AARHUS UNIVERSITY

Press release

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Basic information

Name: Sofia Spampinato Email: sofia.spampinato@oncology.au.dk Phone: +45 50359397

Department of: Clinical Medicine

Main supervisor: Professor, ph.d. Kari Tanderup

Title of dissertation: Late urinary morbidity after radiotherapy in cervical cancer: anatomy, dose and dose-effect

Date for defence: September 4th 2020 at (time of day): 14:00 Place: Virtual defence via Zoom

Press release (Danish)

Blærebivirkninger efter strålebehandling ved livmoderhalskræft: anatomi, dosis og dosis-effekt

Standardbehandlingen for lokalt avanceret livmoderhalskræft inkluderer strålebehandling, kemoterapi og MR-vejledt brachyterapi. Tumor kontrol og overlevelse er forbedret i løbet af de seneste 10 år, men blærebivirkninger stadig til stede efter behandlingen og kan påvirke livskvaliteten for patienter. Forskellige blærebivirkninger kan have forskellige årsager og være relateret til forskellige områder af blæren. Anatomiske strukturer i blæren, der er relaterede til forskellige funktioner af blæren, er blevet identificeret i behandlingsplanlægningsbilleder af mere end 100 livmoderhalskræftpatienter. Strålingsdoserne modtaget af disse strukturer blev evalueret og sammenlignet med de dosisparametre, der i øjeblikket er anbefalet i forbindelse med behandling af livmoderhalskræft. Endelig er patienter og behandlingsrelaterede risikofaktorer for forskellige blærebivirkninger undersøgt hos 1416 patienter behandlet i det internationale multi-center studie, EMBRACE I. Analysen viste, at nogle bivirkninger er relateret til dosis hotspots uanset deres placering i blæren, mens andre korrelerer med doser leveret til blærebasen. Patientrelaterede risikofaktorer (alder, overvægt, rygestatus) og nye dosisgrænser for blæren blev identificeret. Den nylige udvikling inden for behandling af livmoderhalskræft gør det muligt at sænke blæredoserne og mindske bivirkninger, samtidig med at man sikrer optimal tumordækning. Projektet er gennemført af Sofia Spampinato, der forsvarer det d. 04/09/2020.

Forsvaret af ph.d.-projektet er offentligt og finder sted den 04/09 kl. 14.00 via Zoom. Adgang til forsvaret forgår via link, som kan fremsendes ved henvendelse til Sofia Spampinato via nedenstående kontaktoplysninger. Titlen på projektet er "Late urinary morbidity after radiotherapy in cervical cancer: anatomy, dose and dose-effect". Yderligere oplysninger: Ph.d.-studerende Sofia Spampinato, e-mail: sofia.spampinato@oncology.au.dk, tlf. 50359397.

Bedømmelsesudvalg:
Associate Professor Bodil Ginnerup Pedersen, Department of Radiology, Aarhus University Hospital, Aarhus, Denmark

Head of Brachytherapy Bradley Pieters, Department of Radiation Oncology, Amsterdam University Medical Centers, location AMC, Amsterdam, Netherlands

Professor Ivan Vogelius, Department of Oncology, Rigshospitalet, Copenhagen, Denmark

Press release (English)

Late urinary morbidity after radiotherapy in cervical cancer: anatomy, dose and dose-effect

The standard treatment for locally advanced cervical cancer includes external beam radiotherapy, chemotherapy and MRI-guided brachytherapy. Although tumour control and survival have improved during the last 10 years, urinary side effects are still present after treatment and can affect the quality of life of patients. Different urinary side effects can have different causes and be related to different regions of the bladder. Urinary sub-structures related to different bladder functions have been identified in treatment planning images of more than 100 cervical cancer patients. Radiation doses received by these sub-structures were evaluated and compared with the bladder dose parameters currently recommended in cervical cancer treatment. Finally, patients and treatment-related risk factors for different urinary side effects have been investigated in 1416 patients treated within the international multi-center study EMBRACE I. The analysis showed that some side effects are related to dose hotspots regardless of their location in the bladder, while others correlate with doses delivered to the bladder base. Patient-related risk factors (age, overweight, smoking status) and new bladder dose limits were identified. Recent developments in cervical cancer treatment allow to lower bladder doses and decrease side effects, while securing optimal tumour coverage. The project was carried out by Sofia Spampinato, who is defending her dissertation on 04/09/2020.

The defence is public and takes place on 04/09 at 2pm on Zoom. The title of the project is "Late urinary morbidity after radiotherapy in cervical cancer: anatomy, dose and dose-effect". For more information and for access to Zoom, please contact PhD student Sofia Spampinato, email: sofia.spampinato@oncology.au.dk, Phone +45 50359397 .

Assessment committee:
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