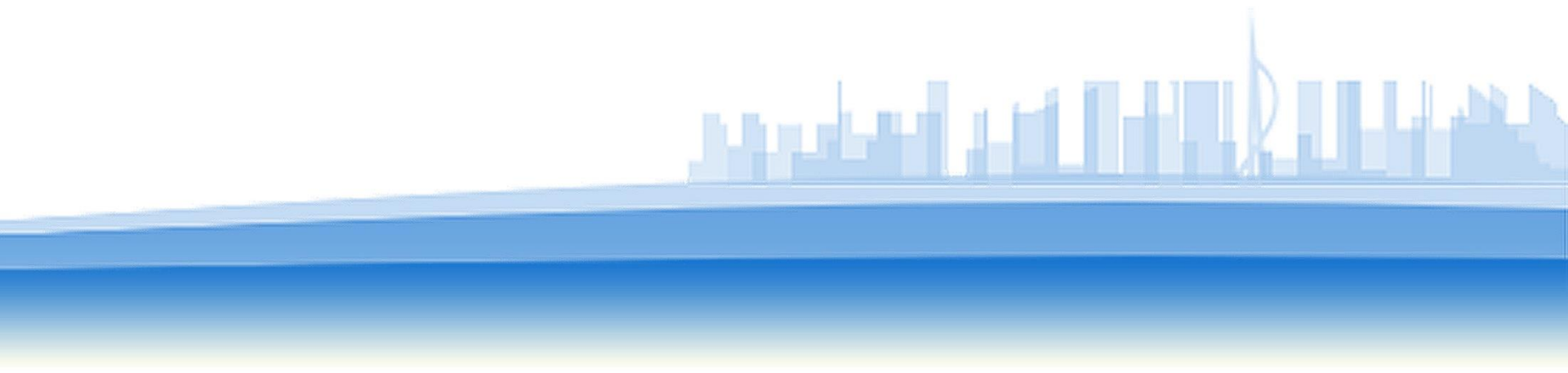


# Mesothelioma Diagnosis & Treatments in 2017

Lesley Bishop

Clinical Lead for Lung Cancer and Pleural Disease



*Brit. J. industr. Med.*, 1960, 17, 260.

# **DIFFUSE PLEURAL MESOTHELIOMA AND ASBESTOS EXPOSURE IN THE NORTH WESTERN CAPE PROVINCE**

BY

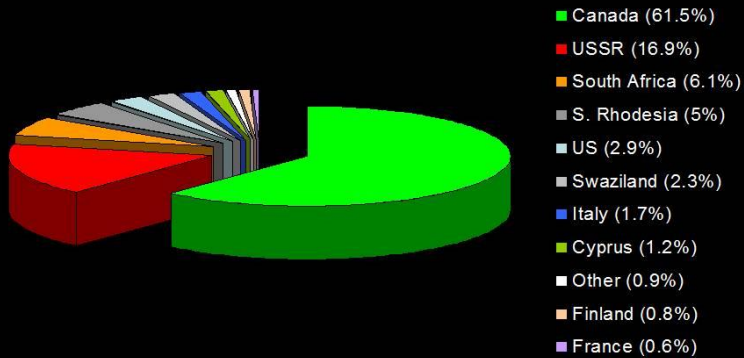
**J. C. WAGNER, C. A. SLEGGS, and PAUL MARCHAND**

*From the Pathology Division, Pneumoconiosis Research Unit of the Council for Scientific and  
Industrial Research, Johannesburg, West End Hospital, Kimberley, and the  
Department of Thoracic Surgery, University of the Witwatersrand and Johannesburg General Hospital*

(RECEIVED FOR PUBLICATION APRIL 24, 1960)



### Global Asbestos Fiber Production, 1950

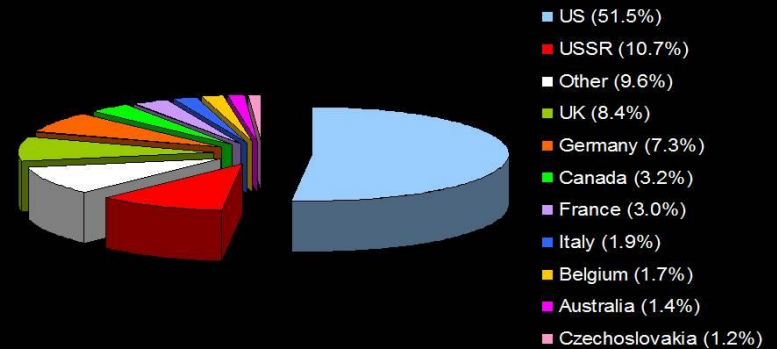


**Notes:**

- Based on USGS data.
- Other: around 20 smaller producer countries for which data were gathered.

Compiled by: International Ban Asbestos Secretariat

### Global Asbestos Fiber Consumption, 1950



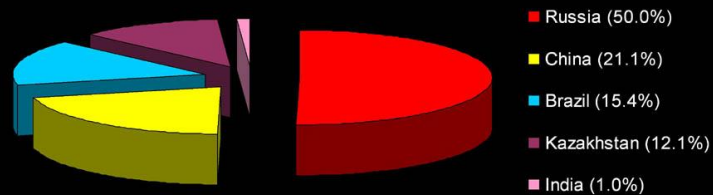
**Notes:**

- Based on USGS data on apparent asbestos consumption.
- Figure for Germany is the combined percentage for East and West Germany.
- Belgium, above refers to Belgium and Luxembourg.
- Other: around 40 smaller consumers listed by the USGS.

Compiled by: International Ban Asbestos Secretariat



### Global Asbestos Fiber Production, 2012

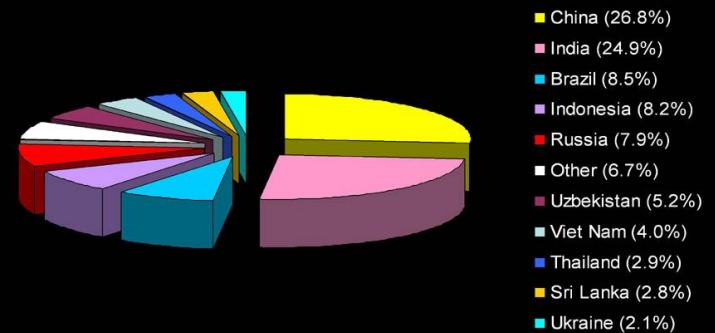


**Notes:**

- Based on USGS data.

