



D L C G

V I S I O N S P R O J E K T

L U N G E K R Æ F T

FREMTIDIG LUNGECANCERKIRURGI

JESPER RAVN

LUNGKIRURGISK AFDELING

RIGSHOSPITALET

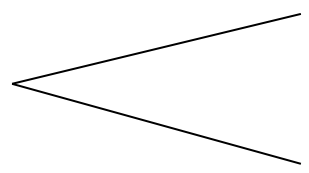
Formulering af et Visionsprojekt

- **Målsætning:**

Dobbelt så mange skal overleve lungekræft i 2030!

- *5-årsoverlevelsen for lungekræftpatienter skal fordobles til 25 % inden udgangen af 2030,*
- *- og patienterne skal overleve til et godt liv.*

Lungecancer i DK år 2016

4706 tilfælde:  **2344 mænd**
2362 kvinder

1004 (21 %) opererede på 4 afdelinger

Median alder: 69 år
Spredning: 18-90 år

Observeret 5 års overlevelse 2016

- Alle patienter 14,5 %
- Alle Opererede patienter 56,2 %
- Efter stadie:
 - Ia 67 %
 - Ib-IIa 68,5-52,7 %
 - IIb 58-47 %
 - IIIa_{1,2,3} 48-27,8 %
 - IIIb 0 %
 - IV 15,6%

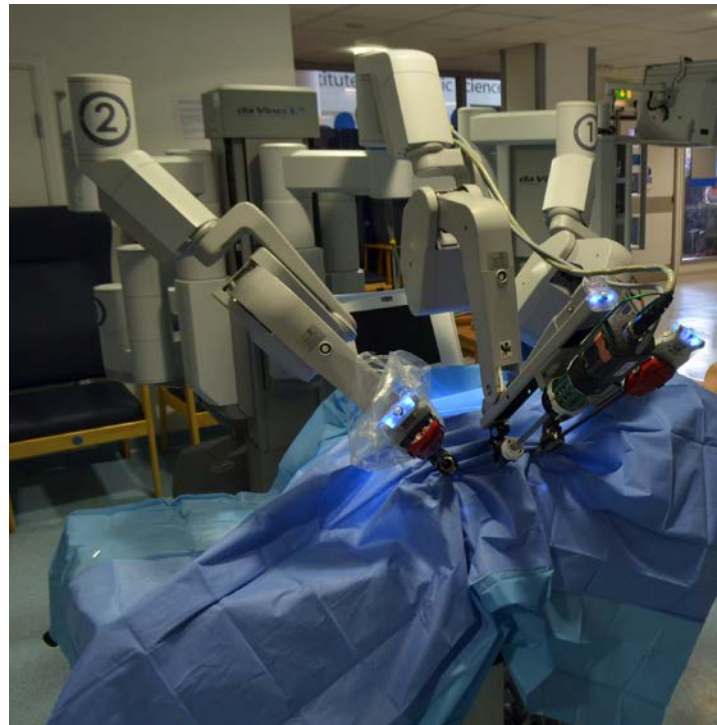
DLCR 2016

Visionsprojekt lungecancer 2017

- Væsentligste parameter for overlevelse er stadig +/-kirurgi
- Flere patienter til kirurgi
 - Screening
 - Mere skånsom kirurgi
 - Udvidet indikation for kirurgi
- kombinationsbehandling

Skånsom kirurgi

- Robotkirurgi; næppe og slet ikke i nærmeste fremtid.



