# Kinetic variable most useful for identifying malignant MRI-detected breast lesions identified

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Breast MRI allows physicians to evaluate suspicious lesions using a variety of variables. Researchers have found though that computer-aided kinetic information can help significantly in distinguishing benign from malignant suspicious breast lesions on MRI, according to a study published in the September issue of the *American Journal of Roentgenology (AJR).*

In the study, performed at the University of Washington Medical Center, researchers analyzed and compared the computer-aided evaluation variables of 125 suspicious breast lesions. Three different kinetic curves (washout, plateau and persistent), were compared along with lesion morphology (size and shape). "We wanted to clarify which, of the many variables that reflect kinetics, were most predictive of malignancy, said Constance Lehman, MD, lead author of the study. "We found overlap in kinetic patterns across benign and malignant lesions, but we did determine that the "most suspicious" curve type, washout, was useful in separating benign from malignant lesions," said Dr. Lehman.

"Of lesions with the most suspicious curve type (any washout), 45.7 percent were malignant compared with 20.0 percent with plateau and 13.3 percent with entirely persistent enhancement," she said.

"We continue to study the specific features on MRI most predictive of breast cancer. We know that the morphology of the lesion is extremely

important, but our study also supports the use of kinetic features in lesion assessment. The "most suspicious" curve, washout, does seem to help distinguish benign from malignant lesions," said Dr. Lehman.

"In breast MRI, it is important to know which variables are most important for predicting malignancy because they help us in determining whether or not a lesion needs to be biopsied or not," she said.

More information: This study appears in the September issue of the *American Journal of Roentgenology*.

Source: American Roentgen Ray Society