Denmark) and age-matched unaffected control. Our aim is to utilize the established cell lines to study neurogenesis processes (neuronal outgrowth and synaptogenesis) in ASD patients.
Conclusions	The established 3D brain-tissue model or so called brain organoids can be used as a tools to investigate disturbances in neurogenesis in autism. The cells can also be utilized for high throughput screening of chemical compounds as therapeutic agents and thus the development of effective therapeutics. The project will have a social impact moving forward the development of individualized drug treatment in ASD and thus enhancing life quality of the patients and their families.

Klinisk forskning - Lokale T8 -10.30-12.00

Chairman: Anders Jakobsen

A Mixed Methods Study; Older People's Preferences and Needs Clarified by a Patient-Centered Approach

Author(s)	Stine Hanson(Stine.hanson@rsyd.dk)[1,2], Dorthe Nielsen[3], Annmarie Lassen[4], Mikkel Brabrand[1,], Jesper Ryg[4] and Roberto Forero[2] 1. *Department of Regional Health Research, Center-Esbjerg, University of Southern Denmark* 2. *Simpson Centre for Health Services Research, University of NSW, Australia* 3. *Migrant Health Clinic, Odense University Hospital and Center for Global Health, University of Southern Denmark* 4. *Odense University Hospital and the Institute of Clinical Research, University of Southern Denmark.*
Speaker(s)	Stine Hanson
Background and Aim	We have limited knowledge how to manage older people's end-of-life wishes. We aim to investigate older Danes' treatment preferences such as resuscitation in case of cardiac arrest. Furthermore, we aim to clarify what matters at end-of-life (EOL), and will use participant experiences and perspectives to develop a tool to identify their needs when their overall wellbeing deteriorates.
Design and Methods	A patient centered mixed methods study was undertaken using purposive sampling with people >65 years. All interviews and focus groups were analyzed using NVivo11. The analysis comprised two levels: (1) Systematic Text Condensation was used to identify major themes, (2) Theoretical Analysis was used to generate a theoretical framework based on the four-dimension EOL (4D EOL) trajectories (psychological, physical, social and spiritual) previously identified. A new developed questionnaire based on the holistic 4D EOL identified in the qualitative component will be piloted in May 2019. Data from the qualitative and quantitative studies will be linked in the end of the study. We aim to include 1500 inpatients >65 years at the Emergency Department at two sites in the Region of Southern Denmark in October 2019 over 6 months period, and will follow up at 1 and 6 months post-discharge.
Preliminary results	Five focus groups and 9 in-depth interviews were conducted. Three major themes emerged: (1) Being independent (2) Handling the end of life, and (3) Conditions in everyday life are significant. All 4Ds were well illustrated and achieved theoretical saturation. The questionnaire contains several items for each of the 4D's along with questions regarding treatment preferences.
Conclusions	Our study will test the hypothesis that the 4D EOL trajectories play an important role in population preferences and knowledge about advance care utilization. Our findings will improve our understanding about the dynamic process of EOL preferences in the older population along with identifying their needs and how these presents over time from admission to hospital to discharge to their home.

Non-invasive markers Accurately Predict Liver-Related Outcomes in Compensated Alcoholic Liver Disease

Author(s)	Ditlev Nytoft Rasmussen, FLASH center for liver research, Ditlev.Nytoft.Rasmussen2@rsyd.dk; klinisk forskning
Speaker(s)	Ditlev Nytoft Rasmussen
Background and Aim	The traditional liver biopsy has been largely replaced by novel non-invasive methods for the diagnosis of fibrosis in alcoholic liver disease. However, the ability of the novel methods to predict the prognnosis has not beed assessed. We aimed to provide head-to-head comparisons between four non-invasive methods and liver biopsy for their ability to predict a first decompensation in alcoholic liver disease.
Design and Methods	Inclusion was prospective with biopsy and the four non-invasive tests perfomed on the same day. Follow-up was from retrospective review of the patients' medical charts. The predictive ability of the individual tests were compared using Harrell's C compputed from univariate Cox regression.
Primary variables	The outcome variable that denoted a first decompensation of liver disease was a composite of several detrimental clinical outcomes such as variceal bleeding, ascites, hepatic encephalopathy and hepatorenal syndrome. The predictive variables were liver biopsy and the four non-invasive tests: TE, 2D-SWE, ELF and FT.
Preliminary results	250 alcoholised patients were included between April 2013 and December 2015 with a mean follow-up of 52 months (IQR 43-58). TE and ELF predicted the first decompensation to the same degree as a liver biopsy. Among the non-invasive markers, TE, ELF and 2D-SWE outperformed Fibrotest. The Harrell's Cs were 0.86; 0.84; 0.84 and 0.80, respectively.
Conclusions	Non-invasive tests accurately predicts the first liver related outcome in patients with compensated, biopsy-controlled alcohol-related liver disease. Four this porpose, the invasive liver biopsy should be replaced by one of the non-invasive tests. Our data suggests that ELF and TE are the best replacements of liver biopsy, while FT is the poorest replacement.

The association between early post-operative leg pain intensity and disability at one and two year follow-up after first-time lumbar discectomy

Author(s)	Dorthe Schoeler Ziegler (dorthe.schoeler.ziegler@rsyd.dk),[1,2] Rikke Krüger Jensen,[3] Lisbeth Storm,[1] Leah Carreon,[1,2], Mikkel Oesterheden Andersen,[1,2] 1) *Spine Surgery and Research, Spine Center of Southern Denmark – part of Lillebaelt Hospital.* 2) *Institute of Regional Health Services Research, University of Southern Denmark.* 3) *Nordic Institute of Chiropractic and Clinical Biomechanics*
Speaker(s)	Dorthe Schoeler Ziegler
Background and Aim	In a clinical low back pain population the prevalence of sciatica is 11-12% with a peak during working age. Lumbar disc herniation (LDH) is the causing pathology in estimated 90% of cases. Although nonsurgical treatment for LDH can relieve pain and give better functionality, approximately 10-20% of patients with LDH undergo discectomy due to severe or persistent symptoms. In these, 5-20 % will experience poor recovery in terms of continued pain and functional disability one year after discectomy. The objective of this study was to examine the association between leg pain intensity measured pre-operatively and early post-operatively, and disability as measured by the Oswestry Disability Index (ODI) at one-year and two-years follow-up after lumbar discectomy.
Design and Methods	The study is a longitudinal cohort single-center study of patients identified from a clinical database DaneSpine. The patients were included when undergoing first-time, single level limited discectomy. Follow-up time-points were at five weeks, one year and two years post-operatively. Associations were examined using Generalized Estimating Equations. Leg pain intensity at early follow-up was categorized to provide cut-points for subsequent analyses.
Primary variables	Functional disability measured using ODI at one year and two years after first-time, single level limited discectomy.
Preliminary results	A statistically significant higher degree of disability at one-year and two-years follow-up was seen when leg pain intensity exceeded 30 (0-100 scale) at early follow-up, p =.000.
Conclusions	Leg pain intensity greater than 30 at early follow-up, is associated with worse disability at one and two-years after primary, single-level lumbar discectomy. This finding may guide the clinician and others in adjusting the post-operative regimen in these patients that are at greater risk of long-term disability.

The association between pre-operative MRI findings and surgical revision within three years after surgery for lumbar disc herniation

Author(s)	Dorthe Schoeler Ziegler (dorthe.schoeler.ziegler@rsyd.dk),[1,2] Leah Carreon,[1,2], Mikkel Oesterheden Andersen,[1,2] Rikke Krüger Jensen,[3] 1) *Spine Surgery and Research, Spine Center of Southern Denmark – part of Lillebaelt Hospital.* 2) *Institute of Regional Health Services Research, University of Southern Denmark.* 3) *Nordic Institute of Chiropractic and Clinical Biomechanics*
Speaker(s)	Dorthe Schoeler Ziegler
Background and Aim	Because of a risk of poorer outcome in patients receiving revision surgery compared to first-time discectomy, there is a need to identify patients with lumbar disc herniation (LDH) in risk of surgical revision. Therefore, analyzing pre-operative magnetic resonance imaging (MRI), the objective was to determine associations between MRI findings and the frequency of surgical revision due to recurrent LDH at same level within three years after primary discectomy.
Design and Methods	Following an inter-observer reliability study pre-operative MRIs were evaluated using a standardized protocol. In a cohort study potential predictive variables for surgical revision were evaluated using univariate and multivariate logistic regression analysis. Also, a sum-score of the number of MRI findings at the involved level was created and assessed.
Primary variables	Frequency of surgical revisions and commonly identified MRI findings when examining the lumbar spine.
Preliminary results	In a study population of 451 operated patients 10% had revision discectomy and 2% had fusion surgery within the study period. Those who had surgical revision were significantly younger and were significantly less likely to have vertebral endplate signal changes Type 2 or more than five MRI findings at the involved level than the patients not undergoing surgical revision.
Conclusions	In general, pre-operative MRI findings have a limited explanatory value in predicting surgical revision within three years after first time, single-level, simple lumbar discectomy. Both the single variable VESC Type 2 and a sum-score > 5 MRI findings at the operated level was found to be negatively associated with patients undergoing surgical revision.

Returning to work within two years after first-time, single-level, simple lumbar discectomy: A multifactorial, predictive model.

Author(s)	Dorthe Schoeler Ziegler (dorthe.schoeler.ziegler@rsyd.dk),[1,2] Rikke Krüger Jensen,[3] Gert Frank Thomsen,[4] Leah Carreon,[1,2], Mikkel Oesterheden Andersen,[1,2] 1) *Spine Surgery and Research, Spine Center of Southern Denmark – part of Lillebaelt Hospital.* 2) *Institute of Regional Health Services Research, University of Southern Denmark.* 3) *Nordic Institute of Chiropractic and Clinical Biomechanics* 4) *Department of Occupational Medicine, Hospital of Southwest Jutland, Denmark*
Speaker(s)	Dorthe Schoeler Ziegler
Background and Aim	As continued post-operative inability to work has both societal and health-related consequences, identification of factors associated with sustained RTW after lumbar discectomy is needed. In patients undergoing, simple lumbar discectomy, we describe the time to sustained return-to-work (RTW) within two years after surgery using high-quality data from a national registry, and identify pre- and peri-operative factors associated with sustained RTW within two years after surgery.
Design and Methods	A longitudinal observational cohort study using prospectively collected registry data from DaneSpine, Statistics Denmark, and electronic medical records. The time to a sustained RTW within the study period was described using a time-scaled Kaplan-Meier plot. The biopsychosocial factors were examined using Cox proportional hazards models. The final model was internally and externally temporal validated.
Primary variables	Sustained return-to-work within two years after lumbar discectomy.
Preliminary results	In a study population of 512 operated patients, 66% returned to work or education; 75% within six months. A high probability of sustained RTW was associated with a high educational level, positive expectations towards the future labor market attachment, less sick absence within two years prior to the surgery, less pre-operative functional disability and higher pre-operative physical quality of life.
Conclusions	A larger number of patient-related factors not previously considered were found to be associated with sustained RTW; whereas most disease-related clinical findings were not associated.

