

## ABSTRACT

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### **Radiomics, mirnomics, and radiomirRNomics in glioblastoma: defining tumor biology from shadow to light.**

Maggio I(1), Franceschi E(1), Gatto L(1), Tosoni A(1), Di Nunno V(1), Tonon C(2), Brandes AA(1).

#### Author information:

(1)Medical Oncology Department, Azienda USL, Bologna, Italy.

(2)Ircss Istituto di Scienze Neurologiche di Bologna, Bologna, Italy.

**INTRODUCTION:** Glioblastoma is a highly aggressive brain tumor with an extremely poor prognosis. Genetic characterization of this tumor has identified alterations with prognostic and therapeutic impact, and many efforts are being made to improve molecular knowledge on glioblastoma. Invasive procedures, such as tumor biopsy or radical resection, are needed to characterize the tumor.

**AREAS COVERED:** The role of microRNA in cancer is an expanding field of research as many microRNAs have been shown to correlate with patient prognosis and treatment response. Novel methodologies like radiomics, radiogenomics, and radiomiRNomics are under evaluation to improve the amount of prognostic and predictive biomarkers available.

**EXPERT OPINION:** The role of radiomics, radiogenomics, and radiomiRNomic for the characterization of glioblastoma will further improve in the coming years.

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