



Interstitial lung disease (ILD) is the presence of fibrosis and/or inflammation of the lung parenchyma not due to infection or malignancy.¹

STEP 1: RECOGNIZE ILD

TYPICAL PRESENTATION

- Subacute or chronic cough
- Exertional dyspnea (breathlessness)

While performing an H&P:

- Listen carefully for crackles
- Look for evidence of autoimmune disease on the skin and joints
- Walk your patient informally in the hallway to assess for desaturation (>3% drop)

Order initial testing based on your H&P. Consider:

- Spirometry (normal or low FVC often with a normal FEV1/FVC ratio in ILD)
- Lung Volumes (normal or low TLC)
- DLCO (frequently reduced in ILD)
- Chest x-ray (unexplained, persistent markings)

If you suspect ILD, perform a high resolution CT scan of the chest. HRCT includes the following:

- Inspiratory and expiratory supine imaging
- High-spatial frequency algorithm reconstruction at 0.625 to 2.5mm thickness
- No IV contrast required
- Consider prone imaging when mild dependent ground-glass attenuation is present

SUPPORT FOR YOU FROM THE PULMONARY FIBROSIS FOUNDATION

The Pulmonary Fibrosis Foundation mobilizes people and resources to provide access to high quality care and leads research for a cure so people with pulmonary fibrosis will live longer, healthier lives.

To learn more about how the PFF can help support you, contact the PFF Patient Communication Center at **844.TalkPFF** (844.825.5733) or **pcc@pulmonaryfibrosis.org**, or visit the PFF online at pulmonaryfibrosis.org.



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MANAGEMENT CHECKLIST

- Recommend smoking cessation
- Advise patients to purchase a pulse oximeter to monitor oxygen levels immediately after activity: stairs, hills, level ground, exercise, showering
- Prescribe different oxygen prescriptions at rest, with routine activities, with exercise, and with sleep to maintain oxygen levels over 90% 24 hours per day
- Consider nocturnal oximetry or polysomnography
- Prescribe pulmonary rehabilitation
- Advise patients to achieve a healthy weight
- Administer influenza and pneumococcal vaccination
- Tell your patients about reliable resources like the Pulmonary Fibrosis Foundation (PFF). They can visit pulmonaryfibrosis.org or call **844.TalkPFF** (844.825.5733) for information
- Provide information about your local PFF support group
- Consider lung transplant evaluation
- Consider clinical trial enrollment
- Consider pharmacological treatment after a diagnosis is confirmed

1 Rosas IO, et al. Interstitial lung disease: NHLBI Workshop on the Primary Prevention of Chronic Lung Diseases. *Ann Am Thorac Soc.* 2014 Apr;11 Suppl 3:S169-77.

STEP 2: ATTEMPT TO IDENTIFY THE CAUSE OF ILD

Step 2A: Perform a detailed history and physical

Disease

Disease	Questions/Findings
Drug/Radiation-induced ILD	Chemotherapy, amiodarone, nitrofurantoin, other drugs
Connective Tissue	Check PneumoTox.com. Radiation therapy to the chest
Vasculitis	Joints, skin, Raynaud's, reflux, dry eyes/mouth, muscle weakness Disease-related ILD or pain
Chronic Hypersensitivity Pneumonitis	Sinus disease, hoarseness, hematuria, hemoptysis • Exposure to mold sources (forced air heating, hot tubs, humidifiers, water damage or visible mold) • Exposure to birds, down bedding, farming, or agriculture
Pneumoconioses	Occupational history
Familial ILD	Family history of ILD, sarcoidosis, home oxygen use, autoimmune disease

Step 2B: Order relevant blood tests

Disease

Disease	Blood tests
Eosinophilic pneumonia	CBC with differential
Sarcoidosis	Serum calcium
Scleroderma/MCTD	ANA, Scl70, centromere, U1RNP
Rheumatoid Arthritis	RF, CCP
Sjogren's	ANA, Ro/SSA, La/SSB
Idiopathic inflammatory myositis	ANA, Jo-1, CK, myoglobin, aldolase, consider myositis panel
Vasculitis	Anti-PR3 and MPO (ANCA), creatinine
Chronic Hypersensitivity Pneumonitis	HP panel (controversial)
CTD-ILD	ESR, CRP

Step 2C: Consider surgical lung biopsy

Involve a multidisciplinary team at an ILD center to determine whether a surgical lung biopsy is required.

If a biopsy is performed, ask the surgeon to take multiple appropriately sized biopsies from 2-3 lobes (not just the lingula or middle lobe). Biopsy unaffected and mild-to-moderately affected areas. Do not biopsy only the most severely affected area. Have the biopsy reviewed by a pulmonary pathologist with expertise in ILD.

ATS/ERS/JRS/ALAT TREATMENT GUIDELINES FOR IPF

Strongly recommended for IPF*

Long-term oxygen therapy**
Lung transplantation**
Conditionally recommended for IPF*
Pulmonary rehabilitation
Nintedanib
Pirfenidone
Anticancer therapy
Corticosteroids during an "acute exacerbation"
* These recommendations apply only to adults diagnosed with idiopathic pulmonary fibrosis (IPF) and do not apply to those with other forms of pulmonary fibrosis or interstitial lung disease
STRONG RECOMMENDATION: "Most individuals should receive this intervention."

CONDITIONAL RECOMMENDATION:

"Recognize that different choices will be appropriate for individual patients and that you must help each patient arrive at a management decision consistent with his or her values and preferences." and "The majority of individuals in this situation would want the suggested course of action, but many would not."

Please note that corticosteroid monotherapy, N-acetylcysteine monotherapy, and combination therapy with prednisone + azathioprine + N-acetylcysteine are **not** recommended for IPF.

From Raghu G, et al., *Am J Respir Crit Care Med* 2015;192(2):238-48, and Raghu G, et al., *Am J Respir Crit Care Med* 2011;183(6):788-824.

**When indicated