

Patient: DUARTE, NATHAN MATTHEW Age: 31 y
PHN: [REDACTED] Gender: Male
Date of Birth: 13/Sep/1991 Account: RC189336/22
Patient Phone: [REDACTED]



Ordering Provider: Bigder, Mark G
CopyTo(s): Chang, Adam Y; Bigder, Mark G

Admission Date: 01/Nov/2022
Discharge Date: 03/Nov/2022

Lab #: 22-38824777
Collected: 01/Nov/2022 00:01
Received: 01/Nov/2022 14:46

Time Resulted

Pathology

Surgical Report

17/Nov/2022 13:43

Pathology Lab: Royal Columbian Hospital
Phone: (604) 520-4352 Fax: (604) 520-4409

Specimen Number: 22RS-46887

ADDENDUM

This case was sent in consultation to Dr. Peter Schutz (VGH Neuropathology group). His full diagnostic report (NR22-172) reads as follows:

Final Diagnosis:

Specimen labelled RIGHT PARIETAL TUMOR: Astrocytoma, IDH-mutant, CNS WHO grade 4.

a. Histopathology: Infiltrative astroglial neoplasm with gemistocytic morphology and microvascular proliferation.

b. Molecular pathology:

1. IDH1 R132H immunoreactive.
2. Nuclear ATRX immunoreactivity lost.
3. p53 immunohistochemistry indicative of mutation.

Electronically signed by SCHUTZ, PETER
November 15, 2022 13:12:05

Diagnosis Comment:
Dear Dr. Pyatibrat,

Thank you for sending this case in consultation.

The patient is a 31-year-old male with a right parieto-occipital mass. MRI reports detail focal enhancement.

Histological sections demonstrate an infiltrative astroglial neoplasm with prominent gemistocytic morphology and high cellularity. Mitotic activity is present and there is microvascular proliferation (blocks 4A and 4B). These features in conjunction with the immunohistochemical results are consistent with an IDH-mutant astrocytoma and justify classification as CNS WHO grade 4. The diagnosis is based on terminology of the 2021 WHO classification of CNS tumors.

Select slides were also seen by Dr. S. Yip, who agrees with the grading.

Thank you very much again for referring this interesting case.

Sincerely,
Peter Schutz, MD PhD

PWS/jw

Electronically signed by SCHUTZ, PETER
November 15, 2022 13:12:05

Clinical Summary:

31M, presents with progressive H/A x2 month
Large right deep parietal lesion debulking

Specimens Received:

A: Glass Slide(s) x13; 22RS-46887
B: Block(s) x1(4B); 22RS-46887

Inquiries: Royal Columbian Hospital 604-520-4300

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Microscopic Description:

Sections demonstrate grey and white matter with an infiltrative, often highly cellular, glial neoplasm. There is regionally a mucinous background. Neoplastic cells have hyperchromatic moderately pleomorphic nuclei and are associated either with variable amounts of gemistocytic cytoplasm or, less frequently, are associated with fibrillar cytoplasm. There are occasional mitoses and there is microvascular proliferation (blocks 4A, 4B).

Immunohistochemical stains performed at Royal Columbian Hospital:

IDH1 R132H: Immunoreactive.
ATRX: Loss of nuclear ATRX immunoreactivity.
Ki67: Regionally estimated at 10%.

Immunohistochemical stains performed at Vancouver General Hospital:

p53: Strong diffuse labelling of neoplastic nuclei, indicative of mutation.
GFAP: Neoplastic cells positive.

Dr. Sergey Pyatibrat MD FRCPC
Electronically signed: 17/Nov/2022

DIAGNOSES

1. RIGHT PARIETAL ENHANCING TUMOR (FROZEN SECTION):
- BENIGN BRAIN PARENCHYMA.
2. RIGHT PARIETAL ENHANCING TUMOR:
- BENIGN BRAIN PARENCHYMA.
3. RIGHT PARIETAL TUMOR (FS):
- DIFFUSE ASTROCYTOMA WITH PROMINENT GEMISTOCYTIC COMPONENT.
4. RIGHT PARIETAL BRAIN TUMOR:
- DIFFUSE ASTROCYTOMA WITH PROMINENT GEMISTOCYTIC COMPONENT, WHO GRADE II-III.
- IDH1 R132H IMMUNO-POSITIVE: IDH MUTANT.
- ATRX NUCLEAR IMMUNO-NEGATIVE: ATRX DELETED/MUTATED
5. RIGHT PARIETAL BRAIN TUMOR IN SALINE (ULTRASONIC ASPIRATE):
- DIFFUSE ASTROCYTOMA WITH PROMINENT GEMISTOCYTIC COMPONENT

DIAGNOSES COMMENT

This case will be sent to the VGH Neuropathology group for a second opinion and/or further workup. The results will be issued in an addendum.

SPECIMEN SUBMITTED

1. Right parietal enhancing tumor (frozen section)
2. Right parietal enhancing tumor
3. Right parietal tumor (FS)
4. Right parietal brain tumor
5. Right parietal brain tumor in saline (ultrasonic aspirated)

CLINICAL INFORMATION

31 M presents with progressive ___ x 2 months. Large right deep parietal lesion debulking.

INTRAOPERATIVE CONSULTATION

1. Multiple pieces of tan tissue measuring up to 0.6 cm in length. Smear x 2. FSx3.
Dx: Benign brain parenchyma.
3. Multiple pieces of tan and hemorrhagic tissue measuring up to 0.7 cm in length. Smear x 2.
FS x 3.
Dx: High grade glial neoplasm.

Dr. Willard Wong MBBS FRCPC

GROSS DESCRIPTION

Five containers all labelled with the patient's name "DUARTE, NATHAN MATTHEW".

No. 1. Labelled "right parietal enhancing tumor" is a specimen consisting of multiple pieces of tan tissue measuring up to 0.6 cm in aggregate. The specimen was submitted for frozen section evaluation. The frozen section remnant is submitted in cassette "1A".

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Surgical Report (continued)

entirely submitted in cassettes "2A"- "2B".

No. 3. Labelled "right parietal tumor" is a specimen consisting of multiple tan tissue fragments measuring up to 0.7 cm in aggregate. Portion of the submitted for frozen section evaluation. Frozen section remnant is submitted in cassette "3A". Remaining specimen is submitted in cassette "3B".

No. 4. Labelled "right parietal brain tumor" is a specimen consisting of multiple pink-tan fragments of tissue that measure 3.5 x 2.0 x 1.5 cm in aggregate. The specimen is entirely submitted in cassette "4A"- "4C".

No. 5. Labelled "right parietal brain tumor Ultrasonic aspirate" is a specimen consisting of multiple white-tan fragments of tissue in normal saline that measure 4.5 x 4.0 x 0.7 cm. One representative section of the specimen is submitted in cassette "5A". /cb

Dr. Sergey Pyatibrat MD FRCPC
Electronically signed: 04/Nov/2022

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