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**PATIENT HISTORY:**

CHIEF COMPLAINT/ PRE-OP/ POST-OP DIAGNOSIS: [REDACTED] Left tongue cancer.  
PROCEDURE: Left partial glossectomy.  
SPECIFIC CLINICAL QUESTION: Not answered.  
OUTSIDE TISSUE DIAGNOSIS: Not answered.  
PRIOR MALIGNANCY: Not answered.  
CHEMORADIATION THERAPY: Not answered.  
ORGAN TRANSPLANT: Not answered.  
IMMUNOSUPPRESSION: Not answered.  
OTHER DISEASES: Not answered.  
CYTOGENETIC TESTING: Not answered.  
[REDACTED]

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**ADDENDA:****Addendum**

Immunostains and in-situ hybridization results are as follows:

Stain	Result
P16	Negative
EGFR	2+
HPV In-situ (Pan selective probe set)	Negative

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My signature is attestation that I have personally reviewed the submitted material(s) and the above diagnosis reflects that evaluation.

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**FINAL DIAGNOSIS:****PART 1: TONGUE, LEFT, PARTIAL GLOSSECTOMY -**

- A. INVASIVE SQUAMOUS CELL CARCINOMA, POORLY DIFFERENTIATED (1.9 CM, 0.8 CM THICK) WITH AN INFILTRATIVE BORDER.
  - B. PERINEURAL INVASION PRESENT.
  - C. MARGINS ARE FREE OF TUMOR (SEE PARTS 2, 3, 4, 5 AND 6).
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## Pathology Report

D. PATHOLOGIC STAGE: pT1 N1.

PART 2: TONGUE, DEEP MARGIN, EXCISION –  
NO TUMOR PRESENT.

PART 3: TONGUE, ANTERIOR MARGIN, EXCISION –  
NO TUMOR PRESENT.

PART 4: TONGUE, DORSAL MARGIN, EXCISION –  
NO TUMOR PRESENT.

PART 5: VENTRAL MARGIN, EXCISION –  
NO TUMOR PRESENT.

PART 6: TONGUE, POSTERIOR MARGIN, EXCISION –  
NO TUMOR PRESENT.

PART 7: LYMPH NODES, LEFT NECK, LEVEL 1A AND B, SELECTIVE DISSECTION –  
A. TWO LYMPH NODES, NO TUMOR PRESENT (0/2).  
B. SUBMANDIBULAR GLAND WITH NO SIGNIFICANT ABNORMALITIES.

PART 8: LYMPH NODES, LEFT NECK, LEVEL 2 THROUGH 4, SELECTIVE DISSECTION –  
A. METASTATIC SQUAMOUS CELL CARCINOMA IN ONE OF TWENTY-SEVEN LYMPH NODES (1/27).  
B. THE POSITIVE LYMPH NODE MEASURES 0.5 CM.  
C. NO EXTRACAPSULAR SPREAD.

My signature is attestation that I have personally reviewed the submitted material(s) and the final diagnosis reflects that evaluation.

### GROSS DESCRIPTION:

The specimen is received in eight parts.

Part 1 is received fresh labeled with the patient's name, initials [REDACTED] medical record number and labeled "left tongue - sltch anterior." The specimen consists of a portion of tongue which in total measures 3.2 (anterior to posterior, 3.5 cm (medial to lateral) x 2.8 cm (superior to inferior / dorsum to ventrum).

There is a mucosal lesion noted with a white-tan ring in the periphery and central roughened brown and slightly tan and roughened mucosal area, which measures 1.9 cm from anterior to posterior, 1.7 cm from medial to lateral, 0.6 cm deep into the muscle upon cross-sectioning. The lesion comes to within 0.3 cm of the posterior mucosal specimen margin (not true margin), 0.3 cm from the anterior specimen margin (not true margin) and 1.5 cm from the lateral margin (not true margin), 0.2 cm from the medial specimen margin (not true margin).

Note: Tumor and normal tissue are banked for Head and Neck SPORE.

The specimen is serially sectioned into 8 slices from anterior to posterior and sections are submitted as follows:

## Pathology Report

- 1A – slice 5, most tumor depth
- 1B – slice 3, minimal involvement by tumor
- 1C – right side of slice 4
- 1D – left half of slice 4
- 1E – right half of slice 7.

Part 2 is received fresh labeled with the patient's name, initials [REDACTED], medical record number and labeled "deep margin." The specimen consists of a piece of tan tissue measuring 1.3 x 1.3 x 0.3 cm which is evaluated intraoperatively by frozen section and the remainder of which is submitted in cassette 2AFS.

