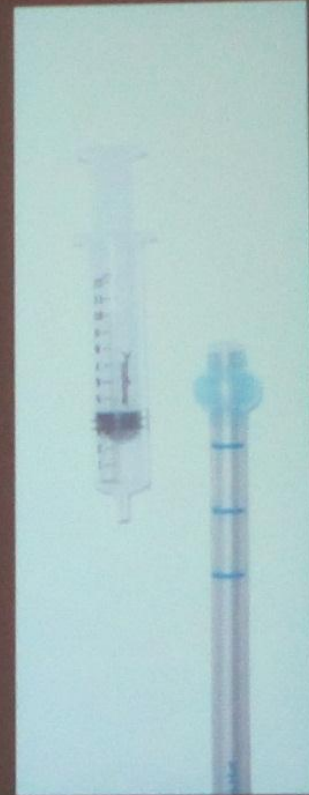
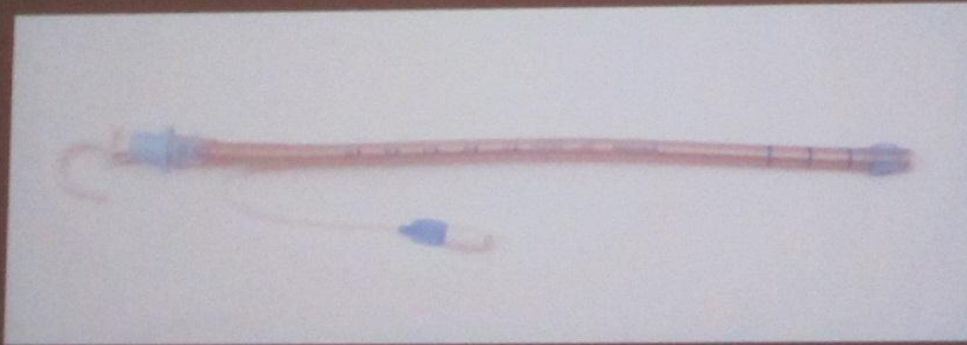


Lung isolation in the patient with a difficult airway. P. Slinger, Toronto

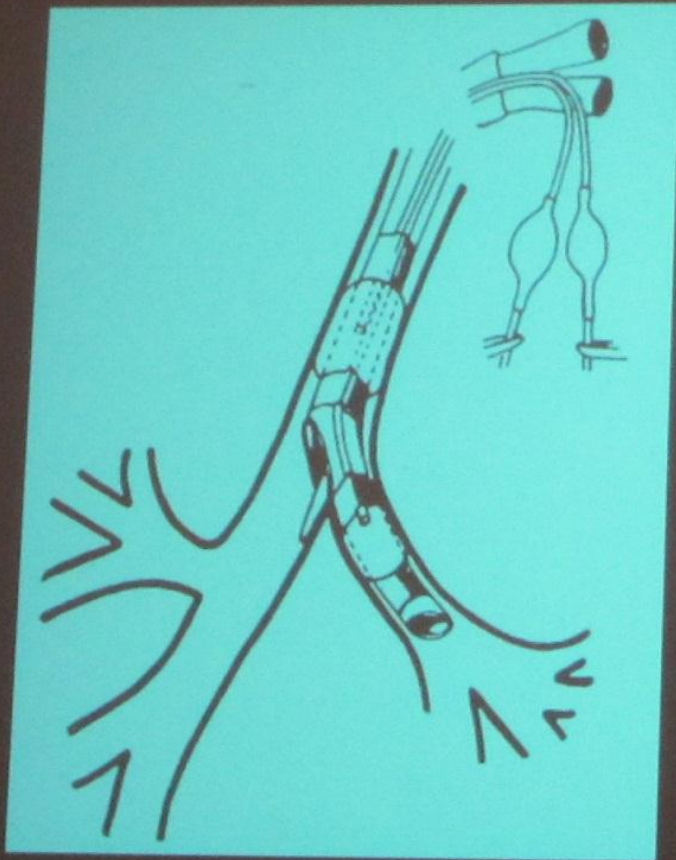
Techniques of Lung Isolation:

