

Press release

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Basic information

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Department of: Clinical Medicine

Main supervisor: Birgitte Vrou Offersen

Title of dissertation: The risk of radiation-associated heart disease in patients with early breast cancer

Date for defence: 29/10-21 at (time of day): 14.00 Place: Aarhus University Hospital, Auditorium A G206-145, Aarhus University Hospital

Press release (Danish)

Ph.D.-forsvar: Marie Louise Holm Milo

Brystkræft er den hyppigste kræftform hos kvinder. Langt størstedelen af patienter diagnosticeres i et tidligt stadie, hvor strålebehandling spiller en vigtig rolle, da den reducerer risikoen for tilbagefald af brystkræften og øger overlevelsen. Strålebehandling mod brystregionen kan dog medføre stråledosis til hjertet, og tidligere studier har vist en øget risiko for hjertesygdom. I starten af årtusindeskiftet skete der flere ændringer i den adjuverende behandling af brystkræftpatienter, både den medicinske behandling og strålebehandling, hvor CT-baseret planlægning af strålebehandlingen blev indført.

I et ph.d.-projekt fra Aarhus Universitet, Health, er risikoen for hjertesygdom undersøgt i en kohorte på 22.056 brystkræftpatienter strålebehandlet mellem 1999 og 2016. I en subgruppe af patienter strålebehandlet med CT-baseret teknik er stråledosis til hjertet og hjertets substrukturer undersøgt.

Ph.D. projektets konklusioner er, at for patienter strålebehandlet med CT-baseret planlægning er der ikke tegn på en øget risiko for hjertesygdom inden for de første 10 år efter strålebehandlingen. Generelt var stråledosis til hjertet lav, og der blev ikke observeret nogen forskel i stråledosis til hjertet og hjertets substrukturer for patienter med efterfølgende hjertesygdom sammenlignet med tilsvarende bestrålede brystkræftpatienter, der ikke udviklede hjertesygdom.

Forsvaret af ph.d.-projektet er offentligt og finder sted den 29/10 2021 kl 14.00 i auditorium A (G206-145), Aarhus Universitetshospital, Palle Juul-Jensens Boulevard 99, indgang G, 8200 Aarhus N. Titlen på projektet er "The risk of radiation-associated heart disease in patients with early breast cancer". Yderligere oplysninger: Ph.D.-studerende Marie Louise Holm Milo, e-mail: milo@oncology.au.dk, tlf: +45 20962648

Bedømmelsesudvalg:

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Press release (English)

Ph.D. defense: Marie Louise Holm Milo

Breast cancer is the most common female cancer worldwide. The majority of patients are diagnosed in an early stage and adjuvant radiation therapy plays an important role to reduce the risk of recurrence

and improve the overall survival. However, thoracic radiation therapy may cause some incidental radiation dose to the heart with subsequent risk of cardiac disease. After the millennium, several changes in the adjuvant treatment of early breast cancer patients occurred, both in the systemic treatment and in radiation therapy where CT-based planning was implemented.

In this Ph.D. project from Aarhus University, the risk of cardiac disease is investigated in a cohort of 22,056 breast cancer patients irradiated between 1999 and 2016. In a subgroup of patients treated with CT-based radiation therapy planning, the radiation dose to the heart and cardiac substructures is reported.

In conclusion: For patients irradiated after CT-based planning was implemented, no trend towards an increased risk of cardiac disease within the first 10 years after radiation therapy was seen. In general, the radiation dose to the heart was low and there was no difference in the radiation dose to the heart and cardiac substructures for patients with subsequent cardiac disease compared to patients without subsequent cardiac disease.

The defence is public and takes place 29/10-2021 at 14:00 in the Auditorium A (G206-145), Aarhus Universitetshospital, Palle Juul-Jensens Boulevard 99, 8200 Aarhus N. The title of the project is "The risk of radiation-associated heart disease in patients with early breast cancer". For more information, please contact PhD student Marie Louise Holm Milo, e-mail: milo@oncology.au.dk, tlf. +45 20962648

Assessment committee:

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