In the memory of
Dr. Eldon J. Gardner
Hereditary Colorectal Cancer

Proceedings of the Fourth International Symposium on Colorectal Cancer (ISCC-4)
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With 97 Figures

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Since the success in chemical induction of cancer in rabbit’s ear skin by K. Yamagiwa in 1915, oncologists of the world have come to believe that they can only solve their problems by means of animal experimentation. The importance of environmental factors became more evident in 1935 when T. Yoshida and T. Sasaki introduced azodye hepatocarcinogenesis in rats. In the domain of the gastrointestinal tract, T. Sugimura has more recently accumulated enough evidence to indicate that locally active chemical mutagens are carcinogenic.

In contrast, principal approaches to colorectal tumors have been quite different: emphasis has been placed on gene identification. Long before cancer of the large bowel was recognized, importance of the roles of adenomatosis coli and its familial occurrence attracted the attention of epidemiologists and geneticists. Morphological characterization and analysis of hereditary trends of human material have already had a long history, and recently detailed analysis of genetic material has become feasible in the wake of rapid development in our knowledge of the oncoviruses, oncogenes, suppressor genes, chromosomal and DNA mapping, molecular mutation and so on. It is true that in colorectal pathology, and in no other field, these areas of research have been explored more extensively and decisively. The identification of previously ill-defined lesions such as precancers and benign neoplasms have been improved because sequential changes can be observed in multiple samples spread over a wide area and followed up in due course.

Multidisciplinary approaches with close cooperation of surgeons, pathologists, molecular biologists, geneticists, and epidemiologists among others, have contributed greatly to recent developments and will surely continue to do so in the immediate future. The organization of the present conference and gathering of global experts owe much to the efforts of Prof. J. Utsunomiya who has dedicated many years to the compilation of genetic-epidemiological data in Japan, especially with reference to the adenomatosis. This publication coedited by Prof. J. Utsunomiya and Prof. H.T. Lynch represents another step forward toward solving remaining problems in this field.

KUNIO OOTA, M.D.
President, Japanese Association of Medical Sciences
Three International Symposia on Colorectal Cancer, organized under the Chairmanship of Dr. Sydney J. Winawer, and held at New York (1979), Washington (1981), and Boston (1983) respectively, had the following topics as their themes: (1) Prevention, Epidemiology, and Screening, (2) Risk Factors and Screening, and (3) Policy for Prevention.

As a sequel to this series of meetings, we had the opportunity of organizing the Fourth International Symposium on Colorectal Cancer, held in Kobe, Japan, on November 9–11, 1989 with the specific theme of “Hereditary Colorectal Cancer.” This topic is very timely, because of the imminent convergence of the fields of clinicoepidemiology and molecular genetics; the knowledge of colorectal cancer, accumulated through patient and persistent observations over many decades, has now reached a level at which the merging of incisive ideas and updated technology developed recently in molecular genetics promises to spark breakthroughs in major problems in cancer.

Under the term “Hereditary Colorectal Cancer,” we include the presently recognized heritable conditions known to be predisposed to colorectal cancer, which can be roughly classified into the polyposis syndromes and hereditary nonpolyposis colorectal cancer (HNPCC). We have particularly focussed upon: (1) identification, surveillance, and management of HNPCC especially; (2) chemoprevention in theory, research, and practice; and (3) clinicopathological and cytomolecular aspects for better understanding of the etiology and pathogenesis of the conditions; these aspects include: (a) clinical spectra; (b) histopathological diversity; (c) genetic heterogeneity; (d) genetic markers and linkage studies; (e) markers for presymptomatic diagnosis; and (f) cloning and characterization of relevant gene sequences.

The aim of the symposium was to create and maintain an active workshop spirit throughout the meeting in order to generate in-depth discussions between experts in the range of disciplines which have impact upon the field. Spontaneity was encouraged so that new frontiers of knowledge might be developed freely in an intellectually challenging atmosphere.

The three-day symposium began with two plenary sessions which included 10 “state-of-the-art” lectures. This was followed by the workshops, which comprised 75 papers in 6 sessions, organized as two parallel series: one focussed upon genetic epidemiology and clinical features,
while the other delved more heavily into basic science, particularly biomolecular genetics and pathology. Finally, these workshops were summarized by the respective chairpersons, with the primary intent of forecasting future research.

The program and content of this meeting were planned after painstaking discussions among the members of the several planning committees. These interdisciplinary interactions representing diverse fields contributed to the truly eclectic atmosphere which permeated the meeting. The symposium was attended by 70 distinguished speakers from an array of disciplines, including 18 from medicine, gastroenterology, and radiology, 18 from medical and biomolecular genetics, 16 from surgery and gynecology, 10 from pathology and biology, and 4 from epidemiology and biostatistics. These colleagues are from 15 different countries: 25 from the United States, 15 from Japan, 7 from the United Kingdom, 5 from Italy, 3 from the Netherlands, 2 from Denmark, and 1 each from Australia, Canada, Finland, France, Greece, Israel, New Zealand, Poland, and Sweden. Approximately 50 observers, mainly Japanese, joined in active discussion throughout the symposium.

This symposium was dedicated to the memory of Dr. Eldon J. Gardner, who contributed so much during most of his lifetime to the study of hereditary colorectal cancer. Dr. Gardner passed away during the period of conception of this symposium, and his contributions are greatly missed.

JOJI UTSUNOMIYA
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