Clinical and genetic findings in patients with familial multiple lipomatosis (FML)

Author(s)	Julie Bjerrelund, Dept. of Clinical Genetics, Odense University Hospital (OUH), Julie.bjerrelund@rsyd.dk Anja L. Frederiksen, Dept. of Clinical Genetics, (OUH), Anja.Frederiksen@rsyd.dk
Speaker(s)	Julie Bjerrelund. The presentation will be in Danish.
Background and Aim	Familial multiple lipomatosis (FML) is a very rare condition characterized by multiple, usually painless, subcutaneous lipomas, located on the trunk and extremities. The genetic inheritance in the chosen group of patients indicates a monogenetic cause for the condition, however, the causative genes have not yet been identified. There may be reduced penetrance and a variable expressivity of disorder. An older study reported patients with FML to have a sub-normal insulin sensitivity however, this has not been studied in detail. We aim to describe the metabolic phenotype and screen for a monogenetic cause of the disease.
Design and Methods	Next generation sequencing performed on five patients diagnosed with FML and regardless of their FML-status. Clinical assessment including investigations of the glucose- and lipid metabolism. Cell- and gene expressions studies for identifying the gene(s) function and effect on involved pathways.
Primary variables	Identification of genetic variant(s) in gene(s) that causes FML.
Preliminary results	Five families with the clinical diagnosis FML including n=18 have been identified M=12, F=6. Age of onset: 20-35 years. The patients have no other comorbidities. Three of the patients have accepted to participate.
Conclusions	Five families with the clinical diagnosis FML. Genetic cause is not yet identified, but it will be studied using exome sequencing.

Longitudinal trajectory patterns of albumin and CRP levels around diagnosis, relapse, bacteraemia, and death of acute myeloid leukaemia patients

Author(s)	Kim Oren Gradel (kogradel@health.sdu.dk)[1], Pedro Póvoa[1,2], Olav Sivertsen Garvik[1], Pernille Just Vinholt[3], Stig Lønberg Nielsen[4], Court Pedersen[4], Thøger Gorm Jensen[5], Pernille Sanberg Ljungdalh[6], Annmarie Touborg Lassen[7], Henrik Frederiksen[8] *1) Center for Clinical Epidemiology, OUH* *2) The Polyvalent Intensive Care Unit and NOVA Medical School, Lisbon, Portugal* *3) Department of Clinical Biochemistry and Pharmacology, OUH* *4) Department of Infectious Diseases, OUH* *5) Department of Clinical Microbiology, OUH* *6) Department of Regional Health Research, University of Southern Denmark* *7) Department of Emergency Medicine, OUH* *8) Department of Haematology, OUH*
Speaker(s)	Kim Oren Gradel
Background and Aim	Little is known about the impact of inflammation on events re-lated to acute myeloid leukaemia (AML) patients. The study has two aims: i) to describe correlations between the levels of the gold standard inflammatory biomarker C-reactive protein (CRP) and plasma albumin (PA); ii) to assess if changes of daily CRP and PA levels are related to diagnosis, relapse, bacteraemia, and death.
Design and Methods	All adult AML patients, 2000-May 2017, OUH, retrieved from the Danish National Acute Leukemia Registry. Data are linked to registries with data on comorbidity, vital status, biochemistry, and microbiology. We compute diagnosis, relapse, bacteraemia, and death as events around which we assess longitudinal trajectory patterns of CRP and PA. The time spans include 30 days before (D−30) through 30 days after the event (D30), except death which only includes D−30/D0.
Primary variables	AML characteristics, comorbidity, gender, age, positive blood cultures, CRP levels, PA levels.
Preliminary results	A total of 893 AML patients have 64,080 specimens with CRP and PA measured on the same day. There are high inverse corre-lations between PA and CRP levels ($R=-0.51$, $p<10\text{-}5$) for PA≥25 g/L, but no correlation for PA≤24 g/L ($R=0.01$, $p=0.61$). In most of the individual patients as well as in aggregated data, large CRP level increases and PA level decreases are mainly seen at bacteraemia and before death, with less fluctuation around an AML diagnosis or relapse.
Conclusions	Inflammatory response is low around an AML diagnosis and relapse. In these immunocompromised patients, bacteraemia is related to a marked acute inflammatory response with high CRP and low PA levels. PA is an important inverse inflammatory bi-omarker.

Exposure therapy in virtual reality for social anxiety disorder

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Speaker(s)	Lars Clemmensen
Background and Aim	Social Anxiety Disorder (SAD) is a common mental disorder, but we need more accessible and effective treatment. A substantial part of SAD individuals either do not seek treatment or drop out. Effective treatment for SAD is particularly important in that it is a disorder that starts at a young age and affects social skills. The present study aims to develop and examine a new treatment program for SAD based on cognitive behavioral therapy (CBT) with exposure therapy conducted in Virtual Reality (VR). VR Exposure Therapy (VRET) has several advantages compared to traditional (either in vivo or imaginary) exposure methods, because treatment can take place in a safe setting with increased control of situational elements.
Design and Methods	We will conduct a randomized controlled trial comparing the reduction in SAD symptoms from baseline to post-treatment between the following three arms 1) Individual CBT with VRET (using 360º 3D videos) 2) Individual CBT with in vivo exposure and 3) Individual VR relaxation therapy. Therapy will consist of 10 weekly sessions with a 6 months follow-up. We expect to recruit 90 patients diagnosed with SAD.
Primary variables	The main outcome is reduction in SAD symptoms assessed with the Social Interaction Anxiety Scale (SIAS).
Preliminary results	We are currently producing the VR videos.
Conclusions	Positive findings will support the use of VRET as an alternative or supplement to traditional exposure methods. If the treatment proves successful, it is the intention to introduce it as an alternative at the Centre for Telepsychiatry and, in the longer term, other psychiatric departments. With time, this type of therapy might be carried out in the home of the patients, and thereby be helpful for patients who would not otherwise seek treatment because of severe fear of social interactions. VRET could therefore be a key element in an effort to reach those that stay away from traditional treatment.

The impact of anti-TNFα therapy on colectomy rates and corticosteroid treatment among pediatric and adolescent patients with ulcerative colitis - a nationwide study

Author(s)	Lund K. (ken.lund@rsyd.dk)[1], Larsen M.D.[1], Knudsen T.[2], Kjeldsen J.[3], Nielsen R. G.[4], Nørgård B.M.[1] *1) Center for Clinical Epidemiology, Odense University Hospital & Research Unit of Clinical Epidemiology, Department of Clinical Research, University of Southern Denmark, Odense, Denmark.* *2) Department of Medicine, Hospital of Southwest Jutland & Institute for Regional Health Science, Center Southwest Jutland, University of Southern Denmark, Esbjerg, Denmark.* *3) Department of Medical Gastroenterology S, Odense University Hospital & Research Unit of Medical Gastroenterology, Department of Clinical Research, University of Southern Denmark, Odense, Denmark.* 4) *Hans Christian Andersen Children's Hospital, Odense University Hospital & Research Unit of Pediatric, Department of Clinical Research, University of Southern Denmark, Odense, Denmark.*
Speaker(s)	Ken Lund
Background and Aim	The long-term effects of anti-TNFα therapy are debatable. Therefore, in pediatric and adolescent patients with ulcerative colitis (UC) we examined whether anti-TNFα changed the colectomy proportion and reduced the use of corticosteroids.
Design and Methods	A nationwide cohort study among patients (age: 0-20) diagnosed with UC through 1977–2016 from Danish health registries. We calculated the cumulative five year risk of colectomy after diagnosis and used a Cox regression model for comparison between a historical pre-anti-TNFα cohort 1 (1977–2003) and a cohort 2 for the era of anti-TNFα (2004–2016). Based on anti-TNFα users, defined as patients who had at least four anti-TNFα treatments within four months, we examined the subsequent need for corticosteroids.
Primary variables	Anti-TNFα, Colectomy & Corticosteroid
Preliminary results	We identified 4,449 patients from 1977-2016. The 5-year cumulative proportion of colectomy in cohort 2 was 7.8% (95% confidence interval [CI]: 6.7-9.0) and 9.1% (95% CI: 8.0-10.4) in cohort 1. The adjusted 5-years hazard ratio was 0.84 (95% CI: 0.68-1.03) for colectomy in cohort 2 compared to cohort 1. A total of 334 patients received anti-TNFα treatments, and 16.5% (55/334) were prescribed corticosteroids in the subsequent 3-month period. Corticosteroid treatment declined with follow-up after 6 and 12 months, 5.4% and 1.2%, respectively.
Conclusions	In patients ≤ 20 years the adjusted hazard ratio for colectomy within a period of five years from the time of diagnosis was reduced in the era of anti-TNFα, but not statistically significant, compared to a historical cohort. In patients treated with anti-TNFα, prescriptions of corticosteroids were virtually ceased after 12 months.

CAMONCO - A phase two parallel-group randomized controlled trial assessing the efficacy of open dialogue about complementary alternative medicine integrated in conventional oncology care

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Speaker(s)	Mette Stie
Background and Aim	A high rate of patients with cancer use complementary alternative medicine (CAM) as an adjunct to conventional oncology care. Thus, it is crucial to integrate an open dialogue between patients and health professionals about the risks and benefits of CAM use in daily oncology care. However, little is known about the effects of such dialogue on patients´ health, quality of life and well-being. The aim of this study is to assess how open dialogue about CAM integrated in conventional oncology care affects symptoms, side-effects and patient-reported quality of life, level of anxiety, depression and received information.
Design and Methods	This is a phase two parallel randomized trial including 106 patients randomized with 1:1 allocation ratio to either intervention or control group. The intervention is a scheduled 60 minute open dialogue about CAM with a nurse specialist. Based on the fundamentals of person-centered care, patient preferences and wishes the dialogue includes reliable information, counselling, and advice about risks and benefits of CAM as an adjunct to conventional oncology care. Patients in the control group will receive standard care and referral to a website presenting research about potential effects and outcomes of CAM. Data on symptoms, side effects and patient-reported quality of life, level of anxiety, depression and received information will be collected through clinical observations and questionnaires, respectively.
Primary variables	The effect of the open dialogue about CAM will be assessed by comparing the frequency of adverse events grade 3 or 4 within the two groups 8 weeks after enrolment. Adverse events will be graded according to the Common Terminology Criteria for Adverse Events (CTCAEv5).
Preliminary results	Inclusion has just begun.
Conclusions	It is expected that this study will capture comprehensive data on how an open dialogue about CAM integrated in conventional oncology care affects patients´ health, quality of life and well-being. Additionally it will add knowledge on how to integrate an open dialogue about CAM in conventional oncology care.

