

Skånsom diagnostik af lungeinfiltrater

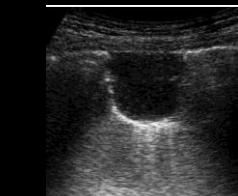
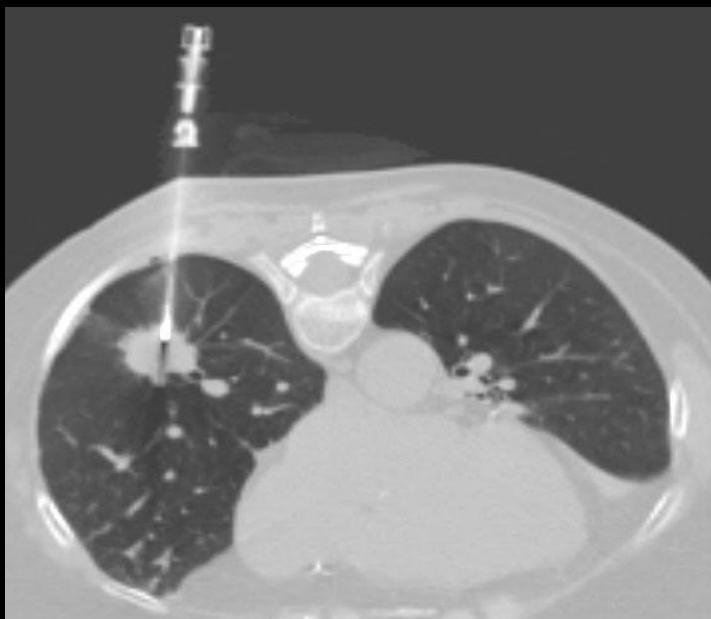
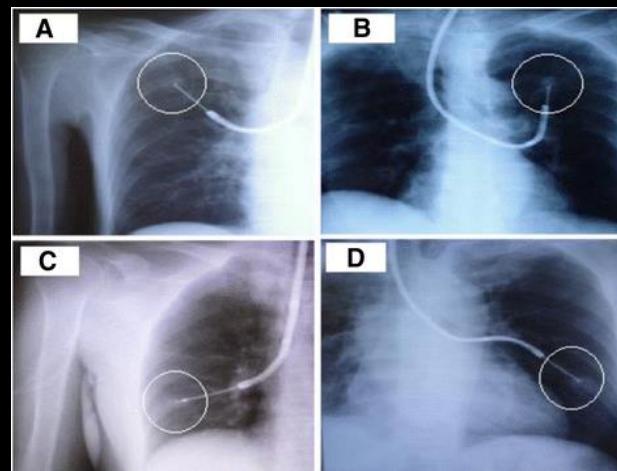


