

# De Novo And Acquired Resistance To Immune Checkpoint

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**Role of Radiotherapy in the Era of Targeted Therapy and Precision**

**Oncology** - Kevin X. Liu 2022-02-03

**Theranostics and Precision Medicine for the Management of Hepatocellular Carcinoma, Volume 3** - Ganji

Purnachandra Nagaraju 2022-04-15

Theranostics and Precision Medicine for the Management of Hepatocellular Carcinoma: Translational and Clinical Outcomes, Volume Three provides comprehensive information about ongoing research and clinical data on liver cancer. The book presents detailed descriptions about diagnostics and therapeutic options for easy understanding, with a focus on precision medicine approaches to improve treatment outcomes. This updated volume discusses topics such as clinical and safety assessment of HCC patients, liver transplantation as a therapeutic option, immunotherapy interventions, and image-based surveillance. In

addition, it discusses immunohistology of HCC-enabled precision medicine and artificial intelligence for hepatocellular carcinomas. This is a valuable resource for cancer researchers, oncologists, graduate students, hepatologists and members of biomedical research who need to understand more about liver cancer to apply in their research work or clinical setting. Provides best practices for the management of hepatocellular carcinoma in the clinical setting Discusses emerging treatment approaches based on artificial intelligence and precision medicine tools and techniques Brings updated information on international clinical trials for the treatment of HCC  
Drug-Resistance in Cancer Cells: A

New Wine in an old Bottle - Leonardo Freire-de-Lima 2023-04-05

Cancer Immunotherapy Principles and Practice, Second Edition - Lisa H. Butterfield, PhD 2021-08-25

Thoroughly updated to reflect major advances in the field of immunoncology, this second edition of Cancer Immunotherapy Principles and Practice, from the Society for Immunotherapy of Cancer (SITC), remains the definitive resource for information on tumor immunology and cancer immunotherapy treatments. An essential reference for both novice and experienced cancer researchers, oncologists, and related practitioners alike, the book not only guides readers through the fundamental scientific principles of the field all the way to

translational and practical clinical applications for treating and managing oncologic disease, but also provides a comprehensive understanding of the regulatory processes that support the safe and effective delivery of immunotherapy to patients with cancer. The expanded and updated second edition now spans 68 chapters, including 12 new chapters, covering major topics and innovations that have shaped the rapid development of immunotherapy and its ascension into the standard of care as first-line treatment for a growing number of disease settings. New to this edition are chapters with deeper insight into our understanding of cancer genomics and determinants of response, immunogenic cell death, cancer and stromal cell-intrinsic pathways of immune resistance, cancer

immune exclusion, adoptive cell therapy, metabolomics, tumor mutation burden, immunotherapy in combination with radiation therapy, synthetic biology, and more. Complete with detailed illustrations, tables, and key points for targeted reference, *Cancer Immunotherapy Principles and Practice, Second Edition* is the most comprehensive and authoritative resource for scientists and clinicians looking to expand their knowledge base of this dynamic field. Key Features: Offers key insights and perspectives on cancer immunology and immunotherapy treatments from renowned experts in the field Covers the basic principles and science behind cancer immunotherapy and tumor immunology Includes treatment strategies for a vast array of available immunotherapy classes and

agents, such as cytokine therapies, oncolytic viruses, cancer vaccines, CAR T therapies, and combination immunotherapies Provides essential information on FDA-approved immunotherapies, including clinical management and outcome data related to response rates, risks, and toxicities Discusses special considerations for immunotherapy in the context of specific disease settings, including skin cancers, genitourinary cancers, gastrointestinal cancers, hepatocellular carcinomas, gynecologic malignancies, breast cancers, lung cancers, head and neck cancers, brain tumors, sarcomas, pediatric cancers, and treatments combined with radiation therapy Clarifies the complex regulatory aspects behind the development and

approval of immunotherapy drugs  
**RNA Delivery Function for Anticancer  
Therapeutics** - Loutfy H. Madkour  
2022-01-26

