


# YEARBOOK®

## YEAR BOOK OF ONCOLOGY® 2001

PATRICK J. LOEHRER, SR  
BURTON L. EISENBERG  
ELI GLATSTEIN  
MICHAEL S. GORDON  
BRUCE E. JOHNSON  
CHARLES B. PRATT  
J. TATE THIGPEN

YEAR BOOK  
  
years of excellence

2001

# The Year Book of ONCOLOGY®

Editor-in-Chief

**Patrick J. Loehrer, Sr, MD**

*Professor of Medicine, Section of Hematology/Oncology, Indiana University  
School of Medicine, Indiana University Hospital, Indianapolis*



**M Mosby**

St. Louis Baltimore Boston Carlsbad Naples New York Philadelphia Portland London  
Madrid Mexico City Singapore Sydney Tokyo Toronto Wiesbaden



*Publisher:* Cynthia Baudendistel  
*Developmental Editor:* Jennifer Richardet  
*Senior Production Editor:* Pat Costigan  
*Manager, Literature Services and Continuity Editing:* Idelle L. Winer  
*Project Supervisor, Production:* Joy Moore  
*Production Assistant:* Betty Dockins  
*Illustrations and Permissions Specialist:* Steve Ramay

**2001 EDITION**

**Copyright © 2001 by Mosby, Inc**

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without prior written permission from the publisher.

Permission to photocopy or reproduce solely for internal or personal use is permitted for libraries or other users registered with the Copyright Clearance Center, provided that the base fee of \$35.00 per chapter is paid directly to the Copyright Clearance Center, 21 Congress Street, Salem, MA 01970. This consent does not extend to other kinds of copying, such as copying for general distribution, for advertising or promotional purposes, for creating new collected works, or for resale.

Printed in the United States of America  
Composition by Thomas Technology Solutions, Inc  
Printing/binding by Maple-Vail

Editorial Office:  
Mosby, Inc  
11830 Westline Industrial Dr  
St. Louis, MO 63146  
Customer Service: [hhspcs@harcourt.com](mailto:hhspcs@harcourt.com)

International Standard Serial Number: 1040-1741  
International Standard Book Number: 0-323-01509-3

**2001  
YEAR BOOK OF  
ONCOLOGY®**

---

## 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.

---

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.

---

## The 2001 Year Book Series

**Year Book of Allergy, Asthma, and Clinical Immunology™:** Drs Rosenwasser, Boguniewicz, Milgrom, Routes, and Spahn

**Year Book of Anesthesiology and Pain Management™:** Drs Tinker, Abram, Chestnut, Roizen, Rothenberg, and Wood

**Year Book of Cardiology®:** Drs Schlant, Collins, Gersh, Graham, Kaplan, and Waldo

**Year Book of Chiropractic®:** Dr Lawrence

**Year Book of Critical Care Medicine®:** Drs Parrillo, Dellinger, Balk, Calvin, Franklin, and Shapiro

**Year Book of Dentistry®:** Drs Zakariasen, Boghosian, Dederich, Hatcher, Horswell, and McIntyre

**Year Book of Dermatology and Dermatologic Surgery™:** Drs Thiers and Lang

**Year Book of Diagnostic Radiology®:** Drs Osborn, Birdwell, Dalinka, Groskin, Maynard, Oestreich, Pentecost, Ros, and Smirniotopoulos

**Year Book of Emergency Medicine®:** Drs Burdick, Cone, Cydulka, Hamilton, Loiselle, and Niemann

**Year Book of Endocrinology®:** Drs Mazzaferri, Fitzpatrick, Horton, Kannan, Kreisberg, Meikle, Molitch, Morley, Osei, Poehlman, and Rogol

**Year Book of Family Practice®:** Drs Bowman, Dexter, Gilchrist, Morrison, Neill, and Scherger

**Year Book of Gastroenterology™:** Drs Lichtenstein, Dempsey, Ginsberg, Katzka, Kochman, Morris, Nunes, Rosato, and Stein

**Year Book of Hand Surgery®:** Drs Berger and Ladd

**Year Book of Medicine®:** Drs Barkin, Frishman, Jett, Klahr, Loehrer, Malawista, Mandell, and Mazzaferri

**Year Book of Neonatal and Perinatal Medicine®:** Drs Fanaroff, Maisels, and Stevenson

**Year Book of Neurology and Neurosurgery®:** Drs Bradley, Gibbs, and Verma

**Year Book of Nuclear Medicine®:** Drs Gottschalk, Blafox, Coleman, Strauss, and Zubal

**Year Book of Obstetrics, Gynecology, and Women's Health®:** Drs Mishell, Kirschbaum, and Miller

**Year Book of Oncology®:** Drs Loehrer, Eisenberg, Glatstein, Gordon, Johnson, Pratt, and Thigpen

**Year Book of Ophthalmology®:** Drs Wilson, Cohen, Eagle, Grossman, Laibson, Maguire, Nelson, Penne, Rapuano, Sergott, Shields, Spaeth, Steinmann, Tipperman, Ms Gosfield, and Ms Salmon

