in JSN > 0 were considered progression. Cartilage morphology was scored using both, WORMS and BLOKS systems for baseline and 24-month visits. For WORMS and radiographic assessment, readers also recorded within-grade changes that did not fulfill the criteria of a full grade change. MRI images were read paired, but blinded to time order, by two experienced radiologists. Interobserver reliability for cartilage lesion scoring was 0.88 (w-kappa) for WORMS and 0.75 (w-kappa) for BLOKS (lesion extent). A knee with an increase of > 0 in either the cartilage lesion extent-dimension or the cartilage thickness-dimension in either the tibial or femoral weight-bearing subregion was considered as medial TF cartilage loss in BLOKS readings. A knee with an increase in cartilage morphology scores of > 0 in any of the 3 tibial and the central and posterior femoral subregions was considered as medial TF cartilage loss in WORMS readings. Knees with discrepancies between X-ray and MRI readings were reviewed in consensus for possible explanations.

Results: 7 knees had a baseline JSN score of 3 and were excluded; none of these showed worsening by MRI. 10 (23%) of the remaining 43 knees showed JSN progression; of these, 5 (50%) had no cartilage loss by either WORMS or BLOKS, 3 (30%) progressed by both systems and 2 progressed by WORMS only.

33/43 (77%) knees did not show JSN progression; 7 of these had cartilage loss on MRI. 5/43 knees progressed using the BLOKS system (2/5 did not progress by JSN) and 11 progressed using WORMS (6/11 did not progress by JSN). 31/43 knees had no cartilage loss by either system; of these, 5 showed radiographic progression, of which none exhibited worsening meniscal damage or extrusion.

Conclusions: Disagreement between longitudinal X-ray scoring and semiquantitative MRI assessment of cartilage in the medial TF compartment is not rare. None of the knees that showed progressive JSN and no progression on MRI showed an increase in meniscal damage or extrusion, which may be explained by ceiling effects of the meniscal scores. Incident susceptibility artifacts on MRI within the joint space were also observed and may explain disagreement. Positioning consistency may further explain some of the JSN progression without concomitant MRI progression. Worsening in MRI cartilage morphology but no progression on X-ray is explained by progressive cartilage loss in the posterior femur and increase in size of focal defects only detectable semiquantitatively on MRI.