

Imaging features predict tumor grade

30 January 2018, by Leigh Macmillan

The vast majority of meningiomas—tumors that form from the membranes surrounding the brain and spinal cord—are slow-growing and benign. "Atypical" meningiomas have a more aggressive clinical course, and patients with atypical tumors would potentially benefit from earlier surgery and efforts to achieve complete tumor removal.

Andrew Hale, an MD/PhD candidate at Vanderbilt, Lola Chambless, MD, and colleagues reviewed [magnetic resonance imaging](#) (MRI) studies for 128 patients who had benign or atypical meningiomas surgically removed.

They found that tumor volume was the most striking single predictor of tumor grade. Additional imaging features associated with increased risk for atypical pathology included the presence of [tumor necrosis](#), swelling around the tumor (peritumoral edema) and tumor location.

The findings, reported in the February issue of the *Journal of Clinical Neuroscience*, demonstrate the contribution of [tumor](#) volume to atypical meningioma pathology and may help guide surgical planning and patient counseling.

More information: Andrew T. Hale et al. Differentiating meningioma grade by imaging features on magnetic resonance imaging, *Journal of Clinical Neuroscience* (2017). [DOI: 10.1016/j.jocn.2017.11.013](#)

Provided by Vanderbilt University

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