FINAL PROGRAMME

Friday, 12th March

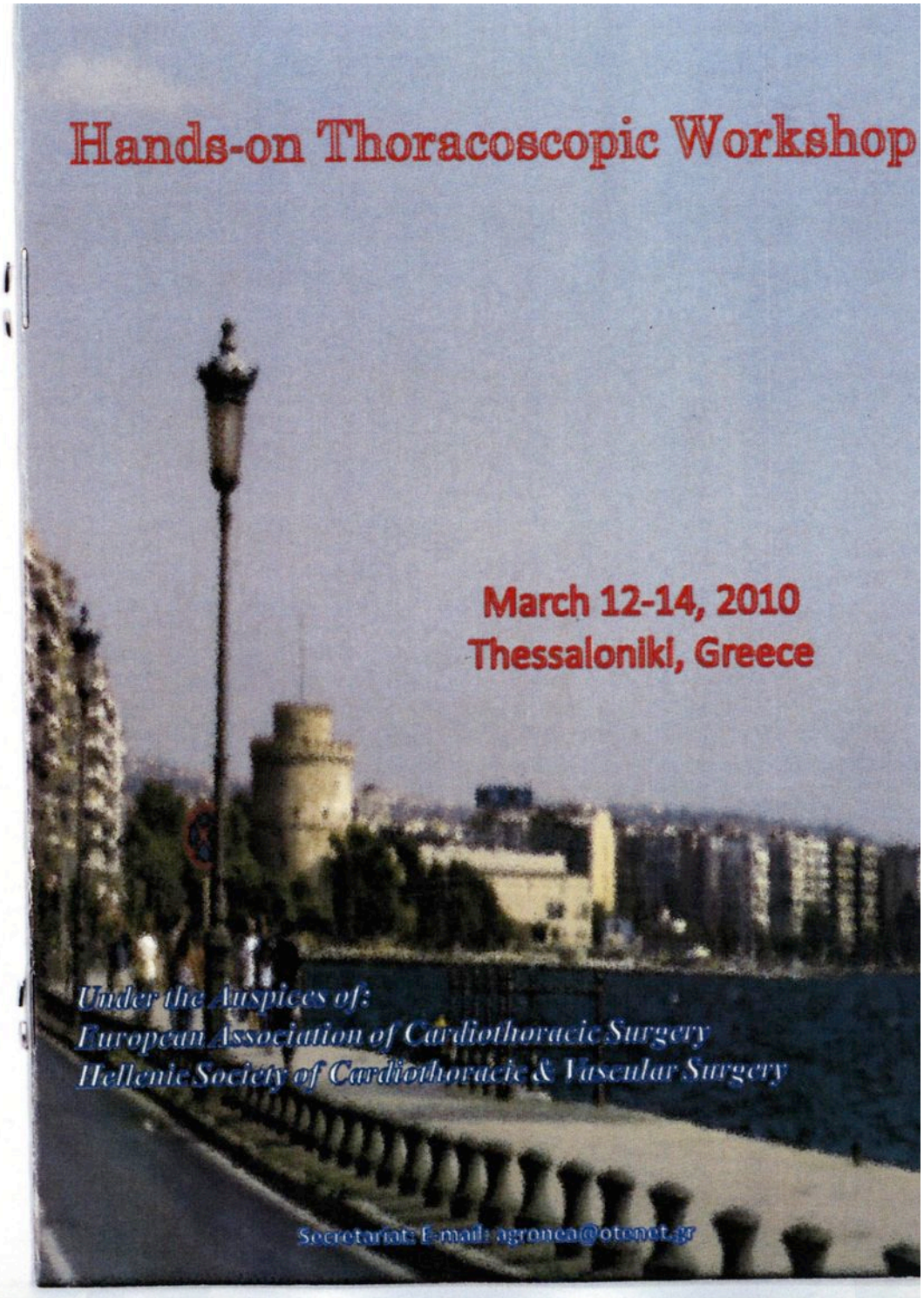
14.00-14.30	Registration
15.00-15.30	**Prof. D. Raptopoulos** **Prof. Ch. Papakonstantinou**
15.30-16.00	**Anaesthesia in Pigs – Dr. I. Savas** **Surgery in Pigs; what's common in humans – Dr. L. Papazoglou**
16.00-17.30	**PRINCIPLES OF THORACOSCOPY** Chairmen: Prof. D. Raptopoulos, Prof. Ch. Papakonstantinou 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**



