

# DANSKE KRÆFTFORSKNINGS DAGE 2022

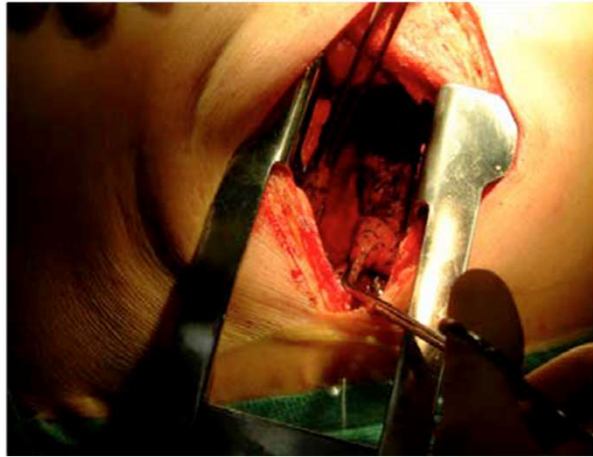
## *Udvikling af minimal invasive lungebesparende kirurgi til lungecancer*



*René Horsleben Petersen  
Professor, overlæge, Ph.D.  
Thoraxkirurgi, Rigshospitalet*

#DKD2022  
#SamarbejdeOmKræft

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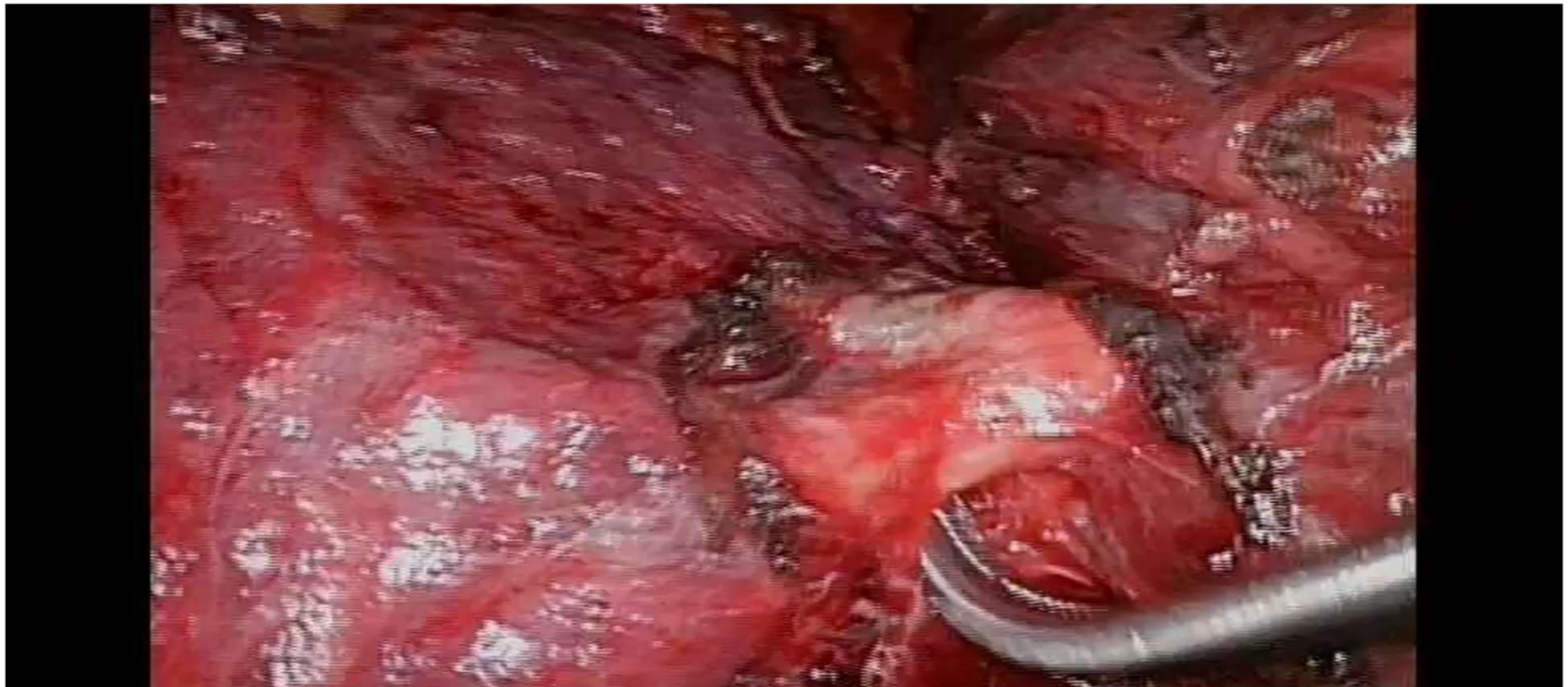


