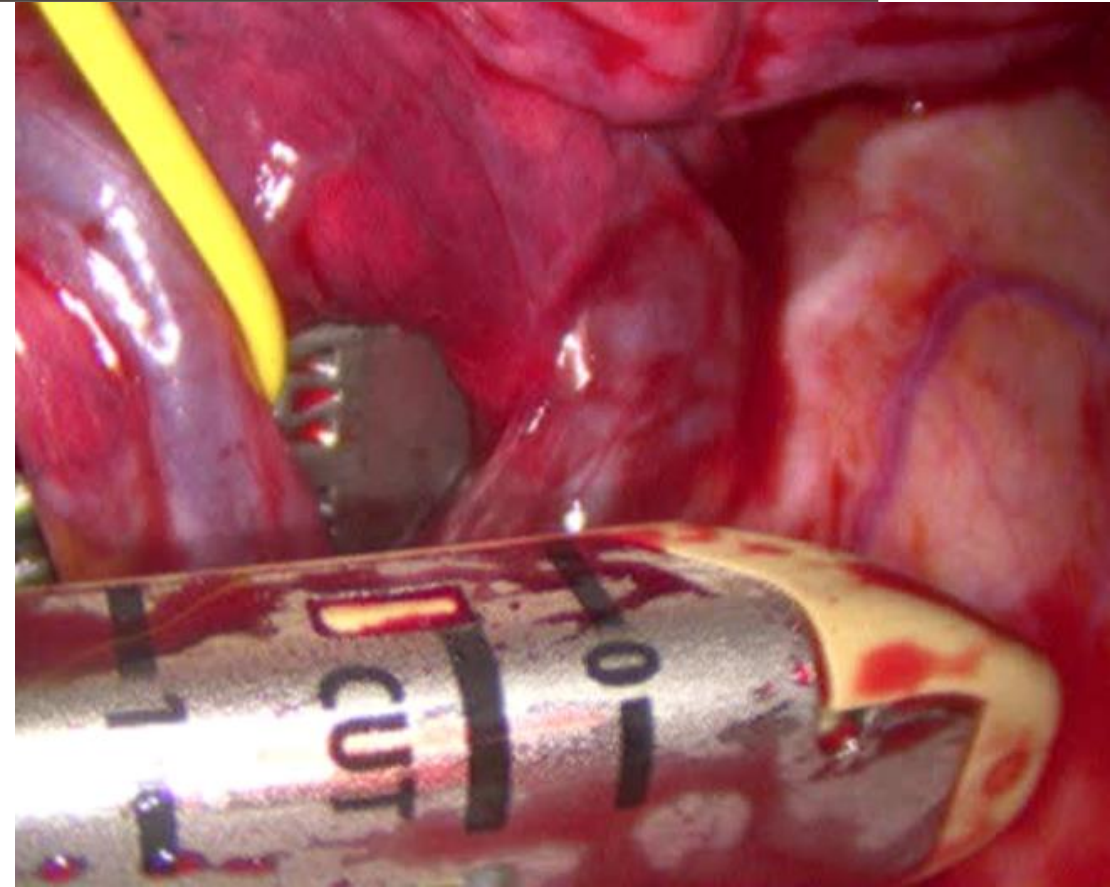
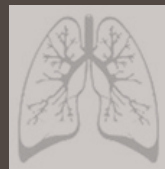


