Ali Hendi Juan-Carlos Martinez

Atlas of Skin Cancers

Practical Guide to Diagnosis and Treatment



Atlas of Skin Cancers

Ali Hendi • Juan-Carlos Martinez

Atlas of Skin Cancers

Practical Guide to Diagnosis and Treatment



Authors
Ali Hendi, MD
Consultant, Department of Dermatology
Mayo Clinic, Jacksonville, FL
USA
Assistant Professor of Dermatology
College of Medicine
Mayo Clinic, Rochester, MN
USA

Present address: Private Practice Chevy Chase, MD USA mohsmd@yahoo.com Juan-Carlos Martinez, MD
Senior Associate Consultant,
Department of Dermatology
Mayo Clinic, Jacksonville, FL
USA
Assistant Professor of Dermatology
College of Medicine
Mayo Clinic, Rochester, MN
USA
martinez.juancarlos@mayo.edu

ISBN 978-3-642-13398-5 e-ISBN 978-3-642-13399-2 DOI 10.1007/978-3-642-13399-2 Springer Heidelberg Dordrecht London New York

Library of Congress Control Number: 2010937910

© Mayo Foundation for Medical Education and Research 2011

This work is subject to copyright. All rights are reserved, whether the whole or part of the material is concerned, specifically the rights of translation, reprinting, reuse of illustrations, recitation, broadcasting, reproduction on microfilm or in any other way, and storage in data banks. Permission requests should be directed to Scientific Publications, Plummer 10, Mayo Clinic, 200 First Street SW, Rochester, MN 55905, USA.

The use of general descriptive names, registered names, trademarks, etc. in this publication does not imply, even in the absence of a specific statement, that such names are exempt from the relevant protective laws and regulations and therefore free for general use.

Product liability: The publishers cannot guarantee the accuracy of any information about dosage and application contained in this book. In every individual case the user must check such information by consulting the relevant literature.

Cover design: eStudioCalamar, Figueres/Berlin

Printed on acid-free paper

Springer is part of Springer Science+Business Media (www.springer.com)

To my wife Azadeh for her relentless encouragement and faith in me, my parents, Ahmad and Afsar, for their continual support, and Drs. John Zitelli and David Brodland, for their mentorship.

Ali Hendi

To my wife Mary Ellen for her constant love and support, and our beautiful children Carolina and Lucca who have enriched my life in a way I could never have imagined.

To my parents Carlos and Maria Carolina for instilling in me the desire to achieve.

To my mentors Clark Otley, and Jonathan L Cook, for directing my ambitions toward the fascinating world of Mohs surgery and cutaneous oncology.

Juan-Carlos Martinez

Preface

The incidence of skin cancer has risen drastically in recent years. This increase, combined with relatively limited access to specialists in dermatology, leads to many of these patients presenting to their primary care providers with suspicious skin lesions. Even with formal training in dermatology, distinguishing one scaly bump from another with certainty can be quite difficult. This atlas is intended for those providers who wish to sharpen their clinical acumen.

Our aim is to help the reader realize that each entity can have a variety of clinical presentations and should be distinguished, if possible, from a number of mimickers. To that end, we have organized the atlas into separate chapters dedicated to the most common cutaneous malignancies. We provide several examples of each entity and various images of common mimickers. For each entity, we discuss treatment options and provide high-quality clinical images detailing these treatments in a step-by-step fashion.

We must alert the reader that while we wish to provide a visual foundation for many providers, this atlas should not serve as a diagnostic tool; a biopsy is always indicated if the practitioner has any doubt as to the clinical diagnosis. Cutaneous malignancies can be very destructive and, in some cases, fatal if not managed properly. Diagnosis and proper treatment is paramount.

We hope that the readers of this atlas will come away from it better able to serve the needs of their patients.

