Duke Comprehensive Cancer Center
notes
A Comprehensive Cancer Center Designated by the National Cancer Institute
WINTER/SPRING 2009

Phil Febbo, MD, and David Harpole, MD, are pictured in front of an enlarged "heat map" of the genomic profiles of lung cancer patients.

Genomic Clinical Trials

Studies focus on the personalized care of patients

Physician-researchers from the Duke Comprehensive Cancer Center and Duke's Institute for Genome Sciences & Policy are leading two new national clinical trials that use a patient's cancer genome to determine what treatment will likely be the most successful for that patient. One study will test whether chemotherapies already FDA approved for late-stage lung cancer are effective for certain early-stage lung cancer patients, too. The other study will use a genomic test developed at Duke to compare the effectiveness of an FDA-approved therapy with an investigational therapy for men with advanced prostate cancer.

"It's difficult for physicians to know which patients will benefit from which treatments," explains Duke surgeon David Harpole, MD, lead investigator of the trial for early-stage lung cancer patients. "Using a genomic signature from a patient's lung cancer, we can now predict with high accuracy which patients may benefit most from chemotherapy." Genome is defined as the collection of a person's genetic information from a person or his or her tumor.

> "...we can now predict with high accuracy which patients may benefit most from chemotherapy."
>
> **David Harpole, MD**

Harpole and his colleagues across the country will accrue 1500 early-stage lung cancer patients who are being treated at major medical centers in the United States. The trial is one of the largest trials ever conducted for early-stage lung cancer patients and the first to use genomics to determine which patients will likely benefit from receiving chemotherapy.

"Forty percent of patients with early-stage lung cancer die within five years," says Harpole. "It's unacceptable that so many people die, even when the disease is caught early."

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A Publication for Friends of Duke Comprehensive Cancer Center

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from the director

Duke Is One of Only 40 Comprehensive Cancer Centers

Dear Friends,

Members and staff of the Duke Comprehensive Cancer Center have been engaged in an immense and significant project over the last year, culminating in a multi-million dollar core grant application which was submitted to the National Cancer Institute (NCI) on January 29, 2009. The core grant provides funding, which is one of the primary sources of support to the Cancer Center and is absolutely crucial to the progress and achievements of our more than 285 members. Importantly, this funding also signifies Duke's status as a Comprehensive Cancer Center, one of only 40 in the nation. Duke, as with all Comprehensive Cancer Centers, is required to apply for renewal of its core grant funding every five years.

Duke has been fortunate to receive continuous funding as a Comprehensive Cancer Center since 1972, when the Duke Comprehensive Cancer Center became one of the nation's first cancer centers with the passage of the National Cancer Act. At that time, Congress authorized federal funding to build 15 cancer centers nationwide, and Duke was one of the first eight to be established.

The NCI describes Comprehensive Cancer Centers as "a major source of discovery of the nature of cancer and of the development of more effective approaches to cancer prevention, diagnosis, and therapy. Comprehensive Cancer Centers are expected to rise to the highest standard, delivering medical advances to patients and their families, educating health-care professionals and the public, and reaching out to underserved populations."

Duke Comprehensive Cancer Center members are organized in 11 different research programs specializing in specific areas of basic, clinical, and translational research, including genomics, breast and ovarian cancers, and brain tumors. Cancer Center members are engaged in hundreds of research studies, which are enhanced by the outstanding clinical services offered to more than 5,500 new patients each year.

We are now preparing for the NCI's visit to Duke this spring, at which time representatives will review our research programs and our scientific and clinical achievements.

The coming year holds great promise and opportunity for the Cancer Center and its members. The time is ripe for progress, and our intent is to continue to make new and exciting discoveries that will help prevent cancer and will ensure that we continue to advance and improve the care of all persons with cancer. Thanks to each of you for your continued support of our efforts.

Sincerely,

H. Kim Lyerly, MD
George Barth Geller Professor for Research in Cancer
Director, Duke Comprehensive Cancer Center

Obama's Research Funding Likely Good News for Cancer

President Barack Obama's campaign plan to combat cancer identified key strategies including doubling funding for cancer research, improving access to health insurance, supporting advances in personalized medicine, and providing new support to cancer survivors and their families. However, the current economic outlook may create obstacles for the plan, and organizations like the American Association of Cancer Research have expressed concern that Obama may have to limit "the ambitious agenda he outlined as a candidate."

