

YEAR BOOK®

YEAR BOOK OF ONCOLOGY 1990

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1990
**The Year Book of
ONCOLOGY**

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Journals Represented

Mosby–Year Book subscribes to and surveys nearly 850 U.S. and foreign medical and allied health journals. From these journals, the Editors select the articles to be abstracted. Journals represented in this YEAR BOOK are listed below.

Acta Cytologica
American Journal of Kidney Diseases
American Journal of Obstetrics and Gynecology
American Journal of Ophthalmology
American Journal of Pediatric Hematology/Oncology
American Journal of Public Health
American Journal of Roentgenology
Annals of Internal Medicine
Annals of Surgery
Archives of Disease in Childhood
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Archives of Surgery
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British Journal of Cancer
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Diseases of the Colon and Rectum
European Journal of Cancer and Clinical Oncology
Gynecologic Oncology
Human Pathology
Infection Control
International Journal of Cancer
International Journal of Radiation, Oncology, Biology and Physics
Journal of Clinical Epidemiology
Journal of Clinical Investigation
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Journal of Dermatologic Surgery and Oncology
Journal of Infectious Diseases
Journal of Investigative Dermatology
Journal of Neurosurgery
Journal of Pathology
Journal of Pediatric Surgery
Journal of Pediatrics
Journal of Urology
Journal of the American Medical Association
Journal of the American Osteopathic Association
Journal of the National Cancer Institute
Lancet

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Proceedings of the National Academy of Sciences
Radiation Research
Radiology
Radiotherapy and Oncology
Reviews of Infectious Diseases
S.A.M.J./S.A.M.T.—South African Medical Journal
Science
Seminars in Nuclear Medicine
Southern Medical Journal
Surgery
Surgery, Gynecology and Obstetrics
Therapeutic Drug Monitoring
Western Journal of Medicine
World Journal of Surgery

STANDARD ABBREVIATIONS

The following terms are abbreviated in this edition: acquired immunodeficiency syndrome (AIDS), the central nervous system (CNS), cerebrospinal fluid (CSF), computed tomography (CT), electrocardiography (ECG), and human immunodeficiency virus (HIV).

Publisher's Preface

We welcome Ralph R. Weichselbaum, M.D., as an Associate Editor of the YEAR BOOK OF ONCOLOGY Dr. Weichselbaum, Professor and Chairman at the Michael Reese/University of Chicago Center for Radiation Therapy, Head of the Michael Reese Department of Radiation Oncology, and Director of the Chicago Tumor Institute, selected and commented on material related to radiation oncology, imaging, lung tumors, and pathology.

Introduction

The 1990 YEAR BOOK OF ONCOLOGY is the second edition in its completely revised format. We have tried to identify interesting, provocative, and sometimes controversial articles from the entire spectrum of oncology that we feel will be of interest to our broad readership. These articles span all of the oncology disciplines as well as basic science, cancer prevention, and supportive care. The articles are as timely as is possible in a book format. The vast majority were published in 1989 and approximately 10% were published this year. In this way, we believe we can provide you with up-to-date reference material supplemented with comments from our editorial board.

This year we have included 307 articles that represent some of the most interesting information published in oncology this year and last. In addition, we have greatly expanded the additional reading lists and provided the complete reference and a brief comment on an additional 109 articles. These provide the reader with important supplemental reading and relevant additional references. We have sought to keep our comments thought-provoking and provocative, and hope that they enhance the interest in the subject or perhaps even stimulate further discussion or debate. We have asked and encouraged the editorial board to be open and forthright, and we hope that we have succeeded.

We are all committed to making this YEAR BOOK useful to you. We would appreciate any comments, suggestions, or criticisms that you might have.

Robert C. Young, M.D., F.A.C.P.

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1 Cancer Etiology

Introduction

The search for cancer causes continues at the most rapid possible pace permitted by the inadequate financial support for research. It is clear that cancer etiology is a complicated matter. Although a few rare tumors appear to be entirely related to genetic factors, genetic and environmental factors interact in this process in all but a small number of cases. Much of what we know about the contribution of environmental factors to cancer causation is derived from epidemiologic studies of populations at risk. However, it is exceedingly important to understand the strengths and limitations of epidemiologic data. Careful and methodologically sound epidemiologic studies can identify factors *associated* with risk, but experimental studies are required to establish causation.

