

Early detection of lung cancer by blood samples

- A prospective national observational study

DETECT-DK

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Background



Lung cancer causes the largest number of cancer deaths, and more than half of patients are incurable at diagnosis



CT scans of the lungs have many false positive findings



Tumor DNA have been suggested as a diagnostic biomarker, and sensitivity may be improved by using bronchial lavage instead of plasma

Peter B. Bach et al. Benefits and Harms of CT Screening for Lung Cancer: A Systematic Review. JAMA. 2012 June 13; 307(22): 2418–2429.

Bray F. et al. Global cancer statistics 2018: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries. CA Cancer J Clin. 2018 Nov;68(6):394–424.

Alicia Hulbert et al. Early Detection of Lung Cancer Using DNA Promoter Hypermethylation in Plasma and Sputum. Clin Cancer Res 2017;23:1998-2005.

Objectives

To investigate the diagnostic value of the following markers in lung cancer:



Hypermethylated HOXA9 DNA in plasma and bronchial lavage



Proteins CA125, CEA and CYFRA 21-1 in serum

Endpoints



Primary:

- Initial diagnosis of lung cancer stratified by stage

Secondary:

- Occurrence of lung cancer over a 1-year follow-up period
- Overall survival

Inclusion and exclusion criteria

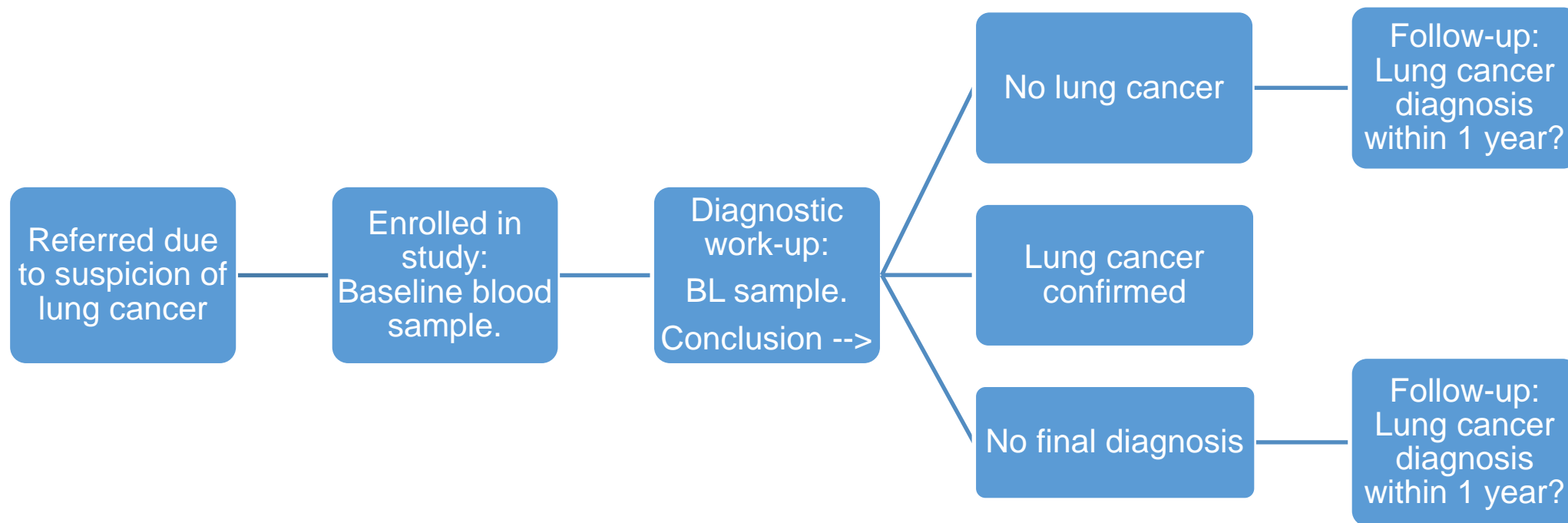
Inclusion:

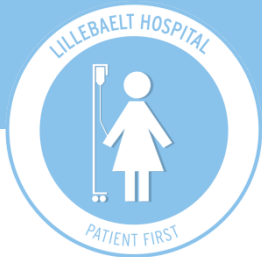
- Patient suspected of having lung cancer and eligible for bronchoscopy.
- Age ≥ 18 years.
- Written and orally informed consent.
- Consent to translational research and biobank.

Exclusion:

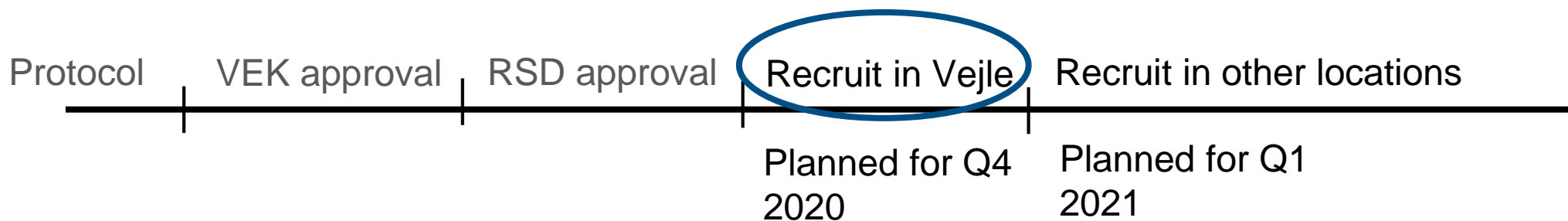
- Previous lung cancer diagnosis.
- Other malignant disease within 5 years prior to study enrolment, except non-melanoma skin cancer and carcinoma in situ cervicis uteri.
- Severe comorbidity making the patient unable to complete the planned follow-up period.

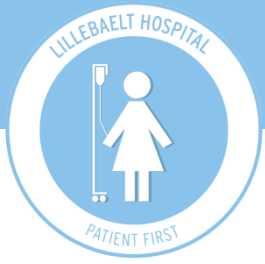
Patient flow chart





Current status





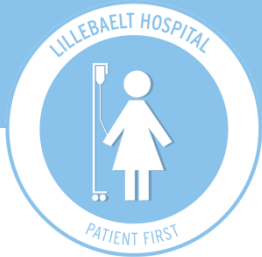
Project future



Initiate the project in Vejle and further test the method for analyzing HOXA9 in bronchial lavage



Initiate enrolment of patients in other locations (and enroll 500 patients)



Thank you for your attention

I hope your department wants to participate

Kontaktperson:

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