

# Pleural effusion

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## Rationale

Pleural effusions are common and may represent local or systemic disease. An organized approach including assessment of pleural fluid usually leads to a correct diagnosis.

## Causal Conditions

(list not exhaustive)

- Transudative (e.g., congestive heart failure, nephrotic syndrome, cirrhosis)
- Exudative
  - a. Infectious/inflammatory causes (e.g., parapneumonic, empyema, rheumatoid arthritis)
  - b. Neoplastic causes (e.g., primary, metastatic, mesothelioma)
  - c. Pulmonary embolus
  - d. Gastrointestinal causes (e.g., ruptured esophagus, pancreatitis, chylothorax)

## Key Objectives

Given a patient with pleural disease, the candidate will diagnose the cause, severity, and complications, and will initiate an appropriate management plan. In particular, the candidate should be able to differentiate between causes of pleural effusion on the basis of pleural fluid analysis.

## Enabling Objectives

Given a patient with pleural disease, the candidate will

- list and interpret critical clinical findings, including results of a history and physical examination aimed at:

- a. determining whether the patient has one of the edema states such as heart failure,
  - b. has evidence of an infectious or neoplastic disease,
  - c. or relevant workplace exposure;
- list and interpret critical clinical investigations, including
    - a. findings of a chest X-ray and identification of indications for thoracentesis;
    - b. findings of a thoracentesis;
    - c. computed tomography scanning, if indicated;
  - construct an effective initial management plan, including
    - a. initiating medical management for underlying conditions (e.g., congestive heart failure, pneumonia);
    - b. considering other treatment options (e.g., therapeutic thoracentesis, chest tube insertion) if the patient is refractory to conventional treatments;
    - c. determining whether the patient requires specialized care (e.g., thoracic surgery for empyema).