In recent years there has been an increase in the troubling tendency to overinterpret epidemiologic data involving commonly used substances in daily life such as coffee and alcohol, and to advocate wholesale alterations of life-style as a method of decreasing cancer risk. As recently outlined by Alvan Feinstein (1), current epidemiologic methods “need substantial improvement to produce trustworthy scientific evidence.” He reviewed a number of studies linking coffee consumption, alcohol consumption, and reserpine usage with particular types of cancer. All of the highly statistically significant associations, which were much ballyhooed in the lay press, turned out to be rather seriously flawed. In short, despite peer review, the interpretation of epidemiologic results cannot safely be left exclusively to the epidemiologists.

Dan L. Longo, M.D.

Reference

1. Feinstein AR: *Science* 242:1257–1263, 1988.

Cancer Causation

Hepatitis B Virus, Aflatoxins, and Hepatocellular Carcinoma in Southern Guangxi, China

Yeh F-S, Yu MC, Mo C-C, Luo S, Tong MJ, Henderson BE (Guangxi Med College, Nanning, China; Univ of Southern California, Los Angeles; Huntington Mem Hosp, Pasadena)

Cancer Res 49:2506–2509, May 1, 1989

1–1

Although the incidence of primary hepatocellular carcinoma (PHC) in the United States and Western Europe is low, PHC is the third most com-

mon cancer in Chinese men and the fourth most common in Chinese women. Blood specimens from 7,917 men in 5 regions in southern Guangxi where the rate of PHC is extraordinarily high were examined to determine the roles of hepatitis B virus and aflatoxin B₁ in the development of PHC. The men, aged 25–64 years, had no evidence of PHC at the time of enrollment. Within 30,188 man-years of observation, 149 of the 7,917 men died, including 76 (51%) who died of PHC. Stored blood specimens from 2,072 of the men, including all who had died, were tested for hepatitis B surface antigen (HBsAg) by radioimmunoassay.

Of the 76 patients who died of PHC, 69 (91%) were positive for HBsAg at the time of enrollment in the study, compared to 22% of all members of the cohort. Of 4 patients who died of liver cirrhosis, (3) were HBsAg positive at the time of enrollment. No association between HBsAg positivity and other causes of death was noted.

All of the men were exposed to relatively high levels of aflatoxins through ingestion of moldy foods contaminated with aflatoxin B₁, which acts as a hepatic carcinogen in animals and might have a carcinogenic effect in humans. Aflatoxin B₁ exposure levels were estimated for the pop-

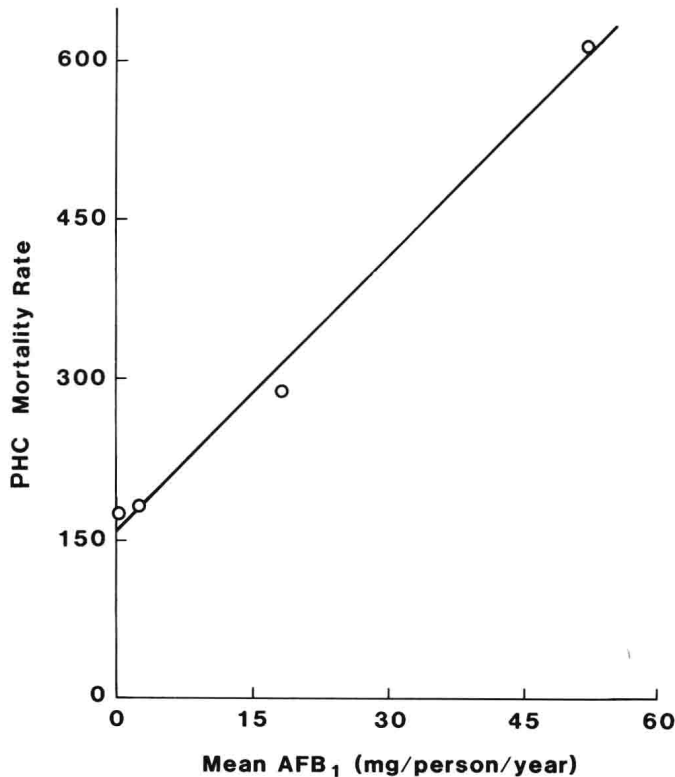


Fig 1—1.—The relationship between PHC mortality rate and dietary aflatoxin B₁ exposure in 4 communes in southern Guangxi, China. (Courtesy of Yeh F-S, Yu MC, Mo C-C, et al: *Cancer Res* 49:2506–2509, May 1, 1989.)