Compiled by: International Ban Asbestos Secretariat

### Global Asbestos Fiber Consumption, 2012



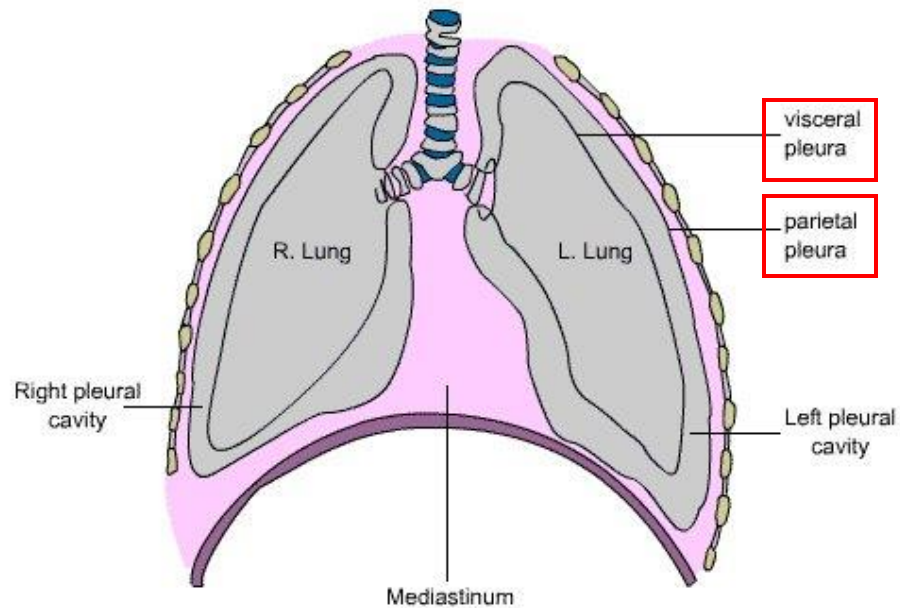
**Notes:**

- Based on USGS data on apparent asbestos consumption.  
- Other: 41 smaller consumers listed by the USGS.

Compiled by: International Ban Asbestos Secretariat



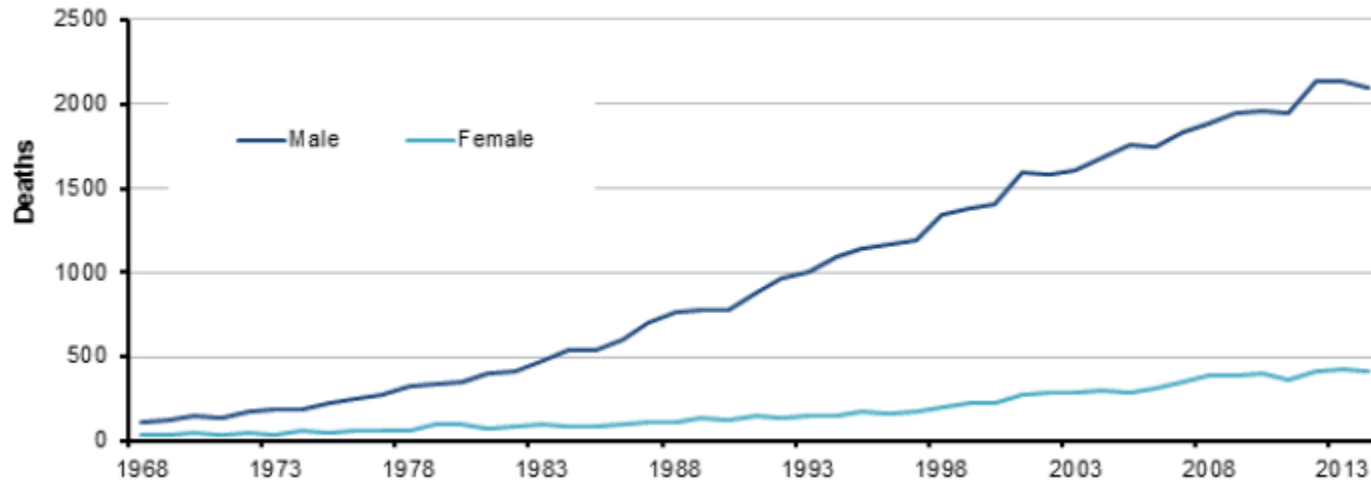
# Mesothelioma



# Mesothelioma

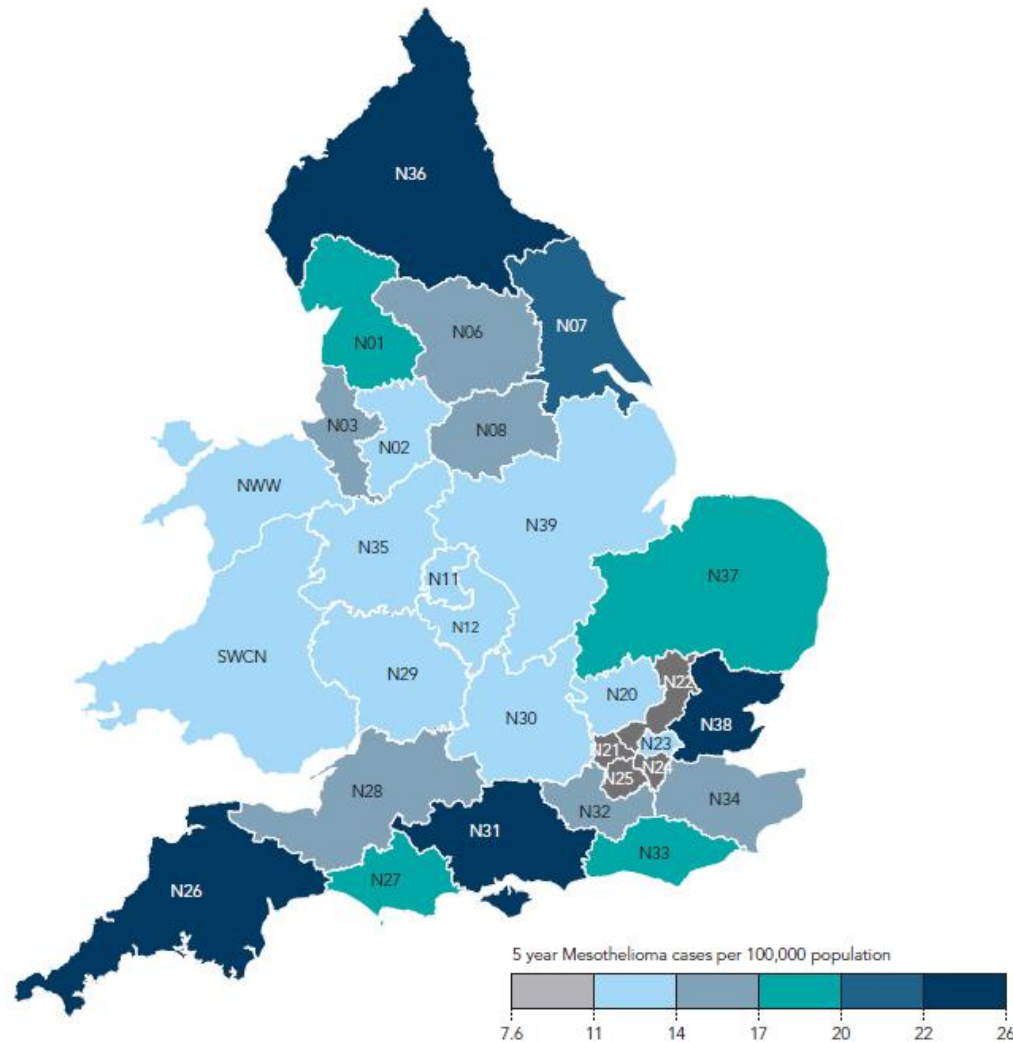
- 17<sup>th</sup> most common cancer in UK (<1% of all cancers)
  - Accounts for 2% of death of all cancers
- Lifetime risk of developing mesothelioma is 1 in 150 for men and 1 in 773 for women
- Asbestos exposure causes mesothelioma in 97% of men and 83% of women
- Up to 10% of asbestos workers will develop mesothelioma