**Thoracotomy**

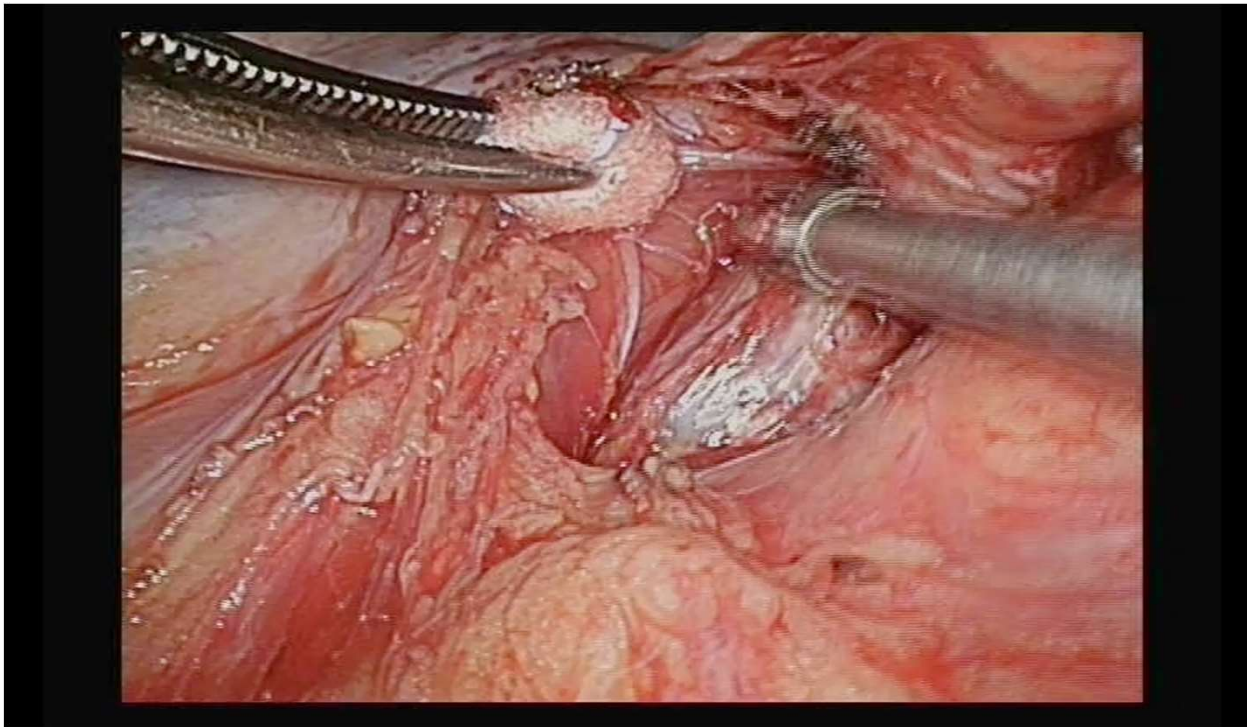
**VATS**



# Concerns



# Systematic lymph node dissection



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## Postoperative pain and quality of life after lobectomy via video-assisted thoracoscopic surgery or anterolateral thoracotomy for early stage lung cancer: a randomised controlled trial



Morten Bendixen, Ole Dan Jørgensen, Christian Kronborg, Claus Andersen, Peter Ejlert Licht

**Interpretation** VATS is associated with less postoperative pain and better quality of life than is anterolateral thoracotomy for the first year after surgery, suggesting that VATS should be the preferred surgical approach for lobectomy in stage I non-small-cell lung cancer.

