

Encyclopedia of Pathology  
Series Editor: J. H. J. M. van Krieken

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Timothy Craig Allen  
Saul Suster *Editors*

# Pathology of the Pleura and Mediastinum

 Springer

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# Encyclopedia of Pathology

**Series Editor**

J. H. J. M. van Krieken

The scope of this 15–20-volume set encompasses the entire field of pathology ranging from general pathological terms to specific diseases to diagnostic methods. Published as print edition and online version (eReference) in the Springer Reference Program each topical volume sticks out by clearly and homogenously structured entries. A team of international experts guarantee that the essays and definitions are scientifically sound. The A-Z format of each topical volume allow readers to quickly and easily find the information they need. The major advantage of the encyclopedia is the way it makes relevant information available not only to pathologists, but also to all clinicians and researchers of the neighboring disciplines working together with pathologists who occasionally might wish to look up terms online.

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Timothy Craig Allen • Saul Suster  
Editors

# Pathology of the Pleura and Mediastinum

With 264 Figures and 9 Tables

 Springer

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*“To my pulmonary pathology mentors, S. Donald Greenberg and Philip T. Cagle”*

*Timothy Craig Allen*

*“To my wife, Jenny, and our children, David and Dana, with love and appreciation”*

*Saul Suster*

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## Series Preface

When Denis Diderot started the first encyclopedia in the eighteenth century, it was a groundbreaking and timely event. It was the time of the Enlightenment, and knowledge was seen as something which was to be spread to many and to build upon by creating new knowledge. His ambition was to bring all available knowledge together in one series of books so that every person who could read has access to all there is to know. Nowadays, in a time of easily accessible knowledge, the question is whether there is still need of an encyclopedia. It is obvious that the amount of knowledge is such that it is not possible to bring it all together in one encyclopedia. One may argue that the Internet is the encyclopedia of today, but that misses an important point of Diderot, a point that is probably even more valid today. He created a team that valued information and selected what was worth to be presented in the encyclopedia. He recognized that science is not a democratic process where the majority decides what is true and valuable, but rather a growing body of knowledge in which radical ideas from individuals may bring about huge changes, even though most would reject these new ideas in the beginning. Indeed, the Internet lacks such authority and it is not easy to select valuable information from nonsense, especially when one is not an expert in a certain field.

It is therefore that an encyclopedia is only as good as the team that creates it. It goes without saying the team that is responsible for the Encyclopedia of Pathology consists of recognized experts in the field. Pathology is a growing medical discipline in which the amount of information is probably already more than that the whole encyclopedia of Diderot contained. For experts in subspecialties within pathology, it is already almost impossible to keep an overview on new developments and to select relevant from less relevant new information. There are plenty of textbooks for every disease group, and scientific literature is available for most pathologists through PubMed or GoogleScholar. What is lacking is a systematic overview of what we know in an alphabetical order, easily accessible to all. The encyclopedia of pathology fills that gap. It is written by experts with the general pathologist in mind and also specialist from other disciplines. It will consist of a series of volumes on subspecialties, and when it is completed there will be an online version combining these. Yearly updates from the online version is foreseen and readers are welcome to provide suggestions for improvement. These will be judged by the editorial team in order to keep the encyclopedia authoritative yet using the expertise of many.

Finally, it is my hope that the encyclopedia will grow into a reliable body of knowledge in pathology, enabling communication through a common language, and that it will grow and adapt to new developments.

Nijmegen, the Netherlands

J. H. J. M. van Krieken



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## Volume Preface

Pleural and mediastinal diseases may at first blush appear to be an odd pairing for a book; however, in fact they work quite well together. Both are in intimate association with the lung, and with lung disease, make up what is traditionally termed “pulmonary pathology.” Yet as the generally more-common lung diseases often take center stage in the study of pulmonary pathology, education of the generally less-common pleural and mediastinal diseases may get less than full attention. This book’s entries are intended to provide complete attention to these two areas of pulmonary pathology. The editors wish to gratefully acknowledge our esteemed predecessors and colleagues whose expertise in pleural disease and mediastinal disease has contributed much to these entries.

Jackson, USA  
Milwaukee, USA  
15 April 2018

Timothy Craig Allen, M.D., J.D.  
Saul Suster, M.D.

