

FLINT ANIMAL CANCER CENTER

NEWSLETTER | Fall 2017



ONE CURE IN ACTION

From the laboratory to clinical trial, brain tumor vaccine showing promising results.

Pictured above: Lucy is participating in the Flint Animal Cancer Center's brain tumor vaccine clinical trial. Read Lucy's story on Page 2.

FOR MORE THAN 35 YEARS, THE FLINT ANIMAL CANCER Center has been at the forefront of comparative oncology research. Through our One Cure initiative, we are working to translate our knowledge to benefit both pets and people with cancer. As a first step, our basic scientists study several aspects of cancer, including cancer biology, molecular oncology, and clinical immunology, to discover novel therapies. Our clinical scientists use not-yet-on-the-market treatments, some developed internally and some from pharma partners, to potentially benefit our clinical trials patients. One example of our system in action is a current study of a canine brain tumor vaccine.

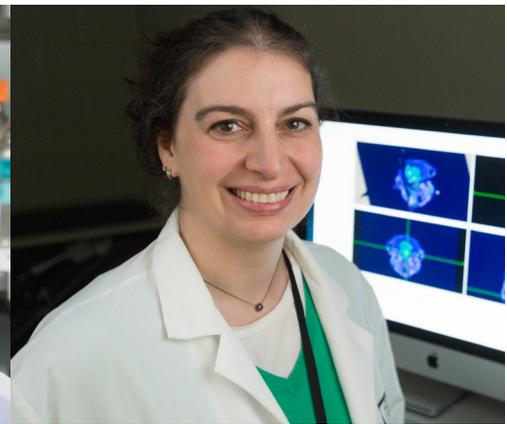
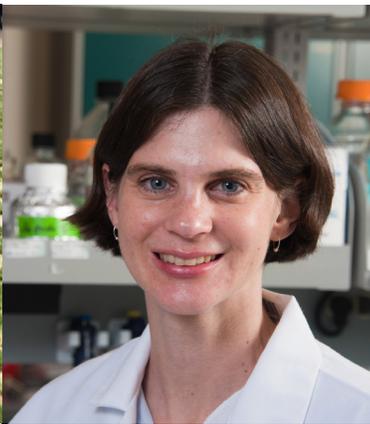
STUDY BACKGROUND

The Canine Brain Tumor Vaccine Clinical Trial is one of several ongoing cancer immunotherapy studies designed and supported

by Dr. Steven Dow's Laboratory for Tumor Immunotherapy at the Flint Animal Cancer Center. The trial and study design are based on research conducted by members of Dr. Dow's research group, especially Drs. Amanda Guth and Daniel Regan. The team is working with Dr. Rebecca Packer, a neuro oncologist, who is recruiting and monitoring study patients. Support for the trial comes from the Shipley Foundation and the CVMBS College Research Council. This particular trial is evaluating a new combined immunotherapy approach to cancer, which involves administering a vaccine that turns the patient's own immune system on to kill cancer stem cells, in conjunction with two cancer immunity-boosting drugs.

"Our basic concept has been figuring out how to harness the body's own defense system to fight tumors," said Dr. Guth, who conducted the foundation work for the vaccine design. "We worked

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From left to right: Clinical trial patient, Chloe, Dr. Amanda Guth, Dr. Rebecca Packer

on this vaccine in the lab for more than three years before it proved ready for the pilot study.”

In addition to the vaccine, the study also uses two “repurposed” drugs to boost cancer immunity. Sometimes drugs work for more than one disease because of their biologic effects. Repurposed drugs are often used in studies because they have already been approved by governing bodies. Before employing these drugs, Dr. Regan studied them in the laboratory and determined they had the potential to block the spread of cancer cells. Following extensive laboratory review by Drs. Guth and Regan, the pilot study received funding for eight patients in late 2016. The first patients entered the trial in the spring of 2017.

CLINICAL TRIAL

The Canine Brain Tumor Vaccine Clinical Trial focuses on patients with glioma type tumors. Currently, the median survival for dogs without treatment is less than one month. “With current treatments, survival is thought to increase only three to six months, and, even with treatment, we haven’t been able to prevent disease progression,” said Dr. Packer. This dismal prognosis is one reason researchers are concentrating on finding a new treatment for this tumor type.

