

## EDITORIAL BOARD

Editor

**Claude H. Organ, Jr, MD**

*Archives of Surgery*

University of California-Davis, East Bay

1411 E 31st St

Oakland, CA 94602

Associate Editor

**Patrick L. Twomey, MD**

Martinez, Calif

Consulting Editors

**Arthur E. Baue, MD**

St Louis, Mo

**F. William Blaisdell, MD**

Sacramento, Calif

**Thomas Hunt, MD**

San Francisco, Calif

**Victor Richards, MD**

San Francisco, Calif

Editorial Assistant

**Margaret M. Kosiba**

Oakland, Calif

**Charles M. Balch, MD**, Houston, Tex  
**Clyde F. Barker, MD**, Philadelphia, Pa  
**Robert W. Beart, Jr, MD**, Scottsdale, Ariz  
**John F. Burke, MD**, Boston, Mass  
**John L. Cameron, MD**, Baltimore, Md  
**Edward M. Copeland III, MD**, Gainesville, Fla  
**William L. Donegan, MD**, Milwaukee, Wis  
**Calvin B. Ernst, MD**, Detroit, Mich  
**Donald S. Gann, MD**, Baltimore, Md  
**Lazar J. Greenfield, MD**, Ann Arbor, Mich  
**Alden H. Harken, MD**, Denver, Colo  
**Robert E. Hermann, MD**, Cleveland, Ohio  
**Joseph A. Ignatius, MD**, San Francisco, Calif  
**Donald L. Kaminski, MD**, St Louis, Mo  
**LaSalle D. Leffall, Jr, MD**, Washington, DC  
**David L. Nahrwald, MD**, Chicago, Ill  
**Basil A. Pruitt, Jr, MD**, San Antonio, Tex  
**Mark C. Rogers, MD**, Baltimore, Md  
**John L. Sawyers, MD**, Nashville, Tenn  
**Norman W. Thompson, MD**, Ann Arbor, Mich  
**Ronald K. Tompkins, MD**, Los Angeles, Calif  
**Donald D. Trunkey, MD**, Portland, Ore  
**Alexander J. Walt, MD**, Detroit, Mich

Official Publication of the New England Surgical Society, Pacific Coast Surgical Association, Society of Surgical Oncology, Surgical Infection Society, Western Surgical Association

Copyright ©1991 by the American Medical Association

**SUBSCRIPTION RATES**—The subscription rates for the ARCHIVES OF SURGERY are as follows: \$80 for 1 year, \$145 for 2 years in the United States and US possessions; all other countries, 1 year, \$95; 2 years, \$175 for surface delivery. For expedited air delivery to most countries, add \$20 surcharge for 1-year subscription, \$40 for 2 years. (Rates for subscriptions for delivery to Japan or South Korea are available through exclusive agents—contact the publisher.) *Special rates for residents and medical students in the United States and US possessions are available.* Address inquiries to the American Medical Association, Publishing Operations Division, 515 N State St, Chicago, IL 60610. Phone: (312) 670-SUBS (670-7827).

The ARCHIVES OF SURGERY (ISSN 0004-0010) is published monthly by the American Medical Association, 515 N State St, Chicago, IL 60610, and is an official publication of the Association. Second-class postage paid at Chicago, IL 60610, and at additional mailing office.

**CHANGE OF ADDRESS**—POSTMASTER, send all address changes to ARCHIVES OF SURGERY, Attention: Subscription Department, 515 N State St, Chicago, IL 60610. Notification of address change must be made at least 6 weeks in advance. Include both old and new addresses, a recent mailing label, and your new ZIP code.