This book presents an overview of the current status of translating the RNAi cancer therapeutics in the clinic, a brief description of the biological barriers in drug delivery, and the roles of imaging in aspects of administration route, systemic circulation, and cellular barriers for the clinical translation of RNAi cancer therapeutics, and with partial content for discussing the safety concerns. It then focuses on imaging-guided delivery of RNAi therapeutics in preclinical development, including the basic principles of different imaging modalities, and their advantages and limitations for biological imaging. With growing

number of RNAi therapeutics entering the clinic, various imaging methods will play an important role in facilitating the translation of RNAi cancer therapeutics from bench to bedside. RNAi technique has become a powerful tool for basic research to selectively knock down gene expression in vitro and in vivo. Our scientific and industrial communities have started to develop RNAi therapeutics as the next class of drugs for treating a variety of genetic disorders, such as cancer and other diseases that are particularly hard to address with current treatment strategies. Key Features Provides insight into the current advances and hurdles of RNAi therapeutics. Accelerates RNAi, miRNAs, and siRNA drug development for cancer therapy from bench to

bedside. Addresses various modifications and novel delivery strategies for miRNAs, piRNAs and siRNA delivery in anticancer therapeutics. Explores the need for the interaction of hematologists, cell biologists, immunologists, and material scientists in the development of novel cancer therapies. Describes the current status of clinical trials related to miRNA and siRNA-based cancer therapy. Presents remaining issues that need to be overcome to establish successful therapies.

Molecular Biochemical Aspects of Cancer - Undurti N. Das 2020-05-30

This book discusses the role of genes, oncogenes, anti-oncogenes, free radicals, PUFAs, anti-oxidants, lipid peroxidation process, telomere, and angiogenesis on the origin of

cancer, cell proliferation, and cancer in general. It includes a broad introduction to cancer cells; genes, oncogenes, and anti-oncogenes; and free radicals. In later chapters, it discusses in depth the relationship among free radicals, lipid peroxidation and anti-oxidants in cell proliferation. It also discusses aerobic and anaerobic metabolism and their relationship to cancer, as well as the Warburg effect and its potential in the development of new targets for cancer management. Based on these and other evidences, Molecular Biochemical Aspects of Cancer introduces a novel concept that suggests that selective enhancement of free radical generation in tumor cells could form a strategy to induce apoptosis of cancer cells employing bioactive

lipids. It presents a new method of treatment of cancer using in vitro, in vivo and clinical data. This book will interest oncologists, scientists, molecular biologists, life scientists.

*Targeted Therapy of Colorectal Cancer Subtypes* - Peter Jordan 2019-01-08

Colorectal cancer (CRC) is a leading cause of cancer-related death worldwide. Recent years have increased significantly our understanding of the genetic alterations that can underlie CRC, but also unraveled the molecular heterogeneity of the disease. Although a simple correlation between genetic pathways, histopathological features and clinical outcome cannot be established, the heterogeneity of CRC is also an opportunity for the development of targeted therapeutic

approaches, able to treat an individual tumor with higher efficiency and less toxic side effects. One CRC subtype is characterized by high mutation rates (MSI-H), DNA methylation changes (CIMP-H), mutation in the BRAF oncogene and occurrence of serrated adenomas in the proximal colon. Other groups prevail in the distal colon and consist of either adenomatous polyps with chromosomal aberrations (CIN) and WNT pathway activation, or carry frequent KRAS mutation and metabolic deregulation, or have strong mesenchymal and infiltrative characteristics. Characterization of driver-mutation events in these CRC subgroups has led to the development of specific drugs targeting, for example, the MAPK pathway, but initial clinical trials have revealed

unexpected response rates. The collection of chapters in this volume address the biology of specific CRC subtypes and how these may be targeted to improve precision therapy and clinical benefit for the patients.

### **Nanotechnology-Based Targeted Drug Delivery Systems for Lung Cancer -**

Prashant Kesharwani 2019-01-26

Nanotechnology-based Targeted Drug Delivery Systems for Lung Cancer is an indispensable resource that will help pharmaceutical scientists and clinical researchers design and develop novel drug delivery systems and devices for the treatment of lung cancer. As recent breakthroughs in nanomedicine are now making it possible to deliver drugs, genes and therapeutic agents to localized areas of disease to maximize clinical

benefit, while also limiting unwanted side effects, this book explores promising approaches for the diagnosis and treatment of lung cancer using cutting-edge nanomedical technologies. Topics discussed include polymeric nanoparticles, solid lipid nanoparticles, liposomes, dendrimers, micelles and nanoemulsions. Provides an overview of an array of nanotechnology-based drug delivery systems Examines the design, synthesis and application of different nanocarriers in drug and gene delivery Provides an in-depth understanding of the design of targeted nanotherapeutics and technologies and its implication in various site-specific cancers *Genetic and Epigenetic Control on Immune Responses Regulating Molecules in Cancer Development, Progression,*



