



A New Day

MARKEY CANCER CENTER | 2012-13 ANNUAL REPORT

UKHealthCare®
Markey Cancer Center

Kentucky's Only NCI-Designated Center



“Every morning is a fresh beginning. Every day is the world made new. Today is a new day. Today is my world made new. I have lived all my life up to this moment, to come to this day. This moment—this day—is as good as any moment in all eternity. I shall make of this day—each moment of this day—a heaven on earth. This is my day of opportunity.”

– Dan Custer

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Celebrating NCI designation



“Our NCI designation will shine a new light on Kentucky and allow us to take even bigger steps to improve cancer care and research in this state through prevention programs and clinical trials.”

– B. Mark Evers, MD, Markey Cancer Center director

What a remarkable year for the Markey Cancer Center! In 2013 we celebrated with many lives saved, a prestigious National Cancer Institute (NCI) designation, and tremendous growth.

Since I became director of the Markey Cancer Center in 2009, one of our top goals was to attain NCI designation. To achieve it, we had to pass a rigorous review process. This distinction signifies national excellence in patient care and research, and it is the result of the tireless efforts of our dedicated researchers, clinicians and staff members.

Markey is now the only NCI-designated cancer center in Kentucky and one of only 68 in the nation that has reached this accomplishment. The designation has several important benefits for our patients.

NCI designation means our patients will have access to the latest cancer research clinical trials available anywhere in the nation. Markey patients will also be able to receive new drugs and treatment options. Patients can also enjoy the peace of mind that comes from receiving care at one of the country’s best cancer centers. Research shows that patients at NCI-designated centers have 25 percent better survival rates.

Markey will reap other benefits as well. We expect to see up to \$1.5 million annually in additional research funding. We will be able to collaborate on new advances in cancer care with other prestigious NCI-designated centers across the country. And we can use our NCI designation to attract the best faculty to UK, something we’re already seeing through the establishment of the UK Center for Environmental & System Biochemistry, an exciting and innovative research project featured in this year’s annual report.

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Kentucky's Only NCI-Designated Center

NCI·CC

A Cancer Center Designated by the
National Cancer Institute



Our celebration of NCI designation was an important milestone in the progress we've made at Markey. But we are also reminded of the work yet to be done. Kentucky has one of the highest rates of cancer in the country, including the nation's highest rate of lung cancer and the second-highest rate of colorectal cancer. Earning NCI designation allows us to shine a light on cancer in the Commonwealth and take even larger strides in cancer treatment and prevention.

We also look forward to continuing our work with our Markey Cancer Center Affiliate Network. Our affiliates continue to grow, and they help us extend Markey's services throughout the state and beyond Kentucky. Our NCI designation is also good news for them, and they will continue to be important partners.

We thank our dedicated physicians, researchers and staff members that make up the Markey Cancer Center, as well as the volunteers and community supporters who help make Markey such a valuable resource for the state. And, as always, we are grateful to the Markey Foundation, which provides philanthropic support that helps us continue our efforts to treat and prevent cancer.

Sincerely,

B. Mark Evers, MD
Director, Lucille P. Markey Cancer Center

Markey Cancer Foundation: Our partners in excellence

In July, the Markey Cancer Foundation was pleased to celebrate the Markey Cancer Center's designation as a National Cancer Institute (NCI), making it Kentucky's first and only cancer treatment facility to achieve such recognition. This distinction signifies national excellence in clinical care and cancer research and puts the Markey Cancer Center in an elite class of cancer centers nationwide.

Having an NCI-designated center means that patients no longer need to travel outside of our commonwealth to receive access to the most recent and innovative clinical trials and advances in care.

