UUID:0DDAB8E8-54DA-495A-9A4B-9D9A3CFE5DB7
TCGA-DU-A7TD-01A-PR Redacted

ICD-O-3
Oligoastrocytoma, grade III
CME 9382/3
Site: Brain, supratentorial NOS C71.0
path Brain, temporal lobe C71.2
JJ 4/22/14

Surgical Pathology Report

Patient Name: Phone #: Accession #:
Med. Rec. #: Client: Taken:
DOB: (Age:) Location: Received:
Gender: M Accnt: Reported:
Physician(s):
Phy Location:

Clinical History

-year-old man experienced falls ago, and was emergently decompressed of a large right temporal lobe tumor that extended to the frontal lobe and insula, with herniation.

Operative Diagnoses

Right temporal brain mass.

Operation / Specimen

A: Brain, excision biopsy

Pathologic Diagnosis

Brain, right temporal, excision: Mixed oligoastrocytoma, anaplastic (WHO grade III).
See Microscopy Description and Comment.

Comment

The sections contain large portions of brain extensively infiltrated and effaced by a very cellular glial neoplastic proliferation. The neoplastic cells have a mixed oligo astrocytic phenotype, there is focally brisk mitotic activity, and the MIB-1 proliferation index is about 75% in the more active areas. There is also focal endothelial hyperplasia and some microvascular proliferation. There are focal areas of necrosis and hemorrhage with some pigment, most likely associated wit previous surgical procedure.
The findings are interpreted as those of an anaplastic oligoastrocytoma.
Electronically Signed Out

, Senior Staff Pathologist
Consultant: ., Senior Staff Pathologist

Procedures/Addenda

PCR for EGFR variant III mutation
Date Ordered: **Date Reported:**
Interpretation

NEGATIVE - No evidence of EGFRvIII mutation is detected

Results-Comments

TEST DESCRIPTION: Testing performed on RNA extracted from paraffin tissue block (A1) H and E slide was examined and no microdissection was needed.
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
as required
by CLIA '88 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.
Electronically Signed Out
Senior Staff Pathologist

Loss of Heterozygosity 1p, 19q Assay (LOH)

Date Ordered: **Date Reported:**

Interpretation

NEGATIVE: Allelic loss on chromosome arm 1p and chromosome arm 19q is NOT detected.
Informative loci are: D1S1612, D1S496, D19S219, D19S412, and PLA2G4C

Results-Comments

Testing performed on DNA extracted from tumor paraffin block (A1). DNA extracted from a corresponding
blood specimen was used as a normal reference control.
H and E slide was examined and no microdissection was needed.
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
as required
by CLIA ' 88 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.
Electronically Signed Out
, Senior Staff Pathologist

MGMT Promoter Methylation

Date Ordered: **Date Reported:**

Interpretation

NEGATIVE: No evidence of methylated MGMT promoter is detected.

Results-Comments

Testing performed on DNA extracted from tumor paraffin block -A1
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 of methylated and unmethylated DNA sequences. The
analytic sensitivity of this assay was determined by serial dilution of methylated positive control DNA into unmethylated DNA, and was assessed to be 1% of methylated DNA in the background of unmethylated DNA. Factors
such as the presence of >50% non-neoplastic cells in the sample, or extensive tissue necrosis, may preclude the
detection of methylated MGMT promoter 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
as required
by CLIA '88 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.
Electronically Signed Out
M.D., Senior Staff Pathologist

Addendum

Date Ordered: **Date Reported:**

Addendum Diagnosis

Review of the slides confirms the diagnosis of a high-grade mixed oligodendroglial and astrocytic glioma. A regional
area of increased cellular atypia and cellular density associated with focal microvascular proliferation is noted. Focal
necrosis is also present. Considering these features, the differential diagnosis includes a high-grade oligoastrocytoma
in transition to glioblastoma with oligodendroglial component, WHO grade IV. Clinical correlation is recommended.

Addendum Comment

This addendum is issued for the purpose of pathology review requested by the clinical oncology team for treatment
protocol considerations.

Electronically Signed Out
Senior Staff Pathologist

Gross Description
A.
Brain, excision biopsy:
CONTAINER LABEL: brain tumor.
FIXATIVE: Formalin. NO. PIECES: many red to gray tan fragments. SIZE/VOL: 5 x 4.5 x 2.0 cm; 15.55 grams
CASSETTES: 1-3,

Microscopic Description
IMMUNOHISTOCHEMISTRY: The GFAP demonstrates an overall sparse gliofibrillary back ground. The CD34
depicts a monotonous capillary-type microvascular network, with a few areas that have endothelial hyperplasia, and a
couple of areas with few vessels with microvascular cellular proliferation. Many cells weakly over express the p53
protein, and only a small minority strongly over expresses the protein. With the MIB-1 there is very high proliferation
index that reaches 75% in the more active areas.
ICD-9(s): 191.2 191.2
Billing Fee Code(s): A:
EGFRvIII:
LOH 1p19q:
MGMT:
Histo Data
Part A: Brain, excision biopsy
Taken: Received:
Stain/cnt Block Ordered Comment
CD34-DA x 1 1
EGFR-curls x 1 1
mGFAP-DA x 1 1
mGFAP-DA x 1 1
H&E x 1 1
LOH-curls x 1 1
MGMT-curls x 1 1
MIB1-DA x 1 1
P53DO7 x 1 1
H&E x 1 2
H&E x 1 3

Criteria	Yes	No
Diagnosis Discrepancy		✓
Primary Tumor Site Discrepancy		✓
HIPAA Discrepancy		✓
Prior Malignancy History		✓
Dual/Synchronous Primary Noted		
Case (Circle): QUALIFIED / DISQUALIFIED		
Reviewer Initials: Date Reviewed: 9/13/13		