Lucy’s Story

In March 2017, Erin noticed that her 4-year-old boxer, Lucy, was having trouble with her back legs. It was unclear if she was limping because of pain or was uncoordinated because of a neurologic issue. Initial X-rays were inconclusive, but then a few days later Lucy had two seizures. Lucy’s veterinarian sent her to a specialist and after an MRI, doctors diagnosed

Lucy with an anaplastic oligodendroglioma, a fast-growing brain tumor. Following diagnosis, Lucy’s doctor referred her to the FACC for evaluation and the potential to enroll in the Canine Brain Tumor Vaccine Clinical Trial.

After a visit with neuro oncologist, Dr. Rebecca Packer, Lucy had surgery to remove as much of the tumor as possible.

To qualify for the study, patients must have a measurable glioma visible on MRI. Participating patients receive the vaccination every other week for 12 weeks and then every three months for the remainder of the six-month study. To date, four dogs have participated in the trial. Based on the small sample, results have been promising.

“All four patients are responding to treatment,” said Dr. Packer. “MRI scans three months after treatment for three of the dogs show no disease progression or tumor regression. Six months after treatment, the tumor in the fourth patient remained measurably smaller.”

Dr. Packer is working to recruit four more patients to complete the pilot. Given the promise of current results, the research team also is submitting a funding request to expand the study to enroll more patients.

“If our patients continue to respond to the vaccine, our hope is to eventually apply for federal funding,” said Dr. Packer. “The goal is not only to improve outcomes for our veterinary patients, but to translate our success to people as well.”

While the struggle to conquer cancer continues, with ongoing support, our team accomplishes miracles of hope and discovery every day. To stay on top of the latest, please visit our website www.csuanimalcancercenter.org. ■

Dr. Packer explained that surgery was the first step to minimize Lucy’s symptoms, but that this type of tumor is aggressive, and Lucy would require additional treatment. One option was the clinical trial.

“We enrolled Lucy in the clinical trial because we felt it was the best option,” said Erin.

Lucy completed the protocol in early September, and her

three month MRI showed no disease progression.

“Lucy never skipped a beat during treatment and hasn’t had any side effects,” said Erin. “When your dog has cancer, the last thing you want is for them to suffer more and she’s done great. This vaccine has been an amazing gift; I really didn’t think Lucy would still be here.”

A NEW LOOK FOR FACC

By Dr. Rod Page, Director, Flint Animal Cancer Center

I AM QUITE HAPPY TO INTRODUCE THE updated graphic style and logo for the Flint Animal Cancer Center with this edition of our newsletter. We have had several “looks” over the years, each with a meaningful symbol of our passion for the good work that we do every day. It was a challenge to continue that legacy while moving the FACC brand into a modern feel, but I think we accomplished it. I am pleased to introduce and describe the next iteration of the design and, in particular, the logo – it is less literal than previous ones.

Many of you may not immediately recognize the logo as a Mobius strip. It is a mathematical symbol of a continuous plane that was created from a surface with two separate planes and is the basis for the symbol for infinity. Although it is a common symbol, it has profound scientific and organizational implications.

As we know too well, cancer is an extremely complex phenomenon with infinite permutations that are in constant change. Finding solutions to this puzzle requires that we scientifically embrace the complexity that is cancer. It is moving

to appreciate that such intricacy can be modeled by such a simple form as the Mobius strip. Much of what we do at the FACC is to model the obscure biology of cancer.

For the FACC as an organization, I believe the Mobius strip embodies the interconnectedness of our mission to drive new discoveries continuously with exemplary service and education. It is not possible to separate these functions of the FACC, nor should we. Each input creates an output or treatment result which feeds back onto itself as another input. We learn and more fully realize the awesome challenge we have to confront with each loop around the Mobius strip as we care for each of our patients. The Mobius strip also reminds us of the continuity of our human-animal bond.

The process of updating our look has also resulted in a modern design for the newsletter and our website. The new FACC website is bold, informative, and easy to navigate. The “feel” and the “flow” of the design make the information very accessible. The critical information to assist concerned pet owners and veterinarians

is even more available, and the access to our clinical trials and consultations is front and center. This website refresh was led by Lauren Mingus, our new outreach coordinator, and Dr. Christine Hardy. Lauren is relatively new to our team but has already made considerable contributions to our communications portfolio. Well done, and thank you, Lauren and Christine!

