

Lung cancer in frail older patients

We aim to investigate the impact of Comprehensive Geriatric Assessment (GCA)-linked intervention and implementation of an interdisciplinary collaboration between Dept. of Geriatric and Dept. of Oncology in frail older patients with lung cancer.

Ongoing studies:

Validation study. The G8 screening tool is developed to identify the frail versus the non-frail patients it has shown good screening properties for identifying older patients who could benefit from CGA. However, a modified G8 tool has been developed and, in some studies, shown to be even more precise facilitating selection for full CGA in older patients with cancer. *Aim:* To identify the most sensitive tool to select the geriatric patient with potentially modifiable frailty domains, to direct geriatric resources to frail patients. *Method:* Medical record reviews. Comparing G8 versus modified G8 applied in a prospectively described cohort of 212 patients with lung cancer who underwent CGA.

Proposed studies:

1) Prospective study.

Aim: To examine the impact of CGA versus standard care on time to death and time to need of assisted living. *Method:* Previous prospectively collected CGA data in a cohort of 452 patients diagnosed with lung cancer in Aarhus. *Expected outcome:* Mortality rates, cause of death, admissions and contact to general practitioner in a CGA versus no-CGA cohort.

2) Clinical Randomized controlled intervention, a multi-center pilot-study.

Method: Using the most effective screening tool to identify frail patients and compare CGA-linked intervention with standard care in patients with lung cancer. We expect participation and inclusion of patients in three clinical centers in Denmark: AUH, HEV, and AaUH. *Randomization:* Randomized 1:1 and allocated into either standard treatment or CGA-linked treatment. *Aim:* To investigate the impact of CGA-linked interventions compared to standard care in frail patients with lung cancer identified by the sensitive screening tool found in the validation study. The primary outcome of interest is survival. The secondary outcomes are causes of death, QoL, proportion of patients who suffered from grade 3-5 toxic effect, scheduled oncologic treatment completion, admissions, and contact to general practitioner.

3) Biomarkers in frail patients. Currently, several biomarkers are correlated to frailty. Biomarkers might be an option to optimize patient selection and is easy available as blood sampling is routine procedure in oncology and CGA. The lack of studies regarding biomarkers in frail patient with lung cancer underline the need of further exploration to ease identification of frail patients.

Aim: To investigate biomarkers and the clinical importance in detecting frailty in older patients with lung cancer. *Method:* Blood samples collected in the cohort of patients in study 2 rated frail versus patients rated non-frail. *Expected outcome:* To strengthen the validity and predictive value of biomarkers in order to identify frail patients with lung cancer.

Expected outcome/perspectives: clinical experiences to establish a standard evidence-based onco-geriatric clinic to accommodate the special needs of frail older patients with cancer. Our findings will be presented to other departments of geriatrics and oncology to extrapolate in all of Denmark. We aim to develop a scalable model to make sure the interventions are simply implemented.