Basal forskning -
Lokale T5 -10.30-12.00

Chairman: Ulrich Kirk

Gene co-expression network analysis of acupuncture induced treatment effects on rheumatoid arthritis

Author(s)	Dea Louise Ravn[1,3], Afsaneh Mohammadnejad[1], Weilong Li[1], Jesper Lund[1], Veit Schwämmle[2], Qihua Tan[1] 1. *Unit of Epidemiology and Biostatistics, Department of Public Health, University of Southern Denmark, Denmark* 2. *Protein Research Group, Department of Biochemistry and Molecular Biology, University of Southern Denmark, Odense, Denmark* 3. *Department of Biochemistry and Molecular Biology, University of Southern Denmark, Odense, Denmark*
Speaker(s)	Dea Louise Ravn
Background and Aim	Classical Chinese acupuncture has been used in the treatment of human rheumatoid arthritis (RA), but the molecular mechanisms for doing so, are not very well described in modern medicine. In this study, we performed a weighted gene co-expression network analysis (WGCNA) on data collected from a microarray study on mRNA blood samples, to investigate the molecular mechanisms that follow acupunctural treatment in an animal model for RA.
Design and Methods	Gene expression from mRNA blood samples from collagen induced arthritis (CIA) rats and non-CIA rats treated with manual acupuncture, measured using microarray. WGCNA was performed to identify network modules related to the effect of acupuncture according to time, disease status as well as the interaction between time and disease status. To find the biological function and pathways, the R package clusterProfiler was applied to the relevant modules of each trait to visualize genes that could have importance to the understanding of acupuncture and RA, by gene ontology analysis and KEGG pathway analysis.
Primary variables	None.
Preliminary results	We identified one network module (115 genes) which was significantly associated with all experimental factors, which indicates that acupuncture could have an overall effect on both CIA and Non-CIA rats. We found hub-genes associated with the inflammatory process and pathways associated with osteoarthritis disease process and inflammatory process. We also found another network module (347 genes) significantly associated with CIA, the interaction between time 1 hour and CIA and the interaction between time 34 days and CIA, indicating an early and continuous responses to acupuncture in CIA rats. With Gene Ontology and KEGG, we found hub genes and pathways related to the production of heme which is vital for blood and bone marrow.
Conclusions	This study revealed important genes within specific modules and pathways, which might be activated in response to acupuncture. The finding may help to clarify the underlying mechanism of acupuncture and provide reference for further studies on acupuncture and RA.

Reassuring results on the chance of a live born child in women with multiple sclerosis receiving assisted reproduction

Author(s)	Jølving LR[1], Larsen MD[1,] Fedder J[2], Nørgård BM[1] *1) Center for Clinical Epidemiology, Odense University Hospital, and Research Unit of Clinical Epidemiology, Department of Clinical Research, University of Southern Denmark. line.joelving@rsyd.dk* 2) *Department D, Centre of Andrology and Fertility Clinic, Odense University Hospital, Odense Denmark and Research Unit of Human Reproduction, Department of Clinical Research, University of Southern Denmark*
Speaker(s)	Line Riis Jølving
Background and Aim	Women with autoimmune diseases as ulcerative colitis, Crohn's disease and rheumatoid arthritis, have reduced chance of a live birth after assisted reproductive technology (ART) treatment. Whether this is the case in women with multiple sclerosis (MS) is unknown, but women with MS are more likely to refrain from pregnancy, and infertility and MS may coincidence. We aimed to examine the chance of live birth after ART treatment in women with MS, compared to women without MS undergoing infertility treatment.
Design and Methods	A nationwide register-based cohort study comprising all ART treatments (embryo transfers) in Denmark during 24 years was carried out. Women undergoing ART included 2,297 embryo transfers in 826 women with MS (the exposed cohort), and 203,862 embryo transfers in 68,105 women without MS (the unexposed cohort). We used logistic regression to compute the risk estimates with 95% confidence intervals (CI) adjusting for a number of important confounders. In sub-analysis we examined a potential impact of the use of corticosteroids prior to embryo transfer.
Primary variables	Our main outcome was live birth.
Preliminary results	A total of 508 (22.1%) live births in the exposed cohort and 49,185 (24.1%) in the unexposed cohort comprised the population. The adjusted odds ratio (aOR) for a live birth in women with MS, relative to women without MS undergoing ART, was close to unity (aOR = 0.92 (95% CI 0.82-1.03)). Use of corticosteroids within 3 month prior to embryo transfer did not have an impact on the chance of a live birth.
Conclusions	This is the first study to examine the impact of MS on the efficacy of ART, and our results must be confirmed in other settings. The chance of a live birth after ART was comparable in women with MS and in without MS. These are important information for young women with MS and their clinicians.

Celiac Disease viewed from insights in self-based immunity

Author(s)	L Baudewijn (Leen.Baudewijn@rsyd.dk), H. Cheroutre, T. Barington. Department of Clinical Immunology, Odense University Hospital, Denmark.
Speaker(s)	Leen Baudewijn
Background and Aim	Celiac Disease (CD) is a chronic enteropathy caused by an uncontrolled immune response to gluten proteins present in the daily diet. There is a strong correlation between HLA (human MHC)-DQ2 genes and celiac disease. These HLA molecules can bind modified gluten peptides and then present them to gluten-specific T cells in the small intestine, triggering an inappropriate immune response. It is unknown why only 1% of individuals expressing these HLA types develop CD in countries where gluten-rich products are an important part of the daily diet. HLA genes play also an important role in the development of T cells in the thymus, where HLA molecules loaded with self-antigens interact with T-cell receptors on developing thymocytes. We reasoned that celiac disease-predisposing HLA-DQ2 alleles loaded with self-antigens with an enriched glutamate/proline pattern similar to immunodominant gluten might promote self-based imprinting of CD4 T cell precursors in the thymus, resulting in the generation of self-imprinted gluten-reactive CD4 T cells that reside among the naive T cells in the periphery. These strong self-imprinted T cells might encounter the same auto-antigens as the selecting self-antigens in the periphery, and might be activated by those self-antigens if proper regulation fails, leading to inflammatory autoimmune T cells with cross-reactivity to gluten, that remain lifelong as inflammatory tissue resident memory T cells in the small intestine causing tissue destruction in the presence of dietary gluten.
Design and Methods	Study 1: Identification and characterizing of dietary antigen-reactive CD4 T cells with or without cross-reactivity to self in 2 mouse models both containing transgenic T cells with mono-specificity for the same dietary antigen but differing in MHC. Study 2: Identification of T cell markers that are consistent with self-imprinting in blood of HLA-DQ2 individuals, with and without celiac disease
Primary variables	Identification of T cell markers that coincide with self-reactivity and self-imprinting in transgenic mouse models and in humans (patients and controls). Evaluation of celiac pathology in mouse models if self-based regulation is experimentally disabled.
Preliminary results	Study 1: Naïve transgenic T cells that cross-react with self-antigens expressed higher CD45RB. T cells that cross-react with a self-antigen caused small intestinal pathology in mice similar to celiac disease in humans, if these T cells were exposed to their cognate antigen in the diet, in the absence of self-based immune regulation. Study 2: Higher expression of CD45RB was found in celiac patients compared to controls, indicating that CD45RB might be a marker for active disease. We observed a global increased expression of CD5 in HLA-DQ2 positive individuals compared to individuals with another HLA type, indicating that naïve T-cells educated in the context of self-peptide-HLA DQ2 might have received stronger self-based thymic imprinting.
Conclusions	We proposed and showed that CD might originate from a defect in regulation of self-imprinted T cells with cross-reactivity to gluten peptides. This

	categorizes CD as a true autoimmune disease, expanding the possibilities of identifying a genetic link for CD predisposition and possibly new targets to cure or even prevent the disease.

Anti-NMDA-receptor encephalitis: Mechanisms and long-term effects

Author(s)	Mette Scheller Nissen[1,2] (Mette.scheller.nissen2@rsyd.dk) Morten Blaabjerg[1,2] *1) Dept. of Neurology, OUH* 2) *Institute of Clinical Research, SDU*
Speaker(s)	Mette S Nissen
Background and Aim	Autoimmune encephalitis (AIE) is a disorder in which the immune system produces autoantibodies against cell surface proteins. In the most common form of AIE, the antibodies produced inhibit the N-methyl-D-aspartate receptors (NMDAR), causing Anti-NMDAR encephalitis. This condition results in a severe phenotype with deficits in memory, cognition and neuro-psychiatric symptoms. If diagnosed early, Anti-NMDAR encephalitis can be reversed by removal of pathological antibodies and immunosuppression. However, even patients with an apparent favorable outcome often display ongoing cognitive symptoms, and the mechanisms behind this is unknown. Establishing a rodent model of Anti-NMDAR encephalitis, we want to investigate 1) the effect of pathological anti-NMDAR antibodies on normal brain function and neurogenesis, and 2) the potential of NMDAR modulators as a symptomatic treatment during and after Anti-NMDAR encephalitis.
Design and Methods	IgG from patients with Anti-NMDAR encephalitis will be isolated and purified. By inserting an osmotic micropump into the lateral ventricle of living Sprague Dawley rats, antibodies will be continuously infused into the CSF, causing Anti-NMDAR encephalitis. The clinical and imaging features during the acute and recovery phase of the disease, will be measured using well known maze systems combined with rodent FDG-PET imaging. At different timepoints animals will be euthanized and brain sections immunohistochemically stained. To investigate the potential of NMDAR modulators as symptomatic treatment, groups of animals will be treated with modulators during acute encephalitis and during recovery after encephalitis. Anti-NMDAR encephalitis animals will be compared to similar animals treated with control IgG or vehicle.
Primary variables	FDG-PET CT of rat brain metabolism, behavioral tests investigating innate behavior, memory, learning, anxiety, visuo-spatial function and anhedonia (Barnes Maze, Open field, Novel Object Recognition test and Sucrose Preference test), neuronal and glial cell morphology and hippocampal neurogenesis.
Preliminary results	Project is ongoing. Preliminary results from rat hippocampal slice cultures exposed to anti-NMDAR IgG showed inhibition of neurogenesis compared to controls. Currently, repeated studies on primary hippocampal cell cultures and hippocampal slice cultures are running both examining neurogenesis and the effect of NMDAR modulators.
Conclusions	We expect to establish a rat model of Anti-NMDAR encephalitis. We expect behavioral tests to show impairment of memory, affected ability to learn, increased anxiety level and maybe anhedonia. Brain metabolism can be expected to show temporal hypermetabolism or occipital hypometabolism. Neurogenesis is expected to be reduced, in line with our previous findings. Finally, we expect to show a protective effect of NMDAR modulators, making

	them potential candidates for symptomatic treatment in Anti-NMDAR encephalitis.