*and Treatment* - Katherine  
Chiappinelli 2021-11-30

**Liver Diseases** - Florentina Radu-  
Ionita 2020-01-10

This book provides an in-depth coverage not only of liver pathology but also of diagnosis of the numerous types of liver disease, placing specific emphasis on current treatments of liver pathology including the most up-to-date information on liver transplantation. The first part provides an in-depth account of the liver pathology in different conditions such as Hepatitis, liver ischaemia reperfusion injury, Lyme disease, cirrhotic cardiomyopathy and hepatocellular carcinoma. The second part provides a comprehensive overview of diagnostic methods. Of particular interest are

chapters on the latest techniques in Patient-specific 3D printing and transient elastography (FibroScan). The final part focuses on treatment and provides a step-by step guide to the therapeutic management of liver diseases starting with pharmacological treatment and techniques including surgery and liver transplantation. This is an invaluable book for clinicians, practitioners including academics, scientists/researchers and postgraduates to provide the newest knowledge in the field of liver pathogenesis. It is written by a multidisciplinary team of experts in hepatology, gastroenterology, and surgery especially from liver transplantation.

*Particles and Nanoparticles in  
Pharmaceutical Products* - Henk G.

Merkus 2018-09-06

This edited volume brings together the expertise of numerous specialists on the topic of particles – their physical, chemical, pharmacological and toxicological characteristics – when they are a component of pharmaceutical products and formulations. The book discusses in detail properties such as the composition, size, shape, surface properties and porosity of particles with respect to how they impact the formulations and products in which they are used and the effective delivery of pharmaceutical active ingredients. It considers all dosage forms of pharmaceuticals involving particles, from powders to tablets, creams to ointments, and solutions to dry-powder inhalers, also including the latest nanomedicine products.

Further, it discusses examples of particle toxicity, as well as the important subject of pharmaceutical industry regulations, guidelines and legislation. The book is of interest to researchers and practitioners who work on testing and developing pharmaceutical dosage and delivery systems.

*Next-Generation Cancer Therapies based on a (R)evolution of the Biomarker Landscape* - Claudia Cerella  
2022-03-30

**AACR 2019 Proceedings: Abstracts 2749-5314** - American Association for Cancer Research 2019-03-08  
American Association for Cancer Research 2019 Proceedings: Abstracts 1-2748 - Part B  
Tumor Microenvironment - Alexander Birbrair 2020-10-29

Revealing essential roles of the tumor microenvironment in cancer progression, this book focuses on the role of hematopoietic components of the tumor microenvironment. Further, it teaches readers about the roles of distinct constituents of the tumor microenvironment and how they affect cancer development. Topics include eosinophils, NK cells,  $\gamma\delta$  T cells, regulatory T Cells, Langerhans cells, hematopoietic stem cells, Mast cells, B cells and Microglia, and more. Taken alongside its companion volumes, Tumor Microenvironment: Hematopoietic Cells – Part B updates us on what we know about various aspects of the tumor microenvironment as well as future directions. This book is essential reading for advanced cell biology and cancer biology students as well as

researchers seeking an update on research in the tumor microenvironment.

**Lung Cancer** - Anne C. Chiang  
2021-09-30

Lung cancer has seen a paradigm shift in disease treatment over the past few years, with major changes in the therapeutic drugs now available as well as in the overall management approach. For targeted and immunotherapeutic approaches, understanding the biology of acquired resistance is a key strategy that has yielded productive advances in the subsequent treatment. Future advances also include incorporating biomarker data obtained from solid and liquid biopsies, as well as combination of immunotherapy with radiotherapy and in special populations such patients with CNS involvement.

