
Contents

<i>Preface</i>	<i>v</i>
<i>Contributors</i>	<i>vii</i>

Section One. Principles of Chemotherapy

Scientific Foundation of Chemotherapy

Routes of Administration

1/ The Scientific Basis of Cancer Chemotherapy	2
John W. Yarbro, M.D., Ph.D.	
2/ Antineoplastic Drug Development	15
Barbara A. Conley, M.D.	
David A. Van Echo, M.D.	
3/ Principles of Pharmacology and Pharmacokinetics	22
Mark J. Ratain, M.D.	
Richard L. Schilsky, M.D.	
4/ The Norton-Simon Hypothesis	36
Larry Norton, M.D.	
5/ Drug Resistance	54
James H. Goldie, M.D., S.R.C.P.C.	
6/ Adjuvant Chemotherapy	67
Teresa Gilewski, M.D.	
Jacob D. Bitran, M.D.	
7/ Combination Chemotherapy	90
Michael L. Friedland, M.D.	
8/ Hematopoietic Growth Factors	96
Marc B. Garnick, M.D.	
9/ Combined Modality Therapy	110
Eric L. Raefsky, M.D.	
Todd H. Wasserman, M.D.	
10/ The Design and Interpretation of Clinical Trials	130
Richard Simon, Ph.D.	
Michael A. Friedman, M.D.	

11/ Biologic Response Modifiers: Principles of Immunotherapy	144
Susan A. Melin, M.D.	
Howard Ozer, M.D., Ph.D.	
12/ Chemotherapy: Circadian Timing and Toxicity	165
William J.M. Hrushesky, M.D.	
13/ Intraventricular Therapy	213
Arthur D. Forman, M.D.	
Victor A. Levin, M.D.	
14/ Intraperitoneal Chemotherapy	226
Maurie Markman, M.D.	
15/ Continuous Intravenous Infusion Chemotherapy	232
Robert W. Carlson, M.D.	
16/ Intraarterial Therapy	256
William D. Ensminger, M.D., Ph.D.	
17/ Perfusion Therapy	272
William G. Kraybill, M.D.	
18/ Bone Marrow Transplantation	280
Julie M. Vose, M.D.	
James O. Armitage, M.D.	

Section Two. Chemotherapeutic Drugs

19/ Alkylating Agents	286
Gerald H. Clamon, M.D.	
20/ Antimetabolites	301
Richard L. Schilsky, M.D.	
21/ Antitumor Antibiotics and Related Compounds	318
Charles E. Riggs, Jr., M.D.	
22/ Vinca Alkaloids and Epipodophyllotoxins	359
Eric K. Rowinsky, M.D., F.A.C.P.	
Ross C. Donehower, M.D., F.A.C.P.	
23/ Nitrosoureas	384
Edith P. Mitchell, M.D.	
Philip S. Schein, M.D.	
24/ Enzymes and Random Synthetics	398
Alan P. Lyss, M.D.	
25/ Hormonal Agents	413
Joseph Aisner, M.D.	
Mario A. Eisenberger, M.D.	
Joseph A. Fontana, M.D.	

