AARHUS UNIVERSITY

Press release

Please fill in this form and return it to graduateschoolhealth@au.dk in Word format no later than three weeks prior to your defence.

Basic information

Name: Johanne Andersen Højbjerg Email: johanand@rm.dk Phone: 24915958

Department of: Clinical Medicine

Main supervisor: Boe Sandahl Sørensen

Title of dissertation: "Circulating tumour DNA and microRNA in lung cancer"

Date for defence: June 20 2019 at (time of day): 14.00 Place: Hjertesygdommes konferencelokale; Indgang F, krydspunkt F203

Press release (Danish)

I et nyt ph.d.-projekt fra Aarhus Universitet, Health, undersøges cirkulerende biomarkører ved lungekræft.

Lungecancer er, på trods af forbedrede behandlingsmuligheder, fortsat den mest dødelige cancer i verden. Dette kan forhåbentlig ændres ved at optimere udvælgelsen af patienter, forbedre sygdomsmonitorering, overvinde resistens og ultimativt finde nye molekylære behandlingsmål. Disse fremskridt kan langt hen ad vejen opnås ved hjælp af liquid biopsies. Ved hjælp af liquid biopsies er det muligt at få genetisk information om onkogene drivere, cancer aktivitet, resistens mekanismer og forhåbentlig også finde nye mål for behandling.
I denne afhandling har jeg fokuseret på validiteten af liquid biopsies samt udvikling af nye prædiktive markører med det formål at forbedre udvælgelsen af patienter.
Vores undersøgelser har optimeret kvaliteten af liquid biopsies og dermed forbedret udvælgelsen af patienter ved at validere EGFR-mutationstesten samt ved at identificere en ny prædiktiv markør. Vi har forøget vores viden om ctDNA og har derved forbedret mulighederne for monitorering ved hjælp af ctDNA. Og afslutningsvis har vi peget påspecifikke microRNA´er som potentielle fremtidige behandlingsmål i kampen mod resistens.

Forsvaret af ph.d.-projektet er offentligt og finder sted den 20/06/2019 kl. 14 i Hjertesygdommes konferencelokale, Aarhus Universitethospital,Palle Juul-Jensens Boulevard 99, 8200 Aarhus N. Yderligere oplysninger: Ph.d.-studerende Johanne Andersen Højbjerg, e-mail: johanand@rm.dk tlf. 24915958.

Bedømmelsesudvalg:

Professor Hans Jürgen Hoffmann - chairman
Lungemedicinsk afdeling, Aarhus Universitetshospital, Danmark

Professor, MD, PhD, Senior Consultant, Åslaug Helland
Department of Cancer Genetics, Institute for Cancer Research, Oslo Universitetshopital, Norge

Associate professor, MD, PhD, Senior Consultant, Eric Santoni Rugiu
Patologisk Afdeling, Rigshospitalet, København Universitet, Danmark

Press release (English)
Despite improved treatment options, lung cancer remains to be the leading cause of cancer related deaths worldwide. This distressing fact could hopefully be changed by refining

patient selection, improving disease monitoring, converting resistance and ultimately by discovering new targetable molecular alterations. These advances can to a great extend be achieved through liquid biopsies. Liquid biopsies contain genetic information on oncogenic drivers, cancer activity, resistance mechanisms and hopefully new molecular targets.
In this thesis I have focused on the validity of liquid biopsies and the development of a predictive markers to improve patient selection.
Our studies have refined the quality of liquid biopsies leading to improvement of patient selection by validating the EGFR mutation test and by identifying a new predictive marker. Furthermore, we have optimised the monitoring potential of ctDNA by describing the biological variation and finally we have suggested specific microRNAs as possible new treatment targets to overcome EGFR-TKI resistance.

The defence is public and takes place on 20/06/2019 at in the conference room at the department of cardiology, Aarhus University Hospital,Palle Juul-Jensens Boulevard 99, 8200 Aarhus N. For more information, please contact PhD student Johanne Andersen Højbjerg, email: johanand@rm.dk, Phone +45 24915958

Assessment committee:

Professor Hans Jürgen Hoffmann - chairman
Lungemedicinsk afdeling, Aarhus Universitetshospital, Danmark

Professor, MD, PhD, Senior Consultant, Åslaug Helland
Department of Cancer Genetics, Institute for Cancer Research, Oslo Universitetshopital, Norge

Associate professor, MD, PhD, Senior Consultant, Eric Santoni Rugiu
Patologisk Afdeling, Rigshospitalet, København Universitet, Danmark

Permission

By sending in this form:

- I hereby grant permission to publish the above Danish and English press releases.
- I confirm that I have been informed that any applicable inventions shall be treated confidentially and shall under no circumstances whatsoever be published, presented or mentioned prior to submission of a patent application, and that I have an obligation to inform my head of department and the university's Patents Committee if I believe I have made an invention in connection with my work. I also confirm that I am not aware that publication violates any other possible holders of a copyright.