Skånsom kirurgi

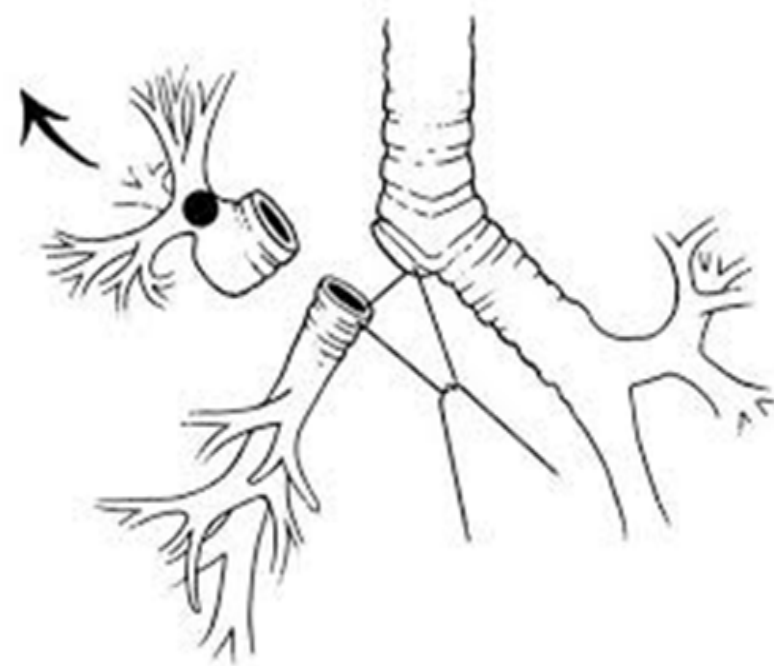
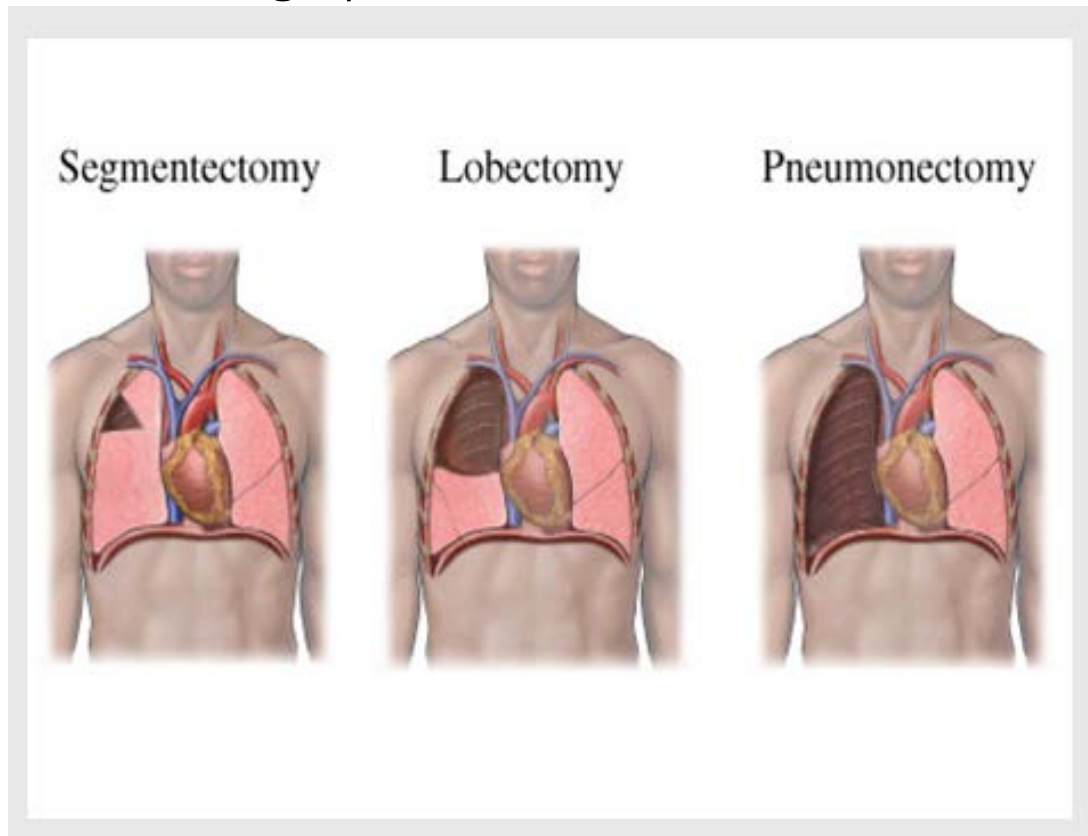
- Kikkertkirurgi VATS

