Poster

Clarifying the pathway to an accurate diagnosis of interstitial lung disease: results from a modified Delphi survey in the US

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Clarifying the pathway to an accurate diagnosis of interstitial lung disease: results from a modified Delphi survey in the US

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INTRODUCTION

- Timely diagnosis of ILD is important for monitoring of fibrosis, initiating treatment, delaying disease progression and prolonging survival.[1]
- The pathway to diagnosis can be winding and may involve misdiagnosis, missed opportunities and delays in referral.[2–4]
- Delphi analysis is a robust consensus technique for health-related cases in which clinical evidence is insufficient or contradictory.[5]

AIM

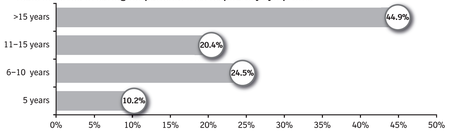
- To seek consensus on the key steps that facilitate the patient journey to an accurate ILD diagnosis and appropriate management in the US.

METHODS

- A three-round, web-based, modified Delphi survey was conducted in the US (Apr–Sep 2021).
- A Steering Committee of experts defined the topics, the panel recruitment criteria, the definitions of consensus and identified a suitable panel.

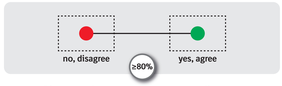
Delphi panel

Years involved in caring for patients with respiratory symptoms



Consensus definitions

7-point Likert scale: median=±2-3, IQR=0-1



Binary scale: ≥80% yes/no, agree/disagree

CONCLUSIONS

- We achieved robust consensus agreement amongst PCPs and pulmonologists in areas of the patient pathway to early diagnosis where there is currently uncertainty.
- These findings identify symptoms that should merit further evaluation for ILD and help define the steps for timely, accurate diagnosis in the primary care and outpatient pulmonology settings.

RESULTS

Summary of consensus agreement on the pathway to ILD diagnosis

Symptom onset

1. PCP EVALUATION

Signs that should prompt suspicion of ILD

- Chronic cough
- Dyspnea
- Crackles on auscultation
- Clubbing on fingernails
- Oxygen desaturation with ambulation
- Hypoxemia at rest

97.2%

Conditions to rule out before considering ILD

Cardiac disease, asthma, bronchitis and allergies in patients with chronic cough and/or dyspnea — 97.2%

The workup for patients presenting with chronic cough and dyspnea

- Spirometry
- Chest X-ray
- Oximetry

85.7%

- Patients should be asked questions in review of systems about CTD

94.3%

Following workup

- Different course of action in 1–3 months if no response to treatment or management
- Pulmonology referral to be considered

97.2%

- PCP to order HRCT if familiar with technique

94.4%

- PCPs need clearer guidance on ordering an HRCT in ILD

100%

2. PULMONOLOGIST AND RADIOLOGIST EVALUATION

The workup for patients with suspected ILD

- Medical history
- Physical examination
- PFTs
- Serology
- 6MWT
- HRCT

96.9%

Questionnaires — 97.0%

The most important serologies to order[a]

ANA, CCP, RF, SSA and Scl-70 — 80.7%

Symptoms that prompt HRCT scan

- Crackles on auscultation
- Clubbing of fingernails
- Oxygen desaturation with ambulation
- Bibasilar abnormalities on chest X-ray
- Abnormal FVC
- Abnormal DLco
- Confirmed CTD

100%

How to order HRCT

- Specify whether expiratory, inspiratory or both views needed
- Specify whether prone, supine or both images needed
- Specify that it needs to be presented in thin sections

87.1%

Basic requirements for the radiologist's HRCT report

Use of standardized template — 2(1)[b]

The most important elements are the description of features and the probable diagnosis — 97.0%

3. MDDs

Who is part of the MDT?

- Pulmonologist
- Thoracic radiologist
- Pathologist with expertise in ILD
- Rheumatologist when CTD is suspected

100%

What is the most effective MDD style?

All disciplines involved (face to face or virtual) — 100%

When should MDDs take place?

- If there is at least diagnostic uncertainty
- If any lung biopsy is being considered

93.9%

https://bit.ly/3xB5hp5

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[a]Other serologic testing may be necessary.
[b]Median response = agree (IQR = 1) on 7-point Likert scale.

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REFERENCES

1. Hoyer N, et al. Respir Res 2019; 20:103;
2. Cosgrove GP, et al. BMC Pulm Med 2018; 18:9;
3. Hewson T, et al. Thorax 2018; 73:683–685;
4. Collard HR, et al. Respir Med 2007; 101:1350–1354;
5. Murphy MK, et al. Health Technol Assess 1998; 2:i–iv, 1–88

ABBREVIATIONS

6MWT, 6-minute walk test; ANA, antinuclear antibody; CCP, cyclic citrullinated peptide; CTD, connective tissue disease; DLco, diffusing capacity of the lung for carbon monoxide; FVC, forced vital capacity; HRCT, high-resolution computed tomography; ILD, interstitial lung disease; IQR, interquartile range; MDD, multidisciplinary discussion; MDT, multidisciplinary team; PCP, primary care physician; PFT, pulmonary function test; RF, rheumatoid factor; SSA, Sjögren's-syndrome-related antigen A.

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