

# Radiologic Diagnosis of Chest Disease

Miriam Sperber  
Editor

# Radiologic Diagnosis of Chest Disease

Consultants to the Editor  
Philippe Grelet    Dragutin Novak    Dirk Westra

With 449 Illustrations



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Miriam Sperber, M.D.  
Professor of Radiology  
University of Bordeaux II, France  
Director, Research and Development  
Almed Corporation  
1050 Brussels, Belgium

*Cover:* Shown is a mezzotint of the figure appearing on p. 175 of the text, depicting the evolution of right upper lobe acute pneumonia in a 24-year-old male after a week of treatment with antibiotics.

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*To my father, Zoltan Frenkel*

*To my husband, Charles*

*To young achievers:  
Steven, Galia, Alex, Sandy, Isaac, Sherry  
and Michelle*

*To all the medical students and residents whom I had the  
pleasure to teach during my career and on whose enlightening  
discussions are based the ideas for this book*

# Foreword

*The intellect of man is forced to choose Perfection of the life  
or of the work.*

*William Butler Yeats*

Recent years have seen the apparition of numerous high quality volumes dedicated to the utilization of new and revolutionary investigation modalities. In general, all these works were “one organ tomes” concentrating on the diagnostic possibilities in a specific area.

Following this stage, the necessity became apparent to assemble texts that discuss the value of new techniques in relation to a multitude of clinical issues as compared to routine imaging methods. This volume proposes an integral view of thoracic radiology, where para-clinical examinations and modalities are discussed separately and then are included in the general analysis, together with clinical signs and radiologic investigations.

Thoracic examinations represent an important part of daily practice of radiology. The complexity of the growing radiological resources has placed the diagnostic radiologist in a central position in the medical team treating a specific patient. Knowledge and expertise have to be shared in the most effective way, especially when confronted with a difficult diagnosis.

I am writing this “Foreword” in place of Dr. Benjamin Felson who did much of the pioneer work in thoracic radiology and could certainly summarize the present status of this area and its future perspectives. Unfortunately, it was not to be so.

Many valuable authors have collaborated in the compilation of this volume. Directing such a large “orchestra” required a great deal of conviction, perseverance, patience and foresight. All these qualities belong to the “unique lady” who is Miriam Sperber.

I am convinced about the possibilities of this book to enlighten radiologists and clinicians alike.

Philippe Grelet, M.D.

# Preface

*If I have seen a little further, it is by standing on the shoulders of giants*

*Sir Isaac Newton*

In the last decade, the rapid development of new investigative techniques has revolutionized modern diagnostic imaging. The impact has been felt in all radiologic domains, including the thorax.

While coexisting with conventional radiologic methods, the amazing new diagnostic arsenal frequently creates decision problems for diagnostic radiologists and treating physicians, who have to select from the many available modalities, the most suitable for a given clinical situation.

Therefore, professional collaboration between clinicians and diagnostic radiologists has never been as important as it is today. In an attempt to present a wide range of expertise and better reflect this cooperation, our volume is multi-authored, with an equal representation of pulmonologists, radiologists and researchers in both areas.

“Medicine sans frontieres”—radiologic diagnosis of chest disorders has certainly outgrown the limits of one department or one country. The present volume has an international representation, gathering the works of specialists from eleven countries. We hope that the combined experience of our competent contributors will appeal to the sophisticated clinician and researcher and also provide material which is sufficiently organized and didactic to be used by the young physician.

A great deal of attention has been devoted to the coverage of many areas of thoracic abnormalities in a teaching manner. Although classifying the material based on radiologic patterns became an acceptable instruction method in pulmonary radiology, we have chosen to arrange the contents of the textbook based on a clinical entity approach which seemed more suitable for the presentation of various entities in a global, realistic manner and in concordance with the latest discoveries made by electronic microscopy and high resolution CT, which show that several presentations may coexist in the same disease. Still, abnormal pulmonary patterns are amply discussed in the chapter on diffuse radiographic pulmonary abnormalities by Dr. Berkmen.

Our goal was to facilitate an understanding of the fundamentals of pulmonary disorders and promote a realistic and appropriate use of the exciting new diagnostic modalities. The remarkable experience amassed by the authors of this book in leading university hospitals in the United States, France, England, Belgium, Germany, Italy, Brasil, Switzerland, Holland, Israel, and Sweden promises to convey this message to all those involved in the challenges and rewards of pulmonary diagnosis and management.