26/ Biologics	430
Edward T. Creagan, M.D.	
27/ Investigational Drugs	439
Daniel R. Budman, M.D., F.A.C.P.	
Section Three. Management of Drug Toxicity	
28/ Hematologic Complications of Cancer Chemotherapy	498
H. Clark Hoagland, M.D., F.A.C.P.	
29/ Oral Toxicity	508
Douglas E. Peterson, D.M.D., Ph.D.	
Mark M. Schubert, D.D.S., M.S.D.	
30/ Dermatologic Toxicity	531
John D. DeSpain, M.D.	
31/ Extravasation	548
Gerald H. Clamon, M.D.	
32/ Hypersensitivity Reactions	553
Raymond B. Weiss, M.D.	
33/ Ocular Side Effects of Chemotherapy	570
Linda J. Burns, M.D.	
34/ The Cardiotoxicity of Chemotherapeutic Drugs	582
Ace Allen, M.D.	
35/ Pulmonary Toxicity of Antineoplastic Therapy	598
Harvey Kreisman, M.D.	
Norman Wolkove, M.D.	
36/ Gastrointestinal Toxicity of Chemotherapeutic Agents	620
Edith P. Mitchell, M.D.	
Philip S. Schein, M.D.	
37/ Hepatotoxicity of Chemotherapeutic Agents	635
Michael C. Perry, M.D., F.A.C.P.	
38/ Renal and Electrolyte Abnormalities Due to Chemotherapy	648
William P. Patterson, M.D.	
Garry P. Reams, M.D.	
39/ Neurotoxicity of Chemotherapeutic Agents	666
David R. MacDonald, M.D., F.R.C.P.C.	
40/ Vascular Toxicity	680
Q. Scott Ringenber, M.D.	
41/ Second Malignancies After Chemotherapy	689
Robert A. Kyle, M.D., F.A.C.P.	
Morie A. Gertz, M.D.	

42/ Chemotherapy in Pregnancy	703
Donald C. Doll, M.D.	

43/ Gonadal Toxicity and Teratogenicity	710
Ramona M. Chapman, M.D.	

Section Four. Combination Chemotherapy Programs

44/ Combination Chemotherapy Programs	756
Michael C. Perry, M.D., F.A.C.P.	

Section Five. Drug Administration

45/ Central Venous Access for Chemotherapy	780
Marvin J. Lopez, M.D.	

46/ Safe Handling of Cytotoxic Drugs: A Review	799
Bruce R. Harrison, M.S., R.Ph.	

47/ Stability and Compatibility of Intravenous Oncology Drugs	833
(Modified from Cetus Corporation)	

48/ Patient Education	853
Mary H. Johnson, M.S.N., R.N., O.C.N.	
Verna A. Rhodes, Ed.S., R.N.	

49/ Nursing Implications in the Administration of Cancer Chemotherapy	873
Connie Henke Yarbro, R.N., B.S.N.	

Section Six. Current Therapy of Specific Tumors

50/ Chemotherapy of Melanoma	886
Michael J. Mastrangelo, M.D.	
Robert E. Bellet, M.D.	
Michael J. Kane, M.D.	
David Berd, M.D.	

51/ Chemotherapy of Primary Brain Tumors	908
Roy A. Patchell, M.D.	

52/ Head and Neck Cancer	918
Everett E. Vokes, M.D.	

53/ Chemotherapy of Lung Cancer	932
Vicki A. Morrison, M.D.	
Sharon D. Luikart, M.D.	

54/ Chemotherapy of Breast Cancer	948
Carl G. Kardinal, M.D., F.A.C.P.	

55/ Chemotherapy of Gastrointestinal Cancer	989
Michael C. Perry, M.D., F.A.C.P.	

56/ Chemotherapy of Endocrine Tumors	998
Ronald L. Stephens, M.D.	
57/ Chemotherapy of Genitourinary Cancer	1008
Nicholas J. Vogelzang, M.D.	
58/ Chemotherapy of Gynecologic Cancer	1039
J. Tate Thigpen, M.D.	
59/ Sarcomas of Bone and Soft Tissue	1068
Karen H. Antman, M.D.	
60/ Chemotherapy of Hematologic Malignancies	
<i>Part 1. Leukemias and Lymphomas</i>	1094
James K. Weick, M.D.	
<i>Part 2. The Treatment of Multiple Myeloma and Related Plasma Cell Dyscrasias</i>	1110
Medhi Farhangj, M.D., F.A.C.P.	
Ali Khojasteh, M.D., F.A.C.P.	
61/ Pediatric Solid Tumors	1122
Nasrollah Hakami, M.D.	
Appendix/ WHO Toxicity Guidelines	1132
Michael C. Perry, M.D., F.A.C.P.	
Index	1145

