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Patrick J. Byrne

## **Evaluation and Initial Management of the Patient with Facial Skin Cancer** 301

Tang Ho and Patrick J. Byrne

The incidence of skin cancer is on the rise, and facial plastic surgeons are frequently involved in its initial evaluation and management. This article seeks to delineate the important information to be obtained during the history and physical examination of a patient presenting for facial lesion evaluation. The biologic behavior and treatment options are summarized for the most commonly encountered skin cancers—basal cell carcinoma, squamous cell carcinoma, and melanoma.

## **Nonmelanoma Skin Cancer** 309

David A. Lee and Stanley J. Miller

This article provides readers with a comprehensive review of the evaluation and management of nonmelanoma skin cancers. Treatment recommendations are heavily based on the most recent guidelines from the National Comprehensive Cancer Network. Merkel cell carcinoma and dermatofibrosarcoma protuberans are also discussed. After reviewing this article, readers should be equipped with a better understanding of these entities and the current recommendations for their management.

## **Mohs Micrographic Surgery for the Management of Nonmelanoma Skin Cancers** 325

Lara Cumberland, Ali Dana, and Nanette Liegeois

Many treatment modalities have been described to address the growing epidemic of nonmelanoma skin cancer (NMSC). Mohs micrographic surgery (MMS) is a surgical technique that allows complete and precise microscopic margin analysis by using horizontal frozen sections. The purpose of MMS is twofold: to ensure definitive excision and to minimize loss of normal surrounding tissue. MMS offers the advantages of superior cure rates and, because tissue removal is minimized, excellent cosmetic outcomes. Therefore, MMS has become the treatment of choice for many high-risk tumors. Because this technique is labor intensive, MMS is not indicated in certain situations. Understanding the indications, advantages, and disadvantages of MMS remains paramount for facial plastic surgeons managing NMSC.

## **Malignant Melanoma** 337

Joseph Califano and Melonie Nance

Malignant melanoma is the most lethal cutaneous neoplasm. Awareness, detection, and treatment along with sophistication of both the physician and patient are integral components to early recognition and cure of the disease. Diagnosis of melanoma at its earliest stage is crucial to outcome. This article discusses in depth the clinical presentation and evaluation, patterns of growth, and pathologic staging of the neoplasm and regional lymph nodes. Treatment approaches and outcomes are presented.

**Local Flaps I: Bilobed, Rhombic, and Cervicofacial****349**

Eugene A. Chu and Patrick J. Byrne

This article is the first in a series focusing on the reconstruction of defects of the head and neck created by the resection of a skin cancer. This series begins with a detailed description of specific types of local flaps, and is followed by articles emphasizing the options for reconstruction by anatomic site. The surgical technique for three workhorse flaps of the face are described: the bilobed flap, rhombic flap, and cervicofacial flaps.

**Interpolated Forehead and Melolabial Flaps****361**

Brian S. Jewett

Facial reconstruction is a challenging yet rewarding endeavor. The interpolated forehead and melolabial flaps are well-established methods for facial restoration, especially for the repair of nasal defects following excision of cutaneous malignancies. Repair of facial defects using interpolation flaps requires an appreciation of variations in skin thickness, facial contours, and functional concerns at the donor and recipient sites. A detailed review of flap design, modifications, and implementation is provided for the forehead and melolabial flaps.

**Options for the Management of Forehead and Scalp Defects****379**

Patrick C. Angelos and Brian W. Downs

Forehead and scalp reconstruction comprises a diverse and complex set of defects. Repair must be performed with minimal disturbance to surrounding structures, such as the eyelid, eyebrow, and hairline. Care must be taken to maintain symmetry between sides. This article addresses the options for the management of forehead and scalp defects, including secondary intention healing, skin grafting, local flaps, free flaps, tissue expansion, and negative pressure treatment. When possible, special consideration is given to addressing the advantages and disadvantages of each repair option, while providing a framework from which to plan scalp and forehead reconstruction.

**Management of Cutaneous Nasal Defects****395**

Stephen M. Weber and Shan R. Baker

Nasal reconstruction has reached a point in its evolution such that its goals no longer include simply filling the defect. The contemporary facial reconstructive surgeon aims for an aesthetic and functional result in the vast majority of cases. Cutaneous nasal defects most often result from oncologic surgery, such as either Mohs excision or square technique, or, less commonly, traumatic or iatrogenic injury. This article discusses the current practices in the repair of nasal defects. Although this article focuses on reconstruction of oncologic defects, the principles discussed can be effectively applied to traumatic defects, as well.

**Reconstruction of Eyelid Defects****419**

Amar C. Suryadevara and Kris S. Moe

Reconstruction of the eyelids is highly complex because of their function and critical role in appearance. Optimal restoration of their form and function depends on a firm understanding of normal eyelid position, the structural support system of the eyelids, and the forces that act to keep the eyelids in precise balance. With this knowledge, the surgeon can choose among numerous reconstructive techniques to correct a deficit, depending on its location, depth, and size, while restoring normal eyelid

function and an esthetically pleasing form. This article reviews the pertinent eyelid anatomy, describes methods for analysis of eyelid position before and after surgery, and discusses the structural restoration options for commonly encountered eyelid defects.

## **Ear Defects**

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David C. Shonka Jr. and Stephen S. Park

The projection and exposure of the auricle make it particularly susceptible to actinic injury and thus to cutaneous malignancies. Auricular reconstruction is challenging because of its unique surface anatomy and undulating topography. This article organizes auricular defects into different categories based on anatomic location and extent of tissue loss, including skin-only defects, small composite defects, full-thickness defects involving or sparing the upper third of the ear, and total auricular loss. The authors share an algorithm for repair of the array of auricular defects.

## **Lip Reconstruction**

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Lisa E. Ishii and Patrick J. Byrne

The upper and lower lips are prominent facial features of significant importance for esthetic and functional reasons. Both lips, but especially the lower lip, are at risk for cutaneous malignancy because of their prominent location. Treatment of such malignancies creates a spectrum of defects that must be meticulously addressed by the reconstructive surgeon. These defects can be classified as small, medium, and large, and the optimal reconstructive method is typically based on this distinction. Depending on the size of the defect and the patient characteristics, reconstructive options include primary closure, local tissue transfer, and free tissue transfer.

## **Cheek Defects**

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Eric J. Dobratz and Peter A. Hilger

The challenge surgeons face when reconstructing cheek defects varies significantly depending on the location and depth of the defect and the distensibility of the surrounding tissues. The cheek is a large aesthetic unit characterized in most areas with a convex surface and inherent transitions in color and texture. These characteristics demand the surgeon's attention to achieve superior results during reconstruction. Surgeons must also recognize the free margins of the adjacent structures, including the lower eyelid, nasal ala, and lip, to minimize distortion of these areas during healing. With these challenges in mind, this article discusses several approaches to reconstruction of various types of cheek defects.

## **Recontouring, Resurfacing, and Scar Revision in Skin Cancer Reconstruction**

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Michael J. Brenner and Christopher A. Perro

Residual disfigurement is a common problem for patients who have undergone skin cancer reconstruction. Restoring form and function in these patients is an artistic and technical endeavor. The efficacy of surgical scar revision, dermabrasion, chemical peels, and laser resurfacing is predicated upon the skin's innate ability to regenerate over time in response to mechanical, chemical, and thermal or ablative stresses. The patient and surgeon should be accepting of a process that is often gradual and may proceed in stages. Achieving proficiency with the secondary procedures for improving scars and local flaps may allow the motivated surgeon to mold an initially passable surgical result into an excellent one.

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