The study included 27 outpatients with primary knee osteoarthritis, recruited from a single rheumatology clinic. All patients underwent non-contrast-enhanced, 1.5 T MRI. Synovial membranes were imaged by axial T_1-weighted, T_2-weighted and gradient-echo acquisition sequences; cartilage volume, subchondral bone and menisci were visualized on sagittal three-dimensional spoiled-gradient-recalled sequences. A novel scoring system was used to grade the presence and severity of synovitis, subchondral bone edema and meniscal tears at several sites. Interestingly, a high synovitis score correlated with the presence of meniscal extrusion, which suggests that such mechanical disorders might directly influence synovitis severity. Images were re-evaluated after 14 days, and scores showed excellent intrareader and interreader reliability. The imaging studies were repeated after 60 days in a subset of 14 patients, among whom the severity of synovitis at baseline correlated with the percentage loss of cartilage volume, which implicates synovitis in mechanisms of cartilage destruction.

As the study population was small and the follow-up period very short, however, the results require corroboration from large studies with extended follow-up.

Original article Pelletier JP *et al.* (2008) A new non-invasive method to assess synovitis in relation to symptoms and cartilage volume loss in knee osteoarthritis patients using MRI. *Osteoarthritis Cartilage* **16 (Suppl 3):** S8–S13

Algorithm that predicts progression of undifferentiated arthritis has been validated

Van der Helm-van Mil AH *et al.* previously developed an algorithm that scored baseline laboratory, demographic and clinical findings to predict whether patients with recent-onset undifferentiated arthritis (UA) would go on to develop rheumatoid arthritis (RA). These same authors have now validated the algorithm and report accurate prediction of progression in 75% of patients with recent-onset UA.

Data from three cohorts of patients with recent-onset UA from the UK ($n = 99$), Germany ($n = 155$) and The Netherlands ($n = 34$) were used to validate the prediction rule. The original prediction rule included the parameter of baseline severity of morning stiffness; however, these data were only available in one cohort, so for the validation study the rule was rederived to include the duration (in minutes) of morning stiffness instead. A score of ≤6 correctly predicted that UA would not progress to RA in 83%, 83% and 86% of patients in the three cohorts, while a score ≥8 correctly predicted progression in 100%, 93% and 100% of patients.

Duration of morning stiffness was a less powerful predictor than its severity, and the rederived rule consequently had a slightly reduced diagnostic performance. Nonetheless, the accurate prediction of the development of RA in independent cohorts from different countries strongly supports the validity of the rule. A total of 25% of patients were in the intermediate group (scores between 6 and 8) for which no satisfactory estimation of risk could be made—emphasizing the need to identify additional predictive biomarkers in these patients.

Original article Van der Helm-van Mil AH *et al.* (2008) Validation of a prediction rule for disease outcome in patients with recent-onset undifferentiated arthritis: moving toward individualized treatment decision-making. *Arthritis Rheum* **58:** 2241–2247

Quantitative MRI provides insights into the efficacy of licofelone for knee OA

Licofelone, a potent NSAID, has been shown to reduce joint structural damage and the synthesis of several catabolic factors in animal models of osteoarthritis (OA). A multicenter clinical trial using quantitative MRI has now provided the first evidence that licofelone prevents cartilage volume loss in patients with knee OA.

The study enrolled 355 patients with knee OA who were randomized in a double-blind manner to receive either licofelone 200 mg twice daily or naproxen 500 mg twice daily for 24 months. The results showed that licofelone was as safe and effective as naproxen, with both treatments significantly relieving clinical symptoms of OA from baseline ($P < 0.0001$). Radiography revealed less-pronounced joint space narrowing in the licofelone group than in the naproxen group at 12 and 24 months, but the differences were not significant. Cartilage volume loss, as measured using high-resolution three-dimensional quantitative MRI, was significantly lower in the licofelone group compared with the naproxen group at 12 and 24 months. Of note, patients with severe medial meniscal extrusion