



Cancer and Blood Disorders Center Annual Report



"Each and every child we treat has a future worth fighting for!"

Vinod Balasa, MD
Medical Director
Cancer and Blood Disorders Center

More than 65 years ago, five young mothers imagined building a hospital just for kids in California's Central Valley. The mothers' dream not only expanded into a comprehensive medical facility with nationally recognized physicians and programs, it is now an entire healthcare network that serves more than 1.3 million children.

As one of many subspecialties offered at Valley Children's, the Cancer and Blood Disorders Center provides the breadth of specialized services and depth of experience to treat the most common to the rarest pediatric hematologic and oncologic conditions. We provide state-of-the-art treatment protocols and clinical trials on par with top hospitals across the nation. From leukemia to Rosai-Dorfman to adrenocortical tumors to aplastic anemia, we have seen and treated them all here.

In recent years, the department has experienced unprecedented growth. We are caring for more patients than ever before with annual volume increases of 10 percent in oncology and 30 percent in hematology.

In FY2016 alone, we saw more than 7,000 outpatient visits in oncology and more than 4,000 outpatient visits in hematology. We provide care for 120-150 newly diagnosed cancer patients a year. Because of this growth, we now have five nurse practitioners and 10 board-certified oncologists and hematologists who have been trained at top institutions around the world.

With our high patient volume every year, it's impossible not to see the impact we have in the Central Valley. In the pages that follow, I invite you to read about the progress we are making with our programs through research, collaborations with partner institutions, rare diseases we've treated and our efforts on reaching out in the community.

I am very proud of the difference our team makes in the lives of our young patients and their loved ones. The best gift we can give our patients is to bring hope and healing through innovative therapies. Each and every child we treat has a future worth fighting for!



Samantha, 4, with Valley Children's mascot, George the Giraffe. Read Samantha's story on page 16.

Front cover: Samantha with child life specialist, Joy Johnson.

PHYSICIANS



Vinod **Balasa**, MD



Vonda Crouse, MD



John **Gates**, MD



Karen **Fernandez**, MD



J. Daniel **Ozeran**, MD, PhD



Latha **Rao**, MD



Faisal **Razzaqi**, MD



David Samuel, MBChB, MD



Wendy **Tcheng**, MD



Ruetima **Titapiwanatakun**, MD

NURSE PRACTITIONERS



Katie **Baker**, NP



Kelly Folmer, MSN, CPNP



Terea **Giannetta**, DNP, CPNP, FAANP

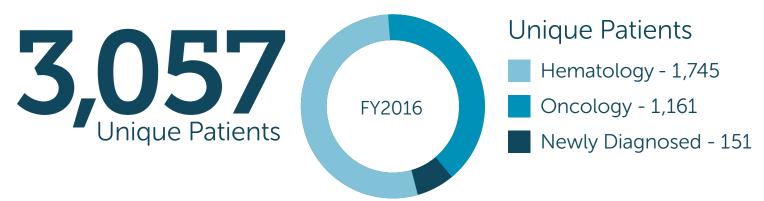


Malynda **Kemmer**, NP



Therese **Hinz**, MSN, PPCNP-BC

SERVICE IN NUMBERS FY2016



Patient Visits

11,975

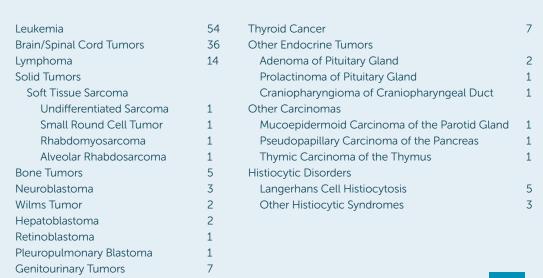
Hematology - 4,200

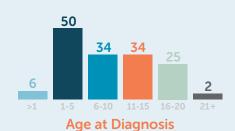
Oncology - 7,775

Oncology Procedures with Sedation

1,104

151 Newly Diagnosed Oncology Cases



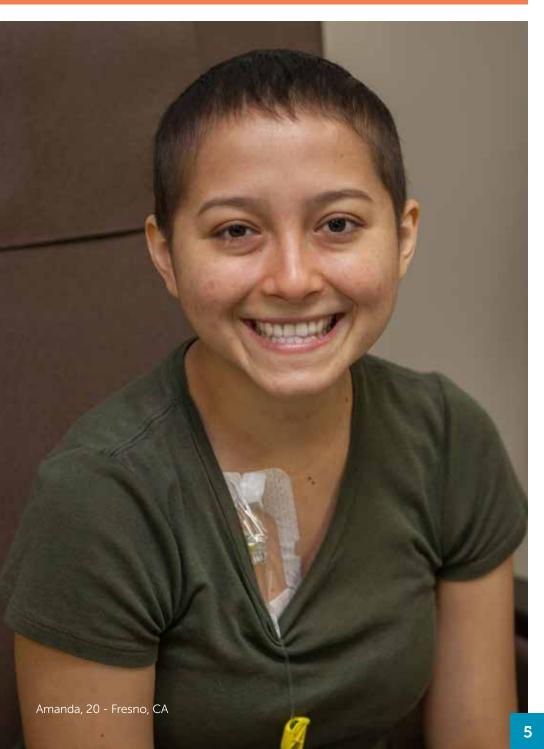


County at Diagnosis

Fresno - 54 Merced - 8
Kern - 34 Monterey - 1
Kings - 3 San Joaquin - 1
Madera - 8 San Luis Obispo - 2

Stanislaus - 14 Tulare - 25 USA, Non-CA - 1

ONCOLOGY



PROVIDING COMPREHENSIVE CANCER CARE

The Cancer and Blood Disorders Center at Valley Children's serves as one of the leading pediatric cancer facilities on the West Coast and the only provider of pediatric oncology services between Los Angeles and the Bay Area. The center includes an outpatient unit and a fully-equipped, 36-bed inpatient unit, Starship Craycroft.

