Set	% FEV_1	% FVC	FEV_1 / FVC	% TLC	% DLCO
1	83	89	93	92	85
2	58	62	93	68	**54**
3	52	80	65	110	65
4	55	87	63	100	88
5	57	87	65	70	68
6	66	72	92	75	33

Set 1: Normal PFTs

Case: A 35-year-old non-smoking male presents for a routine physical examination. He is asymptomatic, with no shortness of breath, cough, or wheezing. He is physically active, exercises regularly, and has no history of lung disease.

PFT Results:

- FEV_1: 83% of predicted
- FVC: 89% of predicted
- FEV_1/FVC: 93%
- TLC: 92%
- DLCO: 85%

Question:
How would you interpret these PFT results?

Answer: Normal pulmonary function.

Set 2: Restrictive Pattern with Reduced DLCO

Case: A 60-year-old female with a history of systemic sclerosis presents with progressive shortness of breath and a dry, non-productive cough. She denies wheezing or chest pain. A high-resolution CT shows reticular opacities and honeycombing in the lung bases.

PFT Results:

- FEV_1: 58% of predicted
- FVC: 62% of predicted
- FEV_1/FVC: 93%

- TLC: 68%
- DLCO: 54%

Question:
What is the most likely diagnosis based on these findings?

Answer: Restrictive lung disease, likely due to interstitial lung disease (ILD) secondary to systemic sclerosis.

Set 3: Obstructive Pattern with Hyperinflation

Case: A 65-year-old male with a 40-pack-year smoking history presents with chronic cough, sputum production, and worsening dyspnea.

PFT Results:

- FEV_1: 52% of predicted
- FVC: 80% of predicted
- FEV_1/FVC: 65%
- TLC: 110%
- DLCO: 65%

Question:
What is the most likely diagnosis based on these findings?

Answer: COPD with emphysematous changes (obstructive pattern with hyperinflation and reduced DLCO).

Set 4: Obstructive Pattern with Preserved DLCO

Case: A 30-year-old female presents with intermittent wheezing, shortness of breath, and nocturnal symptoms. She reports using her rescue inhaler several times per week.

PFT Results:

- FEV_1: 55% of predicted
- FVC: 87% of predicted
- FEV_1/FVC: 63%
- TLC: 100%
- DLCO: 88%

Question:
What is the most likely diagnosis based on these findings?

Answer: Asthma (obstructive pattern with preserved DLCO, which is typical for asthma).

Set 5: Obstructive Lung Disease with Reduced TLC

Case: A 50-year-old male is referred to the pulmonology clinic from the bariatric clinic for preoperative evaluation and optimization of his respiratory condition. He has a known history of asthma.

PFT Results:

- FEV_1: 57% of predicted
- FVC: 87% of predicted
- FEV_1/FVC: 65%
- TLC: 70%
- DLCO: 68%

Question:
What is the most likely diagnosis based on these findings?

Answer: Mixed obstructive and restrictive lung disease, likely due to obesity and asthma.

Set 6: Isolated Low DLCO with Mild Restriction

Case: A 55-year-old male with a history of lymphoma for which he received chemotherapy, presents with fatigue and exertional dyspnea. He denies wheezing or productive cough.

PFT Results:

- FEV_1: 66% of predicted
- FVC: 72% of predicted
- FEV_1/FVC: 92%
- TLC: 75%
- DLCO: 33%

Question:
What is the most likely diagnosis based on these findings?

Answer: Pulmonary fibrosis due to chemotherapy (mild restriction with significantly reduced DLCO).

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