GST registration number: R 126 225 556

# ARCHIVES

OF

# Surgery

Vol 126

No. 12

DECEMBER 1991

## COMMENTARY

### Laparoscopic Hernioplasty

1449

Irving L. Lichtenstein, MD; Alex G. Shulman, MD;  
Parviz K. Amid, MD, Los Angeles, Calif; William O. Richards, MD,  
John L. Sawyers, MD Nashville, Tenn

## PAPERS PRESENTED AT THE 44TH ANNUAL CANCER SYMPOSIUM OF THE SOCIETY OF SURGICAL ONCOLOGY

### Prospective Evaluation of the Use of Antigen-Specific Immune Complexes in Predicting the Development of Recurrent Melanoma

1450

Jan H. Wong, MD; Shi Hong Xu, MS; Kristin A. Skinner, MD;  
Leland J. Foshag, MD; Donald L. Morton, MD, Los Angeles, Calif

- The absence of antigen-specific immune complexes in postoperative serum samples is predictive of a disease-free status.

### Detection of Submicroscopic Lymph Node Metastases in Patients With Melanoma

1455

Richard Heller, PhD; Jeanne Becker, PhD; Joseph Wasselle, MD;  
Paul Baekey, MD; Wayne Cruse, MD; Karen Wells, MD;  
Charles Cox, MD; Bonnie King; Douglas S. Reintgen, MD, Tampa, Fla

- Culture of lymph nodes is a sensitive method for the detection of micrometastases; this procedure may change prognosis and identify candidates for adjuvant therapies.

**Invited Commentary:** Donald L. Morton, MD, Santa Monica, Calif

### The Prognostic Implications of Microscopic Satellites in Patients With Clinical Stage I Melanoma

1461

Pablo León, MD; John M. Daly, MD; Marie Synnestevedt, MS;  
Delray J. Schultz, MA; David E. Elder, MB, ChB, FRCPA;  
Wallace H. Clark, Jr, MD, Philadelphia, Pa

- The presence of microscopic satellites correlates with a significantly decreased survival.

### Morbidity of Radical Lymphadenectomy in the Curative Resection of Gastric Carcinoma

1469

James W. Smith, MD; Man H. Shiu, MD; Lori Kelsey;  
Murray F. Brennan, MD, New York, NY

- Radical lymphadenectomy can be performed safely for gastric carcinoma and should not be avoided based on the fear of complications.

*Continued on page 1437.*

## American Medical Association

Physicians dedicated to the health of America

The ARCHIVES OF SURGERY is a member of the consortium of AMA journals listed below. The ARCHIVES reaches more than 36 400 readers in 85 countries each month. The complete text of all AMA journals is available on the MEDIS database from Mead Data Central, Dayton, Ohio.



### The Journal of the American Medical Association (JAMA)

### American Journal of Diseases of Children (AJDC)

### Archives of Dermatology

### Archives of General Psychiatry

### Archives of Internal Medicine

### Archives of Neurology

### Archives of Ophthalmology

### Archives of Otolaryngology—Head & Neck Surgery

### Archives of Pathology & Laboratory Medicine

### Archives of Surgery

James S. Todd, MD, Executive Vice President  
Kenneth E. Monroe, Deputy Executive Vice President

Larry E. Joyce, Senior Vice President  
George D. Lundberg, MD, Editor-in-Chief, Scientific Publications

Robert L. Kennett, Vice President, Publishing  
Michael D. Springer, Associate Publisher  
Nawin Gupta, PhD, Director, Publishing Operations Division

**Advertising Principles:** Each advertisement in this issue has been reviewed and complies with the principles governing advertising in AMA scientific publications. A copy of these principles is available on request. The appearance of advertising in AMA publications is not an AMA guarantee or endorsement of the product or the claims made for the product by the manufacturer.

**ADVERTISING OFFICES:** SALES MANAGER; John P. Cahill, East: Donald M. Blatherwick, 600 Third Avenue, Suite 3700, New York, NY 10016 (212) 867-6640; Midwest/Far West: John P. Cahill, 515 North State Street, Chicago, IL 60610 (312) 464-2470

Please address communications concerning accepted or published communications to AMA Specialty Journals, 515 N State St, Chicago, IL 60610.

