

2019-2020 IMPACT REPORT

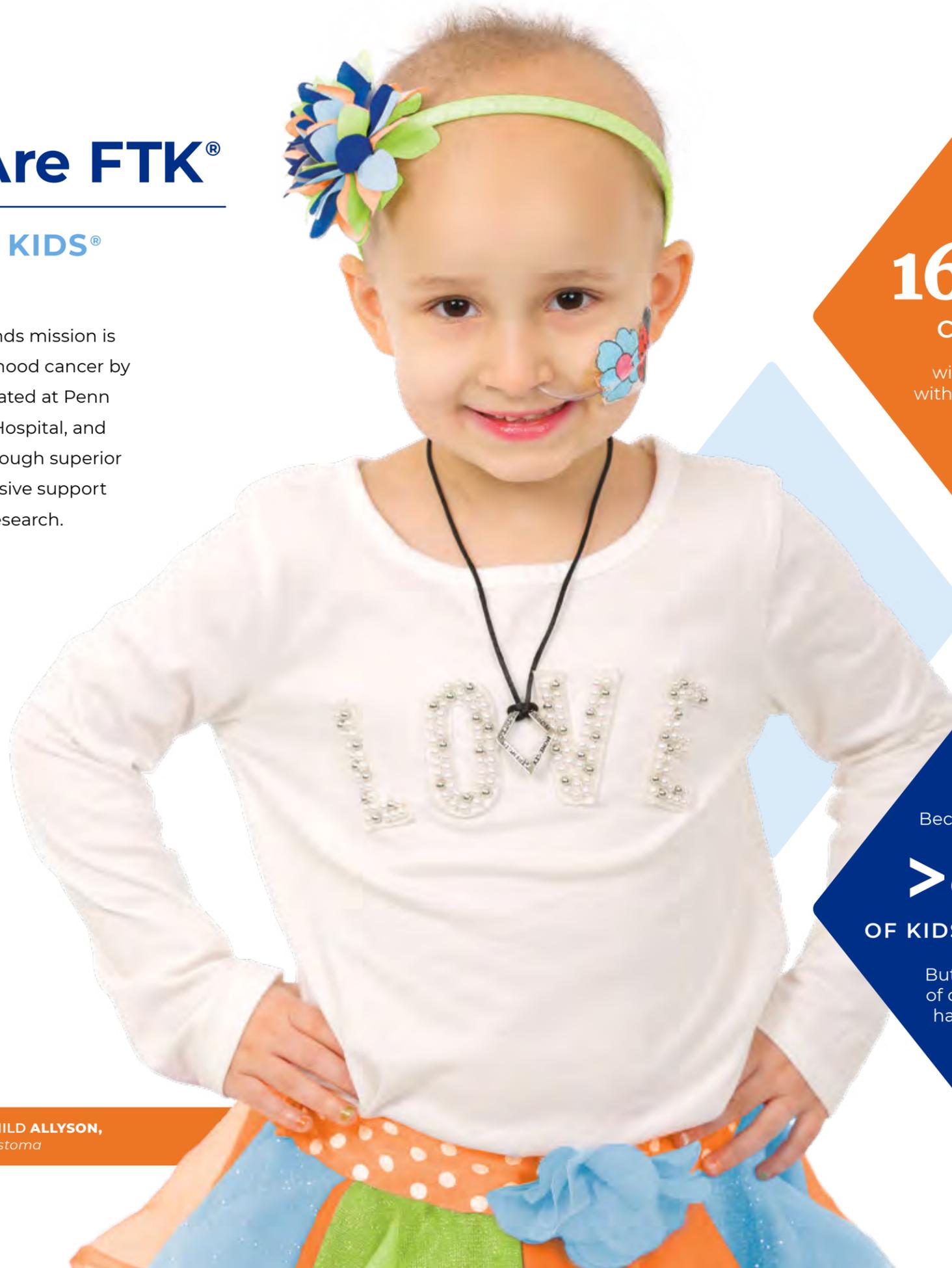
CONQUERING CHILDHOOD CANCER



FOUR DIAMONDS CHILD RILEY,
conquering neuroblastoma

We Are FTK®
FOR THE KIDS®

The Four Diamonds mission is to conquer childhood cancer by assisting kids treated at Penn State Children's Hospital, and their families, through superior care, comprehensive support and innovative research.



