

Clinic for Thoracic Surgery

Lung cancer

Early stages; which operation?

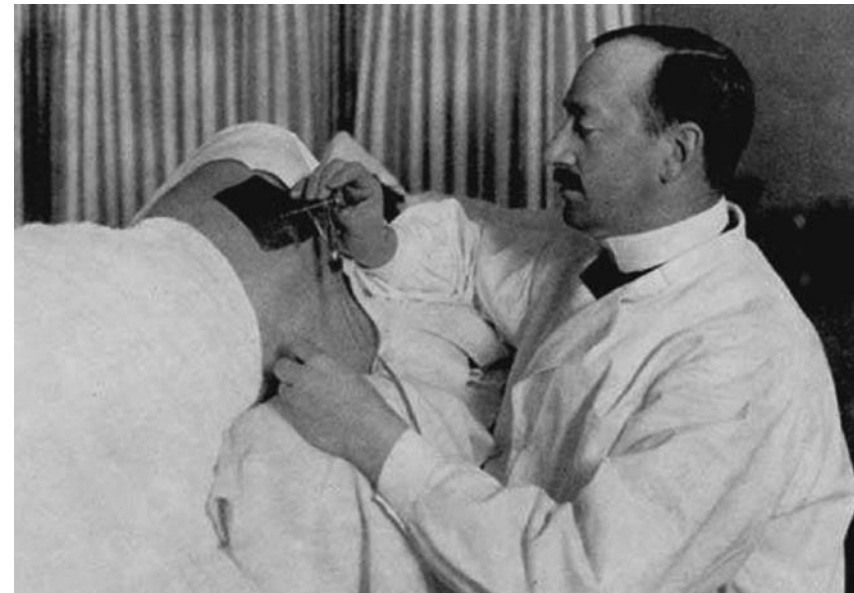
Peter B. Kestenholz, FEBTS, Chefarzt Thoraxchirurgie LUKS
March 17th, 2022



Change in Thoracic Surgery?



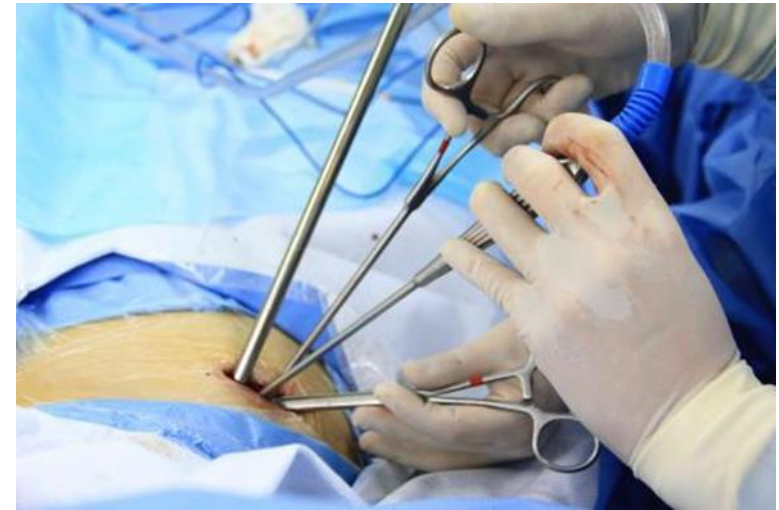
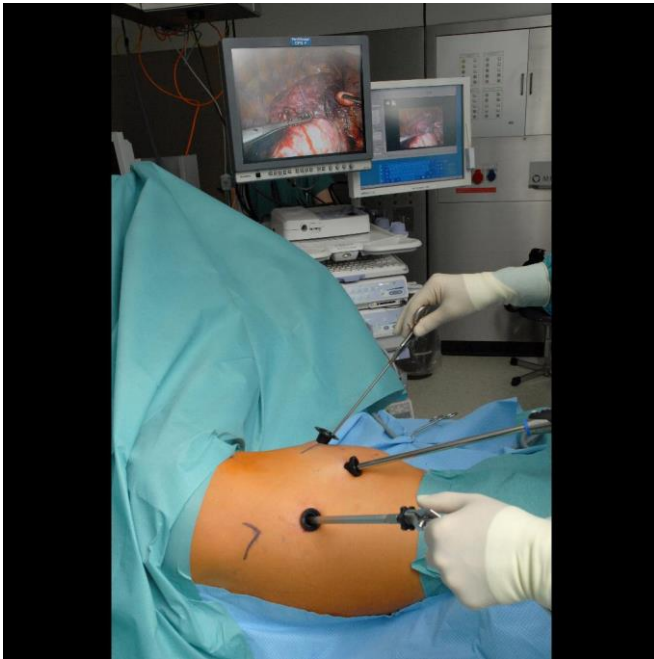
Hans Christian Jacobaeus (1879-1937)
treatment of pleural adhesions in TB patients
with non-intubated thoracoscopy (biportal)



