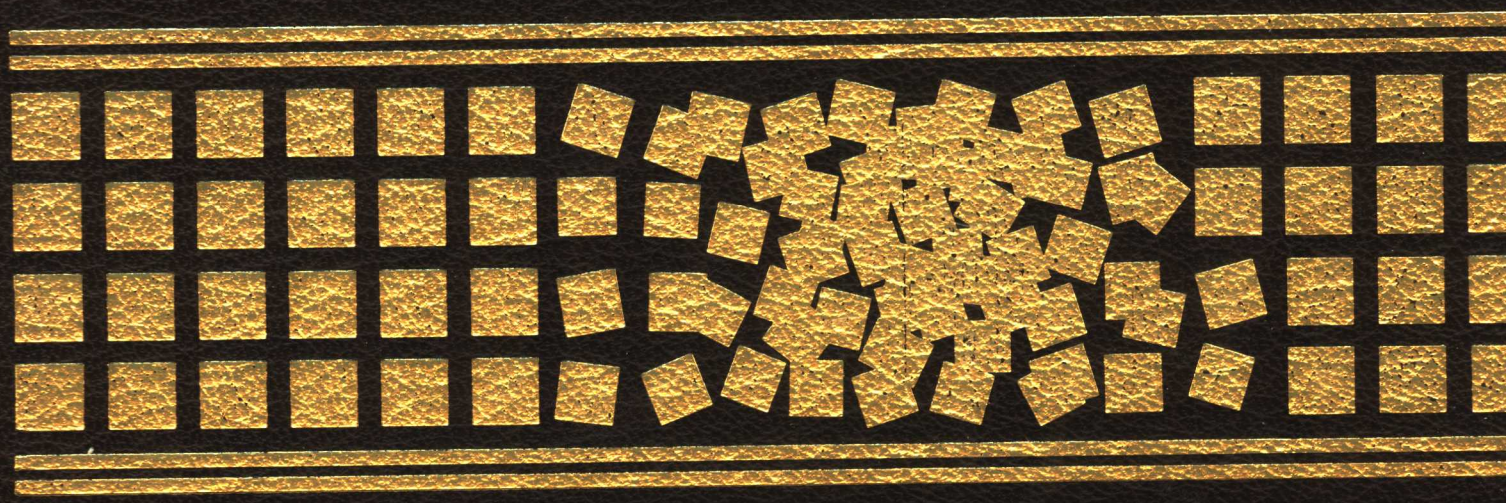
CANCER

Principles & Practice of Oncology

6th Edition



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Vincent T. DeVita, Jr.
Samuel Hellman
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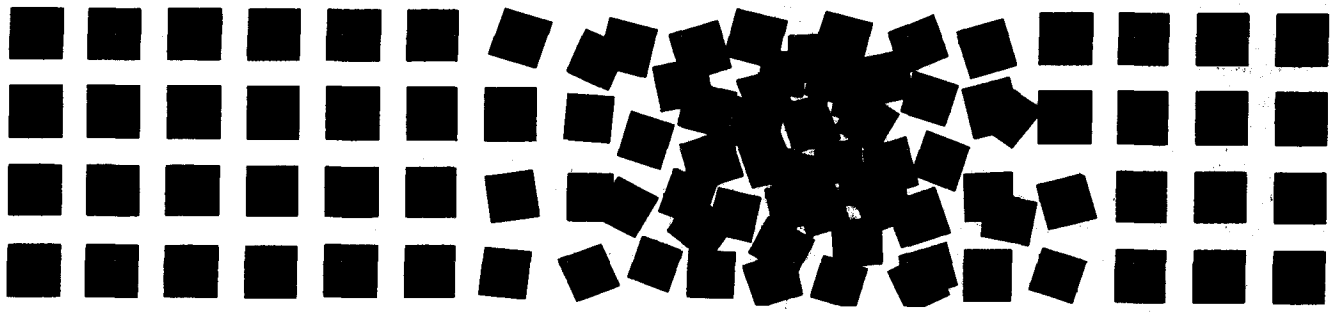

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PREFACE

The rapid pace of change in knowledge of the scientific basis and clinical practice of oncology presents a daunting challenge to the oncologist. The extraordinary increase in understanding of the molecular basis of cellular processes, the rise of biotechnology, and the steady refinement of each of the major treatment approaches have impacted every phase of the care of the cancer patient. In addition, an increased appreciation of the coordinated role of each of the main treatment modalities in the care of an individual cancer patient has emphasized the need for oncologists to be familiar with developments in all treatment modalities. Each edition of this text, first published in 1982, has attempted to help the oncologist keep pace with these changes.