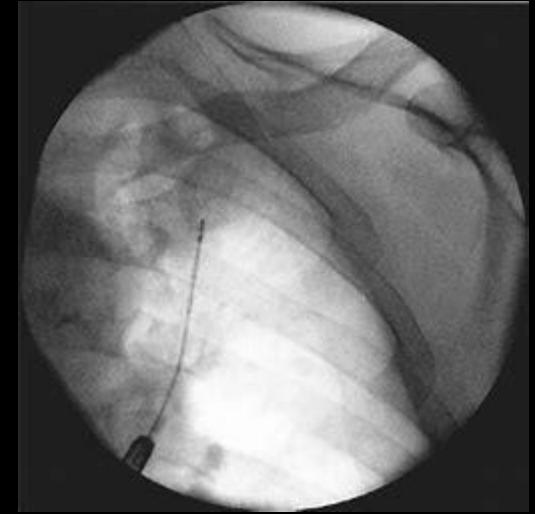
Stigende udfordring



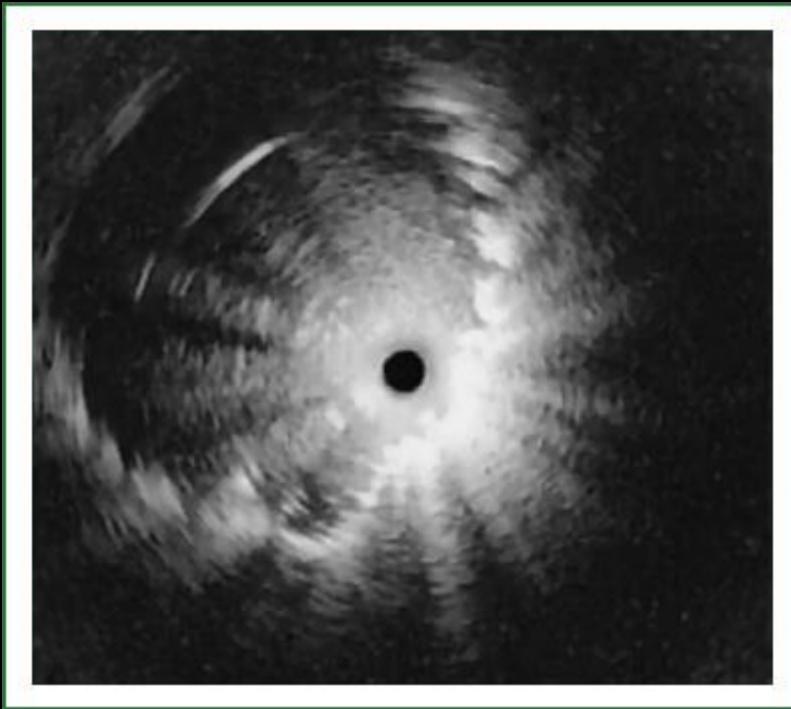
Hvor skal vi hen du?!







