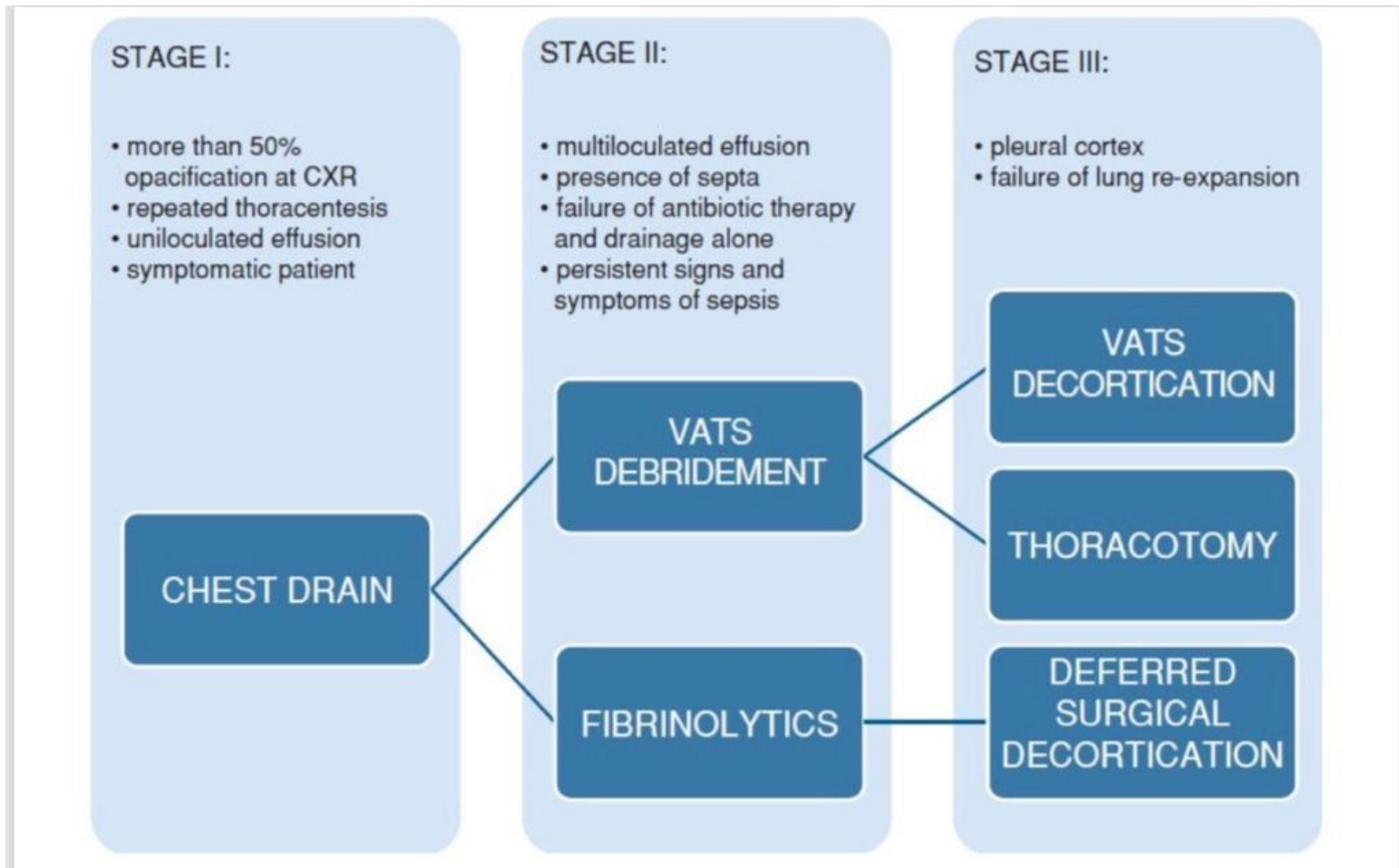


# Pleural disease

- Effusions: benign  
                  malignant
- Tumors:: benign  
                  malignant
- cysts

# Parapneumonic empyema



# Medical illness

- If P.E is large and respiratory compromise and lung collapse : drainage → needle aspiration or small drain
- 1- larger effusion
- 2- equal E. → Right pleural cavity is choose

