FRONTIERS IN GASTROINTESTINAL CANCER

Edited by
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PREFACE

Gastrointestinal cancer continues to be a significant factor in much human suffering. Unknown causes, changing epidemiological patterns, the difficulty of early diagnosis, and the apparent resistance of some malignancies to chemotherapeutic agents all serve to heighten the immense clinical and scientific challenges faced by the investigator and practicing physician.

The critical reader may well consider the term "frontiers" to be rather presumptuous. However, we feel that this volume does present a selection of important topics that convey some of the exciting scientific and clinical advances in this field. Distinguished investigators responded enthusiastically to our invitation to contribute manuscripts. We specifically requested them to discuss their own work in the context of the overall area. These "minireviews" cover topics ranging from etiology, pathogenesis, histopathology, and experimental carcinogenesis to therapy. We believe that our authors have succeeded admirably but will leave to the reader the ultimate judgment of our failure or success. At the very least, we hope we have been able to stimulate interest and controversy in this important area.

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Bernard Levin and Robert H. Riddell, *Editors-in-Chief*

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DIET AND ENVIRONMENT IN THE ETIOLOGY OF ESOPHAGEAL CARCINOMA

KAMBIZ DOWLATSHAHI, M.D., F.R.C.S., AND
SOHRAB MOBARHAN, M.D.

In most parts of the world, carcinoma of the esophagus is a rare disease. The incidence in the United States and Europe is 3 to 4 per 100,000 population per annum (Cutler and Young, 1975; Doll et al., 1970). In certain other areas, this rate increases more than twentyfold to almost 100 new cases per 100,000 population per annum, and esophageal cancer becomes the most frequently occurring neoplasm in the community (see Figures 1 and 2).

GEOGRAPHIC INCIDENCE

The sharp geographic demarcation between regions of high incidence of esophageal cancer and relatively close neighboring areas with a much lower incidence, such as in northeast Iran, has given rise to a great deal of scientific debate regarding the role of nutritional deficiencies and environmental carcinogens and their possible reciprocal interaction in the development of esophageal cancer. In recent years, a significant body of epidemiologic and biologic studies has accumulated suggesting that dietary factors, particularly micronutrients such as trace elements and vitamins, could influence carcinogenesis. These may act by modifying the activity of either carcinogens or host protective mechanisms against cancer. Esophageal cancer has a strong association with malnutrition secondary to poor economic conditions, special dietary habits, and/or alcoholism.

In our discussion, we will distinguish the predisposing factors, such as the nutritional status, from the promoting factors or carcinogens that act directly on the esophageal mucosa.

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