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## About the Editors



**Timothy Craig Allen, M.D., J.D.**, obtained his medical degree from Baylor College of Medicine in 1984 and completed his residency in anatomic and clinical pathology, subsequently serving on the faculty of Baylor College of Medicine until 1995. He then attended the University of Chicago Law School and graduated with the degree of Doctor of Law with Honors in 1998, subsequently practicing health care law and litigation. Dr. Allen completed a 2-year fellowship in pulmonary pathology in the Texas Medical Center in 2004. He was a Professor of Pathology and Director of Anatomic Pathology at the University of Texas Medical Branch. In 2018, Dr. Allen began Professor and Chair of the Pathology Department at University of Mississippi Medical Center in Jackson, Mississippi. Dr. Allen is certified by the American Board of Pathology in anatomic and clinical pathology, with added qualification in cytopathology. He is an Associate Editor of the *Archives of Pathology and Laboratory Medicine*. Dr. Allen is the Immediate Past-President of the Pulmonary Pathology Society and President of the Texas Society of Pathology. He is Governor of the College of American Pathologists Board of Governors, and is chair, vice-chair, or member of several CAP councils and committees. He has authored and coauthored numerous articles and book chapters on pulmonary pathology and medicolegal issues and has coauthored and co-edited several books on pulmonary pathology. Dr. Allen is series coeditor of the *Advances in Surgical Pathology* series.



**Dr. Saul Suster, M.D.**, took his training in anatomic pathology at the Sheba Medical Center of the University of Tel-Aviv Sackler School of Medicine, in Tel-Aviv, Israel. In 1984, he immigrated to the United States to continue his training at the Mount Sinai Medical Center of Greater Miami under Dr. Arkadi M. Rywlin. He then completed a 2-year fellowship in research and surgical pathology at the Yale University School of Medicine, New Haven, CT, under the supervision of Dr. Juan Rosai. In 1990, he joined the staff at Mount Sinai Medical Center of Greater Miami where he served as Director of Surgical Pathology and was appointed Clinical Professor of Pathology at the University of Miami School of Medicine. In 1998, Dr. Suster was recruited to head the Division of Anatomic Pathology at the Ohio State University Medical Center in Columbus, OH, until 2007. Since 2007, Dr. Suster has served as Professor and Chairman of the Department of Pathology and Laboratory Medicine at the Medical College of Wisconsin, Milwaukee, WI. Dr. Suster is the author of more than 300 publications, 40 book chapters, and 5 books. He is one of the editors of the pathology textbook, *Modern Surgical Pathology*. He serves as a member of the editorial board in several pathology journals and is co-Editor-in-Chief of the *Annals of Diagnostic Pathology*. Dr. Suster is a frequent guest speaker at major national and international meetings and has served as course director for many subspecialty workshops. Dr. Suster's research work has centered on the pathology of tumors of the lung, pleura, and mediastinum, as well as tumors of soft tissue, skin, and thyroid.

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## Series Editor Biography



**J. H. J. M. van Krieken** is a pathologist with special expertise in the fields of hematopathology and the pathology of the gastrointestinal tract. He was Professor for tumor pathology since 1999 and kept from 2005 to 2015 the Chair of pathology at the Radboud University Nijmegen Medical Centre in Nijmegen. He furthermore served as Chairman of the Board of the Oncology Institute of the Radboud University, Nijmegen, from 2008 to 2016. Since 2016, he is the Rector Magnificus (Vice Chancellor) of the Radboud University.

He was the Treasurer/Secretary of the European Association for Hematopathology from 2000 to 2008, from 2003 to 2011 the Treasurer, from 2013 to 2015 the President of the European Society for Pathology (ESP), and from 2015 to 2017 the past-President of the ESP. Furthermore, he coordinates the ESP quality assessment program and is the chair of IQN path. He is (co) author of more than 600 papers in peer-reviewed journals (H-index 85), has written chapters in books on pathology and oncology, is editor of a Dutch textbook on oncology, and serves on the editorial board of the American Journal of Surgical Pathology, was managing editor of Virchow's Archive from 2012–2016, and was the chief editor of the Journal of Hematopathology from 2008–2018. Since 2011, he is member of the German Academy of Sciences Leopoldina, and since 2014 of Academia Europea and Honorary Fellow of the Royal Society of Pathology of Great Britain and Ireland.

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