Twenty-Year Survival In Glioblastoma: A Case Report And Molecular Profile.

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BACKGROUND: The prognosis for patients with glioblastoma (GB) remains grim. Historically, the median survival has been 6 to 9 months. Recent research has improved the outcome slightly. A computer search of the literature reveals few long-term survivors.

METHOD: Presented here is a case report of a 20-year survivor of GB, with pathologic review to confirm the diagnosis. A battery of molecular studies was performed to develop a molecular profile of this unique patient. RESULTS: The results of the molecular genetic testing for this most unusual patient were as follows: (1) methylguanine methyl transferase (MGMT) was methylated, (2) p53 positive, (3) PTEN tumor suppressor gene positive, (4) protein kinase AKT (pAKT) negative, and (5) epidermal growth factor receptor negative.

CONCLUSION: To our knowledge, this is the longest survival of any patient in the literature whose initial diagnosis was GB. Triple-positive GBM patients (MGMT methylated, PTEN, and p53 positive) are uncommon but may be associated with a better prognosis. Further research is needed to confirm whether this molecular profile is prognostic of prolonged survival. Molecular genetics will determine future treatment and prognosis in GB.

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