Mesothelioma

Lt. Col. **Ioannis Ch. PAPACHRISTOS**

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The "**424**" Military General Hospital, Thessaloniki, Greece
ESTS Regent for Greece

12.3.2010

Overview - 1

- **Rare** malignant neoplasm
- ≈ 2,500 people in the US every year
- It can affect the **pleurae** (both parietal & visceral), the **pericardium** and the **peritoneum**
- *Deadly* disease
- *Extremely difficult* to treat & to achieve reasonably optimistic end-results
- Median Overall survival **1 yr**
- Usually older men, aged 72-yr

Overview - 2

- Previous exposure to **asbestos**
  - **latency** period: 20-40 yrs
  - Shipyards, vehicles' brakes, fire-resistant materials for roofs, tiles, fireplaces etc
- Radiotherapy and viruses (SV-40 etc) may also be associated with mesothelioma
- Histology subtypes:
  - Epithelioid (common)
  - Sarcomatoid
  - Biphasic or mixed

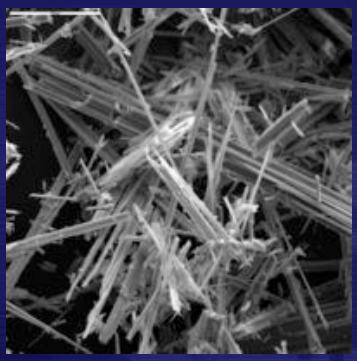
Asbestos:

Muscovite

Chrysotile

Forms of Asbestos

Asbestos Fibres



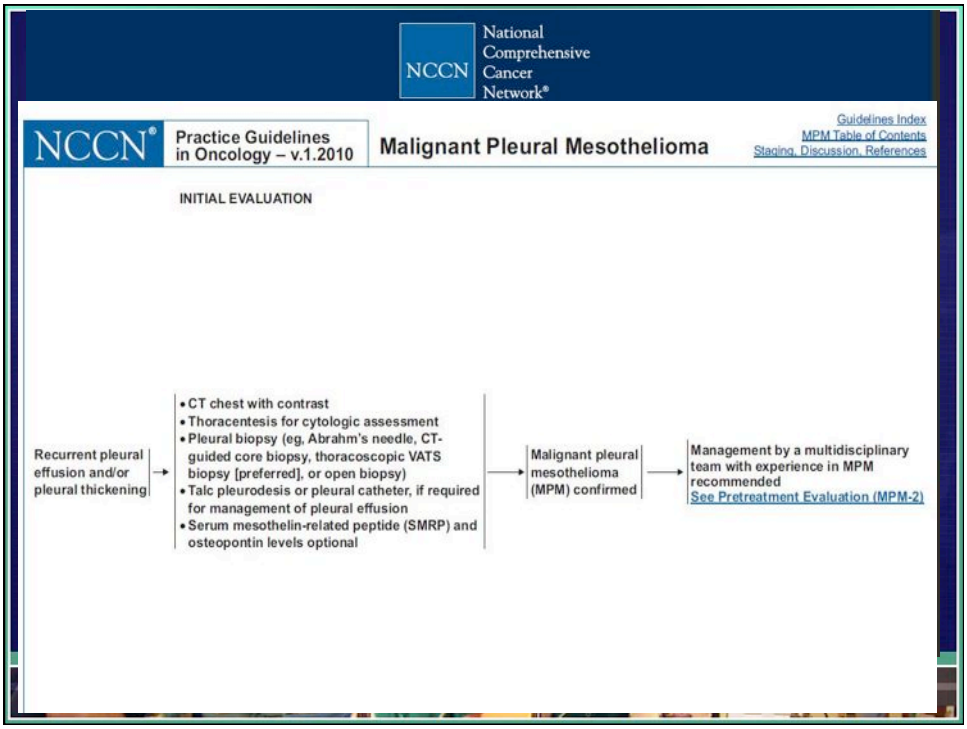
Anthophyllite

Controversies

- Once therapeutic *Nihilism* was usually the case amongst physicians because of MPM's poorest prognosis despite radical attempts to Rx
- *Extremely* aggressive & radical Ops *alone* did *not* offer chances for cure:
  - Pleuropneumonectomy or Extrapleural pneumonectomy
- *Multimodality* Rx achieved some relatively better results occasionally
- *Lesser* surgical Ops nowadays carried out