- Single Lumen Tubes
- Double-lumen Tubes
- Bronchial Blockers

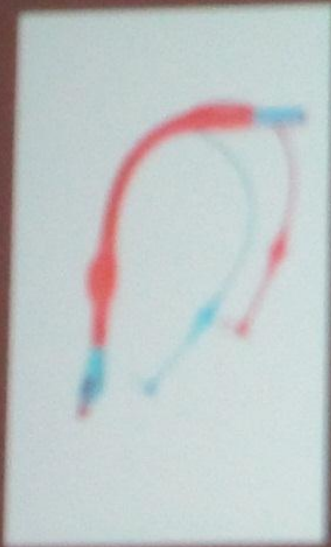
Single Lumen Endobronchial Tubes



Carlens Double-lumen Endobronchial Tube



Robertshaw Double-Lumen Tubes



Right-Sided



Frank Robertshaw
1919-1991

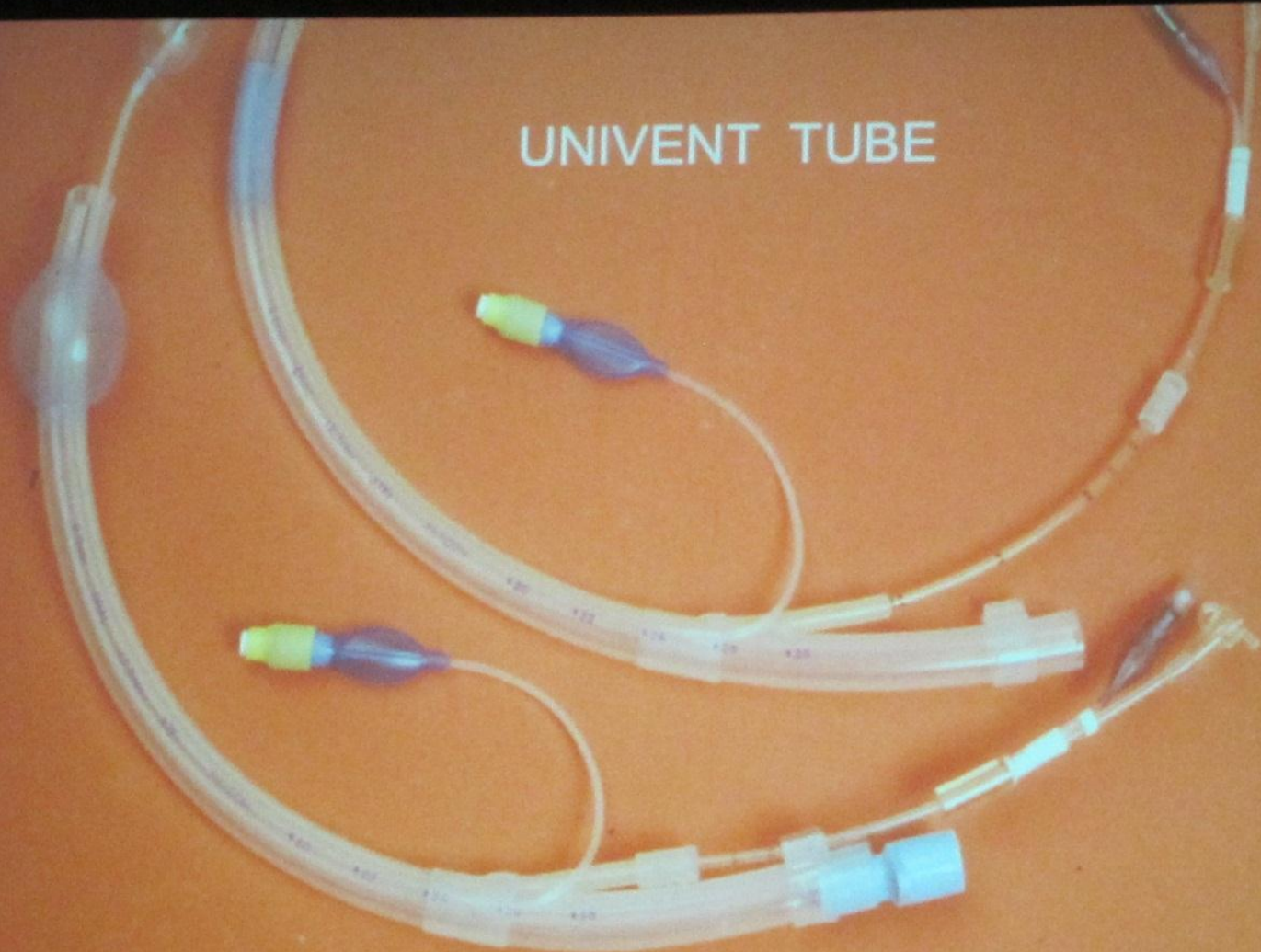


Left-Sided

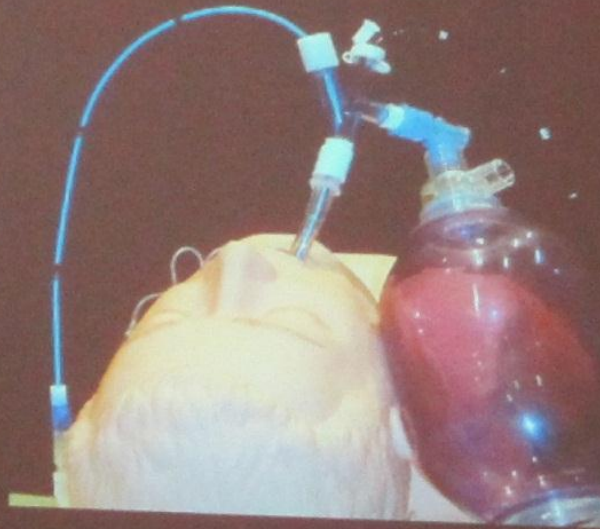
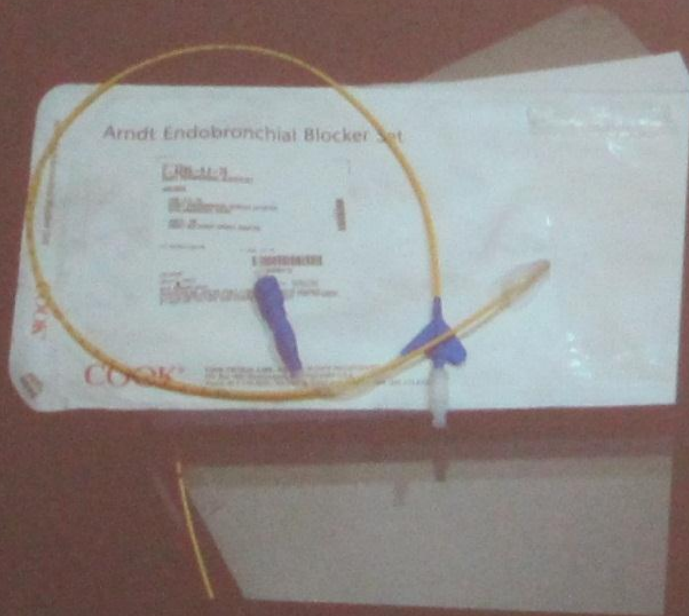
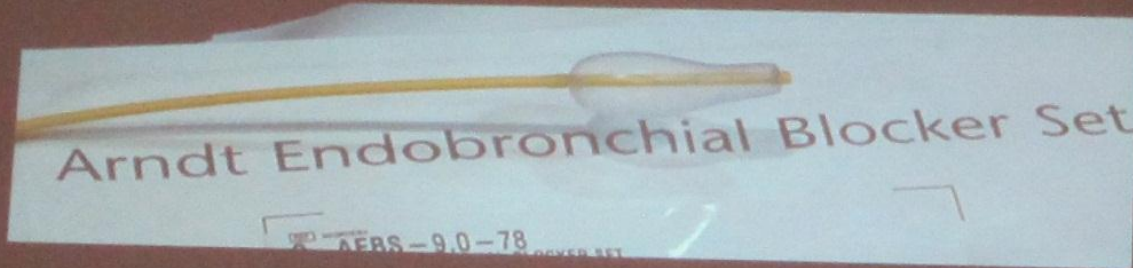
Techniques of Lung Isolation:

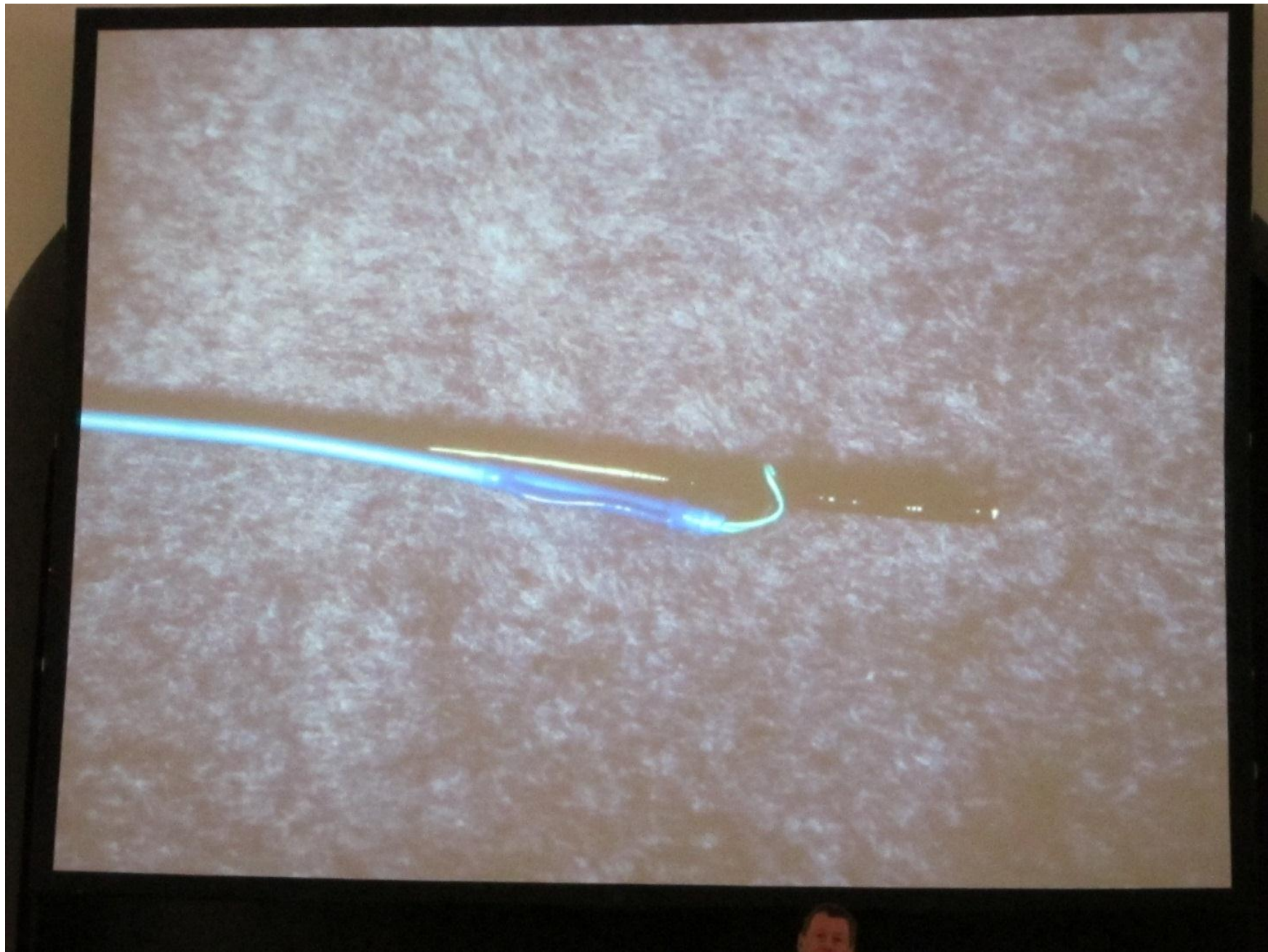
- ◆ Single Lumen Tubes
- ◆ Double-lumen Tubes
- ◆ Bronchial Blockers