The anterior approach



Skånsom kirurgi

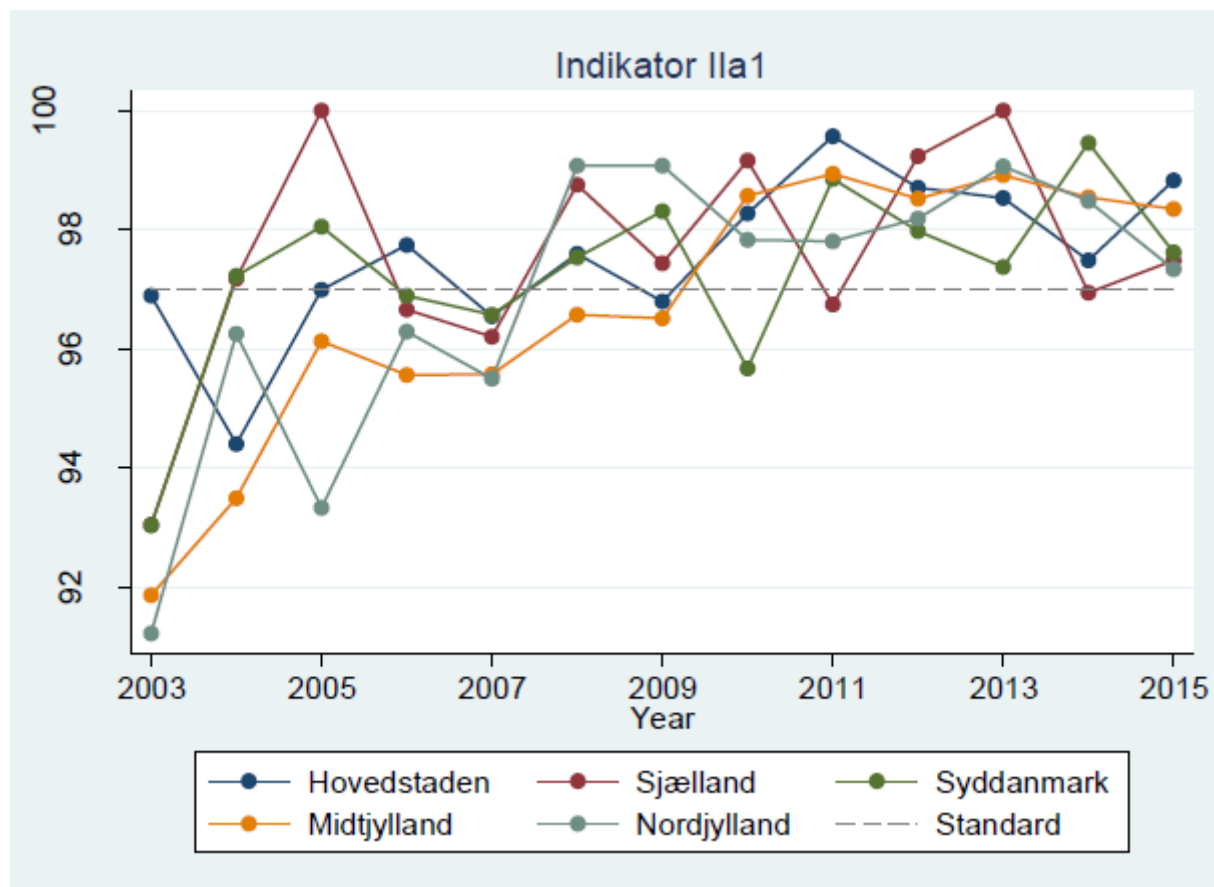
- Lungebesparende kirurgi- Sleeveresektioner, segmentresektioner.
Undgå pneumonektomier



