

# Oncology Clinical Pathways IDH Mutant Astrocytoma

October 2024 – V2.2024



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U.S. Department  
of Veterans Affairs

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# IDH Mutant Astrocytoma – Presumptive Conditions

VA automatically presumes that certain disabilities were caused by military service. This is because of the unique circumstances of a specific Veteran's military service. If a presumed condition is diagnosed in a Veteran within a certain group, they can be awarded disability compensation.

## Atomic Veterans Exposed to Ionizing Radiation

- Cancer of the Brain

## Gulf War and Post 9/11 Veterans

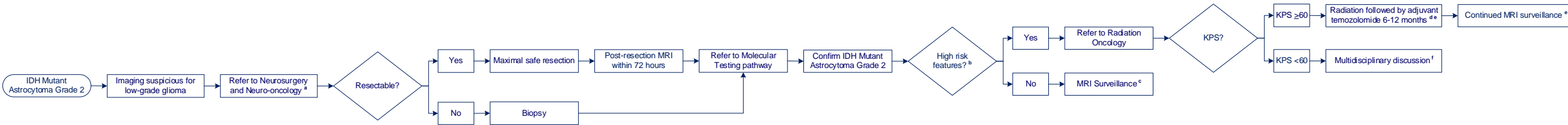
If the patient served on or after Sept. 11, 2001, in Afghanistan, Djibouti, Egypt, Jordan, Lebanon, Syria, Uzbekistan, or Yemen or if you served in the \*Southwest Asia theater of operations, or Somalia, on or after Aug. 2, 1990, specific conditions include:

- Brain Cancer

\* The Southwest Asia theater of operations refers to Iraq, Kuwait, Saudi Arabia, the neutral zone between Iraq and Saudi Arabia, Bahrain, Qatar, the United Arab Emirates, Oman, the Gulf of Aden, the Gulf of Oman, the Persian Gulf, the Arabian Sea, the Red Sea, and the airspace above these locations.

For more information, please visit [U.S. Department of Veterans Affairs - Presumptive Disability Benefits \(va.gov\)](https://www.va.gov/presumptive-disability-benefits/)

# IDH Mutant Astrocytoma – Grade 2



Clinical trial(s) always considered on pathway. For assistance finding a clinical trial, email [CancerClinicalTrialsNavigation@va.gov](mailto:CancerClinicalTrialsNavigation@va.gov)

<sup>a</sup> Refer to Neuro-oncology via National TeleOncology consult if local VA Neuro-oncology unavailable

<sup>b</sup> High Risk Features to include >40 years old and residual tumor, neurologic symptoms to include uncontrolled seizures, or atypical neuroimaging to include contrast enhancement, also take into account high risk features as determined by neuropathologist

<sup>c</sup> MRI Surveillance at least every 4 months for first 5 years, every 6 months for years 5-10, and then at least annually > 10 years

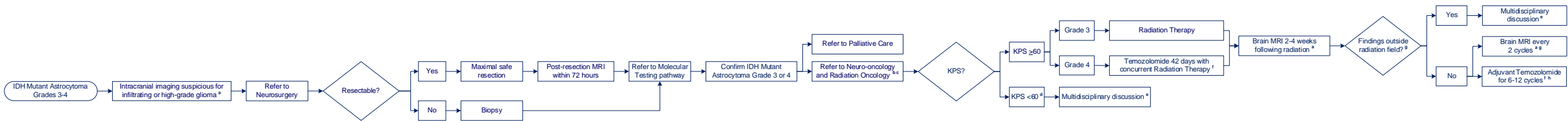
<sup>d</sup> Temozolomide beginning 4 weeks after the end of radiation, adjuvant temozolomide 150 mg/m<sup>2</sup> days 1-5 of a 28 day cycle (C1); if no myelosuppression increase dose to 200 mg/m<sup>2</sup> days 1-5 of a 28 day cycle for subsequent cycles up to C12 with a CBC between day 22 and day 28; ondansetron 8mg orally 30 minutes before each temozolomide dose; PJP prophylaxis recommended only for patients on long-term glucocorticoids or who have lymphopenia