In the U.S.,
an estimated
16,000
CHILDREN
will be diagnosed
with cancer this year.*

We have more
work to do, to
**FIND BETTER
TREATMENTS
AND CURES**
to help kids
everywhere.

That's nearly
1
every
33
MINUTES.

**CANCER
DOESN'T
STOP DURING
A PANDEMIC.**

Because of research,
>80%
OF KIDS WILL SURVIVE.

But, for some types
of cancer, progress
has been limited.

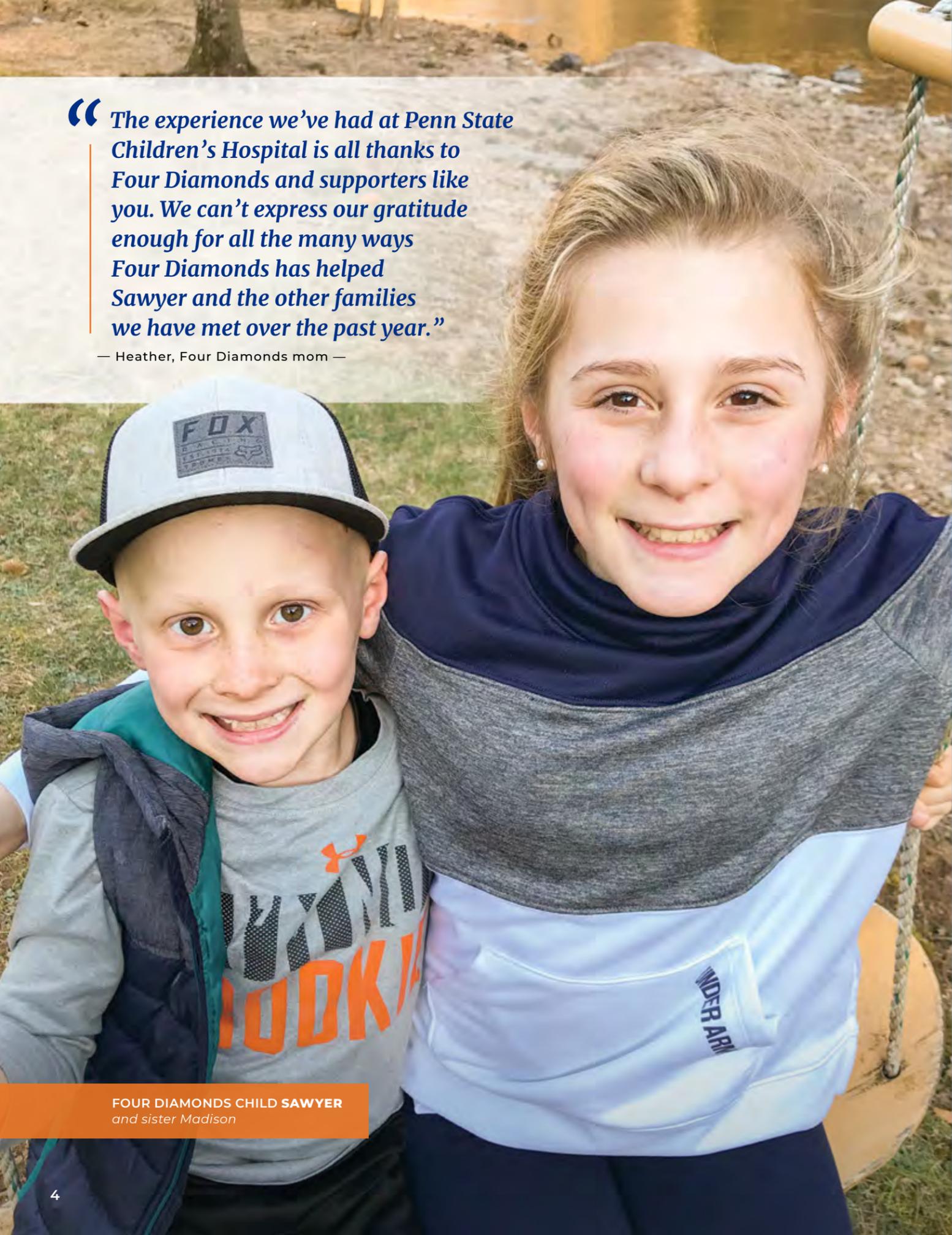
This year, you helped us remain strong as we continued working to conquer childhood cancer. We won't stop fighting until all children survive this disease and thrive.

