

Description of additional Supplementary File

Supplementary Data 1: The classification performance of the MIL diagnostic model. The top, second, third and bottom rows for each type/grade indicate the performance on the internal validation cohort, internal testing cohort, and external testing cohort 1 and 2, respectively. Task 1: classifying the six categories. Task 2: classifying the three types. Task 3: classifying IDH-wildtype diffuse astrocytic tumors and IDH-mutant astrocytoma grade 2 and 3. Task 4: classifying IDH-mutant GBM in 2016 WHO classification (classified as IDH-mutant A4 in 2021 rule) and IDH-wildtype GBM. Task 5-6: classifying grades within types. Task 7: classifying IDH-mutant A and IDH-mutant 1p/19q-codeleted O.

Supplementary Data 2: The classification performance of the all-patch diagnostic model. The top, second, third and bottom rows for each type/grade indicate the performance on the internal validation cohort, internal testing cohort, and external testing cohort 1 and 2, respectively. Task 1: classifying the six categories. Task 2: classifying the three types. Task 3: classifying IDH-wildtype diffuse astrocytic tumors and IDH-mutant astrocytoma grade 2 and 3. Task 4: classifying IDH-mutant GBM in 2016 WHO classification (classified as IDH-mutant A4 in 2021 rule) and IDH-wildtype GBM. Task 5-6: classifying grades within types. Task 7: classifying IDH-mutant A and IDH-mutant 1p/19q-codeleted O.