UNIVENT TUBE

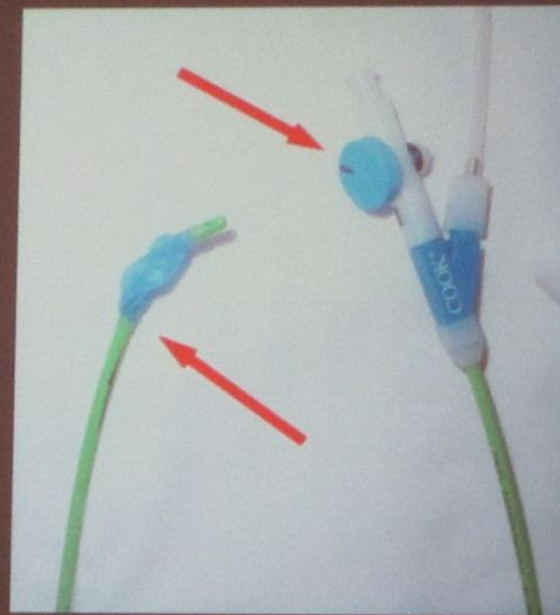
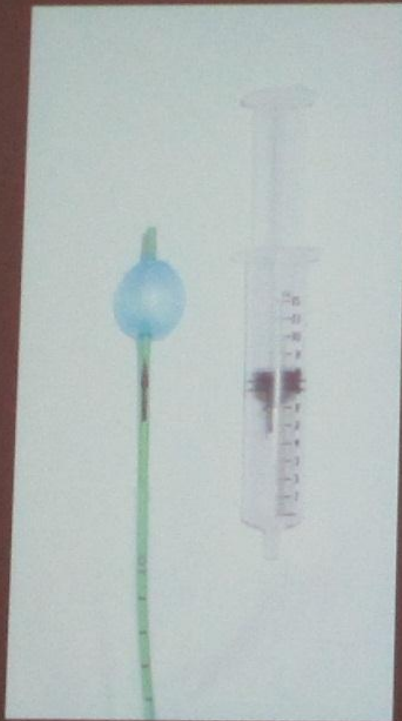
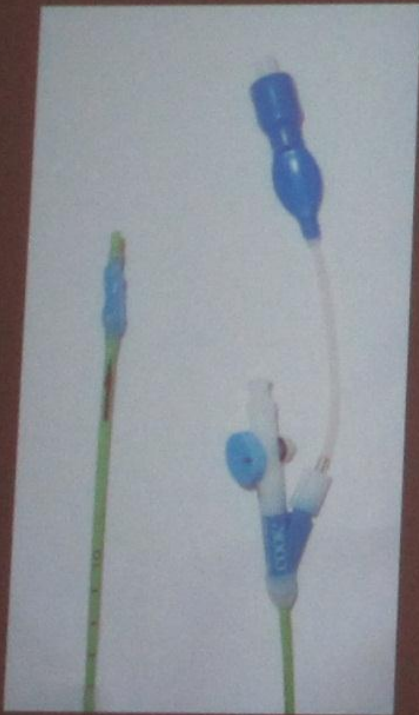


The "Arndt" Bronchial Blocker

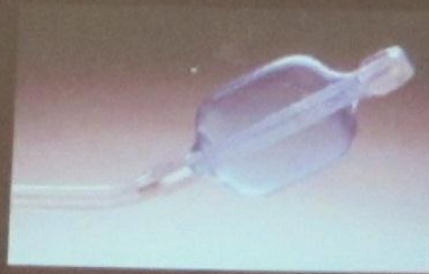
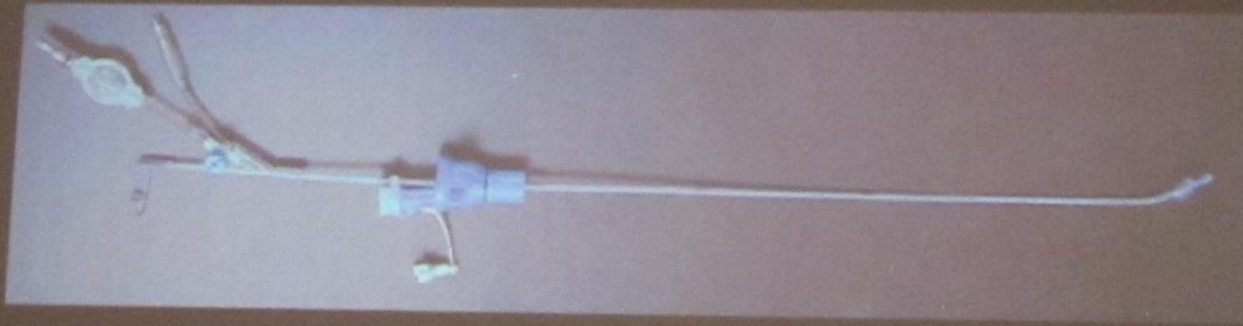




Bronchial Blockers – Cohen



Fuji "Uni-Blocker"