As a member of the Children's Oncology Group (COG) and a participant of industry-sponsored clinical trials, we offer our patients access to 90 open protocols for treating childhood cancer. Today, with enhanced therapies and supportive care, Valley Children's cancer patient cure rates average 85 percent.

WE FOCUS ON PROVIDING QUALITY TREATMENTS AND BETTER CONTINUITY OF CARE THROUGH OUR PROGRAM-BASED CLINICS:

- Leukemia/Lymphoma About 35 percent of our new patients have common cancers such as Acute Lymphoblastic Leukemia (ALL) and Acute Myeloid Leukemia (AML). Close to 10 percent of our new patients have lymphomas.
- **Solid Tumors** Approximately 30 percent of our new patients suffer from a solid tumor diagnosis. The most common types of solid tumors in children include neuroblastoma, osteosarcoma, hepatoblastoma, retinoblastoma, Hodgkin lymphoma and Wilms tumor.
- Neuro-Oncology Brain and spinal cord cancers affect about 20 percent of our newly diagnosed patients. Our dedicated neuro-oncologist, Dr. David Samuel, brings years of experience as part of the diverse team of experts.
- Histiocytosis We see about 8-10 cases a year for histiocytosis. As a member of the North American Consortium for Histiocytosis (NACHO), we have access to advanced treatment protocols for kids with Langerhans Cell Histiocytosis (LCH).
- Childhood Cancer Survivorship The only one of its kind in Central California, our program is open to any survivor who is cancer-free for at least three years since completion of therapy.

ON AVERAGE, 85% OF CHILDREN TREATED FOR CANCER AT VALLEY CHILDREN'S WILL BECOME LONG-TERM SURVIVORS

ONCOLOGY

TREATING UNIQUE ONCOLOGIC DIAGNOSES

Many of our center's new cases are common childhood leukemias and lymphomas. But in our large and ethnically diverse region, we also have patients with rare diagnoses infrequently seen even in larger metropolitan areas.

WITH YEARS OF EXPERTISE AND TRAINING FROM AROUND THE WORLD, VALLEY CHILDREN'S ONCOLOGISTS HAVE TREATED MANY OF THE RARE DISEASES BELOW.

- Rosai-Dorfman
- Langerhans Cell Histiocytosis
- Hemophagocytic Lymphohistiocytosis (HLH)
- Embryonal Sarcoma of the Liver
- Adrenocortical Tumor
- Nasopharyngeal Carcinoma
- Acute Promyelocytic Leukemia (APL)
- Infant ALL
- Pleuropulmonary Blastoma
- Synovial Sarcoma
- Rhabdomyosarcoma
- Burkitt Lymphoma

Our multidisciplinary teams work together for each patient, meeting regularly as a group to make diagnostic and treatment decisions for improved outcomes. The team comprises subspecialists and specialists including oncologists, pathologists, interventional radiologists, radiation oncologists, pediatric surgeons, neurosurgeons, neurologists, endocrinologists, psychologists, nurse practitioners, nurse navigators, physiatrists, social workers, palliative care providers, therapists and child life specialists.





Cancer and Blood Disorders Center Nurse Navigators L-R: Sia Vang, Kimberly Ling, Tina Little, Maria Padilla, Laura Andrews

PATIENT AND FAMILY SUPPORT SERVICES

CHILD LIFE

Focusing on developmental needs of children, child life specialists provide illness and hospital education, surgery preparation, therapeutic and recreation play activities and emotional support for patients and their families.

NURSE NAVIGATORS

Our nurse navigators play a crucial role in coordinating care for patients and families from time of diagnosis through intensive treatments. They are an important link between the families and subspecialists.

NUTRITION SERVICES

Our registered dietitians in the Clinical Nutrition Department provide medical nutrition therapy to patients.

PALLIATIVE CARE

Through palliative care, children with life-limiting or life-threatening medical conditions receive active treatments at home. Palliative care is treatment of the pain, symptoms and stress of the illness to improve a child's and family's quality of life. We also help families enroll in the state-funded Concurrent Care Program for added home support services as necessary.

REHABILITATION CENTER

We provide the highest quality inpatient and outpatient pediatric rehabilitation care tailored to meet the individual physical, developmental, social, psychosocial and educational needs of each child and family.

SOCIAL SERVICES

Our social workers assist children and families in coping with every part of the cancer journey – through emotional, social or financial issues. They help families understand their child's diagnosis and treatment plan and overcome any barriers to care such as transportation or work-related issues. They also help kids stay focused on their goals or assist in their transition back to school after his or her care is complete.

ONCOLOGY RESEARCH

TAKING PART IN FINDING A CURE

Children's cancer has come a long way. Half a century ago, many childhood cancers were simply incurable. Now the average cure rates for certain pediatric cancer conditions have increased to 75-80 percent, with cure rates for some conditions at 98 percent.

