Multidisciplinary Meetings in Interstitial Lung Disease: Polishing the Gold Standard

Cathryn T. Lee, M.D.

Section of Pulmonary and Critical Care, Department of Medicine, The University of Chicago, Chicago, Illinois

ORCID ID: 0000-0002-0963-7505 (C.T.L.).

With many available clinical, radiologic, and pathologic patterns and combinations thereof, diagnosis of interstitial lung disease (ILD) subtypes has been colloquially described as an "alphabet soup." Despite this confusion, achieving a correct diagnosis early is critical in patients with ILD because treatments can differ depending on underlying etiology. Immunosuppressive agents targeting underlying autoimmune disease, for instance, have proved to be harmful in patients diagnosed with idiopathic pulmonary fibrosis (IPF) (1). Thus, early and accurate diagnosis can lead to early and accurate treatment, thereby ameliorating the disease progression that is so common in these patients.

The ILD multidisciplinary meeting (MDM) is broadly accepted as the gold standard for ILD diagnosis worldwide. Generally, such meetings involve the clinician caring for the individual patient along with other specialists, including pulmonologists, radiologists, pathologists, and/or rheumatologists, to discuss available clinical data and generate a consensus ILD diagnosis for the patient. The majority of data supporting MDM emphasize its downstream effects on ultimate diagnosis as well as its effect on diagnostic agreement among clinicians. MDM has consistently been shown to change ILD diagnosis in approximately half of patients presented, and these collaborative diagnoses have been found to be more concordant with patient outcomes (2, 3). MDM diagnosis of IPF, considered the ILD subtype with the worst prognosis, is more closely associated with mortality than clinician or radiologist diagnosis of IPF alone (4).

Because of these effects on diagnostic concordance, the international ILD community has embraced MDM as an essential component of ILD care. Indeed, the health systems of some countries, most notably Australia, require MDM diagnosis of IPF before a patient can receive antifibrotic therapy (5). This emphasis on MDM as essential has not, however, resulted in its standardization. The description of these meetings in diagnostic guidelines, whether regarding membership, goals of discussion, or types of cases presented, is variable (Table 1) (6). Accordingly, one survey of expert centers around the world found considerable heterogeneity regarding which experts should participate, what information should be presented, and how a final diagnosis should be made (7). One area of consensus has been increasingly made clear: standardization of the MDM is needed, including an overall statement of purpose regarding which objectives this meeting must accomplish (8).

In this issue of AnnalsATS, Teoh and colleagues (pp. 66–73) begin this important task with a Delphi survey among ILD physicians worldwide regarding essential features of the ILD MDM (9). An initial semistructured interview was conducted with 15 ILD experts, followed by two web-based survey rounds of 102 additional ILD experts. The authors’ definition of consensus was a median score on Likert scale of 4 or 5 with an interquartile range (IQR) of 0. Fifty statements were initially proposed, five of which reached the level of consensus in the first round. Three of these statements involved the use of radiology, and two were exploratory statements regarding the necessity of future benchmarking and
Table 1. Selected diagnostic guidelines/position statements mentioning MDM

| Society                                      | Year | ILD Type | Recommendations Regarding Multidisciplinary Diagnosis |
|----------------------------------------------|------|----------|------------------------------------------------------|
| Canadian Thoracic Society                    | 2017 | Fibrotic ILD | • Respiriologists, radiologist, and pathologists present  
|                                              |      |          | • Iterative process, rereview should occur if new information becomes available  
|                                              |      |          | • MDM should occur when possible before disease-specific treatment  
| National Institute for Health and Care Excellence (UK) | 2013 | IPF      | • Differing composition of MDM based on clinical question, but at minimum respiratory physician, radiologist, ILD nurse, team coordinator  
| Fleischner Society                           | 2018 | IPF      | • Not required for all patients; focus on disease that is not fully characterized or suspicion of non-IPF etiology  
| American Thoracic Society, European Respiratory Society, Japanese Respiratory Society, and Latin American Thoracic Society | 2018 | IPF      | • Clinician, radiologist, and pathologist; rheumatologist often helpful  
| Thoracic Society of Australia and New Zealand | 2020 | CTD-ILD | • Direct contact or telemedicine  
| American College of Chest Physicians         | 2021 | HP       | • Weekly to monthly frequency, depending on volume  
|                                              |      |          | • Goals: diagnosis, management, review of disease progression  
|                                              |      |          | • Pulmonologist, radiologist, and pathologist; rheumatologist on case-by-case basis  
|                                              |      |          | • Meeting mode deferred to clinicians  
|                                              |      |          | • Conditional recommendation for MDM for diagnostic decision-making  
|                                              |      |          | • Face-to-face discussion with respiratory physicians, radiologist, pathologist if relevant; rheumatologists may also play role  
|                                              |      |          | • MDM defined as pulmonologists, chest radiologists, and pathologists with sometimes rheumatologists, occupational medicine  
|                                              |      |          | • MDM should be performed in cases in which a high confidence diagnosis cannot be established (weak recommendation, very low-quality evidence)  
|                                              |      |          | • Cases with biopsy require MDM to confirm diagnosis  

>90% of respondents were actively involved in the MDM at their ILD referral center. This study is the largest to systematically address what ILD experts believe should make up the MDM itself rather than assessing the downstream effects of individual MDMs. Interestingly, only 5 statements and 2 exploratory statements reached the threshold for consensus despite 50 initial statements being considered. This finding reflects the notable center-to-center heterogeneity that exists among MDMs and the considerable work that remains if standardization is to become a priority.