<sup>e</sup> MRI 4 weeks following radiation and then every 3 months to assess treatment response

<sup>f</sup> Multidisciplinary Discussion through local tumor board or National TeleOncology CNS Virtual Tumor Board

IDH Isocitrate Dehydrogenase  
KPS Karnofsky Performance Status  
PJP Pneumocystis jirovecii Pneumonia

# IDH Mutant Astrocytoma – Grades 3-4



Clinical trial(s) always considered on pathway. For assistance finding a clinical trial, email [CancerClinicalTrialsNavigation@va.gov](mailto:CancerClinicalTrialsNavigation@va.gov)

<sup>a</sup> **Imaging** MRI with and without contrast; CT with contrast if MRI contraindicated

<sup>b</sup> **Refer to Neuro-oncology** via National TeleOncology consult if local VA Neuro-oncology unavailable

<sup>c</sup> **Refer to Genetic Counseling** for patient with personal history of other primary cancers particularly if diagnosed  $\leq$  45 years or first or second degree relative with cancer  $\leq$  55 years, clinician discretion for those >55 years

<sup>d</sup> **Life expectancy**  $\leq$  6 months refer to Hospice

<sup>e</sup> **Multidisciplinary Discussion** through local tumor board or National TeleOncology CNS Virtual Tumor Board; for patients with poor prognosis provide supportive care in lieu of chemo/radiation

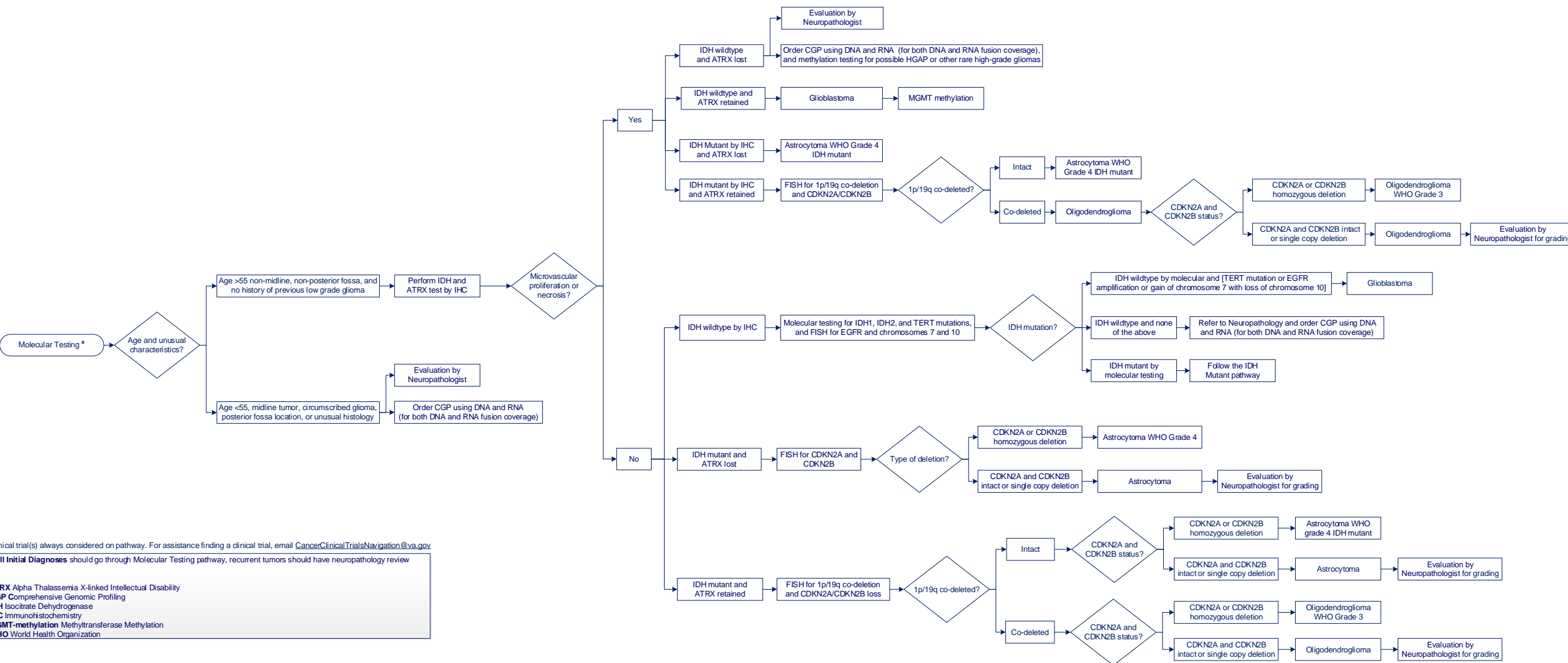
<sup>f</sup> **Temozolomide** prescribing concurrent with radiation therapy at a dose of 75 mg/m<sup>2</sup> per day for up to 42 days with weekly CBC with differential and metabolic panel to include liver function; beginning 4 weeks after the end of radiation, adjuvant temozolomide 150 mg/m<sup>2</sup> days 1-5 of a 28 day cycle (C1); if no myelosuppression increase dose to 200 mg/m<sup>2</sup> days 1-5 of a 28 day cycle for subsequent cycles up to C12 with a CBC between day 22 and day 28; ondansetron 8mg orally 30 minutes before each temozolomide dose; PJP prophylaxis recommended only during concurrent radiation therapy for patients on stable (not decreasing) doses of glucocorticoids or who have lymphopenia

