

FINAL PROGRAMME

Friday, 12th March

14.00-14.30	Registration
15.00-15.30	Prof. D. Raptopoulos Prof. Ch. Papakonstantinou
15.30-16.00	Anaesthesia in Pigs – Dr. I. Savas Surgery in Pigs; what's common in humans – Dr. L. Papazoglou
16.00-17.30	PRINCIPLES OF THORACOSCOPY Chairmen: Prof. D. Raptopoulos, Prof. Ch. Papakonstantinou ANAESTHESIA FOR THORACOSCOPY: Dr. E. Chrona VATS: HISTORY & PRINCIPLES: Dr. K. Athanassiadi MEDICAL THORACOSCOPY: Dr. E. Balis SURGICAL THORACOSCOPY: Dr. K. Iliadis
17.30-18.00	Coffee break
18.00-19.30	PLEURAL DISEASES Chairmen: Dr. Iliadis, Dr. G. Marulli PNEUMOTHORAX: Dr. I. Papachristos MESOTHELIOMA : Dr. I. Papachristos EMPYEMA: Dr. N. Anastasiou LUNG VOLUME REDUCTION SURGERY: Dr. N. Anastasiou

Saturday, 13th March

09.00 - 13.00	Hands-on Workshop
13.00-14.00	Light lunch with tutors
14.00 - 16.00	MEDIASTINUM & INFECTIONS Chairmen: Dr. N. Anastasiou, Dr. K. Anastasiadis MEDIASTINAL LESIONS: Dr. K. Iliadis PULMONARY HYDATIDOSIS: Dr. K. Athanassiadi BRONCHOSCOPY FLEXIBLE & RIGID BRONCHOSCOPY; FILMS: Dr. E. Balis & Dr. K. Athanassiadi EBUS: Dr. K. Kotsifas
16.00-16.30	Coffee break
16.30-19.00	HOW TO DO IT! –TIPPS Chairmen: Dr. K. Athanassiadi, Dr. K. Iliadis CHEST WALL – NUSS PROCEDURE: Prof. M. Yukzel Thymectomy : VATS – ROBOTICS: Dr. G. MARULLI ROBOTICS –VATS LOBECTOMY: Dr. F. Melfi META-ANALYSIS OF VATS LOBECTOMY: Prof. R. Schmid
21.00	Dinner (tutors & students)

Sunday, 14th March

09.00 - 12.00	Hands-on Workshop
12.30-13.00	Conclusions

Hands-on Thoracoscopic Workshop

March 12-14, 2010
Thessaloniki, Greece

Under the Auspices of:
European Association of Cardiothoracic Surgery
Hellenic Society of Cardiothoracic & Vascular Surgery

Secretariat: E-mail: agronca@otenet.gr

Pneumothorax

Lt. Col. Ioannis Ch. PAPACHRISTOS

Consultant Thoracic Surgeon

The "424 Military Gen. Hospital," Thessaloniki, Greece

ESTS Regent for Greece

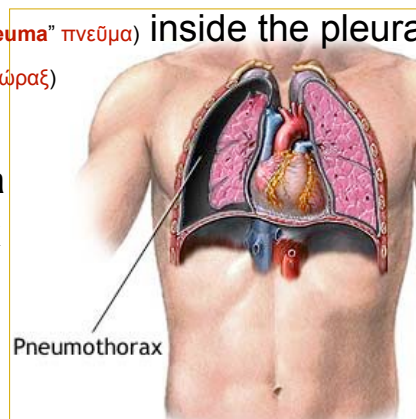


Hands On Thoracoscopic Course
12.3.2010

www.icp-med.gr

Pneumothorax / plural: *Pneumothoraces*

- Free air (Hellenic word "**pneuma**" πνεῦμα) inside the pleural cavity (Hellenic w. "**thorax**" θώραξ)
- **Traumatic Pn/x**
- Due to **barotrauma**
- **Spontaneous Pn/x**
- **Tension Pn/x**
- **Recurrent Pn/x**
- **Persistent Pn/x**
- Small Medium Large-sized Pn/x

