

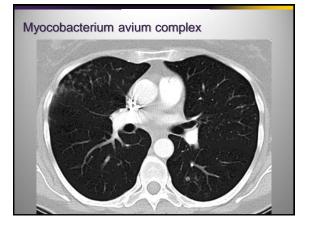
• 38-year-old male with dry cough and dyspnea on exertion.

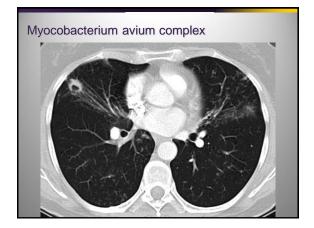


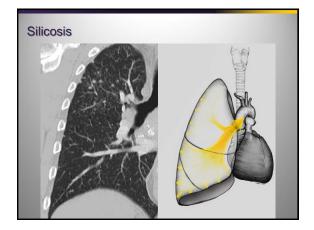










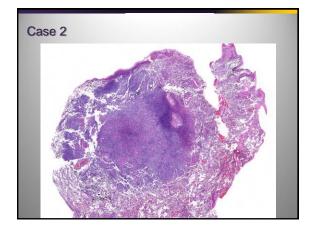


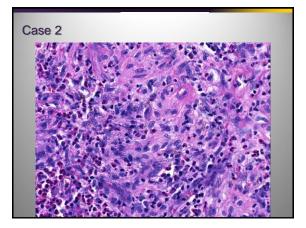


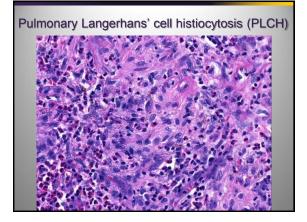


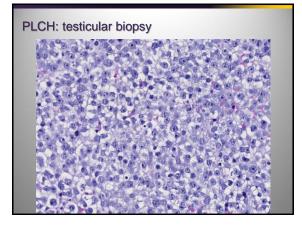
### Case 1: concepts

- Granulomas are common
- Sarcoidosis and fungi are the most common associated diagnoses
- Typical CT distribution of nodules and adenopathy:
   sarcoidosis
- Atypical distribution: infection





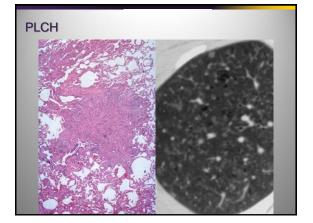


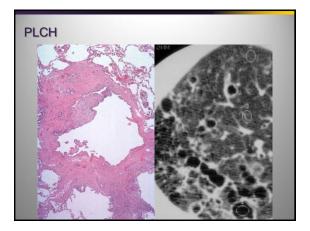


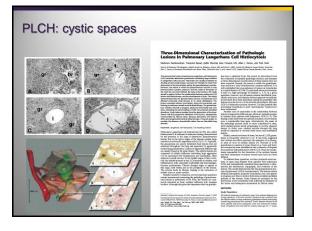
• 49-year-old male with a history of left testicular seminoma 3 years prior. He was treated with radical orchiectomy and chemotherapy at diagnosis. Post therapy surveillance CT scan was obtained.









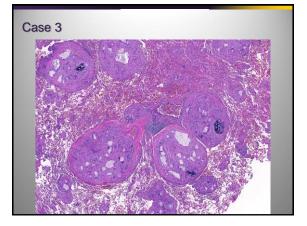


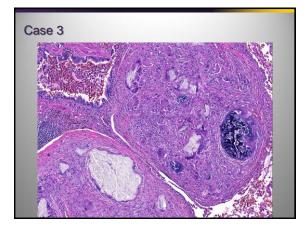


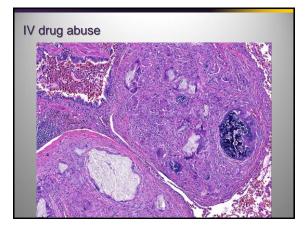


#### Case 2: concepts

- Metastases follow blood flow: lower lobe
- Chronic inhalational lung disease: upper lobe
  - Silicosis
  - Sarcoidosis
  - Respiratory bronchiolitis
  - Centrilobular emphysema
    Pulmonary Langerhans' cell histiocytosis







 26-year-old male with methicillin-resistant Staphylococcus aureus (MRSA) pneumonia with a central line undergoing treatment at home. He presents with dyspnea and anxiety.



