

# Tibial trabecular bone texture predicts osteoarthritis progression

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(HealthDay) -- Changes in medial and lateral trabecular bone texture can predict joint space narrowing (JSN) and progression of knee osteoarthritis (OA), according to research published in the March issue of *Arthritis & Rheumatism*.

To evaluate OA progression based on an increase in the medial JSN grade, Tom Woloszynski, of the University of Western Australia in Perth, and associates used two sets of knee radiographs from 105 individuals obtained four years apart to calculate three texture parameters of the medial and lateral compartment tibial trabecular bone in 203 [knees](#) with (68) or without (135) preexisting radiographic tibiofemoral OA .

The researchers found that, in knees with or without preexisting radiographic OA, medial trabecular bone texture predicted increased medial JSN in knees with and without OA, with an area under the curve (AUC) of 0.77 and 0.75, respectively. In knees with and without preexisting OA, the AUC for lateral trabecular bone texture was 0.71 and 0.72, respectively.

"We have developed a system, based on analyzing tibial trabecular bone texture, which yields good prediction of loss of tibiofemoral joint space," the authors write. "The predictive ability of the system needs to be further validated."

**More information:** [Abstract](#)  
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