Non-invasive biomarkers in glioma - the road map for designing a diagnostic/prognostic panel

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Gliomas are aggressive primary neuro-epithelial tumors, with dismal prognosis partly due to a lack of molecular workup during routine radiological monitoring of the disease. Subsequently, a number of potential molecular prognostic and predictive biomarkers are being characterized in line with current World Health Organization guidelines 2016. Although quite a few tissues based prognostic and predictive markers with cited threshold values are documented in literature, their clinical use becomes limited because of the attached invasiveness of sampling. My team has been working on circulatory biomarkers representing proliferation, inflammation, angiogenesis and stemness in glial tumors to devise a sensitive prognostic scale and identify the risk of recurrence. This presentation will summarize the clinical utility of serum/plasma levels of systemic markers of glial tumor microenvironment linked to prognosis of the disease in terms of overall survival, advocating high throughput screens in routine clinical use for recurrence risk assessment.

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