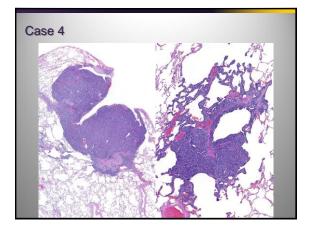


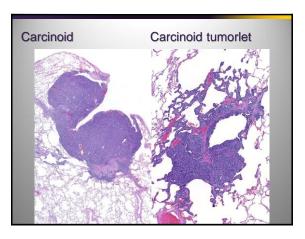


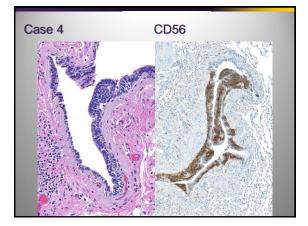


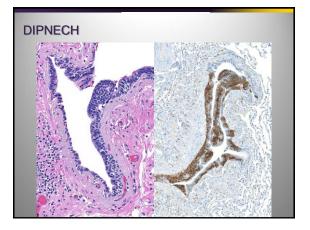
### Case 3: concepts

- · A tree-in-bud pattern most commonly: airway related
- IV drug abuse is rarely suspected prior to biopsy
- Patients often have a central line in place for therapeutic use
- · Histology is the key to diagnosis

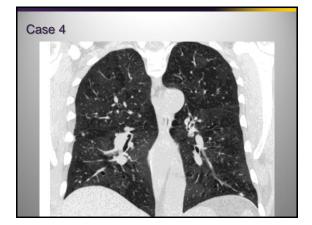


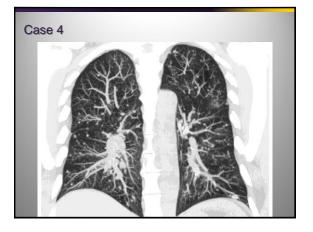


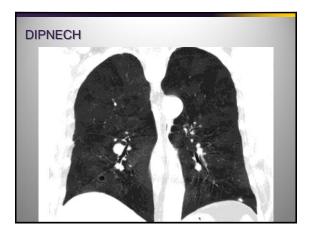


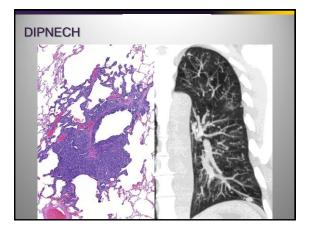


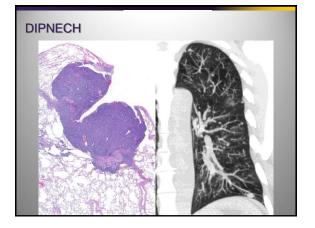
 49-year-old woman with dyspnea who carries a diagnosis of asthma and is a never smoker.

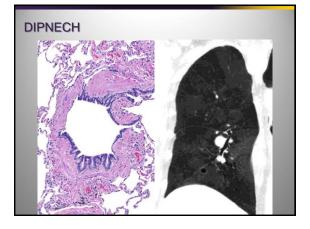






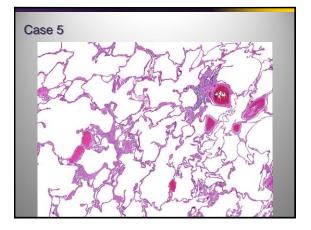


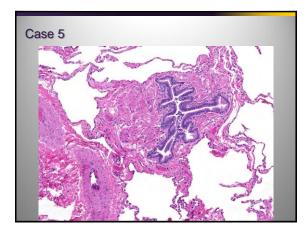


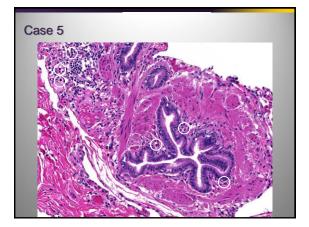


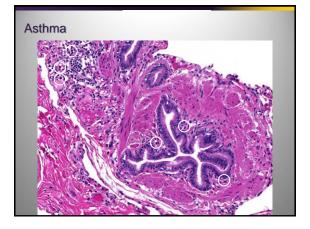
# Case 4: concepts

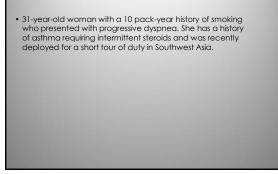
- DIPNECH is being recognized with increasing frequency
- Clinically often confused with asthma
- Mosaic attenuation and multiple small nodule: DIPNECH





