JOURNAL ARTICLE CORRECTED PROOF

# Sex differences in glioblastoma based on tumor subtypes

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## Extract

Roberto Pallini et al. reinforce the importance of understanding the subtypes in glioblastoma (GBM) isocitrate dehydrogenase 1/2 (IDH1/2) wild type (wt) based on inflammatory processes, suggesting that the inflammation defined in our work linked to the infiltration of myeloid-derived suppressor cells (MDSCs) in necrotic areas of the tumor may favor dysfunctional lymphoid profiles, as the depleted CD8+CD103+PD1+Trms. Moreover, these cells are enriched in a small group of GBM with a very accelerated progression. Regarding the involvement of lymphocytes as a prognostic marker, it is important to highlight the elegant study by Lathia et al. showing that GBM developed in males generate more exhausted T cells and more aggressive tumor.[1] In this context, it is possible to hypothesize that there is a greater facility to generate exhausted T cells in conditions where myeloid cells are unable to present antigens,[2] as in the case of tumors with high necrotic areas. It has also been observed how hypoxic niches attract TAM and cytotoxic T cells, where they are subsequently reprogrammed into an immunosuppressive state.[3] But it is also essential to take into account the studies that demonstrate a specific sex-dependent immune regulation, in order to improve the immunotherapy.[4]

**Issue Section:** Reply to Letter to the Editor