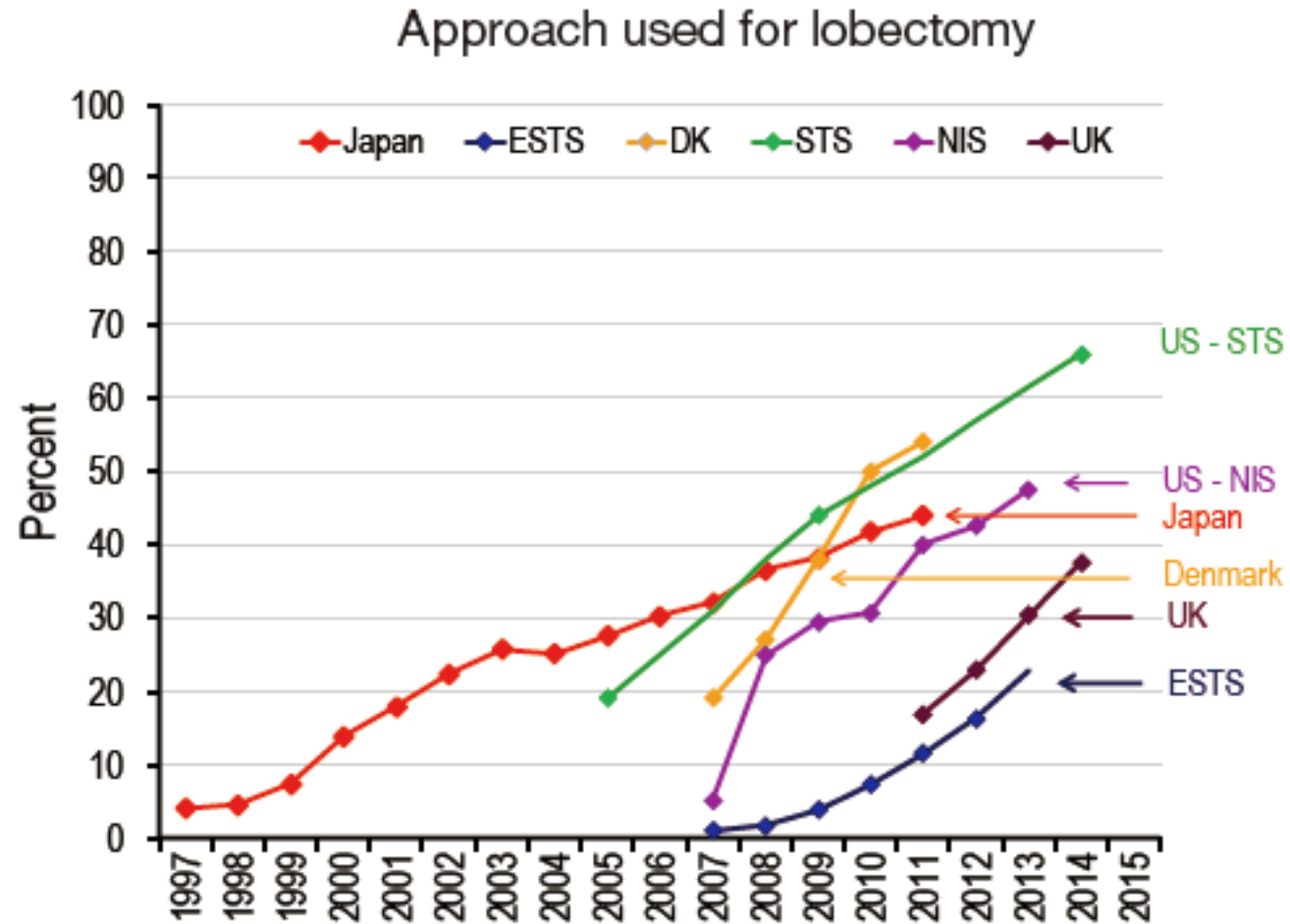
Change in Thoracic Surgery?



