



CHEST

USPS 157-860 ISSN 0012-3692

Alfred Soffer, MD, FCCP, Editor-in-Chief

Deputy Editor: David W. Cugell, MD, FCCP, Chicago

EDITORIAL BOARD

Michael J. Belman, MD, FCCP, Los Angeles
Charles A. Boucher, MD, FCCP, Boston
Roy D. Cane, MD, FCCP, Tampa
Bart Chernow, MD, FCCP, Baltimore
Denis A. Cortese, MD, FCCP, Rochester, Minnesota
Patrick J. Fahey, M.D., FCCP, Maywood, Illinois
Debra H. Fiser, MD, FCCP, Little Rock
Victor F. Froelicher, MD, FCCP, Palo Alto, CA
Jeffrey Glassroth, MD, FCCP, Chicago
Samuel Z. Goldhaber, MD, FCCP, Boston
Roger S. Goldstein, M.B., FCCP, Toronto, Canada
Paul A. Kvale, MD, FCCP, Detroit
Hillel Laks, MD, FCCP, Los Angeles
Louis Lemberg, MD, FCCP, Miami
Richard W. Light, MD, FCCP, Long Beach, CA
Alex G. Little, M.D., FCCP, Las Vegas
Joseph Lo Cicero, III, M.D., FCCP, Boston
John M. Luce, MD, FCCP, San Francisco
Terence J. Montague, MD, Edmonton, Canada
Michael R. Pinsky, MD, FCCP, Pittsburgh
Udaya B.S. Prakash, MD, FCCP, Rochester, Minnesota
Thomas A. Raffin, MD, FCCP, Stanford
C. Venkata S. Ram, MB, FCCP, Dallas
Anthony S. Rebuck, MD, FCCP, Toronto, Canada
Bruce K. Rubin, M.D., FCCP, St. Louis
Mark H. Sanders, MD, FCCP, Pittsburgh
Deborah Shure, MD, FCCP, St. Louis
David H. Spodick, MD, FCCP, Worcester
J. Iasha Sznajder, MD, FCCP, Chicago
James V. Talano, MD, FCCP, Chicago
Martin J. Tobin, MD, FCCP, Maywood, Illinois
Irwin Ziment, M.D., FCCP, Sylmar, California

International Editors

Georges M. Akoun, MD, FCCP, France
Jose Luis Barros, MD, FCCP, Spain
Gerald L. Baum, MD, FCCP, Israel
Antonio Blasi, MD, FCCP, Italy
Israel Bruderman, MD, FCCP, Israel
Teresita S. De Guia, MD, FCCP, Philippines
Gunter Fruhmann, MD, FCCP, West Germany
Henry W. Herzog, MD, FCCP, Switzerland
Hiomi Homma, MD, FCCP, Japan
Tadashi Inoue, MD, FCCP, Japan
Ruben J. Jaen, MD, FCCP, Venezuela
Paul Keszler, MD, FCCP, Hungary
Meinhard Kneussl, FCCP, Austria
Jose Kuthy-Porter, MD, FCCP, Mexico
Stuart C. Lennox, MD, FCCP, England
Dario Olivieri, MD, FCCP, Italy
Michael C. Pain, MD, FCCP, Australia
Claude Perret, MD, FCCP, Switzerland
Charis S. Roussos, MD, FCCP, Athens, Greece
Moisés Selman, MD, FCCP, Mexico
W. Laurence Simpson, MD, FCCP, Australia
Jesse P. Teixeira, MD, FCCP, Brazil
Takashi Teramatsu, MD, FCCP, Japan
Cyr Voisin, MD, FCCP, France
E. J. Zerbin, MD, FCCP, Brazil

Executive Office

3300 Dundee Road, Northbrook, IL 60062-2348
Telephone 708-498-1400

Copyright 1993, by the American College of Chest Physicians.
Published monthly.

Chest (USPS-157-860) is published monthly by the American College of Chest Physicians, 3300 Dundee Road, Northbrook, IL 60062-2348. Second Class Postage Paid at Northbrook, IL and additional mailing offices.

Annual Subscriptions: Personal—U.S. and Puerto Rico, \$96.00. Other Countries, \$102.00. Institutional—U.S. and Puerto Rico, \$108.00. Other Countries, \$138.00. Rates effective July 1, 1992.

Special rates for residents, interns, medical, nursing or respiratory therapy students, physicians in training: U.S. and Puerto Rico, \$48.00; Other Countries, \$72.00.

Single copies U.S. and Puerto Rico—\$14.00. Other Countries \$15.00.

Supplements U.S. and Puerto Rico—\$12.00. Other Countries \$14.00.

National Sales Representatives

GARAND & CATLIN ASSOCIATES

Jon Cattin
Ken Garand
59 Jefferson Avenue
Westwood, New Jersey 07675
(201) 664-4555

SYLVIA J. PETERSON
Executive Editor

PATRICIA A. MICEK
Advertising Production
Manager

LAURA LIPSEY
Editorial Secretary

BARBARA ANDERSON
Editorial Secretary

KIM SCHRADER
Circulation Manager
JUDITH A. MCKAY
PAMELA GOORSKY
Manuscript Editors
KATHY F. JEWETT
Publications and Public
Relations

POSTMASTER: Send address changes to CHEST, 3300 Dundee Road, Northbrook, IL 60062-2348