

PATIENT HISTORY:

CHIEF COMPLAINT/ PRE-OP/ POST-OP DIAGNOSIS: History of malignant neoplasm, cystic lesion on left ascending ramus, lichen planus on right buccal surface.

PROCEDURE: Neck dissection, trach, reconstruction.

SPECIFIC CLINICAL QUESTION: Not given.

OUTSIDE TISSUE DIAGNOSIS: Not given.

PRIOR MALIGNANCY: Not given.

CHEMORADIATION THERAPY: Not given.

ORGAN TRANSPLANT: Not given.

OTHER DISEASES: Not given.

ADDENDA:

Addendum

Immunostains and in-situ hybridization are as follows:

STAIN	RESULT
EGFR	1+
P16	Negative
HPV in-situ (Pan selective probe set)	Negative

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

FINAL DIAGNOSIS:

PART 1: STENSEN'S DUCT, RIGHT, MARGIN, BIOPSY –
NO TUMOR PRESENT.

PART 2: BUCCAL MASS, RIGHT, RESECTION –

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- A. INVASIVE SQUAMOUS CELL CARCINOMA, MODERATELY DIFFERENTIATED (3.2 CM, 1.8 CM THICK), WITH INFILTRATIVE BORDER (See synoptic).
- B. BACKGROUND OF LICHENOID DYSPLASIA WITH PROMINENT LYMPHOCYTIC RESPONSE.
- C. ANGIOLYMPHATIC AND PERINEURAL INVASION PRESENT.
- D. MARGINS FREE OF TUMOR (SEE ALSO PARTS 1, 3 AND 4).
- E. PATHOLOGIC STAGE: pT2 N0

PART 3: BUCCAL FAT, RIGHT, BIOPSY –
NO TUMOR PRESENT.

PART 4: MARGIN, DEEP, RIGHT, BIOPSY –
NO TUMOR PRESENT.

PART 5: LEVEL 1A AND 1B, RIGHT, NECK DISSECTION –
A. SUBMANDIBULAR GLAND WITH NO SIGNIFICANT ABNORMALITY.
B. SEVEN LYMPH NODES, NO TUMOR PRESENT (0/7) (see comment).

PART 6: LYMPH NODES, RIGHT, LEVELS 2 THRU 4, NECK DISSECTION –
TWENTY-NINE LYMPH NODES, NO TUMOR PRESENT (0/29).

PART 7: ADDITIONAL INFERIOR MARGIN, BIOPSY –
NO TUMOR PRESENT (see comment).

COMMENT:

Part 5: A cytokeratin immunostain and levels were performed on one lymph node with subcapsular fibrosis and giant cell reaction. However, no micrometastases are noted, and this focus is essentially gone on levels.

Part 7: While there is no definitive tumor noted, cautery artifact makes histologic assessment suboptimal.

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GROSS DESCRIPTION:

The specimen is received in seven parts.

Part 1 is received fresh labeled with the patient's name, initials, [REDACTED], medical record number and "right Stensen duct (margins)". The specimen consists of a 0.6 x 0.5 x 0.3 cm piece of tan tissue. The specimen is totally submitted in cassette 1AFS.

Part 2 is received fresh labeled with the patient's name, initials, [REDACTED], medical record number and "right buccal mass – stitch anterior". The specimen consists of a 4.9 x 5.0 x 2.1 cm portion of buccal mucosa and underlying subcutaneous tissue with a central area of ulceration/irregular tumor measuring 3.2 x 2.0 x 1.8 cm (in depth).

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Digital images are taken.

Representative sections are submitted as follows:

- 2AFS – anterior shave margin
- 2BFS – posterior margin, shave
- 2CFS – inferior margin, shave
- 2DFS – superior margin
- 2E – 2H – representative sections of tumor corresponding to one section per centimeter.

Part 3 is received fresh labeled with the patient's name, initials, [REDACTED], medical record number and "buccal fat". The specimen consists of a 2.2 x 1.6 x 1.0 cm piece of fibroadipose tissue. The specimen is totally submitted in cassette 3AFS.

Part 4 is received fresh, labeled with the patient's name, initials, [REDACTED], medical record number and "deep margin". It consists of three pieces of fibroadipose tissue measuring in aggregate 2.8 x 1.2 x 0.5 cm. The specimen is totally submitted in cassette 4AFS.

Part 5 is received fresh labeled with the patient's name, initials [REDACTED], medical record number and "right level 1A and 1B". The specimen consists of a 6.2 x 6.3 x 2.1 cm portion of fibroadipose tissue and submandibular gland. The submandibular gland is serially sectioned and appears unremarkable on cut surface. Representative sections are submitted as follows:

- 5A - section of submandibular gland
- 5B-5D - multiple potential lymph nodes from level 1A
- 5E - multiple potential lymph nodes from level 1B.

Part 6 is received fresh labeled with the patient's name, initials [REDACTED], medical record number and "right neck levels 2, 3 and 4". The specimen consists of an 11.2 x 6.4 x 1.1 cm unoriented neck dissection consisting of fibroadipose tissue from which multiple potential lymph nodes are dissected. The specimen is divided arbitrarily into three levels based on the 11.2 cm dimension and are submitted as follows:

- 6A-6C - level 2 lymph nodes
- 6D-6G - level 3 lymph nodes
- 6H-6J - level 4 lymph nodes.

