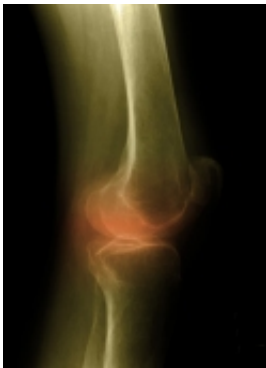


Abnormalities on MRI predict knee replacement

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(HealthDay)—Structural joint damage measured with magnetic resonance imaging (MRI) can predict knee replacement in the following year, according to research published in the March issue of *Radiology*.

Frank W. Roemer, M.D., of Boston University, and colleagues analyzed data drawn from 4,796 participants in the Osteoarthritis Initiative, a longitudinal observational study of individuals who have, or are at risk for, [knee osteoarthritis](#). During five years of follow-up, 199 knees underwent replacement (cases) and were matched with 199 knees that did not undergo replacement (controls). The association between MRI-based measures of structural [joint damage](#) and knee replacement during the following year was assessed.

The researchers found that the following MRI-based measures significantly increased risk of knee replacement during the following year: two or more subregions with severe cartilage loss (odds ratio [OR], 16.5; 95 percent confidence interval [CI], 3.96 to 68.76), more than two subregions with bone marrow lesions (OR, 4.00; 95 percent CI, 1.75 to 9.16), medial meniscal maceration (OR, 1.84; 95 percent CI, 1.13 to 2.99), effusion (OR, 4.75; 95 percent CI, 2.55 to 8.85), and synovitis (OR, 2.17; 95 percent CI, 1.33 to 3.56). Meniscal extrusion did not predict knee replacement during the following year (OR, 1.00; 95 percent CI, 0.60 to 1.67).

"Apart from meniscal extrusion, all features of tissue abnormalities at MR imaging were related to clinical prognosis and could be used to predict [knee replacement](#) in the following year," the authors write.

The study was partly funded by pharmaceutical companies. Several authors disclosed financial ties to biomedical, pharmaceutical, and medical device/imaging companies.

More information: [Full Text \(subscription or payment may be required\)](#)

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