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Harnessing FLASH irradiation to improve immunotherapy of medulloblastoma

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Abstract

Ultra-high dose delivery of radiation (>40 Gy/s), namely FLASH radiation therapy (FLASH-RT), is a novel treatment strategy that maximizes cell kill while sparing normal tissue. Recent data reported by Ni et al. demonstrate that one of the mechanisms through which FLASH-RT promotes inflammation involves the metabolic reprogramming of macrophages to support immune stimulation, thus enhancing immunotherapy in medulloblastoma (MB).

Keywords: FLASH-radiation; PPARg; brain tumors; fatty acid synthase; lipid metabolism; macrophages.