# Drains

- BTS → 2010 → chest drainage :
  - 1- positive gram stain or culture
  - 2- PH<7.2
  - 3- Poor clinical progress during antibiotic course
  - 4- large effusion

# Tube thoracostomy

- As primary treatment → failure 40%
- Tube size:????
- Clinical outcome of patients treated with different sizes has not been addressed in R.C Trials...
- BTS GUIDLINS : **1**-Small catheter(10F to 14F), **2**-image guide whenever possible, **3**- regular saline flushing

- Larger drain (>28) → thick pus → no consensus optimal size !!! R.C.T
- Multicenter intrapleural sepsis trial(MIST1)::  
**NO DIFFERENCE IN THE PRIMARY  
OUTCOM**(death or need for surgery) **related  
to type of drain.**

# Criteria to choose small- or large- bore drains are not standardised but:

- Analysis of demography
- Bacteriology
- Prognostic factors
- Shows acceptable homogeneity among group.

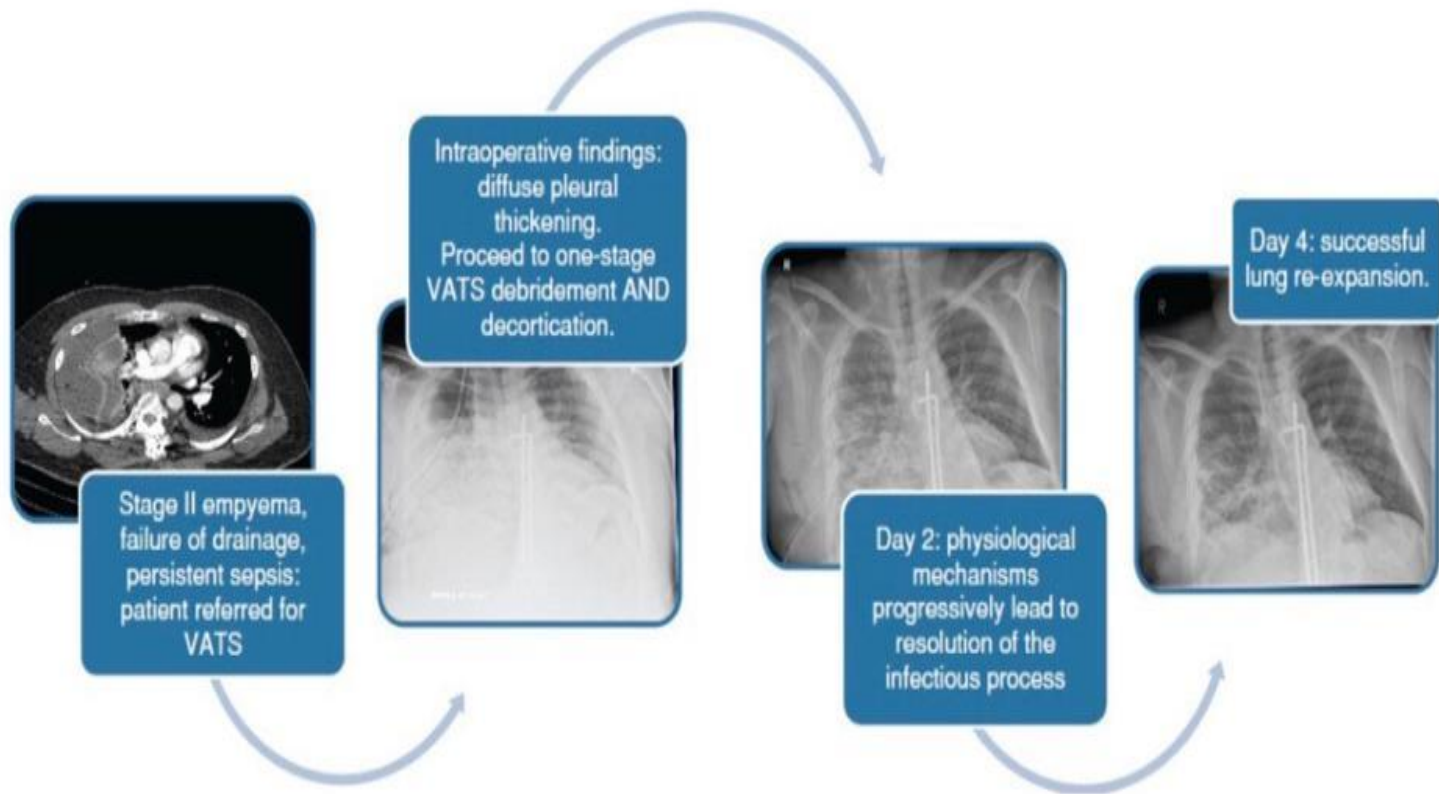
*Pain- reinsertion- tube blockage- displacement*

