

LIFEx

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A retrospective study of surgically treated [glioblastomas](#) between March 2018 and November 2019 was performed. Patients with [IOUS B-mode](#) and [strain elastography](#) was included. After preprocessing, segmentation and extraction of [radiomics](#) were performed with [LIFEx](#) software. An evaluation of semantic segmentation was carried out using the [Dice similarity coefficient](#) (DSC). Using univariate correlations, radiomic features associated with OS were selected. Subsequently, survival analysis was conducted using Cox univariate regression and Kaplan-Meier curves.

Sixteen patients were available for analysis. The DSC revealed excellent agreement for the segmentation of the tumour region. Of the 52 radiomic features, two texture features from B-mode (conventional mean and the grey-level zone length matrix/short-zone low grey-level emphasis [GLZLM_SZLGE]) and one texture feature from strain elastography (grey-level zone length matrix/long-zone high grey-level emphasis [GLZLM_LZHGE]) were significantly associated with OS. After establishing a cut-off point of the statistically significant radiomic features, we allocated patients in high- and low-risk groups. Kaplan-Meier curves revealed significant differences in OS.

IOUS-based quantitative texture analysis in [glioblastomas](#) is feasible. Radiomic tumor region characteristics in B-mode and elastography appear to be significantly associated with OS ¹⁾.

¹⁾

Cepeda S, García-García S, Arrese I, Velasco-Casares M, Sarabia R. Relationship between the overall survival in glioblastomas and the radiomic features of intraoperative ultrasound: a feasibility study. J Ultrasound. 2021 Feb 16. doi: 10.1007/s40477-021-00569-9. Epub ahead of print. PMID: 33594589.

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