Figure 2. Area under the ROC curve to determine the number of B-lines at LUS to define a significant RA-ILD, applying the 10% of fibrosis at chest HRCT measured by OsiriX as external criterion.

Conclusion: The present study provided data to determine the number of B-lines to identify a significant RA-ILD. LUS may represent a useful technique to select RA patients to be assessed by chest HRCT.

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SAT0071

SUBCLINICAL SYNOVITIS IN ARTHRALGIA: HOW OFTEN DOES IT RESULT IN CLINICAL ARTHRITIS? A LONGITUDINAL STUDY TO REFLECT ON STARTING POINTS FOR DMARD TREATMENT

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Background: Clinically apparent arthritis is mandatory for diagnosing and classifying RA. It is often used as endpoint in arthralgia cohorts and as a starting point for DMARD therapy in clinical practice. In recent literature subclinical synovitis, visualized with MRI or ultrasound, is increasingly used as a starting point for DMARD therapy in absence of clinically apparent arthritis. However, not all patients with a subclinical synovitis will develop clinically apparent arthritis, and thus may be overtreated. It has even been suggested to replace the entry-criterion of clinical arthritis by subclinical synovitis within the 2010 classification criteria for RA to diminish overtreatment. However this might lead to an overclassification of the disease. Because of aforementioned reasoning we aimed to evaluate the risk of overtreatment of these approaches and therefore performed a longitudinal study in three observational arthralgia cohorts.

Objectives: To determine the frequency of non-progression to clinical arthritis in patients with subclinical synovitis, also after considering the 2010-criteria.

Methods: Three individual cohorts of arthralgia patients without clinically apparent arthritis (n=166, 473 and 168) were followed for 1-year on the development of inflammatory arthritis (IA). At baseline subclinical synovitis in hands or feet was visualized with ultrasound (US) (defined as greyscale $\geq$ 2 and/or power-doppler $\geq$ 1)

in cohort 1 and 3 and MRI (synovitis score $\geq$ 1 by two readers) in cohort 2. For all patients with subclinical synovitis the proportion of progressors ('true positives') and non-progressors ('false positives') were determined. The same analysis was done in the subgroup of patients that fulfilled the 2010 criteria for RA, if subclinical synovitis was used as entry criterion. Analyses were stratified for ACPA.

Results: At baseline 36%, 41% and 31% of patients had subclinical synovitis. Of the ACPA-positive arthralgia patients with subclinical synovitis 46%, 56% and 29% respectively developed IA, whereas 54%, 44% and 71% did not progress. Within ACPA-negative arthralgia patients with subclinical synovitis 34%, 15% and 10% developed IA; whereas 66%, 85% and 90% did not progress (Figure 1A). Similar results were seen in the subgroup of patients that fulfilled the 2010 criteria with subclinical synovitis as entry criterion (Figure 1B).

A Patients presenting with arthralgia and imaging detected subclinical synovitis

B Patients presenting with arthralgia, imaging detected subclinical synovitis and $\geq$ 6 points on the 2010-criteria (with subclinical synovitis as entry-criterion)

Figure 1. Percentage of arthralgia patients with subclinical synovitis that did and did not develop IA, in three independent cohorts: (A) Percentage of patients with subclinical synovitis that did and did not progress to IA after one-year follow-up, stratified for ACPA status. (B) Percentage of patients with subclinical synovitis and $\geq$ 6 points at baseline that did and did not progress to IA after one-year follow-up stratified for ACPA status.

Conclusion: Replacing clinical arthritis by subclinical synovitis in arthralgia introduces a high false-positive rate: 44-71% (ACPA-pos) and 66-90% (ACPA-neg) of patients with subclinical synovitis did not develop clinically apparent arthritis within one year. Applying the 2010-criteria in this setting did not diminish the false positive rate. Starting DMARDs in patients without clinical synovitis may therefore introduce considerable overtreatment.

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SAT0072

THE IMPACT OF COMORBIDITIES ON ABSENTEEISM, PRESENTEEISM AND EMPLOYMENT STATUS IN PEOPLE LIVING WITH RHEUMATOID ARTHRITIS

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Background: Many people with rheumatoid arthritis (RA) have comorbidities. However, there is limited research on the impact of multimorbidity on absenteeism (e.g. sick leave) and presenteeism (i.e. reduced productivity while at work due to ill health) in people with RA.

Objectives: i) to explore the impact of comorbidities on absenteeism and presenteeism in patients with RA and ii) to evaluate the association between multimorbidity and employment status.

Methods: A cross-sectional survey was conducted by the National Rheumatoid Arthritis Society (NRAS), UK, collecting information on: demographics, education, employment status (i.e. employed (Empl), stopped/retired early because of RA (Stop_RA), stopped/retired early because of other health issues (Stop_Health)), and disease related variables (e.g. symptom duration, rheumatoid arthritis impact of disease (RAID) questionnaire). Participants were asked to report whether they