# Intrpleural fibrinolytics

- Instilled pleural cavity → break the septa of the empyema & degrade the necrotic debris
- **2008 COCHRANE** → 207 pleural eff. → Saline vs. Fibrinolytic → pleural fibrinolysis decrease the need for surgery/ hospital stay.
- 1- *streptokinase*
- 2- *TPA*
- 3- *Dnase*
- VATS 91% VS. Fibrinolytic 41%



# VATS

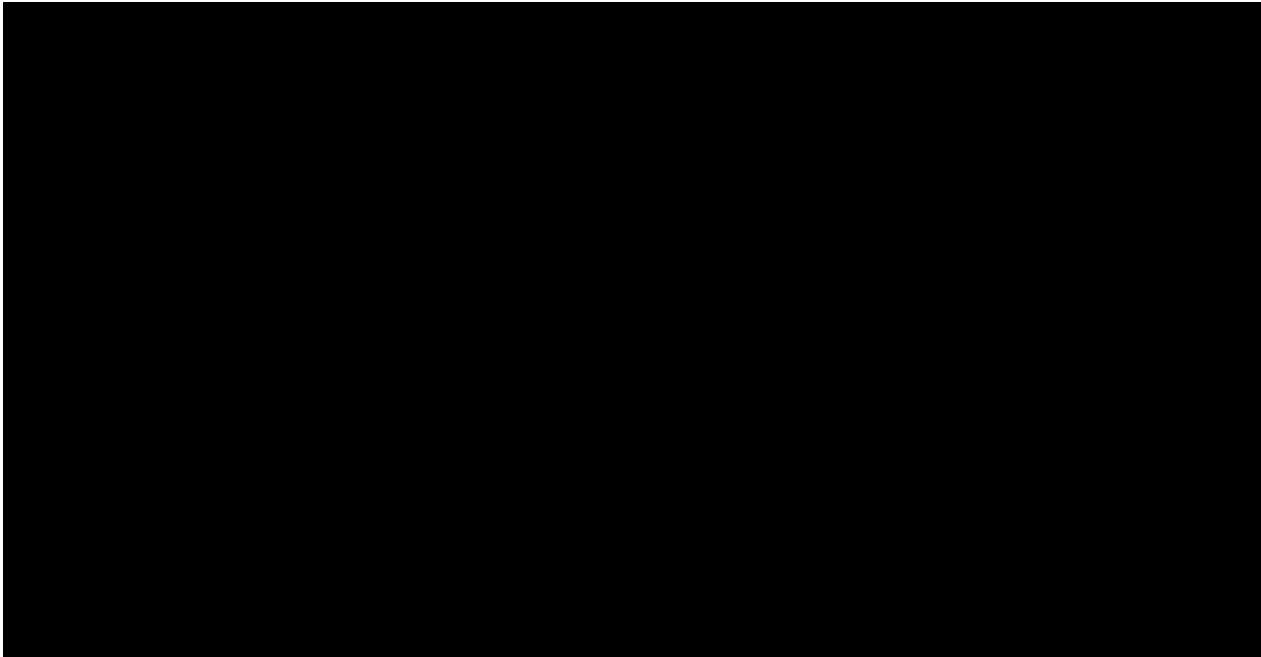


Successful one-stage VATS debridement and decortication.

