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Analysis of pulmonary sounds for the diagnosis of interstitial lung diseases secondary to rheumatoid arthritis

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Abstract

The diagnosis of interstitial lung diseases in patients affected by rheumatoid arthritis is fundamental to improving their survival rate. In particular, the average survival time of patients affected by rheumatoid arthritis with pulmonary implications is approximately 3 years. The gold standard for confirming the diagnosis of this disease is computer tomography. However, it is very difficult to raise diagnosis suspicion because the symptoms of the disease are extremely common in elderly people. The detection of the so-called *velcro crackle* in lung sounds can effectively raise the suspicion of an interstitial disease and speed up diagnosis. However, this task largely relies on the experience of physicians and has not yet been standardized in clinical practice. The diagnosis of interstitial lung diseases based on thorax auscultation still represents an underexplored

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