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ASO AUTHOR REFLECTIONS

ASO Author Reflections: Size of Tumor Volume in Glioblastoma Patients

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PAST

For newly diagnosed glioblastoma, the mainstay of therapy is preferably complete resection of the contrast-enhancing tumor part, followed by the so-called Stupp scheme, a combined radiochemotherapy;[1,2] however, incomplete tumor resection was questioned in a recent study.[3] This study showed that gross total but not incomplete resection improves patients' overall survival when treated with adjuvant radiochemotherapy. Therefore, incomplete resection is questionable, and, according to this study, biopsy might be an alternative treatment for patients with tumors in eloquent regions.[3] The aim of this study was to assess the impact of pre- and postoperative tumor volume on overall survival, considering molecular status and adjuvant treatment regimens.

PRESENT

The present study shows that not only complete resection of the contrast-enhancing tumor part but also incomplete resection improves overall survival of glioblastoma patients, considering adjuvant treatment regimens and O^6-methylguanine-DNA-methyltransferase (MGMT) methylation status.[4] These results therefore suggest—in contrast to the previous study[3]—to achieve a maximum safe tumor resection also in patients with tumors that cannot be completely resected due to infiltration of eloquent regions. Furthermore, our study assessed residual tumor volume instead of extent of resection, which is used in most oncological studies. Whereas extent of resection depends on preoperative tumor volume, residual tumor volume is an independent quantitative parameter for patients' tumor burden. The importance of measuring postoperative tumor volume has also been shown in previous studies.[5,6]

FUTURE

Prospective studies should be performed to assess molecular factors and adjuvant therapy regimens, not only extent of resection but also residual tumor volume, to address the prognostic value of incomplete tumor resection.

DISCLOSURES Stefanie Bette, Bernhard Meyer, and Jens Gempt are consultants for Brainlab AG, Munich.

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