*American Cancer Society, American Childhood Cancer Organization

FOUR DIAMONDS CHILD ALLYSON,
conquering neuroblastoma

“The experience we’ve had at Penn State Children’s Hospital is all thanks to Four Diamonds and supporters like you. We can’t express our gratitude enough for all the many ways Four Diamonds has helped Sawyer and the other families we have met over the past year.”

— Heather, Four Diamonds mom —



FOUR DIAMONDS CHILD SAWYER
and sister Madison

Providing World-Class Care

AT NO COST TO FOUR DIAMONDS FAMILIES

In October of 2019, 7-year-old Sawyer was diagnosed with cancer.

That summer, Sawyer was a very happy and healthy little boy who loved his family, friends, hunting, fishing and sports. In fact, he was a state championship wrestler leading up to his diagnosis, placing eighth in Pennsylvania earlier that year! Persistent ear pain eventually led to a diagnosis of rhabdomyosarcoma, a cancer in skeletal muscle tissue.

Sawyer’s mom, Heather, says their family will be forever grateful to Four Diamonds. Since their cancer journey began, Four Diamonds has been a lifesaver by ensuring that, no matter what type of medical treatment Sawyer needed, they would never have to see a bill.* Heather also says Sawyer’s care team at Penn State Children’s Hospital has been incredible, supporting their family every step of the way. “Everyone has truly gone above and beyond to understand Sawyer’s needs and encourage him to keep fighting.”

In July, Sawyer celebrated his 8th birthday and the best news of all—that he is now cancer-free! Sawyer is excited to “get back to normal” following his grueling treatments to beat cancer. He eventually wants to get back to school, hang out with his buddies, play sports and just be a kid again.

FOUR DIAMONDS
HAS HELPED

4,000+

FAMILIES
since 1972.

* *Four Diamonds covers all medical expenses not paid for by insurance for kids fighting cancer at Penn State Children’s Hospital.*

Local Research. Global Impact.™



GIVING HOPE TO KIDS EVERYWHERE

The combination of world-class care, lifesaving research and transformative philanthropy is our hope for a cure. By continuing to expand the depth and breadth of our research, Penn State Health Milton S. Hershey Medical Center and Penn State College of Medicine will benefit kids around the world. Every day, we are generating new knowledge to help us better prevent, diagnose, treat and cure childhood cancers, in order to save the lives of children.

HERE'S SOME OF THE PROGRESS WE'VE MADE THIS YEAR:

- **Four Diamonds scientists discover promising therapy to decrease relapse and improve long-term survival in children with high-risk acute myeloid leukemia (AML).** Although intensive chemotherapy and significant improvements in care have increased the five-year survival rate of AML in children to approximately 70%, we must pursue more effective and less toxic therapies to save more children.

There has been a sustained effort in the research community to develop new drugs targeting cancer-driving proteins, which are associated with high rates of relapse in adults and children. Our recent studies suggest that the combination of new drugs called FLT3 inhibitors and anti-inflammatory drugs has promising potential to prevent drug resistance and relapse in AML. Anti-inflammatory drugs have decades of clinical use and experience, so we are especially hopeful that our proposed combination therapy can be explored and translated quickly to help more patients in need.