# Incidence



- Total number of deaths 2007 was 2156 (84% male)
- Total number of deaths 2011 was 2291 ((84% male)
- The number is expected to rise, peaking before the end of 2020
- Occupations associated with the construction industry (carpenters, electricians, plumbers) are recorded more frequently on the death certificates of patients dying now





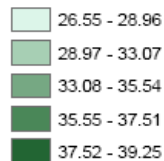
# National Lung Cancer Audit Report 2014 Mesothelioma

Report for the period 2008–2012

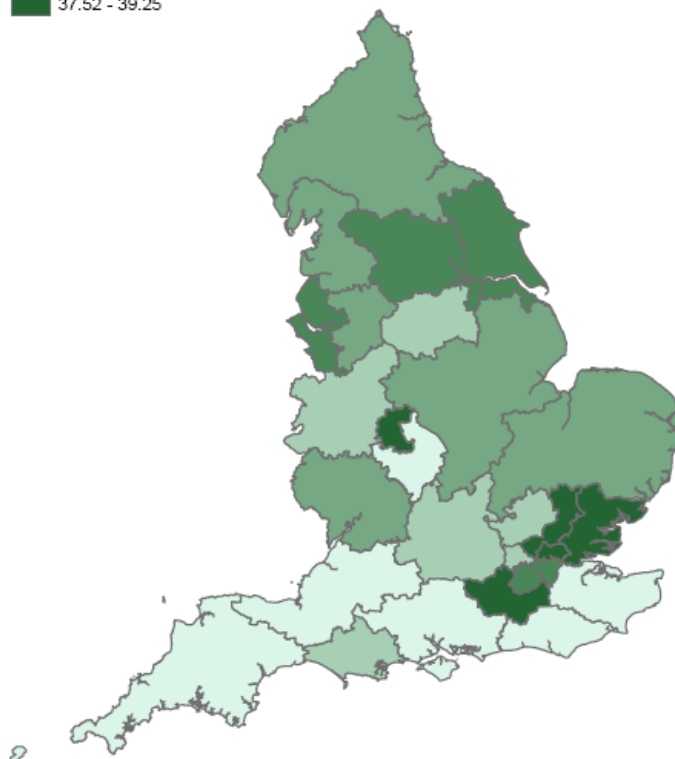




## One-year relative survival of mesothelioma male and female patients in England, 2002-2006, by cancer network



- 40% 1 year survival
- 8% 3 year survival



# Presentation

- Chest Pain
  - Dull, diffuse, pleuritic
- Dyspnea
  - Pleural Effusion
- Chest wall mass, weight loss, abdominal pain less common

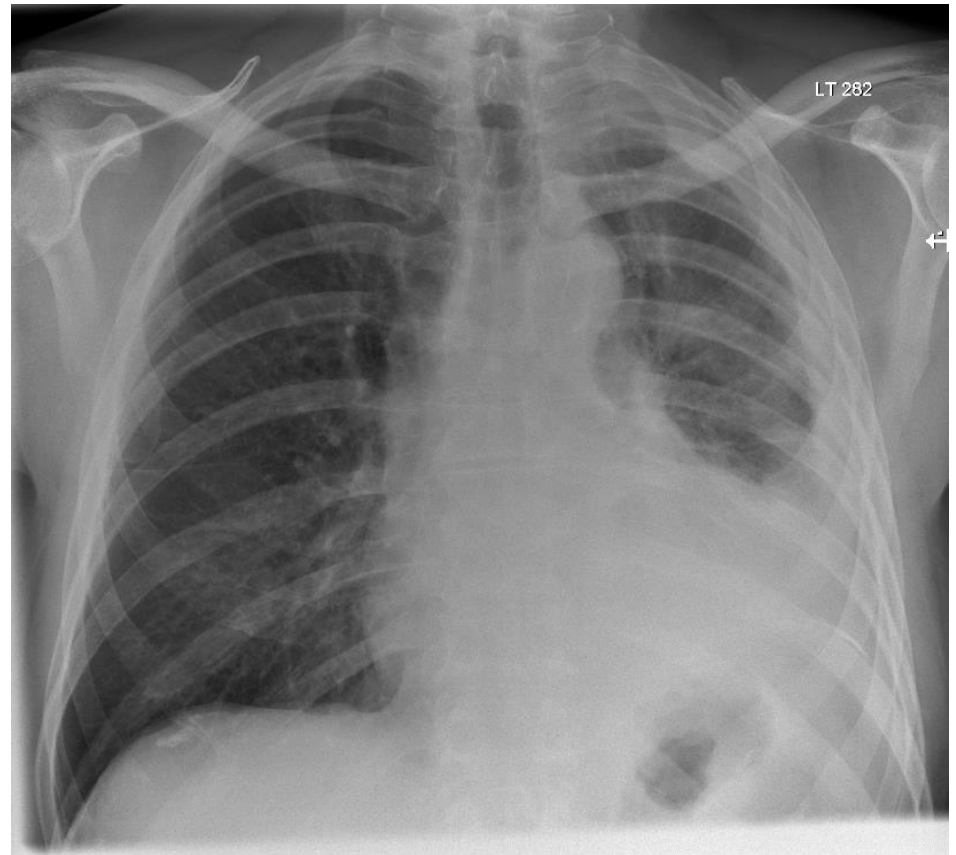
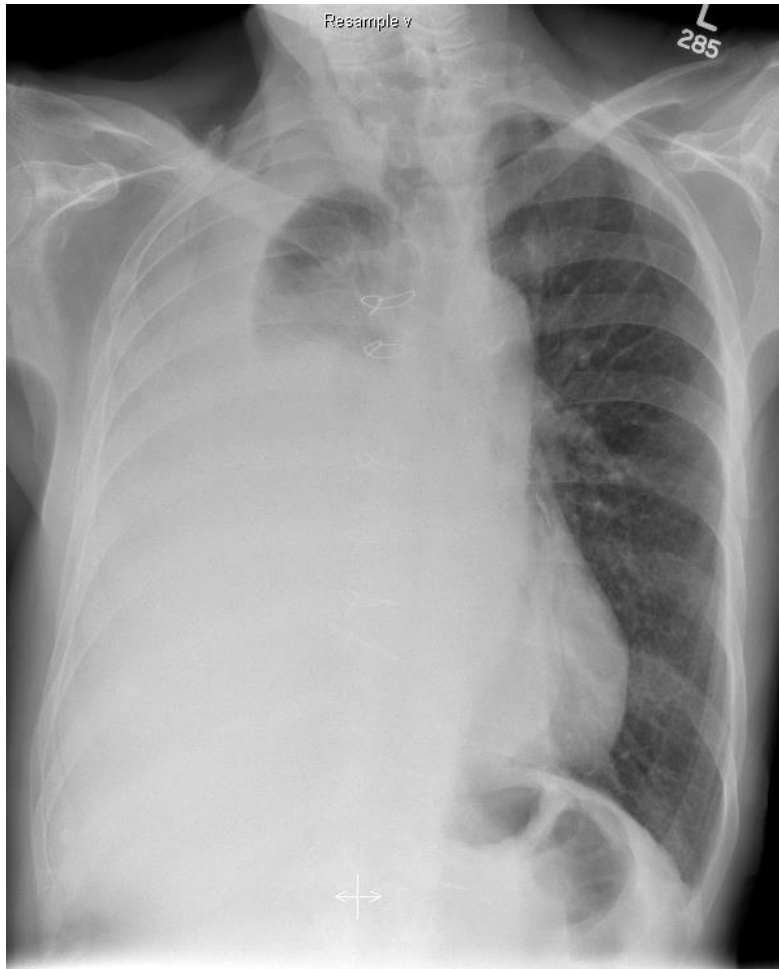