Lancet Oncol 2016

Published Online

May 6, 2016

[http://dx.doi.org/10.1016/](http://dx.doi.org/10.1016/S1473-2045(16)00173-X)

[S1473-2045\(16\)00173-X](http://dx.doi.org/10.1016/S1473-2045(16)00173-X)

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Anaesthesia (C Andersen PhD),

Odense University Hospital,

Odense, Denmark; and Centre

of Health Economics Research

(COHERE) (C Kronborg PhD) and

Odense Patient data

Explorative Network (OPEN)

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ORIGINAL ARTICLE

Vid  
in E

Eric Lim,  
Michael  
Elizabeth  
Rosie A.  
Alba Rea  
Sarah W  
on behalf

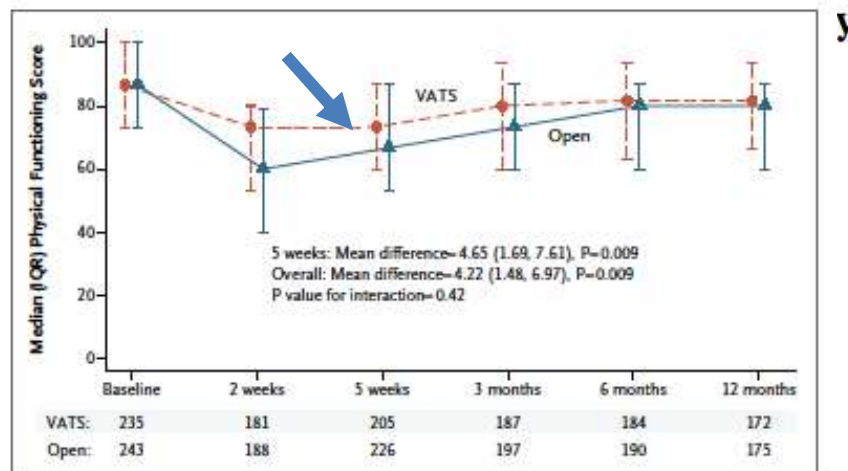


Figure 2. Primary Outcome Measure — QLQ-C30 Physical Functioning.

# Potential advantages of VATS

- Less pain and less analgesia requirement
- Better preservation of pulmonary function
- Better function (6 min. walk, shoulder strength and arm movement)
- Fewer complications
- Less blood loss
- Less immunosuppression
- Faster return to normal activity
- Shorter tube time and in-hospital stay
- Improved tolerance and deliverance of adjuvant chemotherapy

*VATS in Lung Cancer Resection. A Meta-Analysis and Systematic Review of Controlled Trials.  
Cheng et al. Innovations 2007;2: 261-292*

European Journal of Cardio-Thoracic Surgery Advance Access published June 25, 2015

European Journal of Cardio-Thoracic Surgery (2015) 1–6  
doi:10.1093/ejcts/ezv205

ORIGINAL ARTICLE

Cite this article as: Laursen LØ, Petersen RH, Hansen HJ, Jensen TK, Ravn J, Konge L. Video-assisted thoracoscopic surgery lobectomy for lung cancer is associated with a lower 30-day morbidity compared with lobectomy by thoracotomy. *Eur J Cardiothorac Surg* 2015; doi:10.1093/ejcts/ezv205.

## Video-assisted thoracoscopic surgery lobectomy for lung cancer is associated with a lower 30-day morbidity compared with lobectomy by thoracotomy

THORACIC

European Journal of Cardio-Thoracic Surgery 49 (2016) 602–609  
doi:10.1093/ejcts/ezv154 Advance Access publication 26 April 2015

ORIGINAL ARTICLE

Cite this article as: Falcoz P-E, Puyraveau M, Thomas P-A, Decaluwe H, Hürtgen M, Petersen RH *et al.* Video-assisted thoracoscopic surgery versus open lobectomy for primary non-small-cell lung cancer: a propensity-matched analysis of outcome from the European Society of Thoracic Surgeon database. *Eur J Cardiothorac Surg* 2016;49:602–9.