Change in Thoracic Surgery?



VATS



Definition of VATS

No rib spreading!!!

Number of incisions not important.

True anatomic dissection.

Key Points

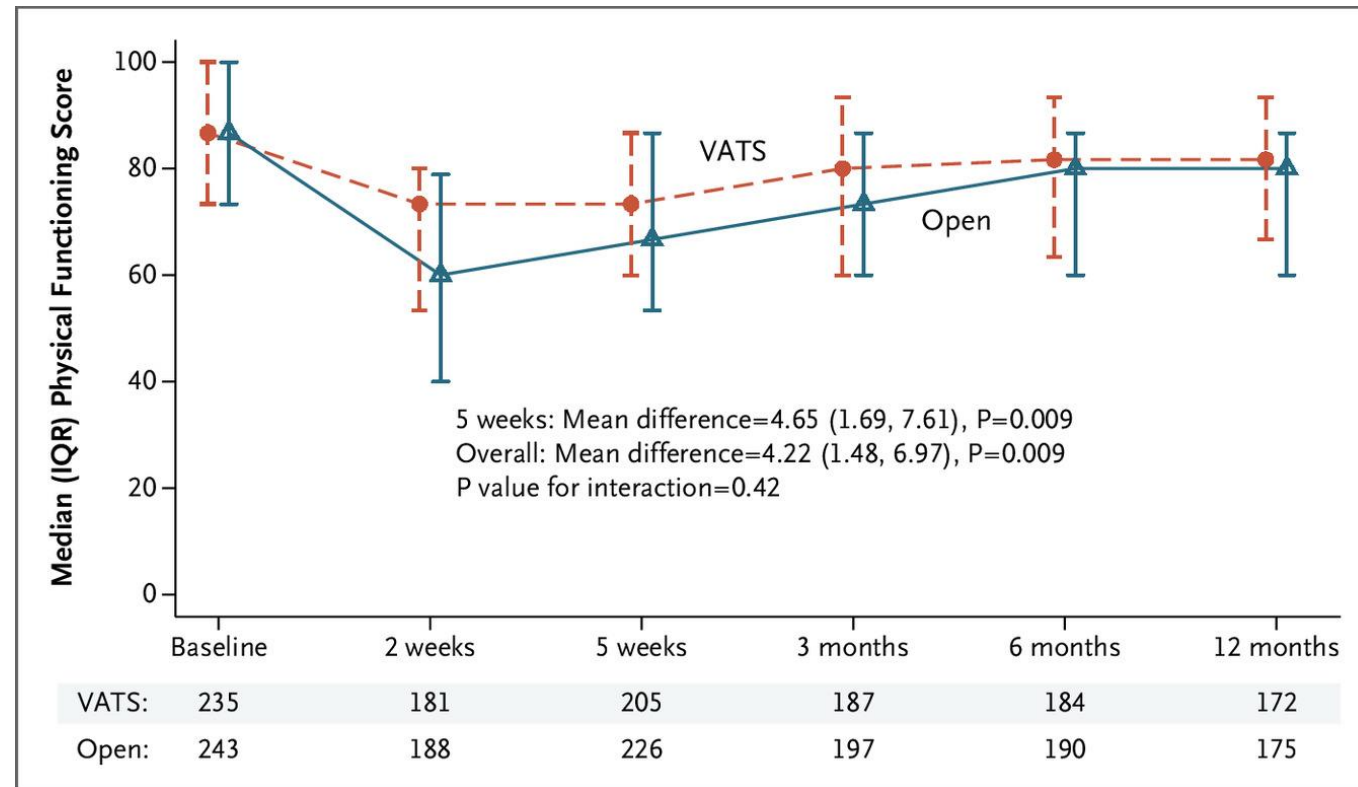
- PAIN
 - MORBIDITY-MORTALITY
 - SURVIVAL
-

RCT: Video assisted thoracoscopic lobectomy versus conventional Open LobEcTomy for lung cancer (VIOLET); one year results