New Bronchial Blockers

COHEN



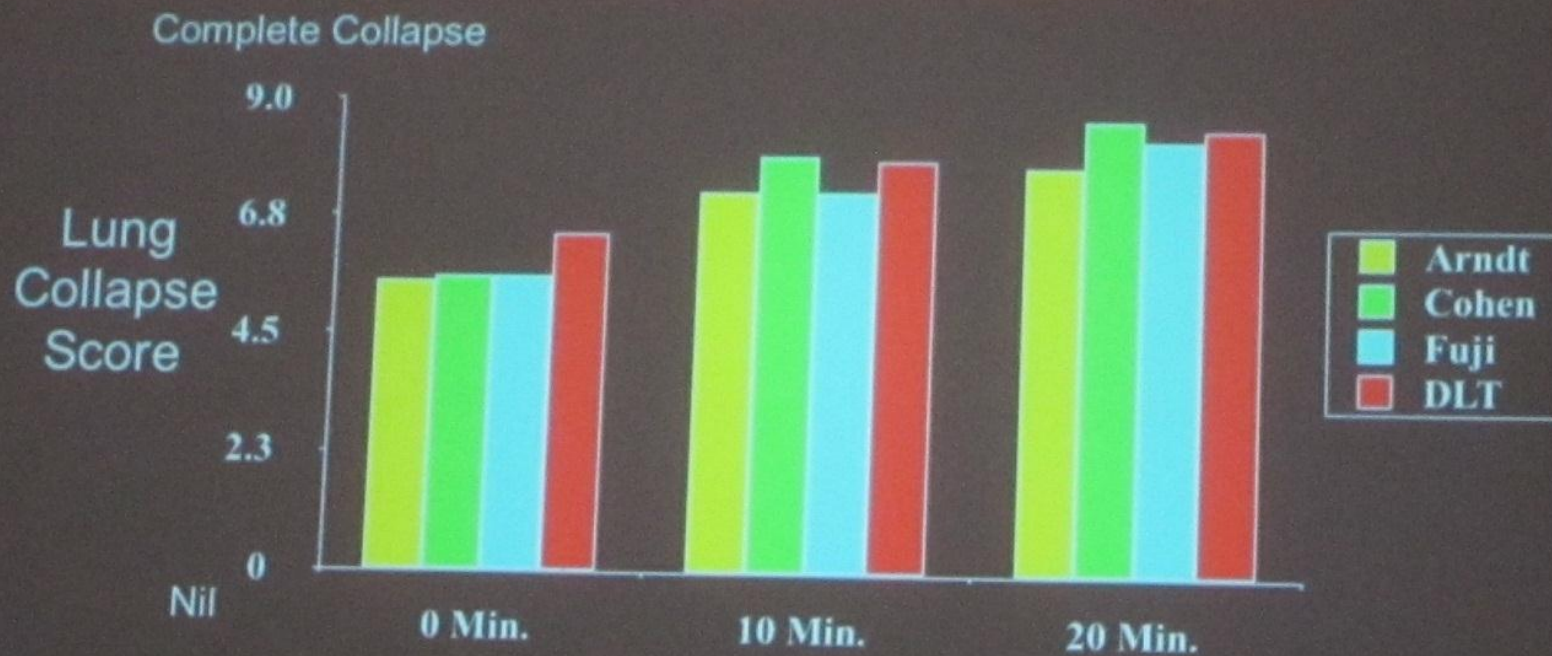
FUJI



ARNDT

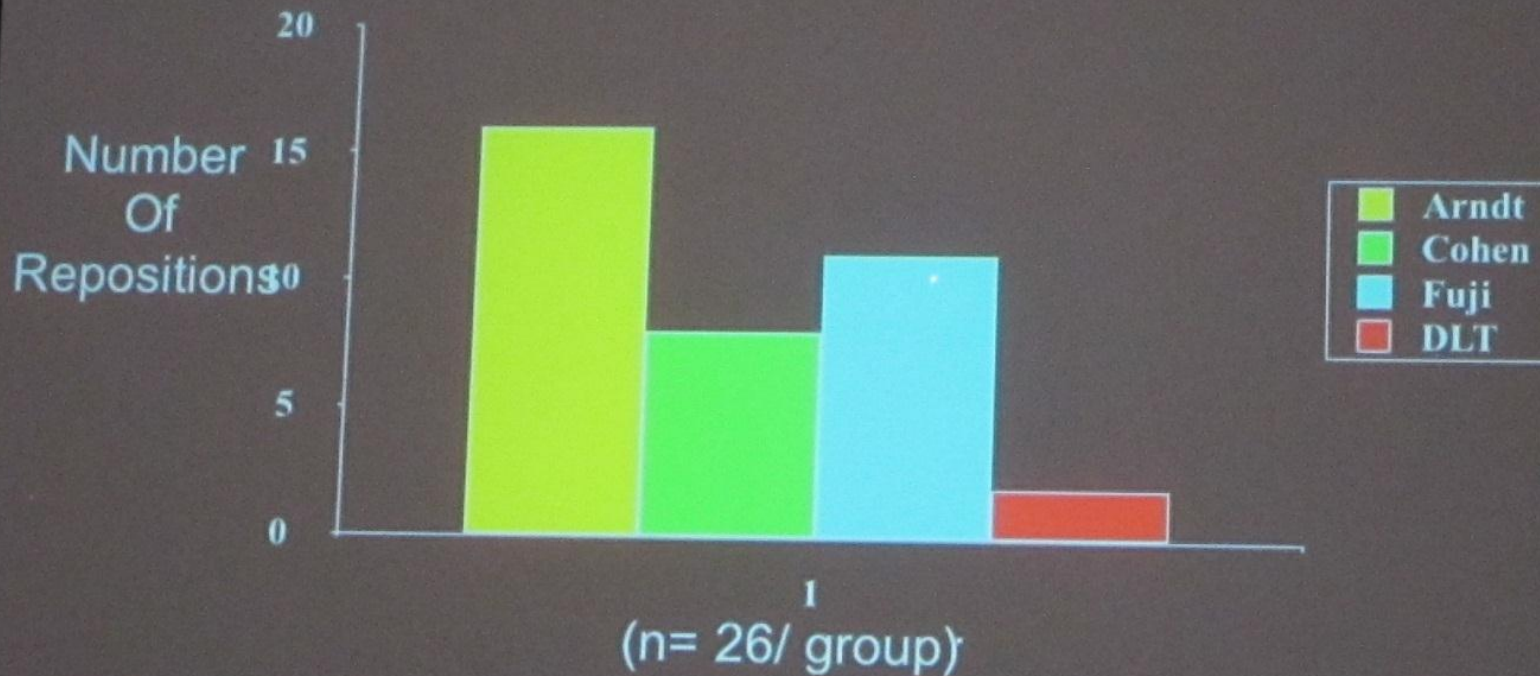


Bronchial Blockers vs. Left DLTs Left-Thoracotomy/VATS



Narayanaswamy M, et al. Anesth Analg 2009, 108: 1097-1101

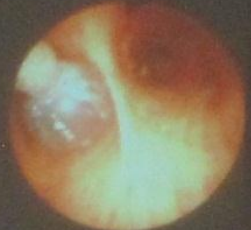
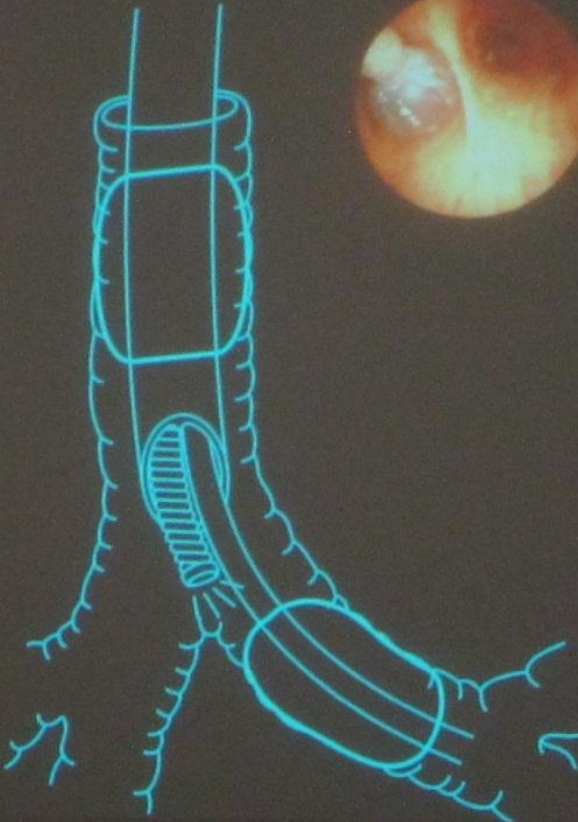
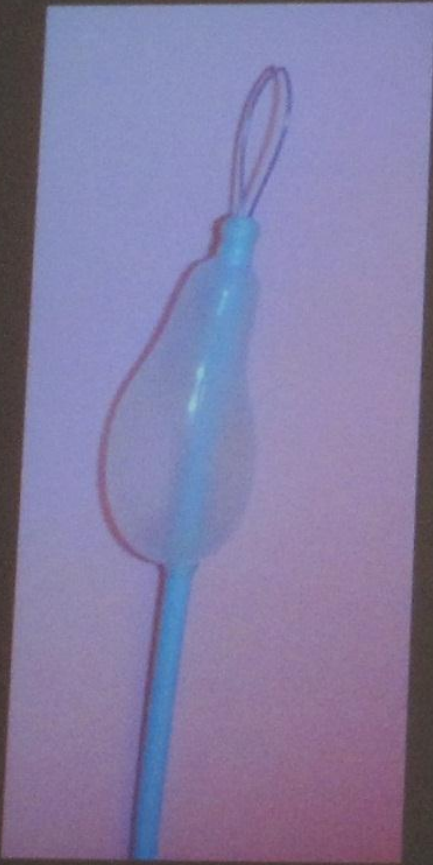