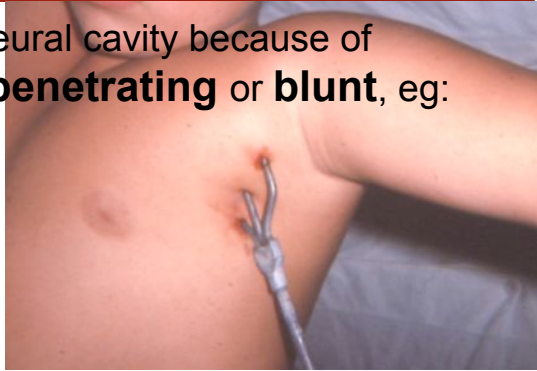


Hands On Thoracoscopic Course
12.3.2010

www.icp-med.gr

Traumatic Pn/x

- Air enters the pleural cavity because of trauma, either **penetrating** or **blunt**, eg:
 - Gunshot
 - Stabbing
 - Iatrogenic
 - Compression
 - Deceleration
- The lungs were previously normal & healthy, i.e. without any abnormalities such as bullae



Hands On Thoracoscopic Course
12.3.2010

www.icp-med.gr³

Pn/x due to barotrauma

- Caused by the rupture of the pulmonary surface because of excessive pressure applied to the bronchial tree.
 - Usually the latter pressure has built up because of diving to significant depths
 - ($\approx +1$ atm every 10m of sea water below)
 - Possible to be associated with mechanical ventilation

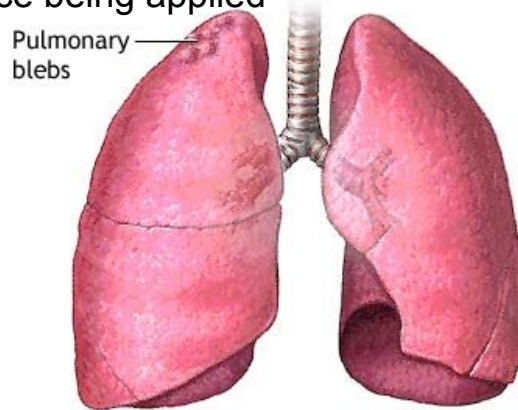


Hands On Thoracoscopic Course
12.3.2010

www.icp-med.gr⁴

Spontaneous Pn/x

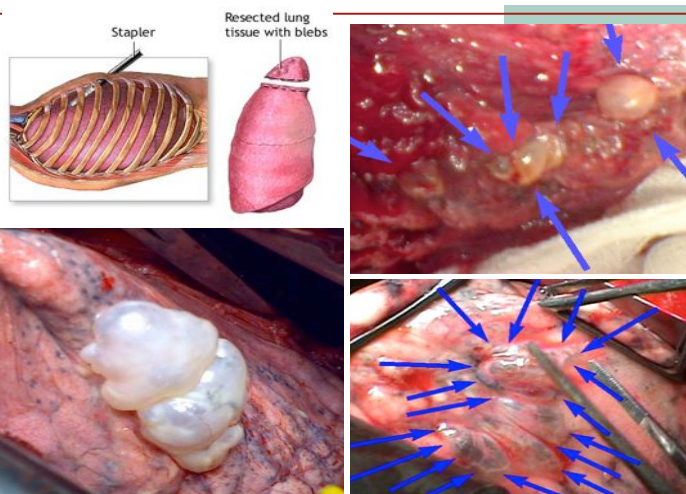
- The Pn/x occurs without any trauma or significant force being applied