The Markey Cancer Foundation has been an important partner in the journey to this milestone, as its mission is to support the people, programs and facilities that enable the Markey Cancer Center to develop new and better treatments to fight cancer and ultimately discover a cure. During the past three decades, the Markey Cancer Foundation has raised more

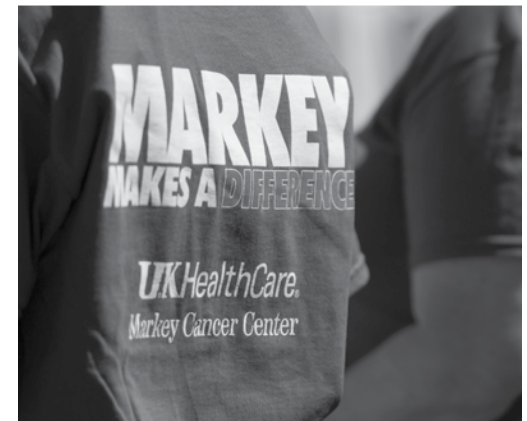
than \$70 million through gifts from individuals, corporations, granting organizations and special events such as the Markey Golf Classic, The Betsy equine show jumping championship dinner, and the Concert on the Lawn at Keeneland Race Course.

We are especially proud of donations received from grateful patients who chose to honor the doctors, nurses and staff members who provided outstanding, quality care to them at the Markey Cancer Center.

Giving to the Markey Cancer Foundation ensures that the Markey Cancer Center will have the resources necessary to maintain its NCI designation and continue on its path of excellence. If you would like more information on how you or your organization can join in the fight against cancer, please contact Trish Jaracz, Markey Cancer Foundation vice president and director of development, at trish.jaracz@uky.edu or 859-323-6448.

“Each new day is a blank page in the diary of your life. The secret of success is in turning that diary into the best story you possibly can.”

– Douglas Pagels



A patient's perspective... What NCI designation means to Sally Leukefeld

In the spring of 2008, I felt a lump. When I visited my doctor, she felt it too and immediately called the UK Markey Cancer Center. Within 15 minutes, a team of three people arrived to do a biopsy. The result was not what I had hoped for – I had breast cancer. My first reactions were: Is this it? Is that all there is? And then... I do not want to be pitiful.

Luckily, I was at Markey Cancer Center. Immediately, a team of optimistic, caring professionals came together to face this crisis with me. They were there to assure me this was not "it" and I would not be "pitiful." My oncologist, Edward H. Romond, MD, along with nurse practitioners, nurses, technologists and even my own personal nurse (available to me at any time), outlined the options available to me and the odds for a full recovery related to a proactive treatment strategy. That treatment would include surgery recommended by my surgeon, Patrick C. McGrath, MD.

I was included in every decision. We chose to treat my cancer aggressively. My team was with me every step of the way, encouraging me and taking care of complications as they arose. They coped with my allergy to a chemotherapy drug and solved blood and nutrition problems expertly. I never felt alone in my struggle. I had my team. As I moved on to radiation treatment and the care of Marcus E. Randall, MD, I encountered a patient, good-natured group of people. Their concern was heartening and helpful through my daily visits.

One year after I began my odyssey through treatment, when my hair was returning and I was continuing to feel better each day, I was asked to join the Patient Advisory Group. This wonderful, top-flight cancer center was still striving to become even better. Patients, caregivers and staff visited and evaluated facilities and programs throughout the center, and, from our unique point of view, offered suggestions for

improvement. The most remarkable thing about Markey is our suggestions were implemented. From improved signage to alternative treatment methods, we saw changes.

Almost five years after being treated for breast cancer at Markey, I have every reason to recognize and appreciate the people-oriented and perfection-focused cancer center with which we are blessed. I have experienced, firsthand, what an outstanding facility we have. The National Cancer Institute designation will enable Markey to become an even greater place for cancer research and treatment, and I extend my congratulations for this recognition. If anyone asked me about it, though, I would answer, "I am not surprised."



Sisters share mission



“The young ladies were so passionate and genuine about the idea, it was amazing...” – Dr. Timothy Mullett

“Survival bracelets” are best known by outdoors enthusiasts or military personnel. The intricately woven bracelets represent a lifeline, a way to easily carry a long length of rope that could come in handy in an emergency.

For sisters Brittany and Jessica Lyden, these bracelets have taken on a new meaning: honoring their late father, Mike Lyden, who died of stage IV lung cancer in 2008, while raising awareness of the disease.