Bronchial Blockers vs. Left DLTs Left-Thoracotomy/VATS



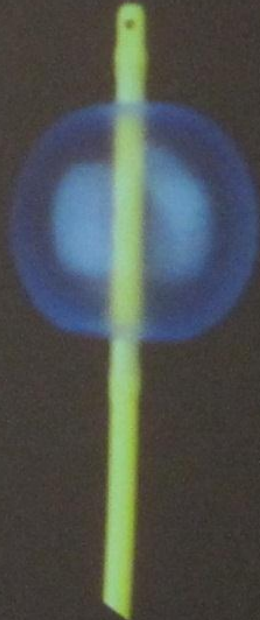
Narayanaswamy M, et al. Anesth Analg 2009, 108: 1097-1101

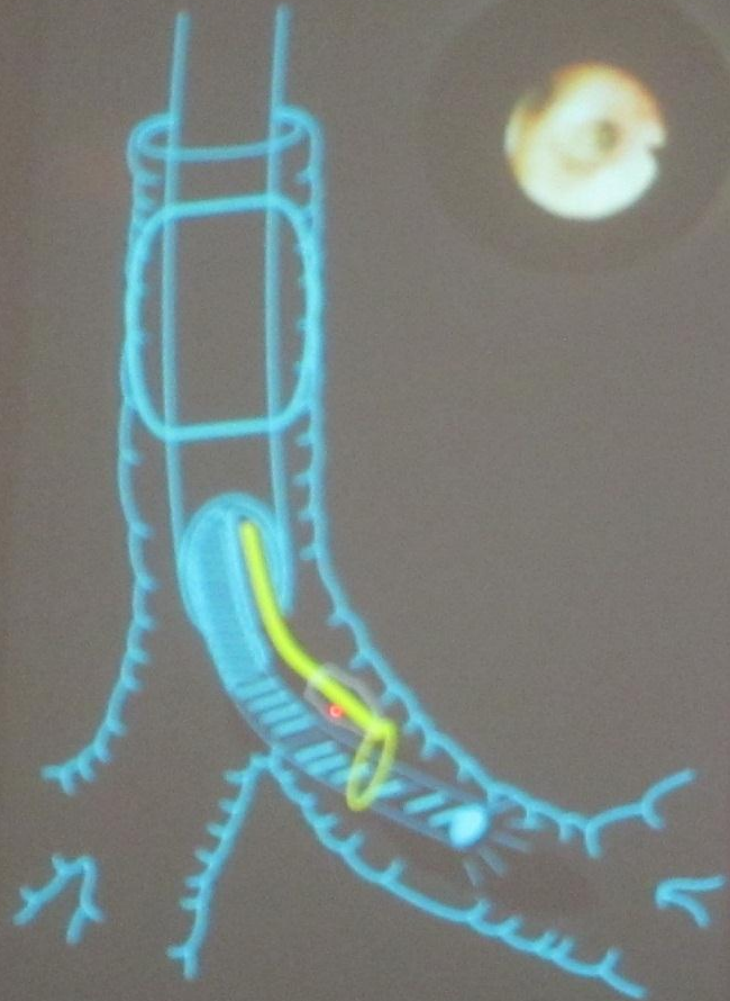
Arndt Blockers

Elliptical

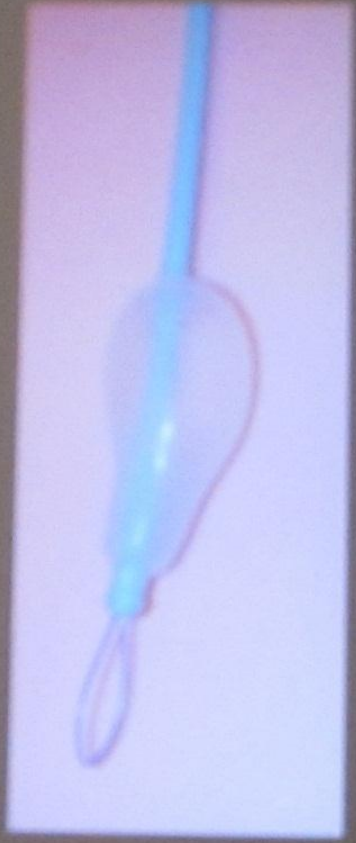


Spherical

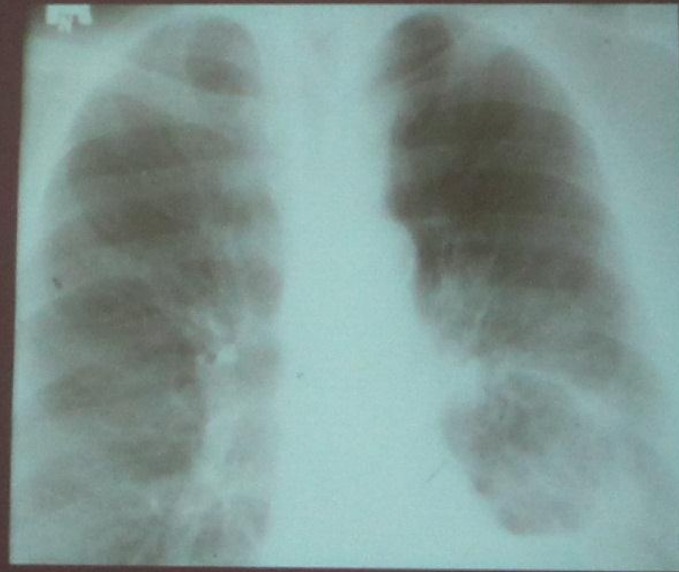
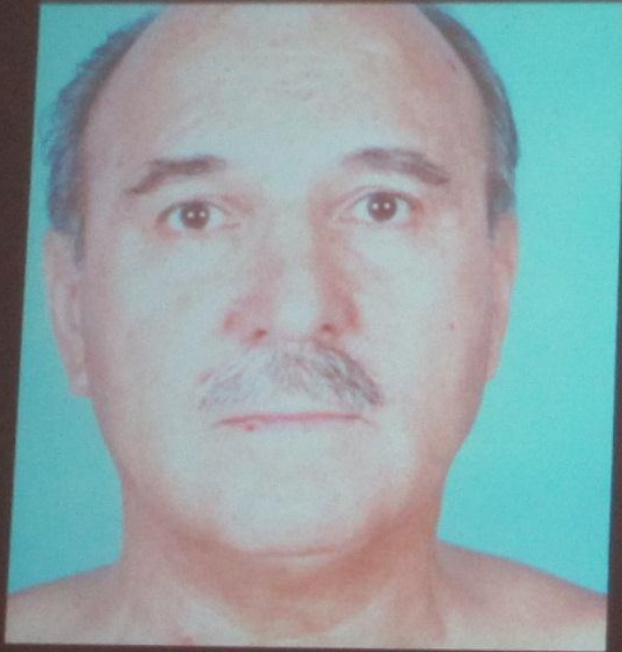