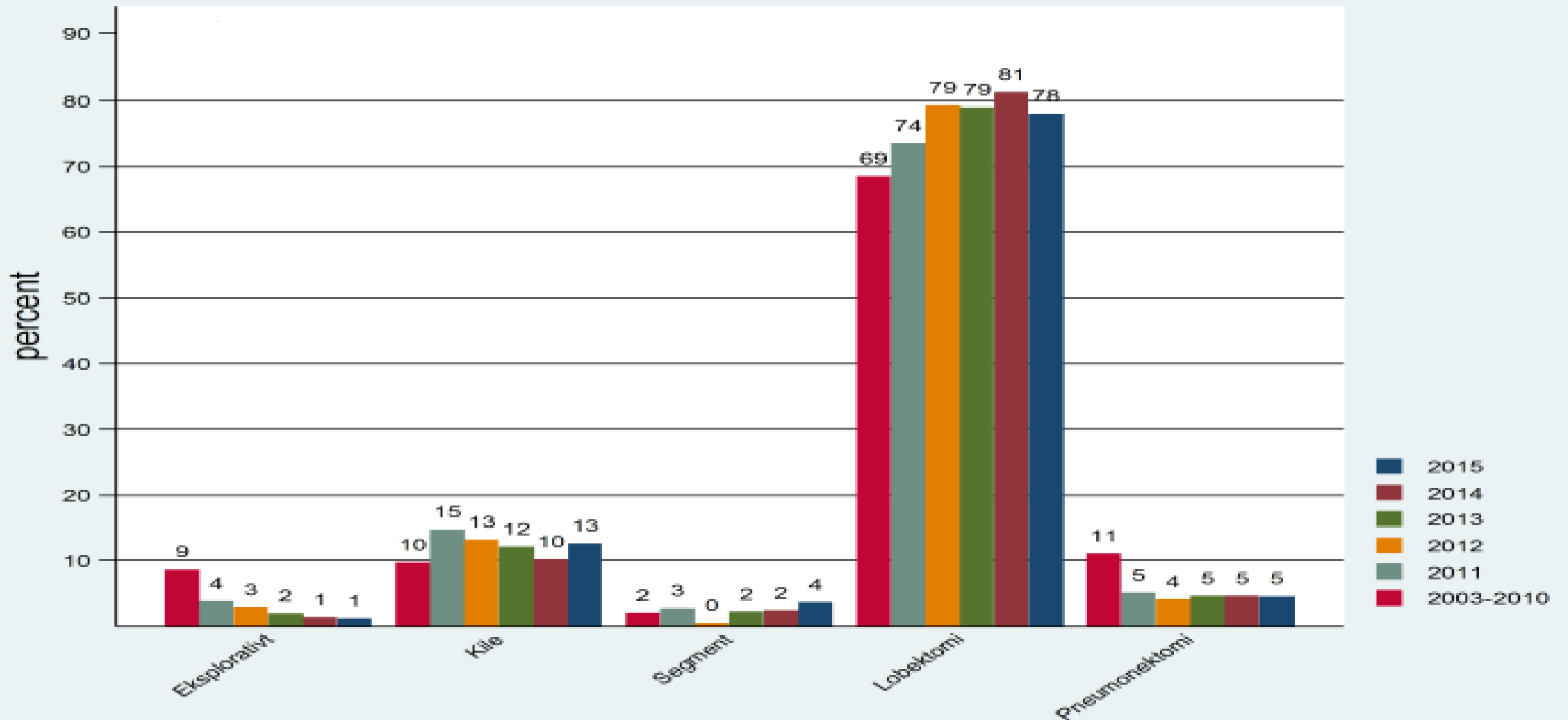
Udvidet indikation for kirurgi

- Internationale retningslinier:
 - Behandlings-algoritme baseret på database med patienter behandlet 1990-2000
 - Den kirurgiske risiko er blevet væsentlig mindre

30 dages overlevelse i DK



Operationstyper i DK



Kirurgi for lungecancer 2017

- Operationskohorte stadie 0-IIb samt enkelte IIIa (T3N1 og T4N0-1)
- Potentiel operationskohorte stadie IIIa (T0-3N2)
- Operation efterfulgt af kemoterapi (adjuverende kemoterapi) stadie (IB) IIa-
- Kemo-stråle behandling efterfulgt af operation (Neoadjuverende kemoterapi)

Kirurgi for lungecancer 2017

	cStadie 0-IIB	Opererede	%
2011	1040	800	77
2012	1103	871	79
2013	1082	814	75
2014	1198	900	75
2015	1190	960	81

Kirurgi for lungecancer 2017

- 19-25 % af kohorten bliver ikke opereret
 - Dårlig Lungefunktion (LFU)
 - Konkurrerende sygdomme (Co-morbiditet)
 - Patient fravalg

