Society of Neuro-Oncology 2016 Annual Meeting

November 17-20, 2016, Scottsdale, AZ

Session Title

Tumor predisposition and genetic risk assessment in a neuro-oncology practice

Presentation Type

Sunrise Session

Educational Objectives

Primary brain tumors are well-known features of several hereditary cancer/tumor predisposition syndromes and have been associated with additional inherited germline mutations as phenotypic spectrums expand and new genes are discovered. Many of the well-characterized syndromes are also associated with additional cancer pathologies, prompting genetic screening in individuals with characteristic personal and/or family histories. In addition, an early age of diagnosis and/or a particular type of brain tumor may prompt genetic screening in the absence of family history. Identifying patients that would benefit from further assessment is an important step in the management of primary brain tumors, and genetic counselors are specially trained to offer this type of assessment. However, genetic counseling may not be regularly incorporated into many neuro-oncology practices (or readily available), despite some patients presenting in a neuro-oncology clinic for initial diagnosis.

This session will provide attendees with a crash course on current knowledge of genetic predisposition to primary brain tumors and equip them with the skills needed to properly assess whether patients are at increased risk for a hereditary syndrome. Laboratory genetic counselor Michelle Jackson will provide an overview of known syndromes that can present with primary brain tumors in children and adults and generate pathology-specific differential diagnoses. Neuro-pathologist Anat Stemmer-Rachamimov will highlight key differences between the molecular profiles of brain tumors resulting from a hereditary predisposition and their sporadic counterparts and review the roles of genes implicated in these syndromes in tumorigenesis. Clinical genetic counselor Krista Qualmann will demonstrate how to perform a genetic risk assessment for patients and facilitate case presentations for practical application in neuro-oncology clinical practice. An overview of available genetic testing for primary brain tumors and data about current utilization will be provided. Attendees will leave the session with infographic tools to utilize in their current practice and education regarding appropriate referrals.

Presentation Titles & Speakers

Predisposed to primary brain tumors: A review of genetics and notable syndromes
Michelle Jackson, MS, CGC, Ambry Genetics, mjackson@ambrygen.com

Notes from neuropathology: Hereditary brain tumors and their sporadic counterparts
Anat Stemmer-Rachamimov, MD, Massachusetts General Hospital, Harvard Medical School, astemmerrachamimov@mgh.harvard.edu

Risk assessment and genetic counseling: Putting the pieces together
Krista J. Qualmann, MS, CGC, The University of Texas Health Science Center at Houston, krista.qualmann@uth.tmc.edu

Session Moderator

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