Molecular signatures of different lesions types in the white matter brain of patients with progressive multiple sclerosis

Author(s)	Maria L. Elkjaer[1,2,3], Tobias Frisch[4], Richard Reynolds[5], Tim Kacprowski[4,6], Mark Burton[7], Torben A. Kruse[3,7], Mads Thomassen[3,7], Jan Baumbach[4,8], Zsolt Illes[1,2,3] 1) *Department of Neurology, Odense University Hospital, Odense, Denmark* 2) *Institute of Clinical Research, BRIDGE, University of Southern Denmark, Odense, Denmark* 3) *Institute of Molecular Medicine, University of Southern Denmark, Odense, Denmark* 4) *Department of Mathematics and Computer Science, University of Southern Denmark, Odense, Denmark* 5) *Division of Brain Science, Imperial College, London, UK* 6) *Research Group Computational Systems Medicine, Chair of Experimental Bioinformatics, TUM School of Life Sciences Weihenstephan, Technical University of Munich, Germany* 7) *Department of Clinical Genetics, Odense University Hospital, Odense, Denmark* 8) *Chair of Experimental Bioinformatics, TUM School of Life Sciences Weihenstephan, Technical University of Munich, Germany*
Speaker(s)	Maria L. Elkjaer
Background and Aim	To identify mechanistic markers and potential drivers of different lesion types in the white matter (WM) of patients with progressive multiple sclerosis (PMS), we RNA-sequenced 73 WM areas. Compared to 25 non-MS WM controls, 4,223 out of 18,722 genes were significantly differentially expressed in MS (DEGs: FDR<0.05). A computational systems medicine analysis was performed to describe the different MS lesion endophenotypes, and cellular source of specific molecules was examined by RNAscope, immunohistochemistry, and immunofluorescence. Chronic active lesions that become prominent in PMS were the most distinct, and were differentiated by two clusters of 62 DEGs from all other lesion types: this distinctive mechanistic signature was characterized by unique mitochondrial and metabolic changes, less expression of B and T cell-related genes, and specific downregulation of molecules involved in tissue repair. CHI3L1 (chitinase-3-like protein-1), an upcoming MS biomarker, was among the top ten upregulated genes in chronic active lesions, and RNAscope/immunohistochemistry indicated its expression by astrocytes in the rim. To identify reparatory molecules, we also examined protein interaction networks upregulated in remyelinating while downregulated in chronic active lesions, and found TGF□-R2 as central hub in this reparation-related network; RNAscope revealed astrocytes as cellular source of TGF□-R2 in remyelinating lesions. We also noticed that signature of the normal-appearing white matter (NAWM) in MS was more similar to control WM than to lesions. Only 22 DEGs differentiated NAWM from controls, and one of the six upregulated genes was CD26/DPP4; immunofluorescence indicated its expression by microglia in the NAWM. Since lesion-specific unique DEGs were more common than shared signatures, we examined lesion-specific

	pathway regulation based on de novo networks enriched by unique DEGs. Such network analysis indicated cellular trafficking and activation in active lesions; healing and immune responses in remyelinating lesions that was supported by the most heterogeneous immunoglobulin gene expression and the presence of CD20+ B cells; coagulation and ion balance in inactive lesions; and metabolic changes in chronic active lesions. Because we found inverse differential regulation of particular genes including risk genes among different lesion types, our data emphasize that omics related to MS lesions should be interpreted in the context of different lesions types.

Forebyggelse og sundhed - Lokale T7 - 10.30-12.00

Chairwoman: Else Marie Bladbjerg

Need to know or nice to know - is the current level of information sufficient when women with breast cancer initiate their treatment?

Author(s)	Cathrine Lundgaard Riis (Cathrine.Lundgaard.Riis@rsyd.dk)[1,2,3] Troels Bechmann (Troels.Bechmann@rsyd.dk)[1,2] Pernille Tine Jensen (Pernille.Tine.Jensen@rsyd.dk)[5,6] Angela Coulter (angela@angelacoulter.com)[2,3,4] Karina Dahl Steffensen (Karina.Dahl.Steffensen@rsyd.dk)[1,2,3] 1) *Department of Oncology, Vejle Hospital, University Hospital of Southern Denmark, Vejle, Denmark* 2) *Institute of Regional Health Research, Faculty of Health Sciences, University of Southern Denmark.* 3) *Center for Shared Decision Making, Vejle.* 4) *Nuffield Department of Population Health, University of Oxford, Oxford, United Kingdom.* 5) *Department of Gynecology and Obstetrics, Odense University Hospital.* 6) *Department of Clinical Research, University of Southern Denmark.*
Speaker(s)	Cathrine Lundgaard Riis
Background and Aim	When diagnosed with a life-threatening disease as breast cancer, everyday life changes dramatically. Essential decisions have to be made within a sparse time period and the information provided by health professionals to support the individual is fundamental. In this study we investigated whether patients experience a sufficient level of information to support decisions regarding treatment and whether they experience shared decision making.
Design and Methods	A survey was distributed to a population of postmenopausal women diagnosed with breast cancer, within the first 9 month after initiating adjuvant endocrine therapy. This survey was part of a study in optimizing follow-up care after primary treatment.
Primary variables	Selected items from a validated questionnaire developed by the Danish Cancer Society were used to assess patients' experience of the provided information, and their involvement in decision making.
Preliminary results	From a cohort of 207 newly diagnosed women with early breast cancer, 129 provided a questionnaire regarding their experiences of the information received at the oncological department. Half of the patients reported that they sought further information elsewhere e.g. the internet, the other half had confidence that necessary information would be provided from the health professionals. Shared decision making was experienced by 36% of the patients although more than half (52%) reported shared decision making as the most optimal decision-making process.
Conclusions	The information provided was sufficient, although a large fraction of patients searched for additional information. To endorse patients searching for additional knowledge, validated information could potentially be supplied by a homepage or an App. Furthermore, shared decision making can be improved by the use of a patient decision aid.

Time to pregnancy: A comparison of fertility in women with and without inflammatory bowel disease in the Danish National Birth Cohort

Author(s)	Friedman S[2], Nielsen J[1] (jan.nielsen2@rsyd.dk), Nohr EA[3], Jølving LR[1], Nørgård BM[1]. 1) *Center for Clinical Epidemiology, Odense University Hospital, and Research Unit of Clinical Epidemiology, Department of Clinical Research, University of Southern Denmark, Odense, Denmark.* 2) *Division of Gastroenterology, Hepatology, and Endoscopy, Department of Medicine, Brigham and Women's Hospital, Boston, Massachusetts and Harvard Medical School, Boston.* 3) *Research Unit for Gynecology and Obstetrics, Department of Clinical Research, University of Southern Denmark, Odense, Denmark*
Speaker(s)	Jan Nielsen
Background and Aim	Inflammatory bowel disease (IBD), i.e. Crohn's decease (CD) and Ulcerative Colitis (UC), is often diagnosed during the peak reproductive years and may affect fertility. We wish to estimate fertility in patients with IBD that is not confounded by of voluntary childlessness.
Design and Methods	We used data from the Danish National Birth Cohort, a nationwide study of 92,274 pregnant women recruited from 1996-2002. Women gave information about waiting time to pregnancy in a telephone interview when they were on average 16 week pregnant. We included couples with planned pregnancies and where the pregnancy resulted in a live birth. Information about CD and UC was retrieved from the National Patient Register. Using logistic regression models, we compared waiting time to pregnancy, as a proxy measure of fertility, in women with CD, and UC respectively, versus women without IBD.
Primary variables	None.
Preliminary results	We examined the waiting time to pregnancy in 74,471 pregnancies in women without IBD, 340 in pregnancies women with UC and 206 pregnancies in women with CD. The adjusted odds ratio (aOR) was 1.78 (95% CI, 1.30-2.45) for a waiting time of more than 12 months in pregnancies of women with CD versus non-IBD pregnancies. The aOR was 1.33 (95% CI, 0.87-2.02) for a waiting time of more than 12 months in pregnancies of women with UC versus non-IBD pregnancies.
Conclusions	This is the first study to estimate fertility in patients with IBD that is not confounded by of voluntary childlessness. We find that women with IBD, especially those with CD, have an increased waiting time to pregnancy.

Future health and Gestational diabetes - the FUDGE-study

Author(s)	PhD student Maria Hornstrup Christensen[1, 2, 3] maria.hornstrup.christensen@rsyd.dk Main supervisor Dorte Møller Jensen[1, 2, 3] Co-supervisors Katrine Rubin[3, 4], Ellen Nøhr[2, 3], Christina Vinter[2, 3], Marianne Skovsager Andersen[3, 5] *1) Steno Diabetes Center Odense, Odense University Hospital* *2) Department of Gynecology and Obstetrics, Odense University Hospital* *3) Institute for Clinical Research, University of Southern Denmark* *4) OPEN - Odense Patient data Explorative Network, Odense University Hospital* 5) *Department of Endocrinology, Odense University Hospital*
Speaker(s)	PhD student Maria Hornstrup Christensen
Background and Aim	Gestational diabetes (GDM) is an increasingly common condition and is associated with increased risk of future morbidity. Thus postpartum follow-up is important but many do not attend and knowledge about optimal postpartum test method regarding prediction of future morbidity is lacking. This PhD-study aims to investigate women with previous GDM and: 1) Incidence of type 2 diabetes (T2D) or cardiovascular diseases (CVD); 2) Incidence of psychiatric disorders; 3) Characteristics of attending versus non-attending women at postpartum follow-up and their risk of T2D, CVD or psychiatric disorders; 4) Predictive value of two postpartum test methods with regards to development of T2D or CVD
Design and Methods	The study is a national, historical cohort study based on register data from national health registers combined with a local sub-study including laboratory data. The national cohort includes all women delivering in Denmark in 1997-2017 and consists of GDM-exposed and non-GDM-exposed women hereby enabling comparison of the health related risk in the two groups. The national cohort has an embedded local sub-cohort of GDM-exposed women delivering at Odense University Hospital (OUH) at which a routine postpartum follow-up is performed. Attenders and non-attenders at the follow-up will be compared with regards to baseline characteristics and future health related risk. Laboratory data from the local sub-cohort will contribute to investigation of the predictive values of oral glucose tolerance test (OGTT) and glycated hemoglobin (HbA1c) as predictors for development of T2D or CVD.
Primary variables	Primary outcomes are incidences of T2D, CVD and psychiatric disorders
Preliminary results	No preliminary results are available as we are awaiting data
Conclusions	The study will generate new and useful knowledge about future physical and mental health in women with previous GDM hereby facilitating opportunity for better risk stratification and optimized postpartum awareness and management.

Prenatal Exposure to Perfluoroalkyl Substances is Associated with Increased Markers of Adiposity and Total Cholesterol in Infancy

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Speaker(s)	Richard Christian Jensen
Background and Aim	Perfluoroalkyl substances (PFASs) are surface repellants with putative endocrine disrupting properties. PFASs cross the pla-cental barrier enabling interference with fetal programming. In the present study, we investigated longitudinal associations be-tween maternal PFAS concentrations in first trimester and re-peated markers of adiposity and lipid metabolism in offspring up to 18 months of age.
Design and Methods	Odense Child Cohort is a prospective study including 2,874 mother-child pairs. We measured maternal serum concentrations of five PFASs: Perfluorohexane sulfonic acid (PFHxS), perfluo-rooctane sulfonic acid (PFOS), perfluorooctanoic acid (PFOA), perfluorononanoic acid (PFNA), and perfluorodecanoic acid (PFDA) in 649 women (median gestational week 11). Offspring clinical examinations were conducted at birth (N=613), three months (N=602), and 18 months (N=530) of age. Total cholesterol (TC), LDL, HDL, and triglyceride were evalu-ated at ages three months (N=260) and 18 months (N=198). Mixed-effects linear regression models estimated associations between maternal pregnancy PFASs and repeated standardized (SDS) body mass index (BMI), ponderal index, and waist cir-cumference in offspring. Associations between maternal PFASs and body fat % (BF%) SDS and plasma lipids SDS at ages three and 18 months were investigated with linear regression models.
Primary variables	Perfluoroalkyl substances, body mass index, ponderal index, body fat percentage, and total cholesterol.
Preliminary results	PFNA and PFDA were associated with higher BMI SDS and ponderal index SDS at ages three and 18 months in girls. PFOA, PFNA, and PFDA were associated with increased BF% SDS (PFDA, β=0.42 (95 % CI: 0.06, 0.77)) at three months of age in boys and girls. PFDA was associated with increased TC SDS (β=1.04 (95 % CI: 0.07, 2.00)) at 18 months of age in girls.
Conclusions	Maternal first trimester PFASs were associated with increased longitudinal markers of adiposity and higher total cholesterol in offspring.