Diagnosis

- Dyspnoea
- Chest pain
- Pleural effusion
- Cough
- Chest wall/pleural Mass(es)
- CT scanning
- Thoracentesis for Cytology
- **VATS** – Bx (preferred) or CT-guided needle Bx of pleura



Stage: T_x, T_0, T_1, T_2

IMIG Staging System for Diffuse Malignant Pleural Mesothelioma*

T	Primary Tumor
TX	Primary tumor cannot be assessed
T0	No evidence of primary tumor
T1	Tumor limited to the ipsilateral parietal pleura with or without mediastinal pleura and with or without diaphragmatic pleural involvement
T1a	No involvement of the visceral pleura
T1b	Tumor also involving the visceral pleura
T2	Tumor involving each of the ipsilateral pleural surfaces (parietal, mediastinal, diaphragmatic, and visceral pleura) with a least one of the following: -Involvement of the diaphragmatic muscle -Extension of tumor from visceral pleura into the underlying pulmonary parenchyma

Stage: T_3, T_4

T3	Locally advanced but potentially resectable tumor Tumor involving all of the ipsilateral pleural surfaces (parietal, mediastinal, diaphragmatic, and visceral pleura), with at least one of the following: -Involvement of the endothoracic fascia -Extension into the mediastinal fat -Solitary, completely resectable focus of tumor extending into the soft tissues of the chest wall -Nontransmural involvement of the pericardium
T4	Locally advanced technically unresectable tumor Tumor involving all of the ipsilateral pleural surfaces (parietal, mediastinal, diaphragmatic, and visceral pleura) with at least one of the following: -Diffuse extension or multifocal masses of tumor in the chest wall, with or without associated rib destruction -Direct transdiaphragmatic extension of the tumor to the -Direct extension of tumor to the contralateral pleura -Direct extension of the tumor to mediastinal organs -Direct extension of tumor into the spine -Tumor extending through to the internal surface of the pericardium with or without a pericardial effusion or tumor involving the myocardium

Stage: N, M

N	**Regional Lymph Nodes**
NX	Regional lymph nodes cannot be assessed
N0	No regional lymph node metastasis
N1	Metastasis to the ipsilateral bronchpulmonary or hilar lymph nodes
N2	Metastases in the subcarinal lymph node or the ipsilateral mediastinal lymph nodes including the ipsilateral internal mammary and peridiaphragmatic nodes
N3	Metastasis in contralateral mediastinal, contralateral internal mammary, ipsilateral or contralateral supraclavicular lymph nodes
M	**Distant Metastasis**
M0	No distant metastasis
M1	Distant metastasis

Stage

Stage	T	N	M
I	T1	N0	M0
IA	T1a	N0	M0
IB	T1b	N0	M0
II	T2	N0	M0
III	T1, T2	N1	M0
	T1, T2	N2	M0
	T3	N0, N1, N2	M0
IV	T4	Any N	M0
	Any T	N3	M0
	Any T	Any N	M1

Management - 1

- Multidisciplinary Team, experienced with DMM
- Rx Options include:
  - **Surgery**
  - RT
  - Chemo
  - Multimodality Rx for selected pts (stages II-III, medically operable, performance status 0)

- Pre-Rx evaluation includes:
  - Chest & abdo CT with IV contrast
  - PET scanning
  - VATS if suspicion of contralateral disease