Regardless of the logo and the look, we remain committed to leading the battle to conquer cancer – in any species. The face of the FACC may have changed a bit but the soul and heart of the team hasn't. I hope you enjoy this current newsletter edition and that you receive much happiness as the year-end holiday season approaches.



Above: New Flint Animal Cancer Center logo. Left: Screenshot of the new Flint Animal Cancer Center website. Visit www.csuanimalcancercenter.org to see all of the features of the new site.



NASCAR driver, Danica Patrick, drove the One Cure car at Bristol on Aug. 19, 2017, as part of the Racing for One Cure initiative.

RACING FOR ONE CURE

One Cure is all about speeding new and promising treatments to all cancer patients – pets and people – which is why we're thrilled to team up with the car racing industry to raise awareness of our groundbreaking work in comparative oncology. Nontraditional? You bet; but we love partnering with folks who also like to speed toward a goal. Thanks to a generous benefactor, we were fortunate to bring our One Cure message to a new audience with a sponsored partnership with the Tony Stewart Foundation. Team One Cure debuted in front of race fans at the 101st running of the Indianapolis 500 in May 2017. One Cure was also included in the sponsorship contract with the Stewart Haas Racing team. Team member Danica Patrick raced with the One Cure brand on her car at six NASCAR races in the 2017 season. Races included the Wonder Woman One Cure car at the Kansas Motor Speedway on May 13, 2017, and One Cure in primary position on the car at the Bristol Night Race on Aug. 19, 2017. Rounding out the Racing for One Cure initiative was a series of events at the Bandimere Speedway in Denver. The overall goal of these initiatives was to raise public awareness of One Cure with a new audience.

2017 ONE CURE DINNER

Eighty friends of the Flint Animal Cancer Center along with furry guests gathered on April 22, 2017, for the sixth annual One Cure Dinner. The evening brings together friends from near and far for the common purpose of supporting comparative oncology research. One Cure supporters Rick and Melissa Westerman hosted the event again this year at the Chinook Tavern in Greenwood Village. The Westermans' Greater Swiss mountain dogs, Heidi and Greta, are both cancer survivors and FACC patients.

The evening's theme, Racing for One Cure, was inspired by One Cure's debut on several 2017 race series vehicles, including an Indianapolis 500 car (see left sidebar for details). One Cure ambassador, Emily Brown, one of the first patients to benefit from FACC's comparative oncology research, and Indy car driver, Jay Howard, unveiled the car graphics to the excited crowd. Guests rallied to graciously fund Emily Brown's and her father's trip to the Indy 500 as One Cure Lead Ambassadors. Two VIP packages to attend the Indy 500 raised \$40,000 for the event through a live auction.

Featured speaker, Dr. David Raben, a radiation oncologist at the University of Colorado Comprehensive Cancer Center, provided details on his research collaborations with FACC radiation oncologists, Drs. Susan LaRue and Keara Boss. Dr. Raben also shared his personal connection to the

FACC as a client. His dog, Riley, received treatment at the FACC for an aggressive abdominal cancer. Based on his personal and professional experiences, Dr. Raben told the crowd he believed that with collaboration, veterinarians and human doctors would make great progress.

The evening's special furry guests included Kono, a golden retriever and FACC nephroblastoma patient, as well as Kono's mother, Kelsey. FACC patient, Lilly, a Great Pyrenees and eight-year bone cancer survivor, accompanied Barb and Larry Mason. Additional guests of note included Jackie Unternaher, whose daughter, Solei, is a pediatric bone cancer patient at Children's Hospital in Denver. Solei's story was featured in the 2017 One Cure video. Dr. Len Lichtenfeld, 2016 One Cure speaker and deputy chief medical officer of the American Cancer Society, returned to support the event again this year.

The 2017 dinner was held in memory of longtime One Cure friend, Bill Lukes. Through his experiences with his dog Bogey's cancer and his own illness, he became a steadfast supporter and advocate of the One Cure mission. With a \$50,000 lead gift from the Kenneth and Myra Monfort Charitable Foundation, and thanks to the generosity of the One Cure family, the event raised \$200,000 for comparative oncology research.



One Cure planning committee members and event guests pose with Indy car driver, Jay Howard, at the One Cure Annual Dinner. (Not pictured: Committee members Dr. Christine Hardy, One Cure founder, Meg O'Neil, and Elyssa Yanas.)

COMINGS & GOINGS

PLEASE JOIN US IN WELCOMING SEVERAL new members to the FACC team!