Lipid Metabolism in Tumor Immunity -

Yongsheng Li 2021-03-19

This book focuses on lipid metabolism in tumor immunity, covering the application of lipidomics in tumor immunity and all aspects of lipid metabolism in tumor microenvironment. During the progression of tumors, tumor cells and immune cells interact in a dynamic microenvironment. Targeting the immune system has a high potential for treating cancer. However, due to the high heterogeneity of the tumor microenvironment, only a small percentage of patients experience such clinical benefits of tumor immunotherapy. Therefore, understanding the tumor microenvironment is crucial for tumor immunity. Recently, lipid metabolism is an emerging research direction and

contributes to cell survival and biofunctions in tumor microenvironment, which is of great interest and significance to be elucidated. This book provides the doctors, researchers, and scientists with a cutting-edge overview of the lipid metabolism and its role in tumor immunity. It also yields benefits for pharmaceutical companies regarding drug discovery.

The Elusive Road Towards Effective Cancer Prevention and Treatment -

Franklyn De Silva 2022-10-28

Cancer will remain a global major health problem unless new diagnostic, prognostic, and management approaches are discovered to address both loss of life and quality of life. Here we summarize the general physiology, pathology, heterogeneity, and evolution of cancer, current status,

limitations and challenges associated with prevention, incidence, treatment, survival, and mortality, as well as future directions with regards to solid tumors. Perspectives are provided on how to improve pre-clinical understandings, outcomes, and patient care. Further, this comprehensive, timely overview of the literature has educational value as part of an academic course, seminar, or as a supplementary text.

**Oncoimmunology** - Laurence Zitvogel  
2017-12-13

In this book, leading experts in cancer immunotherapy join forces to provide a comprehensive guide that sets out the main principles of oncoimmunology and examines the latest advances and their implications for clinical practice, focusing in particular on drugs with

FDA/EMA approvals and breakthrough status. The aim is to deliver a landmark educational tool that will serve as the definitive reference for MD and PhD students while also meeting the needs of established researchers and healthcare professionals. Immunotherapy-based approaches are now inducing long-lasting clinical responses across multiple histological types of neoplasia, in previously difficult-to-treat metastatic cancers. The future challenges for oncologists are to understand and exploit the cellular and molecular components of complex immune networks, to optimize combinatorial regimens, to avoid immune-related side effects, and to plan immunomonitoring studies for biomarker discovery. The editors hope that this book will guide future and

established health professionals toward the effective application of cancer immunology and immunotherapy and contribute significantly to further progress in the field.

**Head & Neck Cancer and Esophageal Cancer: From Biosignatures to Therapeutics** - Victor C. Kok  
2021-05-11

**Immunotherapy in Multiple Myeloma** - Nicola Giuliani  
2019-11-26

**Current Applications for Overcoming Resistance to Targeted Therapies** - Myron R. Szewczuk  
2019-07-15  
Targeted therapies were initially developed to exploit the upregulation and dependence on key oncogenic pathways critical to cancer progression. Additionally, they also presented as a method to overcome

chemoresistance by supplementing conventional therapeutic regimens with targeted therapies. However, the development of resistance to these combinatorial approaches has led to the reassessment of currently available therapeutic options to overcome resistance to targeted therapy. This book aims to provide an update on the advancements in the therapeutic arms race between cancer, clinicians and scientists alike to overcome resistance to targeted therapies. Subject experts provide a comprehensive overview of the challenges and solutions to resistance to several conventional targeted therapies in addition to providing a discussion on broad topics including targeting components of the tumor microenvironment, emerging therapeutic options, and

novel areas to be explored concerning nanotechnology and the epigenome.

**Updated Landscape of the Tumor Microenvironment and Targeting Strategies in an Era of Precision Medicine** - Yu Sun 2017

Despite successive advances in clinical diagnosis and therapeutic intervention, cancer-associated morbidity and mortality keeps up with escalating cost to human society. Clinicians are confronted with an unprecedented challenge in curing cancers with de novo or acquired resistance. Failure to achieve effective and long-lasting treatment effects arises from the complexity of malignancies, particularly when plasticity of cancer cells is coupled with survival adaptability conferred by the pathologically co-opted stroma in the tumor microenvironment (TME).