Part 7 is received fresh labeled with the patient's name, initials [REDACTED], medical record number and "additional inferior margin". The specimen consists of a 2.0 x 0.4 x 0.3 cm tan fibroadipose tissue segment. It is entirely submitted in cassette 7A.

INTRAOPERATIVE CONSULTATION:

1AFS: RIGHT STENSON DUCT (frozen section) –

- A. DEFER.
- B. CANNOT BE CERTAIN IF THERE IS DYSPLASTIC DUCTAL EPITHELIUM, REACTIVE CHANGES WITH ONCOCYTIC METAPLASIA OR BOTH, BECAUSE OF FREEZE ARTIFACT AND TANGENTIAL SECTIONING. [REDACTED]

2AFS: RIGHT BUCCAL MASS, ANTERIOR SHAVE MARGIN (frozen section) –

- A. BENIGN.
- B. NO TUMOR SEEN.

2BFS: RIGHT BUCCAL MASS, POSTERIOR SHAVE MARGIN (frozen section) –

- A. BENIGN.
- B. NO TUMOR SEEN.

2CFS: RIGHT BUCCAL MASS, INFERIOR SHAVE MARGIN (frozen section) –

- A. DEFER.

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- B. AT LEAST ATYPICAL EPITHELIUM WITH INTENSE CHRONIC INFLAMMATION.
- C. RECOMMEND TAKING ADDITIONAL INFERIOR MARGIN FOR PERMANENTS IF POSSIBLE.

2DFS: RIGHT BUCCAL MASS, SQUAMOUS METAPLASIA (frozen section) –

- A. BENIGN.
- B. NO TUMOR SEEN.

3AFS: BUCCAL FAT (frozen section) –

- A. BENIGN.
- B. FIBROADIPOSE TISSUE.
- C. NO TUMOR SEEN BECAUSE SPECIMEN IS MOSTLY ADIPOSE TISSUE AND CUTS WITH DIFFICULTY.

4AFS: DEEP MARGIN (frozen section) –

- A. BENIGN.
- B. NO TUMOR SEEN.

MICROSCOPIC:

Immunohistochemical stain for cytokeratin performed on block 5C shows no evidence of micrometastasis.

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] 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: RIGHT BUCCAL
TUMOR SITE:	Oral Cavity
TUMOR SIZE:	Greatest dimension: 3.2 cm
HISTOLOGIC TYPE:	Squamous cell carcinoma, conventional
HISTOLOGIC GRADE:	G2
PATHOLOGIC STAGING (pTNM):	pT2 pN0 Number of regional lymph nodes examined: 36 Number of regional lymph nodes involved: 0
MARGINS:	pMX Margins uninvolved by tumor
VENOUS/LYMPHATIC (LARGE/SMALL VESSEL) INVASION (V/L):	Present
PERINEURAL INVASION:	Present
ADDITIONAL PATHOLOGIC FINDINGS:	Other: lichenoid dysplasia

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HISTO TISSUE SUMMARY/SLIDES REVIEWED:

Part 1: Stensen Duct Margins

Stain/cnt	Block
H&E x 1	AFS

Part 2: Buccal Mass

Stain/cnt	Block
H&E x 1	E
H&E x 1	F
H&E x 1	G
H&E Recut x 1	H
IHPV x 1	H
cmef x 1	H
IEGFR x 1	H
IBNKNC x 6	H
H&E x 1	H
IISH x 2	H
P16 x 1	H
V-EGFR x 1	H
H&E x 1	AFS
H&E x 1	BFS
H&E x 1	CFS
H&E x 1	DFS

Part 3: Buccal Fat

Stain/cnt	Block
H&E x 1	AFS

Part 4: Deep Margin

Stain/cnt	Block
H&E x 1	AFS

Part 5: Right Level 1 A and B

Stain/cnt	Block
H&E x 1	A
H&E x 1	B
ANEG x 1	C
AE1/3 x 1	C
RHHE Lev ____ x 5	C
H&E x 1	C
H&E x 1	D
H&E x 1	E

Part 6: Right Neck Level 2,3,4

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

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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
H&E x 1 K
H&E x 1 L
H&E x 1 M
H&E x 1 N
H&E x 1 O

Part 7: Additional Inferior Margin

Stain/Block
H&E x 1 A

ICD-9 Diagnosis Codes: {None Entered}

TC1

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: 60
Ratio *EGFR/CEP7*: 2.11
High Polysomy: 37 (61.7%)

SNR (signal to nucleus ratio): 3.3
Low Polysomy: 0%
Trisomy: 2 (3.3%)
Disomy: 21 (35.0%)

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: 60
Ratio *c-MET/CEP7*: 1.02

SNR (signal to nucleus ratio): 1.7
High Polysomy: 0%
Low Polysomy: 0%
Trisomy: 1 (1.7%)
Disomy: 59 (98.3%)



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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.

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.

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.