Nonetheless, two Duke policy experts are hopeful that Obama can achieve increased funding for cancer research and improved healthcare and increased access.

Paul Vick, associate vice president for government relations for Duke University Health System, has more than three decades of experience in government relations and public policy work at the federal, state, and local levels. He believes that while increasing cancer research funding and providing additional support may take longer to get accomplished than Obama had anticipated, it can be done.

"Even before the election, leaders in Congress said they would increase the budget for the National Institutes of Health after several years of flat funding, and they have included a funding increase in the appropriations bill for this current fiscal year," says Vick. "Funding for the National Cancer Institute is unique in that, unlike other institutes at NIH, it is proportionally related to NIH's budget. So we know that because NIH's budget will increase, the budget for the National Cancer Institute automatically will increase as well. We just don't know the level of increase."

Kevin Schulman, MD, professor of medicine and director of the Health Sector Management Program of Duke's Fuqua School of Business, says that there is substantial health care spending in the large economic stimulus bill that Obama signed in February. This wide-ranging bill included everything from funding construction projects to science research and costs $787 billion. NIH is receiving $8.2 billion through the stimulus bill for medical research, in addition to what Congress will later allocate in its yearly budget.

Cancer, in particular, will likely benefit from any increase in research funding, according to Vick. "Cancer remains the most easily identifiable health concern in this country," he says. "There is an expectation to 'cure cancer' and that comes from funding."

One of Obama's most notable health care promises made during the campaign was guaranteeing access to health insurance for all Americans. Vick and Schulman believe that more Americans will eventually have access to health insurance. In February, Congress voted to increase the State Children's Health Insurance Program, which provides insurance to children whose parents make too much to qualify for Medicaid and too little to afford insurance on their own. Obama quickly signed the bill.

"What happens next with health insurance—and health spending in general—depends on what Congress wants," says Schulman.

"Just because Democrats have majorities in the House and Senate does not mean that any piece of legislation will automatically pass," Vick warns.

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Duke Comprehensive Cancer Center
Office of Communications
DUMC 2714, Durham, NC 27710
Phone: 919-684-3560
Fax: 919-684-5653
E-mail: jill.boy@duke.edu

H. Kim Lyerly, MD Director

Karen Cochran Executive Director of Development

Office of Development
Phone: 919-667-2600
cancer.duke.edu/gift

Jill Boy Editor/ Writer

David Elstein Writer

Jared Lazarus Photographer

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Physician-Researchers Test New Procedure to Boost Immune System in Transplant Patients

Duke Comprehensive Cancer Center members Louise Markert, MD, PhD, and Mitchell Horwitz, MD, have partnered to lead a new clinical trial designed to boost the immune system and aid adult patients in their recovery after receiving an umbilical cord blood transplant. A grant for this work was awarded by the Gateway Cancer Research Foundation.

Patients being treated at Duke for leukemia, lymphoma, or myelodysplastic syndromes who must receive an umbilical cord blood transplant may be candidates for the study.

> "The thymus gland is responsible for teaching the body's immune system cells, known as T cells, how to attack and fight off infections."
>
> **Louise Markert, MD, PhD**

Horwitz and Markert have begun accruing patients to participate in the trial, which involves transplanting thymus tissue into a patient after he or she has undergone an umbilical cord blood transplant.

"The thymus gland is responsible for teaching the body's immune system cells, known as T cells, how to attack and fight off infections," explains Markert, a pediatric immunologist who developed the thymus transplant and is the only physician in the world who performs the specialized procedure.

The T cells are built up in early life, so the function of the thymus is diminished in adults. For the study, Markert uses thymus tissue that has been discarded from babies undergoing heart surgery. The tissue, which covers the heart in infants and must be removed to gain access to the heart, can no longer be used by the infant. For this new study, the thymus tissue is surgically transplanted into the adult patient.

Markert has already used thymus transplants in children to reconstitute an absent immune system. More than 50 children have received a transplant at Duke to correct immune system deficiencies caused by a condition called DiGeorge anomaly.