THORACOSCOPIC LOBECTOMY 2018

A. Linegar MD PhD
SA Heart conference
October 2018



Dept Cardiothoracic Surg
University Cape Town

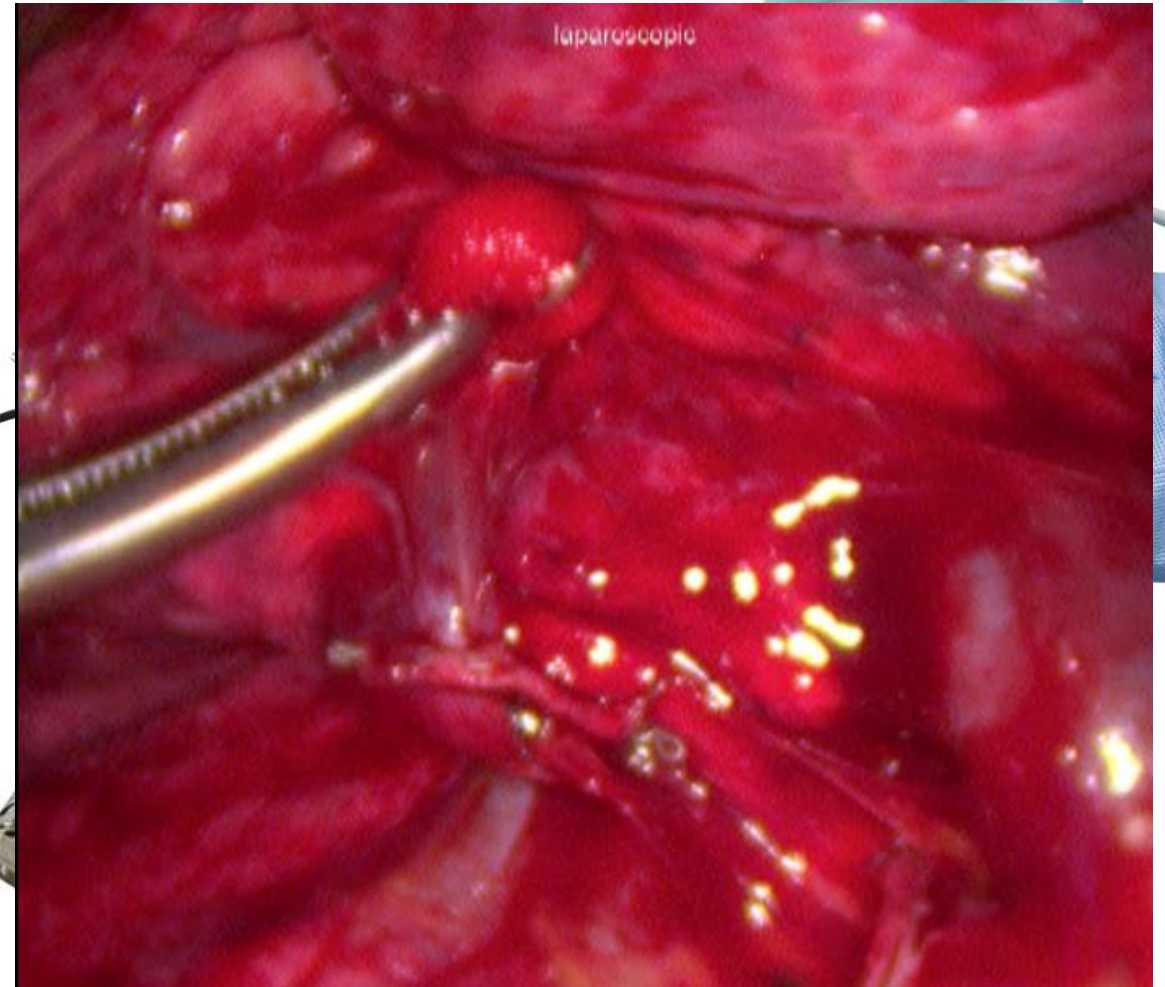


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University Free State



VATS lobectomy evolution

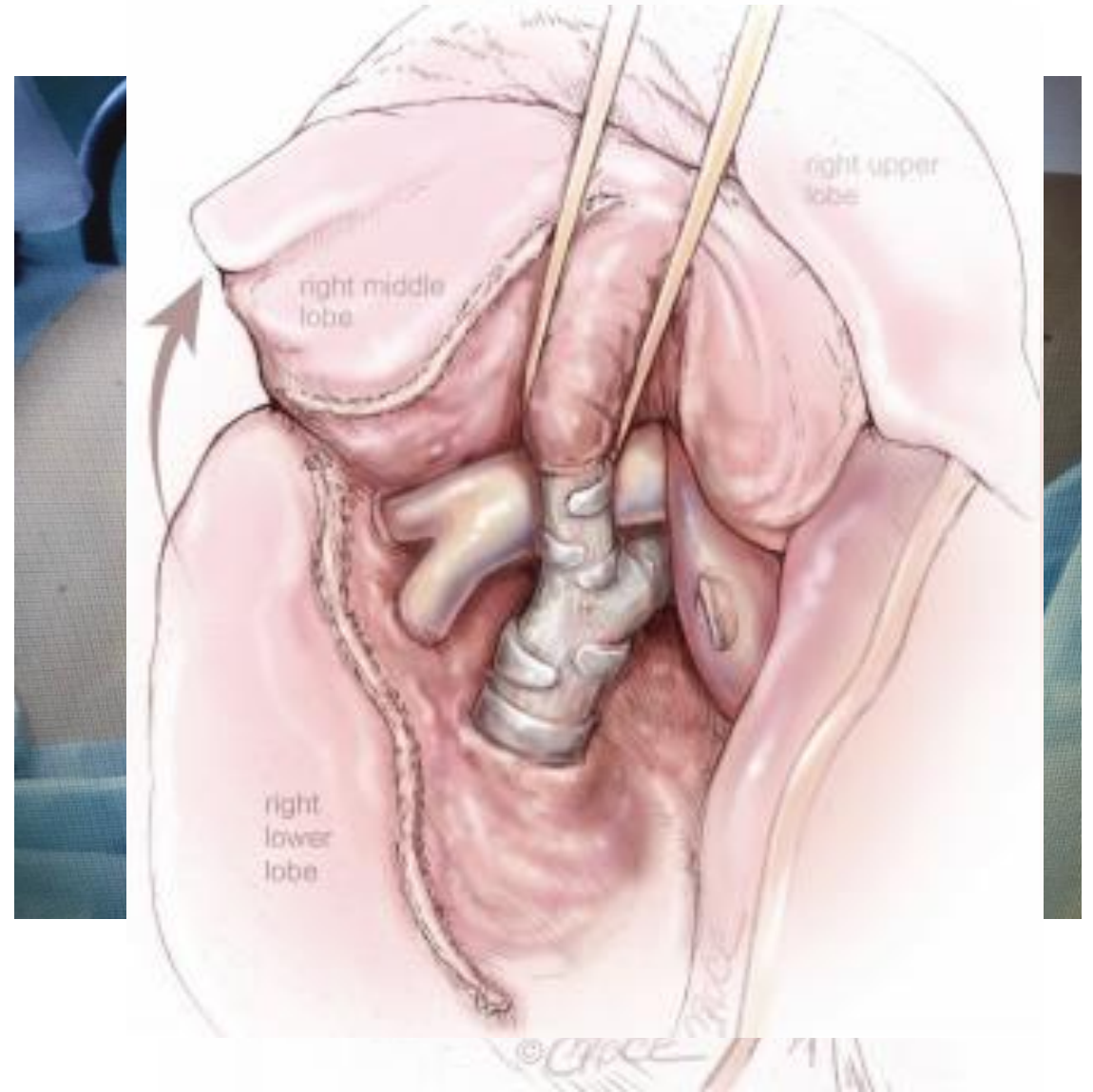
- 1992 – 1st VATS lobectomy Roviario Italy
- 1993 1st World VATS conference RBH
- Uptake has been slow until the last decade
- Screening programs
- Scopes 0° and 30° ; flexible scopes with variable angles
- Staplers
- Energy devices
- Now a large body of evidence to support VATS lobectomy as the method of choice in early lung cancer