# What to do?

- Take a history
- Ask about asbestos
- Refer to Respiratory Physician
- CT chest and abdomen (Staging Chest, Pleural CT)
- Diagnostic and Therapeutic Intervention
  - Medical or Surgical Thoracoscopy
  - US or CT Biopsy
- Tissue is the Issue



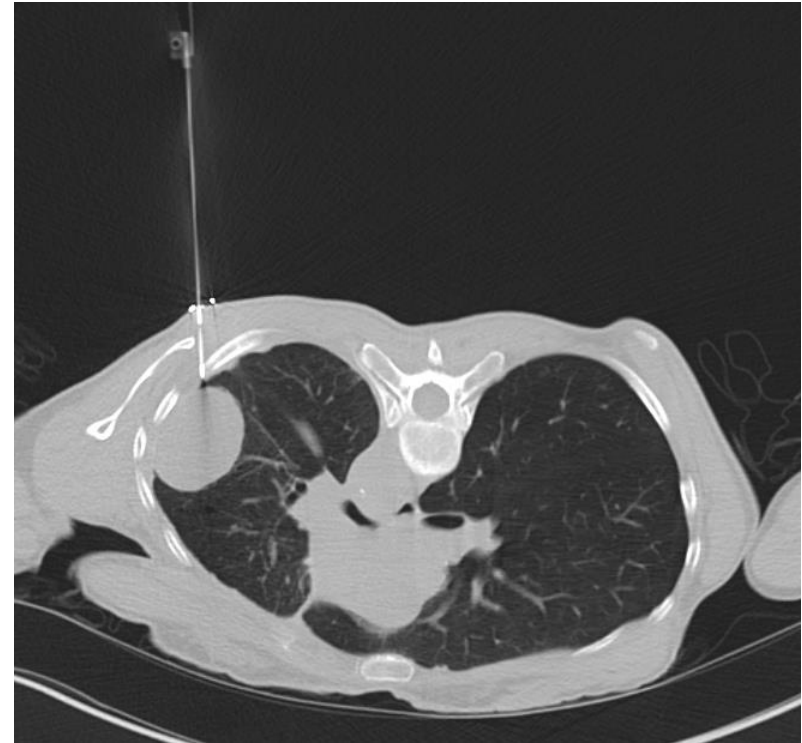
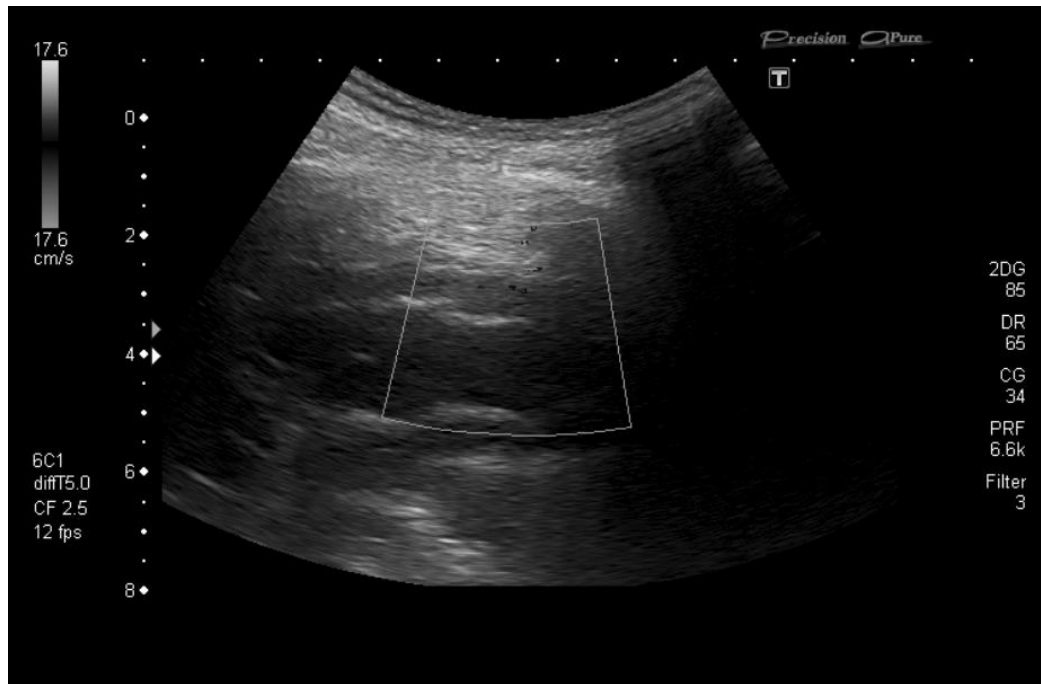
# Mesothelioma



