

Press release

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Basic information

Name: Maria Wielsøe Email: mwielsoe@ph.au.dk Phone: +45 30423856

Department of: Public Health

Main supervisor: Professor Eva Cecilie Bonefeld-Jørgensen

Title of dissertation: Breast cancer risk in Greenland: Associations with lifestyle and diet, environmental exposures, and genetics

Date for defence: 15th May at (time of day): 10.30 Place: Eduard Biermann Auditorium (Building 1252, room 204), Aarhus University, Bartholins Allé 3, 8000 Aarhus C

Press release (Danish)

Kost, miljøekspóneringer og genetik kan påvirke brystkræftrisikoen i Grønland

Risiko for udvikling af brystkræft i Grønland er fokus i et nyt ph.d.-projekt fra Aarhus Universitet, Health. Projektet er gennemført af Maria Wielsøe, der forsvarer det d. 15/5 2018

Brystkræft er den hyppigst forekommende kræftform blandt kvinder. I Grønland har forekomsten tidligere været lav, men siden 1970'erne er der observeret en betydelig stigning. Igennem de sidste 10 år har der været en årlig stigning på 4 % i Grønland, hvorimod der i samme periode er set et fald i Danmark (-0,3%), Island (-0,8%) og på Færøerne (-2,1%).

Ph.d. studiet undersøgte om kost, eksponering til miljøkemikalier samt genetiske faktorer påvirker risikoen for at udvikle brystkræft hos grønlandske Inuit kvinder.

Flere faktorer viste sig at påvirke brystkræftrisikoen. Et højt indtag af frugt og grønsager havde en gunstig effekt og reducerede risikoen signifikant. Derimod havde eksponering til miljøkemikalier en negativ effekt, idet kvinder med høje blodniveauer af miljøkemikalier havde en øget brystkræftrisiko. Disse miljøkemikalier har hormonforstyrrende potentiale som kan være en faktor i den observerede øgede risiko for brystkræft.

Flere variationer i gener involveret i hormonsyntese og udskillelsen af miljøkemikalier blev studeret. En genetisk variation i genet CYP17A1 (-34T>C), involveret i hormonsyntese, var relateret til risikoen for brystkræft. Endvidere blev der observeret tydelig sammenhæng mellem en variation i det såkaldte "brystkræft gen" BRCA1 (Cys39Gly) og brystkræft.

Forsvaret af ph.d.-projektet er offentligt og finder sted den 15/5 2018 kl 10.30 i Eduard Biermann Auditorium (Bygning 1252, lokale 204), Aarhus Universitet, Bartholins Allé 3, 8000 Aarhus C. Titlen på projektet er "Breast cancer risk in Greenland: Associations with lifestyle and diet, environmental exposures, and genetics".

Yderligere oplysninger: Ph.d.-studerende Maria Wielsøe, e-mail: mwielsoe@ph.au.dk, tlf. +45 30423856.

Bedømmelsesudvalg:

Professor Kim Overvad (Formand), Institut for Folkesundhed, Aarhus Universitet, Danmark
Associate Professor Caroline Diorio, Département de Médecine Sociale et Préventive, Université Laval, Canada

Research Professor Arja Rautio, Thule Institute, University of Oulu, Finland

Press release (English)

Diet, environmental exposure and genetic can influence breast cancer risk in Greenland.

Risk factors for breast cancer development in Greenland were studied in a new ph.d. project from Aarhus University, Health. The project was carried out by Maria Wielsøe, who is defending her dissertation on 15/5-2018.

Breast cancer is the most common cancer among women. In Greenland, the incidence has previously been low, but since the 1970s a significant increase has been observed. Over the last 10 years there has been an annual increase of 4% in Greenland, while in the same period a decline were seen in Denmark (-0.3%), Iceland (-0.8%) and on the Faroe Islands (-2.1%). The ph.d project studied how diet, exposure to environmental chemicals and genetic factors affect the risk of developing breast cancer in Greenlandic Inuit women.

The breast cancer risk was influenced by several factors. High intake of fruits and vegetables was beneficial and reduced the risk significantly. In contrast, exposure to environmental chemicals increase breast cancer risk, women with high blood levels having highest risk. These environmental chemicals have an endocrine disrupting potential, which may be a factor in the observed increased risk.

Several variations in genes involved in hormone synthesis and elimination of environmental chemicals were studied. A genetic variation in CYP17A1 (-34T>C), involved in hormone synthesis, was associated with breast cancer risk. . Moreover, a variation in the “breast cancer gene” BRCA1 (Cys39Gly) were observed to increase the breast cancer risk significantly.. .

The defence is public and takes place on 15/05 at 10.30 in the Eduard Biermann Auditorium (Building 1252, room 204), Aarhus University, Bartholins Allé 3, 8000 Aarhus C.

The title of the project is “Breast cancer risk in Greenland: Associations with lifestyle and diet, environmental exposures, and genetics”. For more information, please contact PhD student Maria Wielsøe, email: mwielsoe@ph.au.dk, Phone +45 30423856.

Assessment committee:

Professor Kim Overvad (Chairman), Department of Public Health, Aarhus University, Denmark
Associate Professor Caroline Diorio, Département de Médecine Sociale et Préventive, Université Laval, Canada
Research Professor Arja Rautio, Thule Institute, University of Oulu, Finland

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