Digital Mammography: A Practical Approach
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To my wife, Susan, and my children, Sam and Kayla, who help me every step of the way

GJW

To my children, Anya and Costa, who make the journey more interesting

TMH
Contents

List of contributors viii
Preface xi
Acknowledgments xii

1 Detectors for digital mammography 1
  Andrew Karellas and Srinivasan Vedantham
2 Image acquisition 18
  Tanya W. Stephens and Jihong Wang
3 Preparing digital mammography images for interpretation 22
  Basak E. Dogan
4 Image display and visualization in digital mammography 27
  Jihong Wang and William R. Geiser
5 PACS, storage, and archiving 32
  Stamatia Destounis, Valerie Andolina, Shannon DeMay, Diana Kissel, Stephen Switzer, and Nancy Wayne
6 Interpretation of digital screening mammography 46
  Tamara Miner Haygood and Basak E. Dogan
7 Efficacy of digital screening mammography 62
  Tamara Miner Haygood
8 Artifacts in digital mammography 71
  William R. Geiser

9 Mobile digital mammography 85
  Michael Ryan
10 Procedures with digital mammography 96
  Gary J. Whitman, Malak Itani, Callie Cheatham, and Philip M. Tchou
11 Digital breast tomosynthesis 109
  Alexis V. Nees
12 Breast computed tomography 125
  Gary J. Whitman, Chao-Jen Lai, Xinming Liu, Malak Itani, Raunak Khisty, and Chris C. Shaw
13 Cases 144
  Michael N. Linver and Robert D. Rosenberg
14 Comparison of commercially available systems 187
  Karla A. Sepulveda, Lindsay Hwang, and William R. Geiser

Index 190
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Preface

This book represents the culmination of a decade of conversations and queries regarding digital mammography. When digital mammography was introduced, my colleague Dr. Tamara Haygood and I wondered how digital systems would change mammographic image acquisition and interpretation. Some observers thought that transitioning to digital mammography was similar to converting to a new film-screen combination. We quickly realized that the new digital units had no screens, and thereafter we stopped printing films.

Dr. Haygood and I talked and questioned more. Why did it take longer to read a digital mammogram compared to a film-screen mammogram? What percentage of mammography units were digital? Could digital mammography be successfully implemented on a mobile van? What is the effect of enterprise-wide distribution of mammographic images? What type of a network is needed to support digital mammography? What monitors are required for digital mammography interpretation?

The list of questions keeps going. Currently, we question if tomosynthesis will replace standard planar digital mammography. Is there a role for breast CT? Is digital breast imaging improved with the addition of intravenous contrast material?

The aim of the book is to provide information to practicing radiologists and physicists about all facets of digital mammography. We hope that this book will help you solidify your understanding of digital mammography, from detectors to display to interpretation. Our aim is that this book will provide a core of knowledge, enabling practitioners to understand digital mammography and its derivatives, pose new questions, and find new answers.

This book contains information that we hope will be relevant to radiologists and physicists in many different geographic locations. Nonetheless, it does have an American slant. The book is written in “United States” English. For example, we use etiology rather than aetiology, hematoma rather than haematoma, and color rather than colour. In addition, discussions of legal and regulatory aspects of mammographic practice usually emphasize American law. Even within the United States relevant law can vary among the states. Therefore all readers should take such discussions in this book as generalizations that need to be verified with respect to specific jurisdictions.

Gary J. Whitman
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