**Year Book of Orthopedics®:** Drs Morrey, Beauchamp, Currier, Peterson, Swiontkowski, and Trigg

**Year Book of Otolaryngology–Head and Neck Surgery®:** Drs Paparella, Holt, and Otto

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

**Year Book of Pediatrics®:** Dr Stockman

**Year Book of Plastic, Reconstructive, and Aesthetic Surgery®:** Drs Miller, Bartlett, Garner, McKinney, Ruberg, Salisbury, and Smith

**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



---

## Associate Editors

### **Burton L. Eisenberg, MD**

*Professor of Surgery, Temple University School of Medicine; Chairman, Department of Surgical Oncology, Fox Chase Cancer Center, Philadelphia*

### **Eli Glatstein, MD**

*Professor and Clinical Director, Department of Radiation Oncology, Hospital of the University of Pennsylvania, Philadelphia*

### **Michael S. Gordon, MD**

*Associate Professor of Medicine, Associate Dean for Research-Phoenix Campus, University of Arizona College of Medicine, Phoenix*

### **Bruce E. Johnson, MD**

*Associate Professor of Medicine, Brigham and Women's Hospital and Harvard Medical School; Director, Lowe Center for Throacic Oncology; Physician, Department of Adult Oncology, Dana-Farber Cancer Institute, Boston*

### **Charles B. Pratt, MD**

*Professor, Department of Pediatrics, University of Tennessee-Memphis; Member, Hematology-Oncology, St Jude Children's Research Hospital, Memphis, Tenn*

### **James Tate Thigpen, MD**

*Professor of Medicine, University of Mississippi Medical Center, Jackson*

---

## 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.

American Journal of Clinical Pathology  
American Journal of Epidemiology  
American Journal of Roentgenology  
American Journal of Surgery  
American Surgeon  
Annals of Internal Medicine  
Annals of Surgery  
Annals of Surgical Oncology  
Annals of Thoracic Surgery  
Archives of Surgery  
Blood  
Bone Marrow Transplantation  
British Journal of Cancer  
British Medical Journal  
Cancer  
Cancer Research  
Chest  
Clinical Cancer Research  
Diseases of the Colon and Rectum  
European Journal of Cancer  
European Journal of Nuclear Medicine  
European Journal of Surgical Oncology (London)  
European Respiratory Journal  
Gastroenterology  
Gynecologic Oncology  
Head and Neck  
Health Physics  
Human Pathology  
International Journal of Cancer  
International Journal of Radiation, Oncology, Biology, and Physics  
Journal of Bone and Joint Surgery (American Volume)  
Journal of Clinical Endocrinology and Metabolism  
Journal of Clinical Investigation  
Journal of Clinical Oncology  
Journal of Investigative Dermatology  
Journal of Neurosurgery  
Journal of Pediatric Hematology/Oncology  
Journal of Pediatric Orthopaedics  
Journal of Pediatric Surgery  
Journal of Pediatrics  
Journal of Thoracic and Cardiovascular Surgery  
Journal of Urology  
Journal of the American College of Surgeons  
Journal of the American Medical Association  
Journal of the National Cancer Institute  
Lancet  
Modern Pathology

Nature  
Nature Genetics  
Neurosurgery  
New England Journal of Medicine  
Ophthalmology  
Pediatric Radiology  
Proceedings of the National Academy of Sciences  
Radiology  
Radiotherapy and Oncology  
Science  
Surgery  
Thorax  
Transplantation  
World Journal of Surgery

---

#### 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), ribonucleic acid (RNA), ultrasound (US), and ultraviolet (UV).

---

#### NOTE

The YEAR BOOK OF ONCOLOGY 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 ONCOLOGY 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 ONCOLOGY 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 ONCOLOGY 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 ONCOLOGY.

