Smoking-cessation in newly diagnosed patients with lung cancer: A study of the effect and implementation of a smoking-cessation treatment programme and a qualitative study of patients' and healthcare professionals' attitudes

## Background

Lung cancer is the second most common type of cancer in Denmark, and the disease is characterised by rapid progression with a 5-year survival rate of 12-15%. Patients with lung cancer experience symptoms of breathlessness, pain, fatigue and impaired functioning, and care focuses predominantly on symptom management and quality of life. A considerable proportion of patients with lung cancer continue smoking after diagnosis and throughout the course of the illness, which has been shown to negatively influence quality of life, treatment success (surgery, chemotherapy, radiation,) and survival. Smoking cessation improves quality of life, prognosis, and survival to a similar extent as conventional lung cancer treatment and is therefore considered an essential and highly cost-effective intervention at all times over the course of illness. Therefore, smoking cessation counselling – especially in combination with pharmacological treatment – has an enormous potential to improve relevant outcomes for these patients.

## Δim

The present project aims at implementing and evaluating an already existing smoking cessation treatment programme for newly diagnosed patients with lung cancer. Effects on smoking cessation and quality of life will be explored in a randomised controlled nationwide study, and patients' and healthcare professionals' attitudes towards and experiences with smoking cessation will be explored in an interview-based study.

## Methods

Individuals with a newly diagnosed lung cancer from the 5 participating diagnostic lung cancer units (Aarhus, Aalborg, Vejle, Odense, and Næstved) will be invited to take part in the present study. We expect to include a total of 500 patients, who will be randomly allocated to either the intervention group, receiving a nurse-delivered brief smoking cessation counselling programme + pharmacological smoking cessation treatment in addition to standard care, or the control group, receiving standard care. All participants will complete questionnaires before and after the intervention, and at 3, 6 and 12 months follow-up, and we expect to observe a larger proportion of non-smokers with lower smoking addicting levels and higher quality of life levels in the intervention group after the smoking cessation treatment programme, compared to participants in the control group. Furthermore, a random subsample of participants in the intervention and control arms, as well as a number of employees from each participating unit will be invited to take part in a qualitative study. Here, all participants will take part in an individual 1-hour interview exploring their subjective attitudes towards and/or experiences with smoking cessation with the purpose of gathering information to optimize the implementation of smoking cessation treatment programmes for newly diagnosed patients with lung cancer.

## Perspectives

Despite smoking cessation being one of the most cost-effective interventions for improvement of quality of life for patients with lung cancer, smoking cessation treatment is still relatively underprioritised in the Danish healthcare system. One of the primary reasons is thought to be related to healthcare professionals' attitudes towards and experiences with smoking cessation for these patients. This project will provide important knowledge of these attitudes and the effects of implementing a smoking cessation counselling programme together with pharmacologic treatment in patients with newly diagnosed lung cancer.