Dr. Megan Mickelson joins us as a surgical oncology fellow. She graduated from the University of Wisconsin School of Veterinary Medicine where she also completed her residency.

Dr. Joanne Tuohy joins us as the Lucy Oncology Scholar and surgical oncology fellow. She attended veterinary school at CSU and completed her residency and Ph.D. at North Carolina State University.

Dr. Monica Fernandez joins our team as a medical oncology resident. Dr. Fernandez attended veterinary school at The Ohio State University and completed an internship in medical and radiation oncology at Blue Pearl Tampa, followed by a medical oncology internship at Louisiana State University.

Dr. Sunny Kao joins us as a medical oncology intern. Dr. Kao received her undergraduate degree from the University of Hawaii and completed veterinary school at CSU.

Dr. Chris Pinard joins us as a clinical trials intern. He received his undergraduate degree from the University of Guelph in Guelph, Ontario, Canada. He attended veterinary school at Ontario Veterinary College, also in Guelph.

Hollie Ellis joins our team as a radiation therapy technician after several years in the anesthesia service at the James L. Voss Veterinary Teaching Hospital.

Bethany Meis joins our team as an oncology nurse.

Lauren Mingus joins us as outreach coordinator, a new position at the FACC. Her responsibilities include the website, social media, newsletter, and other external communications. Most recently, Lauren was the communications director at the Food Bank for Larimer County.

Dr. Ruth Rose has rejoined the Laboratory of Comparative Musculoskeletal Oncology and Traumatology under the leadership of Dr. Nicole Ehrhart here at the CSU Flint Animal Cancer Center.

WE BID A FOND FAREWELL TO THE following team members who have left us for new adventures and thank them for the many ways they have enriched our lives in their time with us!

Dr. Brendan Boostrom joined the VCA South Paws Veterinary Specialists and Emergency Center in Fairfax, Va., as a medical oncologist.

Dr. Katherine Stroda joined the Veterinary Specialists of North Texas as a medical oncologist.

Dr. Beatrix Jenei joined a private practice in the Los Angeles area as a radiation oncologist.

Dr. Katie Swift joined the team at the VRCC Veterinary Specialty and Emergency Hospital in Englewood, Colo., as a radiation oncologist.

Dr. Brandan Wustefeld-Janssens joined the faculty of Texas A&M University in College Station as a surgical oncologist.

Dr. Lisa Brownlee is focusing her next career move on internal medicine, her specialty.

DR. NICOLE EHRHART FEATURED SPEAKER AT 2017 MSTS

Dr. Nicole Ehrhart, FACC surgical oncology faculty member, received the honor of presenting the presidential guest lecture at the annual Musculoskeletal Tumor Society meeting on Sept. 29 in Denver. The MSTS is the authority on all aspects of orthopaedic oncology, an influential participant in policymaking for orthopaedic oncology services, and responsive to the needs of orthopaedic oncologists and their patients. The organization includes surgeons from around the world who treat life-and-limb-threatening tumors. Dr. Ehrhart is one of only two veterinarians granted membership to this organization (after FACC founding director, Dr. Steven Withrow).

During her hourlong talk titled "Overcoming Challenges in Limb Salvage through Translational Cross Fit," Dr. Ehrhart presented her work in sarcoma research, nanotechnology, stem cells, and reanimating skeletal muscle in front of an audience of worldrenowned surgeons. As the recipient of the Ross M. Wilkins, M.D. Limb Preservation Foundation University Chair for Musculoskeletal Biology and Oncology, she emphasized the cooperative network that exists between AlloSource, the clinical community, and The Limb Preservation Foundation. Dr. Ehrhart's invitation to speak acknowledges her extraordinary standing as a scientist in the field of translational medicine.



In addition to the honor of speaking at MSTS, Dr. Nicole Ehrhart received the best poster award at the Vail Regenerative Medicine Summit for her work in muscle reanimation.

Lucy Oncology Clinic Celebrates One-Year Anniversary



Left to right: Dr. Brittany Wittenberns with veterinary student, Emily Janik, Dr. Doug Thamm, and a clinical trials patient in the new Lucy Oncology Clinic

IT'S BUSINESS AS USUAL ON A TUESDAY MORNING AT THE Flint Animal Cancer Center. With a full schedule and focus on patient care, it's sometimes easy to forget how different things are today over just one year ago.