August 2020, Blood

- **Researchers identify potential new treatment to overcome chemotherapy resistance in high-risk childhood B-cell acute lymphoblastic leukemia (B-ALL).** B-ALL is the most common malignancy of childhood cancer, and drug resistance is the major cause of relapse and mortality in patients with B-ALL. Four Diamonds scientists have discovered a new mechanism for overcoming drug resistance in B-ALL, resulting

in the design of a new, targeted combination therapy. This research lays the groundwork for Phase I/II clinical studies of the newly identified combination treatment for high-risk B-ALL in children and adults.

September 2020, Blood

- **Four Diamonds researchers discover new approach to suppressing tumors.** Neurofibromatosis type 2 (NF2) is a genetic disease and patients may develop multiple tumors in their nervous system. The disease is caused by dysfunction of a particular protein within cells. A recent study identified a way to activate this protein, and this discovery may help researchers understand how this protein is activated in normal development and how functions are lost in NF2-related tumors.

**Accepted for publication in EMBO (excellence in life sciences).*

- **Four Diamonds scientists identify framework to develop targeted therapeutics for acute myeloid leukemia (AML).** AML can be associated with very poor prognosis and resistance to chemotherapy. Researchers have determined that they can alter cell chromosomes to stop the cell's ability to turn into a tumor cell. Our team is focused on a treatment strategy to manipulate cell chromosomes to stop the development of leukemia in bone marrow.

December 2019, Cancer Cell

February 2020, Nucleic Acids Research

June 2020, Leukemia

- **Researchers identify promising targets for therapies in childhood cancer.** Our team has been working to gain a better understanding of how proteins affect the development of childhood cancers in order to identify promising targets for therapies.
 - We have identified that a multifunctional RNA-binding protein present in fetal growth is implicated in the development of a variety of cancers.
 - Our team has also discovered that genetic or chemical inhibition of another particular protein decreases leukemia cells' likelihood of developing as a tumor, increases leukemia cell death and helps make leukemia cells more sensitive to chemotherapy drugs.
 - Researchers have also explored the role and mechanisms of a specific protein in melanoma development and progression. In two different research models, we determined that genetically suppressing and deleting proteins did not affect the primary formation of tumors, but it drastically reduced the spread of cancer in the lungs.

June 2020, Leukemia

Local Research. Global Impact.™



WORKING WITH DOCTORS &
SCIENTISTS AROUND THE WORLD TO
FIND SAFER TREATMENTS & CURES

“Four Diamonds’ support has been crucial to the development of Penn State Health’s nationally and internationally recognized research programs, which are leading the fight to find better treatments and cures for all childhood cancers.”

— Lisa McGregor, MD, PhD, Interim Chief, Division of Pediatric Hematology and Oncology, Penn State Children’s Hospital and Penn State College of Medicine —



Four Diamonds funds a team of more than

90 SCIENTISTS &
RESEARCH PROFESSIONALS

working toward a cure.



2012-2021



Penn State Children’s Hospital was
**RECOGNIZED BY U.S. NEWS
& WORLD REPORT**

as one of the leading pediatric cancer centers in the United States.

We work with **300+** research partners.

+ nearly 50 International Research Partners

• **48**
Beat
Childhood
Cancer
(BBC)

• **180**
Children’s
Oncology
Group
(COG)

• **79**
Pediatric
Blood
& Marrow
Transplant
Consortium
(PBMTC)

• **10**
Pediatric Oncology
Experimental
Therapeutics
Investigators’
Consortium
(POETIC)



Four Diamonds is a member of

5 NATIONAL &
INTERNATIONAL
RESEARCH
CONSORTIA

that connect doctors and scientists to combine their efforts and find more effective treatments.



All Four Diamonds researchers are funded by the

NIH NATIONAL
INSTITUTES
OF HEALTH,

which is an extremely competitive grant process.