Targeting immune checkpoints, such as programmed cell death 1 (PD-1), programmed cell death ligand 1 (PD-L1) and cytotoxic T lymphocyte antigen 4 (CTLA4), provide significant benefit in multiple tumor types and produce substantial anticancer responses. Tissue resident stromal cells, although damaged together with cancer cells upon cytotoxic treatments, represent an ever-replenishing source that contributes to tumor restoration from residual cancer cells in the post-therapy stage. The TME displays a continually changing landscape, generating significant impacts on treatment outcome in clinics. Moving forward, implementing patient-specific analysis in clinical oncology with TME-oriented agents will significantly improve the

specificity and efficacy of targeted therapies, thereby accelerating the translation of novel conceptions and groundbreaking discoveries in the TME biology through multiple bench-to-bed pipelines in current settings of precision cancer medicine.

**Evidence-based Advance and Management of Adverse Events of Immunotherapy for Cancer** - Yonggang Zhang  
2020-12-22

This eBook is a collection of articles from a Frontiers Research Topic. Frontiers Research Topics are very popular trademarks of the Frontiers Journals Series: they are collections of at least ten articles, all centered on a particular subject. With their unique mix of varied contributions from Original Research to Review Articles, Frontiers Research Topics unify the most

influential researchers, the latest key findings and historical advances in a hot research area! Find out more on how to host your own Frontiers Research Topic or contribute to one as an author by contacting the Frontiers Editorial Office: [frontiersin.org/about/contact](https://frontiersin.org/about/contact).

Medicines for Cancer - Surya K. De  
2023-04-25

Medicines for Cancer: Mechanism of Action and Clinical Pharmacology of Chemo, Hormonal, Targeted, and Immunotherapies covers most known anti-cancer therapeutics. Cancer is the second leading cause of death worldwide, with its various forms resulting in nearly one out of every six mortalities each year. This book describes all US FDA-approved drugs (up to 2021), such as small molecules, peptides, monoclonal



antibodies, whole antibodies, gene therapy, antibody-drug conjugates, cell therapy, and immunotherapies, along with information on their generic and brand names, medical uses, details dosage, mechanisms of actions, pharmacokinetics and side effects. Chemical structures of small molecules, small peptides, antibody-drug conjugates are also provided. This book is ideal for medicinal chemists, oncologists, and pharmacologists, but it will also be indispensable for professional researchers, whether they are working in the clinic or the pharmaceutical industry. Covers precise information on each drug treatment Catalogues and lists all FDA-approved drugs for cancer group by chemical classes Provides easy access to specific drugs

### **Immune Checkpoint Inhibitors in Cancer** - Fumito Ito 2018-09-03

Get a quick, expert overview of the latest clinical information and guidelines for cancer checkpoint inhibitors and their implications for specific types of cancers. This practical title by Drs. Fumito Ito and Marc Ernstoff synthesizes the most up-to-date research and clinical guidance available on immune checkpoint inhibitors and presents this information in a compact, easy-to-digest resource. It's an ideal concise reference for trainee and practicing medical oncologists, as well as those in research. Discusses the current understanding of how to best harness the immune system against different types of cancer at various stages. Helps you translate current research and literature into

practical information for daily practice. Presents information logically organized by disease site. Covers tumor immunology and biology; toxicities associated with immune checkpoint inhibitors; and future outlooks. Consolidates today's available information on this timely topic into one convenient resource. *Cancer Immunotherapies* - Priya Hays 2022-05-12

This book presents the clinical scope of cancer immunotherapeutic agents for solid tumors and Hematologic malignancies, elaborates on the scientific details of their modes of action, and presents the impact of these agents on oncology, patients and the broader healthcare system. At present, cancer immunotherapies fall broadly into three categories: immune checkpoint inhibitors (ICIs),

adoptive T cell therapies, and cancer vaccines which have distinct mechanisms of action. Immune checkpoint inhibitors rely upon disrupting tumor antigen recognition as self by the immune system through inhibition of checkpoint molecules. Adoptive T cell therapies involve the engineering of T cells ex vivo to target and destroy tumor cells. The first part of this book will provide an overview of the discovery and mechanistic details of the technology. The second part will be devoted to elaborating on the clinical outcomes, successes and limitations for specific tumor subtypes, which includes both solid tumors and hematologic malignances for both pediatric and adult populations. As such, the book offers a valuable resource for oncologists,

hematologists, and all those seeking an up-to-date overview of cancer immunotherapies.

