

Contents

Preface	xi
William W. Dzwierzynski	
Pigmented Lesion Pathology: What You Should Expect from Your Pathologist, and What Your Pathologist Should Expect from You	1
Matthew G. Fleming	
<p>The first part of this review examines the reliability of histologic diagnosis in pigmented lesions, as measured by concordance studies and medicolegal analysis. It emphasizes the role of clinicians in maximizing that reliability, by providing adequate clinical descriptions, using appropriate biopsy technique, and critically interpreting pathology reports. It identifies those entities that are especially problematic, either because they cannot be reliably recognized by the histopathologist or because their histology is a poor guide to their biologic behavior. The second part of the review is a guide to some of the more difficult and controversial pigmented lesions, including dysplastic nevus, spitzoid nevi and melanomas, cellular blue nevus, animal-type melanoma, and deep penetrating nevus.</p>	
The Spitz Nevus: Review and Update	21
Valerie B. Lyon	
<p>The Spitz nevus is a relatively common skin lesion in children and is less commonly seen in adults. The lesion is defined by the presence of distinctive-appearing spindle or epithelioid cells on light microscopy in a recognizable nevus-like pattern. Spitz lesions share features with melanoma on light microscopic examination. When Spitz features are atypical or typical features are absent, distinction from melanoma can be difficult. A spectrum of pathology of Spitz lesions can be found from lesions that are benign and typical to lesions that are atypical with melanoma-like features and frank melanoma. There is significant interobserver variation in interpretation of Spitz lesions. The lack of uniformly applied criteria for distinction of light microscopic grades and the confusion in diagnostic terminology demonstrate the difficulty in the pathologic interpretation of these lesions. Exciting progress has been made recently in ancillary testing that will likely be helpful in determining in more detail the biologic nature of these lesions, in better differentiating the benign Spitz lesions from malignant lesions, and in eventually improving treatment recommendations.</p>	
Lentigo Maligna: Diagnosis and Treatment	35
Mark W. Bosbous, William W. Dzwierzynski, and Marcelle Neuburg	
<p>Lentigo maligna is an overgrowth of atypical melanocytes at the dermal–epidermal junction also known as melanoma in situ. Left untreated, these lesions can continue to grow, resulting in dermal invasion and progression to lentigo maligna melanoma. Many operative and nonoperative treatments have been developed with the goals of preserving function and cosmesis while at the same time addressing the diffuse nature of these lesions. Previous recommendations have led plastic surgeons to commonly perform wide local excision with 5 mm margins. More recent literature has suggested that in many cases this treatment can result in high recurrence rates.</p>	

This has led to margin control procedures becoming the treatment of choice for these lesions.

Epidemiology, Staging (New System), and Prognosis of Cutaneous Melanoma **47**

Younghoon R. Cho and Melissa P. Chiang

Melanoma remains one of the most deadly of skin cancers and its incidence has been rising steadily throughout the past several decades. The risk factors associated with melanoma include external factors, such as exposure to ultraviolet radiation, and host factors, such as family history, history of dysplastic nevi, and number of nevi. The 2002 American Joint Committee on Cancer tumor-nodes-metastasis staging classification incorporates Breslow depth, Clark's level, ulceration, pathologic microstaging attributes, and nodal and distant metastases. Prognosis remains poor for advanced disease and surgery remains the mainstay of treatment for early stage melanoma.

Melanoma: Workup and Surveillance **55**

Scott D. Lifchez and J. Alex Kelamis

There is no clear consensus on the best means of detecting melanoma, particularly recurrence of melanoma. Physical examination remains paramount, but other means have been recommended also. This article provides a survey of these means.

Surgical Management of Primary Disease **65**

Jeffrey H. Kozlow and Riley S. Rees

Despite advancements in the treatment of melanoma, surgical management remains the cornerstone for treatment and long-term survival. The authors present their surgical approach to the patient with melanoma including evaluation, treatment, and reconstruction. In addition, management of melanoma occurring in difficult anatomic areas and in special patient populations is reviewed.

Head and Neck Melanoma **73**

David L. Larson and Jeffrey D. Larson

Nearly 20% of malignant melanoma in the human body occurs in the head and neck. Most studies divide the sites of origin of malignant melanoma in the head and neck into the following areas: the face, the scalp and neck, the external ear, and the eyelid or medial or lateral canthal area. Sixty-five percent of malignant melanomas occur in the facial region. Given that the face represents only 3.5% of total body surface area, the face is overrepresented when compared with other sites in the head and neck. Among the sites of origin in the head and neck, melanoma of the scalp and neck carries the highest mortality, with 10-year survival being only 60%. Melanomas of the ear, face, and eyelid have 10-year survival rates of 70%, 80%, and 90%, respectively.

