

Supplementary Table 1

Table S1 Classification of “midline” or “non-midline” in the previous reports

Location	“Midline”	“Non-Midline”
Cerebral hemisphere	Yoshimoto K et al. 2017, Brain Tumor Pathol. 103 [60] Pratt D et al. 2018, Acta Neuropathol. 299 [38] Wang L et al. 2018, Human Pathol. 89 [55] Schreck KC et al. 2019, Journal of Neuro Oncol. 87 [42] Maeda S et.al. 2020, Acta Neuropathol commun. 8 [31] Thust S et al. 2021, Quant Imaging Med Surg. 43 [51]	Lopez G et al. 2017, Acta Neuropathol Commun. 38 [29] Huang T et al. 2018, Oncotarget. 37112 [21] Qiu T et al. 2020, J Neurosurg. 1662 [39] Chia N et al. 2021 Neuro Oncol Adv. 1 [11]
Cerebellum	Aboian M.S. et al. 2017, AJNR Am J Neuroradiol. 795 [1] Funata N et al. 2018, Brain Tumor Pathol. 29 [17] Maeda S et.al. 2020, Acta Neuropathol commun. 8 [31]	Huang T et al. 2018, Oncotarget. 37112 [21]
Corpus callosum	Aboian M.S. et al. 2017, AJNR Am J Neuroradiol. 795 [1] Wang L et al. 2018, Human Pathol. 89 [55] Schreck KC et al. 2019, Journal of Neuro Oncol. 87 [42] Aboian M.S. et al. 2019, AJNR Am J Neuroradiol. 1804 [2] Qiu T et al. 2020, J Neurosurg. 1662 [39] Maeda S et.al. 2020, Acta Neuropathol commun. 8 [31]	Rocca GL et al. 2019 World Neurosurg. 174 [40] Chia N et al. 2021 Neuro Oncol Adv. 1 [11]
Ventricle	Solomon DA et al. 2016, Brain Pathol. 569 [47] Aboian M.S. et al. 2017, AJNR Am J Neuroradiol. 795 [1] Meyronet D et al. 2017, Neuro Oncol. 1127 [33] Wang L et al. 2018, Human Pathol. 89 [55] Bozkurt SU et al. 2018, Childs Nerv Syst. 107 [7] Ebrahimi A et al. 2019, J Cancer Res Clin Oncol. 839 [14] Aboian M.S. et al. 2019, AJNR Am J Neuroradiol. 1804 [2] Maeda S et.al. 2020, Acta Neuropathol commun. 8 [31] Hassan U et al. 2021, Cureus. e17267 [20] Zheng L et al. 2022, Am J Surg Pathol. 863 [62]	
Basal ganglia	Karremann M et al. 2018, Neuro Oncol. 123 [25] Bozkurt SU et al. 2018, Childs Nerv Syst. 107 [7] Maeda S et.al. 2020, Acta Neuropathol commun. 8 [31] Thust S et al. 2021, Quant Imaging Med Surg. 43 [51] Zheng L et al. 2022, Am J Surg Pathol. 863 [62] Jang SW et al. 2022, Brain Tumor Res Treat. 255 [23]	Gutierrez DR et al. 2020 Clin Cancer Res. 1856 [19] (Yoshimoto K et al. 2017, Brain Tumor Pathol. 103) * [60]
Supra-sella	Thust S et al. 2021, Quant Imaging Med Surg. 43 [51] Zheng L et al. 2022, Am J Surg Pathol. 863 [62]	
Diffuse growth along with brain axis †	Ebrahimi A et al. 2019, J Cancer Res Clin Oncol. 839 [14]	
Whole-brain type lesion ‡	Qiu T et al. 2020, J Neurosurg. 1662 [39]	

* G34R-positive at the basal ganglia, so “non-midline” classified

† Widespread lesions involving the spinal cord, brainstem and thalamus

‡ Widespread lesions involving the three or more contiguous lobes in the brain, and involvement of one or more traditional midline structures