AARHUS UNIVERSITY

Press release

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Basic information

Name: Anita Tranberg Simonsen Email: asimonsen@clin.au.dk Phone: +45 24666002

Department of: Clinical Medicine

Main supervisor: Hans Beier Ommen, MD, PhD, Clinical Associate Professor
Department of Hematology, Aarhus University Hospital

Title of dissertation: "Evolution of Subclonal Leukemic Populations During and After Therapy in Myelodysplastic Syndrome and Acute Myeloid Leukemia"

Date for defence: August 22nd, 2019 at (time of day): 14:00 Place: Auditorium A, entrance G, Aarhus University Hospital, Palle Juul-Jensens Boulevard 99, 8200 Aarhus N

Press release (Danish)

"Leukæmiske Subpopulationers Udvikling i Patienter med Myelodysplastisk Syndrom og Akut Myeloid Leukæmi Under og Efter Behandling"

I et nyt ph.d.-projekt undersøges hvordan sjældne cellepopulationers klonale heterogenitet påvirker sygdomsforløbet i patienter med myelodysplastisk syndrom (MDS) og akut myeloid leukæmi (AML). Projektet er fra Aarhus Universitet, Health og gennemført af cand. scient. Anita Tranberg Simonsen, der forsvarer d. 22. august 2019.

Patienter med myelodysplastisk syndrom og akut myeloid leukæmi præsenterer ofte en heterogen molekylær profil ved diagnose. Progression af disse sygdomme sker ofte som en tilkomst af nye genetiske abnormaliteter og sammensætningen af disse genetiske forandringer i subkloner påvirker påvirker patienternes sygdomsforløb og mulige behandlingsmuligheder. I denne ph.d. undersøges disse subkloners udvikling med omfattende sekventering på isolerede cellepopulationer. Projektet er delt op i tre studier, hvoraf det første er et metodologisk studie, som tager udgangspunkt i exom sekventering på meget sparsomt cellemateriale. Dernæst studeres progression fra MDS til sekundær AML i håb om at finde en subklon af celler, der potentielt set ville kunne drage nytte af targeteret behandling og til sidst undersøges den klonale kompleksitet i AML patienter med et mangelfuldt respons på kemoterapi.

Forsvaret af ph.d.-projektet er offentligt og finder sted den 22. august 2019 kl. 14 i Auditorium A (Indgang G), Aarhus Universitetshospital, Palle Juul-Jensens Boulevard 99, 8200 Aarhus N. Titlen på projektet er "Evolution of Subclonal Leukemic Populations During and After Therapy in Myelodysplastic Syndrome and Acute Myeloid Leukemia". Yderligere oplysninger: Ph.d.-studerende Anita Tranberg Simonsen, e-mail: asimonsen@clin.au.dk, tlf. 2466 6002.

Bedømmelsesudvalg:
Professor Signe Borgquist, MD, PhD (Formand for bedømmelsesudvalget)
Institut for Klinisk Medicin - Kræftafdelingen, Aarhus Universitet/Aarhus Universitetshospital, Danmark

Speciallæge Richard James Dillon, BA, MBBS, MRCP, FRCPath, PhD
Department of Medical and Molecular Genetics, King's College and
Cancer genetics lab, Guy's Hospital London, England

Molekylærbiolog Niels Pallisgaard, MSc
Patologisk Afdeling, Sjællands Universitetshospital, Denmark

Press release (English)

“Evolution of Subclonal Leukemic Populations During and After Therapy in Myelodysplastic Syndrome and Acute Myeloid Leukemia”

In this PhD project, the clonal evolution in rare cell populations was investigated in patients with myelodysplastic syndrome (MDS) and acute myeloid leukemia (AML) in order to explore their impact on disease progression. The project was carried out by Anita Tranberg Simonsen, MSc, who is defending her dissertation on August 22nd 2019.

Patients diagnosed with either MDS or AML often present with a very heterogeneous molecular profile at time of diagnosis. The progression of these diseases have been shown to happen through an accumulation of genetic aberrations. The composition of such aberrations in subclones seem to affect the disease course and treatment possibilities. During this PhD the development of subclones was investigated using high throughput sequencing on fractionated cell populations. The project was divided into three sections; first, a methodological study focusing on exome sequencing on sparse material. Second, the progression of MDS to secondary AML was investigated in order to identify specific cell subsets targetable for therapy and finally, the clonal complexity in AML patients with an incomplete response to therapy is explored.

The defense is public and takes place on August 22nd 2019 at Auditorium A, Entrance G at Aarhus University Hospital, Palle Juul-Jensens Boulevard 99, 8200 Aarhus N. The title of the project is "Evolution of Subclonal Leukemic Populations During and After Therapy in Myelodysplastic Syndrome and Acute Myeloid Leukemia". For more information, please contact PhD student Anita Tranberg Simonsen, email: asimonsen@clin.au.dk, Phone +45 2466 6002.

Assessment committee:
Professor Signe Borgquist, MD, PhD (Chairman)
Department of Oncology, Aarhus University/Aarhus University Hospital, Denmark

Consultant Richard James Dillon, BA, MBBS, MRCP, FRCPath, PhD
Department of Medical and Molecular Genetics, King’s College and
Cancer genetics lab, Guy's Hospital London, England

Molecular Biologist Niels Pallisgaard, MSc
Department of Pathology, Zealand University Hospital, Denmark

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