Louise Markert, MD, PhD, and Mitchell Horwitz, MD

"This study is designed to test the safety of this procedure. One patient has already undergone the procedure and is doing very well," explains Horwitz, a stem cell transplant specialist. "Patients eligible for the study are those who have undergone pre-transplant chemotherapy followed by successful umbilical cord blood transplantation."

GENOMICS Continued from Page 1

Currently, patients with early-stage lung cancer usually undergo surgery, but most do not receive chemotherapy. One-third of these patients will have a recurrence of cancer and may have benefitted from chemotherapy, but doctors can't predict which patients will likely have a recurrence. In 2006, Duke researcher Anil Potti, MD, with Harpole, developed the Lung Metagene Predictor, a new test that scans thousands of genes to identify patterns of gene activity in individual tumors that indicate a patient is likely to suffer a recurrence of the disease.

Harpole's trial aims to prove the accuracy of the predictor. The study results should demonstrate whether chemotherapy is appropriate for patients with a high risk of recurrence, low risk, both, or neither.

> "Forty percent of patients with early-stage lung cancer die within five years. It's unacceptable that so many people die, even when the disease is caught early."
>
> **David Harpole, MD**

Duke researcher Phil Febbo, MD, is leading a trial for metastatic, castrate-resistant (hormone-refractory) prostate cancer patients. This is the first trial to study castrate-resistant prostate cancer using molecular markers of an individual cancer to guide therapy. Metastatic, castrate-resistant prostate cancer occurs when a man's PSA level continues to rise even after receiving hormonal therapy. This type of cancer causes 27,000 deaths a year.

Sixty patients for this trial will be accrued from Duke and other major cancer centers nationally through the Department of Defense Prostate Cancer Consortium, a collection of 13 academic centers of excellence for prostate cancer care.

Febbo's laboratory has developed an androgen receptor (AR) activity signature that can determine the level of AR activity with a man's prostate cancer based on the expression of 300 genes. Androgens are natural hormones that contribute to many of the physical features attributed to men and that stimulate the development and maintenance of the prostate.

In the trial led by Febbo, patients will have their tumors biopsied and processed for gene expression analysis to determine AR activity. Men with cancers having high levels of androgen receptor activity will receive nilutamide, a drug proven to block the androgen receptor. Those with low levels of AR activity will receive dasatinib, a drug approved by the FDA to treat certain types of leukemia that targets proteins that contribute to the growth and progression of prostate cancer. There are three new anti-androgen drugs being developed currently, and Febbo's test may be able to determine which patients stand to benefit from these new therapies.

By determining which treatment is likely to be most beneficial for which patient with any type of cancer, patients can be spared from side effects associated with treatments that will not benefit them and can receive the treatment initially that will be most effective.

The lung trial should take four to five years to accrue, while one to two years for the prostate trial. Results of the trials should be known in several years.

"It's enormously satisfying to see our research coming out of the lab and directly helping men in my clinic," says Febbo.

For more information on these trials and other Duke cancer trials involving genomics, go to **genomestohealth.org.**

Sponsored by the Citizens Advisory Council
The Citizens Advisory Council (CAC) is the longest-standing advocacy group at the Cancer Center. For more than 30 years, the group has supported the mission of the Cancer Center through outreach and personal philanthropy. For more information about the CAC, please contact Tim Hart at 919-667-2614.

A TALE OF TWO PATIENTS

And Their Journeys with Lung Cancer

Lung cancer is the most deadly of all cancers, killing more people each year than breast, prostate, and colon cancers combined. Approximately 15 percent of people diagnosed with lung cancer will live five years, a lower percentage than other common cancers.

Despite the statistics, Jeff Crawford, MD, chief of medical oncology, who has dedicated his clinical practice and research to patients with lung cancer, is optimistic about the improvement in treatments for lung cancer patients.

"When I started the thoracic oncology program at Duke in 1990, chemotherapy wasn't routinely prescribed to lung cancer patients, but now it's common and the chemotherapies have improved," he explains. "In addition, there are new combinations of drugs that are helping lung cancer patients and new genomic tests that are dramatically improving the way we treat patients. We are now able to personalize a patient's treatment of lung cancer so that each person receives the most beneficial treatment based on his or her own genomic signature." (See cover story.)

