[redacted]

TCGA--DU--5871

[redacted]

Taken: [redacted]
Received: [redacted]
Reported: [redacted]

[redacted]

CLINICAL HISTORY

[redacted], [redacted]

and has
a large (5 to 6 cm) left frontal heterogeneous enhancing lesion with some mass
effect and vasogenic edema.

OPERATIVE DIAGNOSES

Brain tumor

Operation/Specimen: A: Brain,left frontal tumor, biopsy
B: Brain,left frontal enhancing lesion on MRI, biopsy
C: Brain,left frontal tumor, biopsy

PATHOLOGICAL DIAGNOSIS:

A and B. Brain, left frontal, excisional biopsies:
1. Mixed oligoastrocytoma, with atypical features.
2. MIB-1 proliferation index: 3%.
See Microscopy Description and Comment.

COMMENT

The tumor is a moderately cellular glial neoplasm that has a mixed oligoastrocytic phenotype, predominantly astrocytic. There is moderate nuclear pleomorphism. Mitotic figures are found with difficulty, and the MIB-1 proliferation index ix low at about 3% in the more active areas. There is not microvascular cellular proliferation or necrosis.

The glioma is somewhat cellular and has nuclear pleomorphism. However, there are not anaplastic features, i.e. brisk mitotic activity, necrosis, or microvascular cellular proliferation. The atypical cellular features portend a heightened biological potential, which in addition to the focal enhancement on imaging studies suggest on going anaplastic transformation of the neoplasm.

The features in the biopsy may be correlated with clinical, imaging, and operative findings for their final interpretation and patient's follow up.

Electronically Signed Out

[redacted]

[redacted]

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PROCEDURES/ADDENDA
Loss of Heterozygosity 1p, 19q Assay [redacted]
Date Ordered: [redacted] Date Reported: [redacted]
Interpretation
NEGATIVE: Allelic loss on chromosome arm 1p and chromosome arm 19q is NOT
detected.
Informative loci are: D1S548, D1S1592, D1S552, D19S219, D19S412
Results-Comments
Testing performed on DNA extracted from tumor paraffin tissue block
and a corresponding blood specimen for germline comparison.

TEST DESCRIPTION: Allelic loss is assessed by PCR assay in Normal DNA
(baseline)/ Tumor DNA pairs using 3 markers at both 1p and 19q. The 3 markers
on 1p are D1S548, D1S1592, and D1S552 (with D1S468, D1S1612, and D1S496 as
backup markers) and the 3 markers on 19q are D19S219, D19S412, and PLA2G4C
(with D19S606 and D19S1182 as backup). All markers are microsatellites (2 or 4
nt repeats) except PLA2G4C which is a minisatellite (26 nt repeat)
polymorphism. The markers were selected based on heterozygosity score,
amplicon size, and ease of interpretation. The backup markers are used if the
first line markers at that chromosome arm are uninformative or otherwise
ambiguous in their interpretation. LOH at all informative loci on each
chromosomal arm represents the typical finding in oligodendrogliomas with 1p
and 19q deletion.

FDA COMMENT: The above data are not to be construed as the results from a
stand-alone diagnostic test. This test was developed and its performance
characteristics determined by the [redacted] laboratory as
required by [redacted] regulations. It has not been cleared or approved for
specific uses by the U.S. Food and Drug Administration (FDA). The FDA has
determined that such clearance or approval is not necessary. These results are
provided for informational purposes only, and should be interpreted only in
the context of established procedures and/or diagnostic criteria.

TECHNICAL SENSITIVITY: The presence of >15% non-neoplastic cells in the sample
may preclude the detection of allelic loss.
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Date Ordered: [redacted] Date Reported: [redacted]
Interpretation

POSITIVE: Methylated MGMT promoter is detected.
Results-Comments
Testing performed on paraffin tissue block
TEST DESCRIPTION: Patients with glioma containing a methylated MGMT promoter have been shown to benefit from therapy with alkylating agents. Assessment of MGMT promoter methylation status involves bisulfite treatment of DNA followed by real-time PCR amplification (MethyLight) of methylated and unmethylated DNA sequences.

FDA COMMENT: The above data are not to be construed as the results from a stand alone diagnostic test. This test was developed and its performance characteristics determined by the [redacted] laboratory as required by [redacted]. It has not been cleared or approved for specific uses by the U.S. Food and Drug Administration (FDA). The FDA has determined that such clearance or approval is not necessary. These results are provided for informational purposes only, and should be interpreted only in the context of established procedures and/or diagnostic criteria.
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[redacted]

PCR for EGFR variant III mutation
Date Ordered: [redacted] Date Reported: [redacted]
Interpretation
NEGATIVE - No evidence of EGFRvIII mutation is detected
Results-Comments
TEST DESCRIPTION: Testing performed on RNA extracted from tissue paraffin block
The epidermal growth factor receptor (EGFR) is an attractive molecular target in glioblastoma because it is amplified, overexpressed, and/or mutated in up to 40% to 50% of patients. Epidermal growth factor receptor variant III (EGFRvIII) is an oncogenic, constitutively active mutant form of EGFR that is commonly expressed in glioblastoma. Cell culture and in vivo models of glioblastoma have demonstrated EGFRvIII as defining prognostically distinct subgroups of glioblastomas. Additionally, the presence of EGFRvIII has been shown to sensitize tumors to EGFR tyrosine kinase inhibitors when the tumor suppressor protein PTEN is intact. RNA is extracted from formalin fixed, paraffin embedded tissue samples and reverse transcribed to cDNA. The cDNA is

then amplified using standard PCR technique for DNA templates. PCR products
are detected by gel electrophoresis. The limit of detection of this assay has
been determined to be approximately 5 mutant cells in 100 normal cells.
FDA Comment: The above data are not to be construed as the results from a
stand alone diagnostic test. This test was developed and its performance
characteristics determined by the [redacted] laboratory as
required by [redacted]. It has not been cleared or approved for
specific uses by the U.S. Food and Drug Administration (FDA). The FDA has
determined that such clearance or approval is not necessary. These results are
provided for informational purposes only, and should be interpreted only in
the context of established procedures and/or diagnostic criteria.
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