# Mesothelioma



# US or CT biopsy

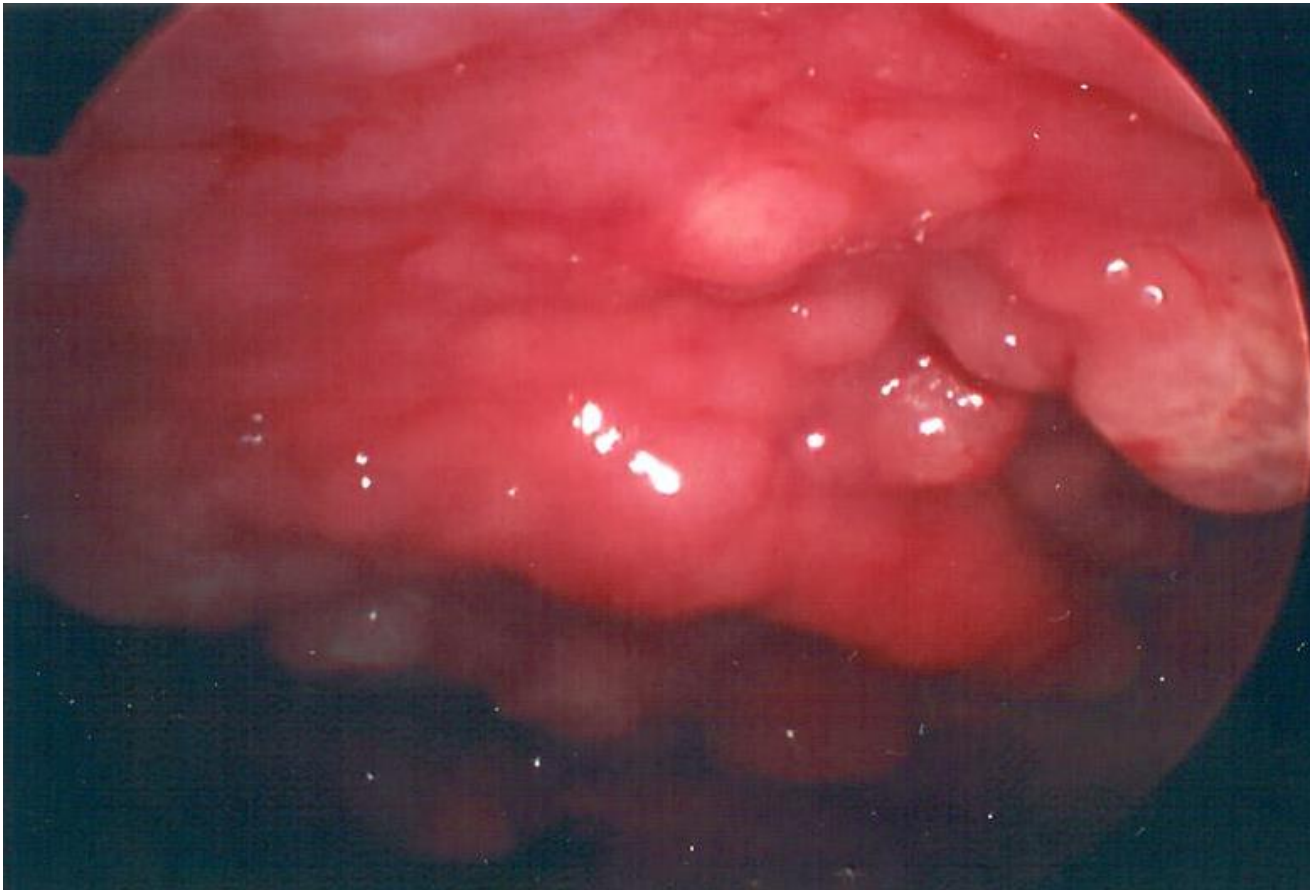




# Medical Thoracoscopy



# Thoracoscopy





# VATS

## Video Assisted Thoracoscopic Surgery

- Done under GA at Southampton General
- Patients who are deemed unfit for LA medical thoracoscopy
  - Small effusions
  - Dementia
  - Movement Disorders



# Treatment

## What Do We Know?

- One approved treatment for mesothelioma in 14 years

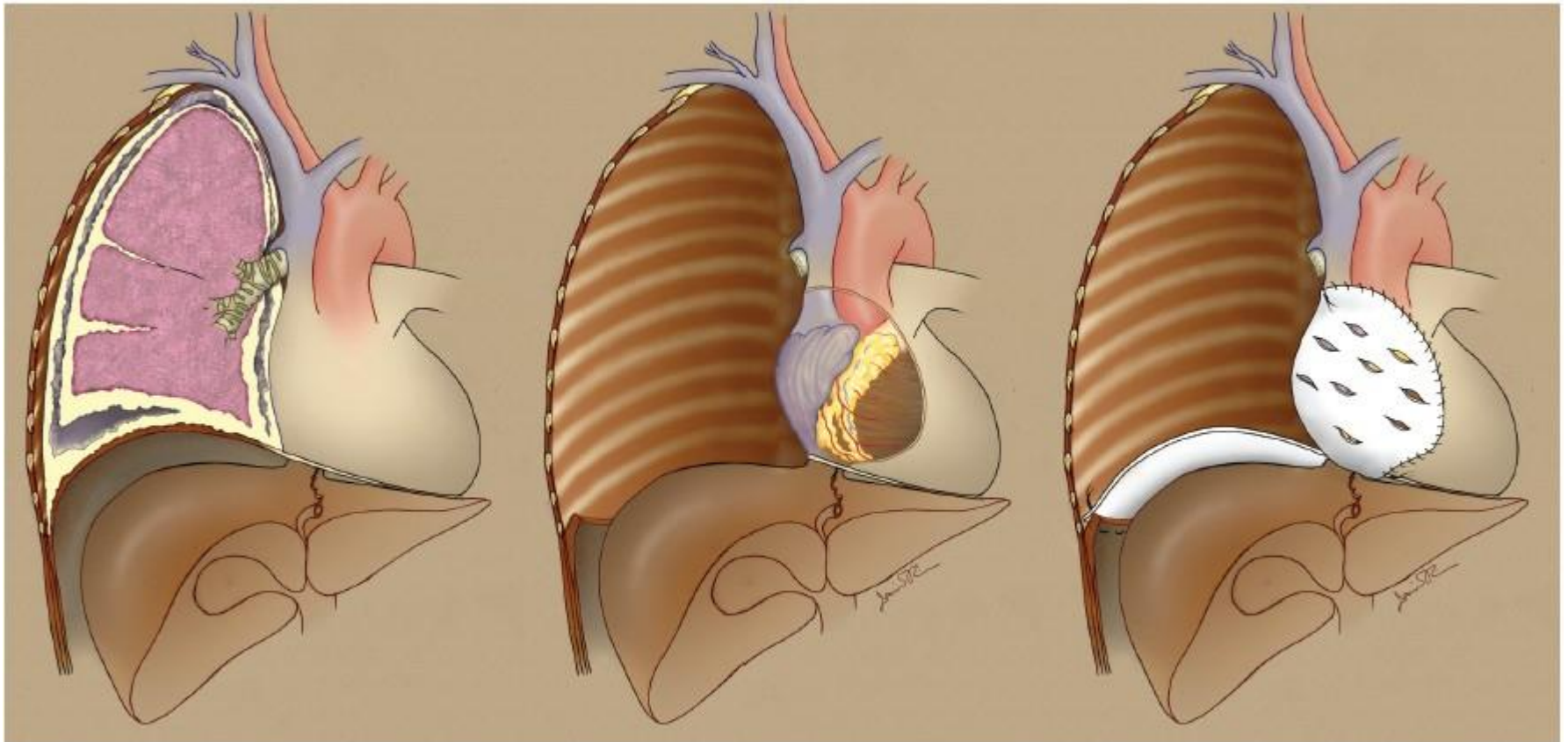


# Surgery

- The role for surgery in MPM is controversial
- Whether MCR results in improved survival in some patients is uncertain and not proven in RCT
- Although not the standard of care, there are some patients who appear to benefit from a surgical based approach