Hands On Thoracoscopic Course
12.3.2010

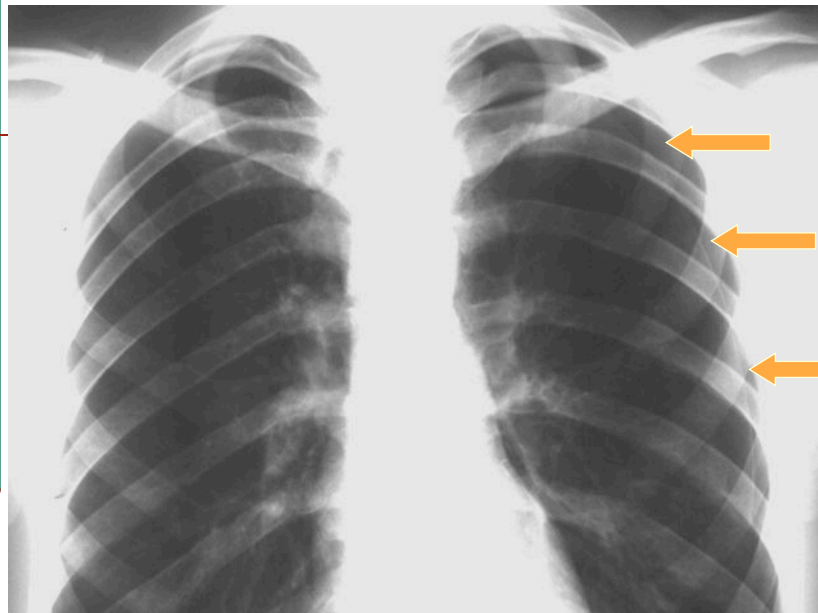
www.icp-med.gr⁵

Bullae blebs



Hands On Thoracoscopic Course
12.3.2010

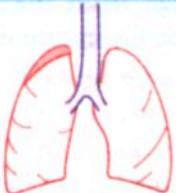
www.icp-med.gr⁶



12.3.2010

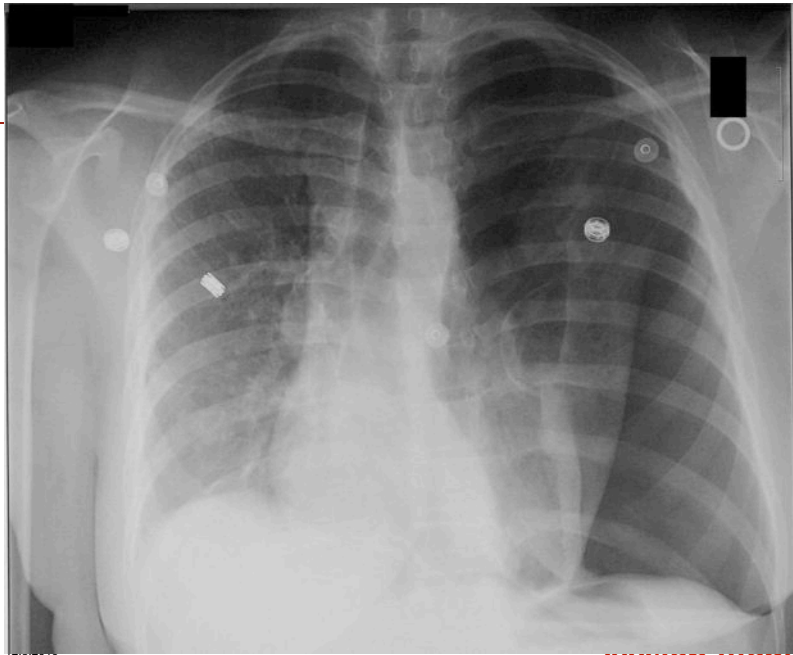
www.icp-med.gr⁷

Size

Small pneumothorax	Medium pneumothorax	Large pneumothorax
		
Small rim of air Best seen on expiratory X-ray <20% of radiographic volume	Definite 20 to 50%	Obvious >50% radiographic volume Some shift of trachea and mediastinum

12.3.2010

www.icp-med.gr⁸



WHEN? Indications for Surgical Rx-1

- Persistent Pn/x
- Recurrent Pn/x
- Failure to achieve full pulmonary re-expansion despite the insertion of an apical drain:
 - Usually due to Massive air leak
- Presence of bulla sizeable enough to be apparent of plain CXR



WHEN? Indications for Surgical Rx-2

- Special socio-professional indications, eg:
 - Pilots
 - Bus drivers
 - Remote area inhabitants
- Complication of Pn/x
 - Haemothorax
 - Empyema thoracis
 - Chronic pn/x
- Bilateral spontaneous pn/x



Hands On Thoracoscopic Course
12.3.2010

www.icp-med.gr¹¹

HOW ? Surgical Rx consist of:

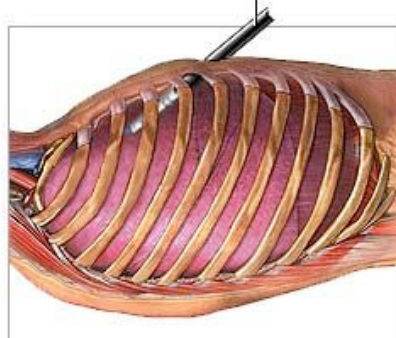
- **Bullectomy** - Resection or sewing (either manually or by stapling) of bullae found at surgery
- Bullectomy **ALONE** or followed by:
- A way of causing dense **adhesions** between the pulmonary surface and the chest wall such as:
 - **Abrasion** pleurodesis (or **chemical** pleurodesis...!...)
 - **Pleurectomy** (parietal)
 - both can be carried out in a fashion either extensive or limited

Hands On Thoracoscopic Course
12.3.2010

www.icp-med.gr¹²

Exposure

- Mini thoracotomy – axillary
- VATS



Resected lung tissue with blebs



Hands On Thoracoscopic Course
12.3.2010

www.icp-med.gr¹³

Post op Recurrence of Pn/x - 1

- Ipsilateral hemithorax recurrence reported up to unacceptable **16%** whenever **Bullectomy Alone** is only carried out
- The benefit of the additional pleurodesis (either by abrasion or by pleurectomy) is, therefore, apparent.