Makenna & Elliot



FOUR DIAMONDS
CHILD MAKENNA

This year, Four Diamonds child Makenna celebrated the end of her cancer treatments with a special surprise! Her family and the community held a parade in her honor—complete with pink shirts and a firetruck escort around town. What made the day even more special was that this was Makenna’s second time beating cancer. After her first diagnosis at the age of 3, Makenna was diagnosed with a different type of cancer when she was 5. Now, a year later and after two courageous fights, there is even more for Makenna to celebrate!

FOUR DIAMONDS CHILD **ELLIOT**
and his dad, Eric



“Four Diamonds has provided our family with financial and emotional support through Elliot’s treatment and beyond. It means everything to us to be a Four Diamonds Family.”

— Amy and Eric,
Four Diamonds
parents —

Caring for Patients' Emotional & Physical Needs



THROUGHOUT TREATMENT & SURVIVORSHIP

Four Diamonds funds the work of more than 30 specialty care providers to exclusively serve the physical, mental, emotional and spiritual needs of our childhood cancer patients and their families. The entire care team provides for these unique needs, in addition to providing expert treatment for childhood cancer. The team is composed of:



FOUR DIAMONDS CHILD JAXON enjoys playing the guitar with music therapist Devon

- Music therapists
- Social workers
- Psychologist
- Pharmacist
- Clinical nutritionist
- Genetic counselor
- Art therapist
- Neuropsychologist
- Chaplain
- Child Life specialists
- Nurse specialists

Social workers like Greg Baiocchi offer families a silver lining in the form of Four Diamonds help. “We try to reassure families that

they’re at the right place. Because of Four Diamonds, they’re not going to need to worry about their child’s medical expenses, and their whole family will receive the care and support they need to get through this.” Families are part of Four Diamonds until their child is five years off treatment, which includes transition into our Survivorship Clinic.



FOUR DIAMONDS CHILD KAI with his paired THON organization

FAMILIES GUIDING OTHERS IN THEIR CANCER JOURNEY THROUGH THE PARENT MENTOR PROGRAM

Traveling down a unique road, but with shared experiences, Four Diamonds families often become a source of mutual support to move forward amidst unknowns. While their son, Kai, was in treatment, Michelle and Brooks found strength among Four Diamonds families they met through Penn State THON. Kai has been done with treatment for three years, and now his parents provide this support for new families through the Parent Mentor Program.

Parents of childhood cancer survivors are matched with new families to offer guidance and support during their child’s cancer journey. Four Diamonds funds a program manager to expand support and programs like this one for childhood cancer patients, parents and bereaved families. Our care team has also created a support group to provide guidance, resources and connections for families who have lost a child to cancer.

“It has been a great opportunity to walk beside parents who are starting down a road that we are familiar with. During our own child’s cancer journey, we connected with other parents, and it was so beneficial to be able to talk to them and lean on them for encouragement, knowing they understood what we were going through.”

— Michelle and Brooks, Four Diamonds parents —

NEW PODCAST GIVES YOUNG ADULTS WITH CANCER A VOICE TO HELP OTHERS

To support young adults with cancer, our care team co-created a podcast called “Life on Pause” with our young adults. The podcast provides an opportunity to connect with others, share their experience and give tips and tricks for life with cancer. Topics range from mental health to fertility preservation and relationships, and all podcasts are available on SoundCloud.

“In addition to Four Diamonds’ financial support, the new podcast, “Life on Pause,” has been a tremendous experience for me. It’s a podcast designed by young adults with cancer for young adults with cancer to share their stories and experiences. I’ve met many amazing fellow survivors because of Four Diamonds and have found a new network of support!”

— Alexsey, Four Diamonds young adult—

Your Support Changes Lives

FOUR DIAMONDS FISCAL YEAR 2019–2020

Each spring, a robust grant process allocates all dollars raised that year by Four Diamonds for the coming fiscal year to further our goal of conquering childhood cancer. All requests are evaluated on the guidelines established in the original gift agreement by the co-founders of Four Diamonds.