# EPP

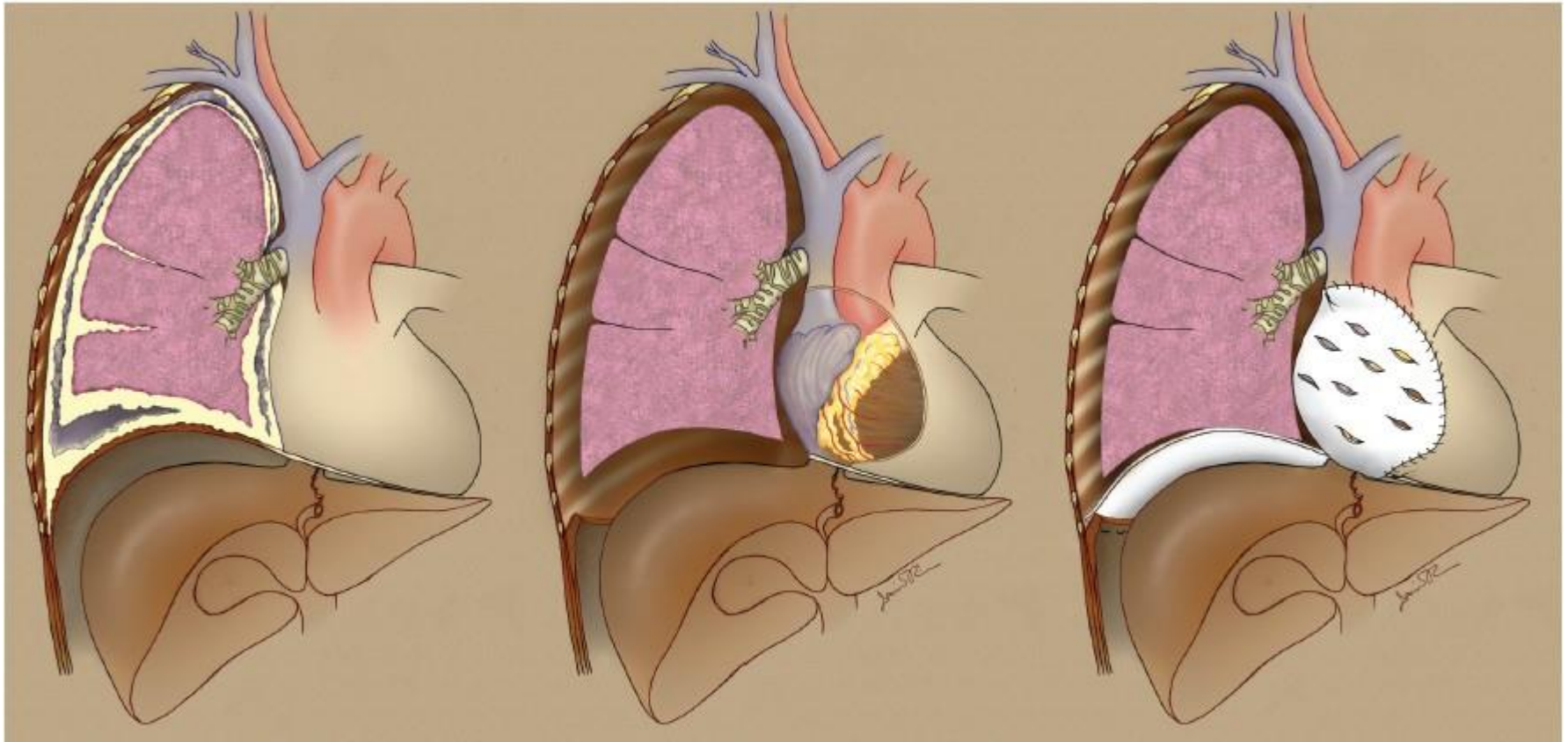


# EPP

- Contemporary studies have shown median survival of 18 months with decreasing morbidity and mortality
- MARS
  - Feasibility study
    - Can radical surgery “cure” mesothelioma or add usefully to length and quality of life
    - Would patients enroll in such a trial??
  - No benefit in surgery
    - Trend towards worsened outcomes for patients who received surgery



# EPD



# The next phase

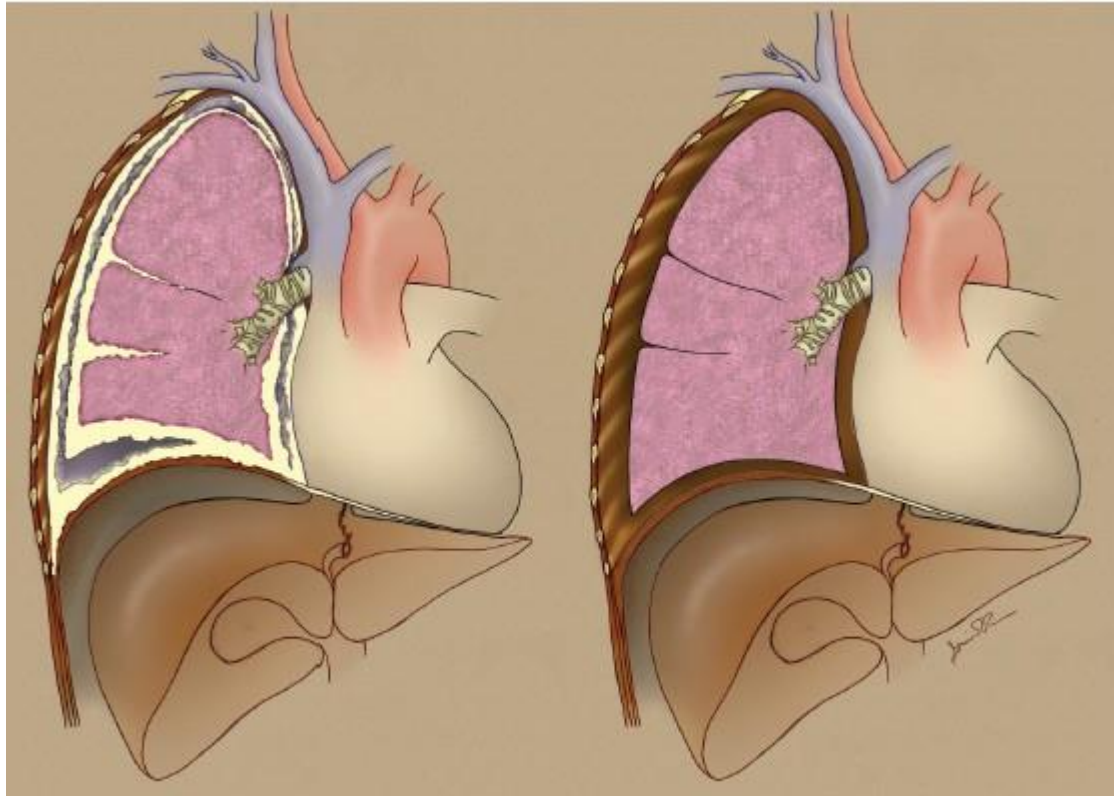
## MARS2

- 3 UK centres
- 50/50 randomized trial of neo-adjuvant pemetrexed/cisplatin +/- EPD

