△ Pathophysiology: repeated exposure to inflammatory agents or impaired repair of damaged tissue.

- Impairment due to damage → V/Q mismatch / shunt / ↓DLCO
  → Decrease lung compliance

pts are usually hypoxic, Pulmonary HTN due to hypoxia that cause vasoconstriction / CO_2 retention in advance stages.

** In all ILD
- Radiology => Diffuse infiltrates
- Histology => Distortion of gas exchaning units
- physiology => Restriction of lung volum & impaired oxygenation

Interlobular septal lines that seperate secondary pulmonary labule become prominent when affected by ILD.

** Interstitial lung disease — 4 major classes
- ILD of Known causes: drug, environ, CVD
- Idiopathic Interstitial pneumonia: idiopathic pulmonary fibrosis, others
- Granulomatous (Sarcoidosis)
- others

△ Diagnosis >>

- History
  - Age > 70 → IPF
  - Exertional dyspnea + non-productive cough
- Duration
  - Acute >> AIP / Infection / hypersensitivity pneumonitis / Drug / Diffuse alveolar hemorrhage
  - Chronic >> smoking related / exposure & occupation / Non-respiratory symptoms

▷ Physical ⇒ - Crackles [fine end inspiratory] ⇒ scarring & paralysis

▷ Types of interstitial lung disease:

1. occupational related
   - ship / train / builder
2. Hypersensetivity pneumonitis
   - birds / cotton
3. Hermansky pudlak syndrom
   - Hereditary pulmony fibrosis
     - Albinism
     - Diffuse fibrosis
     - platelet dysfunction
4. CT related ILD
   - lupus / scleroderma / RA / Raynaud's
   - #labs: ANA - ENA - RF - ds DNA
5. Sarcoidosis
   - scleritis / erythema nodosa / lung fibrosis
   - #labs: serum ACEI / ↑Ca^{2+}
6. Dermatomyositis polymyositis
   - heliotrope rash / Gottron's ....
   - #labs: ANA - ENA - Myositis panel
7. Idiopathic pulmony fibrosis
   - Most common form (UIP/RA)
   - Elderly + progressive dyspnea + clubbing + dry cough
8. Wegners
   - subglotic stenosis = Box shaped (PFT)
   - #Labs: ANCA (vasculitis with fibrosis)
9. lymph-angio-lyo-myo-matosis
   - smooth musule of lymph. wall enlarge.
   - Middle age + Female + on O_2 therapy + with pneumothorax & angioma / history of epilpsy
10. lymphangitis carcinomatosis
11. Congestive HF
    - chronic interstitial edema (B-lines)
    - (bilateral plural effusion)
12. Smoking related
13. Hiatus hernia
    - fibrosis because of reflux (Microaspiration)
14. Drug induced / Radiation induced

→ Affect upper lobes » Sarcoidosis / Ankylosing spondylitis / Hypersensetivity pneumonitis

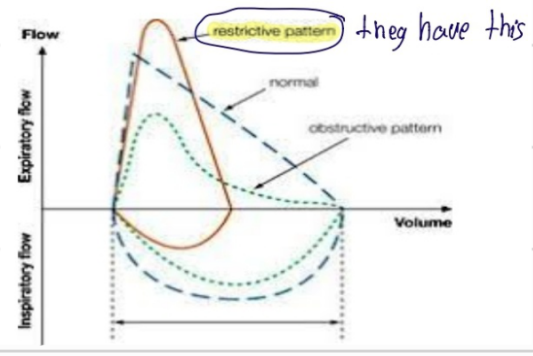
→ lower lobes » IPF / Asbestosis / CT diseases (RA, scleroderma ..)

Honeycombing → Advance lung fibrosis of IPF

Ground glass opacity → Non-specific interstitial pneumonia

** lung volumes : ↓TLC ↓FUC normal FEV_1/FUC ratio

[Spirometry]



** labs → peripheral eosinophilia → Churg-strauss syndrom / Chronic eso. pneumonia

→ Abnormal renal failure → pulmonary-renal syndrom

→ ANCA / Anti-GBM / RF ...

** Diagnose ⇒ CT scan + Muticisciplinary meeting

** Managment ⇒ ① supportive + treat underlying cause

② To stop prognosis but not improve survival :-

✓ systemic steriods + immunosuppressive (mycophenolate)] RA/Hypersenetivity/wegner... Except IPF

✓ Antifibrotics (pirfenidone/nintednib)] for IPF + sclerodema

✓ Anti reflux

Nothing for Asbestosis :-