
Preface

It is estimated that cancer affects approximately 40% of the population at some time and is responsible for 20% of deaths. Recent years have witnessed substantial advances in the treatment of many malignancies. Targeted molecular therapies have improved outcomes for many cancers including HER2-positive breast cancer, EGFR and ALK-positive non-small cell lung cancer, BRAFV600E-positive melanoma, and a growing number of hematologic malignancies, among others. More recently, checkpoint inhibitor-based immunotherapy has dramatically changed the fortune of some patients with melanoma, non-small cell lung cancer, and a rapidly growing list of other cancers (7 FDA approvals in 2016 alone). However, as therapies for cancer improve and patients live longer, relapse within the nervous system is increasing. Additionally, prolonged survival has exposed more cancer survivors to the long-term neurologic sequelae of radiation therapy and systemic therapies. Finally, newly approved antineoplastic therapies bring new neurologic complications, as seen with immunotherapy. These neurologic complications detract significantly from patients' quality of life.

The diagnosis and treatment of neurologic complications of the nervous system are shared among neuro-oncologists, medical and radiation oncologists, neurologists, and neurosurgeons. While neurologists and neurosurgeons have expertise in the diagnosis and management of neurologic complaints, they are generally less familiar with the biology, behavior, and management of cancer. Conversely, medical and radiation oncologists have expertise in the diagnosis and treatment of cancer but are less familiar with the diagnosis and management of neurologic complaints in cancer patients. The purpose of this Third Edition of *Cancer Neurology in Clinical Practice* is to provide clinicians from various backgrounds and levels of training with information that will allow them to optimally diagnose and manage neurologic complications of the nervous system. This volume begins with an overview of diagnostic studies for neurologic complications involving the nervous system. That is followed by parts on metastatic and non-metastatic complications of cancer involving the nervous system, and the interpretation, diagnosis, and management of common neuro-oncologic symptoms. The next part reviews the neurologic complications of cancer therapy, including corticosteroids, radiation therapy, chemotherapy, targeted molecular therapies, immunotherapies, hematopoietic stem cell transplantation, and infections involving the nervous system. The final part focuses on the most important neurologic complications in cancers arising from specific organs.

We hope that this volume will provide clinicians from varied backgrounds looking after cancer patients with readily accessible, relevant information that will allow them to optimally diagnose and manage neurologic complications in these patients. Prompt diagnosis and effective interventions will ameliorate neurologic outcomes of most of the complications discussed in this volume, translating into improved quality (and in some cases quantity) of life for patients suffering from cancer.

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<http://www.springer.com/978-3-319-57899-6>

Cancer Neurology in Clinical Practice
Neurological Complications of Cancer and its Treatment
Schiff, D.; Arrillaga, I.; Wen, P.Y. (Eds.)
2018, XVIII, 643 p. 130 illus., 48 illus. in color.,
Hardcover
ISBN: 978-3-319-57899-6