Longitunal associations of exposure to perfluoroalkylated substances in childhood and adolescence and indicators of adiposity and glucose metabolism 6- and 12-yrs later

Author(s)	Domazet SL[1], Grøntved A, Timmermann AG, Nielsen F, Jensen TK 1) *Department of Sports Science and Clinical Biomechanics, Division of Exercise Epidemiology, Centre of Research in Childhood Health, University of Southern Denmark, Campusvej 55, 5230 Odense, Denmark, sdomazet@health.sdu.dk*
Speaker(s)	Sidsel Louise Domazet
Background and Aim	While the etiology of obesity is partly explained by a long-term positive energy balance in addition to genetic predisposition, industrial chemicals with endocrine-disrupting properties used in the majority of today's households may also cause obesogenic effects on the human organism by targeting the endocrinological system. These chemicals may be involved in the development of impaired insulin secretion and sensitivity that may ultimately cause diabetes. Therefore, the aim of this study was to investigate the long-term association of childhood (9-yrs) and adolescence (15-yrs) exposure to perfluoroalkylated substances on indicators of adiposity and glucose metabolism in adolescence (15-yrs) and young adulthood (21-yrs).
Design and Methods	Data derived from a large multicenter prospective cohort study, where the same participants were followed from childhood (N=590) over adolescence (N=444) and into young adulthood (N=369). Stored plasma samples were analyzed for perfluorooctanesulfonic acid (PFOS) and perfluorooctanoic acid (PFOA). Indicators of adiposity comprising; body height, body weight, skinfold thickness and waist circumference and indicators of glucose metabolism comprising; fasting blood glucose, triglyceride and insulin including calculation of beta-cell function and insulin resistance according to the homeostasis model assessment (HOMA) were collected at all study waves. Multiple linear regressions were applied in order to model earlier exposure on later outcome while controlling for baseline outcome levels, sex, age and socio-economic factors.
Primary variables	Exposure; • perfluorooctanesulfonic acid (PFOS) • perfluorooctanoic acid (PFOA) Outcomes; • body height • body weight • skinfold thickness • waist circumference • fasting blood glucose • triglyceride • beta-cell function • insulin resistance
Preliminary results	Childhood exposure to PFOS was associated with indicators of adiposity at age 15-yrs displayed in elevated BMI, skinfold thickness and waist

	circumference and also increased skinfold thickness and waist circumference at age 21-yrs. PFOA exposure in childhood was associated with decreased beta-cell function at age 15-yrs. We did not observe associations between adolescence exposure and indicators of adiposity and glucose metabolism in young adulthood.
Conclusions	This study found evidence for childhood exposure to PFOS and PFOA predicting adiposity at age 15- and 21-yrs and impaired beta-cell function at age 15-yrs respectively.

Project Early Detection and Prevention (In Danish: Tidlig Opsporing og Forebyggelse (TOF))

Author(s)	Trine Thilsing, Research Unit for General Practice, University of Southern Denmark, e-mail tthilsing@health.sdu.dk Jens Søndergaard, Research Unit for General Practice, University of Southern Denmark, e-mail JSoendergaard@health.sdu.dk Anders L. Sønderlund, Research Unit for General Practice, University of Southern Denmark, e-mail: asonderlund@health.sdu.dk Line Bjørnskov Pedersen, Research Unit for General Practice, University of Southern Denmark, e-mail lib@health.sdu.dk Jeanette Reffstrup Christensen, Research Unit for General Practice, University of Southern Denmark, e-mail jrchristensen@health.sdu.dk Nanna Herning Svensson, Research Unit for General Practice, University of Southern Denmark, e-mail nherning@health.sdu.dk Elisabeth Assing Hvidt, Research Unit for General Practice, University of Southern Denmark, e-mail ehvidt@health.sdu.dk Niels Christian Hvidt, Research Unit for General Practice, University of Southern Denmark, e-mail nchvidt@health.sdu.dk Lars Bruun Larsen, Research Unit for General Practice, University of Southern Denmark, e-mail lblarsen@health.sdu.dk
Speaker(s)	Trine Thilsing
Background and Aim	The increase in non-communicable diseases (NCD) caused by health-risk behaviour such as smoking, sedentary living and poor diet pose a significant challenge for the health care services and for society in general and calls for a holistic solution. The aim of the TOF project is to systematically identify citizens at high risk of NCD and with health-risk behavior and provide them with targeted and coherent preventive services.
Design and Methods	TOF is collaboratively designed with involvement from all major stakeholders incl. 7 municipalities in the Region of Southern Denmark, The organization of General Practitioners in Denmark, the Region of Southern Denmark and the Research Unit for General Practice, SDU: People aged 30-59 are stratified into four groups based on validated algorithms and data from a survey questionnaire and the general practitioner's (GPs) electronic patient record system. 1) People already known with NCD, 2) People at high risk of NCD, 3) People with health-risk behaviour and 4) People with a healthy lifestyle. All participants receive a personal health profile and targeted advise on behaviour change on a webpage. In addition, those at high risk of NCD and health-risk behaviour are offered targeted interventions at the GP and the municipality, respectively. The intervention is supported by a digital support system with user interfaces for citizens, GPs and municipal health professionals.
Primary variables	Feasibility, Participation rate
Preliminary results	In 2016-2017, the feasibility of the intervention was tested in a pilot study (Pilot1). A total of 8814 citizens and 68 GPs from Haderslev and Varde municipality were invited to participate. • 47 GPs (69%) accepted the invitation.

	• 30% of the invited citizens filled in the questionnaire and received a personal health profile. • Participation rates were higher among women, older patients, patients of higher SES, and patients not known with hypertension, hypercholesterolemia, type-2 diabetes, cardio-vascular disease (CVD) or chronic obstructive pulmonary disease (COPD). • Participants with fair/poor self-rated health, BMI above 30, low self-efficacy, sedentary behaviour, and non-smokers were more likely to also attend the targeted interventions at the GP and municipality. • Participation in the TOF project was perceived as relevant by 64% and 43% of those at high risk of NCD and those presenting with health-risk behavior, respectively. The greater the involvement in project activities, the greater the satisfaction. • The municipal health professionals perceived the intervention as very useful resulting in contact with a new and highly relevant target group. • The GPs were more reluctant in their evaluation and pointed to relevant adjustments to the intervention in general practice incl. increased efforts to recruit those with lower SES and increased flexibility in the intervention in general practice. • Both GPs and municipal health professionals were pleased with the decision support functionalities provided by the digital support system.
Conclusions	Based on results from Pilot1 the intervention has been adjusted and the feasibility is currently being tested in a second pilot study (Pilot2) comprising 2 municipalities, 15 GPs and 4800 citizens.

Klinisk forskning - Lokale U1 -12.45-13.45

Chairwoman: Kristine Tarp

Long-term outcomes after high-dose chemoradiotherapy for non-surgical management of distal rectal cancer

Author(s)	Edina Dizdarevic, Ane L Appelt, Torben F Hansen, John Ploeen, Lars Henrik Jensen, Jan Lindebjerg, Soeren Rafael Rafaelsen, Anders Kristian Moeller Jakobsen *Vejle Hospital, Vejle, Denmark; Danish Colorectal Cancer Center South,*
Speaker(s)	Anders Jakobsen
Background and Aim	Surgery is standard treatment for rectal cancer, but neoadjuvant chemoradiotherapy (CRT) may result in clinical complete response (cCR) in selected patients, allowing for non-surgical management (NSM). Prospective studies of NSM strategies are sparse however, and long-term data on quality of life (QoL) are limited. We conducted a single-arm phase II trial of high-dose CRT for NSM of distal rectal cancer; we report secondary long-term patient-reported outcomes (PROs), local regrowth and overall survival (OS) in patients managed non-surgically
Design and Methods	Fifty-one patients with resectable, T2 or T3, N0–N1, low adenocarcinoma received 65Gy (IMRT, brachytherapy boost) and oral tegafur-uracil. Patients with cCR 6 weeks after treatment (clinical examination, MRI, biopsy) were referred for observation, and followed closely with clinical examinations, endoscopies, PET-CTs, and PROs for 5 years. Overall colorectal cancer specific QoL and specific symptom scores were compared between timepoints using paired Wilcoxon tests. Local regrowth was estimated using cumulative incidence; overall survival using Kaplan-Meier estimates
Preliminary results	Forty patients achieved cCR after treatment; 28 were in follow-up at 24m, 21 at 36m, 18 at 60m. Patients left the trial due to local tumor regrowth (n=12), distant metastases (n=3), new primary cancers (n=6) and loss to follow-up (n=1). Average QoL score did not differ between baseline (median 11.1) and 24m (13.7), 48m (11.1,) or 60m (6.9). See Table 1 for individual scores; only rectal bleeding deteriorated from baseline (significantly worse at 24m). At median follow-up of 5.0 years, local regrowth rate and OS were 31% (95 CI 15%-47%) and 85% (95 CI 75%-97%), respectively.

	Baseline (n=40)	24m (n=28)	48m (n=22)	60m (n=18)
Daytime urinary frequency	27%	12%	18%	11%
Urinary incontinence	0%	0%	9%	0%
Rectal pain	0%	4%	4%	0%
Blood in stools	8%	27%	23%	11%
Faecal incontinence	3%	7%	0%	0%
Daytime bowel movement frequency	14%	17%	17%	12%

Conclusions	Long term follow-up after NSM of early rectal cancer showed excellent general colorectal cancer QoL and local symptom scores. (NCT00952926). EORTC QLQ – CR 29. Proportion reporting ‘quite a bit’ or ‘very much’ on symptom scales.

Randomized Controlled Trial comparing the efficacy of therapist guided internet-delivered cognitive therapy (TG-iConquerFear) with augmented treatment as usual in reducing fear of cancer recurrence in Danish colorectal cancer survivors

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Speaker(s)	Johanne Dam Lyhne
Background and Aim	Cognitive therapy has been shown to reduce fear of cancer recurrence (FCR) in mainly breast cancer survivors. The accessibility of cognitive behavioural interventions could be further improved by Internet delivery. The aim of this study is to test the efficacy of a therapist guided internet-delivered intervention (TG-iConquerFear) vs. augmented treatment as usual (aTAU) in Danish colorectal cancer survivors.
Design and Methods	A population-based randomized controlled trial (RCT) comparing TG-iConquerFear with aTAU (1:1) in colorectal cancer survivors who suffer from clinically significant FCR (Fear of Cancer Recurrence Inventory Short Form (FCRI-SF) ≥ 22 and semi-structured interview). Evaluation will be conducted at ½, 3 and 6 months post-treatment and compared to baseline measurements. Long-term effects will be evaluated after one year.
Primary variables	Primary outcome will be post-treatment FCR (FCRI-SF). Secondary outcomes are global overall health and global quality of life (Visual Analogue Scales 0-100), bodily distress symptoms (BDS checklist), health anxiety (Whiteley-8), anxiety (SCL4-anx), depression (SCL6-dep) and sickness absence and health expenditure (register data). Explanatory outcomes include: Uncertainty in illness (Mishels uncertainty of illness scale, short form, MUIS), metacognitions (MCQ-30 negative beliefs about worry subscale), and perceived risk of cancer recurrence (Visual analogue Scale 1-100).
Preliminary results	None.
Conclusions	This RCT will provide valuable information on the clinical and cost-effectiveness of TG-iConquerFear vs. aTAU for CRC survivors with clinical FCR as well as explanatory variables that may act as moderators or mediators of outcome.