*Omics Data Integration towards Mining of Phenotype Specific Biomarkers in Cancers and Diseases* - Liang Cheng  
2022-02-16

**Advances in Pulmonary Diseases:  
Cellular Pathology, Molecular  
Targets, Novel Diagnosis and Therapy**  
- Huahao Shen 2022-03-30

*Approaches to Advance Cancer Vaccines to Clinical Utility* - An M. T. Van Nuffel 2019-12-27

Although cancer vaccines have yielded promising results both in vitro and in animal models, their translation into clinical application has not been very successful so far. Through the success of immune checkpoint

inhibitors, the tumor immunotherapy field revived and led to important new insights. A better understanding of the functional capacity of different dendritic cell (DC) subsets and the immunogenicity of tumor antigens, more particularly of neoantigens, have important implications for the improvement of cancer vaccines. These insights can guide the development of novel strategies, to enhance the clinical utility of cancer vaccines. The aim of this Research Topic is therefore to provide a comprehensive overview of current issues regarding cancer vaccine development with an emphasis on novel approaches toward enhancing their efficacy.

*AACR 2022 Proceedings: Part A Online-Only and April 10* - American Association for Cancer Research

2022-05-09

The AACR Annual Meeting is the focal point of the cancer research community, where scientists, clinicians, other health care professionals, survivors, patients, and advocates gather to share the latest advances in cancer science and medicine. From population science and prevention; to cancer biology, translational, and clinical studies; to survivorship and advocacy; the AACR Annual Meeting highlights the work of the best minds in cancer research from institutions all over the world.

Female and Male Fertility Preservation - Michael Grynberg

2022-01-01

This book comprehensively addresses female and male fertility preservation. It discusses in detail

all major aspects of fertility preservation in both sexes, explains the basis of fertility preservation, and highlights the currently available techniques; further chapters are dedicated to specific diseases. The book offers an essential reference guide for all physicians, specialists or not, seeking to improve their grasp of female and male fertility preservation.

**Nanoparticle-Based Drug Delivery in Cancer Treatment** - Loutfy H. Madkour

2022-03-03

The careful choice of nanoparticles as targets and in drug delivery routes enhances therapeutic efficacy in cancer. Nanoparticle-Based Drug Delivery in Cancer Treatment discusses nanotechnological developments of interfering RNA-based

nanoparticles, delivery vehicles, and validated therapeutic RNAi–molecular target interactions and explains the results of clinical and preclinical trials. The book also gives strategies for universal methods of constructing hybrid organic–inorganic nanomaterials that can be widely applied in the biomedical field. Key Features: Reviews recent advances of nanoparticle-mediated siRNA delivery systems and their application in clinical trials for cancer therapy Focuses on material platforms that establish NPs and both localized and controlled gene silencing Emphasizes the most promising systems for clinical application Surveys progress in nanoparticle-based nanomedicine in cancer treatment Describes the most advanced of the nonviral nanocarriers for delivery of oligonucleotides to

malignant blood cancer cells This book is a valuable resource for researchers, professors, and students researching drug delivery, gene carriers, cancer therapy, nanotechnology, and nanomaterials. Practical Manual for Dermatologic and Surgical Melanoma Management - Delphine J. Lee 2020-05-11 This book provides a practically applicable resource for all clinicians managing patients with or who may develop melanoma. Each chapter focuses on clinically relevant information on the latest advances in the field, including techniques for early detection of skin cancers, cross-sectional imaging and staging of regional nodes. Algorithms for clinical decision-making along with clinical vignettes are incorporated into each chapter,

enabling the reader to develop a deep understanding of how to manage a range of scenarios. Practical Manual for Dermatologic and Surgical Melanoma Management systematically details the latest diagnostic criteria, treatment guidelines and management techniques available for treating these patients and is a valuable resource for the trainee and practising clinician.

