

INVITATION – PHD DEFENCE

NINA LYKKEGAARD GEHR, MD

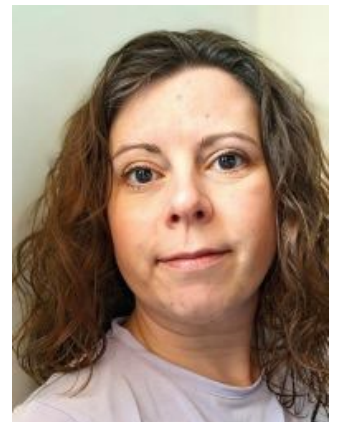
Chemotherapy-induced peripheral neuropathy: Studies exploring early biomarkers and long-term consequences

Friday, March 28, 2025, at 14.00

In auditorium C114-103, Entrance C, Aarhus University Hospital, Palle Juul-Jensens Boulevard 165, 8200 Aarhus N

The defence is public, in English and expected to last 2 hours.

After the defence, The Danish Pain Research Center will host a reception.



Assessment committee

- Chair and moderator of the defence
Associate Professor and consultant Camilla Jensenius Skovhus Kronborg
Danish Centre for Particle Therapy, Aarhus University Hospital, Aarhus, Denmark
- Coordinator in Chief of the Neuro-Oncology Unit and Associate Professor Jordi Bruna Escuer
Hospital Universitari de Bellvitge-Institut Català d'Oncologia, Hospitalet, and Universitat Autònoma de Barcelona, Medicine Faculty, Barcelona, Spain
- Consultant and Associate Professor Christina H Bruvik Ruhlmann
Department of Oncology, Odense University Hospital and Department of Clinical Research, University of Southern Denmark, Odense, Denmark

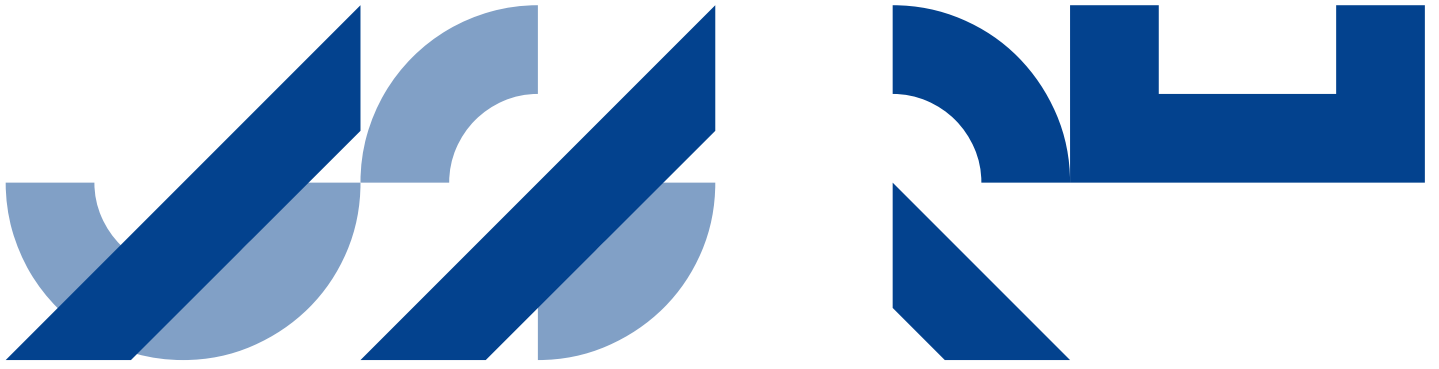
Supervisors

- Nanna Brix Finnerup MD, DMSc, Professor (Main Supervisor)
Danish Pain Research Center, Department of Clinical Medicine, Aarhus University, Aarhus, Denmark
- Lise Ventzel, Associate Professor, MD, PhD
Department of Oncology, University Hospital of Southern Denmark, Vejle, & Department of Regional Health Research, Faculty of Health Sciences, University of Southern Denmark, Odense, Denmark
- Lotte Lauritzen, MScBio, PhD, Professor
Section of Lifecourse Nutrition and Health, Department of Nutrition, Exercise and Sports, University of Copenhagen, Denmark



AARHUS UNIVERSITY

HEALTH – DEPARTMENT OF CLINICAL MEDICINE
Danish Pain Research Center



PRESS RELEASE

Nina Lykkegaard Gehr, MD, from The Danish Pain Research Center, Department of Clinical Medicine, Aarhus University will defend her PhD thesis titled "Chemotherapy-induced peripheral neuropathy: Studies exploring early biomarkers and long-term consequences" at 14.00 on March 28, 2025.

