Medulloblastoma metastasis

While metastatic dissemination is the predominant cause of morbidity and mortality for patients with medulloblastoma, most research efforts and clinical trials to date have focused on the primary tumor; this is due mostly to the paucity of metastatic tumor samples and lack of robust mouse models of MB dissemination. Most current insights into the molecular drivers of metastasis have been derived from comparative molecular studies of metastatic and non-metastatic primary tumours. However, small studies on matched primary and metastatic tissues and recently developed mouse models of dissemination have begun to uncover more directly the molecular biology of MB metastasis. With respect to anatomical routes of dissemination, a hematogenous route for MB metastasis has recently been demonstrated, opening new avenues of investigation. The tumour micro-environment of the primary and metastatic niches has also been increasingly scrutinized in recent years, and further investigation of these tumour compartments is likely to result in a better understanding of the molecular mediators of MB colonization and growth in metastatic compartments [1].

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Van Ommeren R, Garzia L, Holgado BL, Ramaswamy V, Taylor MD. Mini-symposium: The molecular biology of medulloblastoma metastasis. Brain Pathol. 2019 Dec 28. doi: 10.1111/bpa.12811. [Epub ahead of print] PubMed PMID: 31883407.