

Ascent™ Report

Patient Information	Provisional Diagnosis	Specimen	Physician Information
Name: John Smith DOB: 01/01/1990 Sex Assigned at Birth: Male MRN: 11xx22xx33	Diagnosis: Oligodendroglioma ICD10: C71.9	Type: CSF Collected: 01/01/2026 Received: 01/02/2026 Specimen ID: AscOnlyPos-CNS	Institution: Belay Diagnostics Referring Physician: Provider Test

RESULT SUMMARY

POSITIVE

Comments
The 1p/19q codeletion is a characteristic of oligodendroglioma, particularly when observed alongside an IDH variant. Clinical correlation is required.

CLINICALLY SIGNIFICANT ALTERATION DETAILS (Tier 1 or 2 per AMP/ASCO/CAP)

Ascent™ Chromosome Arm Level Loss or Gain				
Alteration	Type of Relevant Genes	Actionability Summary		
		FDA/NCCN Therapies Associated	Prognostic /Diagnostic Guidelines	Clinical Trial Options
1p/19q Codeletion	Fully Contained: <i>AKT2, CCNE1, CIC, ERCC1, ERCC2, FUBP1, MYCL, NRAS</i>	Yes	Yes	Yes

VARIANTS OF UNKNOWN SIGNIFICANCE (Tier 3)

Ascent™ Aneuploidy Variants of Unknown Significance	
chr7q Loss	chr8q Gain

ACTIONABILITY SUMMARY

FDA / NCCN Therapies for the Patient's Tumor Type (Tier 1A)			
Biomarker	Therapies	Setting	Source(s)
1p/19q Codeletion	alkylating agent	Unspecified	NCCN


FDA / NCCN Therapies with Resistance / Decreased Response (Tier 1A): <i>None</i>
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Prognostic Implications per NCCN			
Biomarker	Prognostic Association	Diseases	Note
1p/19q Codeletion	Favorable	Glioma	For glioma, codeletion of 1p and 19q confers a favorable prognosis.

Diagnostic Implications per WHO: <i>None</i>
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CLINICAL TRIALS / INVESTIGATIONAL THERAPIES

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1p/19q Codeletion			
Therapy	Clinical Trial	Location/Sponsor	WeTrials
vorasidenib + temozolomide	NCT06478212 (Phase 1/Phase 2) Vorasidenib in Combination With Temozolomide (TMZ) in IDH-mutant Glioma	Los Angeles, California Institut de Recherches Internationales Servier scientificinformation@servier.com	 https://genomoncology.wetrials.com/v1/NCT06478212

CIC Loss + 1p/19q Codeletion			
Therapy	Clinical Trial	Location/Sponsor	WeTrials
ulixertinib	NCT05804227 (Early Phase 1) Window-of-Opportunity Trial of Ulixertinib for MAPK-Activated Gliomas	Houston, Texas M.D. Anderson Cancer Center nkmajd@mdanderson.org	 https://genomoncology.wetrials.com/v1/NCT05804227

TIER 1A THERAPY DETAILS

1p/19q Codeletion		
Therapy	Approval / Guideline Summary	Underlying Evidence
alkylating agent	Per NCCN, the 1/19 codeletion in glioma is predictive of response to alkylating systemic therapy with or without RT (Category 2A).	The NCCN guideline for alkylating agents was supported by two trials: Study 26951 (NCT00002840; PMID: 23071237) and RTOG 9402 (NCT00002569; PMID: 23071247). Data from the randomized, phase-III trial, Study 26951 demonstrated that adjuvant RT/PCV compared with RT alone improved OS (NR vs. 112 mo., HR = 0.56) in patients with newly diagnosed anaplastic oligodendroglial tumors with 1p/19q codeletion (n = 80). The secondary endpoint was PFS (157 mo. vs. 50 mo., HR = 0.73). Data from the open-label, randomized, phase-III trial RTOG 9402 demonstrated that PCV/RT, compared with RT alone, improved median survival (14.7 yr. v 7.3 yr.; HR = 0.59; P = 0.03) in patients with anaplastic oligodendroglomas with 1p/19q codeletion. For those with noncodeleted tumors, there was no difference in median survival by treatment arm (2.6 yr. v. 2.7 yr.; HR = 0.85; P = 0.39).