The defence is in English and will last approximately 2 hours.

This PhD highlights the long-term impact of chemotherapy-induced peripheral neuropathy (CIPN), a common chronic side effect of cancer treatment. CIPN, caused by drugs like docetaxel, paclitaxel, and oxaliplatin, can lead to potential painful sensibility disturbances significantly affecting cancer survivors' quality of life. Unfortunately, no effective treatments or preventive measures exist, leaving oncologists with few options beyond reducing or stopping potential lifesaving treatment.

The research in this PhD explores CIPN in breast, colorectal, and prostate cancer patients, exploring potential ways to detect and prevent nerve damage. One key finding is that Neurofilament Light Chain protein (NfL) could serve as a biomarker to detect nerve injury caused by chemotherapy.

The PhD also includes a study which investigates whether omega-3 fatty acids, known for their anti-inflammatory properties, could help prevent CIPN in colorectal cancer patients. A clinical trial is currently underway to test their potential benefits.

By improving early detection and exploring new preventive strategies, this research brings hope for better management of chemotherapy-related nerve damage, ultimately improving cancer patients' long-term well-being.

The defence is public and takes place on March 28, 2025, at 14.00 in auditorium C114-103, Entrance C, Aarhus University Hospital, Palle Juul-Jensens Boulevard 165, 8200 Aarhus N

The title of the project is *Chemotherapy-induced peripheral neuropathy: Studies exploring early biomarkers and long-term consequences*.

For more information, please contact PhD-student Nina Lykkegaard Gehr. E-mail: ninalykgehr@clin.au.dk



PRESSEMEDDELELSE

Ph.d.-forsvar: Nina Lykkegaard Gehr, læge, fra Dansk Smerteforskningscenter, Institut for Klinisk Medicin, Aarhus Universitet, vil forsvare sin ph.d.-afhandling med titlen "Chemotherapy-induced peripheral neuropathy: Studies exploring early biomarkers and long-term consequences" den 28. marts 2025 kl. 14.00.

Forsvaret er på engelsk og vil cirka vare 2 timer.

Ph.d.-projektet sætter fokus på de langvarige konsekvenser af kemoterapi-induceret perifer neuropati (CIPN), en hyppig senfølge ved kræftbehandling. CIPN, som udløses af lægemidler som docetaxel, paclitaxel og oxaliplatin, kan føre til smertefulde føleforstyrrelser, der påvirker kræftoverleveres livskvalitet. Desværre findes der endnu ingen effektiv behandling eller forebyggelse, hvilket efterlader onkologerne med få muligheder ud over at reducere eller helt stoppe den potentielt livsreddende behandling.

Forskningen i denne Ph.d.-afhandling undersøger CIPN hos patienter med bryst-, tarm- og prostatakkræft og identificerer mulige metoder til at opdage og forebygge nerveskader. Et centralt fund er, at proteinet Neurofilament Light Chain (NfL) potentielt kan bruges som biomarkør til tidlig påvisning af nerveskader forårsaget af kemoterapi.

Ph.d.-afhandling indeholder også et studiet hvis formål er at undersøge om omega-3-fedtsyrer, der er kendt for deres antiinflammatoriske egenskaber, kan hjælpe med at forebygge CIPN hos patienter med tarmkræft. Et klinisk forsøg er aktuelt i gang for at teste denne forebyggende effekt.

Ved at styrke den tidlige påvisning og afprøve nye forebyggelsesmetoder skaber forskningen håb om bedre håndtering af nerveskader efter kemoterapi og dermed øget livskvalitet hos kræftpatienter på længere sigt.

Forsvaret af ph.d.-projektet er offentligt og finder sted den 28. marts 2025 kl. 14.00 i auditorie C114-103, indgang C, Aarhus University Hospital, Palle Juul-Jensens Boulevard 165, 8200 Aarhus N

Titlen på projektet er *Chemotherapy-induced peripheral neuropathy: Studies exploring early biomarkers and long-term consequences*.

For yderligere oplysninger kan ph.d.-studerende Nina Lykkegaard Gehr kontaktes på mail: ninalykgehr@clin.au.dk