This November, the FACC celebrates the one-year anniversary of the Lucy Oncology Clinic at the James L. Voss Veterinary Teaching Hospital, a state-of-the-art, custom-designed facility dedicated to patient care. While the FACC staff have always been committed to providing extraordinary service, regardless of surroundings, the oncology clinic had outgrown its existing space, and as a result, staff and rooms for specific functions were spread throughout the hospital. The new facility provides the best that veterinary medicine has to offer in one, well-planned space.

"It is hard to believe how quickly this has become our new normal," said Dr. Susan Lana, clinical services chief at the FACC. "Looking through the windows from one end of the space to the other, seeing patients treated in the room dedicated to chemotherapy, having our dog patients in their own kennel space, using the quiet intake room for cat patients or dogs who would like more private space, consulting with

clients in exam rooms connected to our space - all things that were not possible a year ago."

The Lucy Oncology Clinic exists thanks to a generous lead gift from grateful FACC client, Jeff Neu. Jeff brought his cherished Rottweiler, Lucy, to the FACC in 2010 for evaluation and care after Lucy lost her right leg to osteosarcoma. Jeff and Lucy enjoyed 13 more months together, thanks to the treatment at FACC. In memory of Lucy, and in gratitude for the care she received at the FACC, Jeff provided a true gift to staff and future patients through this state-of-the-art facility. Additional support for the clinic remodel was kindly provided by the estates of Patt Hall, Bets Keen, the Pierce family, Big Heart Pet Brands, Jay and Mary Snellgrove, Brian Hart, and the Eldred Foundation, as well as many other FACC friends.

The remodel added 3,000 square feet to the clinic footprint and reconfigured existing space for a total of 4,400 square feet of contiguous space. Highlights of the remodel include dedicated chemotherapy space, two procedure rooms, separate day-patient suites for dogs and cats, exam room, client consult room, and a quiet intake room for cats or dogs who need a more private space for an exam. Additionally, the open floor plan design with windowed walls

allows for better patient monitoring, improved communication among team members, and enhanced teaching opportunities.

A dedicated clinical trials space was critical to moving forward with FACC's strategic focus on comparative oncology and translational research. The new space deliberately connects to our research laboratories to facilitate the processing and storage of samples. It also provides potential to expand our clinical trials program.

"We have our own supplies, computers, and space for study documentation binders," said Dr. Kristen Weishaar, clinical trials director. "All of these features make our team more efficient and give our patients more space for their specialized care."

The spacious new rounds room provides a modern, high-tech space for twice-daily patient case review by a team of staff, including medical, surgical, and radiation oncology faculty as well as fellows, residents, interns, and students. These meetings allow our team to collaborate on personalized plans for diagnosis and treatment of each patient. The room also features two large video screens capable of live streaming surgical procedures to expand students' opportunities to learn even when they can't be there in person.

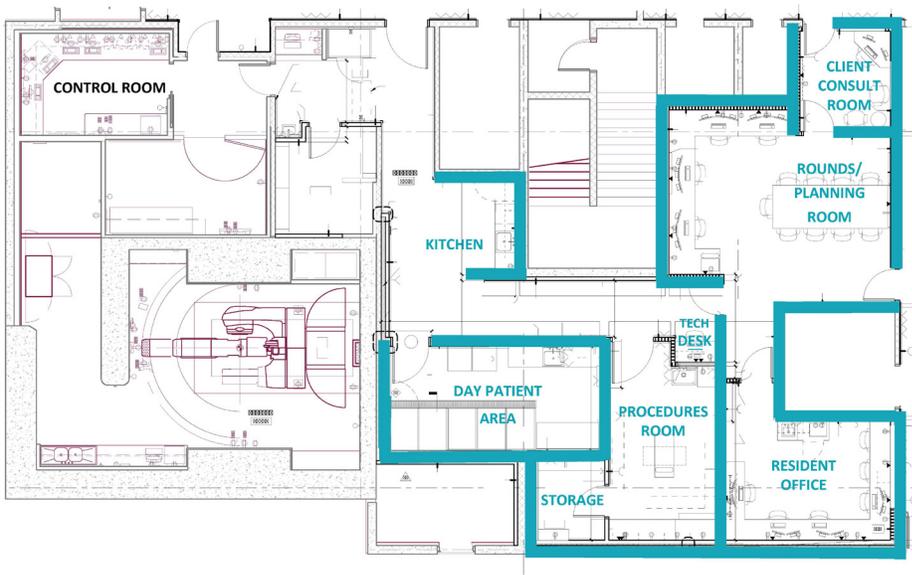
"As I think about where we were working last year and where we are today, I am truly amazed," said Dr. Lana. "We continue to be grateful for the generous support we receive from those we have helped over the years. This new space definitely feels like home!"