Valley Children's continues to expand our research efforts to provide enhanced care and options for our patients while contributing to a greater medical knowledge base for all children. Our physicians participate in international associations and committees and collaborate with key research groups to improve cure rates for young children with unique cancers.

CHILDREN'S ONCOLOGY GROUP (COG)

Our Cancer and Blood Disorders Center has consistently been in the top 5-8 percent worldwide in patient enrollments to COG, the world's largest organization devoted exclusively to childhood and adolescent cancer research. Valley Children's ranks #4 in the western region with its high enrollment volume, making us a valuable contributor to advance treatment protocols for children. Dr. Faisal Razzaqi is a member on the COG Acute Myeloid Leukemia (AML) steering committee. Dr. Vonda Crouse is the principal investigator for Valley Children's, while also a co-investigator for COG internationally.

NORTH AMERICAN CONSORTIUM FOR HISTIOCYTOSIS (NACHO)

Valley Children's is also a member of NACHO, which provides clinical studies for patients with histiocytic diseases. This membership enables us to open different treatment protocols for kids with Langerhans Cell Histiocytosis (LCH), especially those who have failed past treatments or need a second line of treatment.

INTERNATIONAL RARE HISTIOCYTIC DISORDER REGISTRY (IRHDR)

We take part in IRHDR, a registry that collects global cases of rare non-LCH disorders and provides information on how we analyze and confirm the diagnosis.

RADART-PRO

With UC San Francisco (UCSF), we are participating in a multi-institutional study to assess the long term effects of radiation in children's blood vessels as well as stroke recurrence in children with cancer who received radiation therapy to the neck and/or brain.

OTHER STUDIES

Our physicians collaborate closely with other top institutions such as Stanford University and UCSF as contributors or co-investigators in clinical studies such as:

- Biological studies for Acute Lymphoblastic Leukemia (ALL) and Acute Myelogenous Leukemia (AML)
- Brain tumor mutations
- IDH1 gene mutation in a pediatric case with features typical of an adult tumor
- Presence of cerebral microbleeds in pediatric brain tumor survivors

For the past 17 years, Valley Children's has been a member of the Northern California Leukemia Epidemiology Study to understand what risk factors are associated with leukemia and how it can be prevented. We also work with pharmaceutical manufacturers in clinical trials of new medications for various conditions such as refractory solid tumors, advanced melanoma or leukemia.

The Cancer and Blood Disorders Center has the largest research group at Valley Children's with six dedicated staff members. Because of their efforts alongside our physicians, families in the Central Valley do not have to travel to larger metropolitan areas for innovative and breakthrough pediatric cancer therapies. Valley Children's offers them right here in the Central Valley so that families can stay close to home while receiving high-quality pediatric care.



HEMATOLOGY



Angel, 6 - Fresno, CA

COMPREHENSIVE HEMATOLOGY CARE

VALLEY CHILDREN'S OFFERS COMPLETE HEMATOLOGY SERVICES FOR ALL TYPES OF BLOOD DISORDERS.

We treat general hematology disorders such as thrombocytopenia, platelet disorders and white blood cell disorders. We are part of the Western States Region IX Hemophilia Network and the Thalassemia Western Consortium.

Our Hemophilia Treatment Center (HTC) is the only federally-funded center in the Central Valley recognized for providing comprehensive care to individuals with bleeding and clotting problems such as hemophilia, thromboembolic disorders and von Willebrand disease. We also have a hemoglobinopathy program that includes sickle cell anemia and thalassemia, a prevalent condition in the Central Valley region.

We see more than 25 outpatient visits every day. The team performs outpatient blood, platelet and immune-globulin transfusions for our pediatric patients who require these regimens.

Our pediatric subspecialists also work with interventional radiologists and plastic surgeons to treat many vascular malformation cases with chemotheraphy, immune suppressant medications, laser therapy and sclerotherapy.

SUPPORTING THE REGION

In addition to our main campus in Madera, Valley Children's pediatric subspecialists see hematology patients at our Bakersfield and Modesto specialty care centers. We also provide telemedicine support for hematology at our specialty care centers in Modesto, Bakersfield and Visalia to improve access to high-quality care. Telemedicine allows children and their families to stay closer to home, especially if they live in rural areas around the Central Valley.

TREATING UNIQUE HEMATOLOGIC DIAGNOSES

In our large and ethnically diverse region, Valley Children's hematologists have diagnosed and treated many rare hematologic cases. Below are some examples:

- Aplastic Anemia
- Fanconia Anemia
- Diamond Blackfan Anemia
- Factor 13 deficiency
- Combined factor deficiencies
- Vicenza type Von Willebrand disease

HEMATOLOGY SUPPORT SERVICES

Patient education is an important part of our program. Our physicians and nurse practitioners train patients and families on their disease, what to do in an emergency and how to manage the disease as patients grow to adulthood. Our goal is to help our young patients become advocates for themselves as they learn to manage their blood disorder.

ADULT HEMATOLOGY SERVICES

In April 2016, Valley Chidren's expanded its clinic to also serve adult patients with blood disorders. We partnered with California Cancer Associates for Research & Excellence (cCare) to perform outpatient transitional hematologic care to adolescent and adult patients of all ages.



HEMATOLOGY RESEARCH

As a rare disease, there is still a lot to learn about hemophilia. Most people with hemophilia are diagnosed at a very young age and treated at one of the 140 Hemophilia Treatment Centers (HTCs) across the nation. As the only HTC in Central California, Valley Children's engages in many hemophilia research studies outlined below.