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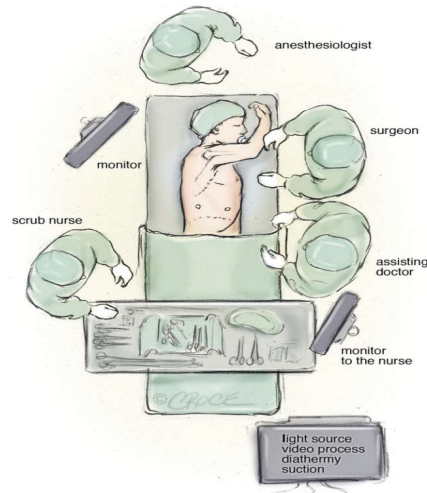
## Video-assisted thoracoscopic surgery versus open lobectomy for primary non-small-cell lung cancer: a propensity-matched analysis of outcome from the European Society of Thoracic Surgeon database<sup>†</sup>

Pierre-Emmanuel Falcoz<sup>a,\*</sup>, Marc Puyraveau<sup>b</sup>, Pascal-Alexandre Thomas<sup>c</sup>, Herbert Decaluwe<sup>d</sup>, Martin Hürtgen<sup>e</sup>, René Horsleben Petersen<sup>f</sup>, Henrik Hansen<sup>f</sup> and Alessandro Brunelli<sup>g</sup> on behalf of the ESTS Database Committee and ESTS Minimally Invasive Interest Group

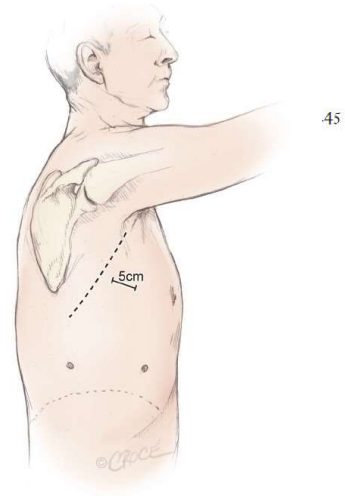


**Video** Art of Operative Techniques  
**a star**

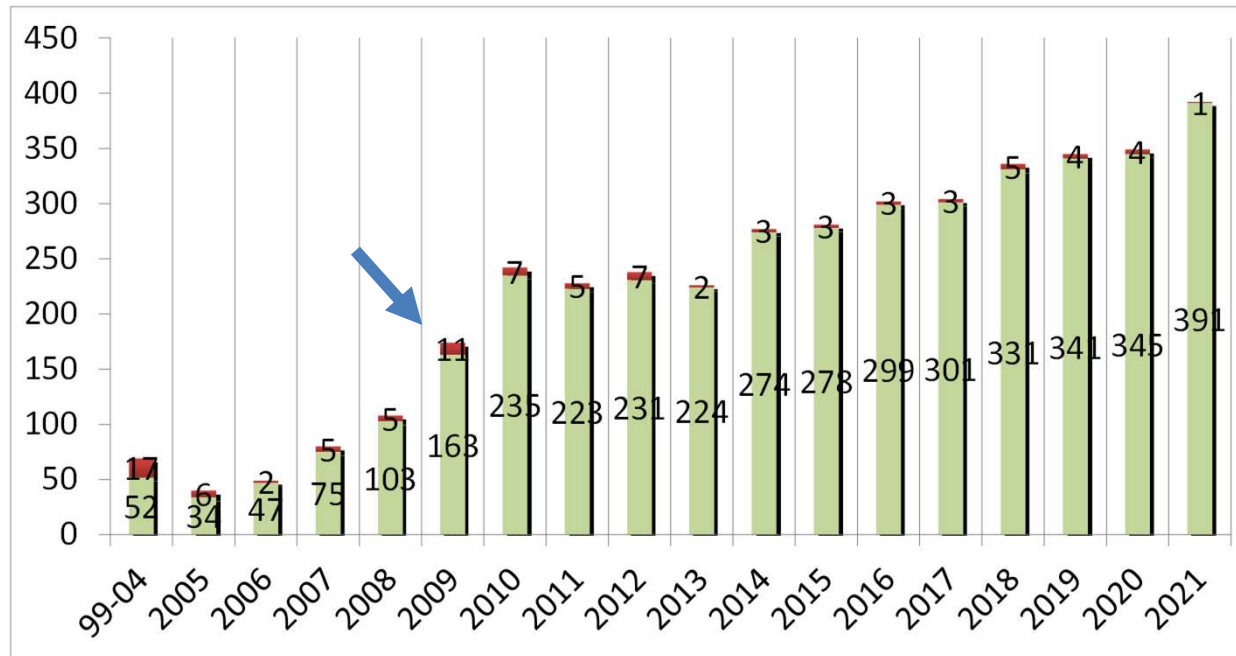
Henrik J Merete C **Video-assisted thoracoscopic lobectomy using a standardized three-port anterior approach - The Copenhagen experience**