Miriam Sperber, M.D.

# Acknowledgments

Doctor Benjamin Felson, who was supposed to write the foreword to this volume, is no longer with us. Chest radiology has lost one of its great and undeniable masters. My first thanks go to Dr. Felson for his warm support all throughout my career. I will miss him.

A thought of love and gratitude goes also to the memory of my mother, Fanny Frenkel, who offered a unique example of integrity, courage and love of learning.

Many people have worked hard to produce this textbook. To thank everybody becomes an impossible task. I must, however, express my thankfulness to my dedicated and competent consultants Professors Philippe Grelet, Dragutin Novak, and Dirk Westra for their expert advice and continuous support during the painstaking process of editing.

I am also grateful to all the outstanding authors for their professional contributions, their enthusiasm and their patience during countless discussions, letter exchanges, and telephone conversations. It was my great pleasure and an exceptional privilege to work with them all.

My secretary, Ursuly House in het Veld, showed great patience and dedication during all this work. Last, but not least, heartfelt thanks go to my sister Dolly, who was always there to help and advise, and to my entire family for their endless care and understanding. There is nothing like love to support the creative process.

Miriam Sperber, M.D.

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# Contributors

*Klaus Anger, M.D.*  
Chief  
Department of Nuclear Medicine  
University Hospital  
Paulmannshöherstrasse 14  
Lüdenscheid, Federal Republic of Germany

*M.C. Anglade*  
Chef de Clinique Assistant,  
Hospital Henri Mondor  
Service de Radiologie  
Creteil Cedex, France

*A. L. Baert, M.D., Ph.D.*  
Professor of Radiology  
University Hospitals K.U. Leuven  
Leuven, Belgium

*Yoram Ben-Menachem, M.D.*  
Professor of Radiology  
Adjunct Professor of Surgery  
University of Washington Medical Center  
Director, of Radiology  
Harborview Medical Center  
Seattle, Washington

*Yahya M. Berkmen, M.D.*  
Chief  
Pulmonary Radiology  
Department of Radiology  
The New York Hospital-  
Cornell Medical Center  
New York, New York

*Martine Boisserie-Lacroix, M.D.*  
Department of Radiology  
Hôpitaux Saint-Andre  
1 rue Jean Burguet  
Bordeaux, Gironde  
Bordeaux Cedex, France

*Jean Brune, M.D.*  
Professor  
Faculté de Médecine Grange Blanche,  
Université Claude Bernard et chef de service,  
Service de Pneumologie.  
Hôpital Louis Pradel  
Lyon, France

*Kenneth A. Buckwalter, M.D.*  
Assistant Professor  
Department of Radiology  
Indiana University Hospital  
Indianapolis, Indiana

*Stewart W. Clarke, M.D., F.R.C.P.*  
Consultant Physician  
Royal Free Hospital  
London, United Kingdom

*Dewey J. Conces, Jr., M.D.*  
Assistant Professor of Radiology  
Indiana University Medical Center  
Wishard Memorial Hospital  
Indianapolis, Indiana

*Carl-Peter Criée, M.D., Priv.-Doz.*  
Privatdozent für Innere Medizin  
University Göttingen  
Vice-Director  
Kreiskrankenhaus an der Lieth  
Universität Göttingen, Federal Republic of Germany

*Sheila D. Davis, M.D.*  
Pulmonary Radiology  
Department of Radiology  
The New York Hospital-  
Cornell Medical Center  
New York, New York

*Wilfried De Backer, M.D., Ph.D.*  
Associate Professor of Medicine  
Department of Pulmonary Medicine  
University Hospital Antwerp  
Antwerp, Belgium

*Partrick De Coster, M.D.*  
Associate Internist,  
Department of Nuclear Medicine  
Cliniques Universitaires U.C.L.  
Mont-Godinne, Yvoir, Belgium

*Arthur M. De Schepper, M.A.P., M.D., Ph.D.*  
Director  
Department of Radiodiagnosis  
University Hospital Antwerp/(Universitair Ziekenhuis  
Antwerpen)  
Wilrijkstraat 10  
Edegem, Antwerp, Belgium