Our hematologists also work with experts across the country to offer some of the newest treatments available for thalassemia, sickle cell disease and iron overload. Dr. Vinod Balasa is the principal site investigator for all Valley Children's research studies.

MY LIFE OUR FUTURE (MLOF)

MLOF's goals are to enable people with hemophilia and their families to understand more about the disease and to advance scientific research to improve care and treatment. Valley Children's participates in MLOF's genotyping initiative data and sample research repository.

The MLOF genotyping program at participating HTCs identifies a specific genetic variant in a patient or carrier that causes the disorder. Through grants from MLOF and the National Hemophilia Foundation (NHF), Valley Children's was the first in the nation to hold dedicated "genotyping days" – a no-cost genetic testing day for people with hemophilia A or B and potentially affected relatives (carriers). During genotyping day, patients learn about their type of hemophilia and are counseled on the risks. In 2015, the NHF and MLOF recognized our treatment center with the Champion of the Year award for enrolling a large number of hemophilia patients through our genotyping testing days.

HEALTH RESOURCES AND SERVICES ADMINISTRATION (HRSA)

Valley Children's provides information for the Hemophilia and Thrombosis Data Set, a U.S. registry of all HTC patients we see annually. The dataset collects important information such as demographics and outcomes, vital to identifying impact, trends and priorities for action.

CENTERS FOR DISEASE CONTROL (CDC) STUDIES

Valley Children's is involved in the CDC's ongoing Community Counts data reports. The purpose of this project is to gather and share information about common health issues, medical complications, and causes of death that affect people with bleeding disorders who receive care at U.S. HTCs.

MCMASTER UNIVERSITY IN CANADA

The McMaster Web-Accessible Population Pharmacokinetic Service (WAPPS-Hemo) project is a centralized database that collects published and unpublished individual classic pharmacokinetic data. It allows researchers to study if medications will work for patients at certain factor levels.

AMERICAN THROMBOSIS AND HEMOSTASIS NETWORK (ATHN)

We also contribute to the ATHN national database, ATHNdataset, designed to support research and ultimately improve care.

CHILDHOOD CANCER SURVIVORSHIP PROGRAM

WITH THEM THE WHOLE WAY

The same treatments that cure cancer patients may put them at risk for long-term health problems. Up to two-thirds of childhood cancer survivors experience late effects. Most remain unaware of their health risks and are unfamiliar with how to reduce them.

The Valley Children's Childhood Cancer Survivorship Program helps these patients prepare for a brighter future. The only one of its kind in the region and among a small number statewide, the program's participants receive personalized treatment therapy summaries, and a tailored risk-assessment, screening and follow-up plan.

Our program works with families and childhood cancer patients who are cancer-free for at least three years from completion of treatment. Our goal is to educate, empower and prepare survivors for adulthood and maintain their health as best as possible.

Since its inception in 2010, Valley Children's Cancer Survivorship Program has seen more than 1,000 childhood cancer survivors. The number of annual visits has grown three times from 134 visits in 2010 to 402 visits in 2016.

CREATING A BRIGHTER FUTURE

The program provides a comprehensive evaluation of the cancer survivor's health and academic and social development, as well as patient education about their diagnosis, treatment, potential late effects and health maintenance.

The primary goals of our Childhood Cancer Survivorship Program are:

- To promote healthy lifestyles for former cancer patients as they enter adulthood
- Advance research efforts to discover the most effective treatments for cancer with the smallest incidence of late effects

Clinical program coordinators collect data and contact survivors for follow-up clinical trials to evaluate long-term health effects of childhood cancer treatments. This beneficial feedback helps improve treatments for all children.



CANCER SURVIVORSHIP

Because of our program, hundreds of childhood cancer survivors now have a greater understanding of the late effects of their treatment and are empowered to reach their full potential as adults. We also help families understand that the goal of childhood cancer treatment extends beyond cure to curing children with fewer effects on their growth and development.

Families in our program learn that clinical trials help researchers design studies to compare the efficacy of existing treatment regimens to treatments with less potential for late medical problems, resulting in a higher quality of life for future childhood cancer survivors.

ANNUAL CHILDHOOD CANCER SURVIVORSHIP CONFERENCE

Every year, Valley Children's Hospital hosts a free educational conference in partnership with the Leukemia & Lymphoma Society. The conference is an opportunity to hear from other cancer survivors and families. It is also a chance for the public to learn from experts on a variety of survivorship topics such as psychosocial issues, physical fitness, nutrition and insurance issues.



Dr. John Gates with Ulyses, 21, from Delhi, CA



LIVING HIS LIFE PURPOSE

Also a cancer survivor, Dr. John Gates is the director of Valley Children's Childhood Cancer Survivorship Program. He was recently named the Margaret Corasick Endowed Chair of Childhood Cancer Survivorship.

In 1978, Dr. Gates was diagnosed at age 5 with Acute Lymphoblastic Leukemia (ALL). Undergoing years of chemotherapy, radiation and experimental bone marrow transplant, Dr. Gates experienced firsthand the challenges of past treatments, including two relapses, painful spinal tap procedures without sedation and weekly blood draws before portacaths existed.

Fortunately, Dr. Gates became cancer-free as a teenager. He worked hard in his recovery and became a pediatric oncologist/hematologist. He joined Valley Children's Cancer Center in 2005. Then in 2010, he launched the region's only Childhood Cancer Survivorship Program.

