MRI scoring system IDs metastatic vertebral fractures

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(HealthDay)—A novel magnetic resonance imaging (MRI) scoring system can differentiate between osteoporotic vertebral fractures (OVFs) and metastatic vertebral fractures (MVFs), according to a study published in the July 1 issue of *The Spine Journal*.

So Kato, M.D., from the University of Tokyo, and colleagues conducted a retrospective and single-center observational study to create a diagnostic scoring system for MVFs. They assessed the sensitivity and specificity of known important MRI findings and examined the classification accuracy of the scoring system. They performed discriminant analysis in 140 fractures as a training set using seven MRI findings as variables. Classification accuracy was examined in 60 additional fractures as a test set.

The researchers found that all findings had high specificity and low-to-moderate sensitivity. In the final discriminant function, eight variables were selected. By approximating the coefficients and the constant term by integral numbers, a simpler scoring system (MRI Evaluation Totalizing Assessment [META]) was created. In the test set, classification accuracy was 96.6 percent. There was variation in the inter-observer reliability of the key findings, but high agreement was found between two reviewers in the final discrimination conducted by META.

"This novel scoring system, META, could prove to be a useful tool for the differential diagnosis of OVFs and MVFs," the authors write. "It is simple and physician-friendly, yet highly accurate."

More information: Abstract
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