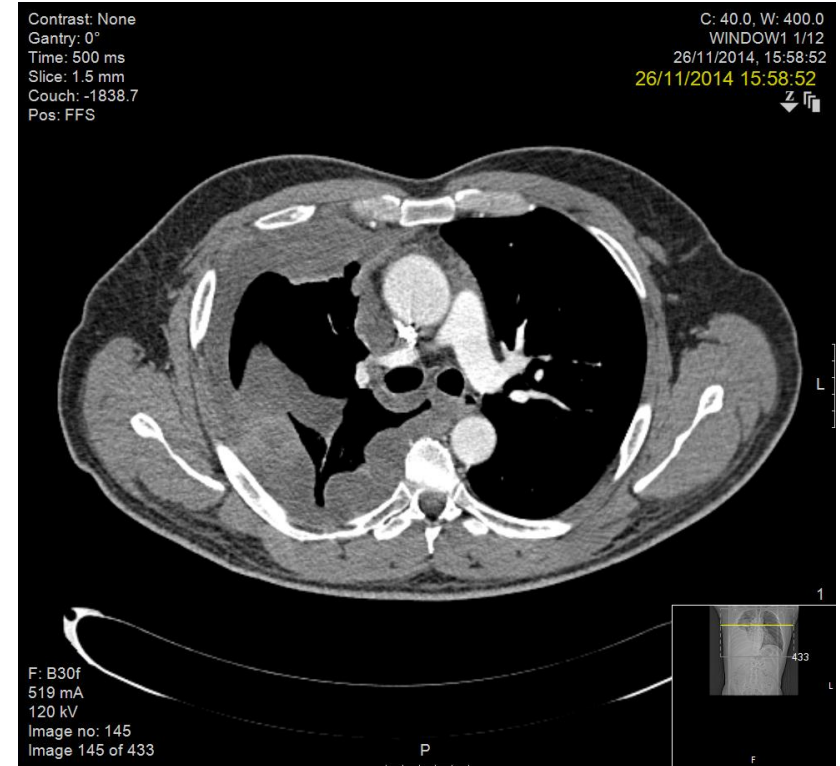
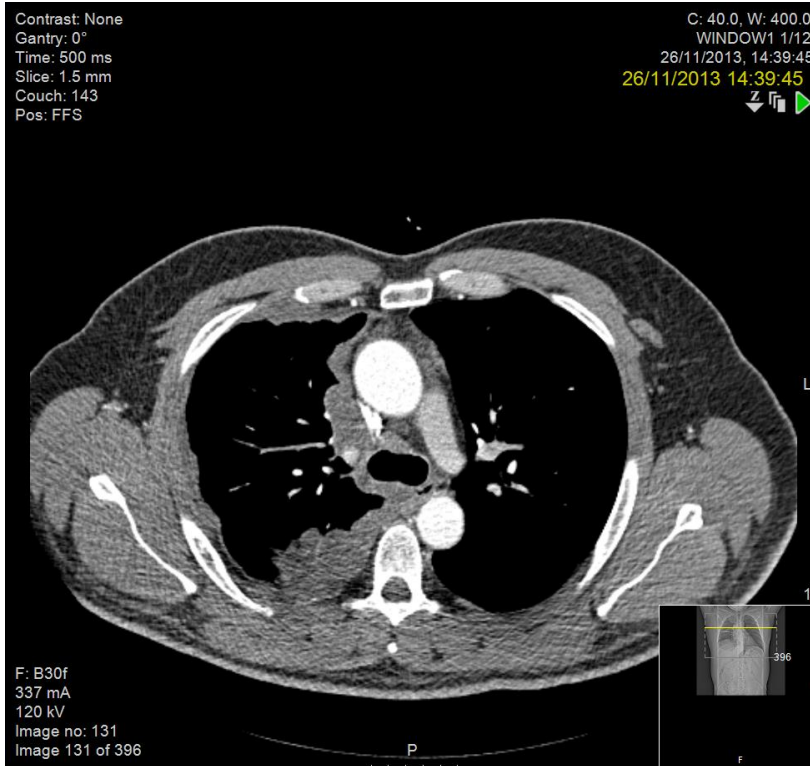


