JOURNAL ARTICLE

Secondary IDH-mutant gliosarcoma in a patient with prior IDH-mutant grade 2 astrocytoma

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Extract

To the Editor:

Gliosarcoma is a variant of isocitrate dehydrogenase (IDH) wild-type glioblastoma that arises most frequently as a primary brain tumor.[1–6] Survival rates are similar for patients with either gliosarcoma or glioblastoma.[1–5] IDH mutations occur in low-grade gliomas and grade 4 astrocytomas and are associated with better overall survival than that of IDH wild-type gliomas.[1–6] Sarcomatous transformation is most commonly associated with IDH-wildtype glioblastoma but can also be seen rarely in IDH-mutant astrocytomas or IDH-mutant and 1p/19q-codeleted oligodendrogliomas (oligosarcoma).[1–6] We recently cared for a patient whose pathology consisted of an IDH-mutant gliosarcoma. To the best of our knowledge, the literature includes only 2 other reports of IDH-mutant gliosarcoma.[3,4] The literature suggests that survival with secondary gliosarcoma is better than that of primary gliosarcoma[2]; however, its full prognosis and disease history are poorly understood given its rarity.

We here report a rare case of a 31-year-old woman with secondary IDH-mutant gliosarcoma arising from a WHO grade 2 IDH-mutant astrocytoma not previously treated with radiation. The patient presented for biopsy and surgical resection of presumed tumor recurrence after years of follow-up for her low-grade glioma. She was noted to have dural thickening as well as a separate focal nodule in the anterior wall of her old resection cavity (Figure 1). Her surgical history is significant for 2 prior craniotomies for resection. The first resection was in 2016, at which time pathology demonstrated an IDH-mutant astrocytoma that was negative for 1p/19q co-deletion. The second resection was performed for recurrence in 2019 with pathology demonstrating WHO grade 2 IDH-mutant astrocytoma with a mitotic index of 10%. On both occasions, the patient refused radiation therapy. She underwent 6 cycles of temozolomide, with cycle 1 dosed at 150 mg/m^2, cycle 2 with 200 mg/m^2, cycle 3 with 150

mg/m^2 (lower because of thrombocytopenia and fatigue/nausea), cycle 4-6 with 300 mg × 5 days. Other past medical history is significant for sarcoidosis for which she is on low-dose prednisone.

Issue Section: Letter to the Editor

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