**Nanoformulation Strategies for Cancer Treatment** - Sarwar Beg 2020-11-20  
Nanoformulation Strategies for Cancer Treatment provides an up-to-date review on current developments and regulatory and clinical challenges in the field of nanopharmaceuticals and the effective treatment of diverse varieties of cancer. This important reference source is ideal for biomaterials scientists and

pharmaceutical scientists working in the area of cancer diagnosis and therapy. Due to the high cost of traditional cancer treatment types, researchers have increasingly looked for new ways to augment the therapeutic performance of existing drug candidates. The use of nanotechnology-based approaches have gained significant momentum, thus leading to the launch of a series of new drug products. As nanopharmaceuticals improve the therapeutic performance of cancer therapy drugs, but also provide opportunities for site-specific drug targeting in tumors, this work is a welcomed resource on the topics discussed. Highlights the application of nanoformulations, including liposomes, nanoparticles and nanobiomaterials for targeted drug

delivery to cancer cells Explores recent advances made using novel nanoformulations containing herbal drugs and biotechnology based therapeutic strategies for cancer treatment Assesses the regulatory hurdles that are necessary for the successful clinical translation of nanomedicines from the laboratory into the market

**The Epithelial-to-Mesenchymal Transition (EMT) in Cancer** - Joëlle Roche 2018-04-09

This book is a printed edition of the Special Issue "The Epithelial-to-Mesenchymal Transition (EMT) in Cancer" that was published in *Cancers Mechanisms of Resistance in Head and Neck Cancers* - 2022-08-08

*Tumor Micro-environment and Drug Resistance* - Wei Zhao 2022-02-16

*Colorectal Liver Metastasis* - Jean-Nicolas Vauthey 2022-11-24

This book provides a practically applicable guide to the management of liver metastases in cases of colorectal cancer. It features detailed reviews of the latest diagnostic and therapeutic options. Instruction on how to appropriately apply surgical techniques including two stage hepatectomy as well as both laparoscopic and open resection in a variety of scenarios is covered. The use of systemic therapies involving oxaliplatin, immunotherapy and infusional therapy are also described along with a range of surveillance strategies. Vauthey and Adam *Colorectal Liver Metastasis* comprehensively covers the latest advances in how to successfully diagnose and treat colorectal liver

metastases and is an indispensable resource for all trainee and practicing medical professionals who encounter these patients within their clinical practice.

**CRISPR** - Erik J. Sontheimer  
2022-09-19

CRISPR CRISPR: BIOLOGY AND APPLICATIONS “An excellent compendium of all things CRISPR from some of the leading minds in the field. With thorough coverage from every angle and beautifully detailed illustrations, this book is not to be missed!” Jennifer A. Doudna, Professor of Chemistry, Biochemistry & Molecular Biology, UC Berkeley; Founder, Innovative Genomics Institute; Nobel Laureate and coinventor of CRISPR technology “This journey through CRISPR biology and several of its breakthrough

applications offers an exciting glimpse into one of the most beautiful and compelling fields in the life sciences.” David R. Liu, Director of the Merkin Institute at the Broad Institute of MIT and Harvard; Professor of Chemistry and Chemical Biology at Harvard University; coinventor of base editing and prime editing “A must read! The CRISPR topics, written by world-leading experts, span from the fascinating mechanistic underpinnings to the ingenious applications. One can read from start to finish or pick and choose themes. Either way, the book delivers utterly enjoyable learning!” Bonnie Bassler, Squibb Professor and Chair, Princeton University Department of Molecular Biology; Howard Hughes Medical Institute Investigator CRISPR-Cas



systems have revolutionized the science of gene editing and their possible applications continue to expand, from basic research to potentially groundbreaking medical and commercial uses. Led by a distinguished team of editors, CRISPR: Biology and Applications explores the subject matter needed to delve into this fascinating area.

Topics covered include:

Classification and molecular mechanisms of CRISPR-Cas systems  
CRISPR-Cas evolution, regulation, expression, and function  
Uses for gene editing and modulation of gene expression  
CRISPR-based antimicrobials and phage resistance for medical and industrial purposes  
Written by internationally renowned authors, CRISPR: Biology and Applications serves as both an

introductory guide for those new to the field and an authoritative reference for seasoned researchers whose work touches this evolving and headline-making science.

### **Targeted Therapies in Cancer -**

Manfred Dietel 2007-06-10

From its introduction, oncological chemotherapy has been encumbered by poor selectivity because antiproliferative drugs are often toxic not only to tumor cells but also to important populations of the body's non-neoplastic cells. Modern targeted therapies interact with defined molecules present on cancer cells, adding increased selectivity to their toxic effects. This book presents an integrated critical view on the theories, mechanisms, problems and pitfalls of the targeted therapy approach.