CONFERENCE ROOM GETS HIGH-TECH MAKEOVER

Thanks to the Golden Retriever Endowment benefactors, the FACC's second floor conference room also received a recent upgrade. Completed in August 2017, the remodel included infrastructure modernizations to accommodate a smart board and 85-inch television screen with teleconference features and live-streaming video capabilities. New Click Share technology provides multiple users with the ability to share information from their laptops to the large screen. These upgrades, combined with new lights, carpet, and paint, as well as a hospitality center, make the new conference room a popular destination for meetings, seminars, and small events.

RADIATION REMODEL UNDERWAY

The final phase of the Lucy Oncology Clinic project is in progress with the remodel of the radiation oncology unit. This remodel also was made possible with the support of Jeff, in honor of Lucy, who received stereotactic radiation therapy. The project adds 1,400 square feet of space adjacent to the existing control room and the Varian Trilogy linear accelerator. The new addition includes a rounds room that also functions as a multi-station radiation therapy planning suite, client consult room, resident office, procedures room, equipment storage, day-patient room, and a patient kitchen. Staff look forward to project completion in January 2018. ■



The remodeled radiation oncology facility (pictured in teal blue) will open in early 2018.

"The Lucy Oncology Clinic allows the team to be more efficient and interactive within one beautiful space. The clinic facilitates our team-based approach to multi-modality patient care, in which medical, surgical, and radiation oncology specialists provide input in a single appointment for every patient."

—Dr. Rod Page



One Cure's mission is to advance translational cancer research through comparative oncology clinical trials.

Dogs get cancer?

AS A FRIEND OF THE FLINT ANIMAL CANCER CENTER, YOU know that, yes, dogs get cancer. Cats get cancer too. In fact, many animals get cancer. Unfortunately, that fact isn't widely known, even among some in the human medical community.

At the FACC, we've been treating cancer in companion animals for more than 35 years. We've also been studying cancer for decades. Because of that experience, we understand that cancer is cancer. That's why we're focused on translating our successes to benefit humans as well as future pet patients. In return, our colleagues in human medicine share their findings with us to benefit our patients. We call our work comparative oncology. And though we've been at it for a long time, there's more work to do.

What needs to happen? The simple answer is more funding for more research. But, we need to raise awareness first. The fact is, dogs and humans are 85 percent genetically identical – almost 400 diseases affect both species in similar ways. Additionally, we share the same environment (air, water, etc.) As a result, dog and human cancers are much more similar than cancers artificially induced into laboratory animals. Using the information we learn from treating companion animals may help decrease the time and costs involved

in developing new treatments and diagnostics for both pets and people. That's a win-win for everyone!

Our One Cure initiative launched in 2011 to formalize our commitment to comparative oncology research. We know that treatment breakthroughs come through collaboration between scientists and doctors working with people and animals. We still have more to learn about cancer, but we're making progress every day. To continue our work, we need your help to raise awareness and funding for research. To learn more, please visit our website, www.csuanimalcancercenter.org. Let's spread the word and find a cure!

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CONTRIBUTIONS TO COMPARATIVE CANCER RESEARCH

- Developed a limb-sparing surgical procedure in dogs with osteosarcoma, which, with some adaptations has become standard of care for humans with the same cancer.
- Created radiation protocol for oral squamous cell carcinoma in dogs that was later used in humans.
- Generated the first compound approved by the FDA for canine lymphoma. Its brand name is Tanovea.

FACC Wish List

THE FOLLOWING ITEMS WOULD enhance our ability to provide quality patient care and strengthen our resources in cancer research. If you would like to help by donating funds toward the purchase of any of these items, please call (970) 297-4175. All donations and every amount of support makes a difference to our program.

VARIAN PERFECTPITCH 6-DEGREES OF FREEDOM TREATMENT COUCH - \$150,000-\$175,000

This advanced robotic treatment couch allows accurate and reproducible patient setups to improve radiation delivery to tumor target volumes and reduce harm to critical organs during radiation treatment. Patient setup accuracy is especially critical for high-intensity treatments, such as intensity-modulated radiation therapy, stereotactic radiosurgery, and stereotactic body radiotherapy. This treatment couch would allow us to treat our patients with an even higher degree of accuracy.

