Surgery

- Mohs surgery
- Reconstruction may be required
- Chemo/Radiation if needed
- Rarely is neck dissection recommended
Lip

Survival

<table>
<thead>
<tr>
<th>AJCC Stage</th>
<th>5-year Relative Survival</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>83%</td>
</tr>
<tr>
<td>II</td>
<td>73%</td>
</tr>
<tr>
<td>III</td>
<td>62%</td>
</tr>
<tr>
<td>IV</td>
<td>47%</td>
</tr>
</tbody>
</table>

Follow-up

- Annual physical exam
- If positive finding, refer to appropriate medical care provider


Surgery Codes: Tongue

30 Wide excision (includes hemi- or partial glossectomy)
40 Radical excision (includes total or radical glossectomy)
  41 Excision tumor only
  42 Excision and mandible excision

- Neck lymph node resections
- Organ-sparing
  - Salvage Surgery
    - Indications: severe pain, necrotic bone, draining wounds

Other Options: Tongue

- Reconstruction
  - Split thickness skin graft (STSG)
  - Forearm or lateral arm muscle reconstruction

- Radiation
  - Especially early stage
  - Brachytherapy versus beam
  - With or without chemotherapy
Tongue

- **5-Year Relative Survival by Stage**
  - Local: 74.5%
  - Regional: 50.1%
  - Distant: 27.9%
  - Unknown: 40.1%
  

- **Follow-up**
  - H&P every 3 mo. x 1 yr
  - H&P every 4 mo. next yr
  - H&P every 6 mo. next 3 yrs
  - Annually after 5 yrs
  - CXR yearly?
  - CT neck?

Other Oral Cavity Organs

Choice of treatment depends on:

- Site
- Location
- Histology
- Stage
- Node Status
- Competence
- Convenience
- Cost
- Compliance
- Complications

*Head & Neck Cancer: A Multidisciplinary Approach, 2nd ed., pg 275*

Surgery Codes: Oral Cavity

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>Local tumor destruction, NOS</td>
</tr>
<tr>
<td>11</td>
<td>Photodynamic therapy</td>
</tr>
<tr>
<td>12</td>
<td>Electrocautery; fulguration</td>
</tr>
<tr>
<td>13</td>
<td>Cryosurgery</td>
</tr>
<tr>
<td>14</td>
<td>Laser</td>
</tr>
<tr>
<td>20</td>
<td>Local tumor excision, NOS</td>
</tr>
<tr>
<td>21</td>
<td>Photodynamic therapy (PDT)</td>
</tr>
<tr>
<td>22</td>
<td>Electrocautery</td>
</tr>
<tr>
<td>23</td>
<td>Cryosurgery</td>
</tr>
<tr>
<td>24</td>
<td>Laser ablation</td>
</tr>
<tr>
<td>25</td>
<td>Laser excision</td>
</tr>
<tr>
<td>26</td>
<td>Polypectomy</td>
</tr>
<tr>
<td>27</td>
<td>Excisional biopsy</td>
</tr>
</tbody>
</table>

Any combination of 20 or 26–27 WITH
Surgery Codes: Oral Cavity

30  Wide excision, NOS
40  Radical excision of tumor, NOS
41  Radical excision of tumor ONLY
   42 Combination of 41 WITH resection in continuity
      with mandible (marginal, segmental, hemi-, or total resection)
   43 Combination of 41 WITH resection in continuity
      with maxilla (partial, subtotal, or total resection)

Surgery Codes: Salivary Glands

00 – 25 Same as Oral
30  Less than total
   31  Facial nerve spared
   32  Facial nerve sacrificed
33  Superficial lobe ONLY
   34  Facial nerve spared
   35  Facial nerve sacrificed
36  Deep lobe (Total)
   37  Facial nerve spared
   38  Facial nerve sacrificed
40  Total gland removal NOS
   41  Facial nerve spared
   42  Facial nerve sacrificed
50  Radical excision NOS
   51  WITHOUT removal of temporal bone
   52  WITH removal of temporal bone
   53  WITH removal of overlying skin (requires graft or flap coverage)

Salivary Gland Treatment Decisions

<table>
<thead>
<tr>
<th>T1, T2 Low grade</th>
<th>T1, T2 High grade</th>
<th>T3</th>
<th>T4</th>
</tr>
</thead>
</table>
| Parotid gland    | Complete resection| Resection Neck dissect.; RT if LN pos | Resection Neck dissect.; RT if LN pos | Resection Resection of other organs
|                  |                   | Resection | if pos | Neck if pos |
| Submandibular    | Complete resection| Wide excision, nerves if pos RT | Excision of involved areas RT |
Salivary Glands