The research is helping patients live long and is also improving the quality of life for patients. "Lung cancer patients are now living better," says Susan Blackwell, PA, a physician assistant who has worked with Crawford for the last 19 years. "There are drugs that ease the nausea and pain often associated with treatment, and we are able now to provide better supportive care."

"We are now able to personalize a patient's treatment of lung cancer so that each person receives the most beneficial treatment based on his or her own genomic signature."
Jeff Crawford, MD

Jeff Crawford, MD, and Susan Blackwell, PA

Bob Norris

Five-Year Survivor and Harley Enthusiast

It's been five years since Bob Norris of New Bern, North Carolina, was diagnosed with lung cancer. To celebrate, he bought a new Harley-Davidson motorcycle.

Diagnosed in the spring of 2003 with stage II lung cancer, Norris came to the Duke Comprehensive Cancer Center for a second opinion after first visiting a local oncologist. "The statistics were not encouraging," says Norris. "But I knew Duke had a great reputation and I wanted to talk to their doctors."

Norris met with Crawford and surgeon David Harpole, MD. Blackwell and thoracic surgery physician assistant Scott Balderson, PA, completed the team. After talking with Norris, the doctors suggested that he receive a lobectomy (surgery to remove a lobe of the lung) and then three months of chemotherapy. Norris followed their recommendations.

"The treatment went relatively smoothly," says Norris. "There were no surprises during treatment. Before the surgery, Dr. Harpole and Dr. Crawford explained exactly what would happen, and they were able to stick to their plan."

Today, a lasting memory of the surgery is the scar on Norris's back. "That's a reminder to never smoke cigarettes again," says Norris.

After completing chemotherapy, Norris, an alumnus of the University of Maryland, was presented with a Duke baseball cap. Each year, he adds a pin to the cap to commemorate another year of life. He now only visits Duke for an annual checkup.

"Everyone at Duke couldn't have been more professional, friendly, and compassionate," says Norris. "They are all so busy, but they take the time to talk to you about your treatment options and don't make you feel rushed at all."

"I feel like Susan Blackwell is a member of my family now," says Norris.

"Mr. Norris is healthy today thanks to the best surgical techniques and advances in adjuvant chemotherapy," says Crawford.

Today, Norris rides his Harley often and keeps himself busy by taking banjo lessons. He also drives around his neighborhood every week on a modified scooter collecting aluminum cans to sell to a recycler. The money he collects (more than $2,000 in the last year) from recycling supports cancer research.

Bo Johnson

Young Survivor and Cancer Advocate

Bo Johnson of Lake Norman, North Carolina, tells a much different story. Johnson, a non-smoker, was diagnosed with stage IV lung cancer—the most serious stage—in 2006 at the age of 34.

"I never had any symptoms except for a dry cough," says Johnson, "When I was told I had lung cancer, it was a catastrophe—complete shock multiplied by 1,000."

Johnson was diagnosed with cancer by a local oncologist. After the diagnosis, he and his wife, Christi, began searching for the best place to receive treatment. "I looked at all of the doctors in the country," explains Johnson. "I knew my best decision was to go to Duke to be cared for by Dr. Crawford."

After meeting with Johnson, Crawford suggested that he enroll in an innovative clinical trial at Duke which was testing a new targeted therapy for lung cancer.

"Bo was willing to try experimental procedures more than other patients," says Blackwell, who is also a member of Johnson's treatment team. "From day one, he was on a mission to receive cutting-edge therapy."

"I was told I had four to six months to live, and that was not good enough as far as I was concerned," says Johnson. "I'm going to do everything I can to live to walk my daughter down the aisle."

"At Duke, we translate the newest laboratory findings into the most advanced treatments for our patients," says Harpole.

There are clinical trials at Duke studying new therapies for a broad range of cancers, and many of these trials are not available at other medical centers, he explains. "Being a medical center with strong research capabilities allows patients to get exciting experimental therapies. Some phase I trials at Duke are testing treatments that may not be available to the general public for years."

A year after Johnson's diagnosis, he was referred for consideration for a double lung transplant. In May 2008, R. Duane Davis, MD, a Duke thoracic surgeon, performed Johnson's transplant, a procedure that is relatively rare and involves substantial risks. Davis estimates that possibly only 50 lung cancer patients have had a double lung transplant. Johnson remained at Duke University Hospital recovering from the procedure for five months.