---

## 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.

---

## Table of Contents

JOURNALS REPRESENTED . . . . .	xiii
PUBLISHER'S PREFACE . . . . .	xv
1. Etiology, Epidemiology, and Ethics . . . . .	1
2. Breast Cancer . . . . .	17
3. Gynecologic Cancer . . . . .	43
Ovarian Carcinoma . . . . .	43
Cervix Carcinoma . . . . .	63
Endometrial Carcinoma . . . . .	82
4. Genitourinary Cancer . . . . .	91
5. Prostate Cancer . . . . .	111
6. Gastroenterology . . . . .	119
Gastric and Esophageal Cancer . . . . .	119
Hepatobiliary Cancers . . . . .	124
Colon and Rectal Cancer . . . . .	131
7. Adult Leukemia and Myelodysplastic Syndromes . . . . .	151
8. Adult Lymphoproliferative Disorders . . . . .	173
Hodgkin's Disease . . . . .	173
Non-Hodgkin's Disease . . . . .	180
9. Pediatric Oncology . . . . .	189
Introduction . . . . .	189
Epidemiology . . . . .	189
Late Effects . . . . .	192
Rhabdomyosarcoma and Other Sarcomas . . . . .	196
Pediatric Oncologic Surgery . . . . .	203
Neuroblastoma . . . . .	204
Neuroectodermal Tumors . . . . .	208
Acute Lymphoblastic Leukemia . . . . .	209
Pancreatoblastoma and Hepatoblastoma . . . . .	216
Head and Neck . . . . .	218
Radiation Therapy . . . . .	220
Retinoblastoma . . . . .	223
Wilms' Tumor . . . . .	226

Miscellaneous Pediatric Tumors . . . . .	228
<b>10. Lung Cancer . . . . .</b>	<b>235</b>
Pathogenesis . . . . .	235
Staging . . . . .	255
Early Stage Non–Small Cell Lung Cancer . . . . .	263
Treatment of Locally Advanced Non–Small Cell Lung Cancer . . . . .	273
Treatment of Metastatic Non–Small Cell Lung Cancer and Mesothelioma . . . . .	291
Small Cell Lung Cancer . . . . .	305
<b>11. Head and Neck Cancer . . . . .</b>	<b>315</b>
<b>12. Skin Cancer . . . . .</b>	<b>327</b>
<b>13. Sarcomas . . . . .</b>	<b>345</b>
<b>14. Central Nervous System Tumors . . . . .</b>	<b>359</b>
<b>15. Benign Hematologic Disorders and Hematopoietic Growth     Factors . . . . .</b>	<b>385</b>
<b>16. Angiogenesis and Its Inhibition in Cancer . . . . .</b>	<b>389</b>
<b>17. Cancer Biology . . . . .</b>	<b>403</b>
<b>18. Cancer Therapeutics . . . . .</b>	<b>407</b>
<b>19. Psychosocial and Alternative Therapy . . . . .</b>	<b>409</b>
<b>20. Supportive Care . . . . .</b>	<b>415</b>
SUBJECT INDEX. . . . .	421
AUTHOR INDEX . . . . .	457

# 1 Etiology, Epidemiology, and Ethics

---

## **Maintaining Abstinence From Cigarette Smoking: Effectiveness of Group Counselling and Factors Predicting Outcome**

Razavi D, Vandecasteele H, Primo C, et al (Université Libre de Bruxelles, Brussels, Belgium; Novartis Pharma, Brussels, Belgium; Vrije Universiteit Brussel, Belgium; et al)

*Eur J Cancer* 35:1238-1247, 1999

1-1

---

**Objective.**—The long-term effectiveness of worksite smoking cessation programs that use group support and transdermal nicotine replacement has not been well studied. The effectiveness of group support, transdermal nicotine patches, or both, at maintaining abstinence after 3 and 12 months was evaluated in an open-label randomized study.

**Methods.**—After 7 biweekly smoking cessation sessions, abstainers were randomly assigned to group professional counseling (PG), supportive therapy sessions led by former smokers (SG), or to no intervention (NG) for sessions 8 to 17 (Fig 1). Continued abstinence was verified by urine tests and breath carbon monoxide measurements. Psychological adjustment was evaluated.

**Results.**—The 3-month abstinence rate was 35.1% (Table 1). At 12 months, the abstinence rates for the 3 groups were similar. Multivariate analysis outcome predictors of abstinence at 12 months were male sex, better psychological scores, and coming from a nonsmoking family. Abstinent and relapsed individuals gained 4.1 and 2.4 kg, respectively, at 3 months. Weight gain was associated with male sex, blue collar employment, and higher Fagerström scores.

**Conclusion.**—The relationship between smoking cessation and weight gain, sex differences, and family support need to be studied more thoroughly to improve the smoking cessation rate.