5-Year Relative Survival by Stage

<table>
<thead>
<tr>
<th>AJCC Stage</th>
<th>5-Year Relative Survival</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>86%</td>
</tr>
<tr>
<td>II</td>
<td>66%</td>
</tr>
<tr>
<td>III</td>
<td>53%</td>
</tr>
<tr>
<td>IV</td>
<td>32%</td>
</tr>
</tbody>
</table>


Follow-up
- H&P every 3 mo. x 1 yr
- H&P every 4 mo. next yr
- H&P every 6 mo. next 3 yrs
- Annually after 5 yrs
- CXR yearly
- TSH yearly if thyroid radiated

Surgery Codes: Pharynx

- 00 – 25 same as Oral
- 15, 28 Stripping
- 30 Pharyngectomy, NOS
- 31 Limited/partial pharyngectomy, tonsillectomy, bilateral tonsillectomy
- 32 Total pharyngectomy
- 40 Pharyngectomy WITH laryngectomy OR removal of contiguous bone tissue, NOS
- 41 WITH laryngectomy (laryngopharyngectomy)
- 42 WITH bone (mandibulectomy)
- 43 WITH both 41 and 42
- 50 Radical pharyngectomy (includes total mandibular resection), NOS
- 51 WITHOUT laryngectomy
- 52 WITH laryngectomy

Nasopharynx Treatment

RT = Radiation  C = Chemotherapy

| AJCC I, II | N0 → RT → Observe |
| AJCC III, IV | N0 → RT → Observe |

CR = Complete Response; ND = Node dissection
Pharynx: 5-Year Relative Survival by Stage

<table>
<thead>
<tr>
<th>AJCC Stage</th>
<th>I</th>
<th>II</th>
<th>III</th>
<th>IV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oropharynx</td>
<td>57%</td>
<td>54%</td>
<td>43%</td>
<td>30%</td>
</tr>
<tr>
<td>Nasopharynx</td>
<td>63%</td>
<td>52%</td>
<td>56%</td>
<td>39%</td>
</tr>
<tr>
<td>Hypopharynx</td>
<td>41%</td>
<td>36%</td>
<td>36%</td>
<td>20%</td>
</tr>
</tbody>
</table>

Follow-up: Similar to other oral sites


Laryngectomies

- Cordectomy
- Frontolateral laryngectomy
- Anterior frontal laryngectomy
- Hemilaryngectomy
- Total

Surgery Codes: Larynx

- 00 – 28 same as Oral and stripping
- 30 Partial excision of primary site, NOS; subtotal/partial laryngectomy NOS; hemilaryngectomy, NOS
- 31 Vertical laryngectomy
- 32 Anterior commissure laryngectomy
- 33 Supraglottic laryngectomy
- 40 Total or radical laryngectomy, NOS
- 41 Total laryngectomy ONLY
- 42 Radical laryngectomy ONLY
- 50 Pharyngolaryngectomy
- 80 Laryngectomy, NOS
Other Treatment: Larynx

- Reconstruction
  - Pneumatic speech
  - Esophageal speech
  - Tracheoesophageal puncture speech (TEP)
  - Electrolarynx
  - Talking keyboards

- Early Stage: surgery OR radiation
- Surgery and radiation
  - Positive margins
  - Cartilage invasion
  - Bulky disease
  - Positive lymph nodes
  - Add chemotherapy for N2, N3 disease

Larynx

5-Year Relative Survival by Stage

<table>
<thead>
<tr>
<th>AJCC Stage</th>
<th>5-Year Relative Survival</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>80%</td>
</tr>
<tr>
<td>II</td>
<td>66%</td>
</tr>
<tr>
<td>III</td>
<td>55%</td>
</tr>
<tr>
<td>IV</td>
<td>37%</td>
</tr>
</tbody>
</table>

Follow-up

- H&P every 3 mo. x 1 yr
- H&P every 4 mo. next yr
- H&P every 6 mo. next 3 yrs
- Annually after 5 yrs
- CXR yearly?
- CT neck?
- Laryngoscopy

Surgery Codes: Thyroid

- 13 Local tumor destruction, NOS (no path)
- 25 Removal of less than a lobe, NOS
- 26 Local surgical excision
- 27 Removal of a partial lobe ONLY
- 20 Lobectomy and/or isthmectomy
  - 21 Lobectomy ONLY
  - 22 Isthmectomy ONLY
  - 23 Lobectomy WITH isthmus
- 30 Removal of a lobe & partial removal of contralateral lobe
- 40 Subtotal or near total thyroidectomy
- 50 Total thyroidectomy
- 80 Thyroidectomy, NOS

Hormone Therapy: Thyroid

Generic Thyroid Drugs
- Levothyroxine / L-thyroxine
- Liothyronine
- Liotrix
- Methimazole
- Natural Thyroid
- Propylthiouracil / PTU
- Thyrotropin alfa
  - Calcium propionate
  - Hormone
  - Replacement for
  - Papillary and
  - Follicular CA.