"I realized this is my life purpose and why I survived when the odds were stacked against me," said Dr. Gates.

MEET SAMANTHA - Diagnosed with Neurofibromatosis Type 1

FINDING COMFORT AND CONFIDENCE

Jordyn Leal knows about a mother's intuition. Her baby, Samantha, had three birthmarks during birth which suddenly increased to more than 50 marks by six months. She also knew it was odd little Sammy only gained five pounds during her first year. Despite the first pediatrician's advice that there was nothing to worry about, Jordyn knew something was very wrong.

Jordyn changed to a new pediatrician who made a referral to the Genetics and Metabolism department at Valley Children's. Samantha was diagnosed with Neurofibromatosis Type 1 (NF1), a genetic disorder that affects 1 in every 3,000 people. An MRI revealed the disease caused an optic nerve glioma, a cancerous growth in the nerves of Sammy's eyes. Dr. Clair Schmidt, Valley Children's pediatric ophthalmologist, confirmed Sammy's right eye was affected by the optic glioma.

"My husband and I were in complete disbelief. It shocked our entire world," said Jordyn. "But we had full faith that the doctors - and God - would do what was needed for Sammy."

Dr. David Samuel, Valley Children's neuro-oncologist, presented a treatment plan that eased the family's fears. At only 13 months, Sammy received chemotherapy every week for an entire year. After she stabilized during the first round, she came off chemo and continued with her speech therapy, occupational therapy and physical therapy.

But the disease is complex and chronic. NF1 not only caused a tumor behind Sammy's eye, but also another tumor in her brain. Complications can cause vision problems, seizures, headaches, infectious diseases and learning disabilities. These complications are monitored and treated by multiple Valley Children's subspecialties, including neuro-oncology, genetics medicine, ophthalmology, neurology, infectious diseases and psychology.

"We feel very comfortable about the high level of expertise of all her doctors here at Valley Children's. When I bring up questions, they always take the time to answer them. I know I will get honest answers because they genuinely show they care. And that's a huge thing. The last thing I want is to feel that I can't speak up in regards to Sammy's care. I'm glad we have the comfort level we do."

A SAFE PLACE FOR SAMANTHA

Now 4 years old, Sammy is on a new chemotherapy plan. Her doctors continue to monitor any side effects from the medications and adjust as necessary until she is stable again.

Through her path to healing, Sammy has bonded with many Valley Children's staff members. She even calls her child life specialist, Joy Johnson, "her Joy." She affectionately calls her doctors her own. When she sees a picture of George the Giraffe in the mail, she knows it's from her doctors.

"After three years of coming in for treatments and therapies, the staff becomes like family. It is our safe place," Jordyn continues. "As we drive up to the hospital, Sammy gets excited and says, 'mommy, it's my doctors!' She loves the staff here. It makes us feel that we are doing right thing, we are making the right choices."

"After three years of coming in for treatments and therapies, the staff becomes like family. It is our safe place."



MEET JAZLEAN - Diagnosed with Rhabdomyosarcoma

A MYSTERIOUS LUMP BECOMES THE UNIMAGINABLE

When Jazlean Vega was 12 years old, she noticed a big lump suddenly grow on her left thigh. With no pain or other symptoms, her family practice doctor thought it was just built up fatty cells. After two months, the "fatty cells" were not going away. Jazlean's mom, Alanna, took action and rushed her daughter to a local emergency room. After an alarming blood test and ultrasound at the ER, Jazlean was referred to Valley Children's Cancer and Blood Disorders Center right away.

Valley Children's specialists performed a biopsy and confirmed Jazlean had rhabdomyosarcoma, a soft tissue cancer made up of cells that normally develop into skeletal muscles. An imaging scan showed the cancer cells had reached lymph nodes in Jazlean's abdomen.

"At that point, a treatment plan, roadmap and a process was put in place immediately. The plan had to be more aggressive and longer because the doctors said it had reached Stage IV cancer," Alanna recalled. "It was tough on the entire family, but we all stayed strong and leaned on our faith. God, our family and friends poured blessings our way. Jazlean has a beautiful and uplifting soul. When she was diagnosed, our roles switched. I became more emotional and Jazlean became a very strong young girl as she was about to fight this battle."

It has been over a year since Jazlean's diagnosis. During the past schoolyear, she had a homeschool teacher for seventh grade as she went through months on her chemotherapy treatment plan. She also went through 28 days of radiation therapy. Through it all, Jazlean persevered, thrived in homeschool and kept a positive attitude. Her recent scans showed that she had no active cancer, but is still continuing her chemotherapy for another month.

AMAZING 'STRENGTH AND GRACE'

"Fortunately, Jazlean's cancer has responded very well to her chemoradiation therapy," said Dr. Wendy Tcheng, pediatric oncologist at Valley Children's. "She has shown strength and grace throughout her treatment and has always maintained a positive attitude."

Alanna continues, "I feel very comfortable with all the doctors here at Valley Children's. No matter the situation, we know they will have it handled. Through the bumpy road, everyone has been so helpful, attentive, very loving and caring No one made us feel like Jazlean was just another cancer patient. They always made us feel at home."

Jazlean doesn't take anything for granted. She is grateful for every blessing as she continues her journey. Now in eighth grade, she looks forward to attending Long Beach State in a few years to take nursing. She hopes to care for other children in the future. With her sweet, nurturing spirit, there is no doubt she will make a perfect pediatric nurse someday.