Today, he is back home with his family. "So far, so good," he says. "If it wasn't for this transplant, I'm not sure I would be alive right now."

Johnson has returned to work, but tires easily. He works as much as possible—often three to four hours a day—as chief marketing officer at Financial Independence Group, a financial marketing company.

He is currently taking drugs to prevent infection associated with the lung transplant and to fight rejection. He may eventually begin taking additional drugs to prevent the cancer from returning.

Three months after his diagnosis with cancer Johnson, along with his wife, Christi, created a nonprofit foundation to fund lung cancer research at Duke, and raised more than $75,000 in its first three months. Lung cancer research receives less funding from government and private foundations than other common types of cancer. The Johnsons decided to name the foundation Addi's Cure after their then 15-month-old daughter. In February 2009, Johnson presented a check to Crawford for more than $62,000, bringing Addi's Cure's total donation for lung cancer research at the Duke Comprehensive Cancer Center to more than $161,000.

"Through the foundation's support of the thoracic oncology program at Duke, we will be able to continue to develop and apply the latest techniques and treatments to each patient in order to provide the opportunities Mr. Norris and Mr. Johnson received," says Crawford.

Bob Norris

Bo Johnson with daughter Addi and wife Christi

"I was told I had four to six months to live, and that was not good enough as far as I was concerned. I'm going to do everything I can to live to walk my daughter down the aisle."

Bo Johnson

H. Kim Lyerly, MD, with Duke University student Josh Sommer

Duke Student = Cancer Survivor

Halftime of the Georgia Southern versus Duke men's basketball game on November 10, 2008, featured cancer survivor and Duke University student Josh Sommer; H. Kim Lyerly, MD, director of the Duke Comprehensive Cancer Center; and Joanne McCallie, head coach of Duke's women's basketball team. The game, held in Cameron Indoor Stadium at Duke, was the regional round of the Coaches vs. Cancer Tournament, a nationwide collaboration between the American Cancer Society and the National Association of Basketball Coaches that empowers basketball coaches, their teams, and local communities to make a difference in the fight against cancer. Sommer, who has a rare form of cancer called chordoma, received a standing ovation from the crowd including his fellow students—the Cameron Crazies—for his dedication to the fight against cancer. Sommer is working with Cancer Center members Neil Spector, MD, and Michael Kelley, MD, to find a cure for chordoma and has founded the Chordoma Foundation, of which he now serves as executive director.

Students Win Nation's Highest Honor for Their Research with Cancer Center Mentor

Durham high school students and Duke Comprehensive Cancer Center interns Sajith Wickramasekara and Andrew Guo won the coveted Siemens Competition in Math, Science and Technology in December 2008 for their research in genetics and chemotherapy.

Andrew Guo and Sajith Wickramasekara

Wickramasekara and Guo were the grand-prize winners of the prestigious competition and were awarded a $100,000 scholarship for their project titled "A Functional Genomic Framework for Chemotherapeutic Drug Improvement and Identification." Working as interns with Duke Comprehensive Cancer Center member Craig Bennett, PhD, the two students combined traditional genetics with cutting-edge computational modeling to streamline the gene discovery process. Bennett first began mentoring Wickramasekara in 2007 when he was a participant in the Duke Comprehensive Cancer Center's Summer on the Edge internship program.

"This research project addresses the need to identify new genes to target for cancer therapy," explains Bennett, an assistant professor who specializes in the study of DNA damage and repair. "Sajith and Andrew have contributed significantly to pushing our research forward. Our goal is to easily identify new chemotherapeutic drugs and greatly improve existing ones."

"Not only does Sajith's and Andrew's win of this national award validate our research approach using yeast as a model organism, but it deservedly rewards their hard work and intellectual capability as well," says Bennett. "If the genes we have identified prove to be resistant in human cells, then we will have identified targets that can be used to address a tumor's resistance to treatment."

Going Smoke Free After 33 Years

Tim Washburn used to smoke three packs a day during the week and five on the weekend. Growing up around tobacco farms, Washburn, a resource technician for Duke University Medical Center, smoked his first cigarette at age eight and was a regular smoker by the time he turned 12.