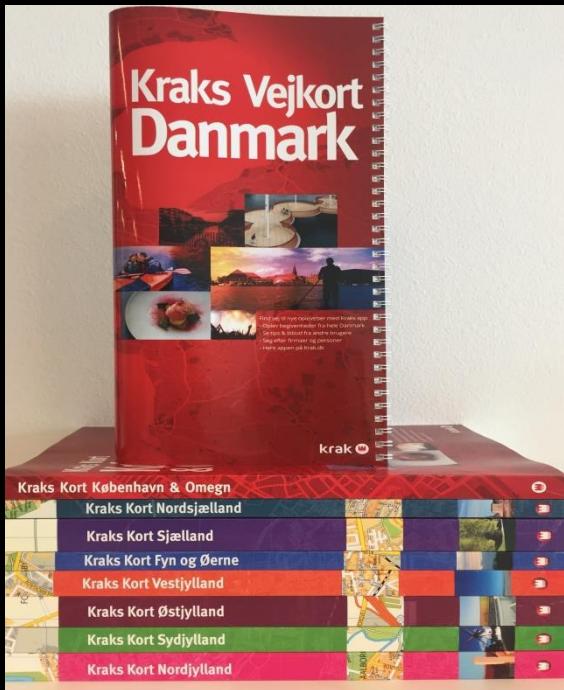
Radial EBUS



ENB



Krak vejkort



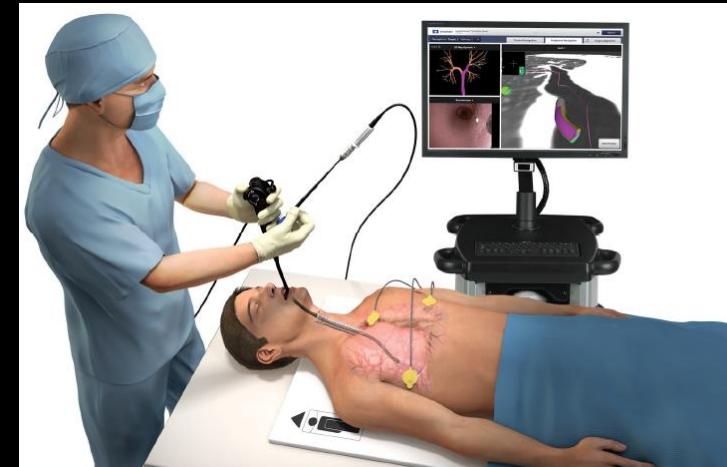
Pokemon Go



GPS



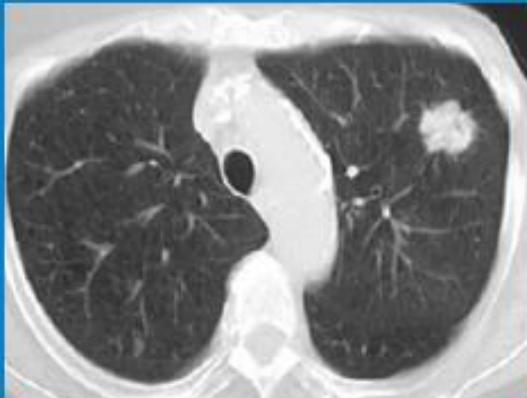
Elektromagnetisk navigation?



