**HRCT thorax reporting in patients with suspected idiopathic pulmonary fibrosis (IPF) as per ATS / ERS guidelines**

**Descriptor:**

The aim of this audit is to evaluate reporting practices of HRCT thorax in patients with suspected idiopathic pulmonary fibrosis (IPF) or interstitial lung disease (ILD)  in accordance with ATS/ERS/JRS/ALAT guidelines.

**Background:**

IPF is chronic, progressive, fibrosing interstitial pneumonia of unknown cause, occurring primarily in older adults and limited to the lungs. Diagnosis of IPF requires exclusion of known causes of ILD, and the presence of a usual interstitial pneumonia (UIP) pattern on HRCT or lung biopsy. Guidelines for the diagnosis of IPF published by American Thoracic Society/European Respiratory Society/Japanese Respiratory Society/Latin American Thoracic Association (ATS/ERS/JRS/ALAT) in September 2018 provided new criteria for UIP patterns observed on HRCT.  Four HRCT patterns have been described namely, “UIP pattern”, “probable UIP pattern”, “indeterminate for UIP pattern”, and “alternative diagnosis”.  In the appropriate clinical context, the presence of a typical or probable UIP pattern on HRCT is sufficient for a diagnosis of IPF to be made. If the clinical context is indeterminate for IPF, or the CT pattern is not definite or probable UIP, biopsy should be considered to confirm the presence of a UIP histologic pattern, and a confident diagnosis of IPF may be made based on multidisciplinary evaluation. Categorisation of patients into one of these categories based on HRCT appearances will help plan further management and whether lung biopsy is required or not.

## The Cycle

**The standard:**

All thoracic HRCT reports in patients with suspected IPF should follow the ATS-ERS guidelines. All patients should be categorised into one of the four HRCT patterns namely, “UIP pattern”, “probable UIP pattern”, “indeterminate for UIP pattern”, and “alternative diagnosis”.

In case of indeterminate UIP or alternative diagnosis, the most likely diagnosis or a differential diagnosis should be suggested in the report.

**Target:**

100 % of thoracic HRCT reports in patients with suspected IPF/ Interstitial lung disease should be categorised into one of four categories as per ATS / ERS guidelines.

100 % of reports of indeterminate UIP or alternative diagnosis categories should suggest the most likely diagnosis or give a differential diagnosis.

## Assess local practice

**Indicators:**

Did the report categorise patients based on the HRCT patterns into one of the four categories as per ATS/ERS guidelines?

Did the report mention the most likely diagnosis or at least a differential diagnosis in case of indeterminate UIP or alternative diagnosis categories?

**Data items to be collected:**

Retrospective data collection of HRCT thorax reports in patients with suspected IPF/ interstitial lung disease.

**Suggested number:**

30 reports

**Suggestions for change if target not met:**

1. Results should be disseminated amongst the HRCT thorax reporters.

2. Ensure awareness of the existing ATS / ERS guideline and disseminate it to HRCT thorax reporters.

3. Discussion of difficult cases in appropriate setting such departmental meetings or interstitial lung disease meeting.

**Resources:**

1. RIS-PACS in obtaining the examinations list and reports of HRCT thorax.

2. Create a data collection template.

3. Data analysis and write-up approximately 3 hours.

**References:**

1. 1. Raghu G, Remy-Jardin M, Myers JL, Richeldi L, Ryerson CJ, Lederer DJ et al.  Diagnosis of Idiopathic Pulmonary Fibrosis. An Official ATS/ERS/JRS/ALAT Clinical Practice Guideline. Am J Respir Crit Care Med. 2018 Sep 1;198(5):e44-e68.

2. Lynch DA, Sverzellati N, Travis WD, Brown KK, Colby TV, Galvin JR,Diagnostic criteria for idiopathic pulmonary fibrosis: a Fleischner Society White Paper. Lancet Respir Med. 2018 Feb;6(2):138-153.

3. Martinez FJ, Lederer DJ. Focus on Idiopathic Pulmonary Fibrosis: Advancing Approaches to Diagnosis, Prognosis, and Treatment. Chest. 2018 Oct;154(4):978-979.

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