Copenhagen University Hospital, Department of Thoracic Surgery 2.15.2, Rigshospitalet, Copenhagen, Denmark.



## VATS Lobectomies Copenhagen 2022



August 8, 2022: 4160 VATS Lobectomies  
 VATS Lobectomy rate 2021: **94.6%**

# DLCR 2021

Afdeling	Antal	Lobektomi		
		I alt	Åben	VATS
Rigshospitalet	433	372	5,4	94,6
Odense	350	281	25,3	74,7
Aarhus	269	232	22,4	77,6
Aalborg	204	158	27,2	72,8
Danmark	1256	1043	17,8	82,2

OXFORD

*BJS Open*, 2022, zrac050

<https://doi.org/10.1093/bjsopen/zrac050>

Original Article

## Reasons for staying in hospital after video-assisted thoracoscopic surgery lobectomy

Lin Huang<sup>1</sup> , Henrik Kehlet<sup>2,\*</sup>  and René Horsleben Petersen<sup>1</sup>

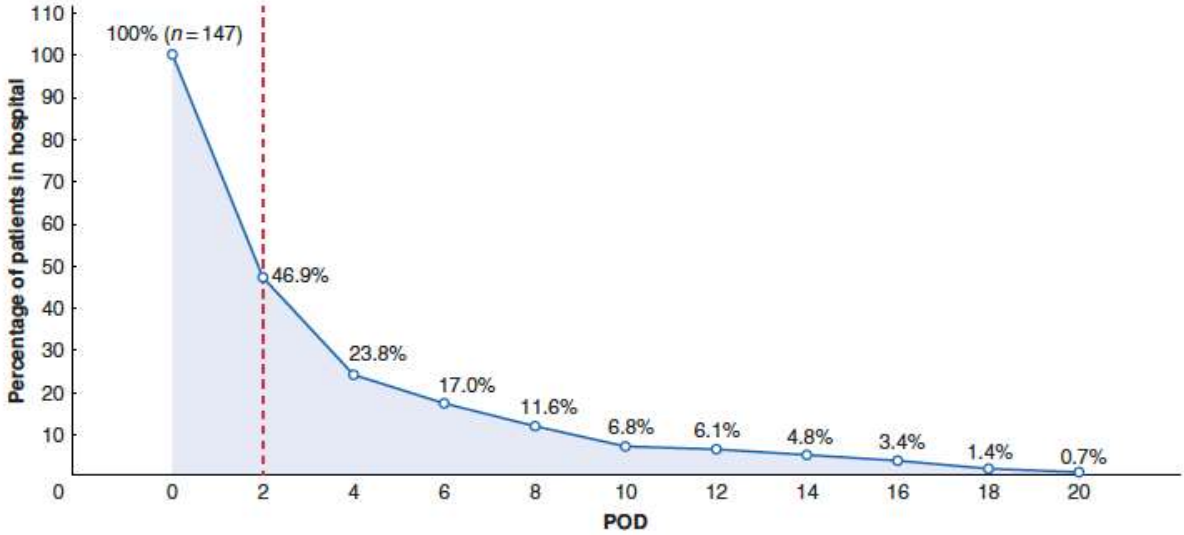
<sup>1</sup>Department of Cardiothoracic Surgery, Copenhagen University Hospital, Rigshospitalet, Copenhagen, Denmark