<sup>g</sup> **Pseudo Progression** can occur inside the radiation field (defined as within the 80% isodose line) up to 12 weeks post-radiation

<sup>h</sup> **Adjuvant Temozolomide** with or without tumor treating fields per patient preference for grade 4 only

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# IDH Mutant Astrocytoma – Molecular Testing



Clinical trial(s) always considered on pathway. For assistance finding a clinical trial, email [CancerClinicalTrialsNavigation@va.gov](mailto:CancerClinicalTrialsNavigation@va.gov)

\* All Initial Diagnoses should go through Molecular Testing pathway, recurrent tumors should have neuropathology review

**ATRX** Alpha Thalassemia X-linked Intellectual Disability  
**CGP** Comprehensive Genomic Profiling  
**IDH** Isocitrate Dehydrogenase  
**IHC** Immunohistochemistry  
**MGMT-methylation** Methyltransferase Methylation  
**WHO** World Health Organization

# IDH Mutant Astrocytoma – Molecular Testing Table

Eligibility	Test Category	Test Type	Recommended Vendors	NPOP Coverage	Specimen Type
Age > 55, Non-midline, Non-posterior fossa, AND No history of previous low grade glioma	IHC	IDH1 R132 mutation ATRX	Local VA or locally contracted vendor	No	Tumor Tissue
IDH-mutated	FISH	1p/19q FISH for codeletion CDKN2A/B homozygous loss	Local VA or locally contracted vendor	No	Tumor Tissue
IDH-wild type	Molecular	TERT promoter mutation testing	Local VA or locally contracted vendor	No	Tumor Tissue
	**FISH	EGFR for amplification Chromosomes 7 and 10 for gain 7/loss 10	Local VA or locally contracted vendor	No	Tumor Tissue
	**Microarray	Chromosomal microarray (aka Oncoscan FFPE)	Local VA or locally contracted vendor	No	Tumor Tissue
	Methylation Testing	MGMT promoter methylation testing	Local VA or locally contracted vendor	No	Tumor Tissue
Age < 55, Midline tumor, Circumscribed glioma, Posterior fossa location, Unusual histology, IDH-wildtype WITH loss of ATRX, OR IDH-wildtype WITHOUT glioblastoma-defining molecular alterations	Somatic NGS	DNA and RNA-based comprehensive genomic profiling (CGP)	Tempus	Yes	Tumor Tissue

\* Testing should not be ordered indiscriminately on every case as it will inappropriately exhaust tissue. Instead, follow the pathological workup recommended on the Molecular Testing page for appropriate test utilization

\*\* Choose FISH OR microarray. In most cases FISH can be done instead of microarray. If performing microarray, then FISH is not indicated.