The effects of a peripheral venous catheter compared to repeated venepunctures on markers of coagulation, inflammation, and endothelial function

Author(s)	Line Espenhain Andersen[1], Louise Schlosser Mose[2], Yaseelan Palarasah[1,3], Johannes Jakobsen Sidelmann[1], and Else-Marie Bladbjerg[1] *1) Unit for Thrombosis Research, Department of Clinical Biochemistry, University Hospital of Southern Denmark, Esbjerg, Denmark, and Department of Regional Health Research, University of Southern Denmark, Odense, Denmark* *2) Department of Neurology, University Hospital of Southern Denmark, Esbjerg, Denmark, and Research Unit of Health Sciences, University Hospital of Southern Denmark, Esbjerg, Denmark* *3) Department of Cancer & Inflammation Research, University of Southern Denmark, Odense, Denmark*
Speaker(s)	Line Espenhain Andersen
Background and Aim	Standard venepuncture is the recommended blood sampling technique for coagulation testing. Frequent venepunctures can, however, cause pain, skin damage, and bruising. Therefore, peripheral venous (PV) catheters are often used for serial blood sampling, but studies suggest that PV catheters increase markers of coagulation activation and inflammation. Whether the increase is caused by irritation of the vessel wall or diurnal variation is unknown. We therefore compared the effects of a PV catheter and repeated venepunctures on markers of coagulation, inflammation, and endothelial function.
Design and Methods	A PV catheter was inserted at 07:45 in a hand vein in 10 healthy subjects, and blood samples were collected at 8:00, 10:00, 12:00, and 14:00. In the contralateral arm, blood was simultaneously obtained by venepunctures.
Primary variables	Markers of coagulation, i.e. prothrombin fragment 1+2 (F1+2) and thrombin-antithrombin (TAT), inflammation, i.e. interleukin 6 (IL-6), and endothelial function, i.e. plasminogen activator inhibitor 1 (PAI-1), tissue plasminogen activator (tPA), von Willebrand factor (vWF), and tissue factor (TF) were measured in plasma.
Preliminary results	The concentrations of TAT and F1+2 were significantly increased (10:00; p-value <0.01, 12:00; p-value<0.05, and 14:00; p-value <0.01) in PV catheter samples compared with venepuncture samples. There was no increase in concentrations of PAI-1, tPA, vWF, or TF and no differences between sampling methods. IL-6 concentrations increased in many PV catheter samples and venepuncture samples, but the response varied between the subjects.
Conclusions	Blood collection through a PV catheter induces coagulation activation, whereas endothelial function is not affected. More studies are needed to disclose the effect of blood sampling on IL-6.

Pregnancy following gastric bypass – consequences for mother and child (Presentation of PhD-protocol)

Author(s)	Louise Laage Stentebjerg, MD, Steno Diabetes Center Odense, Odense University Hospital Dorte Møller Jensen, MD, PhD, Department of Endocrinology/Department of Gynecology and Obstetrics, Odense University Hospital Claus Bogh Juhl, MD, PhD, Department of Endocrinology, Hospital of South-West Jutland René Klinkby Støving, MD, PhD, Department of Endocrinology, Odense University Hospital Mette Tanvig, MD, PhD, Department of Gynecology and Obstetrics, Odense University Hospital
Speaker(s)	Louise Laage Stentebjerg
Background and Aim	Roux-en-Y gastric bypass (RYGB) is a well-established treatment of obesity, most often performed in women during their reproductive years. Adverse events related to RYGB include hypoglycemia. Though usually attenuated in pregnancy, the incretin response is reinforced in subjects with RYGB and the resulting changes in insulin and glucagon responses together with the resultant weight loss are possible underlying mechanisms for hypoglycemia. The majorities of women who have undergone RYGB conceive shortly after RYGB and have an increased risk for inappropriate gestational weight gain (GWG) and thereby fetal growth restriction. However, studies of hypoglycemia and GWG in pregnant women following RYGB are lacking. In women with previous RYGB we aim to investigate a) glucose level and incretin response during a mixed meal test (MMT) in early and late pregnancy, b) trimester specific incidence of postprandial hypoglycemia and c) fetal growth.
Design and Methods	20 women with RYGB and 20 age-, BMI- and parity-matched controls will be studied with a) 2nd and 3rd trimester 4-hour liquid MMTs, b) 10-14-days Continuous Glucose Monitoring (CGM) once every trimester and post partum and c) maternal and fetal anthropometrics including antenatal ultrasound examinations and neonatal DXA-scans.
Primary variables	The primary outcomes are nadir plasma glucose levels during the 4-hour liquid MMT, number of hypoglycemic episodes during CGM and birthweight standard deviation scores.
Preliminary results	None yet
Conclusions	A better understanding of maternal metabolism and fetal growth in women with RYGB will support risk stratification, patient information and management both before and during pregnancy.

Internet-based Cognitive Behavior Therapy for Binge Eating Disorder (i-BED)

Author(s)	Mia Beck Lichtenstein, Centre for Telepsychiatry, Mental Health Services in the Region. Department of Clinical Research, University of Southern Denmark. Mail: mlichtenstein@health.sdu.dk
Speaker(s)	Mia Beck Lichtenstein
Background and Aim	The diagnostic criteria for Binge Eating Disorder (BED) include recurrent episodes of binge eating characterized by lack of control over eating, eating until feeling uncomfortably full and feeling embarrassed and disgusted with oneself. Binge eating occurs at least once a week and is associated with marked distress. The level of severity depends on the number of binge eating episodes per week. BED is the most common eating disorder with an estimated prevalence of 1.4-2.0%. It was included as a diagnosis in DSM-5, but is not yet recognized as an eating disorder in the WHO diagnostic manual used in Denmark. The Danish treatment options are insufficient to meet the needs of about 50.000 Danes who are estimated to be affected by BED. Cognitive behavioral therapy (CBT) has shown good effect in the treatment of BED, but yet no Danish CBT-interventions exist in mental health care settings. Can digital solutions be an option to establish evidence-based, accessible, feasible and effective treatment for BED? The aim of this study is to develop and evaluate the effect of an internet-based cognitive behavioral therapy program for BED called i-BED.
Design and Methods	The study consists of a pilot with development and examination of the internet-based intervention for BED. Next, we aim to conduct a randomized controlled trial with a case-group (n=50) and a waiting list control group (n=50) that is offered treatment after 10 weeks. Patients can refer themselves for treatment online from May 1st 2019. Referral, visitation, and treatment is all internet-based and integrated in digital platforms. The i-BED is developed for adults suffering from mild to moderate BED. The i-BED program consists of 10 steps and is supported by weekly written consultations with a clinician. The content of the 10 steps is presented below and will be further explained at Åben Forskerdag. Step 1 Introduction and motivation Step 2 Psychoeducation and treatment goals Step 3 Registration of eating patterns Step 4 Identification of binge eating triggers Step 5 Regular and stable eating Step 6 Coping with emotions Step 7 Beating binge episodes Step 8 Self-esteem and cognitions Step 9 Prevention of relapse Step 10 Evaluation and final support
Primary variables	The primary outcome is BED-symptoms (binge eating episodes) and secondary outcomes are quality of life and body mass index. Participants are assessed at baseline, after 10 weeks and after 3 months' follow up.

Preliminary results	We expect that patients experience symptom relief (reduction in binge eating episodes), increased quality of life and weight loss. Preliminary results are accessible in September 2019.
Conclusions	If the study shows positive results, we aim to implement i-BED in mental health services, regionally and nationwide. The study also has international potentials as it is among the first to develop and evaluate a CBT-manual that can be integrated in a digital solution and thus make treatment more accessible, flexible and personalized.

Genetic markers predictive of Familial Pancreatic Cancer and Hereditary Pancreatitis

Author(s)	Ming Tan[1,2] (mtan@health.sdu.dk), Klaus Brusgaard[3] (Klaus.Brusgaard@rsyd.dk), Sönke Detlefsen[4] (Sonke.Detlefsen@rsyd.dk), Ove B. Schaffalitzky de Muckadell[1,2] (SDM@rsyd.dk), Maiken Thyregod Jørgensen[1,2] (maiken.t.joergensen@rsyd.dk) *1) Medical Gastroenterology, University of Southern Denmark (SDU)* *2) Department of Medical Gastroenterology, Odense University Hospital (OUH)* *3) Department of Clinical Genetics, OUH* 4) *4) Department of Pathology, OUH*
Speaker(s)	Ming Tan
Background and Aim	Pancreatic cancer is among the deadliest cancer diagnoses worldwide – with an estimated 1-year mortality about 60% in western populations. An estimated fraction of up to 10% of all pancreatic cancers is attributed to familial pancreatic cancer (FPC) with a heritability estimate of 36%. Proper identification of strong genetic markers associated with FPC would enable systematic genetic testing in relevant populations. Unfortunately, no genetic mutations with strong associations to FPC are known to date. In addition to the identification of genetic mutations associated with FPC, pathological changes in the pancreatic tissue are also of great clinical value for early screening and diagnostics of potential malignant lesions. Transcriptome profiling can help characterize the molecular events during the development of FPC and identify molecular markers for determination of the risk of progression to cancer in relevant individuals. Likewise, high-throughput genomic analysis can also help with identifying novel genetic variants for the observed variations in the expression of hereditary pancreatitis (HP). Using a large collection of blood samples from 25 Danish families with FPC (approx. 125 patients), and 16 Danish families with HP (approx. 96 patients) for genomic analyses, as well as pancreatic tissue samples from FPC patients for transcriptomic analysis, the aims of this project are: 1) To identify genetic mutations strongly associated with FPC, using whole genome sequencing. 2) To examine the histopathological stages from pre-malignant to malignant lesions in pancreatic tissue, using whole genome and RNA sequencing for marker discovery, thus enabling early diagnosis of prospective pancreatic cancers. 3) To verify and assess known genetic markers of HP, as well as potential other genetic mutations associated with the occurrence or inhibition of pancreatitis in predisposed families.
Design and Methods	This study will primarily be carried out as a family-based association study – using blood samples prospectively collected from family members of 25 pre-identified families with FPC and another 16 families with HP, all currently followed at the Department of Medical Gastroenterology, OUH. Sequencing analyses of blood and pancreatic tissue samples will be performed using the Illumina sequencing platform (NovaSeq 6000) at the Department of Clinical Genetics, OUH.
Conclusions	This project combines high-throughput sequencing technique with the efficient family-based association design to identify novel genetic variants for FPC and

	HP in the Danish population. New cancer genes are expected to be found and their phenotypes identified in this unique patient material. Further basic understanding of genetic mutations and gene activity associated with FPC and HP would be of great clinical value for early diagnostics and timely intervention of pancreatic cancer in early stages, as well as targeted therapy for hereditary pancreatitis.

