Successful management of laryngeal cancer depends on careful pretreatment evaluation of patient and disease factors to arrive at accurate staging, leading to appropriate treatment selection for patients with this highly impacting disease. Surgical modalities, including transoral laser microsurgery, open partial laryngectomy, and total laryngectomy, offer options, alone or in combination with radiation and chemotherapy. Treatment strategy for laryngeal cancer should strive for cure while maintaining the best quality of life possible for the patient. Achieving the goals of initial and salvage treatment for laryngeal cancer depends on executing a plan of care determined by the expertise of the multidisciplinary team.
A reconstructive algorithm is developed to help choose the ideal reconstructive option. The authors also discuss indications, pearls, pitfalls, and challenges in the harvest and inset of commonly used soft tissue flaps for head and neck reconstructive surgery.

**Management of the Neck in Oral Squamous Cell Carcinoma: Background, Classification, and Current Philosophy**

Payam Afzali and Brent Benson Ward

Nodal metastasis is the single most prognostic determinant in patients with oral squamous cell carcinoma (OSCC). Nodal metastasis is the single most prognostic determinant in patients with OSCC. The decision for the extent of the neck dissection is tailored to tumor-specific characteristics, which dictate the probability and extent of nodal metastasis, including tumor size, location, histopathologic characteristics, and the presence or absence of clinical nodal disease. These factors are tools to aid diagnosticians in their decision making for individual patients.

**Immunotherapy for Head and Neck Cancer**

Felix Sim, Rom Leidner, and Richard Bryan Bell

The immune system has a vital role in the development, establishment, and progression of head and neck squamous cell carcinoma (HNSCC). Immune evasion of cancer cells leads to progression of HNSCC. An understanding of this mechanism provides the basis for improved therapies and outcomes for patients. Through the tumor’s influence on the microenvironment, the immune system can be exploited to promote metastasis, angiogenesis, and growth. This article provides an overview of the interaction between immune infiltrating cells in the tumor microenvironment, and the immunologic principles related to HNSCC. Current immunotherapeutic strategies and emerging results from ongoing clinical trials are presented.

**Contemporary Osseous Reconstruction of the Mandible and the Maxilla**

Ilya Likhterov, Ansley M. Roche, and Mark L. Urken

Cancers of the oral cavity and paranasal sinuses often require ablative surgery with adjuvant therapy in most cases. Large, postablative defects of the mandible and the maxilla present several challenges to the reconstructive surgeon. Functional and cosmetically satisfactory restoration requires a thorough understanding of the underlying disease process, a firm grasp of the nuances of head and neck anatomy, and an ability to plan and execute a reconstruction with the most suitable tissue for each particular patient. The authors outline the components of osseous reconstruction of the facial skeleton with a bias toward techniques and approaches that are particularly useful.

**Gene Therapy in Head and Neck Cancer**

Zachary L. Farmer, Edward S. Kim, and Daniel R. Carrizosa

Although overall cancer death rates are decreasing, comparative improvements in head and neck squamous cell cancer are modest. Although new advances targeting immune checkpoints may soon improve these numbers, additional research for new therapeutic options is vital. One potential treatment avenue is the use of gene therapy. This article provides insight into some gene therapy targets and varied techniques being evaluated for patients with head and neck cancer. Techniques
include corrective gene therapy, cytoreductive gene therapy, and gene editing, in addition to a discussion on gene therapy vectors.

Salivary Gland Malignancies
Eric R. Carlson and Thomas Schlieve
Salivary gland tumors are rare pathologic entities that are derived from major and minor salivary gland tissue located throughout the head and neck region. These tumors are distinctly heterogenous, comprising numerous cell types, especially those deemed malignant. The incidence of malignant salivary gland tumors is widely distributed in both adult and pediatric patient populations. Accurate diagnosis and optimal treatment of these tumors pose challenges to both interpreting pathologists and ablative surgeons. This article examines the epidemiology and pathology of malignant tumors of the major and minor salivary glands and provides recommendations for the most successful treatment approaches.

Current Concepts in Chemotherapy for Head and Neck Cancer
Simran K. Sindhu and Julie E. Bauman
This article highlights the evidence-based data to support systemic treatment options for patients with head and neck squamous cell carcinoma (HNSCC). The discovery of the human papillomavirus epidemic in HNSCC and its favorable prognosis has led to a major focus of research. Patients are stratified into clinical or pathologic risk categories and enrolled in trials comparing standard treatment paradigms with deintensification, in low-risk disease, or to intensification, in intermediate-risk or high-risk disease. Immunotherapy has proven beneficial in second-line palliative therapy and is under investigation in first-line palliative therapy and as a component of definitive, multimodality therapy for high-risk patients.