Chi et al. investigated the function of circular PVT1 on GBM.

CCK-8 and flow cytometry were utilised to estimate viability and apoptosis in both cells. qRT-PCR was performed to determine circPVT1 and miR-199a-5p expression. Western blot was conducted to determine apoptosis, migration and EMT-related proteins levels when silencing circPVT1. Subsequently, these parameters were re-tested after up-regulating miR-199a-5p.

CircPVT1 was highly expressed in GBM tissues. Silencing circPVT1 raised two cells apoptosis and reduced viability and migration capacity. Moreover, EGF-induced EMT was repressed by silencing circPVT1. In addition, miR-199a-5p expression was elevated when silencing circPVT1. And silencing circPVT1 exerted above changes via up-regulating miR-199a-5p. Finally, silencing circPVT1 repressed YAP1 and PI3K/AKT pathways via up-regulating miR-199a-5p.

This data suggested that silencing circPVT1 inhibited viability, migration, EGF-induced EMT and promoted apoptosis as well as repressed YAP1 and PI3K/AKT pathways by up-regulating miR-199a-5p.HIGHLIGHTSCircPVT1 expression is highly expressed in GBM tissues;Si-circPVT1 represses migration and promoted apoptosis in U539 and U251 cells;Si-circPVT1 represses migration and promoted apoptosis when elevating miR-199a-5p;Si-circPVT1 represses EGF-induced EMT when increasing miR-199a-5p;Si-circPVT1 suppresses YAP1 and PI3K/AKT pathways by up-regulating miR-199-5p¹.

1)

Chi G, Yang F, Xu D, Liu W. Silencing hsa_circ_PVT1 (circPVT1) suppresses the growth and metastasis of glioblastoma multiforme cells by up-regulation of miR-199a-5p. Artif Cells Nanomed Biotechnol. 2020 Dec;48(1):188-196. doi: 10.1080/21691401.2019.1699825. PubMed PMID: 31865777.

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