

# YEAR BOOK®

## YEAR BOOK OF DIAGNOSTIC RADIOLOGY® 2001

YEAR BOOK  
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2001  
YEAR BOOK OF  
DIAGNOSTIC  
RADIOLOGY®





Dedicated to Publishing Excellence

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**2001 EDITION**

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## Statement of Purpose

### The YEAR BOOK Series

The YEAR BOOK series was devised in 1901 by health professionals who observed that the literature of medicine and related disciplines had become so voluminous that no one individual could read and place in perspective every potential advance in a major specialty. That has never been more true than it is today.

More than merely a series of books, YEAR BOOK volumes are the tangible results of a unique service designed to accomplish the following:

- to *survey* a wide range of journals
- to *select* from those journals papers representing significant advances and statements of important clinical principles
- to provide *abstracts* of those articles that are readable, convenient summaries of their key points
- to provide *informed commentary* about their relevance

These publications grow out of a unique process that draws on the talents of outstanding authorities in clinical and fundamental disciplines, trained literature specialists, and professional writers—all supported by the resources of Mosby, the world's preeminent publisher for the health professions.

### The Literature Base

Mosby and its editors survey approximately 500 journals published worldwide, covering the full range of the health professions. On an annual basis, the publisher examines usage patterns and polls its expert authorities to add new journals to the literature base and to delete journals that are no longer useful as potential YEAR BOOK sources.

### The Literature Survey

More than 250,000 peer-reviewed articles per year are scanned systematically—including title, text, illustrations, tables, and references—by the publisher's team of literature specialists. Each scan is compared, article by article, to the search strategies that the publisher has developed in consultation with the nearly 200 outside experts who form the pool of YEAR BOOK editors. A given article with broad scientific or clinical implications may be reviewed by any number of YEAR BOOK editors, from one to a dozen or more, regardless of the discipline for which the paper was originally published. In turn, each editor who receives the article reviews it to determine whether it should be included in his or her volume. This decision is based on the article's inherent quality, its relevance to readers of that YEAR BOOK, and the editor's goal to represent a comprehensive picture of a given field in each volume of the YEAR BOOK. In addition, the editor indicates when to include figures and tables from the article to help the YEAR BOOK reader better understand the information.

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Of the quarter million articles scanned each year, only 5% are selected for publication within the YEAR BOOK series, thereby assuring readers of the high value of every selection.

### **The Abstract**

The publisher's abstracting staff is headed by a seasoned medical editing professional and includes individuals with extensive experience in writing for the health professions. When an article is selected for inclusion in a YEAR BOOK, it is assigned to a member of the abstracting staff. The abstractor, guided in many cases by notations supplied by the physician editor, writes a structured, condensed summary designed to rapidly communicate to the reader the essential information contained in the article.

### **The Commentary**

The YEAR BOOK editorial boards, sometimes assisted by guest contributors, write comments that place each article in perspective. This provides the reader with insights from authorities in each discipline that point out the value of the article and that often reflect the authority's thought processes in assessing the article.

### **Additional Editorial Features**

The editorial boards of each YEAR BOOK organize the abstracts and comments to provide a logical and satisfying sequence of information. To enhance the organization, editors also provide introductions to sections or individual chapters, comments linking a number of abstracts, citations to additional literature, and other features.

The published YEAR BOOK contains enhanced bibliographic citations for each selected article, including extended listings of multiple authors and identification of author affiliations. Each YEAR BOOK contains a Table of Contents specific to that year's volume. From year to year, the Table of Contents for a given YEAR BOOK may vary, depending on developments within the field.

Every YEAR BOOK contains a list of the journals from which articles have been selected. This list represents a subset of approximately 500 journals surveyed by the publisher and occasionally reflects a particularly pertinent article from a journal that is not surveyed routinely.

Finally, each volume contains a comprehensive subject index and an index to authors of each selected article.

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## The 2001 Year Book Series

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**Year Book of Pathology and Laboratory Medicine®:** Drs Raab, Bissell, Dabbs, Silverman, and Stanley

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**Year Book of Psychiatry and Applied Mental Health®:** Drs Talbott, Ballenger, Eells, Frances, Jensen, Meltzer, Simpson, and Tasman

**Year Book of Pulmonary Disease®:** Drs Jett, Castro, Maurer, Peters, Phillips, and Ryu

**Year Book of Rheumatology, Arthritis, and Musculoskeletal Disease™:** Drs Panush, Hadler, Hellmann, Lahita, Lane, and LeRoy

**Year Book of Sports Medicine®:** Drs Shephard, Alexander, Kohrt, Nieman, Torg, and Mr George

**Year Book of Surgery®:** Drs Copeland, Bland, Cerfolio, Deitch, Eberlein, Howard, Luce, Seeger, and Souba

**Year Book of Urology®:** Drs Andriole and Coplen

**Year Book of Vascular Surgery®:** Dr Porter

2001

# The Year Book of DIAGNOSTIC RADIOLOGY®

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## Journals Represented

Mosby and its editors survey approximately 500 journals for its abstract and commentary publications. From these journals, the Editors select the articles to be abstracted. Journals represented in this YEAR BOOK are listed below.