Tværsektorial forskning - Lokale T12 - 12.45-13.45

Chairman: Jesper Bo Nielsen

Quality of life in people with dementia living in institutional settings

Author(s)	Hanne Kaae Kristensen (hkristensen@health.sdu.dk) [1, 2], Hanne Peoples [1] *1) Health Sciences Research Centre, UCL Erhvervsakademi og Professionshøjskole, Odense, Denmark* *2) Department of Clinical Research, University of Southern Denmark, Odense, Denmark*
Speaker(s)	Hanne Kaae Kristensen
Background and Aim	Approximately 35,000 Danes have been diagnosed with dementia. However, the Danish Dementia Research Centre estimates that approximately 89,000 Danish people are currently living with dementia. In line with the global demographic shift, the percentage of older citizens is rising, and it is expected that the number of people with dementia in need of sheltered housing will rise. Accordingly, local politicians and health services are engaging in innovative processes to develop new housing facilities, e.g. dementia villages, in order to meet the expectations of up-to-date accommodation and participation in meaningful activities that reflect a familiar way of living. Although knowledge within the field of dementia care is growing, there remains a general lack of coherence in evidence-based knowledge and dissemination of content, quality, and outcomes of social and health services for people with dementia. At the same time, services are expected to be founded on the newest and best available evidence on what may contribute to well-being, quality of life, and dignity from the perspective of people with dementia. The aim of the meta-aggregation was to investigate experiences related to quality of life in people with dementia living in institutional settings.
Design and Methods	A meta-aggregation inspired by the Joanna Briggs Institute was undertaken as part of a research project in the Dementia Village in Svendborg. A systematic search was conducted in four databases and additional studies were found in reference lists of the included studies. Only studies in English, Danish, Swedish, and Norwegian were considered, with publication dates from 2007 to 2018.
Primary variables	None.
Preliminary results	Ten original qualitative studies were included. Using critical appraisal methodological, quality was assessed. We extracted five main categories: accept and adaptation, autonomy, personhood, social connectedness, and activities.
Conclusions	Significant findings concerned the importance of coming to terms with the illness and life situation, while being able to experience feelings of autonomy, independence, and personhood, thus indicating the importance that these issues be of high priority in dementia care and rehabilitation. Meaningful social relationships and activities, individualised flexible routines and regulations, and adjusted physical environments with room for privacy were also prioritised in order to achieve high quality of life.

Defensive medicine in General Practice: Too much to do about nothing?

Author(s)	MK Andersen, LB Pedersen, KM Pedersen, J Lykkegaard, FB Waldorf, AP Munck, E Assing Hvidt Corresponding author: Merethe K Andersen (MKA) mkandersen@health.sdu.dk
Speaker(s)	Elisabeth Assing Hvidt & Merethe K Andersen
Background and Aim	Recent years have witnessed a progressive increase in defensive medicine (DM) in several Western welfare countries. In Danish primary and secondary care, documentation on the extent of DM is lacking. A preceding phenomenological study of General Practitioners' (GPs') understandings of and experiences with DM revealed various forms of defensive medical practices and the GPs' reasons for executing these, founding the basis for development of an audit registration template. The aim of the study was to identify the extent of - and types of DM in Danish general practice and to investigate GPs' reasons for practising DM in the individual consultations.
Design and Methods	All GPs residing in the Southern Denmark Region were invited to participate in an audit under the auspices of Audit Project Odense (APO) registering all consultations during a five-day period indicating if any defensive medical action was carried out in each of the consultations.
Primary variables	The audit template comprised the following variables: Knowledge of the patient, reason for encounter (organ system), time of day, defensive practices carried out; e.g. prescriptions, point-of-care-tests, laboratory tests, referrals, excessive recording and documentation, reasons for practicing DM; e.g. concern about overlooking critical illness, concern about patient complaint, patient demand, etc., degree of defensiveness. Moreover, the GPs were asked to answer a short questionnaire comprising the following variables: GP age, gender, practice type, number of patients on list, average number of consultations/hour, complaints, job motivation, job satisfaction, the importance of your collegial reputation.
Preliminary results	We will present analyses on the extent - and types - of DM and the GPs' reasons for practicing DM. Moreover, there will be group discussions on the participants' experiences with DM focusing on doctors' possibilities to take back professionalism.
Conclusions	Will be presented at the conference, data collection not completed.

Colon cancer patients with a former psychiatric disorder present with more advanced cancer stage and receive less chemotherapy

Author(s)	Linda Kaerlev (Linda.Kaerlev@rsyd.dk or L.Kaerlev@dadlnet.dk)[1,2], Maria Iachina[1,2], Oleg Trosko[3], Niels Qvist[4], Pernille Møller Ljungdalh[1,2], Bente Mertz Nørgård[1,2] 1) *Research Unit of Clinical Epidemiology, Institute of Clinical Research, University of Southern Denmark, Kløvervænget 30, Entrance 216 ground floor east, DK- 5000 Odense C, Denmark* 2) *Center for Clinical Epidemiology, Odense University Hospital, Kløvervænget 30, Entrance 216 ground floor east, DK-5000 Odense C, Denmark* 3) *Department of Psychiatry (University function), The Region of Southern Denmark, Odense C, Denmark.* 4) *Surgical Department A, Odense University Hospital, DK-5000 Odense C, Denmark*
Speaker(s)	Linda Kaerlev
Background and Aim	Psychiatric patients with colorectal cancer may have delayed diagnosis and may be oncologically undertreated.
Design and Methods	The Danish Colorectal Cancer Group database DCCG comprised 25,194 colorectal cancer patients (CRC), (colon cancer (CC, n=16,641), rectal cancer (RC, n=8,553)), having an operation in 2007-2013, and were alive at least 30 days after operation, of which 422 have had at least one hospital contact for a serious psychiatric disorder; ICD-10: DF20-29: primary psychotic disorders, or DF30-39: affective disorders (exposed) in a period of 3650-120 days before the operation date. Pearson chi-squared test for cancer stage was calculated and Odds Ratio (OR) with 95% confidence interval (CI) for having had a palliative vs an intended curative aim of the CRC operation for CRC patients (cohort 1), and for having an oncological treatment for each cancer site CC or RC (cohort 2 and 3) in patients with and without a psychiatric history was estimated. The OR was adjusted for: age, gender, comorbidity index, cancer stage, socio-economic position group, and educational level.
Primary variables	None.
Preliminary results	A higher cancer stage at the time of operation in patients with psychiatric disorders compared with patients without such a history may point towards a delay in the diagnosis or in the treatment of the CC patients with psychiatric disorders and the decreased adjusted OR for having an oncological treatment in these patients, OR 0.55, 95% CI (0.40 -0.76)), was not explained by cancer stage. For patients with RC no difference was seen.
Conclusions	Specific attention for CC patients with pre-existing serious psychiatric disorders is recommended.

Relational possibilities and challenges of email-consultations in general practice – a qualitative study

Author(s)	Assing Hvidt E1,2, Grønning A2, Klausen M2, Søndergaard J1 *1) Research Unit of General Practice, University of Southern Denmark, SDU* *2) Department for the Study of Culture, University of Southern Denmark, SDU*
Speaker(s)	Elisabeth Assing Hvidt
Background and Aim	E-mail consultation in general practice is considered a technological means to meet the challenge of an increase in the patient population and as a way to make communication in the doctor-patient relationship more effective and time saving. However, no knowledge exists about how general practitioners (GPs) experience the relational possibilities and challenges of email-consultations. To investigate how GPs perceive of and experience the relational challenges and possibilities of email-consultations.
Design and Methods	Qualitative semi-structured interviews have been conducted with 12 GPs. Variations were strived for regarding the GPs' age, gender, practice type, geographical location and years of practice as a GP. Data have been analyzed using a hermeneutic analytical strategy, called Interpretative Phenomenological Analysis.
Preliminary results	The GPs generally experience e-con as a challenging means for relationship-building due to interpretation uncertainties and difficulties. Conversely, in continuing doctor-patient relationships e-con is experienced to potentially serve as a means to maintain and even deepen the relationship, e.g. in cases where patients with psychological problems feel a need to express their health concerns or suffering. Communicating empathically with the patient through email is perceived by the GPs as a way of relieving the burden of some of their suffering.
Conclusions	We argue that email-consultations hold the potential for maintaining and deepening the relationships with patients that the GP know well providing feed-back to health concerns and offering reassurance to patients in need of emotional support.

Modic Changes and long-term disability

Author(s)	Peter Muhareb Udby[1,3], MD, Tom Bendix[2], DmSci, Søren Ohrt-Nissen[3], MD, PhD, Michael Ruud Lassen[1], MD, Joan Solgaard Sørensen[4], MD, Stig Brorson[1], MD, PhD, Leah Y. Carreon[5], MD, MSc, Mikkel Østerheden Andersen[5], MD. *1) Spine Unit, Department of Orthopedic Surgery, Zealand University Hospital, Denmark* *2) Center for Rheumatology and Spine Diseases, Rigshospitalet / University of Copenhagen, Denmark* *3) Spine Unit, Department of Orthopaedic Surgery, Rigshospitalet, University of Copenhagen, Denmark* *4) Department of Radiology, Odense University Hospital – Svendborg, Denmark* *5) Spine Surgery and Research, Spine Center of Southern Denmark – part of Lillebaelt Hospital, Denmark*
Speaker(s)	Peter Muhareb Udby
Background and Aim	Previous studies have shown that low back pain (LBP) is associated with MCs and disc degeneration. However, the long-term prognosis of patients with MCs is unclear. To assess whether Modic Changes (MCs) are associated with long-term physical disability, back pain and sick leave.
Design and Methods	In 2004-2005, patients aged 18-60 with daily LBP were enrolled in an RCT study and lumbar MRI was performed. Patients completed numeric rating scales (NRS, 0-10) for LBP and leg pain (LP), Roland-Morris Disability Questionnaire (RMDQ), LBP Rating Scale for activity limitations (RS, 0-30), Inflammatory pain pattern (IPP) and sick leave days due to LBP at baseline and 13-years after the MRI. Patients were stratified based on the presence (+MC) or absence (-MC) of MCs on the MRI.
Preliminary results	Of 204 cases with baseline MRI, 170 (83%) were available for follow-up; 67 (39%) with MCs and 103 (61%) without MCs. Demographics, smoking status, BMI, use of antibiotics, LBP, LP and IPP scores at baseline and at 13-year follow-up were similar between the two groups. Also, baseline RMDQ was similar between the +MC and -MC groups. At 13 years, the RMDQ score was statistically significant better in the +MC group (7.4) compared to the -MC group (9.6, p=0.024). Sick leave days due to LBP were similar at baseline but less in the +MC group (9.0) compared to the -MC group (22.9 days, p=0.003) at 13 years.
Conclusions	MCs were not found to be negatively associated with long-term pain, disability or sick leave. Rather, the study found that LBP patients with MCs had significantly less disability and sick-leave at long-term follow-up. We encourage further studies to elucidate these findings.

