### Management of Salivary Gland Malignancy: ASCO Guideline

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<th>Clinical Question</th>
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| **What is the appropriate pre-operative evaluation for patients with salivary gland malignancy (SGM)?** | **1.1** Providers should perform imaging (neck ultrasound, CT with IV contrast and/or MRI of the neck and primary site) in patients with a suspicion of a salivary gland cancer. | Type: Evidence based  
Evidence quality: Intermediate  
Strength of recommendation: Strong |
| | **1.2** Providers should perform computed tomography of the neck with IV contrast for patients with suspicion for salivary gland cancer and involvement of adjacent bone. | Type: Evidence based  
Evidence quality: Intermediate  
Strength of recommendation: Strong |
| | **1.3** Providers should perform contrast-enhanced MRI with a diffusion sequence of the neck and skull base for patients with suspicion for salivary gland cancer with concern for perineural invasion and/or skull base involvement. | Type: Evidence based  
Evidence quality: Intermediate  
Strength of recommendation: Strong |
| | **1.4** Providers may perform a CT/positron emission tomography from the skull base to mid-thighs for patients with advanced stage high-grade salivary gland cancers. | Type: Evidence based  
Evidence quality: Low  
Strength of recommendation: Weak |
| | **1.5** Providers should perform a tissue biopsy (either fine needle aspiration biopsy or core needle biopsy) in order to support distinction of salivary gland cancers from non-malignant salivary lesions. | Type: Evidence based  
Evidence quality: High  
Strength of recommendation: Strong |
| | **1.6** Providers may perform core needle biopsy if fine needle aspiration biopsy is inadequate or subsite precludes fine needle aspiration biopsy such as deep minor salivary glands. | Type: Evidence based  
Evidence quality: Low  
Strength of recommendation: Moderate |
| | **1.7** Pathologists should report risk of malignancy using a risk stratification scheme for salivary fine needle aspiration biopsies with particular attention to high-grade features. | Type: Evidence based  
Evidence quality: Intermediate  
Strength of recommendation: Strong |
| | **1.8** Pathologists may perform ancillary testing (immunohistochemical or molecular studies) on fine needle aspiration biopsies and core needle biopsies to support diagnosis and risk of malignancy. | Type: Evidence based  
Evidence quality: Low  
Strength of recommendation: Weak |
| **What are the proper surgical procedures for SGM?** | **2.1** Surgeons should offer open surgical excision for histologically confirmed salivary gland malignancies. | Type: Evidence based  
Evidence quality: High  
Strength of recommendation: Strong |
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<td><strong>2.2</strong></td>
<td>Surgeons may request intraoperative pathologic examination to support immediate alterations in intraoperative management (extent of resection, neck dissection). Decisions that would result in major harm such as facial nerve resection should not be based on indeterminate preoperative or intraoperative diagnoses alone.</td>
<td>Type: Evidence based  Evidence quality: Low  Strength of recommendation: Weak</td>
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<td><strong>2.3</strong></td>
<td>Surgeons may perform partial superficial parotidectomy for appropriately located superficial T1 or T2 low grade salivary gland cancers.</td>
<td>Type: Evidence based  Evidence quality: Low  Strength of recommendation: Weak</td>
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<td><strong>2.4</strong></td>
<td>Because of the risk of intraparotid nodal metastases in high-grade or advanced stage parotid cancer, surgeons should perform at least a superficial parotidectomy with consideration of a total or subtotal parotidectomy for any high-grade or advanced (T3 - T4) parotid cancer.</td>
<td>Type: Evidence based  Evidence quality: Intermediate  Strength of recommendation: Strong</td>
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<td><strong>2.5</strong></td>
<td>Surgeons should perform facial nerve preservation in patients with intact preoperative facial nerve function when a dissection plane can be created between the tumor and the nerve.</td>
<td>Type: Evidence based  Evidence quality: Intermediate  Strength of recommendation: Strong</td>
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<td><strong>2.6</strong></td>
<td>Surgeons should perform resection of involved facial nerve branches in patients with impaired facial nerve movement preoperatively or when branches are found to be encased or grossly involved by a confirmed malignancy.</td>
<td>Type: Evidence based  Evidence quality: Intermediate  Strength of recommendation: Moderate</td>
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<td><strong>2.7</strong></td>
<td>Surgeons should offer an elective neck treatment over observation in a clinically negative neck in T3 and T4 tumors and high-grade malignancies.</td>
<td>Type: Evidence based  Evidence quality: Intermediate  Strength of recommendation: Moderate</td>
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<td><strong>2.8</strong></td>
<td>For operative elective neck management of salivary cancers, ipsilateral selective neck dissection should be performed with levels dependent on the primary site. For parotid malignancies, levels may include 2-4.</td>
<td>Type: Evidence based  Evidence quality: Low  Strength of recommendation: Moderate</td>
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<td><strong>2.9</strong></td>
<td>For a cN+ neck, surgeons may perform an ipsilateral neck dissection of involved and at-risk levels and may extend to adjacent levels, up to levels 1-5.</td>
<td>Type: Evidence based  Evidence quality: Low  Strength of recommendation: Moderate</td>
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<td><strong>2.10</strong></td>