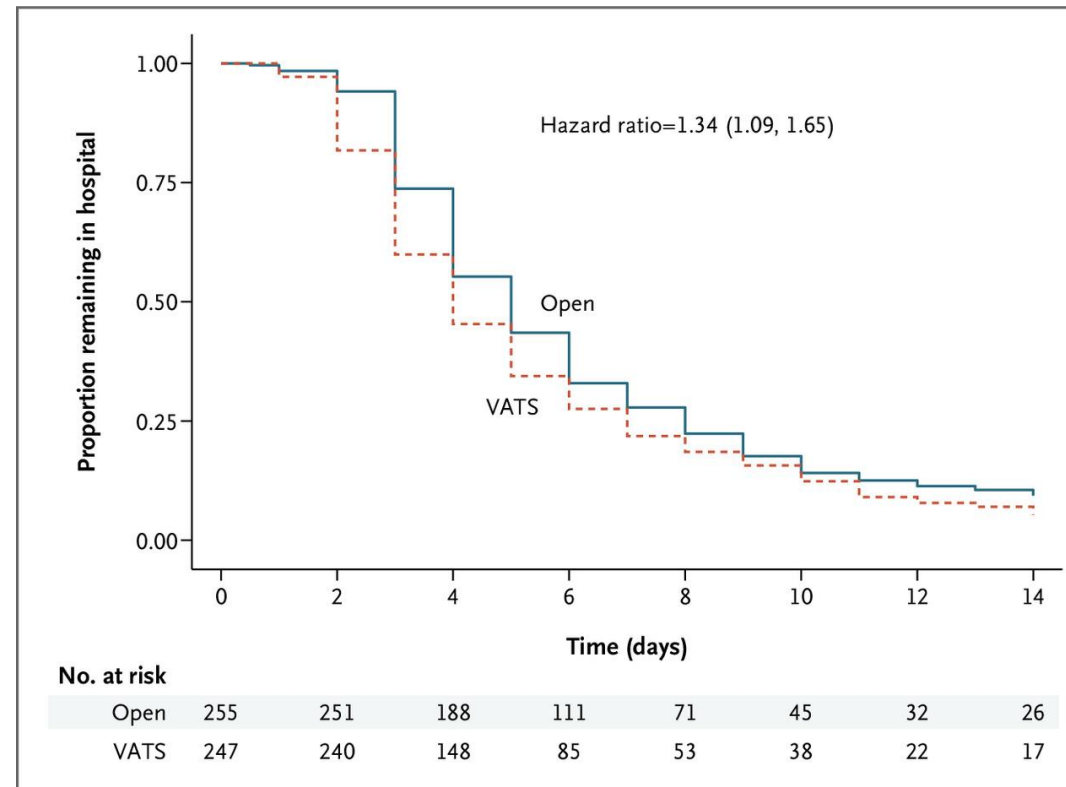
- N 503 (Screened 2109) VATS: n = 247 Open: N = 256
- VATS had less pain up to one-year
- Better functional recovery continued in VATS arm after discharge with better physical function
- In hospital, VATS arm had fewer complications with no difference in serious adverse events
- Median hospital stay was one day shorter in the VATS arm (4 vs 5 days)
- After discharge VATS arm had 19% less serious adverse events and lower readmission rates to one-year.
- Oncological outcome after one year was the same (cancer free survival, overall survival)

Lim et al: published January 18, 2022
NEJM Evid 2022; 1 (3)

