

Predicting brain cancer outcome with red blood cell distribution width

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Glioblastoma (histology slide). Credit: Wikipedia/CC BY-SA 3.0

Glioblastoma (GBM) is the most common and deadly brain tumor in American adults. Considering the poor survival rate, the ability to estimate survival for this population is essential when making treatment decisions.

Red blood cell distribution width (RDW) is a measure of the variation of red blood cell size that may be associated with increased inflammation. High RDW values recently have been linked to poor outcomes in patients with colorectal, lung and [prostate cancers](#).

To test the prognostic merit of preoperative RDW values in a retrospective cohort study of GBM, Robert Dambrino, MD, and colleagues incorporated them into a model that uses known clinical variables to predict overall survival time.

Reporting in the [journal](#) *Clinical Neurology and Neurosurgery*, the researchers observed no increase in prognostic accuracy when preoperative RDW values were added to the model. However, RDW values trended upwards throughout the course of the disease, suggesting possible systemic inflammatory effects that warrant further study.

More information: Patrick D. Kelly et al, Red blood cell distribution width in glioblastoma, *Clinical Neurology and Neurosurgery* (2021). [DOI: 10.1016/j.clineuro.2021.107096](#)

Provided by Vanderbilt University

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