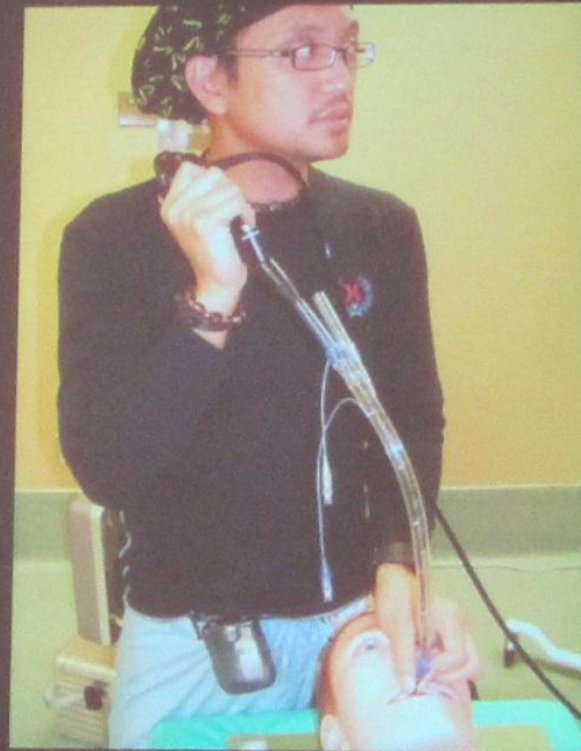
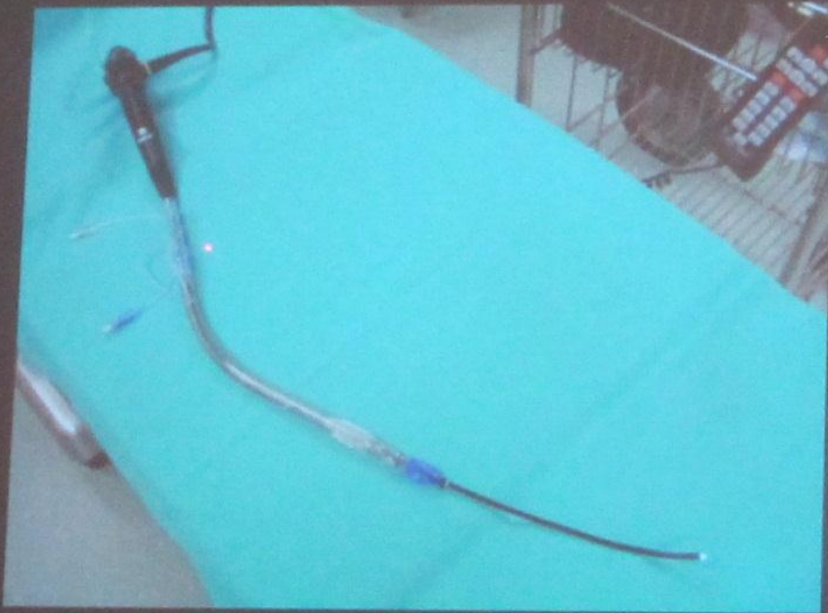
Arndt



62 y.o. Male, Left Lower Lobe Lung
Cancer, Previous Failed Intubation



Awake Fiberoptic Double-Lumen Intubation

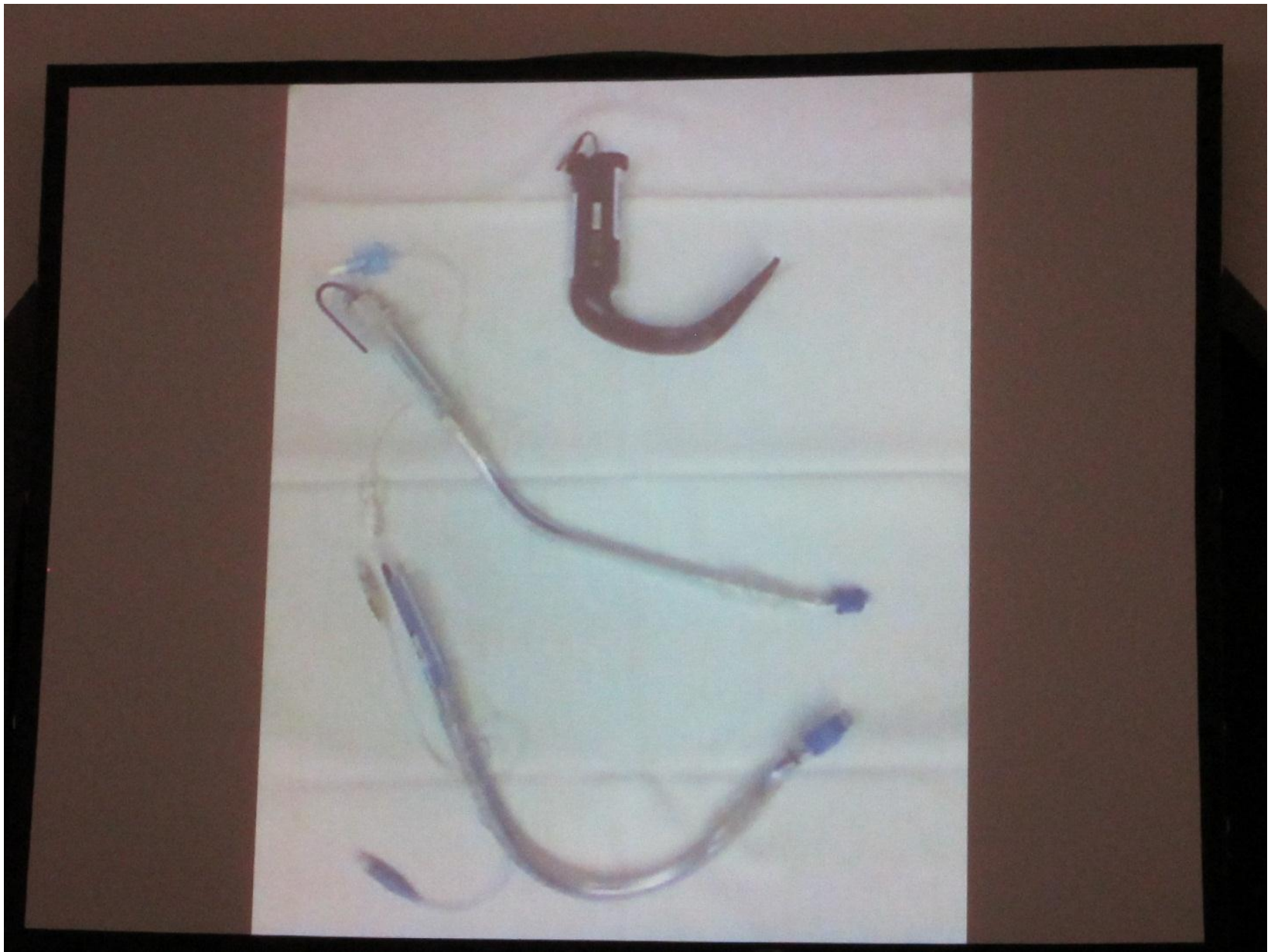


Routine Clinical Practice Effectiveness of the Glidescope in Difficult Airway Management