Known as “Iron Mike” for his continued toughness and determination in the face of his disease, Lyden served as UK’s diving coach from 1993 until his death. Jessica, the oldest, was 17 when he died, while youngest sibling, Brittany, was only 10 years old. Their brother, Jack, was 15.

Lyden had no symptoms other than a persistent cough when he was diagnosed with stage IV cancer with metastasis to the brain by Timothy Mullett, MD, a UK cardiothoracic surgeon. He received treatment from UK Markey Cancer Center oncologist Susanne Arnold, MD, and lived 2½ years after his diagnosis — two full years beyond his initial prognosis.

“It was shocking, because he was so healthy and active. And he never smoked a day in his life,” said Jessica, now 22 and a graduate research assistant to Dr. Mullett at UK.

Lung cancer is often described as an “invisible disease” because many patients — like Mike — don’t show any symptoms until the cancer is in an advanced stage and has spread to other areas of the body, where it becomes difficult to treat. Lung cancer kills nearly twice as many women as breast cancer, and it is the leading cause of cancer deaths for both men and women in the United States. Despite this, lung cancer receives proportionately less government funding per death than other types of cancer.

The Lyden family wanted to find a way to give back to the Markey Cancer Center and raise lung cancer awareness. In January, Brittany and her Lexington Catholic High School classmate Andrea George taught themselves to make the survival bracelets by watching a how-to video on YouTube. While they initially picked blue cord with a white ribbon, they soon expanded their selection.

The sisters approached Dr. Mullett — who also is a longtime friend of the family — and Trish Jaracz from the Markey Cancer Foundation with their bracelet idea. They loved the idea,

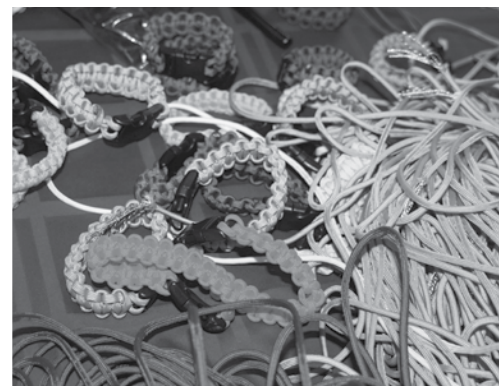
and Jaracz helped them set up the Mike Lyden Patient Support Fund through the foundation.

“The young ladies were so passionate and genuine about the idea, it was amazing,” Dr. Mullett said. “After they told me about the bracelets and showed me some of the samples, it seemed like such a wonderful tool to raise awareness for cancer in general. Of course, the ability to honor their father and make a contribution by increasing awareness of lung cancer resonates with me.”

The girls charge \$7 per bracelet, and all net proceeds go toward the Mike Lyden Patient Support Fund. To date, they have raised more than \$1,000 for the fund and plan to continue filling requests throughout the year. The Lydens have set up a Facebook page to help promote their fundraising.

The girls’ mother, Emily Lyden, said creating the survival bracelets has been therapeutic for the family.

“Brittany was only 10 when Mike passed, but now that she’s older she’s figured out a great way to help the cause,” Emily said. “I’m extremely proud of both of them — this entire project has been their doing, from start to finish.”





“With the new day
comes new strength
and new thoughts.”

– Eleanor Roosevelt



UK Markey Cancer Center welcomes four new faculty who make up innovative metabolic cancer research team

Four new faculty members at the UK Markey Cancer Center will study how metabolism affects cancer growth. Their research program could provide promising breakthroughs in the treatment of cancer patients in Kentucky and nationwide.

Teresa Fan, Andrew Lane, Richard Higashi and Hunter Moseley will bring in more than \$17 million in research funding over five years and will develop a research center at UK.

The researchers will establish a UK Center for Environmental & System Biochemistry, in partnership with Markey, over the next few months. Their laboratories will be on the fifth floor of UK's BioPharm Complex, which is already home to other innovative cancer researchers.

Fan, Lane, Higashi and Moseley use state-of-the-art instrumentation to understand – by tracking atoms – how various conditions or environmental exposures disrupt normal metabolism and how abnormal metabolism contributes to the development and spread of cancer.