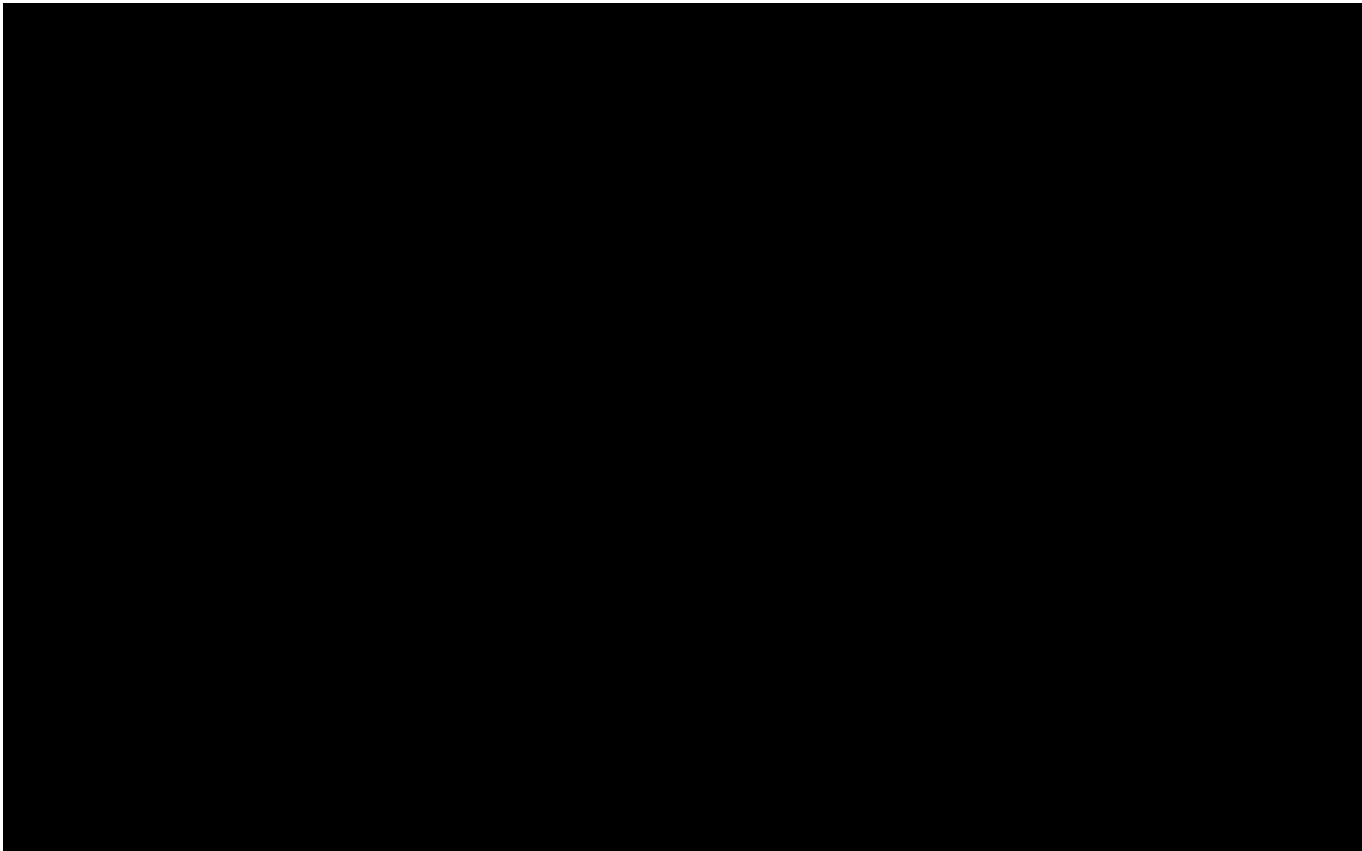


**FIGURE 60.7** CT visualization of pleural cortex.

# EMPYEMA



# MALIGNANT P.E



# Indication for VATS

- 1- Fibrinopurulent effusion
- 2- 2 weeks after failure of conservative treatments.
- 3- when gram-negative organisms are not involved
- 4- stage 3 if feasible.

# Thoracotomy & decortication

- 1- Failure of VATS procedure.
- 2- need to directly enter the empyema cavity and debridement
- 3- had other pathology plus empyema

# Open drainage

- 1- had multiple risk factor
- 2- contraindication to do VATS or Thoracotomy.
- 3- mental disorder and lack of cooperation.

# OPEN DRAINAGE





# خدا نگهدار تان

