

# Retinoblastoma

## Research Update 2013

### National Leadership

Medical Director of the Liver, Renal and Retinoblastoma programs, Dr. James Geller, is primary investigator for several local, national and international research initiatives in retinoblastoma at Cincinnati Children's Hospital Medical Center. He co-leads retinoblastoma research at Cincinnati Children's with Dr. James Augsburger of the Division of Ophthalmology and Dr. Todd Abruzzo of the Division of Radiology

Dr. Geller has been a member of the Children's Oncology Group Retinoblastoma steering committee since 2009. Dr. Augsburger is an internationally recognized ocular oncologist with greater than 25 years of experience managing retinoblastoma, originating at the Will's Eye Institute. The CCHMC retinoblastoma team is advancing numerous treatment options which are highlighted here.

### Research Highlights

Retinoblastoma research at Cincinnati Children's focuses on finding new therapies and examining quality-of-life issues following treatment.

The retinoblastoma team has recently focused efforts towards advancing selective intraocular artery chemotherapy. SIOAC involves delivery of chemotherapy through microcatheters originating in the groin and going through the artery feeding the tumor originating behind the eye.

New visual pathway assessments incorporate state-of-the-art vision tests, measurement of electrical activity through the retina and electrical activity from the eye to the cortex of the brain.

Another research innovation at Cincinnati Children's is the collaborative study of intraarterial topotecan involving the divisions of oncology, ophthalmology, interventional radiology, neurology, and radiology

Advancements in integrating laser therapy and cryotherapy remain an important component of optimizing cancer control and ocular salvage.



*CBDI explores ways to use the genetics of cancer to improve treatments*

### Research Highlights include:

- Transcatheter selective intraocular artery chemotherapy, which involves delivering chemotherapy directly to arteries behind the eye
- Intravitreal-directed chemotherapy, which involves delivering chemotherapy directly into the vitreous
- Subtenon-directed chemotherapy, in which chemotherapy drugs are injected through the membrane covering the muscles and nerves at the back of the eyeball
- Intravenous chemotherapy, in which chemotherapy is injected into the bloodstream
- Novel, targeted anticancer agents
- Conformal radiation techniques, which deliver radiation that conforms to the tumor's shape
- Eye-sparing techniques

Division of Oncology  
Cincinnati Children's Hospital  
3333 Burnet Avenue, MLC 7015  
Cincinnati, OH 45229

[cancer@cchmc.org](mailto:cancer@cchmc.org)  
[www.cincinnatichildrens.org/cancer](http://www.cincinnatichildrens.org/cancer)