Primary Outcome Measure — QLQ-C30 Physical Functioning



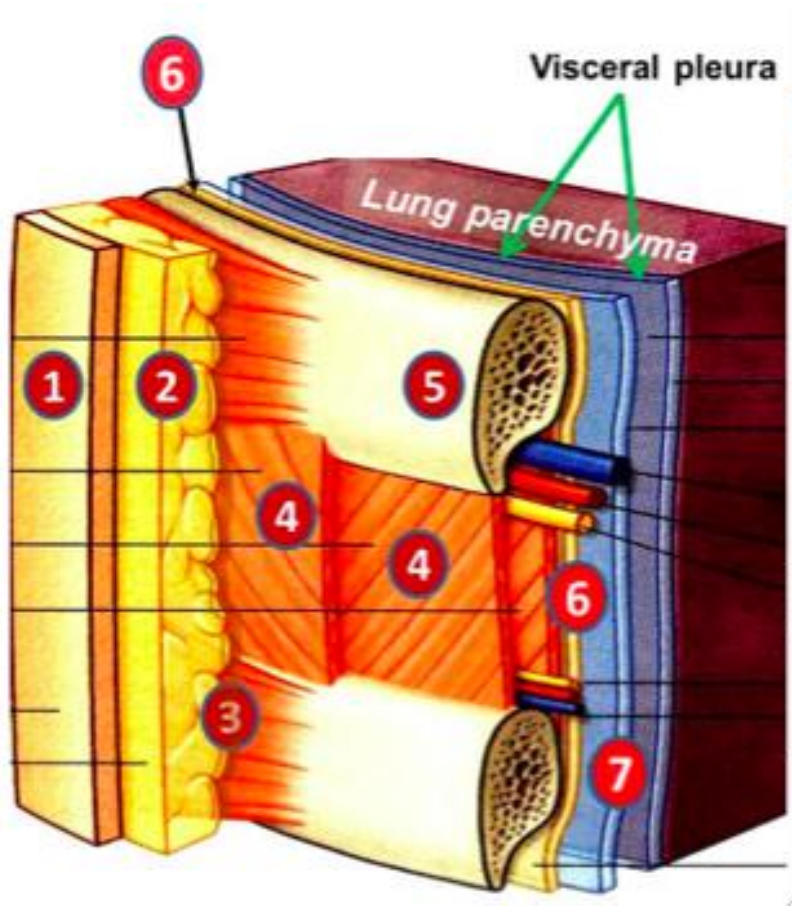
Length of In-Hospital Stay.



Oncological outcome at one year

- Of those with lymph node disease, 50.9% in the VATS and 45.9% in open arms received adjuvant treatment.
- There was no difference in the time to uptake of adjuvant chemotherapy (HR 1.12, 0.62 to 2.02; $p=0.716$).
- Recurrence with clinical follow up and CT at one-year was similar with 7.7% versus 8.1% in the VATS and open groups respectively.
- Progression-free survival (HR 0.74, 0.43 to 1.27; $p=0.27$) and overall survival HR 0.67, 0.32 to 1.40; $p=0.282$) was not significantly different.

INTERCOSTAL ANATOMY AND PAIN



Segmentectomy or lobectomy for early-stage NSCLC?

- Meta-analysis:
- 28 studies
- In stage I, segmentectomy was found to be inferior to lobectomy for OS, CSS, RFS

Winckelmanns et al. Eur J Cardiothorac Surg. 2020 Jun 1;57(6):1051-1060.

Lung Cancer Staging grouping

- The Eighth Edition Lung Cancer Stage Classification, [Frank C.Detterbeck MD et al.](#) CHEST January 2017 p 193-203