"I feel very comfortable with all the doctors here at Valley Children's. No matter the situation, we know they will have it handled."



COMMUNITY EVENTS

VALLEY CHILDREN'S SPONSORED EVENTS

My Life Our Future (MLOF) Genotyping Day January 2016

The team at Valley Children's was the first in the nation to hold "genotyping days" – a day where families were educated about the MLOF program, efficiently conducted genetic testing of patients and carriers, and provided an opportunity for staff to engage with families in the community.

Attendees

- 23 patient participants
- National Hemophilia Foundation representatives from Washington, DC

Annual School Nurses Conference September 2016

A half-day conference that educated the region's school nurses on pathophysiology and treatment modalities of bleeding disorders.

Attendees

- 92 school nurses from 29 school districts
- Counties represented: Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus and Tulare





Annual Childhood Cancer Survivorship Conference October 2016

A free educational conference in partnership with the Leukemia & Lymphoma Society. The conference was an opportunity to hear from other cancer survivors and families to learn from experts on a variety of survivorship topics.

Attendees

• 45 participants





VALLEY CHILDREN'S ALSO PARTICIPATED IN THESE COMMUNITY EVENTS

St. Baldrick's Foundation May 2016

Every year, Valley Children's hosts a head-shaving event at our main campus to help raise funds for childhood cancer research. St. Baldrick's is the largest private (non-government) funder of childhood cancer research grants.

Camp Hemotion June 2016

Camp Hemotion is an annual weeklong residential summer camp serving approximately 100 young people, ages 7-20, living with bleeding disorders. Bleeding disorder carriers and siblings also attended. Every year, Valley Children's physicians and nurses take part in this camp in Oakhurst, CA, to educate children and their families about their blood disorders.

Camp Sunshine Dreams August 2016

Camp Sunshine Dreams is the largest summer camp for children with cancer in Central California. Valley Children's staff members educated patients ages 8-15 at Camp Sunshine Dreams. The camp is an enjoyable, stimulating and supportive experience and provides for the special emotional and physical needs of the children attending.













PUBLICATIONS 2016

MANUSCRIPTS

An infant with MLH3 variants, FOXG1 duplication and multiple benign cranial and spinal tumors. A clinical exome sequencing study. Kansal R, Li X, Shen J, **Samuel D**, Laningham F, Lee H, Panigrahi GB, Shuen A, Kantarci S, Dorrani N, Reiss J, Shintaku P, Deignan JL, Strom SP, Pearson CE, Vilain E, Grody WW. *Genes Chromosomes Cancer*. 2016 Feb; 55(2):131.

Epithelioid glioblastomas and anaplastic epithelioid pleomorphic xanthoastrocytomas - same entity or first cousins? Alexandrescu S1, Korshunov A2,3, Lai SH4, Dabiri S5, Patil S6, Li R7, Shih CS8, Bonnin JM9, Baker JA10, Du E11, Scharnhorst DW12, **Samuel D13**, Ellison DW14, Perry A1. *Brain Pathol*. 2016 March, 26(2): 215-223.

IDH1 mutation can be present in diffuse astrocytoma and giant cell glioblastoma of young children under 10 years of age. Ferris SP, Goode B, Joseph NM, Kline CN, **Samuel D**, Gupta N, Bollen A, Perry A, Mueller S, Solomon DA. *Acta Neuropathol*. 2016 July; 132(1):153-5. Epub 2016 May 9.

Presence of cerebral microbleeds is associated with worse executive function in pediatric brain tumor survivors. Roddy E, Sear K, Felton E, Tamrazi B, Gauvain K, Torkildson J, Buono BD, **Samuel D**, Haas-Kogan DA, Chen J, Goldsby RE, Banerjee A, Lupo JM, Molinaro AM, Fullerton HJ, Mueller S. *Neuro Oncol*. 2016 November; 18(11):1548-1558.

SPARC over expression combined with radiation retards angiogenesis by suppressing VEGF-A via miR410 in human neuroblastoma cells. Boyineni J, Tanpure S, Gnanamony M, Antony R, **Fernández K**, Lin J, Pinson D, and Gondi C. *International Journal of Oncology*. 2016 July 6; 3646:1-13.

Hand1 overexpression inhibits medulloblastoma cell proliferation and metastasis. Asuthkar S, Guda M, Martin S, Antony R, **Fernández K**, Lin J, Tsung A. *Biochemical and Biophysical Research Communications*. August 2016. 477; 2:215-221.

Family-based exome-wide assessment of maternal genetic effects on susceptibility to childhood B-cell acute lymphoblastic leukemia in hispanics. Archer N, Perez-Andreu V, Scheurer M, Rabin K, Peckham-Gregory E, Plon S, Zabriskie R, de Alarcon P, MD, **Fernández K**, Antillon-Klussmann F, Najera C, Yang J, Lupo P. *CANCER*. 2016 Dec 1;122(23):3697-3704. Epub 2016 Aug 16.

ABSTRACTS

Fernández K, Mobberley-Schuman P, Metcalf M, Brookbank C, Adams D, Hamill A. Sirolimus for the treatment of juvenile nasopharyngeal angiofibroma. International Society for the Study of Vascular Anomalies (ISSVA) Annual Workshop. Buenos Aires, Argentina. April 2016. Program book, page 122.

