

Review [Appl Neuropsychol Child](#). 2023 Oct 18;1-20. doi: 10.1080/21622965.2023.2268776.

Online ahead of print.

# The role of CNS tumor location in health-related quality of life outcomes: A systematic review of supratentorial vs infratentorial tumors in childhood survivorship

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PMID: 37851360 DOI: [10.1080/21622965.2023.2268776](https://doi.org/10.1080/21622965.2023.2268776)

## Abstract

Continued advancements in the treatment of pediatric brain tumors have resulted in a growing proportion of children surviving previously incurable diagnoses. However, survivors of pediatric brain tumors show reduced Health-Related Quality of Life (HRQoL) compared to healthy populations and non-CNS childhood cancer survivors. This review systematically evaluates the existing literature on the influence of supratentorial and infratentorial brain tumor locations on Health-Related Quality of Life outcomes in survivors of pediatric brain tumors. Five electronic databases were searched for relevant articles published between their inception and January 2022. A purpose-developed evaluative tool was constructed to assess the quality of eligible studies. 16 of the 5270 identified articles were included in this review ( $n = 1391$ ). This review found little evidence relating to the impact of brain tumor location on HRQoL, with only one study finding a significant difference between supratentorial and infratentorial tumor survivors. Key limitations of the current evidence include poor statistical reporting, ambiguous construct definitions, and insufficient adjustment for confounds. Findings from this review show that recovery from a pediatric brain tumor extends beyond recovery post-treatment and that further study into the factors influencing survivor HRQoL, including the influence of tumor location, is necessary.

**Keywords:** Brain neoplasms; health-related quality of life; neuropsychology; pediatric; rehabilitation.

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