AUTOMATIC SCORING OF LUNG DAMAGE

Development of an automatic computed tomography (CT) score to quantify pulmonary involvement in patients with cystic fibrosis.

ERGANEO
L'AVENIR EST FAIT D'AUDACE

PRESENTATION

Cystic fibrosis is the most common inherited genetic disease in the Caucasian population (1/4500). Respiratory involvement is one of the main causes of death. Patients are monitored using clinical and functional markers and chest scans. But these follow-ups take a long time and are too variable. The method developed allows automatic scoring of pulmonary involvement in cystic fibrosis by CT scan. This score is well correlated with respiratory function, which was verified in two independent cohorts of patients.

DEVELOPMENT PHASE

- ☑ One study with 2 cohorts : one for development (17 patients) and one for validation (53 patients)

CT quantification - Automatic scoring - Cystic fibrosis
Lung segmentation - Histogram analysis

APPLICATIONS

- Use in clinical practice for scoring chest scanners
- Use as a morphological marker in clinical studies
- Application to other chronic pulmonary diseases with similar CT manifestations

PUBLICATIONS

Chassagnon G, Martin C, Burgel PR, et al. An automated computed tomography score for the cystic fibrosis lung. Eur Radiol. 2018;28(12):5111-5120

COMPETITIVE ADVANTAGES

- Automatic
- Quickness of execution
- Reproductibililty

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INTELLECTUAL PROPERTY

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