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Letter to Editor

## Glioblastoma concurrent with follicular lymphoma: A case report

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Dear Editor,

Glioblastoma is the most prevalent malignant tumor of the central nervous system, characterized by its high degree of heterogeneity.<sup>1</sup> Follicular lymphoma, an indolent form of non-Hodgkin's lymphoma, arises from the transformation of B cells centered around follicles, typically offering patients a relatively favorable prognosis.<sup>2,3</sup> However, reports of glioblastoma combined with follicular lymphoma are scarce.

The individual is a 50-year-old male who, three days prior to admission, experienced a sudden onset of headache, dizziness, and an inability to stand. Throughout the hospitalization, the patient experienced recurrent generalized convulsions. Enhanced Magnetic Resonance Imaging (MRI) of the patient's head revealed occupying lesions in the right insula, basal ganglia, knee of the corpus callosum, and bilateral frontal lobes, raising concerns about neoplastic lesions. During the patient's hospitalization, the patient underwent a navigated resection of the right frontal lobe and corpus callosum giant mass under general anesthesia. The patient's preoperative and postoperative imaging is detailed in [Fig. 1](#). The final pathologic findings suggested an intracranial occupancy of grade IV glioblastoma ([Fig. 1](#)). The patient followed up with radiation, chemotherapy and tumor treating fields (TTFields) therapy.

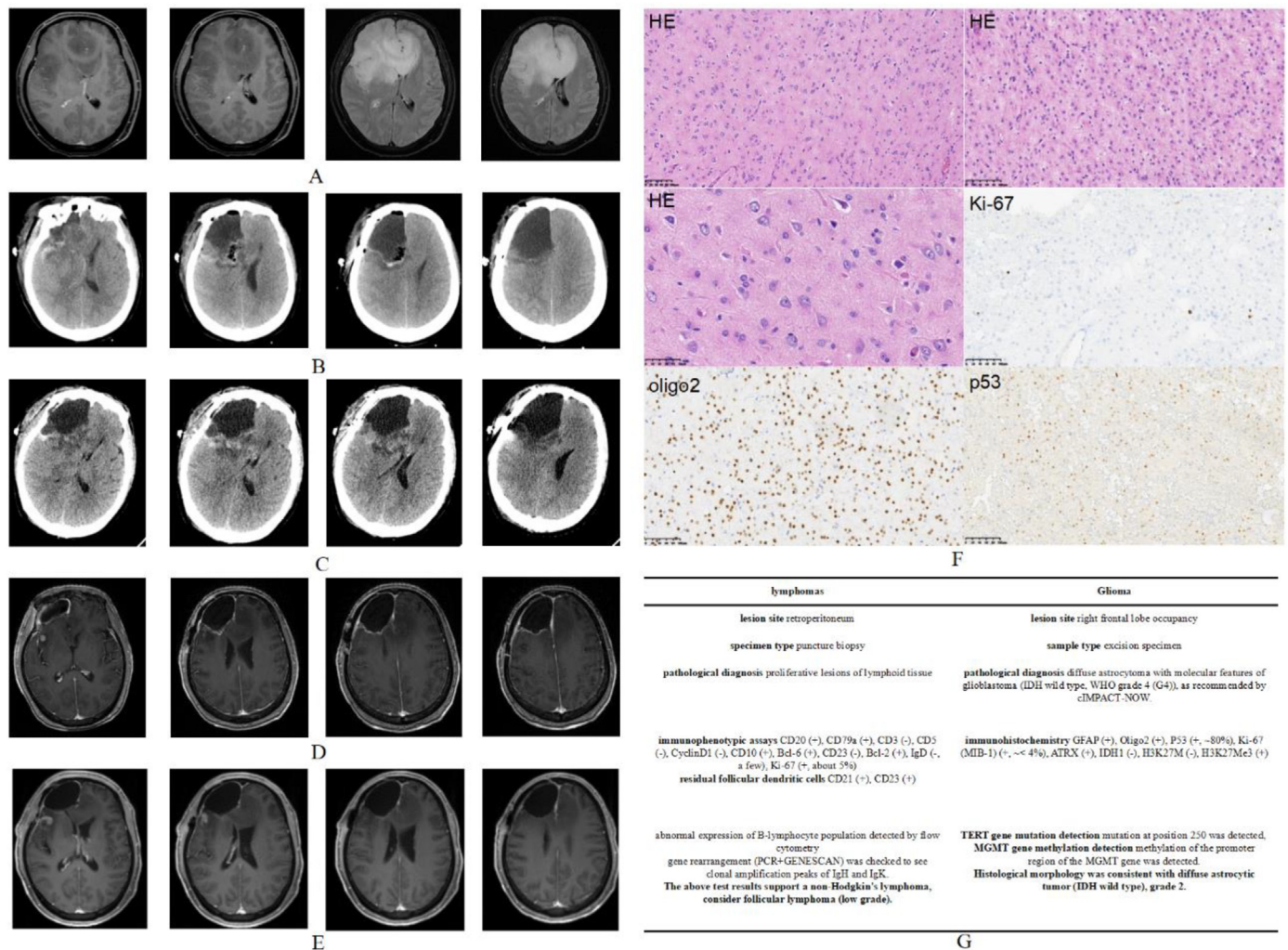
The patient has a medical history of lymphoma. The patient was

initially diagnosed with non-central nervous system axillary inert B-cell lymphoma 18 years ago and received radiotherapy and chemotherapy with the CHOP regimen at our hospital. Six years ago, a routine follow-up revealed a recurrence of the lymphoma, and the patient underwent radiotherapy and chemotherapy again, this time with the R-CHOP regimen. The patient's efficacy evaluation after both treatments was partial response (PR). One year ago, another recurrence was detected during a follow-up, and treatment was administered using an enhancer of zeste homolog 2 (EZH2) inhibitor to control the lesion. However, due to the current episode, the patient has discontinued the EZH2 inhibitor treatment. The patient's most recent pathology results from a biopsy related to lymphoma recurrence indicate non-Hodgkin's lymphoma, with a consideration of follicular lymphoma ([Fig. 1](#)).

We conducted a final follow-up on May 5, 2024, and the patient is still alive with a Karnofsky Performance Status (KPS) score of 75. No significant changes were observed in the lymphoma lesions.

Patients with a history of malignancy may be more susceptible to developing another malignancy. And the impact of lymphoma on the immune system may influence the development of secondary malignancies. Maissa Ben Thayer et al reported a case of papillary thyroid cancer combined with Hodgkin's lymphoma in a patient with no history of prior radiation exposure.<sup>4</sup> Follicular lymphoma combined with malignant glioma is a relatively rare condition. The patient's previous radiation therapy may have influenced the development of gliomas. It should be noted that this patient was treated with an EZH2 inhibitor. Further studies could investigate the effects of EZH2 inhibitors, which are used to treat lymphoma, on glioblastoma. The relationship between lymphoma and glioblastoma is not well understood, and further studies are needed to explore this connection.

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**Fig. 1.** A. Preoperative MRI of the patient's intracranial space-occupying lesion. B. Postoperative computed tomography (CT) of the patient on the 1st day. C. Postoperative CT of the patient on the 1st and 6th day. D. MRI of the patient two months after head surgery. E. MRI of the patient four months postoperatively. F. Pathological images of the patient's intracranial space-occupying lesion after resection surgery. G. Pathological results of the patient's intracranial space-occupying lesion and lymphoma.

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## Declaration of competing interest

The authors affirm that there were no commercial or financial affiliations related to this research that could be interpreted as potential conflicts of interest.

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