Innovativ sundhedsforskning - Lokale T5 - 12.45-13.45

Chairman:

Using Wii technology in assessment of patients attending a falls clinic

Author(s)	Betina Nielsen, stud.cand.scient.san.(betina.louise.nielsen@rsyd.dk)[1]; Karen Andersen-Ranberg (KARanberg@health.sdu.dk)[1,2]; Jesper Ryg[1,2] (jesper.ryg@rsyd.dk). *1) Faculty of Health Sciences, SDU* *2) Geriatric Department, OUH*
Speaker(s)	Betina Nielsen
Background and Aim	Physiotherapeutic assessment (PA) is currently part of the standard interdisciplinary approach of patients attending a falls clinic. However, PA is time consuming for both patients and therapists. Wii technology offers valid, reliable, fast, and easy measurements of physical biomarkers (muscle strength, balance, and reaction time) in healthy people. The aim of this study was to examine feasibility of Wii and comparison with standard PA in older patients attending a falls clinic.
Design and Methods	Patients were recruited from the falls clinic at Geriatric department, OUH, from 151218-120319. Inclusion criteria: referral due to a fall and undergoing standard PA. Exclusion criteria: moderate/severe dementia or unable to give informed consent. Physical biomarkers assessed using Wii included hand grip and lower limb strength, postural balance, and reaction time in extremities and using standard PA included sit-to-stand test, Dynamic Gait Index, Bergs Balance Scale and Timed Up and Go. The Wii and standard PA was performed by two different assessors. Between groups differences were assessed using two-way unpaired t-test in case of normal distributed data and Mann-Whitney test in case of not normally distributed data. Correlations were addressed using Spearman's correlation (r).
Primary variables	Time consumption and physical biomarkers
Preliminary results	A total of 118 patients were assessed for eligibility and 56 were tested (mean (±SD) age 79 (±7) years). Time spent on assessment ranged from 17-27min and 32-55min using Wii and standard PA, respectively. A total of 85% of the participants completed minimum five Wii tests and 57% completed all six Wii tests. In comparison, a total of 65% completed all four standard PAs. No adverse events were recorded. The participants expressed a positive attitude towards the Wii-assessment. Preliminary data showed a moderate correlation between standard Bergs Balance Scale and Wii postural balance wide stand (r=0.6) or narrow stand (r=0.5). No correlations were found between the other tests. Further analyses will be presented at the conference.
Conclusions	Wii assessment was feasible when assessing patients with prior falls and less time was spent compared to standard assessment. Wii might have a potential role in the risk factor assessment of older fallers. Whether Wii and standard PA measures the same domains needs further exploration. Future studies should address whether Wii- or standard measurements best enables identification of patients at risk of further falls.

Evaluation of a new communication program: Feedback Informed Person-centred Communication (FIPeC)

Author(s)	Maiken Wolderslund, postdoc, Maiken.Wolderslund@rsyd.dk, Connie Timmermann, assistant professor, Connie.Timmermann@rsyd.dk, Jette Ammentorp, professor, research manager, Jette.Ammentorp@rsyd.dk Centre for Patient Communication - Health Services Research Unit, Lillebaelt Hospital/Department of Regional Health Research, University of Southern Denmark
Speaker(s)	Maiken Wolderslund & Connie Timmermann
Background and Aim	From 2012 to 2018 all employees at Lillebaelt Hospital have participated in mandatory communication skills training. Evaluation shows significant increase in communication related self-efficacy for the participating healthcare professionals. However, the program is time consuming also in terms of maintenance and further development of communication skills. Consequently, a new generic communication platform (FIPeC) is being developed and tested. The platform comprises digital learning modules for the healthcare professionals (HCP) based on blended learning principles as well as an app for the patients allowing them to re-listen to and rate the individual consultations using the Communication Assessment Tool (CAT). These initiatives will be combined in an interactive feedback system enabling the HCP to continuously train their communication skills based on the patient's feedback.
Design and Methods	The study design is based on Participatory Action Research (PAR) to create the best possible basis for a successful implementation process through patient involvement and an iterative approach. We will be using a mix of methods both quantitative and qualitative in a pre-post design. Departments from four different hospitals will participate.
Primary variables	Qualitative exploration of the feasibility and user experiences. Quantitative measures include: Self-efficacy (SE-12), CAT, work-related well-being, SDM.
Preliminary results	Work in-progress
Conclusions	Work in-progress

The mDIARY RCT trial: Mobile self-monitoring during treatment of borderline personality disorder. Tech. enhanced identification, training and generalizing of emotion regulation during psychotherapy

Author(s)	Stig Helweg-Jørgensen (stighj@rsyd.dk)[1,2,3,4], Mia Beck Lichtenstein (PhD)[2,8], Alan E. Fruzzetti. (PhD)[6], Christian M. Dahl (PhD)[4,5], Susanne S Pedersen (PhD)[1,4,7] *1) Department of Psychology, University of Southern Denmark, Odense, Denmark* *2) Centre for Telepsychiatry, Mental Health Services in the Region of southern Denmark, Odense, Denmark* *3) The borderline DBT-unit, Mental Health Services in the Region of southern Denmark, Svendborg, Denmark.* *4) OPEN, Odense Patient data Explorative Network, Odense University Hospital, Odense, Denmark* *5) Department of Business and Economics, University of Southern Denmark, Odense, Denmark* *6) Department of Psychiatry, Harvard Medical School, Boston, USA* *7) Department of Cardiology, Odense University Hospital, Odense, Denmark* *8) Department of Clinical Research, University of Southern Denmark, Odense, Denmark*
Speaker(s)	Stig Helweg-Jørgensen
Background and Aim	Borderline personality disorder is a painfull psychiatric condition. Treatment by dialectical behavior therapy has been shown to be one of a few effective treatments. Registering patient reported outcome by mobile phone is investigated in the mDIARY study. The presentation will demonstrate a "cloud"/mobile-phone based self-monitoring system developed in a cooperation between 3 parties Telepsychiatric Centre, Odense, Region of Southern Denmark, and Monsenso® - a spin off health tech company started by the developers the MONARCA RCT trial, , and the Borderline personality disorder treatment unit from Psychiatric ward, Svendborg, Region of Southern Denmark. Potential possibilities for monitoring, classification and predictions based on machine learning are very encouraging. The Technological demands for this kind of solution are low. Requirements are basically that patients own a smartphone and therapists has functioning internet-connection. This means that perspectives for this kind of data-collection is very encouraging and point towards new kinds of outcome data in real life therapeutic interventions in the future benefitting both the clinician and the researcher. The study compares selfregistration by smartphone to registration by pen and paper.
Design and Methods	A Randomized controlled trial design compares self-registration by paper to self-registration by mobile-phone at 4 different psychiatric treatment units specializing in borderline personality disorder. All facilities treats patients with dialectical behaviour therapy. The mDIARY self-monitoring system can visualize daily episodes of emotional dysregulation, a self -rated day score of well-being, and use of

	emotion regulation-skills on the patients mobile-phones, as well as on a secure webpage. Daily patient data on self-reported outcomes goes directly into a database and can be accessed as an overview in the beginning of each therapy session by therapists. Data is also accessible during the week by the patients themselves. Therapist and patients are in this way able to follow how many emotion regulation skills were trained? how many episodes control loss? drug use? self-harm? suicidal ideation? were encountered since last session. Patient time series data are collected during therapy while the patients are in psychiatric treatment. This type of data is collected over a year for each patient. Patients can, between sessions, also access short podcasts teaching 30 different Emotion regulation skills. They can access other psychoeducative material and generate other focus points they want to track themselves.
Primary variables	Primary outcome variable is speed of acquisition of emotion regulation skills (Mean days needed to learn a new skill) . Secondary outcome variables are: Dayscore, Symptom severity as measured by borderline symptom list (BSL-23). Emotional variability, episodes of emotional dysregulation will be tracked.
Preliminary results	Will not be available before datacollection has ended. This presentation will focus on protocol and design.
Conclusions	Data collection from the study will not be concluded until December 2019.

Development and Implementation of an App for Supporting Anxiety Treatment in an Outpatient Setting - a Qualitative Investigation

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Speaker(s)	Trine T. Holmberg
Background and Aim	Anxiety disorders are characterized by physiological and psychological symptoms as a response towards perceived threatening stimuli. These disorders cause high amounts of suffering and high expenditure. Current prevalence of anxiety disorders in European cultures is estimated at 10.4% (7.0–15.5%), with a relatively high lifetime prevalence of between 14.5-33.7%. In 2004 it was estimated that anxiety disorders cost the European Union 41 billion euros. A cost which is likely higher today, as global estimates of anxiety has risen with 14.9 % since 2005. New technology may improve current treatment, increase access to treatment, and potentially decrease expenditure and suffering. The present study aims to explore the development and implementation of an app designed to help support treatment of anxiety in an outpatient secondary care setting, as to inform future development and implementation efforts.
Design and Methods	Data on experiences with the app was obtained via semi-structured interviews and the Systems Usability Scale (SUS) survey. Seven patients and four clinicians using the app in treatment were interviewed. The interviews were analysed using a thematic analysis approach. Three raters coded the data separately and then compared emergent themes and subthemes. The clinicians were interviewed about: 1) System usability, feasibility and acceptability of the app in a psychiatric setting, 2) Working procedure and, 3) Implementation. The patients were interviewed about: 1) System usefulness, acceptability and feasibility, 2) Insight in own disorder and relation to the therapist and, 3) compliance.
Preliminary results	The SUS score demonstrated higher patient satisfaction with usability of the app; Mean = 60.38 (SD = 28.35), than clinician satisfaction: Mean = 46.25 (SD = 5.30), this will be compared with the department in general when the results are ready.
Conclusions	Clinicians need tech-support in the start-up phase and follow-ups throughout stabilization Clinician commitment is crucial for successful implementation as well as patient compliance and clinician commitment is dependent on extra allotted time and managerial support User Interface should be designed for lowest common denominator and only implemented when finished Implementing the app enhances ability to tailor the treatment to individual needs, patients prefer app over paper and gain increased disorder recognition

Equivalence between paper and web-based Patient Reported Outcome (PROs) measured on Danish lung cancer patients

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Background and Aim	Lung cancer is associated with a high symptom burden and a reduced quality of life (QoL). Recently more studies have focused on QoL, and PRO data are used to collect information on QoL. PROs are collected by using different collection methods such as paper-, web-based-, and mixed-mode (combination of paper and web-based) questionnaires. The aim of this study was to evaluate the two data collection methods: paper and web-based questionnaires among Danish lung cancer patients.
Design and Methods	A nationwide register-based cohort study included newly diagnosed and treated lung cancer patients from the Danish Lung Cancer Registry (DLCR). From DLCR we retrieved information about the patient's age, gender, tumor stage, comorbidity and post-treatment PRO. We used logistic regression models to estimate the odds ratios of the outcome variables on a set of confounders.
Primary variables	Web-based vs. paper based questionnaires to collect PRO data.
Preliminary results	The study population consisted of 2,025 patients, where 1,497 patients responded using the paper questionnaires and 528 used the web-based questionnaires. Patients using web-based collection methods were younger, were more often men, had oncological treatment and a high tumor stage.
Conclusions	The results suggest that for future use of PRO questionnaires in Denmark, the mixed-mode questionnaire will be the best collection method for patients with lung cancer.

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