<sup>2</sup>Section of Surgical Pathophysiology, Copenhagen University Hospital, Rigshospitalet, Copenhagen, Denmark

\*Correspondence to: Henrik Kehlet, Section of Surgical Pathophysiology, 7621, Copenhagen University Hospital, Rigshospitalet, Blegdamsvej 9, 2100 Copenhagen Ø, Denmark (e-mail: henrik.kehlet@regionh.dk)

Single-centre prospective observational cohort study  
147 patients included from April – December 2020

# Median LOS 2 days



**Fig. 2** The percentage of patients in hospital after video-assisted thoracoscopic surgery lobectomy. The dotted line represents the cut-off for dividing participants into with length of hospital stay greater than 2 days or with LOS of 2 days or less. POD, postoperative day.

## Video-Assisted Thoracic Surgery Segmentectomy: The Future of Surgery for Lung Cancer?

Scott J. Swanson, MD

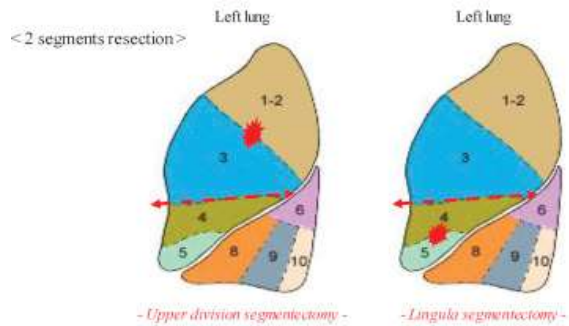
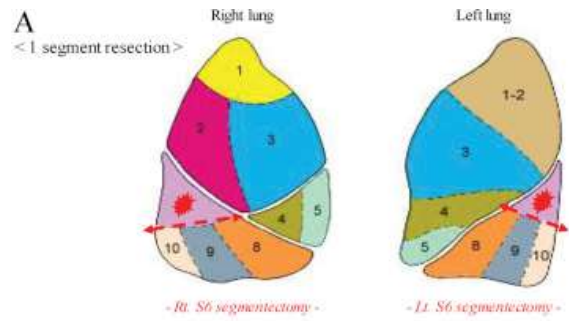
Minimally Invasive Thoracic Surgery, Brigham and Women's Hospital, Boston, Massachusetts

Pulmonary segmentectomy has become a good option for small peripheral non-small cell lung cancers and is currently being evaluated in a large North American randomized study, CALGB-140503 (Cancer and Leukemia Group B-140503). Using a video-assisted thoracic surgical approach to segmentectomy decreases the morbidity and hastens the

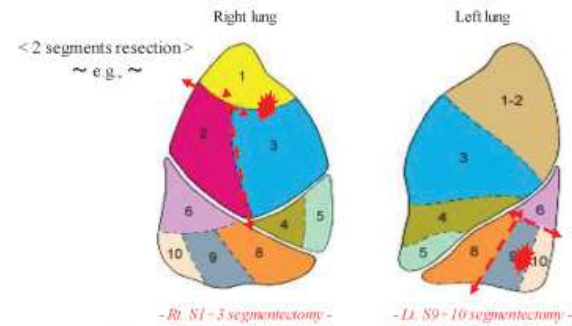
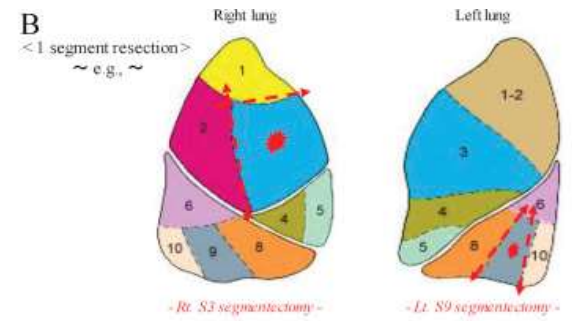
recovery of patients having this operation relative to a thoracotomy. This technique can be easily learned by surgeons who use video-assisted thoracic surgery to perform other operations.

