

## Pulmonary eosinophilia

Peripheral blood eosinophilia  $\geq 500$  with radiographic evidence of pulmonary parenchymal disease

- Increased eosinophils in BAL  $> 10$  percent
- Lung tissue eosinophilia in a transbronchial or open lung biopsy specimen
- Peripheral blood eosinophils are not uniformly increased in all types of eosinophilic lung diseases

### Causes

- ABPA/ABPM
- Acute eosinophilic pneumonia
  - Idiopathic, it can develop after resumption of smoking, toxic exposure to smoke, vaping, or dust
- Chronic eosinophilic pneumonia
- Drugs and toxins
  - NSAID, antimicrobial (daptomycin, minocycline, nitrofurantoin), mesalamine, and sulfasalazine are the most common classes of drugs. Also, ACE-I, amoxicillin, amiodarone
  - Smoke, vaping
- EGPA
  - 1500 but much higher levels are common
  - ANCA are found in 30 to 60 percent of patients with pulmonary involvement
- Hypereosinophilic syndromes
  - It can be idiopathic or associated with other conditions
    - Primary bone marrow or hematologic abnormalities
    - Malignancies such as lymphoma
  - $> 1500$  with evidence of end organ damage or dysfunction
    - Skin, lung, GI, cardiac, and neurologic
  - Eosinophilic infiltration of the lung with patchy ground glass infiltrates and subsequent fibrosis or pulmonary emboli
- Fungal and mycobacterial infections
- Parasitic infections
  - Send sputum and stool for testing for ova and parasites
  - Blood for appropriate serologic studies
  - The luciferase immunoprecipitation systems assay is a sensitive and specific immunoassay to detect *Strongyloides* infection
  - Fleeting lung infiltrates and gram-negative bacteremia related to increased helminthic involvement of the bowel
  - Eosinophilia often disappears during disseminated disease
- Malignancy