Brand Name Thyroid Drugs
- Armour Thyroid
- Cytomel
- Levothroid
- Levoxyl
- Naturethroid
- Synthroid
- Tapazole
- Thyrogen
- Thyrolar
- Unithroid
- Westhroid

Other Treatment: Thyroid

- I-131
  - Papillary and follicular

- Beam
  - Lymphoma
  - Anaplastic?
  - Metastatic disease?

- Chemotherapy
  - Anaplastic
  - Lymphoma

- Palliative
  - Tracheostomy

Thyroid 5-Year Relative Survival

<table>
<thead>
<tr>
<th>PAPILLARY</th>
<th>5-yr Rel. Surv.</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>100%</td>
</tr>
<tr>
<td>II</td>
<td>100%</td>
</tr>
<tr>
<td>III</td>
<td>96%</td>
</tr>
<tr>
<td>IV</td>
<td>45%</td>
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</table>

<table>
<thead>
<tr>
<th>FOLLICULAR</th>
<th>5-yr Rel. Surv.</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>100%</td>
</tr>
<tr>
<td>II</td>
<td>100%</td>
</tr>
<tr>
<td>III</td>
<td>79%</td>
</tr>
<tr>
<td>IV</td>
<td>47%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MEDULLARY</th>
<th>5-yr Rel. Surv.</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>100%</td>
</tr>
<tr>
<td>II</td>
<td>97%</td>
</tr>
<tr>
<td>III</td>
<td>78%</td>
</tr>
<tr>
<td>IV</td>
<td>24%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ANAPLASTIC</th>
<th>Relative Surv.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median</td>
<td>&lt; 6 mos</td>
</tr>
<tr>
<td>3-yr surv</td>
<td>11%</td>
</tr>
<tr>
<td>5-yr surv</td>
<td>9%</td>
</tr>
</tbody>
</table>

Thyroid Cancer Follow-up

- Thyroglobulin (lab)
- PE
- I-131 scan (papillary & follicular)
- CT neck
- Chest X-ray

Risk of Lymph Node Metastases

- T3 – 4 tumors: 50%
- Site
- Younger age
- Larger tumor
- Perineural, perivascular invasion
- Poorly differentiated

Diagnosing Neck Metastases

- Physical Exam
- Radiology
  - CT
  - MRI
  - PET
  - Sonogram
Radiation Therapy

Radiation Treatments
- Usual dose
- Hyperfractionated, accelerated
- IMRT
- Brachytherapy

How Does Radiation Therapy Work?
- 4 R's
  - Repair
  - Repopulation
  - Redistribution
  - Reoxygenation
Chemotherapy

- Recurrent/metastatic disease
  - Originally single drug
  - Now combined
- Newly diagnosed
  - Concomitant
  - Interrupted

Types of Chemotherapy

**Single drugs**
- Bleomycin
- Camptosar (Ifosfamide)
- Carboplatin
- Cisplatin
- Docetaxel (Taxotere)
- 5FU
- Irinotecan
- Methotrexate
- Paclitaxel (Taxol)
- Vinorelbine (Navelbine)

**Combinations**
- 5FU/Cisplatin
- Docetaxel/Platinum
- Docetaxel/5FU
- Docetaxel/5FU/Platinum
Radiosensitizing Chemotherapy

- To code … or not to code … that is the question…
  - Lower dose
    - 500 mg m² vs regular 600 mg m²
    - Synergistic effect with RT

New Treatment Choices

- Erbitux (cetuximab) – combined with radiation – FDA approved February 2006
- Tykerb (lapatinib) – clinical trial February 2007
- Sulindac – clinical trial for pre-cancerous lesions
- Velcade and Taxotere – clinical trial
- Alimta and Oxaliplatin – clinical trial
- Other (acupuncture, biomarkers, tumor suppressor genes)

Resources

- www.emedicine.com
The findings and conclusions in this presentation are those of the authors and do not necessarily represent the views of the Centers for Disease Control and Prevention.

For information about CDC’s Cancer Prevention and Control Programs and the National Program of Cancer Registries Please visit www.cdc.gov/cancer/npcr