NCCN® Practice Guidelines in Oncology – v.1.2010

Malignant Pleural Mesothelioma

Guidelines Index
MPM Table of Contents
Staging, Discussion, References

INITIAL EVALUATION

Recurrent pleural effusion and/or pleural thickening →

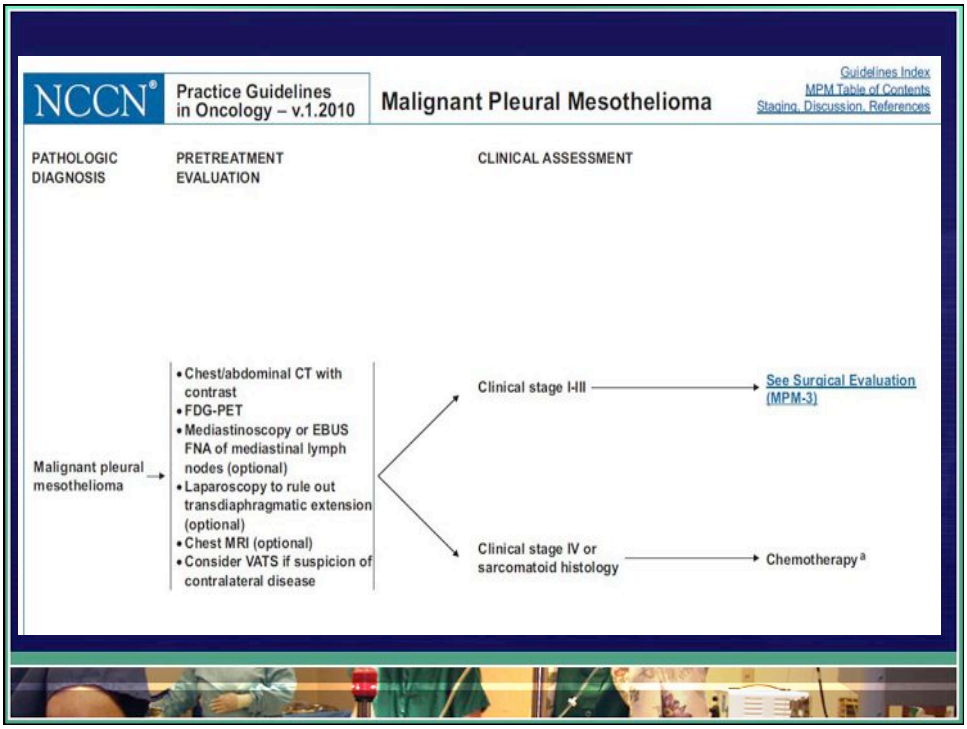
- CT chest with contrast
- Thoracentesis for cytologic assessment
- Pleural biopsy (eg, Abrahm's needle, CT-guided core biopsy, thoracoscopic VATS biopsy [preferred], or open biopsy)
- Talc pleurodesis or pleural catheter, if required for management of pleural effusion
- Serum mesothelin-related peptide (SMRP) and osteopontin levels optional

→ Malignant pleural mesothelioma (MPM) confirmed →

Management by a multidisciplinary team with experience in MPM recommended
See Pretreatment Evaluation (MPM-2)

Management - 2

- Pts with stage I-III:
  - Respiratory Function Tests
  - Quantitative V/Q scan
  - Cardiac stress tests
- **Optional** Preop tests:
  - Mediastinoscopy or EBUS (endobronchial ultrasonography) for Needle-Bx of mediastinal LNs
  - Laparoscopy
  - Chest MRI



Surgery - 1

- **P/D** Pleurectomy / Decortication
  - Complete removal of the involved pleura & all gross tumour
- **EPP** Extrapleural Pneumonectomy (or Pleuro-pneu-monectomy):
  - En-bloc resection of the involved pleura, lung, ipsilateral hemidiaphragm and pericardium
  - High mortality (≈ 15%) & morbidity
- Neither Op will yield an R_0 resection

Surgery - 2

- Recent retrospective analysis (n=663): type of surgery did not affect survival regardless of even early stage of disease
  - Tsao AS, Wistuba I, Roth JA, Kindler HL. Malignant Pleural Mesothelioma. **J Clin Oncol 2009**; 27: 2081-90
  - Flores RM, Pass HI, Seshan VE et al. Extrapleural pneumonectomy vs. pleurectomy/decortication in the surgical management of MPM: results in 663 pts. **J Thorac Cardiovasc Surg 2008**; 135: 620-6
  - Papachristos IC, Jilaihawi ANA, Prakash D. Results with radical resection in the management of malignant mesothelioma. 2nd Internatinal Congress on Lung Cancer, Crete, Greece. 9-15 Nov **1996** (n = 56 pts in 2 groups)
- P/D is more recommended than EPP in most cases

Surgery: any ***Role*** for it…?!