► Surely, one of the major problems in public health among Western countries today is how to help people to stop smoking and prevent relapses of

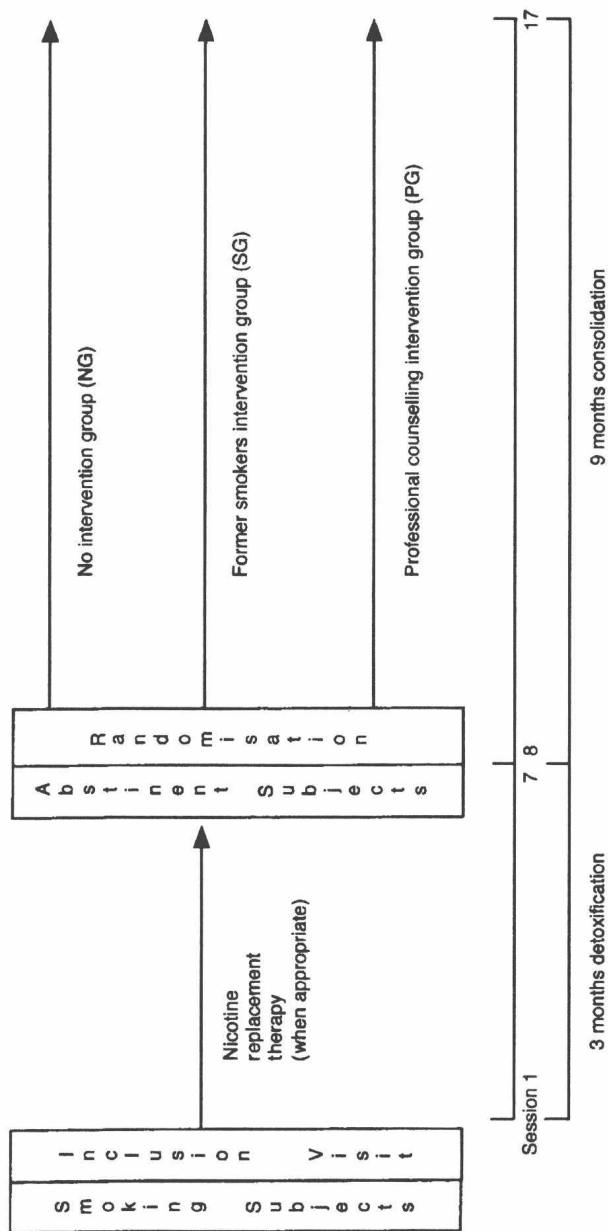


FIGURE 1.—Flow diagram illustrating the study design. (Courtesy of Razavi D, Vandecasteele H, Primo C, et al: Maintaining abstinence from cigarette smoking: Effectiveness of group counselling and factors predicting outcome. *Eur J Cancer* 35:1238-1247. Copyright 2000, with permission from Elsevier Science.)



TABLE 1.—Abstinence at 3 and 12 Months

	Abstinence Based on	
	Subject Report and Expired Carbon Monoxide	Subject Report, Expired Carbon Monoxide and Cotinine
Abstinence at 3 months ( <i>n</i> = 993)	<i>n</i> (%) 349 (35.1)	<i>n</i> (%) 190 (19.1)
Abstinence at 12 months		
Professionals (PG) ( <i>n</i> = 135)	78 (57.8)	59 (43.7)
Ex-smokers (SG) ( <i>n</i> = 88)	47 (53.4)	33 (37.5)
No follow-up (NG) ( <i>n</i> = 121)	60 (49.6)	43 (35.5)
Total ( <i>n</i> = 344)	185 (53.8)	135 (39.2)

(Courtesy of Razavi D, Vandecasteele H, Primo C, et al: Maintaining abstinence from cigarette smoking: Effectiveness of group counselling and factors predicting outcome. *Eur J Cancer* 35:1238-1247. Copyright 2000, with permission from Elsevier Science.)

smoking. Many people have advocated counseling either by professional psychologists or by former smokers. This article from Europe is an interesting effort to assess the problem of abstinence and relapse. In addition to actual smoking histories, the participants were required to have their exhaled gases quantified for carbon monoxide and samples of their urine studied for cotinine.

The results of this study are sobering. At 3 months, the abstinence rate was only 35%. After 12 months, the abstinence rates were roughly half of the rate at 3 months. Moreover, there appeared to be no difference between counseling by professional psychologists, counseling by former smokers, or the no intervention control group.

And the tobacco companies claim this is not a drug!

**E. Glatstein, MD**

### **Sexual Dysfunction, Informed Consent and Multimodality Therapy for Rectal Cancer**

Chorost MI, Weber TK, Lee RJ, et al (Roswell Park Cancer Inst, Buffalo, NY)  
*Am J Surg* 179:271-274, 2000 1-2

**Objective.**—After curative surgery and adjuvant therapy for rectal cancer, many patients experience sexual dysfunction. The role of discussion of this consequence had not been well studied. The frequency of presurgical and preradiation discussion of possible posttherapy sexual dysfunction was retrospectively assessed, and the incidence of sexual dysfunction after treatment for rectal cancer was determined.

**Methods.**—A retrospective review was conducted of 53 consecutive patients (37 men), aged 38 to 65, who had surgery for rectal cancer from January 1993 to January 1999. Presurgical discussion and outcome were recorded.

**Results.**—No presurgical discussion was recorded for 37 patients (71%). Sexual dysfunction was reported by none of the men who had local