Essentials in Ophthalmology

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Jasmine H. Francis • David H. Abramson
Editors

Recent Advances in Retinoblastoma Treatment

Springer

Editors
Jasmine H. Francis
Department of Ophthalmic Oncology
Memorial Sloan Kettering Cancer Center
New York, NY, USA

David H. Abramson
Department of Ophthalmic Oncology
Memorial Sloan Kettering Cancer Center
New York, NY, USA

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Preface

The chapters in this book represent most of the lectures that were delivered at the celebration honoring 100 years of retinoblastoma in New York (1914–2014). During those 100 years, there was a complete reversal in the field. In 1914, more than 95 % of children with retinoblastoma died of metastatic disease and the majority of the eyes removed for retinoblastoma did not contain cancer. By 2014, more than 99 % of children in New York survived and for more than 40 years no eye in New York has been removed for retinoblastoma incorrectly. In 1914, retinoblastoma management consisted of enucleation, exenteration, and low energy external beam irradiation and few children retained an involved eye and no retained eye had useful vision. By 2014, the therapeutic options included enucleation, high energy external beam irradiation, brachytherapy, laser photocoagulation, cryotherapy, intravenous, periocular, intravitreal, and intra-arterial chemotherapy and largely as a result of intra-arterial chemotherapy and intravitreal chemotherapy more than 95 % of eyes could be saved and more than 90 % of children retain 20/20 vision. In 1914, retinoblastoma was classified as a "glioma" of the retina and by 2014 elegant studies revealed that the cell of origin was a cone precursor (the name retinoblastoma was introduced 90 years ago).

Retinoblastoma survival is now the highest in all of pediatric oncology and issues of long-term consequences (physical and psychological) are influencing present therapeutic decisions. The story of second malignancies in this disease has served as paradigm for oncology and strategies for preventing and detecting (and treating) these (usually) lethal cancers were presented at the meeting.

While metastatic retinoblastoma is now rare in the USA, it remains a major issue worldwide where it is estimated that 50 % of children still die. Metastatic retinoblastoma is now largely curable in countries with advanced medicine but second cancers, pineal malignancies, and secondary sarcomas are now the major cause of death of retinoblastoma survivors in the USA.

More than 175 health care workers from almost 20 countries participated in this meeting/celebration (with others electronically listening in from Africa).

In these 100 years, many physicians have worked, studied, contributed and help make the New York program the leading center in the world. There have been three directors: Algernon B. Reese, M.D., Robert M. Ellsworth, M.D., and me. I had the opportunity to learn from both of these giants and my work is simply built on their pioneering efforts. I hope that after reading this book you can say the same.

New York, NY, USA David H. Abramson, MD

Contents

Contributors

Christophe Antczak, PhD High-Throughput Screening Core Facility, Memorial Sloan Kettering Cancer Center, New York, NY, USA

Novartis Institutes for Biomedical Research, Center for Proteomic Chemistry, Cambridge, MA, USA

Ratna Behal, MD Department of Pediatrics, Memorial Sloan Kettering Cancer Center, New York, NY, USA

Bhavneet Bhinder, MS HTS Core Facility, Memorial Sloan Kettering Cancer Center, New York, NY, USA

Scott E. Brodie, MD, PhD Department of Ophthalmology, Icahn School of Medicine at Mount Sinai, New York, NY, USA

Kathryn Champ HTS Core Facility, Memorial Sloan Kettering Cancer Center, New York, NY, USA

Guillermo L. Chantada, MD, PhD Department of Hematology/Oncology, Hospital JP Garrahan, Buenos Aires, Argentina

Department of Oncology, Hospital Sant Joan de Déu, Barcelona, Spain

María T.G. de Dávila, MD, PhD Department of Pathology, Hospital JP Garrahan, Buenos Aires, Argentina

Hakim Djaballah, PhD Institut Pasteur Korea, Seongnam-si, Gyeonggi-do, Korea

Ira J. Dunkel, MD Department of Pediatrics, Memorial Sloan Kettering Cancer Center, New York, NY, USA

Megan Harlan Fleischut, MS, CGC Department of Medicine, Clinical Genetics Service, Memorial Sloan Kettering Cancer Center, New York, NY, USA

Jasmine H. Francis, MD Ophthalmic Oncology Service, Department of Surgery, Memorial Sloan Kettering Cancer Center, New York, NY, USA

Danielle Novetsky Friedman, MD Department of Pediatrics, Memorial Sloan Kettering Cancer Center, New York, NY, USA

Y. Pierre Gobin, MD Department of Neurosurgery, Weill Cornell Medical Center, New York Presbyterian Hospital, New York, NY, USA

J. William Harbour, MD Ocular Oncology Service, Bascom Palmer Eye Institute, Miami, FL, USA

Sylvester Comprehensive Cancer Center, Miller School of Medicine, University of Miami, Miami, FL, USA

Glorymar Ibáñez, BS HTS Core Facility, Memorial Sloan Kettering Cancer Center, New York, NY, USA

Ruth A. Kleinerman, MPH Radiation Epidemiology Branch, Division of Cancer Epidemiology and Genetics, National Cancer Institute, National Institutes of Health, Rockville, MD, USA

Jeni P. Mahida, MS HTS Core Facility, Memorial Sloan Kettering Cancer Center, New York, NY, USA

Thermo Fisher Scientific, Bangalore, India

Lindsay M. Morton, PhD Radiation Epidemiology Branch, Division of Cancer Epidemiology and Genetics, National Cancer Institute, National Institutes of Health, Rockville, MD, USA

Paula Schaiquevich, PhD Clinical Pharmacokinetics Unit, Hospital de Pediatría JP Garrahan, Combate de los pozos, Buenos Aires, Argentina

CONICET, Buenos Aires, CP, Argentina

Margaret A. Tucker, MD Human Genetics Program, Division of Cancer Epidemiology and Genetics, National Cancer Institute, National Institutes of Health, Rockville, MD, USA

Scott D. Walter, MD, MSc Ocular Oncology Service, Bascom Palmer Eye Institute, Miami, FL, USA

Sylvester Comprehensive Cancer Center, Miller School of Medicine, University of Miami, Miami, FL, USA

Jeannette R. Wong, MPH Radiation Epidemiology Branch, Division of Cancer Epidemiology and Genetics, National Cancer Institute, National Institutes of Health, Rockville, MD, USA