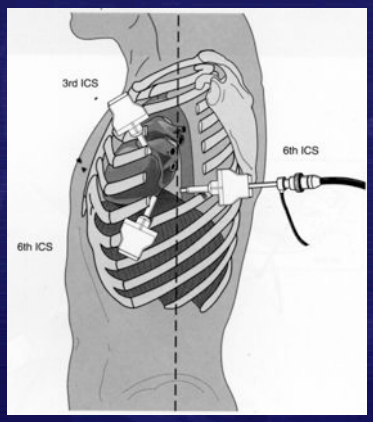
- DIAGNOSTIC role for Surgery:
  - VATS biopsy
- Therapeutic Attempt with:
  - P/D by VATS - Impractical *(?)*
- Paliative Rx with:
  - VATS Pleurodesis either by:
    - Abrasion
    - Talc
    - Chemical other

VATS – Biopsy of Pleura

PHOTOGRAPHS

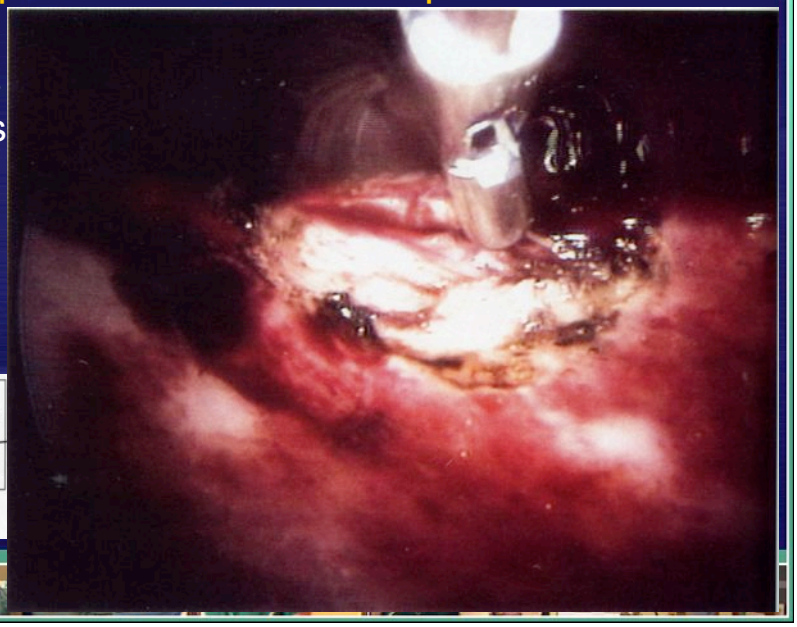
Technique

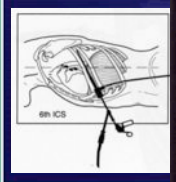
- Double-lumen ET tube
- Lateral decubitus position
- Pleural cavity inspected