(Ann Thorac Surg 2010;89:S2096-7)

© 2010 by The Society of Thoracic Surgeons



**Simple segmentectomy**  
resection of S6, or left upper division or lingula segment



**Complex segmentectomy**  
segmentectomy other than simple segmentectomy

## VATS segmentectomy utilizing the Copenhagen approach

René Horsleben Petersen, Henrik Jessen Hansen

Department

Correspondence

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Case Report on Thoracic Surgery



Page 1 of 3



## Lower lobe S<sup>7+8</sup> video-assisted thoracoscopic surgery segmentectomy

René I

Case report

Page 1 of 5

Department

Correspondence

Copenhagen

## Left basilar VATS segmentectomy for intra lobar pulmonary sequestration using indocyanine green for identification of the intersegmental plane: a case report

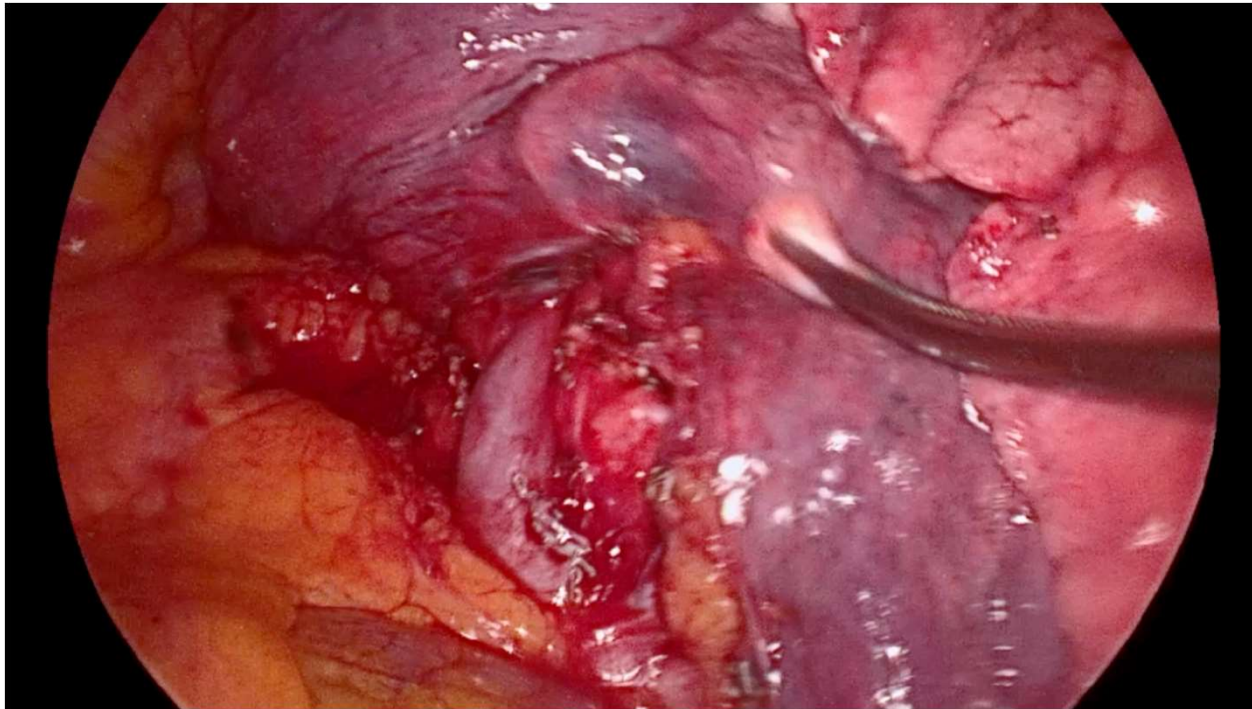
René Horsleben Petersen<sup>^</sup>

Department of Cardiothoracic Surgery, Copenhagen University Hospital, Copenhagen, Denmark

Correspondence to: Professor René Horsleben Petersen, MD, PhD. Department of Cardiothoracic Surgery, Copenhagen University Hospital, Copenhagen, Denmark. Email: rene.horsleben.petersen@regionh.dk.



