

Kidney Cancer

Research Update 2013

National Leadership

Medical Director of the Renal, Liver and Retinoblastoma programs, Dr. James Geller, leads several local, national and international targeted initiatives in renal tumors.

Dr. Geller has been a steering committee member of the *Children's Oncology Group, Renal Tumor Committee* (RTC) since 2006. He currently serves as Chair of the RTC new agents/developmental therapeutics committee. This committee is responsible for new treatments and national trials for pediatric kidney cancer, Wilms tumor, rhabdoid tumor of the kidney, clear cell sarcoma of the kidney, and pediatric renal cell carcinoma.

Dr. Geller also co-founded the national *COG Rhabdoid Tumor Working Group* where scientists and clinical investigators are working to develop new therapies for infants and children with rhabdoid tumor.

Research Highlights

New drug therapies

Dr. Geller is Chair of the National COG Phase I study of the c-MET inhibitor, tivantinib. Levels of c-MET have been discovered to be a factor in pediatric renal and liver tumors.

In collaboration with GlaxoSmithKline, Dr. Geller and colleagues are leading a pre-clinical initiative studying the impact of EZH2 inhibition in pediatric rhabdoid tumors and other solid tumors. EZH2 affects genes involved in cancer and has been found to be critical for rhabdoid tumor growth and progression.

Dr. Geller and colleagues are working with Pfizer to move forward with a study of Axitinib, a new therapy targeting tumor blood vessel formation. This potential new treatment is being studied in Phase I and Phase II studies of translocation renal cell carcinoma, the most common form of renal cell carcinoma in children, adolescents and young adults.



Cells are magnetically separated to investigate function of different cell types

Molecular signaling and genetic profiling

In collaboration with the Children's Oncology Group and the National Cancer Institute, CBDI is seeking to understand the genetics of relapsed Wilms tumor, anaplastic Wilms tumor, and rhabdoid tumor of the kidney in order to identify potential new therapies.

Nephrometry advances in pediatric renal cancers

Researchers at CCHMC have an IRB-approved initiative focusing on using nephrometry (images of the kidney) to diagnose and treat renal tumors in pediatric kidney cancer patients. The detailed information provided by nephrometry may be used to plan surgeries on kidney cancers.

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