

CV resident brings personal and professional experience to fight against pediatric cancer through The Nicholas Conor Institute

By Karen Billing

The Nicholas Conor Institute for Pediatric Cancer Research is working toward building better diagnostic tools and personalized, kid-friendly treatments for children with cancer.

Carmel Valley resident and co-founder Beth Anne Baber, Ph.D, brings the unique insight of being both a cancer researcher as well as a parent of a child who survived cancer. She feels "lucky and blessed" that her son Conor is now in the first grade and cancer-free, but wanted to do her part to ensure that children are the focus of lifesaving cures and high-quality treatment and have the same access to individualized care as adults.

"It's a sad day every time I hear another child has cancer, I really feel it. Especially if they lose their battle," said Baber. "Every day I wake up I know approximately 40 kids are not going to make it."

The institute helps support developing diagnostic, therapeutic and personalized programs for pediatric cancer. They aim to develop partnerships with industry, academia, clinicians and funding sources to get new treatments into the clinic for study.

Currently, the institute is partnered with Prognosys Biosciences of La Jolla, AltheaDx in San Diego and CollabRx in Palo Alto.

"The idea is to determine which treatment is most effective without causing long-term damage," Baber said. "We're trying to take the guesswork out, giving oncologists and parents better tools to make their decisions. The ability to do this is out there,



Beth Anne Baber,
co-founder of The
Nicholas Conor
Institute for Pediatric
Cancer Research

we just want to make sure it's available to children as well as adults."

Baber and her husband, Nick, both worked in the field of cancer biology and both could never have imagined that the disease would strike their son.

Conor had been a very healthy child until he was diagnosed, there was no indication he was as sick as he was, Baber said. At 16 months old, he developed a fever and strange cough so Baber brought him into the physician's office. After being shown the x-rays taken of her son, she knew exactly what the large mass in his chest was.

"I was devastated," said Baber, who was seven-and-a-half months pregnant with her third child at the time.

It took some time to determine that Conor had stage 3, high-risk neuroblastoma, which carries a survival rate of less than 40 percent.

With their research backgrounds, Baber and her husband determined Conor's cancer would best be treated with high intensity chemotherapy and surgery to remove the tumor from his chest and spine, opting against a bone marrow transplant. At the end of four rounds of chemo, Conor didn't show any evidence of the disease.

After four years and 14 magnetic resonance imaging's (MRIs), Conor still shows no evidence of the disease.

"It's temporary relief," said Baber. "At the back of your mind you always know that life can change at any moment. I don't take anything for granted."

After Conor's therapy, Baber couldn't just sit there and not do anything. She wanted to make a difference for others.

Because pediatric cancer is such a small patient population, Baber said industry often doesn't take on projects specific to childhood cancers because it's not a large profit. Baber's aim was to figure out how to incentivise the industry—she even earned a scholarship to go back to school to the UC San Diego Rady School of Management to get a master's degree in business administration.

She applied what she learned about business directly to

starting the institute, figuring out how to work hand-in-hand with her industry partners.

With AltheaDx, the institute is helping develop a diagnostics test for multiple tumor types. With 99 percent accuracy, the test can determine overnight what kind of cancer the child has, which is very important when determining the patient's treatment.

As Conor's diagnosis of neuroblastoma had taken 10 days, this test saves children time in the hospital so treatment can start immediately.

By testing the child's genetic profile, the best treatment can be selected—one that will avoid damaging effects later on in the child's life, such as hearing loss or heart damage.

With CollabRx, the Institute is helping develop a process that compares tumors to normal tissues to find potential drugs when a patient has exhausted standard care. Again, with cancer time is very important and time is wasted when a patient is trying different drugs and treatments, Baber said.

The institute is looking for funding for both projects, through grant opportunities and private donors.

A role model for their cause has become Kyle Garlett, a four-time cancer survivor and IronMan triathlete. Garlett survived both leukemia and lymphoma and as a result of adverse effects from his treatments needed a heart transplant as well as shoulder and hip replacements. He is competing in the grueling Kona race in October to be a role model for survivors and will promote the Nicholas Conor Institute.

"He connects well with our mission," Baber said, noting that if the diagnostics tests they are supporting were utilized in his case, those long-term affects of curing his cancers could have been avoided.

To help raise money for their cause, The Nicholas Conor Institute will host the Life Out Loud event on Sept. 13 at Life Technologies in Carlsbad. The event will include a concert. For more information on the organization and the upcoming event, visit TheNicholasConorInstitute.org