Mobberley-Schuman P, Adams D, Frieden I, Goldenberg D, Venkatramani R, Li K, Levi M, Pennington T, Phillips R, Orme L, Jeng M, Price V, Geddis A, Nelson S, Blatt J, Drolet B, Iacobas M, Hendricks M, Tollefson M, Glade-Bender J, Synakiewicz A, **Fernández K**, McCuaig C, Trenor C, Blei F, Kritzinger F, Greenberger S, Metcalf M, Brookbank C, Wentezel M, Fei L, Hammill A. The mTOR inhibitor sirolimus for the treatment of complicated vascular anomalies: A retrospective review of medical records. International Society for the Study of Vascular Anomalies (ISSVA) Annual Workshop. Buenos Aires, Argentina. April 2016. Program book, page 35.

Gnanamony M, Pinson D, Antony R, **Fernández K**, Lin J, Joseph P, Gondi C. Chronic radiation increases uPA and cMyc expression levels but decreases nMyc expression levels in neuroblastoma cells. Accepted to the 107th Annual Meeting of the American Association for Cancer Research (AACR) 2016.

Olaiya O, Speckhart B, Antony R, **Fernández K**. Neuromuscular symptoms as a rare presentation of adrenocortical carcinoma. Accepted to the American Society of Pediatric Hematology/Oncology (ASPHO) Annual Meeting 2016.

Fernández K, Bostwick A, Girón V, Garrido C, Castellanos M, Wang H, Valverde P, Antillón-Klussmann F, de Alarcón P. Absolute lymphocyte count recovery at the end of induction predicts survival in acute lymphoblastic leukemia in Guatemala. American Society of Pediatric Hematology/Oncology (ASPHO) Annual Meeting 2016. Pediatr Blood Cancer 2016.

Lee B, **Fernández K**, Martin S, Maksimovic J, Lin J and Antony R. Spectrum of central nervous system tumors seen in patients with neurofibromatosis type 1 and tuberous sclerosis. A single center experience. American Society of Pediatric Hematology/Oncology (ASPHO) Annual Meeting 2016. Pediatr Blood Cancer 2016.

PUBLICATIONS & AWARDS 2016

POSTER PRESENTATIONS

Smith J, Hatcher N, Martinez R, Balasa V.

A "Genotyping Day" to facilitate efficient enrollment for a national project.

World Federation of Hemophilia 2016 World Congress, Orlando, FL, July, 2016 and American Thrombosis and Hemostasis Network (ATHN) Data Summit, Chicago, IL, October 2016

PODIUM PRESENTATIONS

Giannetta, Terea, DNP, RN, CPNP

"Blood Dyscrasias in Pediatrics," National Association of Pediatric Nurse Practitioners (NAPNAP) National Conference, Atlanta, GA, (March 2016)

"Blood Dyscrasias," California School Nurse Association State Conference, Fresno, CA (February 2016)

BOOK CHAPTERS

Giannetta, Terea, DNP, RN, CPNP

Burns, Brady, Starr, & Blosser. *Pediatric Primary Care*, 6th Ed., Chapter 27: Hematologic Disorders, 2016 Richardson. *Pediatric Primary Care: Practice Guidelines for Nurses*, 3rd Ed., Chapter 33: Hematologic Disorders, 2016



MENDIBURU MAGIC FOUNDATION AWARD

The Mendiburu Magic Foundation in Bakersfield honored Valley Children's pediatric hematologist/oncologist, Dr. Vinod Balasa, with its award for Outstanding Advances in Cancer Research.

Dr. Balasa with Carlos, 15, from Orange Cove, CA

VALLEY CHILDREN'S STAFF IN REGIONAL AND NATIONAL ORGANIZATIONS

ALL OF VALLEY CHILDREN'S ONCOLOGISTS ARE MEMBERS OF THE CHILDRENS ONCOLOGY GROUP (COG). MANY STAFF MEMBERS ALSO PARTICIPATE IN ORGANIZATIONS HIGHLIGHTED BELOW.

Vonda Crouse, MD

• Institutional Principal Investigator at Valley Children's Hospital for COG

Karen Fernandez, MD

- Member of Vascular Tumor Consortium
- Member of Association of Hematology Oncology Central America (AHOPCA)

Faisal Razzagi, MD

- Member of COG Acute Myeloid Leukemia (AML) steering committee
- Responsible Investigator for COG Cancer Control Studies
- National Chair for Hematology/Oncology/BMT subgroup, Improving Pediatric Sepsis Outcomes (IPSO) collaborative, Children's Hospital Association

David Samuel, MBChB, MD

• Institutional Principal Investigator for UCSF Study: "RadART-PRO, A Prospective Multi-Institutional Study to Assess the Risk of Radiation Induced Vasculopathy and Stroke in Children with Cancer who Received Radiation Therapy to the Neck and Brain"

Terea Gianetta DNP, CPNP, FAANP

- National Board Member-at-large for the National Association of Pediatric Nurse Practitioners (NAPNAP)
- Member of the Thalassemia Alliance for the western region

Ruthloren Martinez, RN, BSN

- · Member of Hemophilia Coordinating Committee (Nursing), Western States Region IX Hemophilia Network
- Chapter Secretary, California Central Valley Oncology Nursing Society (CCVONS)

Laura Andrews, RN-BC, BSN

Member of Association of Pediatric Hematology/Oncology Nurses (APHON)

Freshta Nasrudin, RN

Member of Association of Pediatric Hematology/Oncology Nurses (APHON)

