Machine Learning Prediction Report

Glioma IDH Classification

Patient ID:	UCSF-PDGM-0536	**Patient Age:**	58.0
Report Date:	2026-01-05 23:55:08	**Model Used:**	GradientBoosting

Final Prediction: IDH-mutant

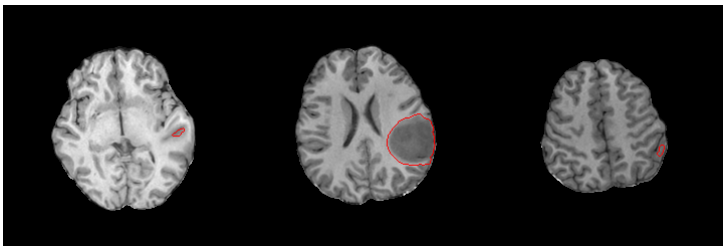
Clinical Interpretation

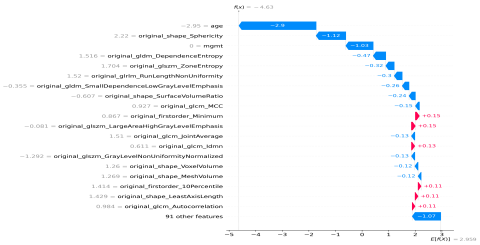
MGMT methylation status which is absent moved the prediction toward IDH-Mutant; MGMT promoter methylation often appears as an important predictor of IDH mutation in machine learning models because both reflect the G-CIMP epigenetic phenotype typical of lower-grade gliomas.

original_glszm_ZoneEntropy which is very low (relative value : 1) compared to the training dataset moved the prediction toward IDH-Mutant; it reflects the randomness in the distribution of zone sizes, with lower values indicating less complexity, a pattern seen in IDH-mutant tumors.

Prediction Explanation (SHAP Analysis) & Tumor Segmentation Slices

Features pushing the prediction higher (towards IDH-wildtype) are red; lower (towards IDH-mutant) are blue.





References:

Extent and prognostic value of MGMT promotor methylation in glioma WHO grade II.

Behavior-Oriented Nomogram for the Stratification of Lower-Grade Gliomas to Improve Individualized Treatment.