Single port with 5 mm telescope

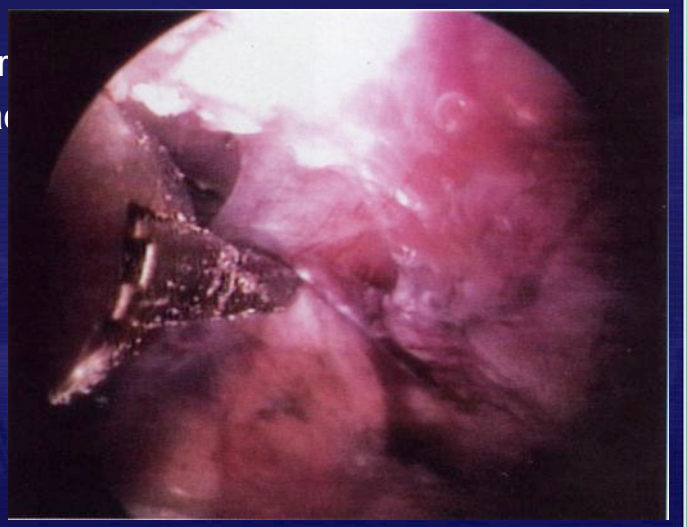
- Direct
- Asbes

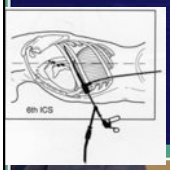




Adhesions being lysed

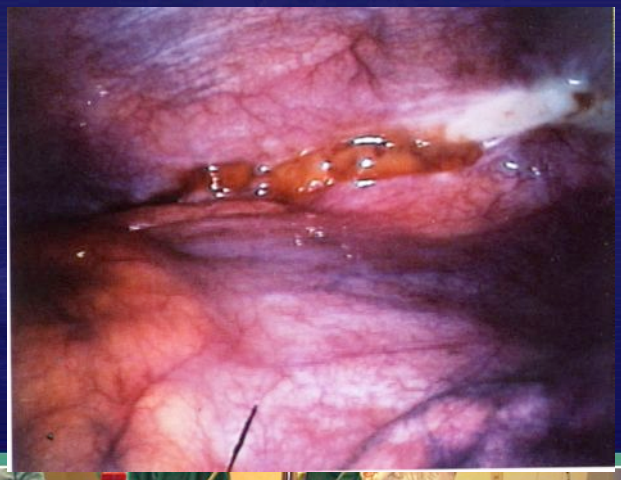
- Long scissor
- Cautery atta

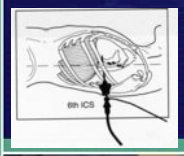




Pleural plaques

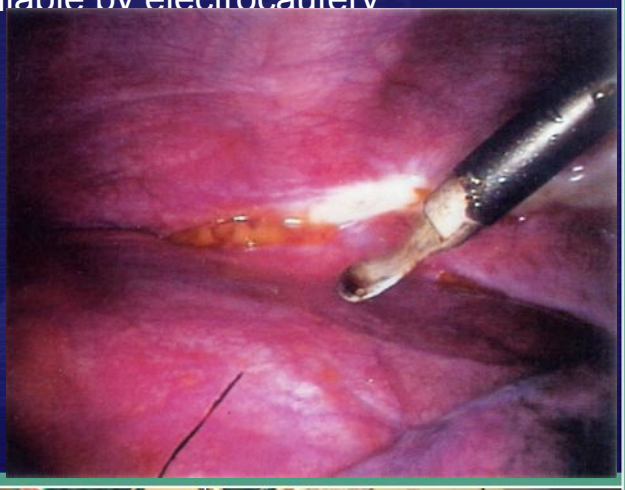
- Along Diaphragmatic & Mediastinal pleural surfaces

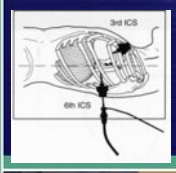




Large pleural Bx specimen

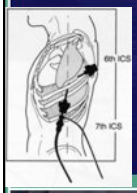
- Bleeding controllable by electrocautery
- Up to 2 x 3 cm





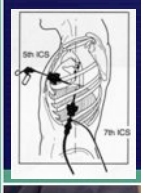
Talc pleurodesis

- The talc disperses & adheres readily to all pleural surfaces, as VATS



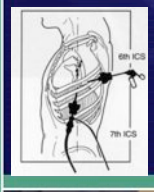
Flimsy, thin & membranous Adhesions

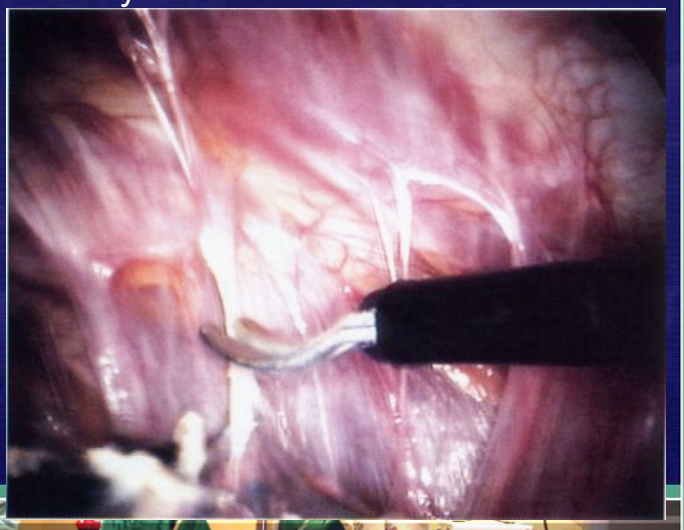
- They can be sharply divided by scissors
- Electrocautery would be needed for thick & vascular adhesions