FUNDING PRIORITY 1:

To ensure every Four Diamonds child receives the highest quality of lifesaving childhood cancer care at our Children's Hospital without ever seeing a bill for that care. This compassionate process relieves both the financial pressures and the burden of billing paperwork for all Four Diamonds families.

FUNDING PRIORITY 2:

To ensure Four Diamonds children and their families are wrapped in comprehensive services. This includes providing access to top-notch specialists proven to enhance positive treatment outcomes, combined with support services to meet the children's physical, emotional, social and spiritual needs.

FUNDING PRIORITY 3:

To ensure grants are made to a variety of innovative research projects that are searching for deeper understanding of why and how childhood cancer happens and new ways it can be treated. Funds are also invested in endowments. The interest earned on those endowments creates a secondary, permanent funding stream for our ongoing research efforts in pursuit of a cure for all childhood cancers.

FOUR DIAMONDS CHILD A'NIAH,
conquering pre-B acute
lymphoblastic leukemia

FOUR DIAMONDS FINANCIALS | 2019–2020

July 1, 2019 - June 30, 2020

Sources of Funds

THON™	\$10,352,807.39
Mini-THON®	\$5,705,747.60
Other	\$1,183,028.36
Bequest	\$227,555.20
Memorial Gifts	\$51,437.58
Honor Gifts	\$20,208.00
TOTAL	\$17,540,784.13

Uses of Funds

In fiscal year 2019–2020, funds used included those funds raised in the previous fiscal year and any dollars that had been allocated, but unspent, in the previous fiscal year.

Patient Care & Family Support

Patient Care	\$3,453,460.97
Family Support	\$1,166,340.00

Research

Research Grants	\$1,730,353.38
Research Support	\$4,554,861.35

Research Endowments

Immunology	\$3,000,000.00*
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Other Endowments

Chair of Pediatrics	\$1,500,000.00
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Administrative Expenses

	\$2,617,631.98
TOTAL	\$18,022,647.68

*Funding was originally allocated for enhanced Four Diamonds research space to be included within the new Innovation Pavilion at Penn State College of Medicine. The Board of Trustees voted on the appointment of an architect at the September 14, 2018, meeting. As this building project has been delayed, Four Diamonds reallocated these funds to Q1 of FY2020 to immediately impact research projects/needs.

