
Preface

The aim of this book is to trace cancer metastasis from the primary sites to the regional lymph nodes and distant organs through the mechanism of local proliferation resulting in metastasis through the lymphovascular system. Rational therapy may be developed to curb the process of metastasis upon understanding these crucial steps of metastasis. Whether the cancer cells utilize the lymphatic or vascular channels or both to metastasize will be examined.

This book summarizes the *2nd International Symposium on Cancer Metastasis: Basis for Rational Therapy* being held in San Francisco from May 3–5, 2007 by bringing together the basic scientists and clinicians to ask the central question of the role of the lymphovascular system in the spread of cancer. Thus, this book is able to link the bench to the bedside and vice versa in understanding the mechanisms of cancer metastasis.

In human solid cancers, the nodal status is the most important prognostic indicator for patients' outcome. Recent developments in the sentinel lymph node (SLN) concept and technology have resulted in the application of such a procedure to define the first draining node or SLN as the primary gateway through which the cancer will spread.

Part I addresses several important developments in the biology and clinical aspects of cancer metastasis. Part II describes the relationship between tumor microenvironment and proliferation. Part III defines the process of lymphangiogenesis and angiogenesis with special reference to cancer metastasis. Part IV summarizes the development of multiple approaches in the imaging of cancer during its course of metastasis. Part V attempts to use the lymphatic system as a target to treat cancer. Part VI updates the latest cellular and molecular mechanisms of cancer metastasis. Part VII examines the role of molecular targeted therapy against growth factor receptors, signaling pathways and angiogenesis as therapeutic targets. Part VIII emphasizes the impact of tumor burden in the sentinel lymph nodes on the clinical outcome in several solid cancers. Part IX defines immune responses in the draining lymph nodes against cancer relating to immunotherapy against cancer. The role of cancer stem cells is being explored in Part X. With advent of molecular techniques, the genomic signatures of cancer may be developed and analyzed in Part XI. Parts XII and XIII summarize the therapeutic results of using new approaches in cancer treatment. Any promising leads from clinical trials in metastatic cancer may be used in the future as adjuvant therapies for occult metastatic deposits. Part XIV poses unanswered questions as future perspectives.

Perhaps, more uniquely, this book will bring the basic scientists, radiologists and clinicians together resulting in cross fertilization between these disciplines with intention to develop strategies to curb the process of metastasis.

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Lymphovascular System

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