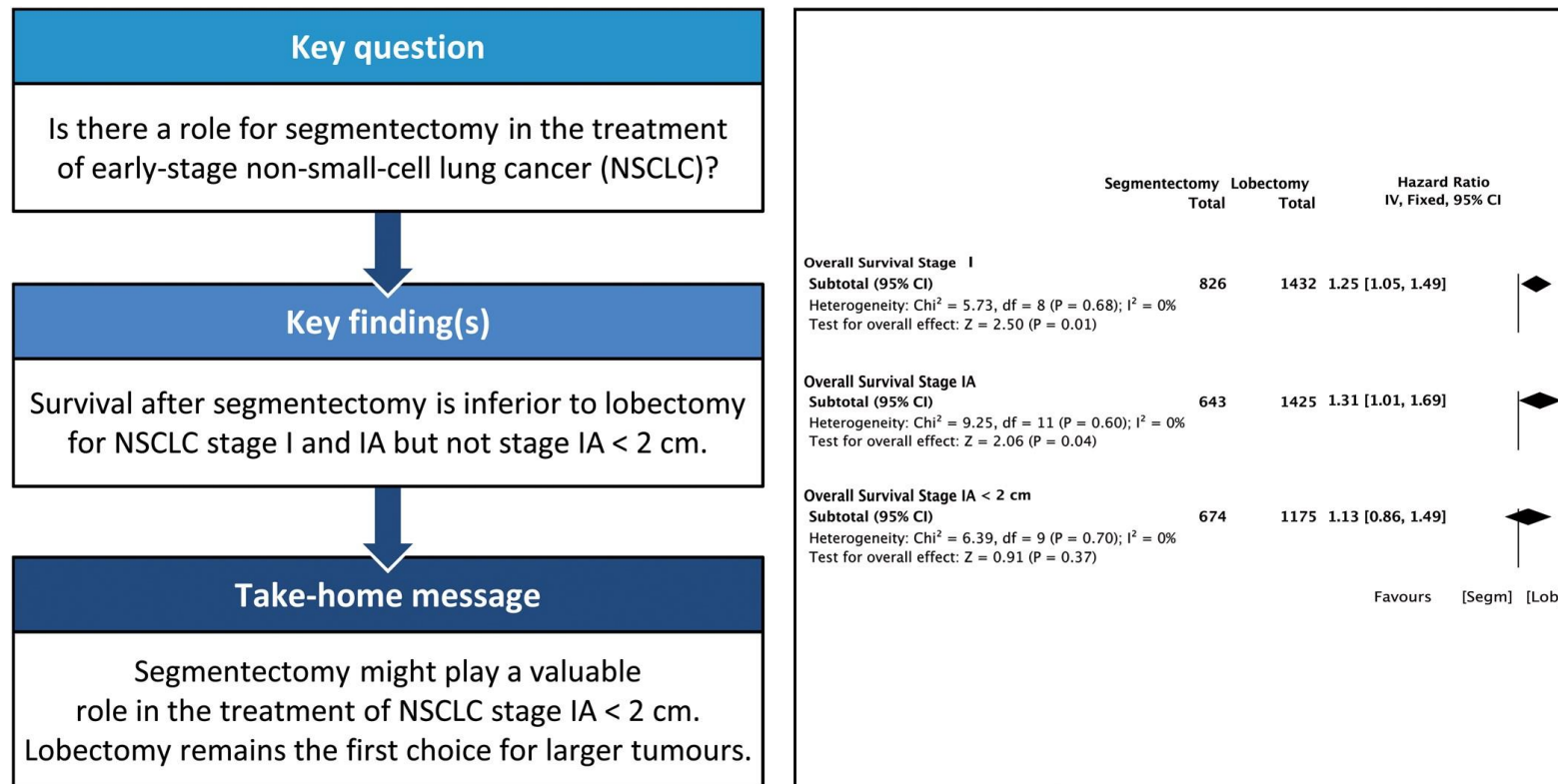
T/M	Label	N0	N1	N2	N3
T1	T1a ≤ 1	IA1	IIB	IIIA	IIIB
	T1b $>1-2$	IA2	IIB	IIIA	IIIB
	T1c $>2-3$	IA3	IIB	IIIA	IIIB
T2	T2a <i>Cent, Yisc Pl</i>	IB	IIB	IIIA	IIIB
	T2a $>3-4$	IB	IIB	IIIA	IIIB
	T2b $>4-5$	IIA	IIB	IIIA	IIIB
T3	T3 $>5-7$	IIB	IIIA	IIIB	IIIC
	T3 <i>Inv</i>	IIB	IIIA	IIIB	IIIC
	T3 <i>Satell</i>	IIB	IIIA	IIIB	IIIC
T4	T4 >7	IIIA	IIIA	IIIB	IIIC
	T4 <i>Inv</i>	IIIA	IIIA	IIIB	IIIC
	T4 <i>Ipsi Nod</i>	IIIA	IIIA	IIIB	IIIC
M1	M1a <i>Contr Nod</i>	IVA	IVA	IVA	IVA
	M1a <i>Pl Dissem</i>	IVA	IVA	IVA	IVA
	M1b <i>Single</i>	IVA	IVA	IVA	IVA
	M1c <i>Multi</i>	IVB	IVB	IVB	IVB

Segmentectomy or lobectomy for early-stage NSCLC?

- Meta-analysis:
- 28 studies
- In stage I, segmentectomy was found to be inferior to lobectomy for OS, CSS, RFS
- In stage IA, the differences were significant for OS and CSS, though not for RFS
- In stage IA2 (<2 cm), no significant differences were found between segmentectomy and lobectomy

Winckelmanns et al. Eur J Cardiothorac Surg. 2020 Jun 1;57(6):1051-1060.

Segmentectomy or lobectomy for early-stage NSCLC?



Winckelmanns et al. Eur J Cardiothorac Surg. 2020 Jun 1;57(6):1051-1060.

LUKS Luzern

	2019	2020	2021	2022
VATS anatomical resections	67%	75%	80%	95%
Segmentectomies	28%	26%	34%	30%
Sleeve resection	7%	8%	4%	13%
Pneumonectomy	1%	6%	2%	0%

LUKS: no VATS anatomical resections before November 2018

Thank you for your attention

- Questions?