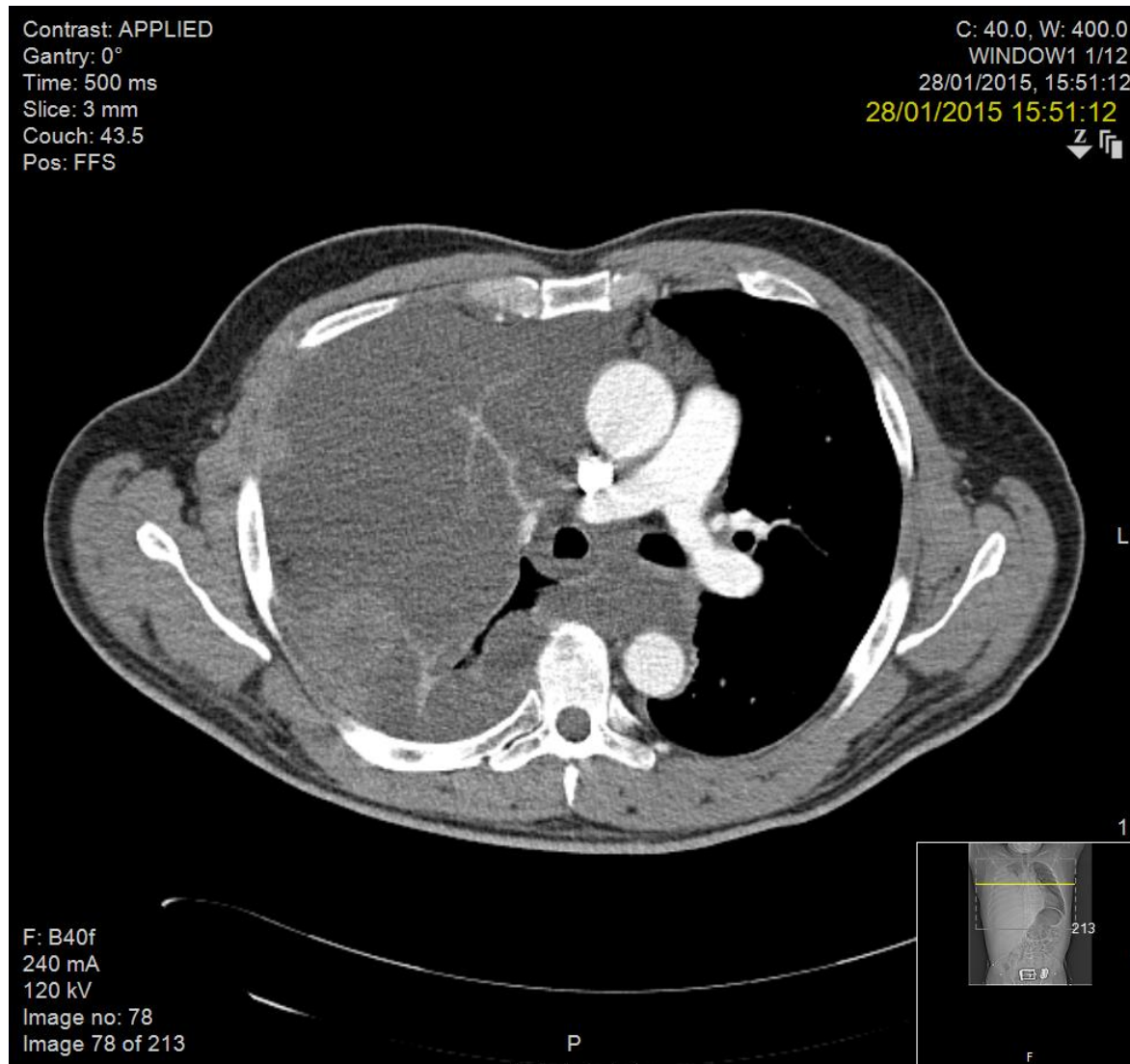


# PD









- Referred to Leicester for VATS
- ePD 3/3/2015



Contrast: None  
Gantry: 0°  
Time: 500 ms  
Slice: 1.5  
Couch: -1  
Pos: FFS

C: 40.0, W: 400.0  
WINDOW1 1/12  
13/05/2015 15:48:00

Contrast: None  
Gantry: 0°  
Time: 500 ms  
Slice: 1.5  
Couch: -1  
Pos: FFS  
Time: 5  
Contrast: None  
Gantry: 0°  
Time: 500 ms  
Slice: 1.5 mm  
Couch: -1052.3  
Pos: FFS

C: 40.0, W: 400.0  
WINDOW1 1/12  
13/05/2015 15:48:10

C: 40.0, W: 400.0  
WINDOW1 1/12

C: 40.0, W: 400.0  
WINDOW1 1/12  
13/05/2015, 15:48:12

13/05/2015 15:48:12



F: B30f  
577 mA  
120 kV  
Image no  
Image 82

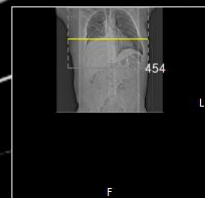
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207 mA  
120 kV  
Image no  
Image 14

F: B30f  
227 mA  
120 kV  
Image r  
Image 2

F: B30f  
340 mA  
120 kV  
Image no: 237  
Image 237 of 454



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1



# Palliative Chemotherapy

- There has been only one NICE approved treatment for mesothelioma in the last 12 years
  - Pemetrexed + Platinum chemotherapy
  - NICE technology appraisals [TA135] Published date: January 2008
- No therapy for relapsed patients (second line)
- No maintenance therapy



# Effusion Options

- Repeated Therapeutic Aspirations
  - Not recommended if life expectancy >1 month

*BTS Pleural Disease Guideline 2010*

- Chest Drain and Pleurodesis (talc)
  - Median hospital stay of 7 days
  - 30% failure rate at 1 month

*Dresler et al. Chest 2005*

- Indwelling Pleural Catheter (IPC) - Pleurx



**Portsmouth**

- 



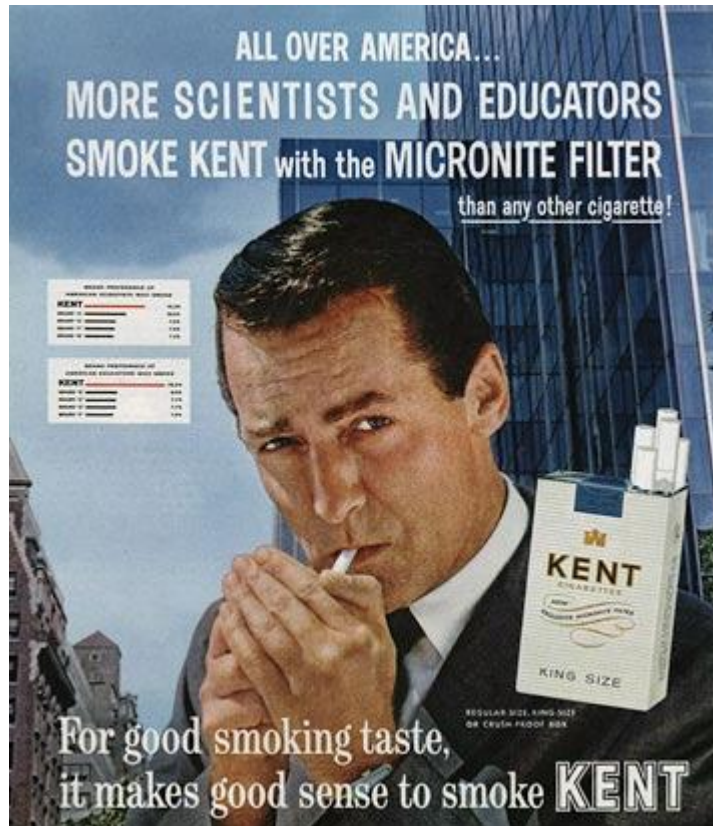


# Conclusion

- Patients with a history of asbestos exposure and Pain or SOB – get a CxR
- If CxR normal and symptoms persist, get another CxR
- If you are worried, refer under 2WW rule with clinical concerns stated



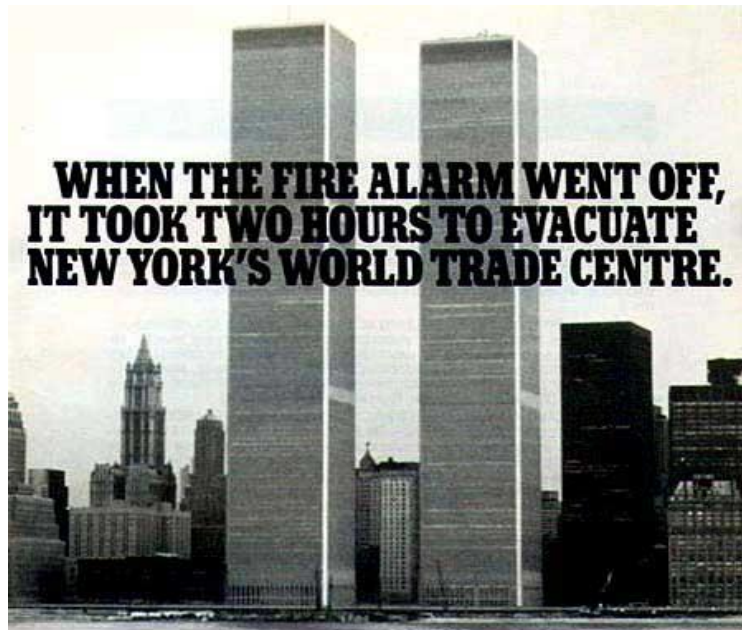




Kent used Asbestos  
in its Micronite  
filter from 1952-  
1955



# Asbestos Related Lung Disease



The bigger the building, the more important fire-proofing becomes.

That's why today's buildings have asbestos-cement walls and even floors containing asbestos.

Asbestos contains fire, cannot burn and holds up after metal and glass have melted down, giving vital time for people to escape.

You'll also find asbestos sealing plumbing joints, insulating heating pipes, electric motors and emergency generators.

Asbestos. We couldn't live the way

**ASBESTOS**

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