OXYLITE PRO - \$45,000

The OxyLite Pro provides an absolute measurement of dissolved oxygen within cells and tissues. Oxygenation of tumor tissues is one of the most important microenvironmental characteristics dictating a patient's response to radiation therapy; therefore, our ability to measure dissolved oxygen noninvasively within our companion animal clinical trials and basic research studies would allow us a deeper understanding of the underlying radiobiology.

BECKMAN COULTER ALLEGRA 25R CENTRIFUGE - \$13,000

Centrifuges are used every day for benchtop research projects and clinical trials samples. FACC has two centrifuges, one of which is on its last legs. Often, both centrifuges are in use and there are additional samples that need to be spun down. Having an additional centrifuge would help when we are very busy, and will be essential when the old one is no longer functional.



The Varian PerfectPitch 6-degrees of freedom treatment couch and OxyLite Pro will support advanced radiation oncology treatment. Pictured: Radiation therapy technicians, Sarah Bruns and Wendy Mullins, with Kono.

UNPARALLELED
COMMITMENT TO
CANCER CARE

12
CLINICAL
FACULTY

14
ONCOLOGY NURSES
& RADIATION
THERAPY
TECHNICIANS

12
Oncologists in
training

5
Dedicated Clinical
Trials Staff



After two cancer diagnoses, FACC patient, Cassie, is still smiling.

Battling Cancer with a Wag and a Smile

ONE LOOK AT HER ADORABLE Mohawk and happy face, and it's hard to believe that Cassie has been through so much. When she arrived at her forever home with Sharon, Cassie, a lovable cocker spaniel, was 1½ years old and had already lived a hard life. Sharon rescued Cassie from a puppy mill and was happy to bring her home to give her love and care. In the years following, Sharon and Cassie have shared a wonderful life that has included many car rides, Cassie's favorite past time!

Two years ago, Cassie's vet found a tumor on the base of her ear. It was surgically removed and testing revealed it was an apocrine gland adenocarcinoma, a type of skin tumor. Sharon brought Cassie in for follow-up every three months. At six months, Sharon had a feeling that something wasn't right. After ultrasound, her doctor found a mass on Cassie's gallbladder. Following gallbladder removal, histology revealed

cholangiocarcinoma, bile duct cancer, unrelated to her first cancer. This time, Sharon brought Cassie to the Flint Animal Cancer Center for evaluation. FACC doctors suggested chemotherapy, and Sharon agreed.

Cassie received four rounds of carboplatin over two months and tolerated chemotherapy very well. She maintained a good appetite and energy level throughout. During her treatment, Cassie and Sharon formed a special bond with Cassie's nurse, Lindsay, and oncologist, Dr. Susan Lana.

"We love Lindsay and Dr. Lana," Sharon said. "They are so kind and caring and they've been great at communicating with me about Cassie's care. I would not take her anywhere else; I know she is in the most capable hands."

In September 2016, Cassie finished chemo and was feeling good. After one year of living cancer-free, an ultrasound revealed a large mass on Cassie's liver. CT confirmed

metastatic liver cancer. After weighing the options, Sharon has decided to try a different chemotherapy protocol to treat the new tumor.

"I feel so strongly that they are making a difference and as long as Cassie is feeling happy, I'm going to do what it takes," Sharon explained.

Despite going through chemo again, Cassie is still excited to jump in the car and go for a ride. She continues to be her happy self, wagging her tail with excitement when she arrives for her visits at the FACC.

"Cassie has been a trouper through all of her visits with us," said Dr. Lana. "She is always friendly and easy to work with, and she has a genuinely happy spirit."

According to Sharon, "Cassie has been given a chance for a longer, quality life through treatment, and I continue to be grateful for the care she has received at the Flint Animal Cancer Center."

HONOR ROLL 2017

Generous giving from the private sector to the Colorado State University Robert H. and Mary G. Flint Animal Cancer Center has become increasingly important over the years. The following individuals (in alphabetical order) are especially noteworthy in that they have given once, or in a sustained way, more than \$25,000 to support the efforts of the CSU Flint Animal Cancer Center. Our heartfelt appreciation goes out to them.