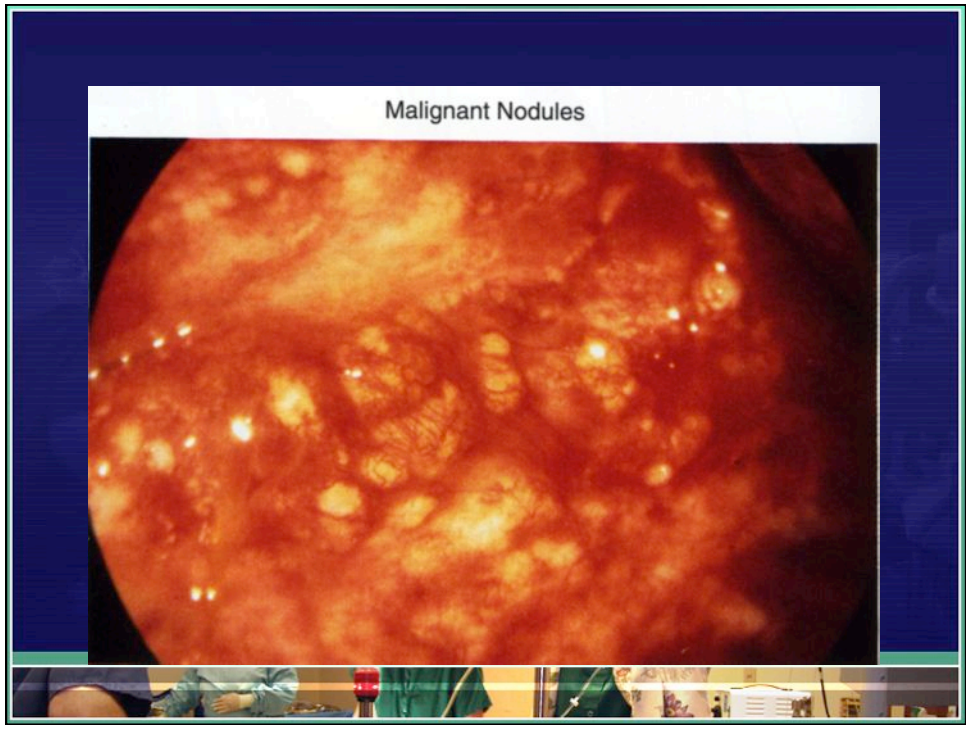


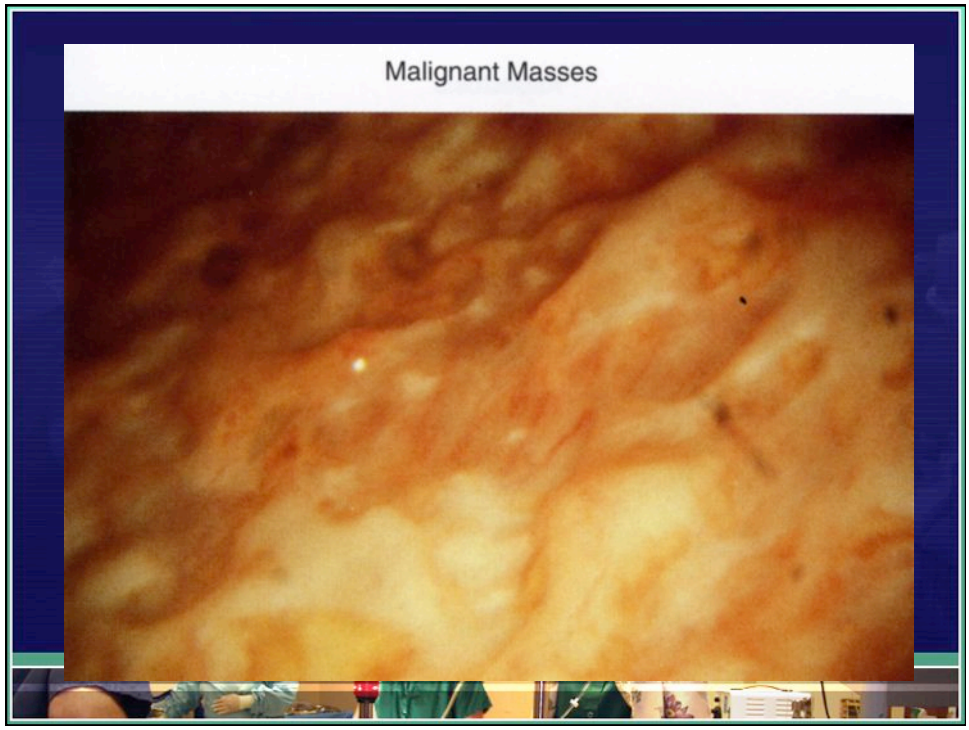
Endo Shears used to lyse adhesions between:

- pulmonary Parenchyma & chest wall
- the fissures






Malignant Nodules


Malignant Masses


THANK YOU