FOUR DIAMONDS BY THE NUMBERS

\$17.5

MILLION RAISED
IN FY2020

85 cents

OF EVERY DOLLAR
SUPPORTS OUR MISSION

100,000+

STUDENT VOLUNTEERS
EACH YEAR

4,000+

FAMILIES HELPED
SINCE 1972

100%

OF MEDICAL
BILLS COVERED*

30+

SPECIALTY CARE
PROVIDERS

90+

RESEARCH
PROFESSIONALS

*For eligible Four Diamonds families

❖ Our Partners In The Fight™



During 2019–2020,

100,000+

VOLUNTEERS



contributed

5+ Million

VOLUNTEER HOURS



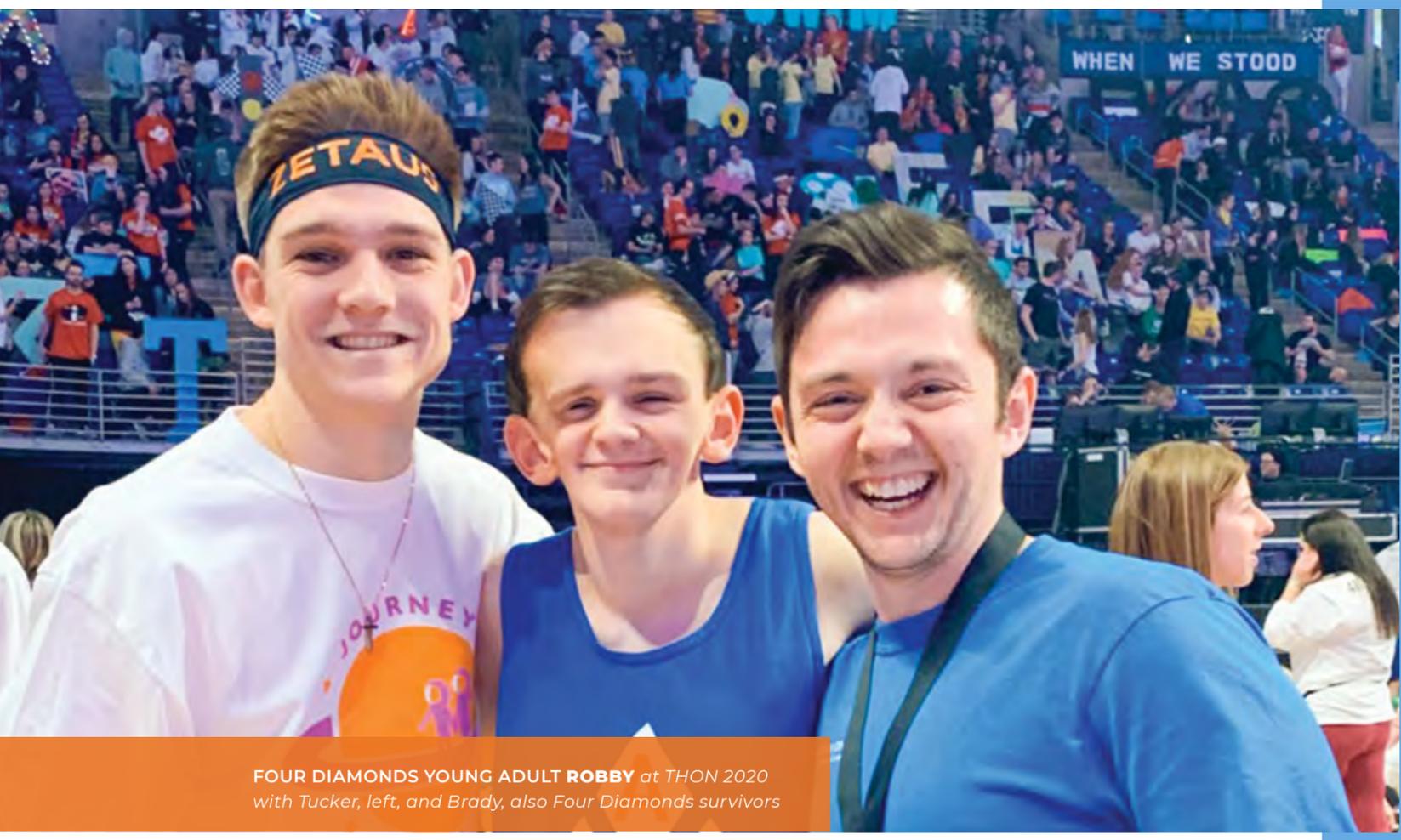
and they raised

\$17.1 Million

FOR THE KIDS®.



FOUR DIAMONDS CHILD AUBREY and a THON volunteer participate in an onstage performance



FOUR DIAMONDS YOUNG ADULT **ROBBY** at THON 2020 with Tucker, left, and Brady, also Four Diamonds survivors

“**THON’s support of families like mine means everything. We would have been so lost on how to get through this terrible time in our lives, but with the support of THON and Four Diamonds we were able to grow closer as a family and meet some amazing people.**”

— Robby, Four Diamonds young adult —

Penn State Dance Marathon THON™



FOUR DIAMONDS SURVIVOR JOINS THE THON COMMUNITY AS VOLUNTEER

In 2020, Four Diamonds teen Robby participated in THON, Penn State’s 46-hour dance marathon, but his involvement in THON started years earlier. Robby was diagnosed with leukemia when he was just 2 years old, enduring several years of hospitalization and treatment before being declared cancer-free.

