

## Molecular signature of gliomas correlated to clinical epidemiological aspects of patients in follow-up at a reference center in São Paulo - Brazil - COMU 2023\*

*Assinatura molecular de gliomas correlacionada a aspectos clínico-epidemiológicos de pacientes em acompanhamento em centro de referência em São Paulo - Brasil - COMU 2023*

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Dear editor,

We have prepared a manuscript that represents our analysis regarding our study. Gliomas are more than 80% of all primary brain cancers and 24% of all brain tumors<sup>1</sup>. In 2021, the new edition of WHO - Classification of Tumors of the Central Nervous System (WHO- CTCNS)<sup>2</sup> established genetic and molecular aspects to the analysis since they could be correlated to characteristics of tumor behavior and clinical-epidemiological features. However, there are few studies correlating molecular analysis to the clinical follow-up of patients in Brazil. We performed a preliminary, observational, prospective and descriptive study that aims to obtain and to compare clinical-epidemiological data to molecular markers of patients in follow-up at Central Hospital of Santa Casa de São Paulo (HC-ISCMSP).

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The most common subtype of gliomas (58,4%) is glioblastoma, known among malignant brain tumors as the most aggressive<sup>1</sup>. The WHO - CTCNS 2021 brought in the IDH-1 marker as a watershed for diagnosing glioblastoma and other high-grade astrocytomas. Currently, the diagnosis of glioblastoma - the highest grade tumor - is given by wild-type IDH-1 tumors. All IDH-mutant diffuse astrocytic tumors are graded as 2, 3, or 4 and are considered a single type (astrocytoma, IDH-mutant)<sup>2</sup>. This oncogene plays roles in Krebs circle and cellular homeostasis. It's believed that the IDH mutants can change cancer metabolism, epigenetic shift and therapy resistance<sup>2</sup>.

As an initial experience, the study denotes to enlighten the clinical-histopathological-molecular features of these tumors in the Brazilian scenery. It engages our research progression as the sample is being expanded for further findings on the associations.

Sincerely,

Thaís Tuasca Jareño - lead author, participation in study design, data collection, or data analysis/interpretation; involvement in drafting or revising the manuscript; approval of the final version of the manuscript for publication; responsibility for the accuracy and integrity of all aspects of the research. Natália Barreto dos Santos - participation in study design, data analysis/interpretation; involvement in drafting or revising the manuscript; approval of the final version of the manuscript for publication. Giovanna Marques Antunes - participation in data collection, involvement in reviewing the manuscript. Catarina Rapôso - involved in drafting or revising the manuscript; approval of the final version of the manuscript for publication. José Carlos Esteves Veiga - involvement in drafting or revising the manuscript; approval of the final version of the manuscript for publication. João Luiz Vitorino Araujo - project supervisor, participation in study design, data collection, or data analysis/interpretation; involvement in drafting or revising the manuscript; approval of the final version of the manuscript for publication; responsibility for the accuracy and integrity of all aspects of the research.

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