All articles published, including editorials, letters, and book reviews, represent the opinions of the authors and do not reflect the official policy of the American Medical Association, the Editorial Board, or the institution with which the author is affiliated, unless this is clearly specified.



# ARCHIVES

## Vascular Soft-Tissue Sarcomas: An Analysis of Tumor-Related Mortality 1474

Martin S. Karpeh, Jr, MD; Christopher Caldwell, MD; Jeffrey J. Gaynor, PhD; Steven I. Hajdu, MD; Murray F. Brennan, MD, New York, NY

- The survival of these patients depends on a complete surgical resection and is independent of individual tumor histology.

## Extremity Epithelioid Sarcoma: Amputation vs Local Resection 1485

Pat W. Whitworth, MD; Raphael E. Pollock, MD, PhD; Paul F. Mansfield, MD; Jean Couture, MD; Marvin M. Romsdahl, MD, PhD, Houston, Tex

- Favorable outcome following local resections for localized disease indicates that WLE with negative pathologic margins is preferable to radical amputation.

## Pediatric Nonrhabdomyosarcomas of the Extremities: Influence of Size, Invasiveness, and Grade on Outcome 1490

Bhaskar N. Rao, MD; Victor M. Santana, MD; David Parham, MD; Charles B. Pratt, MD; Irving D. Fleming, MD; Melissa Hudson, MD; James Fontanesi, MD; Paul Philippe, MD; Michael J. Schell, PhD, Memphis, Tenn

- Patients with G3 histology and T2 lesions may benefit from chemotherapy.

## Carbohydrate-Binding Protein 35 Is the Major Cell-Surface Laminin-Binding Protein in Colon Carcinoma 1498

Edward C. Lee, MD; Hee-Jong Woo, DVM, PhD; Cynthia A. Korzelius; Glenn D. Steele, Jr, MD, PhD; Arthur M. Mercurio, PhD, Boston, Mass

- CBP-35 is involved in tumor cell-basement membrane interactions; an increase in CBP-35 surface expression may facilitate metastatic potential of colon carcinoma cells.

## Enhancing Effect of Interleukin 1 $\alpha$ Administration on Antitumor Effector T-Cell Development 1503

Vernon K. Sondak, MD; Melissa K. Tuck, MS; Suyu Shu, PhD; Hirohisa Yoshizawa, MD; Alfred E. Chang, MD, Ann Arbor, Mich

- This cytokine stimulated tumor-specific lymphocytes, reducing or eliminating pulmonary metastases in mice.

## Patterns of Recurrence After Pelvic Exenteration for Colorectal Adenocarcinoma 1510

Gordon H. Hafner, MD; Lemuel Herrera, MD; Nicholas J. Petrelli, MD, Buffalo, NY

- Locoregional recurrence remains a significant problem for primary or recurrent colorectal carcinoma even after radical pelvic surgery.

## Merkel Cell Carcinoma: Prognosis and Management 1514

Anusak Yiengpruksawan, MD; Daniel G. Coit, MD; Howard T. Thaler, PhD; Carlos Urmacher, MD; William K. Knapper, MD, New York, NY

- A wide excision of the primary tumor and either elective or early therapeutic regional node dissection is recommended.

Continued on page 1441.

## PUBLICATION STAFF

Offices: 515 N State St  
Chicago, IL 60610

### Editorial Processing Department

**Director:** Cheryl Iverson  
**Assistant Director:** Paula Clitman  
**Manager:** Daniel Knight  
**Free-lance Coordinator:** Vickey Golden  
**Senior Copy Editor/Atex Specialist:** Paul Frank  
**Copy Editors:**  
Laura Bleiler  
Diane L. Cannon  
Beena Rao  
Janice Snider  
**Manuscript Records Clerk:**  
Tonja Glover