All that changed on July 4, 2007, when Duke Medicine went tobacco free and no longer permitted employees or visitors to smoke in or outside medical center facilities. That's also the day that Washburn went tobacco free.

"My job is very important to me, and I knew I couldn't smoke at work anymore," explains Washburn. "That was my motivation for quitting."

Tim Washburn

Washburn sought help from LIVE FOR LIFE, Duke University's employee health promotion program. There, he was given reading materials and other assistance, free of charge, to help him quit.

The medical center first announced its plans to go tobacco free in October 2006. "Our plan was to give employees who smoke time to prepare and the resources to stop if they desired," says George Jackson, MD, director of Duke's Employee Occupational Health and Wellness, which oversees LIVE FOR LIFE.

More than a year and a half later, Washburn no longer smokes, although he admits it is a struggle. He often listens to a self-hypnosis CD that the professionals at LIVE FOR LIFE gave him.

"I have been looking for more challenges and other ways to improve my life," says Washburn. "Six months after quitting smoking, I quit drinking alcohol. I bought a bike and often ride to work instead of driving.

"I now have so much confidence. If I can quit smoking, I can do anything."

The smoking cessation programs at Duke include support classes, nicotine-replacement therapy, and telephone counseling and are provided free of charge to Duke employees and their families who are covered under a Duke health plan.

Duke has been recognized for its commitment to helping improve the lives of its employees and its initiatives that promote the prevention and early diagnosis of cancer. Duke University Health System holds the Gold Standard from the CEO Roundtable on Cancer, and is one of only two academic medical institutions to receive this honor.

The CEO Cancer Gold Standard was developed by the CEO Roundtable on Cancer to assist organizations in reducing the burden of cancer. Organizations that adopt the CEO Cancer Gold Standard demonstrate a commitment to improving the health and lives of their employees and their family members by maintaining a culture that fosters healthy lifestyles and provides support.

Duke employees who want to learn more about programs offered by LIVE FOR LIFE can visit **hr.duke.edu/tobaccofree** or call **919-684-3136**. In addition, the Duke Center for Nicotine and Smoking Cessation Research offers paid clinical trials to help smokers quit. Anyone wishing to obtain more information should visit **dukesmoking.com** or call **1-888-525-DUKE**.

Individuals Honored with Shingleton Award for Service to Cancer Center

North Carolina philanthropists Fred and Alice Stanback and Duke graduate Michael Fields were honored this fall with the Shingleton Award, the Cancer Center's most prestigious service award. Named in honor of the late William W. Shingleton, MD, founding director of the Cancer Center, this annual award is presented to individuals who have demonstrated an ongoing interest in fighting the battle against cancer through their long-standing commitment of time, energy, and resources. Mrs. Stanback and Mr. Fields serve on the Cancer Center's Board of Overseers.

Fred and Alice Stanback of Salisbury, North Carolina, have donated more than $4 million to the Duke Comprehensive Cancer Center and the Duke Nicholas School of the Environment to support the study of the link between cancer and the environment. Mr. Stanback has served on the board of the Nicholas School; his son, Brad, now serves on that board. In 2008, Mr. and Mrs. Stanback were presented with the North Carolina Award, the highest civilian honor bestowed by the state, which recognizes significant contributions of individuals in the fields of fine arts, literature, public service, and science.

Fields has been a friend and supporter of the Cancer Center for nearly two decades. He and his family established the Kislak-Fields Family Fund to support leukemia research initiatives at Duke. Their gifts have funded critical equipment and supported bone marrow transplantation and stem cell research. Fields served as chair of the Cancer Center's New York City Outreach Committee in 2006.

Fred and Alice Stanback, Michael Fields, and H. Kim Lyerly, MD

"Michael, Fred, and Alice are truly exemplary friends of the Cancer Center," says H. Kim Lyerly, MD, director of the Duke Comprehensive Cancer Center. "Each of these individuals has gone above and beyond what is expected, and we are truly indebted to each of them for their tireless efforts on behalf of this Cancer Center."

Foundation Supports Breast and Prostate Cancer Research

The Charitable and Research Foundation, based in Florida, recently made a $90,000 pledge to the Duke Comprehensive Cancer Center to support three initiatives: the Director's Fund; prostate cancer research of oncologist Phil Febbo, MD; and breast cancer research of oncologist Kelly Marcom, MD.

