Ependymoma	Pilocytic Astrocytoma	Oligodendroglioma	Glioblastoma (IDH-wild type)	Astrocytoma (IDH-mutant)	Feature
Grade 2 – 3	Grade 1	Grade 2 – 3	Grade 4	Grade 2 – 4	WHO Grade
Ependymal cells	Astrocytes	Oligodendrocytes	Astrocytes	Astrocytes	Cell of Origin
Children (posterior fossa), adults (spinal cord)	Children & young adults	Middle-aged adults	Older adults (6th–8th decade)	Adults (30s–50s)	Age Group
Near ventricles (4th ventricle); spinal cord in adults	Cerebellum (posterior fossa)	Cerebral hemispheres	Cerebral hemispheres (frontal, temporal, parietal)	Cerebral hemispheres	Common Location
Associated with NF2 (spinal cord)	No characteristic molecular alteration	IDH mutation + 1p/19q co-deletion	EGFR amplification, CDKN2A deletion, TP53 mutation, telomerase activation	IDH1/IDH2 mutation, TP53, ATRX	Genetic Features
Often well-demarcated	Well-circumscribed, localized	Infiltrative but slower than GBM	Highly infiltrative, rapid growth	Infiltrative, poorly defined margins	Growth Pattern
Solid or papillary mass	Cystic with mural nodule	Often calcified	Soft, yellow areas with necrosis, hemorrhage	Poorly defined, gray	Gross Appearance
Perivascular pseudorosettes, true rosettes	Bipolar hair-like cells, Rosenthal fibers, eosinophilic granular bodies	"Fried-egg" cells, delicate capillary network, calcifications	Necrosis with pseudopalisading + microvascular proliferation (glomeruloid bodies)	↑ cellularity, nuclear pleomorphism; Grade 3 shows ↑ mitosis	Microscopic Features
Hydrocephalus, headache, vomiting	Symptoms of raised ICP, cerebellar signs	Seizures common	Rapid onset: seizures, vomiting, headache, cognitive decline	Seizures, headache, focal deficits	Clinical Presentation
Anaplastic type shows ↑ mitosis & necrosis	Necrosis & mitosis are rare	Calcification in ~90%	"Butterfly glioma" via corpus callosum	No WHO grade 1 for infiltrating astrocytomas	Special Features
Better if supratentorial or spinal & completely resected	Excellent with surgical resection	Better prognosis than astrocytoma	Very poor; median survival 15–18 months	Grade 2: >10 yrsGrade 3: 5–10 yrsGrade 4: ~3 yrs	Prognosis / Survival