Chevy Chase, MD, USA Jacksonville, FL, USA Ali Hendi Juan-Carlos Martinez

Acknowledgments

The authors would like to acknowledge the efforts of the following in preparing this atlas:

- Department of Dermatology, Mayo Clinic, Jacksonville, Florida, for providing academic support
- The Section of Medical Photography staff for their expertise
- Donald P. Lookingbill, MD, former Chairman, Department of Dermatology at Mayo Clinic, Jacksonville, Florida, for reviewing the initial outline of the atlas and providing thoughtful feedback
- Ms. M. Alice McKinney for the medical illustrations

Contents

1	Introduction				
2	Acti 2.1 2.2	Introduction. Treatment of Actinic Keratoses 2.2.1 Cryotherapy. 2.2.2 Topical Treatments Clinical Images of Actinic Keratoses			
<u> </u>		Clinical Images of Mimickers of Actinic Keratoses			
	Refe	rences			
3	3.1 3.2 3.3 3.4 3.5 3.6	melanoma Skin Cancer 2 Introduction. 2 Treatment of Nonmelanoma Skin Cancer. 2 3.2.1 Topical Treatments 2 3.2.2 Electrodesiccation and Curettage (ED&C) 2 3.2.3 Excision. 3 3.2.4 Mohs Micrographic Surgery 4 3.2.5 Radiotherapy 4 Clinical Images of BCC 5 Clinical Images of Mimickers of BCC 5 Clinical Images of SCC 6 Clinical Images of Mimickers of SCC 7 rences 7			
4	4.1 4.2 4.3 4.4	Introduction. 7 Treatment of Melanoma 7 Clinical Images of Melanoma 7 Clinical Images of Mimickers of Melanoma 8 rences 8			
5	Mise	cellaneous Cutaneous Neoplasms			
_					
6	6.1 6.2 6.3 6.4 6.5	ssy Techniques 9 Introduction 9 Local Anesthesia 9 Numbing the Patient 10 Shave Biopsy 10 Punch Biopsy 10 Excisional Biopsy 11			

xii Contents

	6.7 Incisional Biopsy	114
	6.8 Anatomic Locations	115
	6.9 Wound Care	115
	References	115
7	Complications of Skin Cancer Treatment	117
	7.1 Introduction	117
	7.2 Terrible Tetrad	117
	7.3 Miscellaneous Complications	119
	References	122
Ind	ex	123

Introduction

The skin is the largest organ of the body. A basic understanding of the anatomy of the skin is needed for the proper diagnosis and management of skin cancers. The basic subunits of the skin include the epidermis, dermis, and subcutis (Fig. 1.1). The epidermis is the outermost layer of the skin. The innermost layer of the epidermis is the basal layer. The basal layer cells multiply to form the squamous layer of the epidermis. The outer layer of epidermis is the stratum corneum, which is composed of keratin. Melanocytes (pigment-producing cells) lie within the basal layer of the epidermis. The dermis

incorporates the adnexal structures (hair follicles, sebaceous glands, and sweat glands) and is made up of collagen, elastic tissue, and reticular fibers. The subcutis is made up of adipose tissue.

There are terms used in describing skin lesions that are unique to dermatology. This terminology is helpful in documenting lesions and in communicating with colleagues. The basic terminology and associated illustrations are explained in Figs. 1.2–1.7.

1

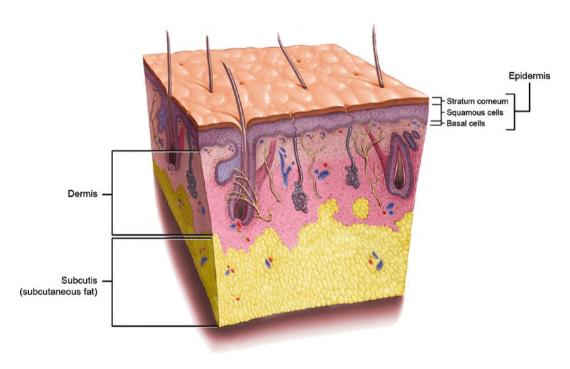


Fig. 1.1 Schematic detailing the multiple layers of the skin