

## Press release

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### Basic information

Name: Mette Marie Fode      Email: mettfode@rm.dk      Phone: 23369302

Department of: Clinical Medicine

Main supervisor: Morten Høyer

Title of dissertation: Optimization of stereotactic body radiation therapy for metastases

Date for defence: June 28 2017 at (time of day): 14:00 Place: Patologisk auditorium

Press release (Danish)

**Normalvævs toksiciteten kan reduceres i forbindelse med højpræcisions strålebehandling af levermetastaser**

Stereotaktisk strålebehandling er en særlig form for strålebehandling, hvor der gives en meget høj stråledosis på ganske få fraktioner med en meget præcis teknik. For at skåne normalvævet mest muligt og samtidig have størst mulighed for tumorkontrol, bliver denne form for strålebehandling planlagt med stejle dosisgradienter mellem tumor og normalvæv. Dette ph.d. studie har kortlagt hvordan det går patienterne i forhold til lokal kontrol, prognostiske faktorer for overlevelse og den påførte morbiditet. Ydermere viser resultater af et kliniske studie at det er muligt at reducere stråledosis til det bedst fungerende raske levervæv såfremt man supplerer den vanlige 4D CT skanning man anvender til dosisplanlægning med en levercelle-specifik PET skanning (FDGal). På lang sigt kan det komme til at betyde at man kan behandle flere patienter med stereotaktisk strålebehandling for levertumorer med større tumorbyrde eller patienter med parenchymal leverlidelse end muligt i dag pga. risikoen for stråleinduceret leversvigt. Dette er konklusionen af et nyt ph.d.-projekt fra Aarhus Universitet, Health. Projektet er gennemført af Mette Marie Fode, der forsvare det d. 28/6 2017

Forsvaret af ph.d.-projektet er offentligt og finder sted den 28. Juni 2017 kl. 14.00 i Patologisk auditorium, Aarhus Universitetshospital, Nørrebrogade 44, 8000 Århus C. Titlen på projektet er "Optimization of stereotactic body radiation therapy for metastases". Yderligere oplysninger: Ph.d.-studerende Mette Marie Fode, e-mail: mettfode@rm.dk, tlf. 23369302

Press release (English)

**Normal tissue morbidity can be reduced using stereotactic body radiation therapy of liver metastases**

Stereotactic body radiation therapy is a special kind of radiotherapy delivering a very large radiation dose in a few fractions with a precise technique. To spare the normal tissue as much as possible but retain the maximal tumor control, this kind of radiotherapy is planned with steep dose gradients between tumor and normal tissue. This ph.d. study has mapped the local control, prognostic factors for survival and the treatment related morbidity. Furthermore results of a clinical study shows that it is possible to reduce the radiation dose to the best functioning parts of the healthy liver tissue combining the usual 4D CT scan for treatment planning with a hepatocyte specific PET tracter (FDGal). In the long term it can be possible to treat more patients with sterotactic body radiation therapy for liver tumors with a larger tumor burden or parenchymal liver disease than possible to treat at the moment due to the risk of radiation-induced liver disease. This is the conclusion of a new ph.d. project from Aarhus University, Health. The project was carried out by Mette Marie Fode, who is defending her/his dissertation on June 28 2017.

The defence is public and takes place on June 28 2017 at 2 pm in Patologisk auditorium, Aarhus University Hospital, Noerrebrogade 44, 8000 Aarhus C. The title of the project is Optimization of stereotactic body radiation therapy for metastases. For more information, please contact PhD student Mette Marie Fode, email: mettfode@rm.dk, Phone +45 23369302.

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