

## **HRCT in the Diagnosis of Diffuse Lung Disease**

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High Resolution CT (HRCT) or thin section CT is currently the imaging modality that provides the most detailed images of the lung. This technique is able to give a “submacroscopic” overview of the entire lung parenchyma which makes an adequate study of the appearance and the distribution pattern of lung disease – two basic elements used to make the diagnosis -possible .

HRCT is in part responsible for the radical change in the diagnostic work-up of diffuse lung diseases that has occurred in the past few years. Instead of histopathologic evaluation being the gold standard for diagnosis, it is nowadays accepted that an integrative approach of clinical, radiologic and, when necessary, pathologic data is the best approach: the more data are available, the higher the level of agreement and the diagnostic confidence become.

The radiologist plays an important role in this multidisciplinary group. HRCT is indeed very often able to make the correct diagnosis, especially when typical patterns of this disease are present, reason why lung biopsy may be avoided. However, when CT signs are atypical, a diagnosis may not be possible until after thorough clinico-radiologic correlation. But even then, diagnosis can be difficult and when there is discordance between clinical and radiological findings, a lung biopsy may be indicated necessitating again a formal multidisciplinary discussion. Therefore it is important that radiologists know the HRCT features of the different diffuse lung diseases and understand as well how these features come about, i.e. understand the pathological correlate of the CT changes.