“The addition of this team of highly accomplished researchers is a major catalyst in the efforts of the Markey Cancer Center to both grow its cancer-related research funding and enhance its ability to submit a competitive renewal

application of its National Cancer Institute (NCI) Cancer Center Support Grant in the next cycle,” said Mark Evers, MD, director of the UK Markey Cancer Center.

MEET THE RESEARCHERS

Teresa Fan serves as director of the UK Center for Environmental & System Biochemistry. She has been continuously funded in federal grants since 1996. She was trained as a plant biochemist at the University of California, Davis, followed by postdoctoral training at Stanford University. She has published 100 peer-reviewed papers and holds two patents. She has trained 11 postdoctoral scholars, one surgical resident, six medical students and eight graduate students.

Andrew Lane is associate director of nuclear magnetic resonance (NMR) development. He was trained in biochemistry and enzymology at University College London and then received further training in biophysics and NMR before becoming a tenured staff scientist at the National Institute for Medical Research in London. Lane has published 189 articles, 160 abstracts and presentations, holds two patents, and has been awarded 25 grants as principal investigator or co-investigator from both federal and nonfederal sources.

Richard Higashi is associate director of mass spectrometry development. He is a bioanalytical chemist with a highly diverse background spanning three decades, including work in pesticide chemistry, aquatic toxicology, plant biochemistry, bioremediation, air pollution, biochemical imaging, and most recently cancer metabolism. He has served as co-director of various research centers across all of these fields for more than 15 years.

Hunter Moseley is associate director of informatics. He has degrees spanning computer science, mathematics, chemistry and biochemistry. Moseley also has more than 20 years of experience in bioinformatics research, particularly in the development of automated analyses of NMR and mass spectrometry data. He holds a patent in computational methods for NMR data analysis and has published 27 peer-reviewed papers. He recently received the Kentuckiana Metroversity Award for Instructional Development, the Kentucky Academy of Science Outstanding Early Career Award and an NSF Career Award.

Retired teacher thankful for bone cancer team



Retired teacher Monte Farmer isn't the kind of guy who worries a lot. So when the Irvine, Ky., resident's right leg started to hurt in March 2012, he asked his doctor to arrange for physical therapy at the local hospital. After six weeks of therapy failed to help, he and his therapist agreed there was something seriously wrong.

The 67-year-old former industrial education and physics teacher went to Richmond orthopaedic surgeon Michael Heilig, MD. "He was sharp; as soon as he saw the MRI, he knew there was something strange and that Monte needed to go to Markey Cancer Center at UK," said Farmer's wife of 43 years, Nancy.

Farmer set an appointment on Sept. 24 with orthopaedic cancer specialist Patrick O'Donnell, MD, PhD. O'Donnell had only recently moved to Lexington to head up Markey Cancer Center's musculoskeletal oncology program.

"Dr. O'Donnell put my mind at ease during that first meeting," Farmer said.

On Sept. 27, Farmer underwent a complex outpatient surgical biopsy of a mass on his right upper thigh bone (femur) at the UK Albert B. Chandler Hospital. On Oct. 9, Dr. O'Donnell told Farmer he had an aggressive form of cancer called dedifferentiated chondrosarcoma.

Sarcomas are rare types of cancer that affect bone and soft tissues. Farmer's type of sarcoma targets the cartilage, usually in the thigh bone. It can only be treated with surgery. Since survival depends on removing the tumor before the cancer has spread, surgery was quickly set for Oct. 12. The couple postponed their planned Hawaii vacation.

"Dr. O'Donnell told us his team had met about Monte's case – not an individual but a team – and we were impressed by that," said Nancy Farmer, a retired English and biology teacher. "This was an aggressive approach to treatment;

they didn't fool around." From the beginning, she said, the doctor's staff – particularly sarcoma team nurse Jo Ann Wright, RN – supported the couple, keeping them informed and scheduling convenient appointments.

"It's my job to oversee things, making sure everything gets done and letting patients know to call me if they have any problems," said Wright, a former endoscopy nurse who came to work for Markey two years ago after watching her late brother battle melanoma. "It's a stressful time for patients so I try to ease their minds."