Horio H, Nomori H, Kobayashi R, **Naruke T**, Suemasu K. Impact of additional pleurodesis in video-assisted thoracoscopic bullectomy for primary spontaneous pneumothorax. **Surg Endosc** 2002 Apr; 16(4) : 630-4

Hands On Thoracoscopic Course
12.3.2010

www.icp-med.gr¹⁴

Post op Recurrence of Pn/x - 2

- Recurrence up to **1.9% - 2.5% - 3.85%** with bullectomy + pleurodesis on clinical trials (n= 53, 90 & 597 respectively) by open (mini) thoracotomy

Horio H, Nomori H, Kobayashi R, **Naruke T**, Suemasu K. Impact of additional pleurodesis in video-assisted thoracoscopic bullectomy for primary spontaneous pneumothorax. **Surg Endosc** 2002 Apr; 16(4) : 630-4

Leo F, Pastorino U, **Goldstraw P**. Pleurectomy in primary pneumothorax: is extensive pleurectomy necessary? **J Cardiovasc Surg (Torino)** 2000 Aug; 41(4): 633-6

Cardillo G, Facciolo F, Regal M, Carbone L et al. Recurrences following videothoracoscopic treatment of primary spontaneous pneumothorax: the role of redo-videothoracoscopy. **Eur J Cardiothorac Surg** 2001 Apr; 19(4): 369-9

Hands On Thoracoscopic Course
12.3.2010

www.icp-med.gr¹⁵

Post VATS Recurrence of Pn/x - 3

- Recurrence up to **4.8% - 5.3%** with VATS surgical Rx for Pn/x on clinical trials (n= 597 & 74 pts respectively).

Cardillo G, Facciolo F, Regal M, Carbone L et al. Recurrences following videothoracoscopic treatment of primary spontaneous pneumothorax: the role of redo-videothoracoscopy. **Eur J Cardiothorac Surg** 2001 Apr; 19(4): 369-9

De Vos B, Hendriks J, Van Schil P, Van Hee R, Hendricks L. Long-term results after video-assisted thoracic surgery for spontaneous pneumothorax. **Acta Chir Belg** 2002 Dec; 102(6): 439-44

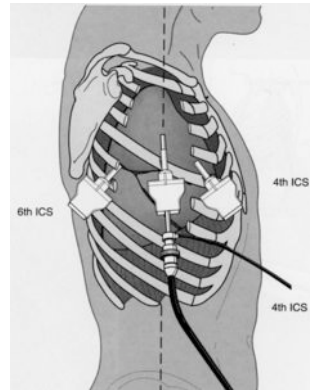
- Arguable statistics based on retrospective data
- Excellent opportunity for Training in VATS

Hands On Thoracoscopic Course
12.3.2010

www.icp-med.gr¹⁶

Photographs

■ VATS technique



Hands On Thoracoscopic Course
12.3.2010

www.icp-med.gr¹⁷

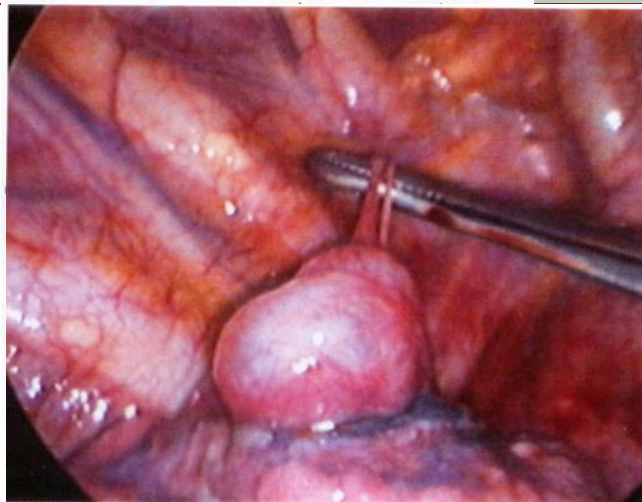
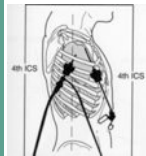
Bleb at the Apical Lower Segment