In this sixth edition of *CANCER: Principles and Practice of Oncology,* we have again attempted to provide a comprehensive resource describing the science underlying recent clinical developments as well as complete information to aid the clinician in the panorama of clinical care ranging from cancer prevention to the care of the terminally ill patient. To accomplish this, the book has been divided into four parts.

PART 1: **Essentials of Modern Oncologic Science** presents a summary of the major areas of modern bioscience carefully distilled to provide the background necessary for an understanding of recent developments in oncology. Thus chapters on molecular biology, genomics, proteomics, signal transduction, and immunology present a primer for the oncologist in these important areas.

Part 2: **Principles of Oncology** has been reorganized to present in further detail the specific scientific areas of greatest relevance to the oncologist, including new chapters on cytogenetics, the cell cycle, apoptosis, and angiogenesis, as well as chapters on the etiology of cancer, and a clear description of modern epidemiologic methods and the incidence of and mortality from cancer.

Chapters on the principles underlying the four modalities of cancer treatment—surgery, radiotherapy, chemotherapy, and biologic therapy—present the basis for continuing changes in the development and application of these treatments. The pharmacology of cancer chemotherapeutics is presented, and a new section is introduced on the rapidly changing area of cancer biotherapeutics as these agents have entered into the practice of oncology.

The final chapter in PART 2 deals with the design and analysis of clinical trials as well as research data and management. As more and more patients are entering clinical trials, knowledge of these areas by the practicing oncologist is of special importance.

PART 3: **Practice of Oncology** provides the practicing clinician with the specific, practical information needed for the management of each cancer patient. Increased emphasis on cancer prevention relating to diet, tobacco, chemopreventive agents, fat, exercise, retinoids, naturally occurring dietary anticarcinogens, and many other areas are covered in detail. A new chapter on the role of surgery in cancer prevention details the emerging use of surgery in preventing cancer in high-risk individuals. Modern techniques of cancer screening, molecular pathology, imaging, and endoscopy are detailed in this section as well.

The hallmark of this book from its inception to the present and a major reason it has gained worldwide acceptance as a definitive source of cancer information has been the description of the treatment of cancer patients by stage of presentation with a tightly coordinated description of the role of each of the treatment modalities in the care of individual patients. To ensure a balanced multidisciplinary approach, each of the major treatment chapters is co-authored by a surgeon, a medical oncologist, and a radiation oncologist. Each of the major treatment sections is preceded by an updated, brief chapter describing the molecu-

lar biology of that cancer and the prospects this new information holds for the improved management of cancer patients.

Increased emphasis on supportive care, palliative care, and the quality of life of the cancer patient has led to an enlargement of sections dealing with these areas, including increased information on pain control and the nutritional, sexual, and psychosocial management of the cancer patient as well as issues related to the specialized care of the terminally ill.

PART 4: **Newer Approaches in Cancer Treatment** looks to the future of developments in oncology with special sections on gene therapy, molecular therapy, preventive and therapeutic cancer vaccines, image-guided surgery, and proton beam radiation therapy. In this section, we have attempted to identify those areas that we think will be of increasing value in the several years after the appearance of this text.

As we enter the twenty-first century, both the incidence and mortality of many of the major cancers are beginning to decline. We believe that the dissemination of carefully coordinated information of the scientific foundation and practice of oncology has played and will continue to play an important role in decreasing the devastating impact of cancer on modern society. We present the sixth edition of *CANCER: Principles and Practice of Oncology* to provide the practicing oncologist with the practical as well as cutting-edge information needed to provide the best possible care for each individual patient.

Vincent T. DeVita, Jr., MD
Samuel Hellman, MD
Steven A. Rosenberg, MD, PhD

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PART 1
ESSENTIALS OF MODERN ONCOLOGIC SCIENCE