The Role of Lymphatic Mapping and Sentinel Lymph Node Biopsy in the Staging and Treatment of Melanoma **79**

Wayne K. Stadelmann

The incidence of malignant melanoma is increasing at an alarming rate, doubling in women and growing by more 300% in men during the past 25 years. The importance

of diagnosing nodal metastatic disease, with the ability to detect smaller and smaller volumes of tumor in the sentinel lymph nodes (SLNs) biopsied using immunohistochemical staining, has impacted the accurate staging and stratification of melanoma patients. The role that elective lymph node dissection now plays in staging the melanoma patient and determining subsequent treatment has been greatly diminished in favor of less morbid and less invasive techniques that have a higher degree of accuracy in detecting occult nodal disease. This article explores what has driven the advent of selective or SLN biopsy, the rationale behind obtaining a preoperative lymphoscintigram, the technical details of the SLN biopsy procedure, and the refinement in the pathologic detection of ever smaller volumes of tumor in lymph node tissue removed. The role that these new modalities have played in changing the dynamic field of melanoma care is emphasized.

Evaluation of Sentinel Lymph Nodes for Melanoma Metastases by Pathologists 101

Vinod B. Shidham

The pathologic evaluation of sentinel lymph nodes for melanoma metastases is not without significant challenges. It is affected by significant variation in approaches, which may compromise the final interpretation, leading to nonrepresentative spurious results. This article discusses various approaches along with recommended dos and don'ts for optimum evaluation of sentinel lymph nodes for melanoma metastases.

Complete Lymph Node Dissection for Regional Nodal Metastasis 113

William W. Dzwierzynski

The primary management of lymph nodes involved with metastatic melanoma is regional lymphadenectomy. Axillary or inguinal node complete lymph node dissection (CLND) is performed after an occult metastasis is found by sentinel lymph node biopsy, or after a clinically apparent regional lymph node metastasis. CLND completely removes all lymph-node-bearing tissue in a nodal basin. This procedure continues to be controversial. No randomized prospective studies have yet determined the survival advantage of CLND. The National Comprehensive Cancer Network recommends that all patients with stage III melanoma have a CLND.

Systemic Therapy for Cutaneous Melanoma 127

Jonathan Treisman and Nina Garlie

This article provides a review of the current medical management of patients with high-risk and metastatic cutaneous melanoma, including a review of the use of adjuvant interferon therapy and a discussion of adjuvant treatments under evaluation. The use of standard chemotherapeutic agents for metastatic disease is discussed, with an emphasis on developmental therapeutics using targeted agents. This discussion includes a review of the immune therapy for metastatic melanoma, including newer immunomodulatory agents and cellular therapeutics that are expected to significantly impact the care of these patients.

Role of Radiation Therapy in Cutaneous Melanoma 147

Jaime H. Shuff, Malika L. Siker, Mackenzie D. Daly, and Christopher J. Schultz

Cutaneous melanoma is a disease that often has an aggressive and unpredictable course. It was historically thought to be a radioresistant neoplasm; however,

substantial radiobiologic and clinical evidence has emerged to refute this notion. Improved local control has been demonstrated with the use of adjuvant radiation therapy delivered to the primary site or regional lymphatics in patients with high-risk clinical or pathologic features. Despite improved local control, high-risk cutaneous melanoma often spreads systemically, leading to poor survival. In the setting of systemic progression, radiation therapy can frequently palliate symptomatic sites of metastatic disease.

Surgical Treatment of Advanced Melanoma

161

Christopher J. Hussussian

Primary surgical treatment should be considered for patients with metastatic melanoma. Because of the poor response of melanoma to chemotherapy or radiation therapy, surgery can be the best approach to quickly eliminate detectable disease and return the patient to normal activities. In properly selected patients, surgery can lead to significant palliation and prolongation of survival. This article reviews the principles of patient selection and the potential benefits of surgical management of melanoma metastatic to various sites. Novel adjuvant therapies are being developed to augment the benefits of surgical treatment of advanced melanoma in the future.

Future Advances in Melanoma Research

169

Thomas J. Hornyak

The future of melanoma research is promising. Specific mechanisms leading to oncogenic transformation in melanoma development have been identified, and are likely to produce new targets for melanoma therapy. Also, advances in melanoma research will result from melanoma investigators co-opting approaches used to study other malignancies in which progress has been made more rapidly. Systematic roadblocks limiting advances in melanoma research relative to other malignancies are being addressed in a formal manner. The public and public officials are increasingly becoming aware of the need for more dedicated efforts to address the challenges of research on this malignancy.

Index

177