Markey's musculoskeletal oncology team includes physicians and staff who came together after three years of planning to create this specialty program, the only one in Central and Eastern Kentucky, Dr. O'Donnell said. Together they planned a way to remove the cancer while saving Farmer's leg.

"Mr. Farmer lost about half of his femur, from the mid-thigh up, as well as a portion of his hip," the surgeon said. The challenge was removing the tumor and a wide enough margin of surrounding muscle to get all of the cancer before it had a chance to spread.

The intricate removal of the cancer accounted for about 80 percent of the surgery. “Only 20 percent was reconstructing his leg; that was the easy part,” Dr. O’Donnell said. He repaired the leg using a 10-inch stainless steel rod and a ball for Farmer’s hip socket.

Farmer said his current challenge is to improve on “my zombie gait.” While he can no longer do some of the things he used to do, like add another antenna to his roof or replace siding on his house, he said he is “truly thankful for the opportunity I have been given.”

Farmer and his wife plan to scuba dive during their rescheduled trip to Hawaii.

The Farmers agree that the support and prayers of friends through email and Facebook helped get them through the last few months. “We also just feel like we were led to Markey, it was the perfect place for him,” Nancy Farmer said.

Dedifferentiated chondrosarcoma is a lethal form of cancer with only a 10 percent survival rate after five years. But, Dr. O’Donnell said, “I tell all of my patients that numbers are just numbers. The hope is we got it all during the surgery and that Mr. Farmer has as good a chance as anyone of beating those odds.”

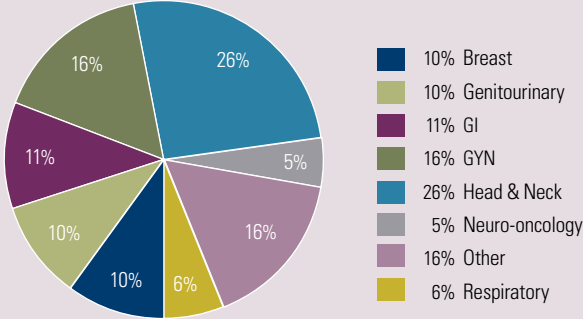


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– Nancy Farmer

FY13 Markey Cancer Center year at a glance

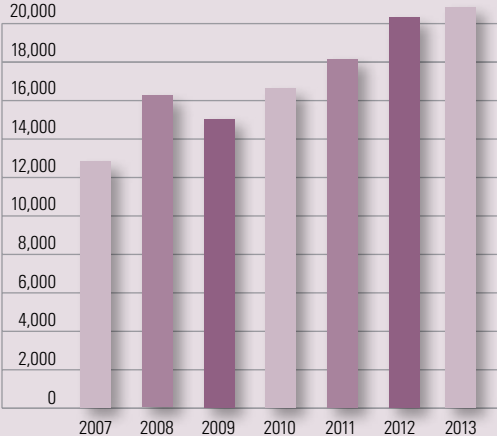
2013 SURGERY DISCHARGES



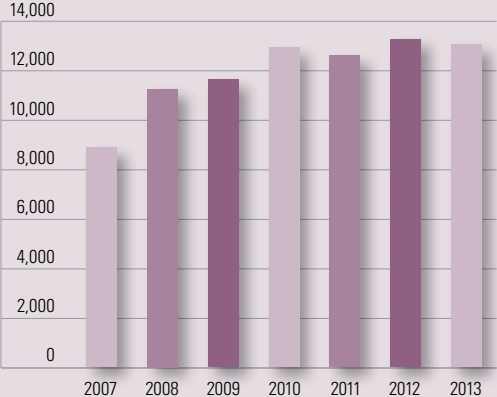
TOTAL OUTPATIENT CANCER VISITS



OUTPATIENT RADIATION VISITS



OUTPATIENT CHEMOTHERAPY VISITS





“O, with what freshness, what solemnity and beauty, is each new day born; as if to say to insensate man, “Behold! thou hast one more chance! Strive for immortal glory!”

– Harriet Beecher Stowe

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Markey makes a difference.

For more information on the
UK Markey Cancer Center,
call toll free **866-340-4488**
or visit **Markey.uky.edu**