Arbejdsflow

CT Scan

- DICOM data



Plan

- Create a plan for the ENB procedure

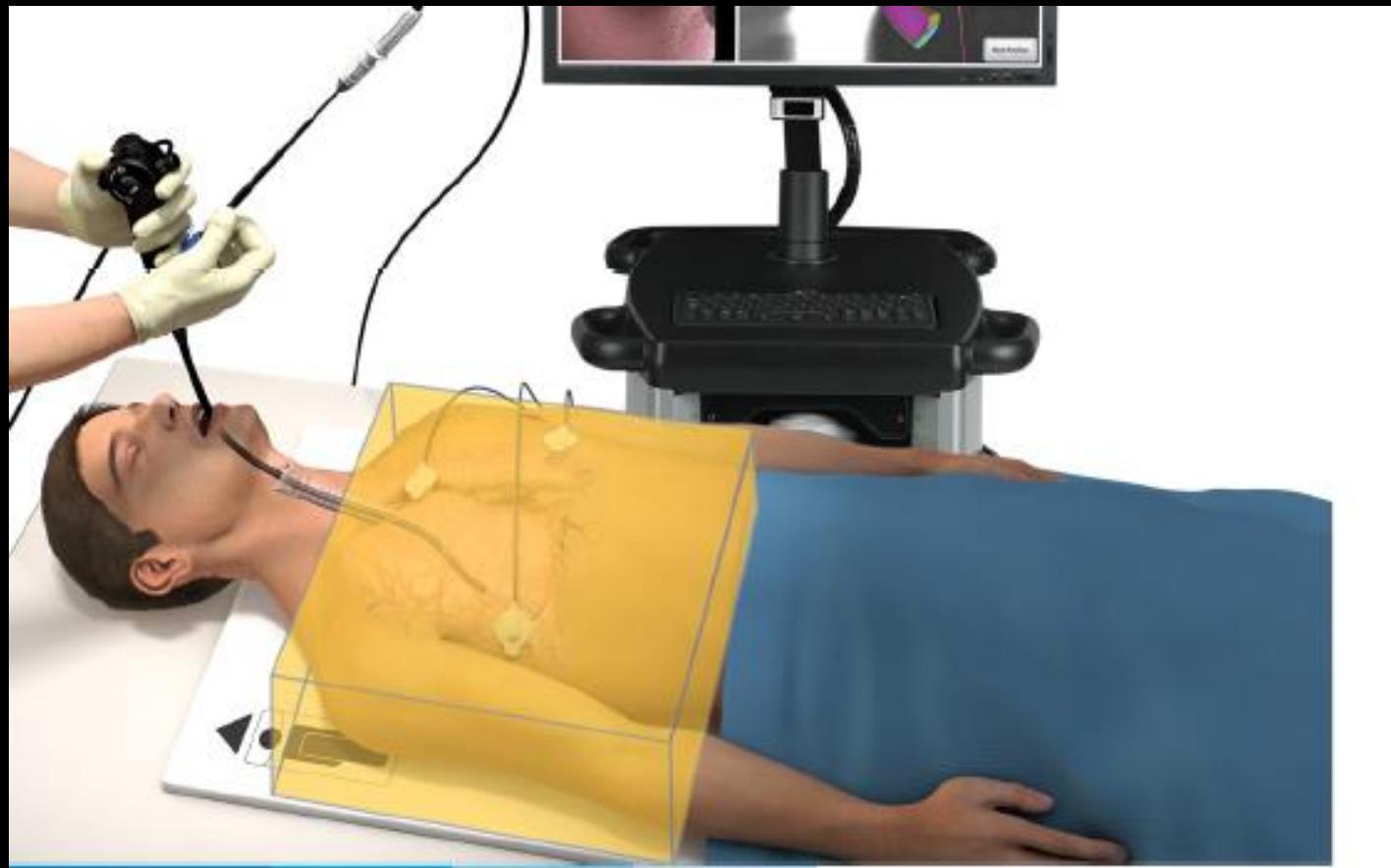


Navigate

- Sample
- Localize



Magnetisk felt





PERIPHERAL NAVIGATION TAB

COVIDIEN superDimension™ Navigation System
Procedure

Navigate to: Target_1 Pathway_1

Central Navigation Peripheral Navigation Target Alignment

3D Map Dynamic

Toolbox

Bronchoscope

Local

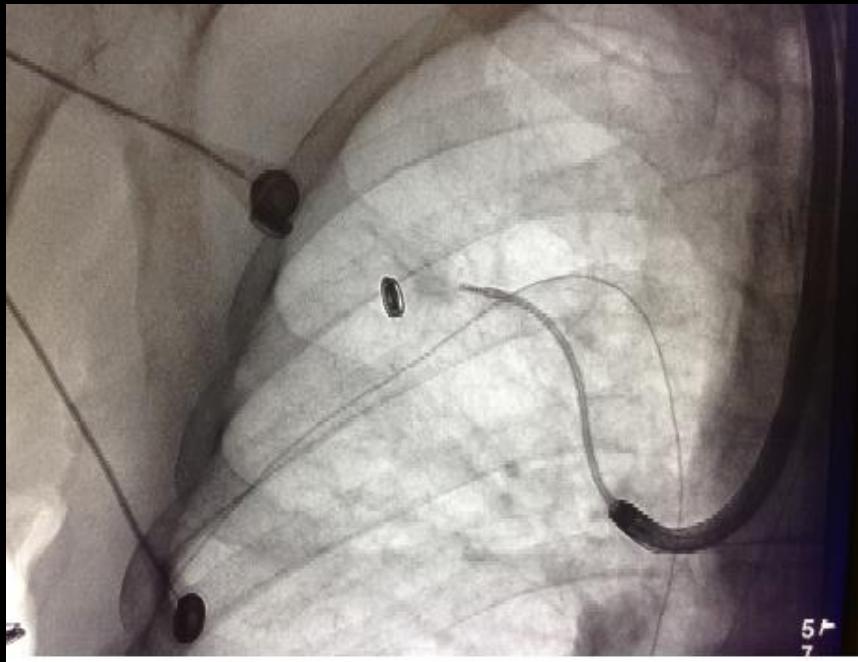
Target dist 9.1 cm

Mark Position

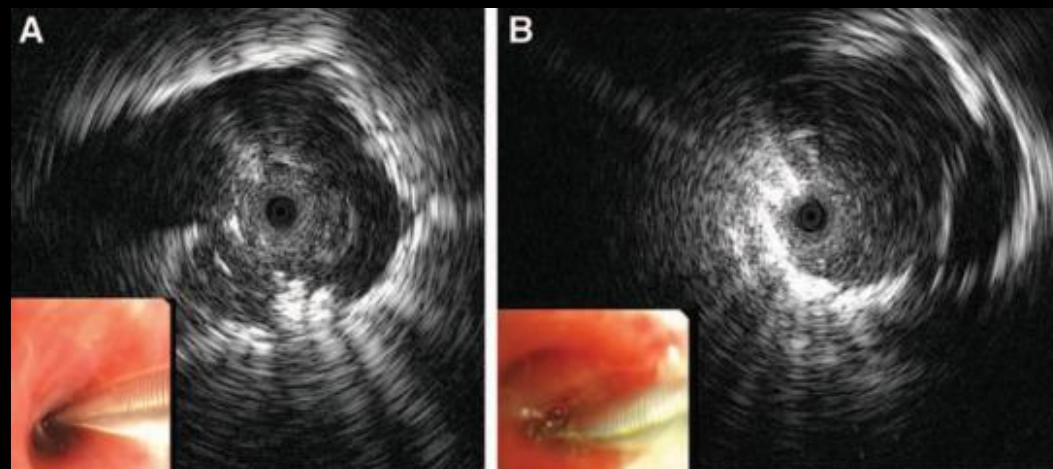
Network status: Connected User: suser

10-Mar-2015 12:51:43 PM

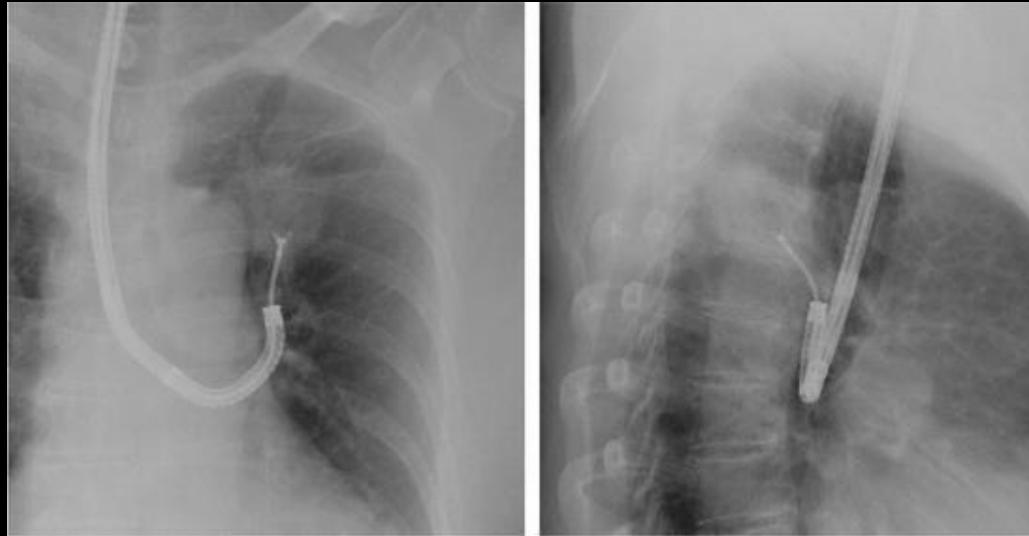
The image shows a screenshot of the superDimension™ Navigation System software. The interface includes a top menu bar with the COVIDIEN logo, system name, and procedure information. Below the menu is a navigation bar with tabs for Central Navigation, Peripheral Navigation, and Target Alignment. The main window is divided into three panels: '3D Map Dynamic' (top left), 'Bronchoscope' (bottom left), and 'Local' (right). The '3D Map Dynamic' panel shows a 3D reconstruction of airways with a magenta pathway highlighted. The 'Bronchoscope' panel shows a close-up view of a bronchoscope tip. The 'Local' panel displays a grayscale CT scan of a lung with a magenta line indicating a target pathway and a green sphere marking a position. A green box in the 'Local' panel indicates a target distance of 9.1 cm. A 'Mark Position' button is located in the bottom right corner of the 'Local' panel. The bottom of the screen shows network status and user information, along with a timestamp.