# Segmentectomy 3 left



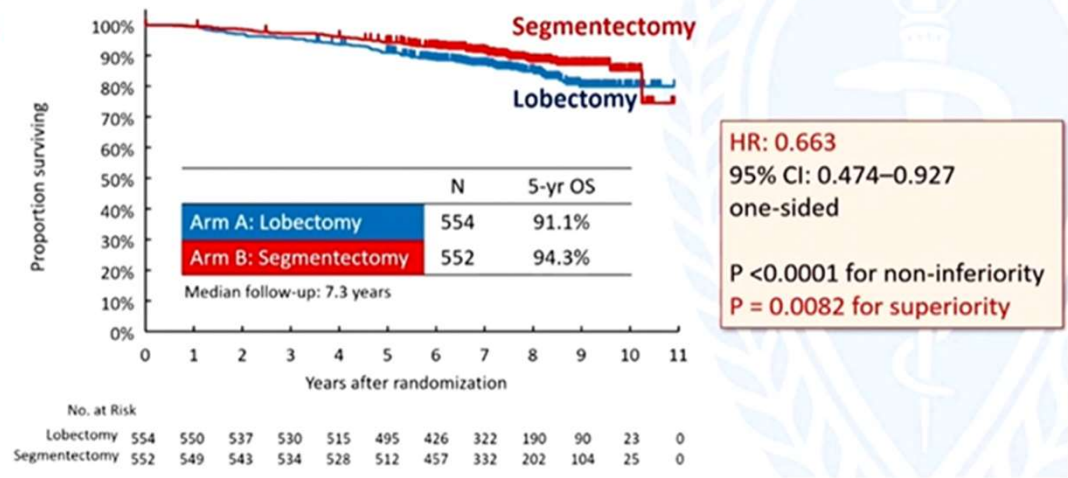
Segmentectomy versus lobectomy in small-sized peripheral non-small-cell lung cancer (JCOG0802/WJOG4607L):



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non

**Result 1. Overall survival (primary endpoint)**

Hisashi Sō  
Norihito C  
Tetsuya N

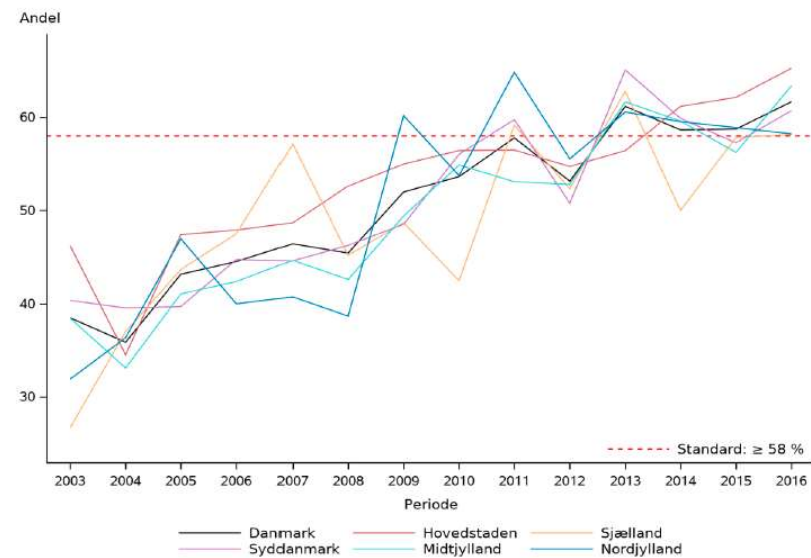


# DLCR 2021

Afdeling	Antal	Segment		
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Rigshospitalet	433	27	0	100,0
Odense	350	7	0	100,0
Aarhus	269	3	0	100,0
Aalborg	204	19	26,3	73,7
Danmark	1256	56	8,9	91,1

# 5 års overlevelse efter kirurgi, DLCR 2021

Indikator Ild\_Bopæl: Andel, som overlever 5 år fra først registrerede resektion efter bopælsregion. Trendgraf på regionsniveau.



# Spørgsmål?