<td>In the setting of resectable, recurrent locoregional disease and no distant metastatic disease, regardless of prior treatment type, patients should be offered revision resection and appropriate surgical reconstruction and rehabilitation.</td>
<td>Type: Evidence based  Evidence quality: Intermediate  Strength of recommendation: Strong</td>
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| **What are the treatment considerations and appropriate radiotherapy technique for patients with SGM?** | **2.11** In the setting of resectable, recurrent locoregional disease and distant metastatic disease, regardless of prior treatment type, treatment may include palliative revision resection and appropriate surgical reconstruction and rehabilitation, if the metastatic disease is not rapidly progressive or imminently lethal. | Type: Evidence based  
Evidence quality: Intermediate  
Strength of recommendation: Moderate |
|                   | **2.12** Patients undergoing revision surgery for recurrent salivary gland cancer should be evaluated for potential adjuvant therapy.                                                                                           | Type: Evidence based  
Evidence quality: Intermediate  
Strength of recommendation: Moderate |
| **3.1** Post-operative RT should be offered to all patients with resected adenoid cystic carcinoma.                                                                                                             | Type: Evidence based  
Evidence quality: Intermediate  
Strength of recommendation: Strong |
| **3.2** Post-operative RT should be offered to patients with tumors with the following features: high grade tumors, positive margins; perineural invasion; lymph node metastases; lymphatic/vascular invasion; and T3-T4 tumors. | Type: Evidence based  
Evidence quality: Intermediate  
Strength of recommendation: Strong |
| **3.3** Post-operative RT may be offered to patients with tumors with close margins, or intermediate grade tumors.                                                                                              | Type: Informal consensus  
Evidence quality: Insufficient  
Strength of recommendation: Weak |
| **3.4** In post-operative cases, the high dose target should cover the salivary gland surgical bed and appropriate nodal levels.                                                                                 | Type: Evidence based  
Evidence quality: Intermediate  
Strength of recommendation: Strong |
| **3.5** In the case of perineural invasion, the associated nerve(s) may be covered with an elective/intermediate dose to the skull base.                                                                        | Type: Informal consensus  
Evidence quality: Insufficient  
Strength of recommendation: Moderate |
| **3.6** Elective nodal coverage may be offered for T3-T4 primary and high-grade malignancies.                                                                                                                   | Type: Informal consensus  
Evidence quality: Insufficient  
Strength of recommendation: Moderate |
| **3.7** Radiation should be initiated within 8 weeks of surgery.                                                                                                                                               | Type: Informal consensus  
Evidence quality: Insufficient  
Strength of recommendation: Moderate |
| **3.8** Particle therapy, including proton, neutron, and carbon ion therapy, may be used for patients with SGM; there are no indications for use of heavy particle therapy over photon/electron therapy. | Type: Evidence based  
Evidence quality: Low  
Strength of recommendation: Weak |
| **3.9** Elective neck irradiation may be offered in patients with cN0 disease for the following indications: T3 - T4 cancers or high-grade malignancies.                                                       | Type: Evidence based  
Evidence quality: Intermediate  
Strength of recommendation: Moderate |
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| **3.10** Radiotherapy should be offered to patients with SGM who are not candidates for surgical resection (due to extent of disease or medical comorbidity). | Note: The high dose target should cover the gross disease in the salivary gland and any appropriate nodal levels. | Type: Evidence based  
Evidence quality: Intermediate  
Strength of recommendation: Moderate                                                                 |
| **4.1** In the setting of patients undergoing adjuvant radiotherapy, the addition of concurrent chemotherapy may not be routinely offered outside of a clinical trial. |                                                                                                       | Type: Evidence based  
Evidence quality: Low  
Strength of recommendation: Moderate                                                                 |
| **4.2** In the setting of patients undergoing radiotherapy for non-operable salivary gland cancer, the addition of concurrent chemotherapy may not be routinely offered outside of a clinical trial. |                                                                                                       | Type: Informal consensus  
Evidence quality: Insufficient  
Strength of recommendation: Moderate                                                                 |
| **4.3** In patients with salivary gland tumors expressing androgen receptor and/or Her2-Neu, adjuvant endocrine or targeted therapy may not be routinely offered outside of a clinical trial. |                                                                                                       | Type: Informal consensus  
Evidence quality: Insufficient  
Strength of recommendation: Moderate                                                                 |
| **5.1** Clinical follow-up with history and physical exam should be completed on a regular basis with decreasing frequency as time elapses from completion of treatment of salivary gland cancer. |                                                                                                       | Type: Informal consensus  
