Neuroblastoma is a tumor derived from the sympathetic nervous system. It is the most common extracranial solid tumor occurring in children and exhibits a marked variability in outcome when the disease is categorized by clinical (e.g. age or stage) and biologic characteristics. This book gives an introduction into the clinical features of progressive neuroblastoma and focuses on molecular-targeted therapies and immunotherapies of this disease.

It has become increasingly clear that MYCN (v-myc avian myelocytomatis virus oncogene neuroblastoma derived homolog) holds a key position in neuroblastic transformation and gene expression in normal and transformed cells. In the 14 chapters important topics such as genomic alterations in neuroblastoma and strategies for indirect molecular targeting of MYCN are discussed. Two chapters, for example, review apoptotic pathways and proapoptotic molecular targets in neuroblastoma, one focusing on the p53 pathway and the other on the extrinsic and intrinsic pathways of apoptosis. Other chapters cover topics related to immunology in neuroblastoma, such as immune regulation in neuroblastoma, immunotherapy related to passive and active vaccination approaches and additional immunotherapy in the treatment of progressive disease.

This volume is essential reading for all clinicians and basic researchers who are involved in delivering health care to patients with progressive neuroblastoma.

Contents

Preface: Christiansen, H.; Christiansen, N.M.

Clinical Introduction
• Clinical Features of Progressive Neuroblastoma: Simon, T.

Genomic Alterations
• DNA Copy Number Changes and Beyond: Fieuw, A.; Schulte, J.H.; De Preter, K.; Speleman, F.
• Genomic Alterations and Abnormal Cell Cycle in High-Risk Neuroblastoma: Capasso, M.; Sidarovich, V.; Quattrone, A.; Tonini, G.P.

Targeting MYCN
• MYCN and MicroRNAs: Althoff, K.; Schulte, J.H.
• MYCN and Its Posttranslational Regulation in Neuroblastoma: Otto, T.

Apoptosis and Angiogenesis
• Neuroblastoma and the p53 Pathway: Chen, L.; Tweedle, D.A.
• Targeting Cell Death Pathways in Neuroblastoma: Fulda, S.
• Neuroblastoma and Angiogenesis: Rössler, J.

Molecular-Targeted Therapy Studies
• The Role of the Anaplastic Lymphoma Kinase Receptor in Neuroblastoma: Yeung, C.M.; George, R.E.
• Molecular-Targeted Therapy in Refractory or Relapsed Neuroblastoma: Corbacioglu, S.

Immunology
• Immune Regulation in Neuroblastoma: Fest, S.; Starke, S.
• Approaches to Passive and Active Vaccination against Neuroblastoma: Lode, H.N.
• Role of Cell Therapy in Neuroblastoma: Bremm, M.; Brehm, C.; Huhnecke, S.; Rettinger, E.; Bader, P.

Minimal Residual Disease
• Minimal Residual Disease in Neuroblastoma: Weber, A.

Author Index
• Subject Index

Fields of Interest:
Oncology; Pediatrics; Genetics, Immunology, Neurology, Neuroendocrinology, Neurosurgery

www.karger.com/pamed
This series deals with rapidly evolving pediatric subspecialties such as perinatal medicine, pediatric endocrinology, immunology, neurology and cardiology. The individual volumes not only highlight recent advances in a particular area, but also provide a comprehensive overview of new trends in monitoring child development and subsequent adult health. The series aims to inform both the general practitioner and the hospital physician about current theoretical and practical developments in pediatric and adolescent medicine.