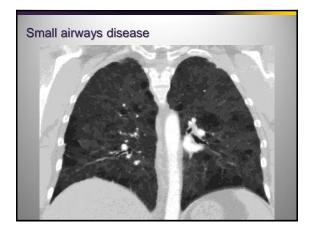


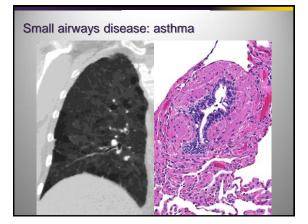


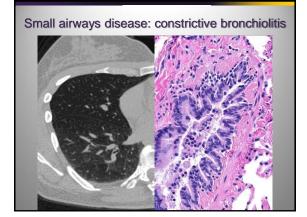


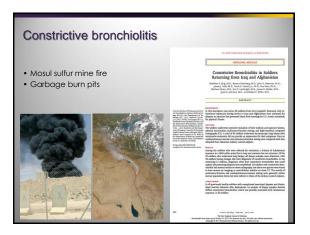






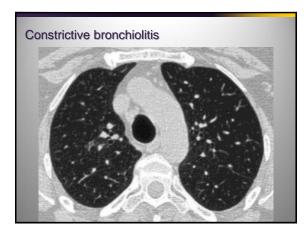


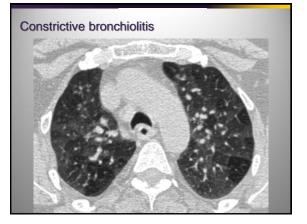






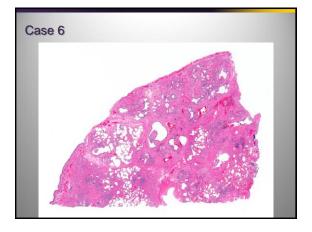


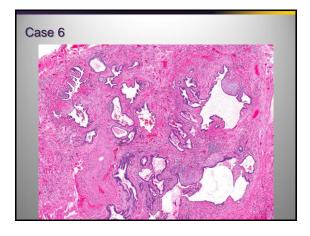


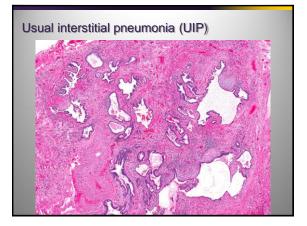


### Case 5: concepts

- Mosaic attenuation can be marker of small airway injury
   multiple possible etiologies
- Expiratory imaging increases the sensitivity of the examination
- Minimal airway narrowing on histology is difficult to quantify
   Poiseuille's Law
  - Resistance to flow in a tube is inversely proportional to the fourth power of the radius





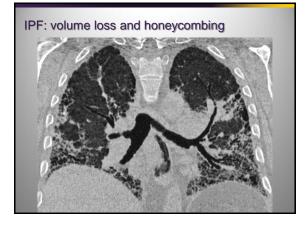


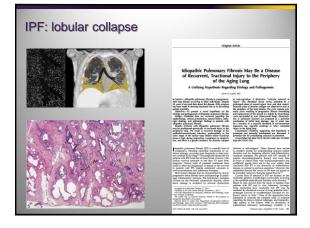
 59-year-old man with a history of progressive dyspnea over the preceding two years. He is hypoxic and tachypneic. He has a 30-pack-year smoking history, and stopped 10 years ago.

