



Pleural Effusion



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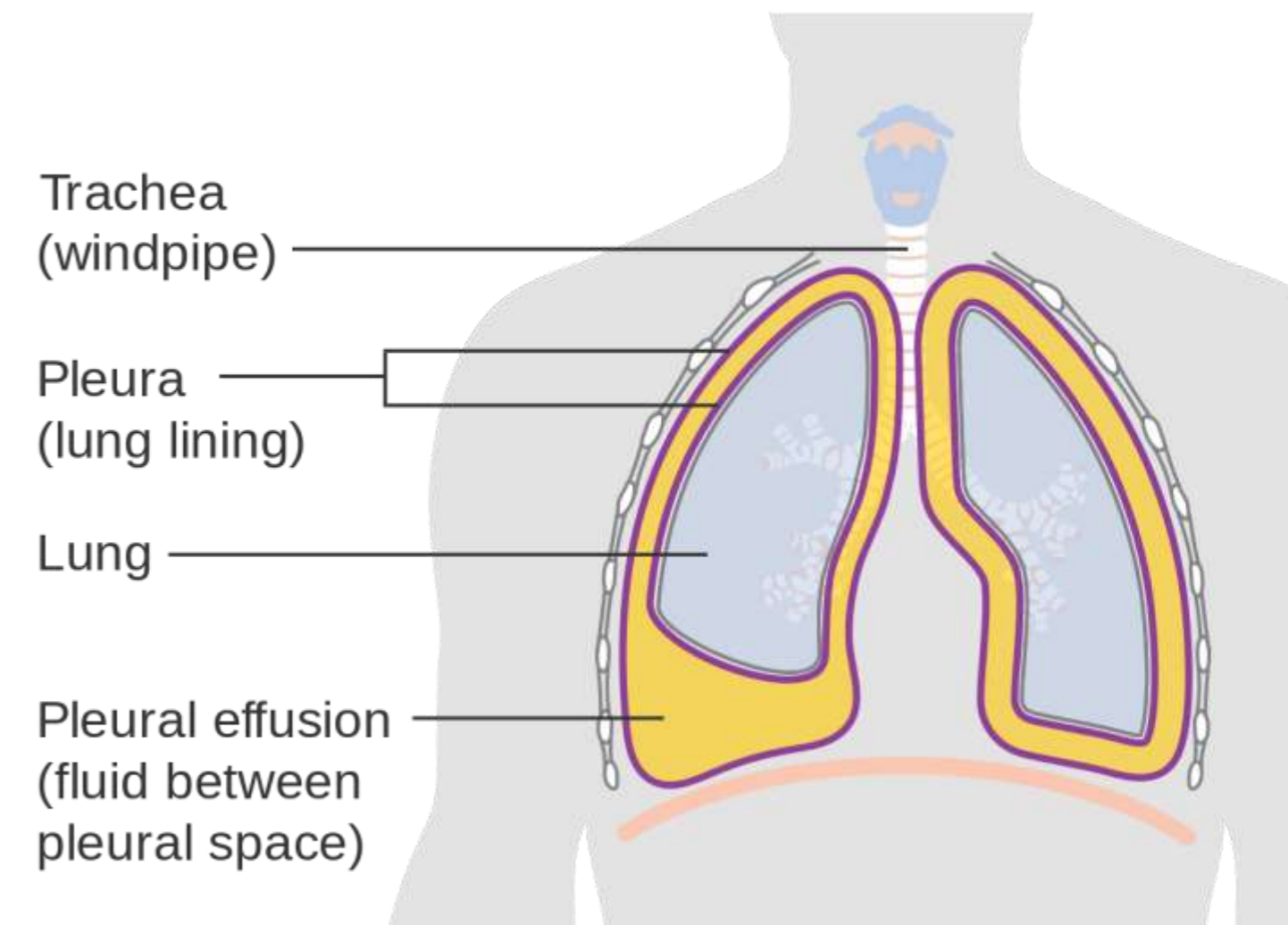


What is pleura?

A thin layer of tissue that covers the lungs and lines the interior wall of the chest cavity

Pleural effusion?

