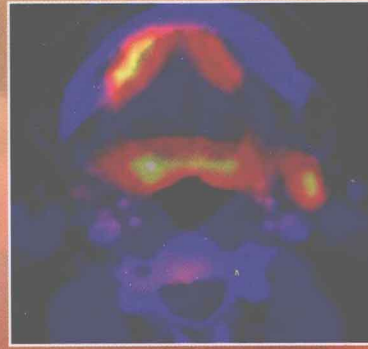
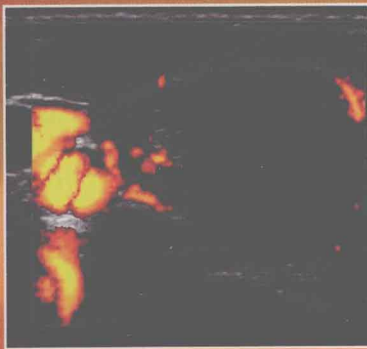


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HEAD AND NECK RADIOLOGY



ANTHONY A. MANCUSO
WILLIAM N. HANAFEE

With contributions from:

Berit M. Verbist

Robert Hermans



Wolters Kluwer | Lippincott Williams & Wilkins
Health

Head and Neck Radiology

VOLUME II

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Head and Neck Radiology

VOLUME II

*To Bill Hanafee, for all of his wisdom, leadership, and kindness,
and Paul Ward . . . who together created a model of what can be accomplished for
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mutual respect and everlasting friendship*

AAM

*To our patients whose suffering is reflected in the images on these
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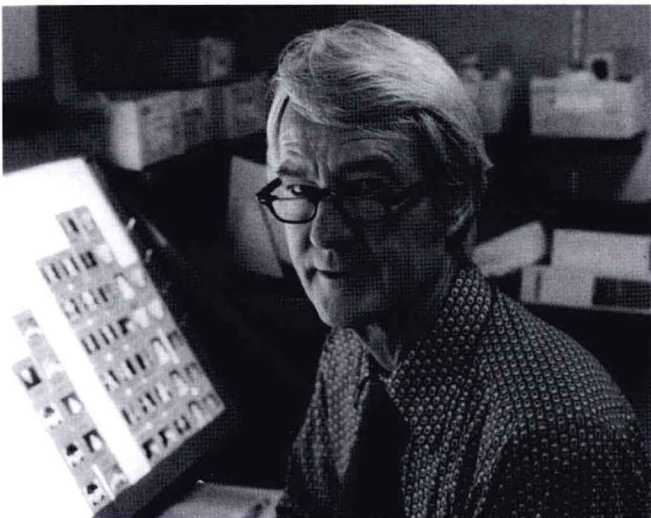
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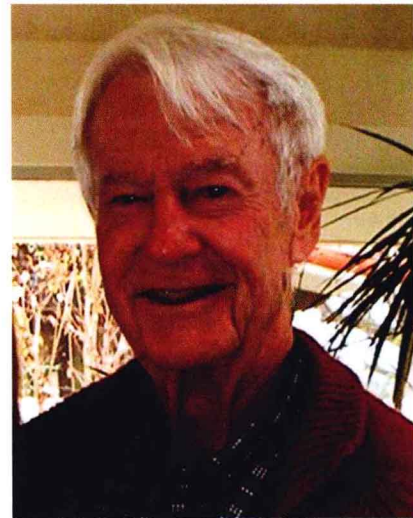
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Bruin flag at UCLA Pauley Pavillion at half mast in Honor of Bill's service—summer 2010.



Bill in his office at UCLA circa 1970s, preparing teaching material



Bill in retirement in north San Diego County, likely getting ready to shoot a round of golf with his longtime friend and colleague Paul Ward

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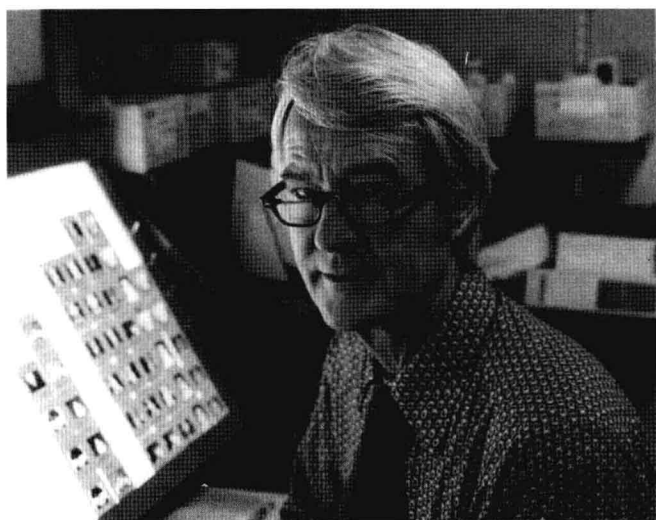
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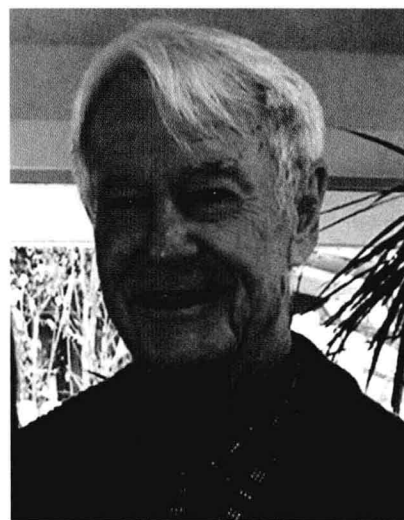
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ACKNOWLEDGMENTS