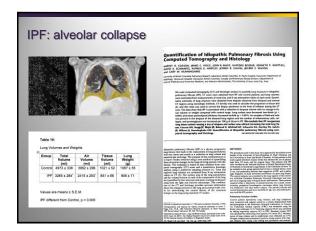


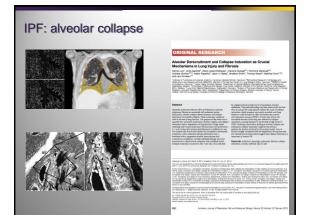


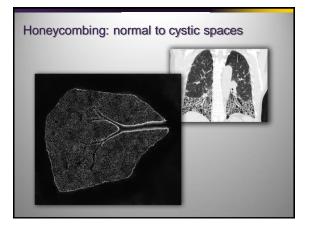


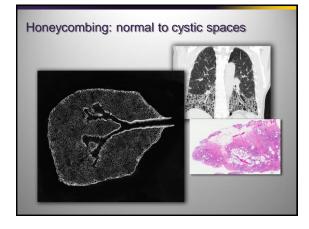


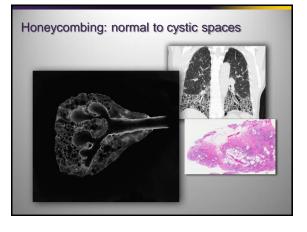


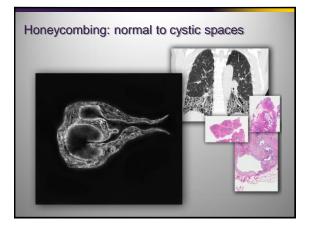


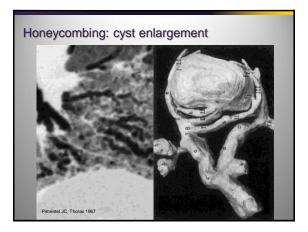


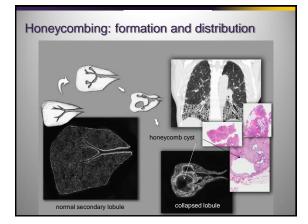


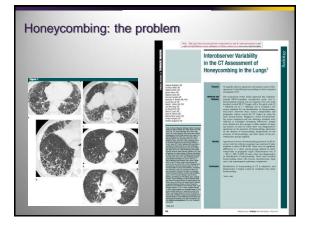


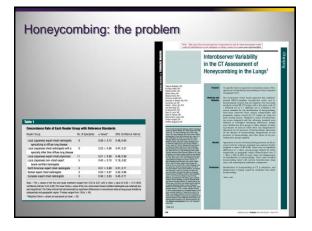


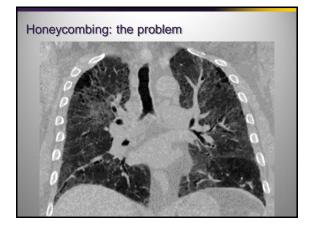


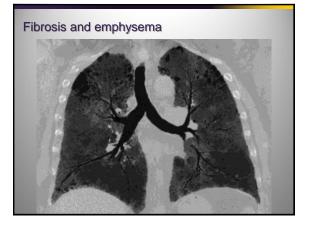


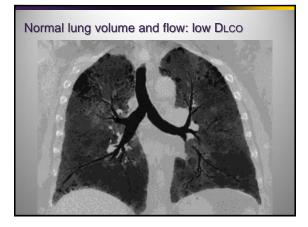


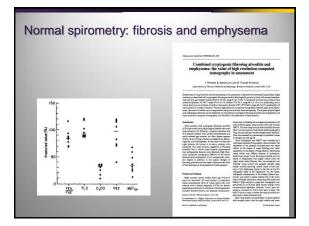








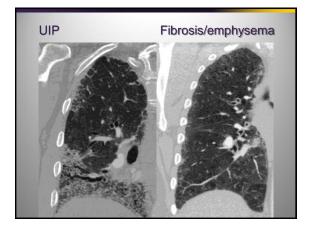




## Normal spirometry: fibrosis and emphysema

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HRCT. <sup>3</sup> Since emphysema and interstitial lung abnormalities have opposing effects on lung volume, our findings suggest that HRCT may provide important diagnostic information in	
smokers whose total lung capacity is unexpect-	
edly "normal." We speculate that this could be	Cip abs
clinically important to physicians who may think	abo rok
that a patient who does not have symptoms or characteristic abnormalities on lung-function	95
tests is disease-free, when in fact the patient	the box
could be affected by two of the consequences of	
smoking — emphysema and interstitial lung abnormalities.	12121
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The NEW ENGLAND JOURNAL of MEDICINE		
PERSONAL PROPERTY INC. MARCH 10, 2011	RE. 3H NO.18	
Lung Volumes and Emphysema in Smokers Lung Abnormalities	with Interstitial	
Gange K. Wahin, M. D., MAI K., Gary W. Hwannghan, M.O., M. Hu, Mauar Habina, M.D., Hala Daigen, M.O., Tawao Hanahiro, M.D., Hall Sen Joel Engle, P.O., Sawid A, Cynth, M.D., John R Burlen, M.D., MSPA Magnetin, A. Oler, M.S., Berlin, Command, P.D., Kafarine D.Kon, M.S., Bahan, S. Streaman, M.D., Phil., Henne Habe, M.D., MDP, and Is Garine G20DScare translighters <sup>1</sup>	panas C. Rosc, M.S., K., Kathartne R. Andricole, IM.C., Anarik C. Schurfen, M.D.,	
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# Case 6: concepts

#### • UIP

- massive volume loss
- lobular collapse
- peripheral and lower zone reticulation
- honeycombing
- A confident HRCT diagnosis of UIP obviates the need for biopsy
- HRCT underestimates honeycombing visible to the pathologist
- Pulmonary fibrosis is difficult to assess in COPD patients