Aziz MF, et al. *Anesthesiology*. 2011 Jan;114(1):34-41.



- ◆ Overall success
Glidescope 97% (1,944 of 2,004)
- ◆ Glidescope Success after failed direct laryngoscopy 94% (224 of 239)
- ◆ Predictors of Glidescope failure: altered neck anatomy, surgical scar, radiation changes, or mass.





A



B

Video-Laryngoscope + Tube Exchanger

Glidescope



**Snapping of Cook exchange catheter
with subsequent dislodgement
in a double-lumen endotracheal tube**

Schulte TE, Tinker JH. *Anesth Analg.* 2007 Oct;105(4):1174-5.



Rush

Mallinckrodt

Fuji



Storz DCI Video Laryngoscope System



Direct laryngoscopic
view, Grade 3
"keyhole" effect



Video view,
Grade 1



Easy, DLT
intubation
using video
view

Difficult Airways

- ◆ Video or Indirect Laryngoscopy Indirect View Intubating Scope

- » AirTraq Laryngoscope

- Hirabayashi and Seo (2007) *Can J Anes*
 - Case series (10 pts)
 - Improved visualization
 - No failures



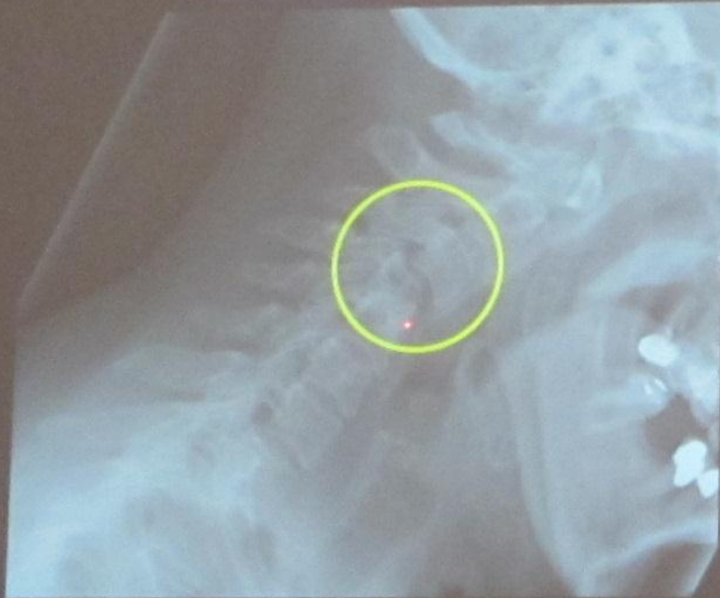
69 y.o. Female, R Upper Lobe Ca.
VATS Lobectomy



- ◆ Severe Rheumatoid Arthritis
- ◆ Neck Pain on Extension
- ◆ Gastro-Esophageal Reflux

69 y.o. Female, R Upper Lobe Ca.

Neck flexion



- ◆ Severe Rheumatoid arthritis
- ◆ Neck pain on Extension
- ◆ GE Reflux
- ◆ Cervical Spine X-ray Instability C3-C4 in Flexion