Part 3 is received fresh labeled with the patient's name, initials [REDACTED], medical record number and is labeled "anterior margin." The specimen consists of a tan piece of tissue with mucosa measuring 1.8 x 0.3 x 0.3 cm and evaluated intraoperatively, the remainder of which is entirely submitted in cassette 3AFS.

Part 4 is received fresh labeled with the patient's name, initials [REDACTED], medical record number and is labeled "dorsal margin." The specimen consists of a piece of tissue which is evaluated intraoperatively, the remainder of which is entirely submitted in cassette 4AFS.

Part 5 is received fresh labeled with the patient's name, initials [REDACTED], medical record number and is labeled "ventral margin." The specimen consists of a tan piece of tissue measuring 0.7 x 0.3 x 0.3 cm, which is evaluated intraoperatively by frozen section and the remainder of which is submitted in cassette 5AFS.

Part 6 is received fresh labeled with the patient's name, initials [REDACTED], medical record number and is labeled "posterior margin." The specimen consists of a tan piece of tissue measuring 1.3 x 0.3 x 0.3 cm which is evaluated intraoperatively by frozen section, the remainder of which is entirely submitted in cassette 6AFS.

Part 7 is received fresh, labeled with the patient's name, initials [REDACTED] medical record number and is labeled "left neck, level 1A and B". The specimen consists of two pieces of tissue, which consists of a submandibular gland measuring 4.5 x 3.2 x 1.8 cm and an additional piece of fibroadipose tissue measuring 2.5 x 2.5 x 1.4 cm. The specimen is totally submitted as follows:

- 7A – representative cross section of submandibular gland
- 7B – one lymph node, bisected
- 7C – one lymph node, bisected.

Part 8 is received fresh, labeled with the patient's name, initials [REDACTED] medical record number and labeled "left neck level 2 and 4". The specimen consists of a piece of fatty tissue of an apparent vascular groove and no muscle attached measuring 9.0 x 8.5 x 1.3 cm, which is arbitrarily divided into three equivalent sections from superior to inferior and submitted as follows:

- 8A – 8C – superior (A- one lymph node , B-C remainder of lymph nodes)
- 8D – 8E – representative lymph nodes from mid section
- 8F – 8J – lymph nodes dissected from inferior section.

### INTRAOPERATIVE CONSULTATION:

#### PART 2AFS: DEEP MARGIN (frozen section) –

- A. BENIGN.
- B. NO TUMOR PRESENT [REDACTED].

#### PART 3AFS: ANTERIOR MARGIN (frozen section) –

- A. BENIGN.
- B. NO TUMOR PRESENT.
- C. NO MUCOSA [REDACTED]

## Pathology Report

PART 4AFS: DORSAL MARGIN (frozen section) –

- A. BENIGN.
- B. NO TUMOR PRESENT

PART 5AFS: VENTRAL MARGIN (frozen section) –

- A. BENIGN.
- B. NO TUMOR PRESENT

PART 6AFS: POSTERIOR MARGIN (frozen section) –

- A. BENIGN.
- B. NO TUMOR PRESENT

TSG/shm

### MICROSCOPIC:

Microscopic examination substantiates the above diagnosis.

The following statement applies to all immunohistochemistry, insitu hybridization (ISH & FISH), molecular anatomic pathology, and immunofluorescence testing:

The testing was developed and its performance characteristics determined by the [REDACTED], Department of Pathology, as required by the [REDACTED] regulations. The testing has not been cleared or approved for the specific use by the U.S. Food and Drug Administration, but the FDA has determined such approval is not necessary for clinical use. Tissue fixation ranges from a minimum of 2 to a maximum of 84 hours.

This laboratory is certified under the Clinical Laboratory Improvement Amendments of [REDACTED] ("CLIA") as qualified to perform high-complexity clinical testing. Pursuant to the requirements of CLIA, ASR's used in this laboratory have been established and verified for accuracy and precision. Additional information about this type of test is available upon request.

