Evidenced-based medicine in glioma: molecular biology is only part of the story

Recently, Weller and colleagues\(^1\) proposed the new European Association for Neuro-Oncology (EANO) guidelines for adult gliomas. They have to be congratulated for their efforts in building recommendations based on the 2016 revision of the WHO classification, translating the integrated histomolecular diagnosis into algorithmic decision making. They confirm that maximal safe surgical resection in high-volume specialist centres has to be proposed whenever feasible, independent of the grade of malignancy and the histomolecular profile.

However, several important concepts that are disregarded in this paper would deserve further comment. First, there is no reference to radiological growth rate, which has been shown to be an independent prognostic factor of overall survival for diffuse low-grade gliomas, regardless of the molecular status (\(IDH\) mutation, 1p19q codeletion).\(^2,3\)

Second, the role of surgery is presented in an ambiguous manner. The authors claim that “a large residual tumour volume after surgery is a negative prognostic factor, but it remains uncertain whether extent of resection truly matters, or whether resectable tumours have a different biology associated with a less aggressive course of disease.” Considering the recent evidence about the survival benefit of increased extent of resection, this statement, which is in itself inconsistent, cannot be defended in this era. For example, in diffuse low-grade gliomas, two randomised-like studies\(^4,5\) have provided indisputable conclusions about the relationship between improved survival and extent of resection. Moreover, this survival benefit still persists after adjusting for molecular markers.\(^6\)

Last but not least, although it is stated that “quality of life is a high priority to patients and carers”, there is no mention of cognitive and quality of life assessments as a general recommendation. Glioma progression, seizures, antiepileptic medication, and oncological adjuvant treatments directly affect patients’ cognition, which in turn affects their quality of life. Clinicians in charge of patients with glioma should always keep in mind oncological and functional aspects—two intricate but distinct facets of this disease. These guidelines appear to focus exclusively on survival curves, whereas “survival with preserved quality of life” appears to be of greater importance.\(^6\)

Clinicians are treating individual patients each with specific expectations about cognitive abilities. In other words, decision making should be based on continual updates of personalised weighting of each treatment modality to achieve the optimal oncofunctional balance. In the era of integrated diagnosis, therapeutic strategies cannot rely solely on molecular profiling, but should also focus on radiological growth rates, seizure activity, cognitive status, and the patient’s own wishes.

We declare no competing interests.

The European Low-Grade Glioma Network (see appendix for full list of contributors)

elggn2006@gmail.com


