Background. Intestinal lung disease (ILD) is an extra-articular manifestation of rheumatoid arthritis (RA) detected in 20% to 60% of patients with RA on high-resolution computed-tomography (HRCT) chest scan and is clinically significant in near 10%. Despite a high morbi-mortality rate, a definite strategy for preclinical ILD screening in patients with RA remains to be determined. To date, several factors have been reported to increase the risk of RA-ILD occurrence (i.e. older age at RA onset, ACPA positivity, male sex, RA disease activity, the MUC5B rs35705950 promoter variant...). However, none of these risk factors has been validated in a prospective cohort of patients with RA. The ESPOIR prospective cohort includes patients aged 18 to 70 years with recent arthritis (less than 6 months) and a definite or probable diagnosis of RA.

Objectives. To identify in the ESPOIR cohort factors associated with ILD after at least 10 years of RA duration in order to develop a predictive score to identify patients with preclinical RA-ILD.

Methods. An ILD detection by chest HRCT scan was systematically offered to every patient with definite RA after at least 10 years follow-up. Chest HRCT scans were centrally reviewed by an experienced radiologist. Potential predictors of ILD were prospectively collected from baseline to the date of the HRCT scan, and all included patients were genotyped for MUC5B rs35705950. To take into account repeated measures, trajectories were determined for disease activity, C reactive protein, smoking, treatment exposure (i.e. prednisone, methotrexate [MTX] and biological disease modifying anti-rheumatic drugs [bDMARDs]). A logistic model was used to identify independent predictors for the occurrence of ILD on HRCT scans. Confidence intervals were estimated using sampling methods. A predictive score for preclinical ILD occurrence was developed based on the identified predictors.

Results. 163 RA patients according to 2010 ACR/EULAR classification criteria, none of whom had pulmonary symptoms, were investigated with a chest HRCT scan. An ILD detection by chest HRCT scan was systematically offered to every patient with definite RA after at least 10 years follow-up. Chest HRCT scans were centrally reviewed by an experienced radiologist. Potential predictors of ILD were prospectively collected from baseline to the date of the HRCT scan, and all included patients were genotyped for MUC5B rs35705950. To take into account repeated measures, trajectories were determined for disease activity, C reactive protein, smoking, treatment exposure (i.e. prednisone, methotrexate [MTX] and biological disease modifying anti-rheumatic drugs [bDMARDs]). A logistic model was used to identify independent predictors for the occurrence of ILD on HRCT scans. Confidence intervals were estimated using sampling methods. A predictive score for preclinical ILD occurrence was developed based on the identified predictors.

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References.

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