### CASE SYNOPSIS:

#### SYNOPTIC DATA - PRIMARY UPPER AERODIGESTIVE TRACT AND SALIVARY GLAND TUMORS

SPECIMEN TYPE: Resection: partial glossectomy, left

TUMOR SITE: Oral Cavity

TUMOR SIZE: Greatest dimension: 1.9 cm

HISTOLOGIC TYPE: Squamous cell carcinoma, conventional

HISTOLOGIC GRADE: G3

PATHOLOGIC STAGING (pTNM): pT1

pN1

Number of regional lymph nodes examined: 29

Number of regional lymph nodes involved: 1

pMX

Margins uninvolved by tumor

VENOUS/LYMPHATIC (LARGE/SMALL VESSEL) INVASION (V/L):

Present

PERINEURAL INVASION: Present

### HISTO TISSUE SUMMARY/SLIDES REVIEWED:

Part 1: Left Tongue

Stain/cht Block  
DOG1 x 1 A

# Pathology Report

ANEG x 1	A
H&E Recut x 1	A
IHPV x 1	A
cmet x 1	A
IEGFR x 1	A
IBNKNC x 6	A
H&E x 1	A
IISH x 2	A
P16 x 1	A
V-EGFR x 1	A
H&E x 1	B
H&E x 1	C
H&E x 1	D
H&E x 1	E

## Part 2: Deep Margin

Stain/cnt	Block
H&E x 1	AFS

## Part 3: Anterior Margin

Stain/cnt	Block
H&E x 1	AFS

## Part 4: Dorsal Margin

Stain/cnt	Block
H&E x 1	AFS

## Part 5: Ventral Margin

Stain/cnt	Block
H&E x 1	AFS

## Part 6: Posterior Margin

Stain/cnt	Block
H&E x 1	AFS

## Part 7: Left Neck Level 1A and B

Stain/cnt	Block
H&E x 1	A
H&E x 1	B
H&E x 1	C

## Part 8: Left Neck Level 2-4

Stain/cnt	Block
DOG1 x 1	A
ANEG x 1	A
H&E x 1	A

## Pathology Report

H&E x 1 B  
H&E x 1 C  
H&E x 1 D  
H&E x 1 E  
H&E x 1 F  
H&E x 1 G  
H&E x 1 H  
H&E x 1 I  
H&E x 1 J

**ICD-9 Diagnosis Codes:** {None Entered}

### SPECIAL PROCEDURES:

#### In Situ Procedure

#### Interpretation

PROBE: LSI EGFR/CEP7 Dual-Color Probe (

Cytogenetic Location: 7p12 / 7p11.1-q11.1

**EGFR FISH STUDIES PERFORMED ON THE SQUAMOUS CELL CARCINOMA ARE POSITIVE.**

Number of cells analyzed: 65

Ratio EGFR/CEP7: 2.11

High Polysomy: 43(66.2%)

SNR (signal to nucleus ratio): 4.1

Low Polysomy: 0%

Trisomy: 3(4.6%)

Disomy: 19(29.2%)

PROBE: c-MET\*/CEP7

Cytogenetic Location: 7q31.2 / 7p11.1-q11.1

**C-MET FISH STUDIES PERFORMED ON THE SQUAMOUS CELL CARCINOMA ARE NEGATIVE FOR AMPLIFICATION.**

Number of cells analyzed: 64

Ratio c-MET/CEP7: 1.21

SNR (signal to nucleus ratio): 2.6

High Polysomy: 0%

Low Polysomy: 12(18.8%)

Trisomy: 14(21.9%)

Disomy: 38(59.4%)

\*RP11-163C9, [REDACTED]

**EGFR FISH analysis was manually performed and quantitatively assessed by analysis of a minimum of 60 cells using the EGFR SpectrumOrange and the CEP7 SpectrumGreen probes.**

## Pathology Report

C-MET FISH analysis was manually performed and quantitatively assessed by analysis of a minimum of 60 cells using the c-MET SpectrumOrange and the CEP7 SpectrumGreen (centromeric) probes.

[REDACTED]  
My signature is attestation that I have personally reviewed the submitted material(s) and the above diagnosis reflects that evaluation.

### Results

*EGFR* FISH positive:

High Polysomy:  $\geq$  four gene copies in  $\geq$  40% of cells

Gene Amplification: Ratio gene/chromosome more than two or  $\geq$  15 gene copies in  $\geq$  10% of cells

*EGFR* FISH negative:

Disomy:  $\leq$  two gene copies in more than 90% of the cells

Trisomy: three gene copies in more than 10% of cells

Low Polysomy:  $\geq$  four gene copies in more than 10% but less than 40% of cells

*c-MET* FISH positive:

Gene Amplification: Ratio gene/chromosome more than two or  $\geq$  15 gene copies in  $\geq$  10% of cells

*c-MET* FISH negative:

Ratio gene/chromosome less than two or  $\leq$  15 gene copies in  $\leq$  10% of the cells.