

Nucleolin (NCL)

Nucleolin was overexpressed in 67 % of [ependymoma](#) samples, demonstrating a subgroup with poor outcome; particularly [infratentorial ependymoma](#) and [anaplastic ependymomas](#). There was no significant correlation between the expression of [EGFR](#) and [caveolin 1](#) and clinical outcomes. Clinically, inferior prognosis was observed with regard to age (<18 years), intracranial location, high grade ependymomas, and incomplete resection. Chen et al. found that nucleolin was an unfavorable prognostic predictor for ependymomas. Moreover, the findings show a subset of aggravating outcomes in high-grade and [infratentorial ependymoma](#). ¹⁾

NCL and HTERT represent the strongest prognostic biomarkers of RFS and OS, respectively, in a ependymoma case series ²⁾.

Biomolecular studies have identified that gain of 1q25 and [EGFR](#) overexpression correlate to poor prognosis, whereas low expression of nucleolin correlated with a favorable outcome ³⁾.

Low nucleolin expression was the single most important biological predictor of outcome in pediatric [intracranial ependymoma](#). Furthermore, telomerase reactivation and maintenance of telomeric repeats appear necessary for childhood ependymoma progression. These findings require corroboration in a clinical trial setting ⁴⁾.

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