*G. M. Domenighetti, M.D.*  
 Director  
 Intensive Care Medicine  
 Ospedale Distrettuale di Locarno  
 (La Carita)  
 Locarno, Switzerland

*N. Dorny, M.D.*  
 Department of Radiology  
 University Hospital Antwerp  
 Edegem, Antwerp, Belgium

*Philippe Duyck, M.D.*  
 Senior Resident  
 Department of Radiology  
 University Hospital Antwerp  
 Edegem, Antwerp, Belgium

*A. Frans, M.D.*  
 Professor  
 Department of Cardio-Pulmonary Investigations  
 Cliniques Universitaires Saint-Luc  
 Brussels, Belgium

*Gérard de Geer, M.D.*  
 Chief  
 Pulmonary Section  
 Department of Radiology  
 Hôpital Cantonal de Genève  
 Geneva, Switzerland

*Peter Gehr, Ph.D.*  
 Professor of Anatomy  
 Head, Division of Histology  
 Department of Anatomy  
 Faculty of Medicine  
 University of Berne  
 Berne, Switzerland

*Carlo Giuntini, M.D.*  
 Pulmonary Unit  
 CNR Institute of Clinical Physiology and 2nd Medical  
 Clinic  
 University of Pisa  
 Via Roma, 67  
 Pisa, Italy

*J. David Godwin, M.D.*  
 Department of Radiology  
 University of Washington  
 Seattle, Washington

*Louis Goncette, M.D.*  
 Associate Radiologist  
 Department of Radiology  
 Cliniques Universitaires U.C.L.  
 St. Luc, Brussels, Belgium

*Timothy Greenland, MSc*  
 Chargé de recherche CNRS  
 INSERM U 80, CNRS UA 1177  
 Université Claude Bernard et Laboratoire d'immunologie  
 et de biologie pulmonaire  
 Hôpital Louis Pradel  
 Lyon, France

*Philippe Grelet, M.D.*  
 Chief  
 Department of Radiology  
 Hôpital Saint-André  
 Bordeaux, Gironde, France

*Barry H. Gross, M.D.*  
 Chairman  
 Department of Diagnostic Radiology  
 Henry Ford Hospital  
 Detroit, Michigan

*Menachem Hirsch, M.D.*  
 Director  
 Department of Radiology  
 Soroka Medical Center, Faculty of Health Sciences,  
 Ben-Gurion University of the Negev,  
 Beer-Sheva, Israel

*Ulrich Hüttemann, M.D.*  
 Professor für Innere Medizin  
 University Göttingen  
 Director Kreiskrankenhaus  
 Universität Göttingen  
 Göttingen, Federal Republic of Germany

*D. Kauzlaric, M.D.*  
 Radiologist  
 Head of the Radiological Division  
 District Hospital  
 Locarno, Switzerland

*F. Laurent, M.D.*  
 Department of Radiology  
 Hôpital Saint-André  
 Bordeaux, Gironde, France

*J. Lauweryns, M.D., Ph.D.*  
 Professor of Pathology  
 University Hospitals K.U. Leuven  
 Leuven, Belgium

*P. Leuenberger, M.D.*  
 Associate Professor of Pneumology  
 Head of the Pulmonary Division  
 Department of Internal Medicine  
 University Hospital  
 Lausanne, Switzerland

*Alvaro Magalhães, M.D.*  
 Associate Professor  
 Hospital das Clínicas  
 University of São Paulo  
 São Paulo, Brazil

*G. Marchal, M.D.*  
 Professor of Radiology  
 University Hospitals K.U. Leuven  
 Leuven, Belgium

*Kathryn McConnochie, M.D.*  
 Department of Tuberculosis and Chest Diseases  
 Llandough Hospital  
 Penarth, South Glamorgan, United Kingdom

*William W. Merrill, M.D.*

Chief  
Pulmonary Surgery  
111-A/Medical SVC  
West Haven VAMC  
West Haven, Connecticut

*Eric N. C. Milne, M.D.*

Department of Radiological Sciences  
University of California Irvine  
Medical Center  
Orange, California

