

Press release

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Basic information

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Department of: Clinical Medicine

Main supervisor: Jens Overgaard, prof., DMSc

Title of dissertation: Dose-escalated, intensified radiotherapy for high-risk head and neck squamous cell carcinoma

Date for defence: 11.06.2021 at (time of day): 14.00 Place: Danish Center for Particle Therapy, Aarhus University Hospital, Entrance B3, Level 4, Palle Juul-Jensens Boulevard 25, 8200 Aarhus N

Press release (Danish)

Dosis-øget, intensiveret strålebehandling til patienter med højrisiko planocellulær kræft i hoved-halsregionen.

Strålebehandling er en grundsten i behandlingen af hoved-halskræft, som det i de fleste tilfælde er muligt at kurere. En undergruppe af patienter har dog ringe prognose trods standardbehandling, og et nyt ph.d. projekt fra Aarhus Universitet, Health, sætter fokus på forbedring af behandlingen for netop denne gruppe af høj-risiko patienter. Projektet er gennemført af Mette Saksø, der forsvarede det den 11.06.2021.

Det er muligt at intensivere strålebehandlingen ved at øge totaldosis. For at skåne det raske normalvæv, kan behandlingen gives i mindre "portioner", med mindre dosis pr. behandling, men til gengæld flere behandlinger. Dette princip kaldes hyperfraktionering. Her gives 2 daglige behandlinger på hverdage gennem 5,5 uger. Herudover kan effekten af behandlingen øges ved at give kemoterapi ugentligt sammen med strålerne (kemo-strålebehandling).

Afhandlingen har vist, at denne type behandling er gennemførlig og effektiv ved lokalavanceret hoved-halskræft hos patienter med god almen tilstand. Behandlingen giver bivirkninger og bør kun bruges til selekterede patienter. Projektet forsøger endvidere at belyse om patienter med særligt stråle-resistente kræftknuder kan identificeres med PET-skanning og om dosisøgning hos denne patientgruppe kan forventes at være effektiv.

Projektet har fået støtte fra Kræftens Bekæmpelse og Aarhus Universitet.

Forsvaret af ph.d.-projektet er offentligt og finder sted fredag den 11/6 kl. 14 i Dansk Center for Partikelterapi, Aarhus Universitetshospital, Indgang B3, Palle Juul-Jensens Boulevard 25, 8200 Aarhus N. Grundet COVID-19 er der meget begrænset mulighed for fysisk deltagelse, men derfor mulighed for online deltagelse. Link til online deltagelse kan tilsendes ved kontakt til ph.d.-studerende Mette Saksø. Titlen på projektet er "Dose-escalated, intensified radiotherapy for high-risk head and neck squamous cell carcinoma". Yderligere oplysninger: Ph.d.-studerende Mette Saksø, e-mail: mette.saksoe@oncology.au.dk, tlf. 78454963.

Bedømmelsesudvalg:

Jasper Albertus Nijkamp, M.Sc., Ph.D., lektor (formand for bedømmelseskomitéen og moderator af forsvaret), Dansk Center for Partikelterapi, Aarhus Universitetshospital, Danmark.

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Press release (English)

Dose-escalated, intensified radiotherapy for high-risk head and neck squamous cell carcinoma.

Radiotherapy is considered a cornerstone in the management of head and neck cancer with a large potential to cure the patient. A subgroup of patients, however, continues to have a poor prognosis despite the recommended treatment. The current PhD project from Aarhus University, Graduate School of Health, focuses on improving treatment for this high-risk patient group. The project was carried out by Mette Saksø, who is defending her dissertation on June 11th 2021.

It is possible to intensify the treatment by increasing the total dose. To spare the normal tissues, the treatment can be given in smaller portions, with less dose per fraction, but with more fractions given. This principle is called hyperfractionation. The schedule includes two daily treatments on weekdays for 5.5 weeks. Moreover, the treatment efficacy can be improved by chemotherapy given concomitant to the radiotherapy (chemo-radiotherapy).

The results of the PhD project demonstrates that such schedule is feasible and effective for locally advanced head and neck cancer in otherwise fit patients. The intensified treatment causes side effects, and should be considered only in selected patients. The PhD project furthermore explores how hypoxia-specific PET imaging prior to radiotherapy can identify patients with radiation-resistant tumors, and whether this subgroup of patients can be expected to benefit from the twice-daily, intensified schedule.

The project has been funded by The Danish Cancer Society and Aarhus University.

The defence is public and takes place on Friday 11/06-2021 at 14.00 at the Danish Center for Particle Therapy, Aarhus University Hospital, Entrance B3, Level 4, Palle Juul-Jensens Boulevard 25, 8200 Aarhus N. Due to COVID-19, the possibility for physical attendance is restricted, but it will be publicly available as an online defense. Link for the online access can be obtained by contacting PhD student Mette Saksø. The title of the project is "Dose-escalated, intensified radiotherapy for high-risk head and neck squamous cell carcinoma". For more information, please contact PhD student Mette Saksø, email: mette.saksoe@oncology.au.dk, Phone +45 78454963.

Assessment committee:

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Åse Bratland, MD., PhD., associate professor, senior consultant and head of Section for Head and Neck Oncology, The Norwegian Radium Hospital, Oslo University Hospital, Oslo, Norway.

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