Hands On Thoracoscopic Course
12.3.2010

www.icp-med.gr¹⁸

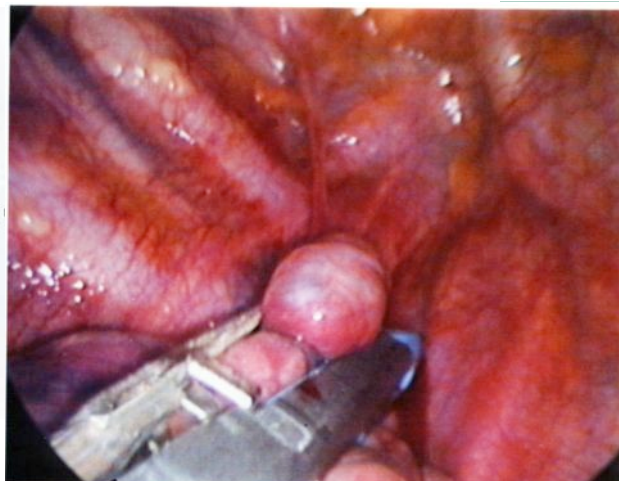
Bleb at the Upper Lobe



Hands On Thoracoscopic Course
12.3.2010

www.icp-med.gr¹⁹

Endo-GIA stapling ($\pm$ knife)