Single- vs. Double-Lumen Tubes in Cross-Section



8.0

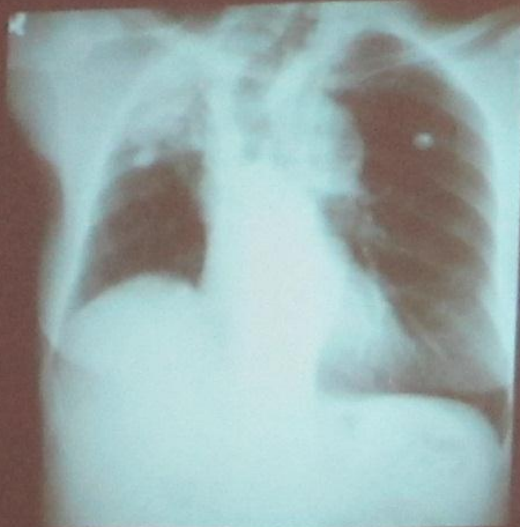
35 Fr

10.0

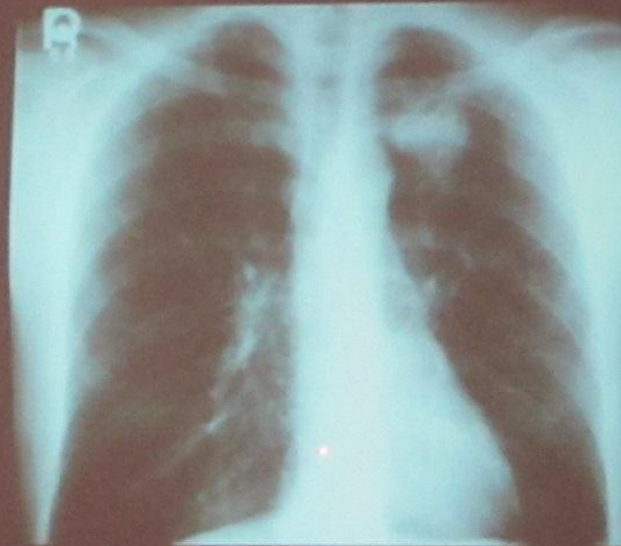
41 Fr

Lung Isolation in a Patient with a Difficult Airway

Difficult Lower Airways

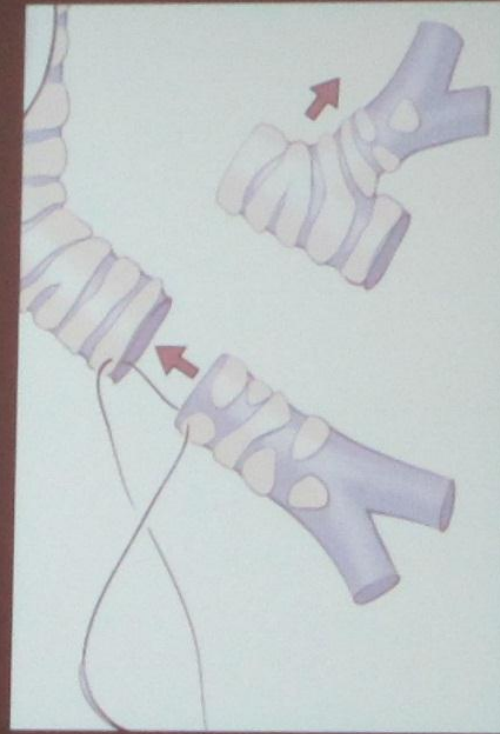
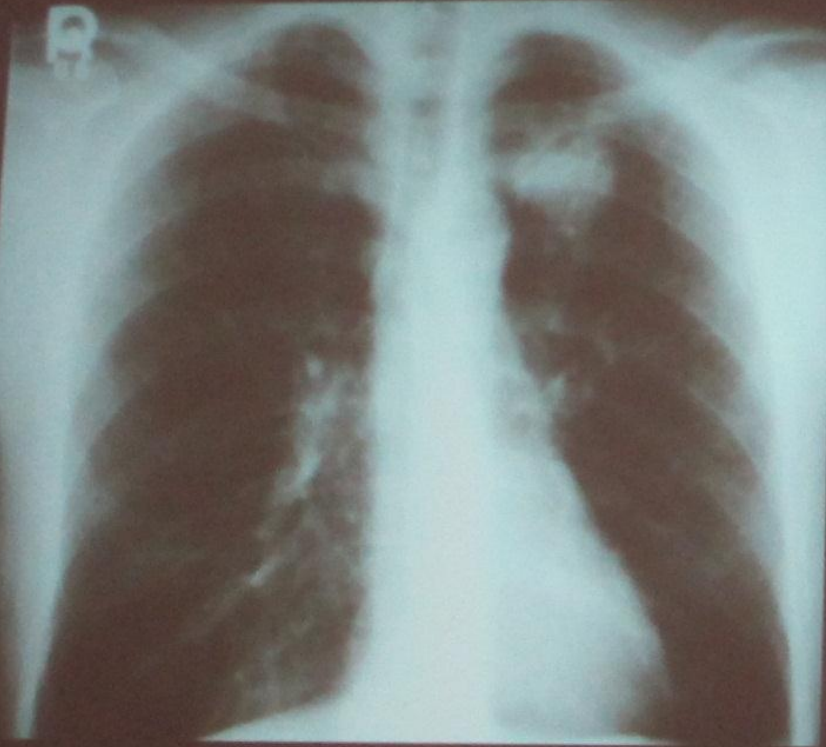


60 y.o. Female
Recurrent Ca.
R Middle Lobe



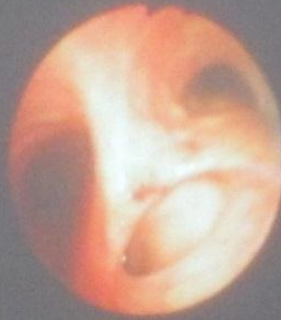
70 y.o. Male
Left Upper
Sleeve Lobectomy

Left Upper Lobe Sleeve Resection



Final Jeopardy:

68 y.o. Female, Mid-esophageal Ca.
Tracheo-Esophageal Fistula, R Thoracotomy



Au C, Can J Anesth 1999, 46: 688





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[Simulations](#)

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[March 2007](#)

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About Us

welcome to thoracic anesthesia.com

thoracicanesthesia.com is an internet based education, information, and reference service for issues related to anesthesia for thoracic surgery.

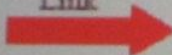
this service is a free-of-charge continuing medical education activity which is offered to all practitioners of anesthesia and related areas of medicine and surgery. by clicking on the "branchial anatomy quiz" tab readers can complete a needs assessment of their knowledge of tracheo-bronchial anatomy which is fundamental to the skill of lung isolation for thoracic anesthesia. after completion of the quiz using the user name and password generated for the quiz, readers have access at any time to the bronchoscopy simulator which is an interactive teaching simulation of fiberoptic bronchoscopy. Also, after completing the quiz, readers will have access to general news articles on lung isolation in the "restricted articles" section on the homepage.

there will be a regular update of articles recently published in the medical literature and a selection of relevant articles pertaining to thoracic anesthesia.

readers are encouraged to submit clinical questions or cases to the "contact us" section which will then be discussed and answered by members of the International Editorial Board. As questions are answered they will be reviewed and posted on the web site along with the discussion and will form a library for future reference.

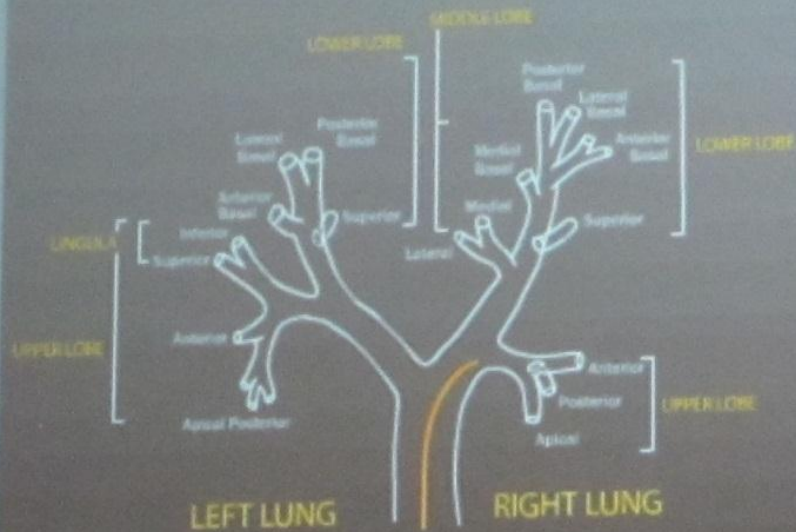
Authors and readers are encouraged to submit summaries or abstracts of relevant published information from other sources.

Simulator
Link

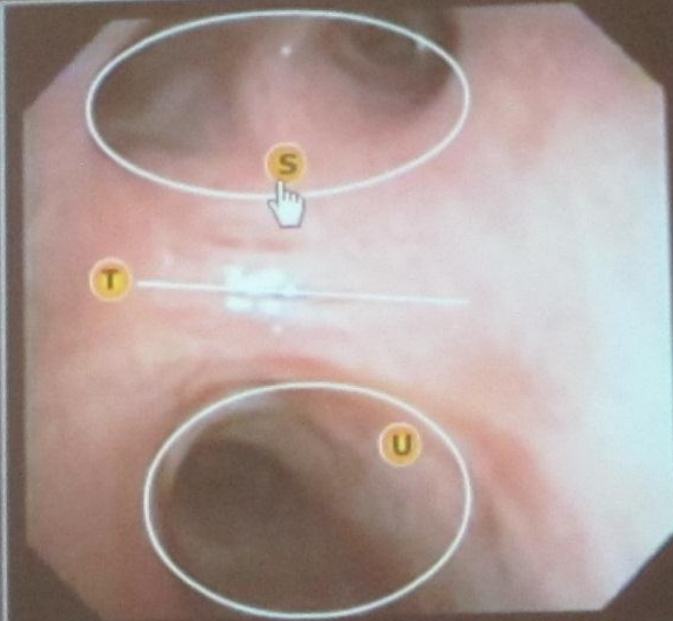


Thoracicanesthesia.com Bronchoscopy Simulation

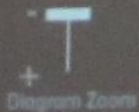
BRONCHIAL TREE NAVIGATION MAP VIEW



BRONCHOSCOPE VIEW



LABELING CONTROLS



- Bronchial Tree Labels
- Bronchial Tree Diagram
- Bronchoscope View Labels
- Bronchoscope Indicator