Evidence quality: Intermediate  
Strength of recommendation: Moderate                                                                 |
| **5.2** Post-treatment baseline imaging with contrast CT or MRI (for patients without contraindications) of the primary site, and/or PET/CT should be obtained 3 months after completion of all treatment. |                                                                                                       | Type: Informal consensus  
Evidence quality: Low  
Strength of recommendation: Moderate                                                                 |
| **5.3** Follow-up surveillance imaging of the primary site (contrast CT or MRI) and the chest CT may be obtained every 6-12 months for the first 2 years after treatment. |                                                                                                       | Type: Informal consensus  
Evidence quality: Low  
Strength of recommendation: Moderate                                                                 |
| **5.4** Follow-up imaging of the primary site and the chest from years 3-5 should be directed by symptoms and physical exam findings. Yearly follow-up imaging may be offered in cases of high-grade histology or poor prognostic clinicopathologic features. |                                                                                                       | Type: Informal consensus  
Evidence quality: Low  
Strength of recommendation: Moderate                                                                 |
| **5.5** Long-term follow-up (beyond 5 years) with yearly exam should be offered in all salivary gland cancer patients. Yearly chest CT may be offered especially in patients with high-grade histology or poor prognostic clinicopathologic features. |                                                                                                       | Type: Informal consensus  
Evidence quality: Low  
Strength of recommendation: Moderate                                                                 |
| **6.1** Patients presenting with metastatic disease may be evaluated for further treatments such as local ablative treatments or systemic therapy. These options should be discussed with the patient and will depend on the patient and tumor factors. |                                                                                                       | Type: Informal consensus  
Evidence quality: Low  
Strength of recommendation: Weak                                                                 |
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<td>6.2</td>
<td>In the setting of adenoid cystic carcinoma and/or low grade tumors with indolent biology with limited metastases (i.e. ≤ 5 metastases), local ablative treatments such as surgery (metastatectomy) or stereotactic body radiation (SBRT) may be offered to delay local disease progression.</td>
<td>Type: Informal consensus Evidence quality: Low Strength of recommendation: Weak</td>
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<tr>
<td>6.3</td>
<td>Patients may be considered for initiation systemic therapy in the following circumstances: 1) metastatic deposits are symptomatic and not amenable to palliative local therapy, 2) growth has the potential to compromise organ function, or 3) lesions have grown more than 20% in the preceding 6 months.</td>
<td>Type: Informal consensus Evidence quality: Low Strength of recommendation: Moderate</td>
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<td>6.4</td>
<td>For patients with adenoid cystic carcinoma who are candidates for initiation systemic therapy, a multitargeted tyrosine kinase inhibitor, such as lenvatinib, or sorafenib may be offered if a clinical trial is not available.</td>
<td>Type: Evidence based Evidence quality: Low Strength of recommendation: Moderate</td>
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<tr>
<td>6.5</td>
<td>For patients with non-adenoid cystic salivary gland cancer who are candidates for initiation of systemic therapy, targeted therapy based on tumor molecular alterations (i.e. AR, HER2, NTRK) may be offered if a clinical trial is not available.</td>
<td>Type: Evidence based Evidence quality: Low Strength of recommendation: Moderate</td>
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<td>6.6</td>
<td>Cytotoxic chemotherapy combinations may be offered to patients with symptomatic disease.</td>
<td>Type: Informal consensus Evidence quality: Low Strength of recommendation: Weak</td>
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<td>6.7</td>
<td>For patients who are candidates for systemic therapy, checkpoint inhibitors should not be routinely offered at this time except for patients with select molecular alteration (high tumor mutational burden, MSI-H).</td>
<td>Type: Informal consensus Evidence quality: Low Strength of recommendation: Weak</td>
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<td>6.8</td>
<td>For patients with histologic tumor types with a high prevalence of targetable molecular alterations (i.e. AR in salivary duct carcinoma, NTRK3 in secretory carcinoma) confirmatory target specific testing should be performed.</td>
<td>Type: Evidence based Evidence quality: Intermediate Strength of recommendation: Strong</td>
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<td>6.9</td>
<td>Patients who may be potential candidates for systemic therapy with histologic tumor types with low prevalence of targetable molecular alterations and unknown driver mutation status should be screened using a comprehensive panel for driver mutations; patients with driver mutation negative tumors may then be offered target specific testing (i.e. AR, NTRK3).</td>
<td>Type: Evidence based Evidence quality: Low Strength of recommendation: Weak</td>
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