1. Record Nr. UNINA9910298295303321

Titolo	Genomic Instability and Cancer Metastasis : Mechanisms, Emerging Themes, and Novel Therapeutic Strategies / / edited by Chris Maxwell, Cal Roskelley
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2015
ISBN	3-319-12136-7
Edizione	[1st ed. 2015.]
Descrizione fisica	1 online resource (252 p.)
Collana	Cancer Metastasis - Biology and Treatment, , 1568-2102 ; ; 20
Disciplina	570 571.6 610 611.01816
Soggetti	Cancer - Research Medicine Molecular biology Life sciences Cytology Cancer Research Biomedicine, general Molecular Medicine Life Sciences, general Cell Biology
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Preface.- Cancer Metastasis: Tracking and Attacking a Moving Target. - The generation, detection, and prevention of genomic instability during cancer progression and metastasis.- DNA damage response pathways in cancer predisposition and progression.- Mathematical modeling for DNA repair, carcinogenesis and cancer detection.- Animal models of metastasis.- Microenvironmental Control Of Metastatic Progression.- 7 Mechanotransduction, metastasis and genomic instability -- 8 Immunomodulation and Genomic Instability -- 9

	Synthetic Genetic Approaches in Colorectal Cancer: Exploiting and Targeting Genome Instability -- Nanomedicine – Nanoparticles in Cancer Imaging and Therapy -- Index.
Sommario/riassunto	Metastasis is the primary cause of mortality associated with cancer, and tumor genomic heterogeneity is a likely source for the cells that support cancer progression, resistance to therapy, and disease relapse. This book connects cancer metastasis with genomic instability in a comprehensive manner. Section 1 outlines the fundamental mechanisms responsible for these cellular and tissue phenotypes. Section 2 discusses in silico, in vitro, and in vivo models used for the experimental study of these processes. Section 3 reviews emerging themes (ex., microenvironment, mechanotransduction, and immunomodulation), and Section 4 highlights new therapeutic approaches to overcome the unique challenges presented by the heterogeneous and metastatic tumor. This book is intended for undergraduates and postgraduates with an interest in the areas of medicine, oncology, and cancer biology as well as for the content expert searching for thorough reviews of current knowledge in these areas.