- Accumulation of fluid in the pleural space between the visceral and parietal pleural
- Normal pleural fluid: the pleural space contains a small amount of fluid (**about 10 to 20 mL**)

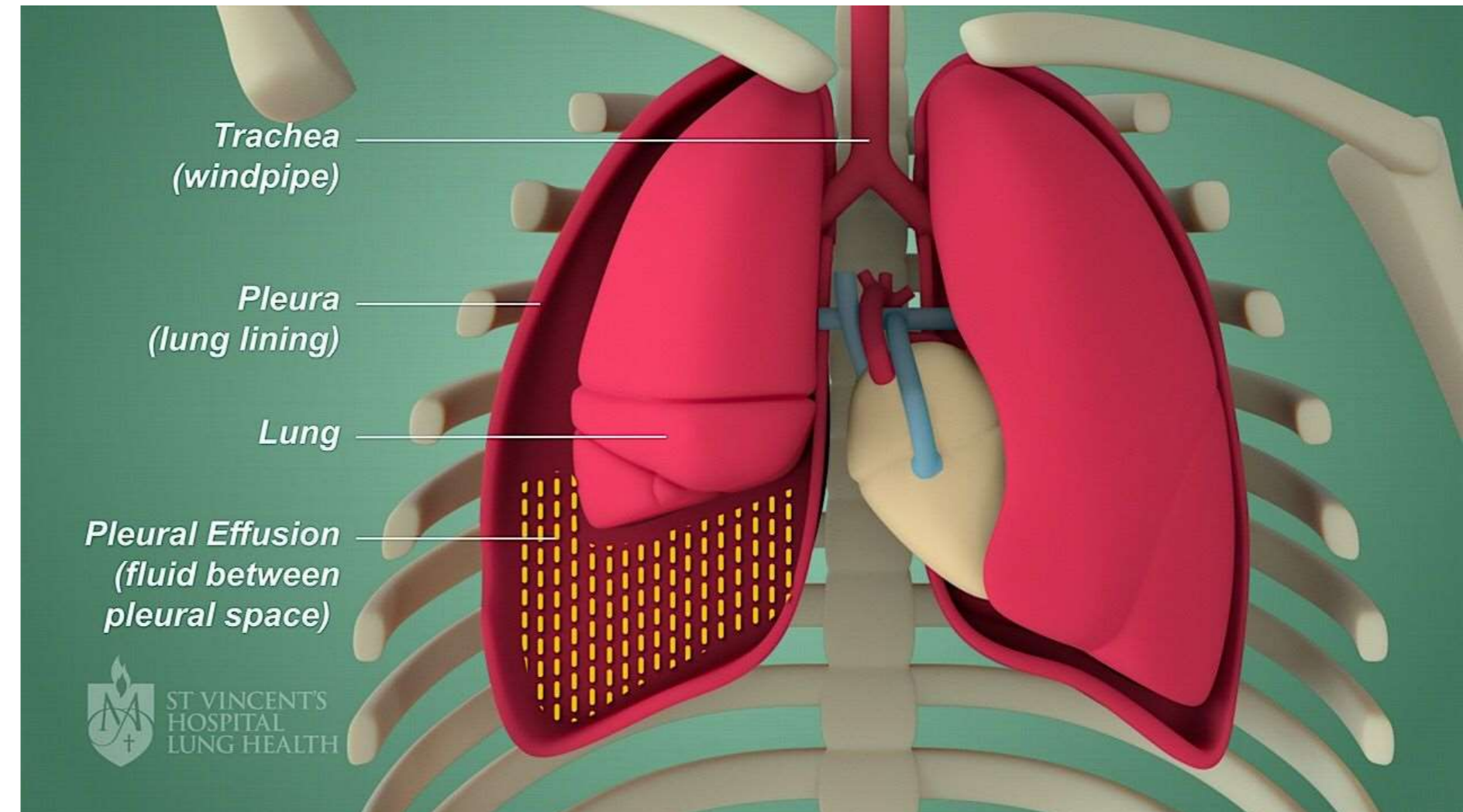




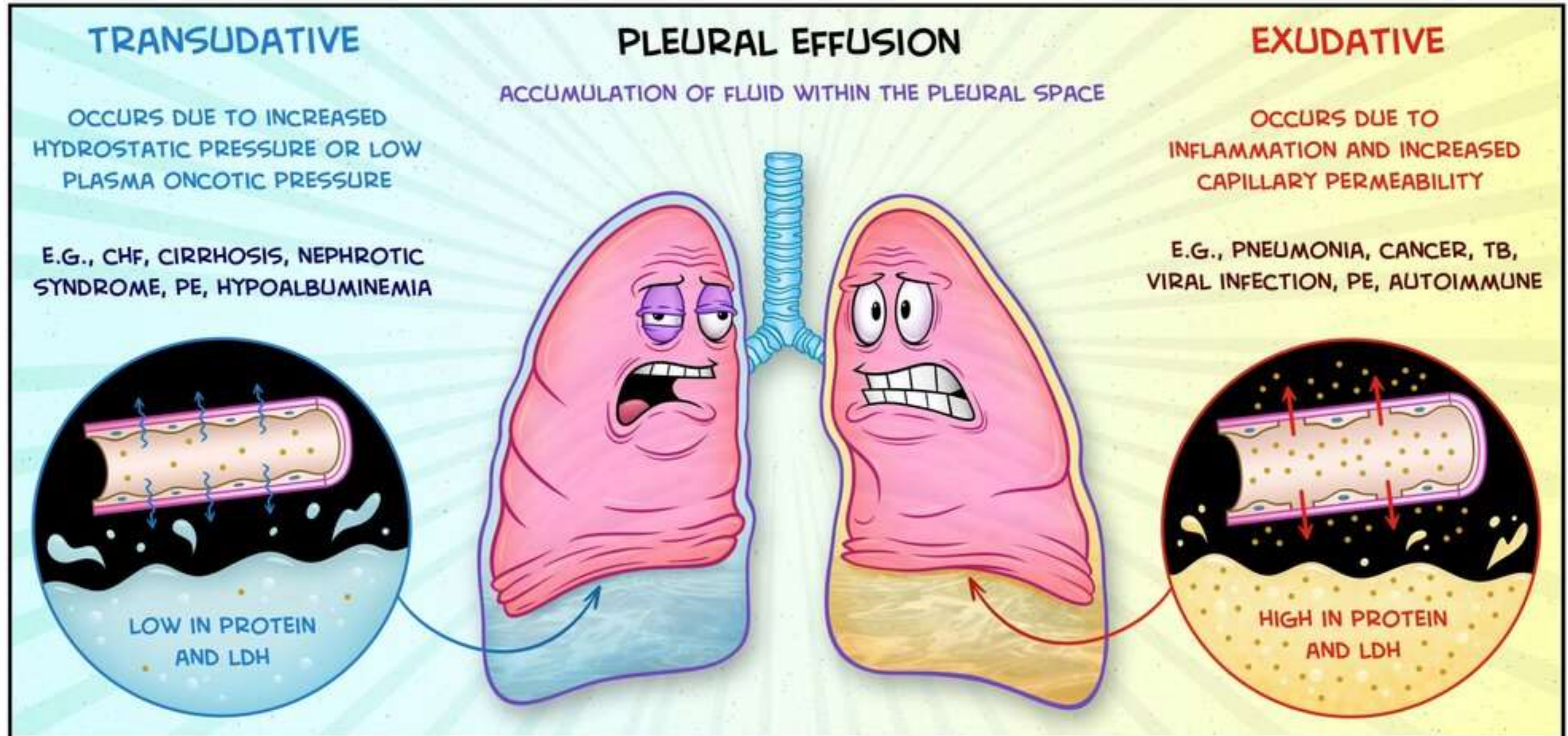
Function of pleural fluid



Small amount of fluid decreases the friction between the pleural layers and allows for smooth lung expansion and contraction during respiration



Transudate (Vs) Exudate





Pathophysiology of Pleural Effusion



Transudates – imbalance in hydrostatic pressures or oncotic pressures, this fluid has low protein content

Congestive Heart Failure

Exudates – results from pleural diseases, neoplasm or inflammation. It has active fluid secretion and high protein content

Bacterial Pneumonia, Cancer



Clinical features



- Clinically silent
- Symptoms of underlying disease condition
- Development of inflammation and associated pain during respiration



Physical exam



- **Dullness to percussion** - A dull sound indicates the presence of a solid mass under the surface
- **Tactile fremitus** - the vibration of the chest wall that results from sound vibrations created by speech or other vocal sounds
- Asymmetrical chest expansion - **The abnormal side expands less and lags behind the normal side.**



Diagnosis



- Chest X-ray
- Diagnostic thoracentesis
- Detection of exudative pleural effusion
- Gram stain and culture of bacteria
- Cytology for malignancy
- PCR test for tuberculosis



Treatment



- Therapeutic thoracentesis 1 to 1.5 L of fluid
- Drainage with large pore thoracotomy tube
- Diuretic therapy