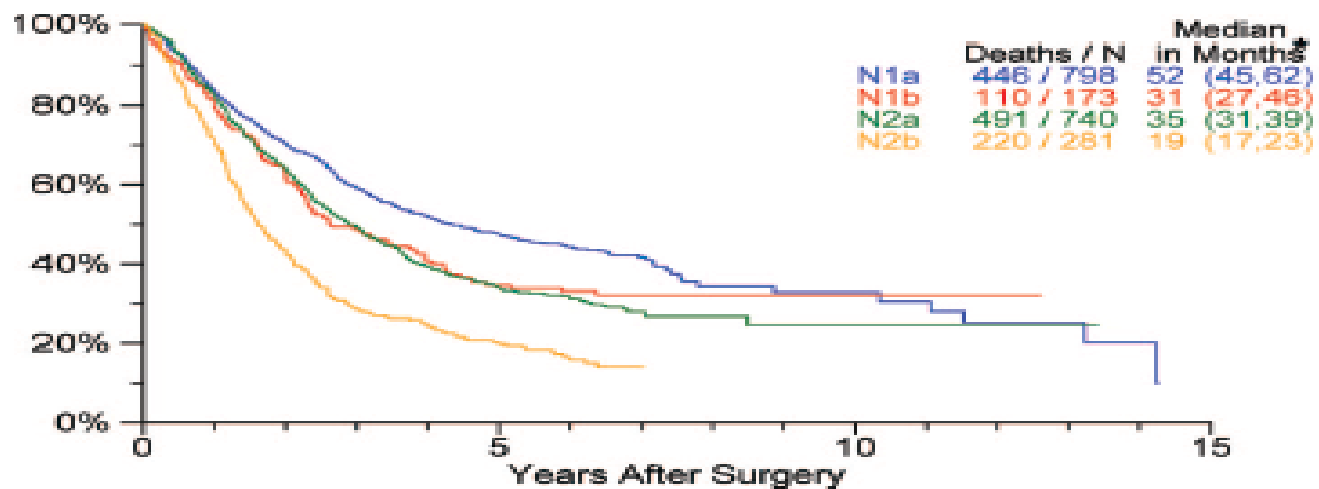
Kirurgi for lungecancer 2017

- Dårlig LFU:
 - Flere segmentresektioner
 - 2014 23 patienter (2%)
 - 2015 35 patienter (4%)
 - 2016 20 patienter (2 %)
- Co-morbiditet
 - Flere VATS resektioner
 - (svinger 57% - RH 86 %)

Kirurgi for lungecancer 2017

- Potentiel operationskohorte T0-3N2
 - Antal 412-489 (sidste 5 år)
 - Antal opererede 100-115 årligt
 - Overlevelse alle IIIA: 14,9 %
 - Opererede T1-2BN2: 48 %
 - Opererede T3N1-2: 36 %
 - Opererede T4N0-1: 27 %

Overlevelse med single level N1-2 og multiple level N1-2 sygdom. Internationale database



	1 Yr	5 Yrs		HR	P
N1a	86%	48%			
N1b	79%	35%	vs N1a:	1.32	<.0090
N2a	83%	34%	vs N1b:	1.04	0.7137
N2b	71%	20%	vs N2a:	1.65	<.0001

*estimates of median survival, followed by 95% confidence intervals in parentheses.

FIGURE 5. Survival by N status and number of involved N zones.

(*J Thorac Oncol.* 2007;2: 603–612)

Management of Stage IIIA Non-Small Cell Lung Cancer by Thoracic Surgeons in North America

Nirmal K. Veeramachaneni, MD, Richard H. Feins, MD, Briana J.K. Stephenson, MPH, Lloyd J. Edwards, PhD, and Felix G. Fernandez, MD

Division of Cardiothoracic Surgery, Department of Surgery, School of Medicine, and Department of Biostatistics, Gillings School of Global Public Health, University of North Carolina at Chapel Hill, Chapel Hill, North Carolina; and Division of Cardiothoracic Surgery, Department of Surgery, Emory University, Atlanta, Georgia

***Conclusions.* There is no clear consensus on management of patients with stage IIIA lung cancer in the United States. Diversity of opinion is greatest in patients with more advanced lung cancer, and limited pulmonary function.**

(Ann Thorac Surg 2012;94:922–8)

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Guidelines on the radical management of patients with lung cancer

Eric Lim,¹ David Baldwin,² Michael Beckles,³ John Duffy,² James Entwisle,⁴ Corinne Faivre-Finn,⁵ Keith Kerr,⁶ Alistair Macfie,⁷ Jim McGuigan,⁸ Simon Padley,⁹ Sanjay Popat,¹⁰ Nicholas Screatton,¹¹ Michael Snee,¹² David Waller,¹³ Chris Warburton,¹⁴ Thida Win,¹⁵ British Thoracic Society and the Society for Cardiothoracic Surgery in Great Britain and Ireland

Single zone N2 disease

Resection may be considered in patients with single zone N2 disease as survival is similar to patients with multi-zone N1b disease.^{63[N/A]} There may also be a role for surgery when the tumour volume or the primary tumour plus nodal disease cannot be encompassed in a radical radiotherapy field. Surgery followed by chemotherapy in this setting may be an alternative to palliative treatment, although there is no direct evidence for this approach.

Kirurgi for lungecancer 2017

- Multimodal behandling
 - I-IIA:
 - skånsom kirurgi (overlevelsesgevinst ?)
 - Adjuverende kemo kohorte ca 600 patienter.
 - Kun 23 % modtog adjuverende kemo i 2016.
 - (overlevelsesgevinst 4-15 %).
- IIIA: neoadjuverende + avanceret kirurgi kohorte ca 350 patienter
 - Heraf blev 128 stadie IIIA og 3 IIB opereret
 - Heraf havde 34 modtaget neo-adjuvererende kemoterapi
 - (overlevelsesgevinst ?).

Kombinationsbehandling

- Neoadjuverende kemoterapi (stadie IIIA/N2)
- Adjuverende kemoterapi (stadie IB/IIA →)
- Fremtid:
 - Immunterapi efter de-bulking ?
 - Målrettet behandling onkologi-kirurgi i kombination
 - Brug af hele behandlingspaletten

Spørgsmål ?