Alistair Robertson, MSW

- Member of the Association of Pediatric Oncology Social Workers (APOSW)
- Serves on the Board of Directors of APOSW since 2012
- 2016 APOSW Social Worker of the Year Award

Nancy Hatcher, MSW, LCSW

- Member of the National Hemophilia Foundation (NHF) Insurance and Reimbursement Committee
- · Member of the National Hemophilia Foundation (NHF) Excellence in Social Work Grant Project

Christina Ashburner, Hematology Clinical Research Coordinator

• Member of Hemophilia Coordinating Committee (Research), Western States Region IX Hemophilia Network



THANK YOU TO OUR DONORS

IN FY2016, THE VALLEY CHILDREN'S CANCER AND BLOOD DISORDERS CENTER RECEIVED OVER \$1,000,000 FROM GENEROUS INDIVIDUALS AND ORGANIZATIONS.

\$100.000 - \$249.000

Legacy Foundation Fund

Taco Bell Restaurants

The Hearst Foundations

\$50,000 - \$99,999

St. Baldrick's Foundation

\$25,000 - \$49,999

Anonymous

Carlos Vieira Foundation, Inc.

Maxco Supply, Inc.

Producers Dairy Foods, Inc.

\$10,000 to \$24,999

Actagro, LLC

Alpine Vista PTO

Ms. Margaret Corasick

Mrs. Shirley Fisher

Mark and Linda Hurst

Mr. and Mrs. Richard lest

Mr. and Mrs. Marvin Meyers

Mr. Robert Pugh and Mrs. Beverly Hayden-Pugh

Terra Family Foundation

\$5,000 to \$9,999

Mr. and Mrs. Mark Astone

Mr. John Atwood

Mr. Steve Brock

Carl and Barbara Orlando Fund

Coburn Ranch

Greg Hostetler

Mr. Gary Ngu

Mr. and Mrs. Cecil Pace

Valley State Prison

\$2,500 to \$4,999

Mr. and Mrs. John F. Bennett

Robert & Klytia Cozzi

Dr. and Mrs. John V. Gates

Mr. and Mrs. Richard R. lest

Mr. and Mrs. Matthew Jones

Dr. Devonna Kaji and Mr. James Johnson

Kingsburg Cancer Volunteers

Raquel Leal

Mr. Jeremy Lusk

Mr. Lance H. McMillan

Nickel Family, LLC

One Nation Under God Motorcycle Ministry

Mr. and Mrs. Carl Refuerzo

Teixeira & Sons

\$1,000 to \$2,499

Mr. and Mrs. Dan Adams

All Valley Administrators, LLC

Allbright Cotton

Allenberg Cotton Co.

Sly and Kiersten Alvarado

American AgCredit, FLCA

Andreini and Company

Belkorp Ag, LLC

Mr. and Mrs. Robert Bertao

Borga Steel Buildings and Components, Inc.

Bowles Farming Company, Inc.

Britz Farming Corp

California Seeds, Inc.

Carbon Works Incorporated

Mr. and Mrs. Larry M. Carlson

Carlucchi Transport

Cen Cal Builders & Developers, Inc.

Central Valley Veterinary Clinic

Crop Production Services, Inc.

Mr. Jason Cuaderno

DaVita

Del Mar Farms

Der Manouel Insurance Group

Dos Palos Y Auction Yard

E & C Ranch

E & J Gallo Winery

Mr. and Mrs. Maurice Etcheverry

F&FWest

Gage Farms

Mr. and Mrs. Michael E. Gragnani

N M Grech

Harman Bros.

Mr. Rick Harman

Mr. Darren Harper

Ingomar Packing Company

Jess Smith & Sons Cotton, LLC

Mr. William Jones

Mr. Eric Kowez

Dr. Thomas T. Lam

Mrs. Audrey Lopes-Dermond

Ms. Laura A. Mather

Mr. and Mrs. Paul McDougal

Mrs. Holli McElvany

Ms. Katy Miller

N&S Tractor Company

Nicoletti Oil, Inc.

Mr. and Mrs. Gordon A. Osmus

Palazzo Farming, Inc.

Phelen Investments

Mr. Charles Preimsberg

Mr. William Pruitt

RC Property Management LLC

Ms. Dora Rosas

Mr. and Mrs. Jean P. Sagouspe

Mr. and Mrs. Douglas Shaffer

Mr. and Mrs. Tim Sherrill

Thomason Tractor Company

Valley Ventures, Inc.

Vaz Dairy

Mr. Michael Villanueva

Water Wise

Mr. David Wood

Dr. Geneva Young

ABOUT VALLEY CHILDREN'S

Valley Children's Healthcare, one of the largest pediatric healthcare networks in the nation, serves over 1.3 million children from the Central Valley to the Central Coast.

In addition to our main campus in Madera, Valley Children's network of physician offices gives families access to pediatric subspecialists closer to home. Our pediatric hospitalists, intensivists and subspecialists also collaborate with local hospitals to care for more children in their communities.

With more than 420,000 patient encounters throughout our network in FY2016, we continuously seek new ways to enable greater numbers of children access to the high-quality, comprehensive pediatric care they need.

Learn more at valleychildrens.org.









9300 Valley Children's Place, Madera, CA 93636 • (559) 353-3000

To make a referral, visit valleychildrens.org/refer or call us at:
Hematology - (559) 353-5460 • Oncology - (559) 353-5480

valleychildrens.org/cancer