Radial EBUS



Biopsitagning



Multimodality Bronchoscopic Diagnosis of Peripheral Lung Lesions

A Randomized Controlled Trial

Ralf Eberhardt¹, Devanand Anantham², Armin Ernst², David Feller-Kopman², and Felix Herth¹

¹Department of Pneumology and Critical Care Medicine, Thoraxklinik, University of Heidelberg, Heidelberg, Germany; and ²Interventional Pulmonology, Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, Massachusetts

Am J Respir Crit Care Med Vol 176. pp 36–41, 2007

118 patients (cancer prevalence 78%)

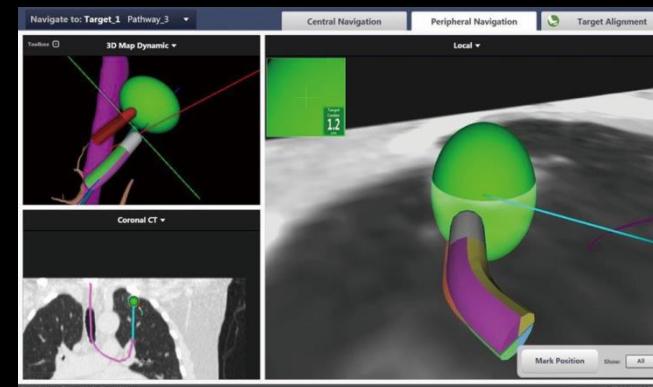
Diagnosis: 85 (72%) positive diagnosis
33 surgical resections

Mean lesion size: 26 ± 6 mm

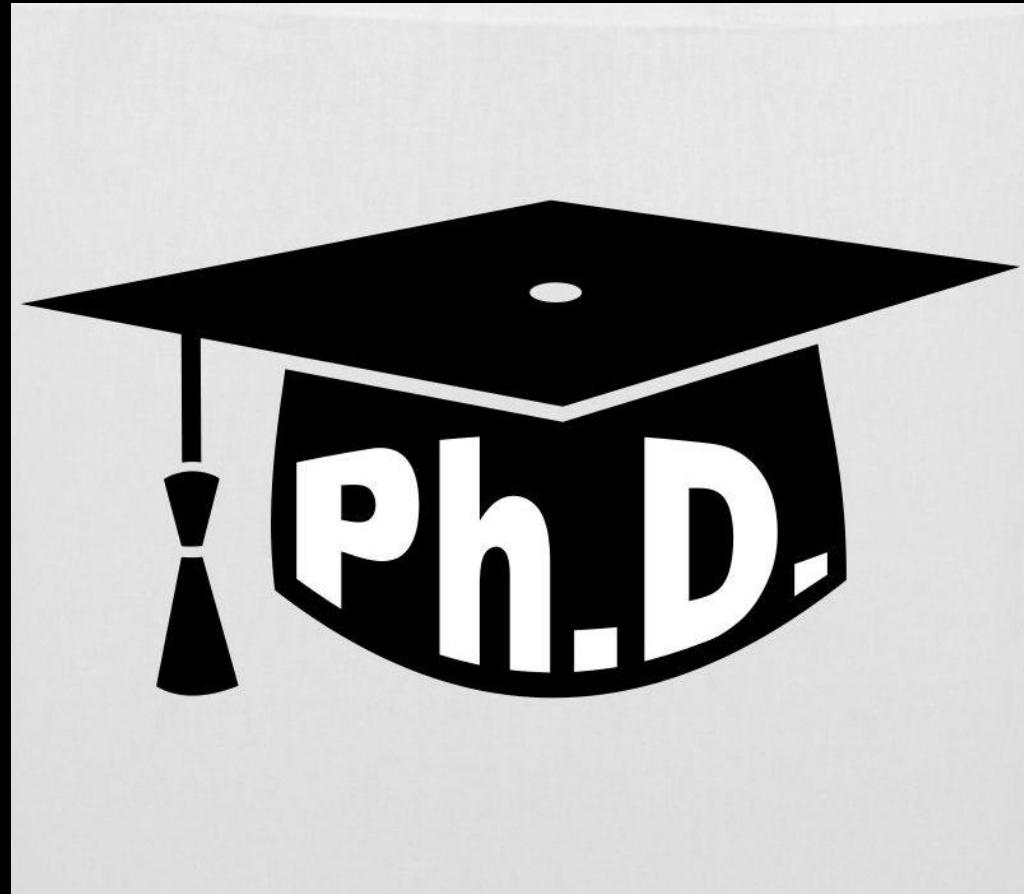
Diagnostic yield:

- rEBUS: 69%
- ENB: 59%
- ENB + rEBUS: 88%

$P=0.02$



The efficacy of combining endoscopic modalities for the diagnosis of solitary pulmonary lesions

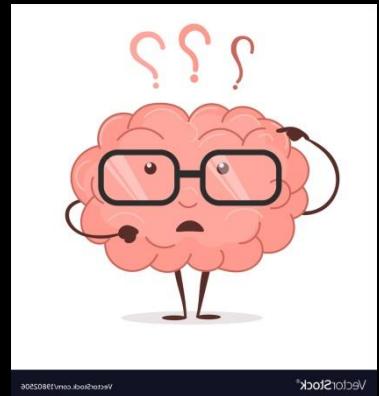


Hypoteser



- Some studies suggest that the combination of the modalities regarding rEBUS, ENB and fluoroscopy can improve the diagnostic yield when performing bronchoscopy
- The diagnostic yield of ENB in combination with rEBUS is not superior to ENB alone in patients with peripheral lung lesions or solitary lung nodules (null hypothesis)
- The obtaining of histological biopsies of the lung lesions alone to establish a diagnose is not inferior to the combination of obtaining both histological biopsies and cytological samples (brush biopsies and bronchial washing) for the diagnose

Research questions



- 1) What is the current evidence regarding the multimodal endoscopic approach of combining rEBUS and ENB in the diagnoses of solitary lung lesions?
- 2) Is the diagnostic yield of ENB in combination with rEBUS superior to ENB alone in diagnosing lung lesions
- 3) Is the diagnostic yield of obtaining only histological biopsies as adequate as the combination of obtaining both histological biopsies and cytological samples (brush biopsies and bronchial washing) for the diagnose

Studies

- 1) What is the current evidence regarding the multimodal endoscopic approach of combining rEBUS and ENB in the diagnoses of solitary lunge lesions?
 1. Study I: A systematic review
- 2) Is the diagnostic yield of ENB in combination with rEBUS superior to ENB alone in diagnosing lung lesions
 2. Study II: A multicentre, randomised, non-blinded clinical trial - **Navigation EndoBronchial ULtrAsound (NEBULA)**
- 3) Is the diagnostic yield of obtaining only histological biopsies as adequate as the combination of obtaining both histological biopsies and cytological samples (brush biopsies and bronchial washing) for the diagnose
 3. Study III: A multicentre, randomised, non-blinded clinical trial - **CChoice of SAMPLing (CHAMP)**

Multicenter studier

- Department of Respiratory Medicine, Aarhus University Hospital
- Department of Medicine, Vejle, Littlebelt Hospital
- Department of Medicine, Roskilde University Hospital
- Department of Respiratory Medicine, Odense University Hospital
- Academic Medical Center (AMC), Amsterdam

Perspektiver

- Bør en multimodal endoskopisk tilgang anbefales, for at øge den diagnostiske hitrate?
- Bør en multimodal endoskopisk tilgang være førstevalg grundet skånsom diagnostik?
- Valg af samplingsmetoder? Histologi og cytologi eller er histologi sufficient?