TEST DETAILS

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Aneuploidy (chromosome arm level loss and gain)									
chr1p	chr3p	chr5p	chr7p	chr9p	chr11p	chr13q	chr16q	chr18q	chr20q
chr1q	chr3q	chr5q	chr7q	chr9q	chr11q	chr14q	chr17p	chr19p	chr21q
chr2p	chr4p	chr6p	chr8p	chr10p	chr12p	chr15q	chr17q	chr19q	chr22q
chr2q	chr4q	chr6q	chr8q	chr10q	chr12q	chr16p	chr18p	chr20p	

Methods and Limitations

Ascent™ evaluates chromosomal arm level loss/gain (aneuploidy), and focal alterations (gene level amplification/deletion) using >0.1x low pass whole genome sequencing (LP-WGS) (PMID: 37014860). The LOD (limit of detection) for aneuploidy was determined to be $\log_2(r)$ of abs (0.09), and for focal alteration was determined to be seq.mean cutoff of 0.1 for amplification and -0.2 for deletions. Variants are called against the human genome build reference hg19 using Summit™ Omics pipeline version 1.3.0, developed at Belay Diagnostics.

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Tertiary analysis is performed using the precision oncology workbench (GenomOncology) based on the joint AMP/ASCO/CAP consensus guidelines for interpretation of sequence variants in cancer (PMID: 27993330). Please reach out to contact@belaydiagnostics.com for additional information or queries.

Disclaimers

This test was developed, and its performance characteristics determined by Belay Diagnostics Laboratory (CLIA# 14D2302605), which is certified under the Clinical Laboratory Improvement Amendments of 1988 (CLIA) as qualified to perform high complexity testing. This test has not been cleared or approved by the U.S. Food and Drug Administration (FDA). This test may be used for clinical purposes. However, the results of this test do not establish a diagnosis and should not be used alone for diagnosis or patient care decisions or otherwise replace the judgment of a treating physician and must always be interpreted in the context of all relevant clinical and pathological data.

This test is performed only to evaluate for somatic (i.e., tumor-specific) variants within the genes listed and cannot distinguish between germline and somatic alterations with absolute certainty. This test therefore does not report on incidental findings as defined by the American College for Medical Genetics and Genomics (ACMG) (PMID: 37347242). If a germline variant is suspected, follow-up germline testing using non-neoplastic (normal) tissue should be performed by a laboratory permitted to perform germline genetic testing along with genetic counseling. It is possible for a genomic variant to be present yet go undetected by our assay either due to the heterogeneous nature of the specimen or the limits of detection of our assay. Therefore, to the extent a particular genomic variant is not reported, Belay Diagnostics LLC does not guarantee that the variant does not exist in the specimen provided. Likely benign, and benign variants are not reported. For any reported variant of uncertain significance (VUS), if the classification changes, there is no obligation to send out a new report updating this information.

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ACTIONABILITY REFERENCES

FDA: U.S. Food & Drug Administration (fda.gov)

NCCN: National Comprehensive Cancer Network® (NCCN®). Referenced with permission from the NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®). © National Comprehensive Cancer Network, Inc. 2024. All rights reserved. The NCCN Guidelines® and illustrations herein may not be reproduced in any form for any purpose without the express written permission of the NCCN. To view the most recent and complete version of the guideline, go online to NCCN.org. NCCN makes no warranties of any kind whatsoever regarding their content, use or application and disclaims any responsibility for their application or use in any way.

WHO: World Health Organization Classification of Tumours online (tumourclassification.iarc.who.int)

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