Bill Hanafee and I had the good fortune of Ruby Richardson of Williams & Wilkins asking us to do our first book, *Computed Tomography of the Head and Neck*, published in 1982. Almost 30 years later, this is the fifth and by far the most comprehensive project that this team has helped produce. All of the production groups over the years have been consummate professionals dedicated to delivering the best-quality resource to help care for patients with head and neck diseases. A special thanks this time around to Ryan Shaw and Brian Brown for developing and guiding this project to its most meaningful conclusion.

This work clearly would not have been possible without two other people. Kelly Paulling, my assistant who was truly extraordinary in helping with the manuscript and illustration preparation as well as countless logistic issues. The second, Chris Sstrom, MD, PhD, developed information technology tools at the University of Florida College of Medicine that

allow for extraordinarily efficient collection and transfer of images from our teaching file repository to this and other educational resources. Also, the online tool for computed tomography and magnetic resonance imaging protocols made available in searchable form at <http://xray.ufl.edu> and reflected in Appendixes A and B of the text are a tribute to his dedication and ingenuity. Those tools and the logistic setup of the information technology work flow through our computer system that Chris created made the production process more efficient than I could ever imagine.

Many thanks to these folks and the many others on the team, including my neuroradiology colleagues who picked up my clinical slack from time to time, who made this almost 5-year project possible.

AAM

The Concept and Suggested Use of this Hybrid Text

General Concepts

This book is a hybrid print/electronic product. The goal of the entire resource is to transfer not only information but also wisdom and judgment based on over 30 years of the practice of modern head and neck diagnostic imaging initiated with the arrival of computed tomography and gray-scale ultrasound in the early to mid 1970s. The seminal knowledge base for those 30 years, however, was created by work done over many previous decades and, in the case of anatomy, centuries. That work established the anatomic basis as well as foundational experience in the pathoanatomic and clinical behavior of the often devastating diseases that afflict the head and neck region. The intended result of applying this continuum of knowledge and wisdom would be to produce the best possible diagnostic imaging process from acquisition to consulting and reporting. This would include assuring optimal resource utilization, which in turn leads to uniformly high-quality images—with those images eventually facilitating the best possible timely consultations and written reports.

Realizing these goals requires access to the entire scope of core knowledge needed to plan, perform, and interpret an imaging examination. This includes applied physics, anatomy, and pathophysiology. Such core knowledge must then be expanded within the known specific clinical context. Core knowledge might also be applied to a clinical situation never before encountered and, with good reasoning skills, result in the correct decision making in what might otherwise be a confounding situation.

Presenting the core and applied knowledge and illustrations in print would require about three volumes; this is impractical and unnecessary in this period of the publishing industry's transition. Therefore, the book is partly electronic and partially print in the following manner.

For the Electronic-Only Portion

The electronic portion of this text contains the following core material:

Part I: Applied Imaging Fundamentals—Chapters 1 through 6

This core material promotes an understanding of the physical principles used to design optimal image acquisition protocols (presented in Appendixes A and B and in searchable and continuously updated form at <http://xray.ufl.edu>), recognize the fundamental strengths and weaknesses of a given imaging modality relative to others, how to anticipate and correct artifacts, and the physical basis for what is seen on the image.

Part II: General Pathology, Pathophysiology, Patterns of Disease, and Natural History of Head and Neck Disorders Correlated with Imaging Appearance—Chapters 6 through 43

This core material establishes a knowledge base of how pathologic states develop and spread as well as how their microenvironment is expressed as pathologic alterations on imaging studies. These mechanisms and morphology of disease states such as cancer, inflammation, and tumor types typically occur in more than one anatomic site in the head and neck region. Once understood as core knowledge, this information does not have to be presented in a discussion of that pathologic process at each potential site of involvement. This leaves the user free to consider the unique clinical issues that these conditions have at each site.

For the Print Portion

The print portion of this text contains the core anatomic knowledge as a framework for clinically integrated material. This could stand alone as a text on the full range of head and neck problems.

Part III: Clinical Applications—Sections 3 through 16 (Chapters 44–223)

The clinical/diagnostic process, as presented in the 180 chapters in these sections is organized anatomically and then grouped by common pathologic and clinical conditions. The lead chapter in each section contains applicable core anatomy and techniques of examination. In subsequent chapters, disease extent and morphology are factored together with relevant clinical issues. Each chapter considers technical considerations and discreet applied anatomy based on core knowledge as needed. The user, depending on his or her knowledge base and goals, can search the electronic core for a more fundamental knowledge of the diagnostic process.

These chapters also consider the impact of the information on patient care and attempts to establish reasonable professional goals with regard to report content and communication appropriate for the acuity of the clinical situation. The intent of these chapters is to impart the wisdom and judgment based on the core knowledge and 33 years of practice in this challenging subspecialty.

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Web-only Chapters available at www.headneckradiology.com.

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