During his treatment, Robby was paired with a THON organization, a Penn State fraternity. He says he formed a very close bond with the fraternity brothers, and those friendships continued throughout his childhood, even after he was cancer-free. He says it’s one of the reasons he kept going to THON every year.

Now Robby is a student at Penn State and this bond has grown even stronger since he joined that same fraternity. In addition to being a member, he was chosen to be one of the organization’s THON chairs for THON 2020.

Robby also participated as a dancer in THON 2020, standing for 46 hours to raise funds and awareness for other families fighting cancer. Robby is unsure what his future holds after graduation, but he is sure of one thing: he will continue to support THON and come back to watch his friends dance for a cure to childhood cancer.

Four Diamonds Mini-THON®

FOUR DIAMONDS SURVIVOR JOINS THOUSANDS OF STUDENTS SAVING LIVES

Sydney's story embodies the strength that Four Diamonds families receive from the community of supporters fighting alongside them. At just 2 years old, Sydney was diagnosed with a brain tumor. Her journey at this young age included multiple surgeries, radiation and the treatment of a second tumor. Though she was young, the impact the Four Diamonds community had on her family is still felt today.

Growing up, Sydney enjoyed visiting Mini-THON events to share her story. She recalls how powerful it was to see so many students passionate about the cause that provided a lifeline to her family and helped save her life. Today, Sydney is 13 years cancer-free! She is a Mini-THON leader at her high school and a member of the Mini-THON Student Leadership Council. She hopes to attend Penn State University, participate in THON and continue to give strength to families fighting cancer through a career as a Child Life specialist.

Typically, Mini-THON engages

90,000
STUDENTS

in

290+
SCHOOLS.

This year,
they raised

\$5.7
MILLION.



FOUR DIAMONDS TEEN **SYDNEY**,
childhood cancer survivor



“ Since Liam’s diagnosis, Four Diamonds has been with us every step of the way, and I’ve never had the stress of paying his very expensive medical bills. We will always do our best to give back so that other families can survive and thrive through this journey!”

— Kristen, Four Diamonds mom —

FOUR DIAMONDS CHILD LIAM
and mom Kristen



Team FTK®

(FOR THE KIDS®)

More than

\$800,000

GIVEN BY INDIVIDUAL
& CORPORATE GIFTS.

Team FTK® is a Four Diamonds fundraising initiative that unites supporters in our quest to conquer childhood cancer. Through Team FTK®, the collective efforts of individuals, students, families, community members and corporate partners make an incredible impact to help kids in our community and around the world.

This year, passionate community supporters and grateful patient families contributed more than \$1,254,673.94 from individual and corporate gifts, community fundraisers and gifts in honor or in memory of a loved one. Every gift gives hope to families fighting childhood cancer, making it possible for Four Diamonds to help thousands of children.

Four Diamonds mom gives back through Team FTK®

Four Diamonds mom Kristen was so grateful for the assistance her family received throughout her son’s cancer fight that she set up a fundraiser for her birthday to raise money to help other families in their cancer journeys. At 5 years old, her son, Liam, was diagnosed with medulloblastoma, a cancerous brain tumor. Throughout his treatment at Penn State Children’s Hospital, Liam has endured more than any 5-year-old should – surgeries, chemotherapy and a stem cell transplant. Liam is still courageously fighting his cancer, and his mom, Kristen, is so grateful to Four Diamonds supporters for helping Liam to thrive throughout his journey.



“ I remember feeling like I was walking in a daze after Megan’s diagnosis, some type of bad dream. Then we met Megan’s social worker who introduced us to Four Diamonds and explained how the organization was going to help us. Any medical bill that was not covered by insurance was paid by Four Diamonds.”

– Michelle, Four Diamonds mom to Megan –

FOUR DIAMONDS YOUNG ADULT MEGAN,
conquering acute lymphoblastic leukemia

FOUR DIAMONDS

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