*Massimo Miniati, M.D.*

Reparto Polmonare  
CNR Istituto Fisiologia Clinica  
Via Savi 8  
Pisa, Italy

*Jean-François Mornex, M.D.*

Assistant chef de clinique  
Laboratoire d'immunologie et de biologie pulmonaire  
Service de Pneumologie  
Hôpital Louis Pradel, Faculté de médecine Grange  
Blanche et  
INSERM U 80 CNRS UA 1177  
Université Claude Bernard  
Lyon, France

*Nestor L. Müller, MD, PhD, FRCP(C), FCCP*

Radiologist-in-Charge  
Chest Radiology  
Department of Radiology  
Vancouver General Hospital  
Vancouver, B.C., Canada

*Dragutin Novak, M.D.*

Chief  
Institute of Radiology  
Bonn, Federal Republic of Germany

*Massimo Pistolesi, M.D.*

Reparto Polmonare  
CNR Istituto Fisiologia Clinica  
Pisa, Italy

*Jacques Prignot, M.D., Ph.D.*

Department of Respiratory Medicine  
University Clinics of Mont-Godinne  
Yvoir, Belgium

*Murray Rebner, M.D.*

Department of Diagnostic Radiology  
Henry Ford Hospital  
Detroit, Michigan

*Didier Revel, M.D.*

Praticien Hospitalo-Universitaire  
Département de radiologie-Hôpital Louis Pradel  
Faculté de médecine Grange Blanche et UA CNRS 1216  
Université Claude Bernard  
Lyon, France

*David Schlossman, M.D., Ph.D.*

Head of Cardiothoracic Division  
Department of Radiology  
Sahlgren Hospital  
Gothenburg, Sweden

*Yves Sibille, M.D.*

Department of Pneumology  
University Clinics of Mont-Godinne  
Yvoir, Belgium

*Anita K. Simonds, M.D., M.R.C.P.*

Medical Registrar  
The Royal Free Hospital  
London, United Kingdom

*Miriam Sperber, M.D.*

Professor of Radiology  
University of Bordeaux II, France  
Director, Research and Development  
Almed Corporation  
Brussels, Belgium

*David L. Spizarny, M.D.*

Department of Diagnostic Radiology  
Henry Ford Hospital  
Detroit, Michigan

*Paul Stark, M.D.*

Director, Division of Thoracic Radiology  
Department of Radiology  
Loma Linda University Medical Center  
Loma Linda, California

*Robert D. Tarver, M.D.*

Associate Professor  
Department of Radiology  
Indiana University Medical Center  
Whishard Memorial Hospital  
Indianapolis, Indiana

*I. Tobbäck, M.D.*

Resident in Radiology  
Department of Radiodiagnosis  
University Hospital Antwerp/(Universitair Ziekenhuis  
Antwerpen)  
Edegem, Antwerp, Belgium

*Jean Paul Trigaux, M.D.*

Chief of Clinique Adjoint  
Department of Radiologie  
UCL Mont-Godinne  
Yvoir, Namur 5180, Belgium

*Eddy Van Hedent, M.D.*

Senior Resident  
Department of Radiology  
University Hospital Antwerp  
Edegem, Antwerp, Belgium

*Jan Van Meerbeeck, M.D., F.C.C.P.*

Department of Pneumology  
University Hospital Antwerp  
Edegem, Belgium

*N. Vasile*

Professor of Radiology  
Hôpital Henri Mondor  
Service de Radiologie  
Creteil Cedex, France

*E. Verbeken, M.D.*

Senior Attending Pathologist  
University Hospitals K.U. Leuven  
Leuven, Belgium

*Jan Verhaert, M.D.*

Head, section of Respiratory Disease  
St. Barbara Institut, Lanaken, Belgium;  
Consultant physician  
University Hospital of Antwerp  
Antwerp, Belgium

*J. Verschakelen, M.D.*

Senior Attending Radiologist  
University Hospitals K.U. Leuven  
Leuven, Belgium

*Peter Vock, M.D.*

Chairman and Professor of Radiology  
Department of Diagnostic Radiology  
University of Berne  
University Hospital  
Berne, Switzerland

*D. Westra, M.D.*

Chief  
Department of Radiology  
Academisch Medisch Centrum  
Amsterdam, Holland

*P. Weynants, M.D.*

Department of Respiratory Medicine  
University Clinics of Mont-Godinne  
Yvoir, Belgium