One limitation that the authors acknowledge is that the overwhelming majority of respondents were pulmonologists, which may bias which statements reached consensus. For instance, there were zero pathologists that were recruited as respondents, which may have affected the lack of consensus regarding the necessity of pathology to be present at MDMs. Nevertheless, this may be reflective of the fact that pathology is not always able to be present at MDMs, particularly smaller or newer meetings; one study found that pulmonologists and radiologists are almost always present, but one-third of centers do not have a pathologist attending MDM (6).

This work by Teoh and colleagues represents an important first step toward the standardization of MDMs worldwide. The many statements reaching consensus regarding the presence of chest radiologists and quality of images obtained and projected emphasize the growing primacy of radiology in the diagnosis of ILD. The presence of a chest pathologist is certainly beneficial when biopsy specimens are available, but the ongoing uncertainty regarding the benefits and risks of surgical lung biopsy as well as emergence of new technologies such as cryobiopsy may change the frequency by which biopsy specimens are available for review over time or over centers. Thus, whereas the presence of some specialists, such as pulmonologists and radiologists, is necessary for every patient presented at MDM, the presence of others, such as pathologists and rheumatologists, may be better used on a case-by-case or center-by-center basis.

Although this study did not take place during the time of the coronavirus disease (COVID-19) pandemic, the consensus...
Is Active Mobility the Most Underdelivered Care Component for Patients on Extracorporeal Membrane Oxygenation?

Joseph E. Tonna, M.D., M.S., F.C.C.M.

Division of Cardiothoracic Surgery, University of Utah Health, Salt Lake City, Utah

ORCID ID: 0000-0001-8879-2628 (J.E.T.)

Physical activity is arguably the most underdelivered component of medical care for patients who are on extracorporeal membrane oxygenation (ECMO). Patient mobility and physical therapy have certainly increased in use among critically ill patients over the last 30 years. The value of physical mobility, despite inconsistent trial data (1, 2), is qualitatively appreciated by providers, patients, and family (1, 2), if underdelivered. Mobility feasibility during critical illness is also established; images of patients working with resistance bands and bed biking—even walking—while ventilated are common. Overall, in 2021, physical mobilization is a broadly used component of multidisciplinary critical care endorsed by societies and intuitively beneficial during injury and illness. Against

References

1 Raghu G, Anstrom KJ, King Jr. TE, Lasky JA, Martinez FJ; Idiopathic Pulmonary Fibrosis Clinical Research Network. Prednisone, azathioprine, and N-acetylcysteine for pulmonary fibrosis. N Engl J Med 2012;366:1968–1977.

2 De Sadeleer LJ, Meert C, Yserbyt J, Slabbynck H, Verschakelen JA, Verbeken EK, et al. Diagnostic ability of a dynamic multidisciplinary discussion in interstitial lung diseases: a retrospective observational study of 938 cases. Chest 2018;153:1416–1423.

3 Jo HE, Glaspole IN, Levin KC, McCormack SR, Mahar AM, Cooper WA, et al. Clinical impact of the interstitial lung disease multidisciplinary service. Respir Med 2016;21:1438–1444.

4 Walsh SLF, Wells AU, Desai SR, Poloiti V, Piciucchi S, Dubini A, et al. Multicentre evaluation of multidisciplinary team meeting agreement on diagnosis in diffuse parenchymal lung disease: a case-cohort study. Lancet Respir Med 2016;4:557–565.

5 Jo HE, Troy LK, Keir G, Chambers DC, Holland A, Goh N, et al. Treatment of idiopathic pulmonary fibrosis in Australia and New Zealand: a position statement from the Thoracic Society of Australia and New Zealand and the Lung Foundation Australia. Respir Med 2017;22:1436–1458.

6 Richeldi L, Launders N, Martinez F, Walsh SLF, Myers J, Wang B, et al. The characterisation of interstitial lung disease multidisciplinary team meetings: a global study. ERJ Open Res 2019;5:00209-2018.

7 Jo HE, Corte TJ, Moodley Y, Levin K, Westall G, Hopkins P, et al. Evaluating the interstitial lung disease multidisciplinary meeting: a survey of expert centres. BMC Pulm Med 2016;16:22.

8 Walsh SLF. Multidisciplinary evaluation of interstitial lung diseases: current insights: number 1 in the Series “Radiology” Edited by Nicola Sverzellati and Sujal Desai. Eur Respir Rev 2017;26:170002.

9 Teoh AKY, Holland AE, Morisset J, Flaherty KR, Wells AU, Walsh SLF, et al.; ILD MDM Delphi Collaborators. Essential features of an interstitial lung disease multidisciplinary meeting: an international Delphi survey. Ann Am Thorac Soc 2022;19:66–73.

10 Mackintosh JA, Glenn L, Barnes H, Dunn E, Bancroft S, Reddy T, et al. Benefits of a virtual interstitial lung disease multidisciplinary meeting in the face of COVID-19. Respir Care 2021;6:612–615.

11 Johannson KA, Lethebe BC, Assayag D, Fisher JH, Kolb M, Morisset J, et al. Travel distance to subspecialty clinic and outcomes in patients with fibrotic interstitial lung disease. Ann Am Thorac Soc 2022;19:23–30.

Copyright © 2022 by the American Thoracic Society