Current Applications for Overcoming Resistance to Targeted Therapies

Series: Resistance to Targeted Anti-Cancer Therapeutics

• Provides an update on the recent advancements in the field of nanomedicine, how these targeted therapy delivery systems are currently being used, and future applications
• Focuses on current and novel therapeutic options, as it pertains to targeted therapy resistance
• Provides a detailed overview of the pathophysiology of several aggressive cancers for which there are currently few treatment options
• Discusses the role that dormancy and dormant stem cells have in the acquisition of targeted therapy resistance

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 reemergence 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.