HIF1A and HIF2A are the two main molecules that contribute to Glioblastoma malignant progression by inhibiting apoptosis or maintaining stemness under hypoxic conditions. Moreover, Sox2, a marker of stemness, also contribute to Glioblastoma malignant progression through stemness maintenance of cell cycle arrest. Briefly, HIF1α, HIF2α, and Sox2 are highly expressed under hypoxia and contribute to Glioblastoma growth and chemoresistance. However, after exposure to HBO for Glioblastoma, whether the expression of the above factors is decreased, resulting in chemosensitization, remains unknown. Therefore, Wang et al. performed a series of studies and determined that the expression of HIF1α, HIF2α, and Sox2 was decreased after HBO and that HBO promoted Glioblastoma cell proliferation through cell cycle progression, albeit with a decrease in stemness, thus contributing to chemosensitization via the inhibition of HIF1α/HIF2α-Sox2 [1].

1)
Wang P, Gong S, Pan J, Wang J, Zou D, Xiong S, Zhao L, Yan Q, Deng Y, Wu N, Liao B. Hyperbaric oxygen promotes not only glioblastoma proliferation but also chemosensitization by inhibiting HIF1α/HIF2α-Sox2. Cell Death Discov. 2021 May 13;7(1):103. doi: 10.1038/s41420-021-00486-0. PMID: 33986256.