Abdominal Imaging  
Academic Emergency Medicine  
Acta Radiologica  
American Journal of Emergency Medicine  
American Journal of Gastroenterology  
American Journal of Medicine  
American Journal of Neuroradiology  
American Journal of Respiratory and Critical Care Medicine  
American Journal of Roentgenology  
American Journal of Sports Medicine  
American Surgeon  
Annals of Diagnostic Pathology  
Annals of Surgery  
Annals of Surgical Oncology  
Archives of Disease in Childhood  
Archives of Disease in Childhood. Fetal and Neonatal Edition  
Archives of Neurology  
Archives of Ophthalmology  
Arthritis and Rheumatism  
Australasian Radiology  
Bone Marrow Transplantation  
Brain  
Breast Journal  
British Journal of Plastic Surgery  
British Journal of Radiology  
Cancer  
Chest  
Circulation  
Clinical Infectious Diseases  
Clinical Nephrology  
Clinical Orthopaedics and Related Research  
Clinical Radiology  
Critical Care Medicine  
European Journal of Cancer  
European Journal of Nuclear Medicine  
European Radiology  
Foot & Ankle International  
Gynecologic Oncology  
Human Reproduction  
Journal of Applied Physiology  
Journal of Bone and Joint Surgery (American Volume)  
Journal of Bone and Joint Surgery (British Volume)  
Journal of Computer Assisted Tomography  
Journal of Laryngology and Otology  
Journal of Neurology, Neurosurgery and Psychiatry  
Journal of Neurosurgery  
Journal of Neurosurgery: Spine

Journal of Nuclear Medicine  
Journal of Orthopaedic Trauma  
Journal of Pediatric Orthopaedics  
Journal of Pediatric Surgery  
Journal of Radiosurgery  
Journal of Rheumatology  
Journal of Spinal Disorders  
Journal of Trauma: Injury, Infection, and Critical Care  
Journal of Tropical Pediatrics  
Journal of Ultrasound in Medicine  
Journal of Vascular Surgery  
Journal of Vascular and Interventional Radiology  
Journal of the American College of Cardiology  
Journal of the National Cancer Institute  
Lancet  
Mayo Clinic Proceedings  
Medicine  
Neuroradiology  
Neurosurgery  
New England Journal of Medicine  
Otolaryngology - Head and Neck Surgery  
Pediatric Radiology  
Prenatal Diagnosis  
Radiology  
Skeletal Radiology  
Spine  
Stroke  
Surgery  
Surgical Neurology  
Thorax  
Ultrasound in Obstetrics and Gynecology  
Urology

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#### STANDARD ABBREVIATIONS

The following terms are abbreviated in this edition: acquired immunodeficiency syndrome (AIDS), cardiopulmonary resuscitation (CPR), central nervous system (CNS), cerebrospinal fluid (CSF), computed tomography (CT), deoxyribonucleic acid (DNA), electrocardiography (ECG), health maintenance organization (HMO), human immunodeficiency virus (HIV), intensive care unit (ICU), intramuscular (IM), intravenous (IV), magnetic resonance (MR) imaging (MRI), ultrasound (US), and ribonucleic acid (RNA).

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#### NOTE

The YEAR BOOK OF DIAGNOSTIC RADIOLOGY® is a literature survey service providing abstracts of articles published in the professional literature. Every effort is made to assure the accuracy of the information presented in these pages. Neither the editors nor the publisher of the YEAR BOOK OF DIAGNOSTIC RADIOLOGY® can be responsible for errors in the original materials. The editors' comments are their own opinions. Mention of specific products within this publication does not constitute endorsement.

To facilitate the use of the YEAR BOOK OF DIAGNOSTIC RADIOLOGY® as a reference tool, all illustrations and tables included in this publication are now identified as they appear in the original article. This change is meant to help the reader recognize that any illustration or table appearing in the YEAR BOOK OF DIAGNOSTIC RADIOLOGY® may be only one of many in the original article. For this reason, figure and table numbers will often appear to be out of sequence within the YEAR BOOK OF DIAGNOSTIC RADIOLOGY®.

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## Publisher's Preface

The publication of the 2001 YEAR BOOK series marks the 100th anniversary of the original Practical Medicine Series of Year Books. To commemorate this milestone, each 2001 Year Book includes an anniversary seal on the cover. The content and format of the Year Books remain unchanged from the beginning of the last century—each volume consists of abstracts of the best scholarly articles of the year, accompanied by expert critical commentaries.

The first Year Book appeared in 1900 when Gustavus P. Head, MD, produced the first *Year Book of the Nose, Throat and Ear*, a volume consisting of highlights from the previous year's best literature, enhanced by expert observations. Dr Head assembled a small group of distinguished physicians to serve as editors, and the first series of Year Books was published in 1901. The first volumes of the Year Book series—*General Medicine, General Surgery, The Eye, Gynecology, Obstetrics, Materia Medica and Therapeutics, Pediatrics, Physiology, and Skin and Venereal Diseases*—appeared at monthly intervals, with 10 volumes published in 1 year. The entire series was met with critical enthusiasm.

