

S100 in meningioma

Despite best clinical [management](#), [meningioma](#) patients experience [tumor recurrence](#). Efforts have been made to improve the prognostic stratification of meningiomas. Recently, a multi-faceted molecular classification suggested that the marker [S100](#) is associated with a favorable [meningioma outcome](#), making a further analysis in a larger cohort interesting.

The immunohistochemical staining for S100 was analyzed in 1669 paraffin-embedded meningioma samples. The distribution and association with clinical data and progression-free survival via radiographic tumor recurrence were assessed.

Of 1669 cases, 218 tumors showed strong S100 expression (13.1%). A significantly higher frequency of S100 positive meningiomas was observed in meningiomas of female patients, tumors with spinal and convexity/falx location, primary tumor surgery, NF2, the higher extent of resection, lower WHO CNS grade, adjuvant radiotherapy and recurrence-free tumors during follow-up. Univariate analysis revealed a favorable progression-free survival for meningiomas with S100 expression ($p = 0.0059$) but not in the multivariate analysis. Higher S100 frequency was independently associated with female gender ($p = 0.0003$), NF2 ($p < 0.0001$), tumor location ($p < 0.0001$) and lower WHO CNS grade ($p = 0.0133$).

The positive prognostic impact of S100 is mostly attributed to the [confounding](#) clinical factors of [gender](#), tumor [location](#), [NF2](#) status, and WHO CNS grade ¹⁾.

¹⁾

Behling F, Fodi C, Skardelly M, Paulsen F, Tabatabai G, Honegger J, Tatagiba M, Schittenhelm J. The prognostic role of the immunohistochemical expression of S100 in meningiomas. J Cancer Res Clin Oncol. 2022 Jul 15. doi: 10.1007/s00432-022-04186-9. Epub ahead of print. PMID: 35838837.

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Last update: **2024/06/07 02:54**