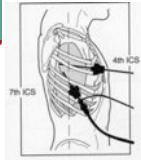


Hands On Thoracoscopic Course
12.3.2010

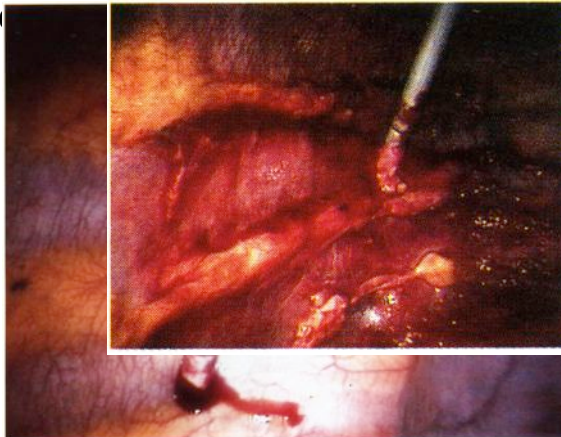
www.icp-med.gr²⁰

Mechanical Pleurodesis

- Disposable Kittner dissector to abrade the parietal pleura



Hands On Thoracoscopic Course
12.3.2010



www.icp-med.gr²¹

Mechanical Pleurodesis: Swab/Sponge



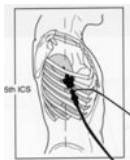
Hands On Thoracoscopic Course
12.3.2010



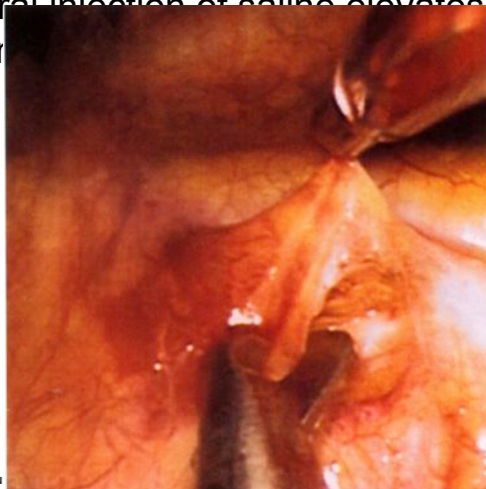
www.icp-med.gr²²

Apical Pleurectomy

- Subpleural injection of saline elevates the pleura and

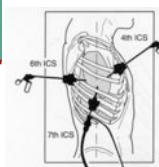


Hands On Thoracoscopic Course
12.3.2010

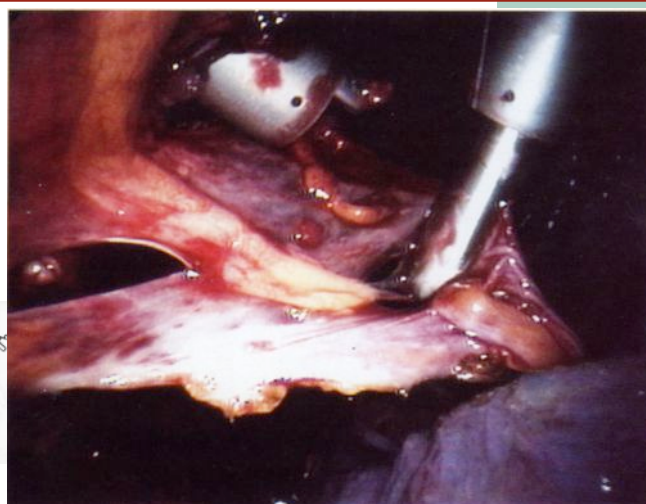


www.icp-med.gr²³

Peeling the pleura w blunt & sharp dissection

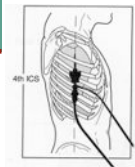


Hands On Thoracoscopic Course
12.3.2010



www.icp-med.gr²⁴

Broad bullae (Bullous Emphysema)



Hands On Thoracoscopic Course
12.3.2010

www.icp-med.gr²⁵

Free-beam LASER (Nd:YAG, CO₂, KTP)

- Base
- Argon
- Not t
- Defo
- surfa
- cavit



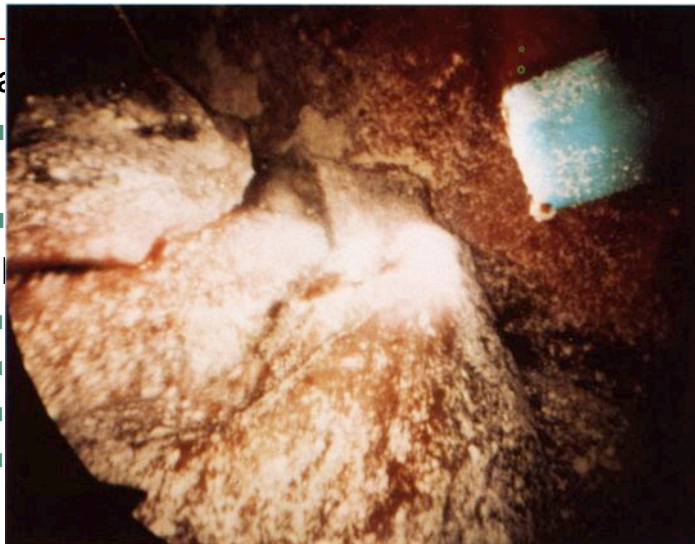
Hands On Thoracoscopic Course
12.3.2010

www.icp-med.gr²⁶

Talc Insufflation

■ Talc

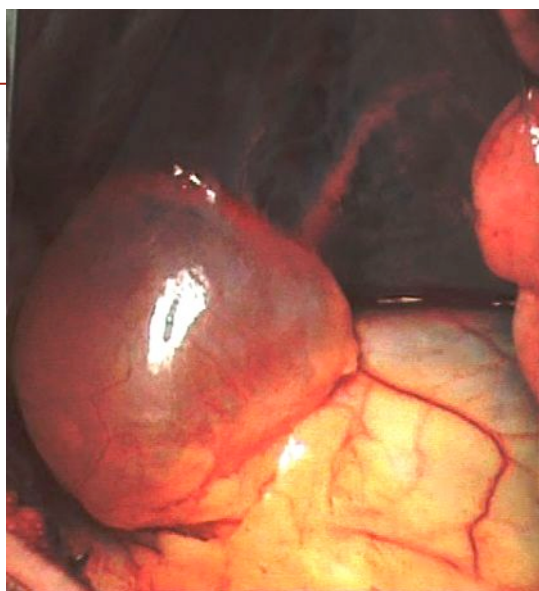
■ C



Hands On Thoracoscopic Course
12.3.2010

www.icp-med.gr

27



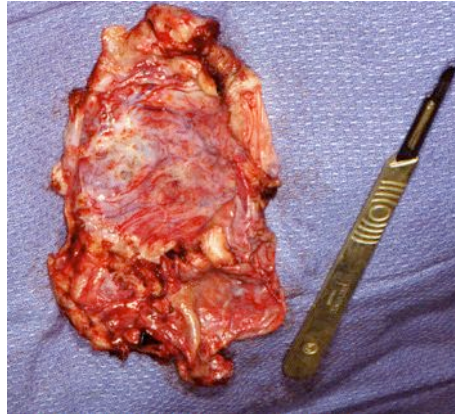
12.3.2010

www.icp-med.gr

28

VATS Surgeon's Trophy..!

- A resected bleb specimen, measuring 15 x 15 cms



Hands On Thoracoscopic Course
12.3.2010

www.icp-med.gr²⁹

Many thanks for your attention