In 1904, Dr Head's brother, Cloyd, assumed responsibility for the management of the Year Books. In 1905, the volumes began to appear at regular intervals during the calendar year instead of on a monthly basis. By World War I, the Year Books had been established as an authority on medical and surgical progress.

The postwar period brought about a significant change in the practice of medicine: specialization. To accommodate the rise of specialization in medicine, the Year Books were now sold as individual volumes rather than only as a complete set. This change brought about a tremendous response and sales of the books increased. In 1922, the Year Books became even more specialized, as the books now had different editors for the different medical specialties covered in each volume. Later, in 1933, the title of the series changed from the Practical Medicine Series of Year Books to the Practical Medicine Year Books to reflect these new designs.

The Year Books have grown significantly from the first 10-volume series in 1901 to a diversified series of 32 volumes in 2001. That the Year Book series is the only series of their kind to have survived is a testament to the vision and commitment of its founders. Some minor changes in format and design have occurred throughout the years, but the mission of the Year Book series—to provide a record of exceptional medical achievements distinguished by the reflections of many of the great names in medicine today—has remained constant.

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## Introduction

Another year brings us even more treats (no tricks) in medical imaging. This, the “real” millennial year, marks some significant changes in the YEAR BOOK OF DIAGNOSTIC RADIOLOGY. We welcome a new pediatrics editor, Dr Alan Oestreich, who takes over from his friend and colleague, Dr Lionel Young. Alan starts us off with some new conditions, new ways to approach old conditions, and a bunch of new observations. See his commentary on osteoporosis and other demineralizing processes—it’s an important one.

Doug Maynard just finished his term as president of the Radiological Society of North America. That very busy (and highly productive) year was marked by the official establishment of the National Institute of Biomedical Imaging and Bioengineering at the National Institutes of Health in Bethesda, Md. This is a major event for the radiologic community as image-related research has been scattered throughout many of the different NIH institutes. We now have a real “home”—with real furniture! Dr Maynard, ever alert to new trends, has included a new section on “job market.” Radiologists and radiologic technologists are in short supply everywhere. He discusses both the problems and potential solutions.

Our thoracic imaging editor, Dr Groskin, made a personally very significant change this year: He left academic medicine for private practice. It’ll be most interesting to see if (and how) this new perspective affects his views on which chest articles are worthy of selection for the YEAR BOOK. He dedicates his section to Dr Robert Heitzman.

Vascular and interventional is always a hot topic. So is cardiac imaging. Whether and for how long noninvasive coronary artery imaging stays in the field of diagnostic radiology remains to be seen. Breast screening with US and CAD (computer-aided detection) mammography remains controversial. Contrast-enhanced MRI? Dr Birdwell declares it “not yet ready for ‘prime time.’ ”

The “belly guys,” Drs Ros and Brown, had a particularly good year. They’ve selected 40 articles for your delectation and delight. Three of their favorites focus on functional cine MRI to detect adhesions, US contrast and liver malignancies, and MRI of the small bowel.

Settle in and enjoy! There’s real comfort in the look, feel, and even smell of a freshly opened book.

Anne G. Osborn, MD

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# 1 Thoracic Imaging

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## Introduction

I have just completed my first year in private practice after spending 13 years in academic medicine. The transition has been challenging, and I am very grateful to my colleagues who have shown me, by example, how rewarding it can be to practice general diagnostic radiology. I was touched when one of my new referring surgeons recently offered me the following compliment, "It's nice to know that someone who was in academic medicine as long as you were can still do something that is (clinically) useful."

Keeping that statement in mind, I have tried to make sure that my selections for this YEAR BOOK OF DIAGNOSTIC RADIOLOGY are "useful" by asking myself how I could use the information in each article in my daily practice. I hope that you will find them both useful and interesting.

I would like to dedicate the thoracic imaging section of the 2001 YEAR BOOK to Dr E. Robert Heitzman. I assume that many, if not all of you, are familiar with Dr Heitzman and with his seminal work in chest radiography; if you are not, I urge you to make his acquaintance as soon as possible. It was my great good fortune to work with Dr Heitzman for a number of years before we both felt compelled to leave academic radiology. He is a man of singular integrity, keen intelligence, and wonderful wit. I learned most of what I know about chest radiology from him and I also learned most of what I know about being a radiologist from him. Dr Heitzman is something of an anomaly—quite apart from his honesty, decency, and compassion, he is an academic radiologist par excellence who has, throughout his long and distinguished career, always stressed the importance of being clinically useful. Thank you, Dr Heitzman.

My selections this year include articles on infections and infestations of the lungs, cancer and cancer detection, interstitial lung disease, functional anatomy, disorders of the airways and pleura, and a smattering of articles that defy easy classification.

Stuart A. Groskin, MD