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# Processing speed drops after medulloblastoma diagnosis

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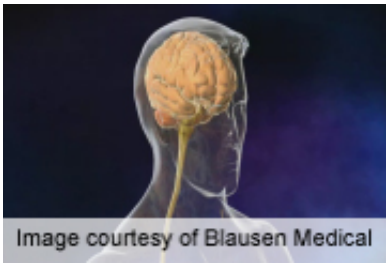


Among key cognitive functions, processing speed shows the poorest outcomes five years after diagnosis of pediatric medulloblastoma, according to a study published online Aug. 26 in the *Journal of Clinical Oncology*.

(HealthDay)—Among key cognitive functions, processing speed (PS) shows the poorest outcomes five years after diagnosis of pediatric medulloblastoma, according to a study published online Aug. 26 in the *Journal of Clinical Oncology*.

To investigate cognitive functions of pediatric patients diagnosed with medulloblastoma, Shawna L. Palmer, Ph.D., from St. Jude Children's Research Hospital in Memphis, Tenn., and colleagues included 126 patients (aged 3 to 21 years at diagnosis) enrolled onto a collaborative protocol for medulloblastoma. Treatment included postsurgical risk-adapted craniospinal irradiation (high risk [HR], 36 patients; average risk, 90 patients) followed by four cycles of high-dose chemotherapy with stem-cell support. A median of three neuropsychological

evaluations per patient were performed over a five-year period using the Woodcock-Johnson Tests of Cognitive Abilities Third Edition.

The researchers found that there was a significant association for younger age at diagnosis, HR classification, and higher baseline scores with poorer outcomes in PS. There were less favorable outcomes in broad attention (BA) and working memory (WM) over time among patients treated as HR and those with higher baseline scores. There were significant associations for parent education and marital status with BA and WM baseline scores, but not changes over time.

"Identifying cognitive domains most vulnerable to decline should guide researchers who are aiming to develop efficacious cognitive intervention and rehabilitation programs, thereby improving the quality of survivorship for the pediatric medulloblastoma population," the authors write.

**More information:** Abstract
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Editorial

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