PRINCIPLES OF CANCER
RECONSTRUCTIVE SURGERY
To Angel, Sophie, and Sadie for their eternal support and inspiration.

—CEB

To my parents, Glen and Cynthia, for getting me started on this path. To my children, Neil and Peter, for the joy that they have brought to my life. And to my wife Karen, for her 25 years of patience and support.

—NAF
Preface

*Principles of Cancer Reconstructive Surgery* is a reference text for medical and surgical oncologists, radiation oncologists, family practice physicians and dermatologists, providing an overview of reconstructive procedures. Interested residents, medical students, and health care professionals will find this an important resource designed to educate those involved with the management of cancer patients.

The disease-specific format facilitates quick reference for focusing on a single body area or disease. The most commonly occurring cancers, breast, melanoma, and head and neck, are covered in an overview chapter and in greater detail individually, with 300 color illustrations in a format that provides excellent detail and clarity.

*Charles E. Butler, MD, FACS*
*Neil A. Fine, MD, FACS*
Contents

Preface ...................................................... vii
Contributors ................................................ xi

Chapter 1
Plastic Surgery: A Component in the Comprehensive
Care of Cancer Patients ................................. 1
Neil A. Fine and Charles E. Butler

Chapter 2
The Principles of Cancer Reconstruction ............... 16
Margo Herron and Michael W. Neumeister

Chapter 3
Breast Reconstruction: Timing and Coordination with
Adjuvant Therapy ........................................... 30
Steven J. Kronowitz and Geoffrey L. Robb

Chapter 4
Breast Reconstruction: Autogenous Tissue .......... 49
Joseph M. Serletti

Chapter 5
Breast Reconstruction: Implant and Nipple
Reconstruction ............................................. 62
Joseph J. Disa and Colleen M. McCarthy

Chapter 6
Skin Cancer and Reconstruction ...................... 81
John Y.S. Kim

Chapter 7
Lip, Cheek, and Scalp Reconstruction ................ 96
Jeremy Waldman and Howard N. Langstein
Chapter 8
Reconstruction of Mandible, Maxilla, and Skull Base .......... 117
Peter C. Neligan and Joan E. Lipa

Chapter 9
Pharynx, Cervical Esophagus, and Oral Cavity Reconstruction . 141
Michael J. Miller

Chapter 10
Concepts in Nasal Reconstruction .................................. 161
Elisabeth K. Beahm, Robert L. Walton, and Gary C. Burget

Chapter 11
Extremity Reconstruction ............................................. 190
S. Baumeister, H. Levinson, M. Zenn, and L. Scott Levin

Chapter 12
Abdominal Wall Tumors and Their Reconstruction .......... 215
Gregory A. Dumanian

Chapter 13
Reconstruction of the Intra-Abdominal Pelvis
and the Perineum ..................................................... 226
Gregory A. Dumanian

Chapter 14
Management of Chemotherapeutic Agent Extravasation
and Radiation Therapy Adverse Effects ......................... 237
Ida K. Fox and Howard N. Langstein

Index ................................................................. 259
Contributors

S. Baumeister, MD
Division of Plastic and Reconstructive Surgery, Duke University Medical Center, Durham, NC 27710, USA

Elisabeth K. Beahm, MD
Department of Plastic Surgery, Division of Surgery, The University of Texas M. D. Anderson Cancer Center, Houston, TX 77230-1402, USA

Gary C. Burget, MD
Department of Surgery, University of Chicago Medical Center, Chicago, IL 60657, USA

Charles E. Butler, MD, FACS
Department of Plastic Surgery, Division of Surgery, The University of Texas M. D. Anderson Cancer Center, Houston, TX 77230, USA

Joseph J. Disa, MD
Plastic and Reconstructive Surgery Service, Department of Surgery, Memorial Sloan-Kettering Cancer Center, New York, NY 10021, USA

Gregory A. Dumanian, MD
Division of Plastic Surgery, Department of Surgery, Northwestern University Feinberg School of Medicine, Chicago, IL 60611, USA

Neil A. Fine, MD, FACS
Division of Plastic Surgery, Department of Surgery, Northwestern University Feinberg School of Medicine, Chicago, IL 60611, USA

Ida K. Fox, MD
Washington University School of Medicine, St. Louis, MO 63139, USA

Margo Herron, MD
Department of Surgery, Southern Illinois University School of Medicine, Springfield, IL 62794-9653, USA
John Y.S. Kim, MD
Division of Plastic Surgery, Department of Surgery, Northwestern University Feinberg School of Medicine, Chicago, IL 60611, USA

Steven J. Kronowitz, MD
Department of Plastic Surgery, Division of Surgery, The University of Texas M. D. Anderson Cancer Center, Houston, TX 77230-1402, USA

Howard N. Langstein, MD
Division of Plastic Surgery, University of Rochester School of Medicine, Rochester, NY 14642, USA

L. Scott Levin, MD
Division of Plastic and Reconstructive Surgery, Duke University Medical Center, Durham, NC 27710, USA

H. Levinson, MD
Division of Plastic and Reconstructive Surgery, Duke University Medical Center, Durham, NC 27710, USA

Joan E. Lipa, MD
University of Toronto, Division of Plastic Surgery, Department of Surgery and Department of Surgical Oncology, Toronto General Hospital, University Health Network, Toronto, Ontario, Canada M5G 2C4

Colleen M. McCarthy, MD
Plastic and Reconstructive Surgery Service, Department of Surgery, Memorial Sloan-Kettering Cancer Center, New York, NY 10021, USA

Michael J. Miller, MD
Division of Plastic Surgery, The Ohio State University, Columbus, OH 43210, USA

Peter C. Neligan, MD
Division of Plastic Surgery, University of Washington Medical Center, Seattle, WA 98195, USA

Michael W. Neumeister, MD
Department of Surgery, Southern Illinois University School of Medicine, Springfield, IL 62794-9653, USA

Geoffrey L. Robb, MD
Department of Plastic Surgery, Division of Surgery, The University of Texas M. D. Anderson Cancer Center, Houston, TX 77230-1402, USA

Joseph M. Serletti, MD
Plastic and Reconstructive Surgery, Department of Surgery, University of Pennsylvania, Philadelphia, PA 19104, USA
Jeremy Waldman, MD
Division of Plastic Surgery, University of Rochester School of Medicine, Rochester, NY 14642, USA

Robert L. Walton, MD
Plastic Surgery Chicago, LLC, Chicago, IL 60611, USA

M. Zenn, MD
Division of Plastic and Reconstructive Surgery, Duke University Medical Center, Durham, NC 27710, USA