

SAA - DENVER

2020 GRANT AMOUNT: \$185,000

GRANT RECIPIENT: Adam Green, MD (Profile)

PROJECT: Investigation of Cerebrospinal Fluid Characteristics in Newly Diagnosed Pediatric Brain Tumors

Project Details: There has been a recent surge in investigation of cancer immunity and immunotherapy, including the successful use of CAR T-cells and childhood leukemia and of targeted checkpoint inhibitors in adult solid tumors like melanoma. However, the role of the immune system and immunotherapy in pediatric brain tumors is incompletely defined. We hypothesize that investigating an understudied dataset, white blood cell (WBC) and WBC differential (subtypes and quantities of WBCs present) results in cerebrospinal fluid (CSF) drawn at the time of pediatric brain tumor diagnosis to look for microscopic metastases, would provide insight into the role of immunology and potential for immunotherapy in these diseases and correlate with prognosis and/or metastasis.

GRANT RECIPIENT: Amanda Winters, MD, PHD (Profile)

PROJECT: Standardizing Care for Pediatric Myelodysplastic Syndrome

Project Details: Pediatric myelodysplastic syndrome (MDS) is a devastating blood disorder. Without treatment, children with MDS inevitably go on to develop a resistant form of acute myeloid leukemia (AML) and depend on bone marrow/stem cell transplant. We hypothesize that the development of a more uniform and rigorous approach to classification, treatment, and biological investigation of pediatric MDS will allow critical evaluation of candidate therapies to find optimal treatment approaches for children with MDS. The Center for Cancer and Blood Disorders at Children's Hospital Colorado is uniquely positioned to take on this effort. Pediatric MDS occurs as both a precursor to AML and a downstream complication of known inherited bone marrow failure syndromes. We already have established national recognition for the study and treatment of pediatric leukemias and the study and treatment of pediatric bone marrow failure syndromes as well as an internationally recognized stem cell transplant program that has performed over 1100 pediatric transplants. With the recent recruitment of a scientific leader in bone marrow failure and RNA biology, we have the necessary critical mass in all relevant areas. Our intent is to spearhead the evaluation of candidate therapies for children with MDS and to serve as a model for other centers to improve clinical practice, and ultimately the care of these children.



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