### Production Department

**Director:** Bernard Schlameuss  
**Staff Assistants:**  
Bonnie Van Cleven  
Diane Darnell  
Karen Branham  
**Manager, Color Illustrations:** Thomas J. Handrigan  
**Supervisor, Production:** Susan Price  
**Senior Production Assistants:**  
Anita Henderson  
Christine Metzler  
Debbie Pogorzelski  
**Supervisor, Proofreading:** Barbara Clark  
**Proofreaders:**  
Gwen Gilberg  
Margaret Johnson  
Teresa H. Omiolek  
Jennifer Reiling  
**Secretary:** Sandra Sanders

### Electronic Production Department

**Director:** Mary C. Steermann  
**Electronic Coordinator:** Mary Ellen Johnston  
**Supervisor, Electronic Production:** Jaye Dickson  
**Production Associate:** Melinda Lerner  
**Electronic Production Operators:**  
Brenda Chandler  
Debra Lucas  
**Supervisor, Art and Layout:** JoAnne Weiskopf  
**Electronic Art and Layout:**  
Leslie Koch  
Julianna K. Mills  
Linda Schmitt

### Circulation Department

**Director:** Beverly Martin  
**Reprints and Permissions:** Rita Houston

### Fulfillment Department

**Director:** Raymond Healy

### Associate Publisher Staff

**Marketing Services Manager:** Geoffrey Flick  
**Associate Editor:** Julie Foreman  
**Administrative Assistant:** Tara W. Matthews

### Scientific and Socioeconomic Indexing Department

**Director:** Norman Frankel  
**Staff:**  
George Kruto  
Susan McClelland  
Mary Kay Tinerella

# ARCHIVES

## A 5-Year Study of Cryosurgery in the Treatment of Liver Tumors 1520

T. S. Ravikumar, MD, New Haven, Conn; Robert Kane, MD; Blake Cady, MD; Roger Jenkins, MD; Melvin Clouse, MD; Glenn Steele, Jr, MD, Boston, Mass

- This study establishes the long-term effectiveness of cryosurgery in the treatment of primary and metastatic liver tumors.

## Human Lymphokine-Activated Killer Cell Activity: Role of IL-2, IL-4, and IL-7 1525

Hans Stötter, MD, Michael T. Lotze, MD, Bethesda, Md

- IL-7-induced LAK activity is independent of IL-2 production and regulated by endogenously generated IL-4.

## High-Dose Preoperative Radiation and Radical Sphincter-Preserving Surgery for Rectal Cancer 1534

Gerald Marks, MD; Mohammed Mohiuddin, MD, Philadelphia, Pa; Arieh Eitan, MD, Haifa, Israel; Luigi Masoni, MD, Jan Rakinic, MD, Philadelphia, Pa

- High-dose preoperative radiation and sphincter preservation surgery resulted in better than expected survival and control of local recurrence.

**Invited Commentary:** John H. Pemberton, MD, Rochester, Minn

## CORRECTIONS

## Trauma in Pregnancy: Predicting Pregnancy Outcome 1524

David P. Kissinger, MD; Grace S. Rozycki, MD, Washington, DC  
John A. Morris, Jr, MD, Nashville, Tenn  
M. Margaret Knudson, MD, San Francisco, Calif;  
Wayne S. Copes, PhD, Washington, DC;  
Sue M. Bass, ScM; H. Kendle Yates, Nashville, Tenn;  
Howard R. Champion, FRCS(Edin), FACS, Washington, DC

## Touch Preparation Cytology of Breast Lumpectomy Margins With Histologic Correlation 1542

Charles E. Cox, MD; Ni Ni Ku, MD; Douglas S. Reintgen, MD;  
Harvey M. Greenberg, MD; Santo V. Nicosia, MD;  
Stephen Wangenstein, MD, Tampa, Fla

## REGULAR DEPARTMENTS

### Correspondence and Brief Communications 1541

### Instructions for Authors 1445

### Index to Advertisers 1446

### Index to Volume 126 1545

### Classified Advertising 1569