Allen & Company Inc.	Sam and Margaret Kelly	Rotherham Family
Herbert A. Allen	Lillian M. Key*	Albert and Nancy Sarnoff
Brett and Dawn Anderson	Deborah Van Dyke King	Patricia Shay*
Anschutz Foundation	Kneller Family Foundation	Michael and Kathleen Sheldon
Libby Anschutz	Robert* and Eva Knight	Charles R. Jr.* and Lucia H. Shipley*
Phillip Anschutz	Kate Koogler Canine	Shipley Family Foundation
Barbara Cox Anthony*	Cancer Fund Inc.	David and Peggy Sokol
Maj. Gen. John H. Bell*	Susan Lefebvre	Frederick W. Stelle
Dr. Allen D. and Kathy Brandon	Limb Preservation Foundation	Brett F. Stuart
Bow Wow Buddies Foundation	William C. Lukes, AIA*	Dr. E. Hadley Stuart Jr.* and Family
Timothy Brown	Maddie's Fund	Dr. Nan M. Stuart
Don* and Katy Callender	Steven J. McCarthy	Stuart Foundation
CanineKids Outfitters	Robert and Evelyn McKee	The Estate of Maria Bristol
Colorado State University	Foundation	The Estate of Lionel Edmunds
Research Foundation	David Merin Foundation	The Estate of Patricia Hall
Sophie and Derek Craighead	Jay and Sandra Mesinger	The Estate of June Harper
Crystal Waters Foundation Inc.	Milheim Foundation Cancer	The Estate of Fern A. Howard
David Cummings and Shelley Kerr	Research	The Estate of Elisabeth Kellie
Dani's Foundation	Kenneth and Myra Monfort	The Estate of Lillian M. Key
Dr. William and Sara DeHoff	Charitable Foundation	The Estate of Laura Katherine
Paul Dunbar and Mindy	Thelma C. Morici	Krebill
Richards-Dunbar	Mark L. Jr. * and Bette M. Morris	The Estate of Carolyn Larson
Willard L. and Ruth P. Eccles	Daniel and Deanna Mueller	The Estate of Lois Maurer
Foundation	National Institutes of Health	The Estate of Carol E. McCandless
Walter* and Jaynn Emery	Jeffrey Neu	The Estate of Nancy A. Oyster
Charles Engelhard Foundation	Gary L. and Alice M. Nordloh	The Estate of Jacquelyn Ann Smith
Gene and Marylynn Fischer	Meg and Andy O'Neil	The Hadley and Marion Stuart
Robert H.* and Mary G. Flint*	Dr. Rodney L. and Susan C. Page	Foundation
Edward and Karen Franceschina	Brian and Linda Pardo	William V. Taylor*
Matthew Frank	Landon Phillips and Susan Maltby	Allison Topham
Mari George	David A. and Maxine M. Pierce	Trailsend Foundation
Golden Retriever Endowment Fund	Maj. Glen E. (USMC) and	Dr. Cleve Trimble
Haddington Ventures LLC	Rose M. Porter "Baron"	Lori Venners
Ed and Marilyn Hansen	Joe and Kay Pyland	Theodore Venners
Jeffery Harbers*	Reiman Charitable Foundation	Bruce Weber and Nan Bush
Renee Harbers-Liddell	Roy and Roberta Reiman	Rick and Melissa Westerman
June Harper*	Scott and Virginia Reiman	Richard and Nancy White
Alan* and Berte Hirschfield	Erik and Terrin Riemer	Robert and Susan Wilson
Norman Hirschfield Foundation	Dr. Ronald R. and Sara Ringen	Dr. Stephen J. and Susan L. Withrow
Jewish Communal Foundation	River Terminal Development	William Jr. and Heather Wrigley
Lawrence L. Jones III*	Company	Rosamond R. Zetterholm*
Dr. Norman and Ann Jorgensen	Richard and Nancy Rogers	*Deceased
Gretchen* and Taylor Joynor	Harold and Cathy M. Roozen	

FACC YEAR IN REVIEW

1,660
NEW
PATIENTS



6,056
PATIENT VISITS

31
Clinical Trials

1,923
ONLINE
CONSULTS

3,788
Chemotherapy and
Radiation
Treatments

THANK YOU FOR
MAKING OUR
WORK POSSIBLE!



James L. Voss Veterinary Teaching Hospital
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