The Copenhagen technique

- Hansen, Petersen, Ann Cardiothorac Surg 2012;1:70-76

- 3 port anterior approach
- PV taken first
- PA branches
- Anterior portion of fissure
- Bronchus
- Complete fissure
- Lymph node dissection



Results

- Case Series, Propensity studies
- VATS uptake 10% in 2009
 - 20% in 2012
 - 80% in expert units 2017
- Overall 70% still open thoracotomies (estimated)

ESTS database – Eur J Cardiothorac Surg 2016;49:602-9

- ESTS database Open vs VATS lobectomy propensity matched
- 7 years to 2013
- 28 771 lobectomies
- 26 050 thoracotomy and 2721 VATS
- Propensity matched two groups of 2721 patients

ESTS data base 2006 – 2013

	VATS	OPEN	Significance
Total complications	792 (29.1%)	863 (31.7%)	P = 0.0357
Major CV complications	316 (15.9%)	435 (19.6%)	P = 0.0094
Atelectasis B/S	65 (2.4%)	150 (5.5%)	P < 0.0001
Post op Ventilation >48hrs	18 (0.7%)	38 (1.4%)	P = 0.0075
Wound Infection	6 (0.2%)	17 (0.6%)	P = 0.0218
Post op AF	No diff	No Diff	
Post op LOS	7.8 days	9.8 days	P = 0.0003
In Hospital death	27 (1%)	50 (2%)	P = 0.002

VATS is associated with a lower incidence of complications compared with thoracotomy

Seer database n = 9508 lobectomies

Ann Am Thorac Soc 2018;15:76-8

- N=9508 patients propensity score matching
- VATS lobectomy for NSCLC
 - associated with better postoperative outcomes,
 - similar long-term survival, compared with open lobectomy among older adults, even after controlling for surgeon experience.
- High volume surgeons and specialist thoracic surgeons (p = 0,01)

Results – RCT 2016 and 2018

- 1 RCT on pain and QOL favoured VATS
(Bendixem et al, Lancet Oncol 2019;17:836-44)
- 2nd RCT – VATS vs Open Axillary T/C for short term oncology effect
Long et al, ATS 2018;105:386-4492
- 5 tertiary centres in China, 2008 – 2014

215 VATS vs 201 Ax T/C
Conversions 8 (3.7%)
VATS quicker 150min vs 166min p=0.001
Less bleeding in VATS
R1 VATS = 1 vs T/C = 5
Nodes similar

- Concluded VATS to be safe and reliable

Recommendations

- VATS replacing open lobectomy as method of choice and has already done so in many units.
- Superior technique in early lung cancer but has a steep learning curve
- All cases should be started as VATS and converted if pathology dictates
- Dedicated team
- Collegiate support
- Simulation

