## OP54

### Expression of tumor associated macrophage markers in pediatric glioblastoma

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**Introduction:** Emerging evidence suggests that a varying range of chemokines, cytokines and growth factors released by tumor cells attract macrophages, towards the tumor microenvironment and polarize the Tumor associated macrophages into M1/M2 lineage. In our present study, we evaluated the expression of M2 polarized macrophages through their specific marker CD-204 in pediatric GBM.

**Methodology:** Tumor samples of pediatric glioblastoma [N= 20] between the age group of 1 -18 years were selected. Pilocytic astrocytoma in children [N= 20] cases and control non tumoral brain samples (n=5) were taken for comparison. Tumor associated macrophages (TAMs) marker CD 204 was used for the study and analyzed by immunohistochemistry.

**Results:** We observed a difference in the expression of TAMs between pediatric GBM and pilocytic astrocytoma, which exhibit distinct immune microenvironments. There was no CD-204 expression in any of the control brain samples. Expression of CD-204 was 100% [20/20] in case of GBM, whereas 40% [8/20] in case of PA. The mean labeling index in GBM was 26% [range: 10 - 40%]. Interestingly we found that expression of CD-204 in PA was negative below the age group of 10years [N = 12/20]. Variable protein expression was observed in PA above the age group of 10 years[N = 8/20]. Further immunohistochemical studies for other macrophage associated markers such as MCSF, MCSFR and CD68/86 are underway.

**Conclusion:** Increased expression of CD-204 in pediatric GBM suggests activation of M2 microglia/macrophages within the tumor milieu which probably influences increased proliferation potential in pediatric GBM.