

Clouds Ahead

Brain Tumor Team Advances Data Sharing in Search for Cures

The brain tumor research team at The Children's Hospital of Philadelphia continues its commitment to providing as much data as possible to as many brilliant minds as possible with the expansion of its tumor bank and advances in data sharing.

The Children's Brain Tumor Tissue Consortium (CBTTC), housed at CHOP, now holds more than 4,000 specimens from more than 1,500 subjects. Pediatric hospitals across the country contribute specimens to the tumor bank; UCSF Benioff Children's Hospital and Lucile Packard Children's Hospital Stanford are the newest members.

The CBTTC is not only growing — it's also improving, with an important new way to share data.

Researchers around the world use the CBTTC computer portal to access biospecimen data (from tumor samples and blood) and clinical data (about the subject's disease and outcomes). The portal doesn't have DNA/RNA data, because sharing the quadrillions (10^{15}) of bytes that genetic sequencing creates is challenging. Currently, CHOP creates hard drives with genomics data for different tumor types that then have to be shipped from lab to lab and can't easily be updated. This means research delays and gaps.



Lucas, 11, Neuro-Oncology

That's changing. The National Cancer Institute, a federal funding body, last year issued millions of dollars in grants to create genomics clouds for cancer research. Just as you save photos from your cellphone to a cloud, researchers can use clouds to store and share data.

The awards covered only adult cancers, but CHOP's team reached out to several grant recipients and asked whether they'd collaborate to include pediatrics. The answer: yes.

After a pilot run this summer with Seven Bridges Genomics, one of the recipients, the genomics cloud will be up by early 2016, linked to the CBTTC portal. Data can be shared and refreshed much more easily, an important step in the team's effort to find cures through collaboration. "We're not interested in scientific advantage," says Phillip "Jay" Storm, M.D., chief of Neurosurgery at CHOP and a member of the research team. "We're interested in scientific cures." ●

View a video on advances in brain tumor treatment at CHOP and the Children's Brain Tumor Tissue Consortium at:

chop.edu/brain-tumor-video

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You Make This Possible

Progress in brain tumor research at CHOP is possible because of the support of foundations and individuals including, but not limited to, At Least Kids Foundation, Bryce's Bridge of Hope, Children's Brain Tumor Foundation (CBTF), The Christopher Court Foundation, Hannah Duffy Foundation, The Kortney Rose Foundation, Miriam's Kids Research Foundation, The Naya Foundation, Pearce Q Foundation Inc., Stanley's Dream, Charles and Nancy Stasiak, Vs. Cancer Foundation and Wylie's Day Foundation.

The Kortney Rose Foundation, started by Kristen Gillette, mother of Kortney (pictured above) who died in 2006 as a result of a brain tumor, recently joined the Chairman's Circle at CHOP for those whose cumulative giving exceeds \$1 million.

CBTF's early support allowed CHOP to develop the concept of a biobanking consortium and placed it in the Chairman's Circle.

Thanks to all the philanthropic partners who make our work possible. ●