Febbo plans to use the gift as seed money for sequencing-based investigations.

"Sequencing a cancer genome provides fundamental information about a person's disease. By understanding the molecular causes of an individual's prostate cancer, the choice of appropriate therapy becomes clearer," says Febbo. "However, incorporating sequence analysis into the care of men with prostate cancer requires collaboration between investigators with complementary skills who can harness the opportunity provided by the sophisticated technology and computational approaches available today. This work requires significant resources, and the gift from the Charitable and Research Foundation is critical to launch this effort."

Marcom plans to use the gift to support investigations correlating breast MRI findings with genomic information obtained from breast cancers in a currently open clinical trial. "Imaging evaluation of breast cancer is a critical part of clinical care. By combining the information from genomic studies with the rich data from imaging, we hope to more accurately define tumor biology and predict responses," says Marcom.

In addition to funding the research of Marcom and Febbo, the foundation requested that one-third of the gift be designated to the Director's Fund, the Cancer Center's unrestricted annual fund, so that the funds could be used where it can have the greatest impact.

"Unrestricted giving is incredibly important to the Cancer Center," explains H. Kim Lyerly, MD, director of the Duke Comprehensive Cancer Center. "We are extremely grateful to the foundation for its support."

The Charitable and Research Foundation was formed in 1998 to support various medical and other charities and made a previous gift to the Cancer Center in 2007 to support the Director's Fund and breast cancer research.

Dickson Foundation Supports Genomic Research

The Dickson Foundation of Charlotte recently made a commitment of $100,000 to the Duke Comprehensive Cancer Center to support genomics research. The foundation has supported the Cancer Center for more than two decades with annual gifts of $1,000.

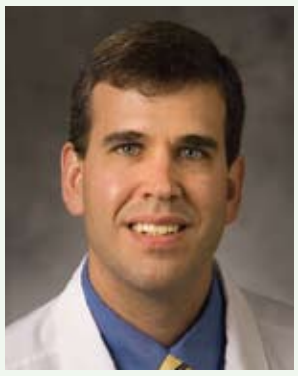
"The foundation's continued support of the Duke Comprehensive Cancer Center illustrates our recognition of Duke's leadership in cancer research and care. In particular, Duke has led the world in genomic research that has resulted in a new standard for personalized medicine," says Alan Dickson, president of the foundation. "It is our intention and hope that our support of these efforts will enable researchers at Duke to continue their efforts to develop new ways to treat patients with cancer."

> "The foundation's continued support of the Duke Comprehensive Cancer Center illustrates our recognition of Duke's leadership in cancer research and care."
>
> **Alan Dickson**
> President, Dickson Foundation

"We are very appreciative of this gift from the Dickson Foundation," says H. Kim Lyerly, MD, director of the Cancer Center. "Physician-researchers at Duke are leading the way in using genomics to help guide therapy so that patients can receive the treatment that will likely be most beneficial for them. The Dickson Foundation's generous gift will provide support that is essential to the continued work in this exciting field of research and care."

ask the expert

Brian Brigman, MD, PhD



Rich Riedel, MD

BRIAN BRIGMAN, MD, PhD, and RICH RIEDEL, MD

A 2007 study published in the *Annals of Surgery* showed that patients with soft tissue sarcoma treated at large volume centers, such as Duke, have higher survival rates and better functional outcomes than those at smaller volume centers. Brian Brigman, MD, PhD, an orthopaedic surgeon; Rich Riedel, MD, a medical oncologist; radiation oncologists David Kirsch, MD, PhD, and Nicole Larrier, MD; physician assistant Susan Blackwell, PA; and nurse Sherry Dufore, RN, form Duke's multidisciplinary sarcoma clinic. In addition to treating sarcomas, Riedel, Brigman, and Kirsch are conducting basic and clinical research to learn more about these rare cancers. We asked Brigman and Riedel to discuss sarcomas and what the future looks like for these diseases.

Can you explain what sarcomas are and how they are treated?

Dr. Brigman: Sarcomas describe a group of at least 50 types of cancers that impact bones and soft tissue (such as muscles and nerves). These cancers are rare. About 12,000 people a year are diagnosed with a type of sarcoma in the United States. For comparison's sake, more than 200,000 people in the U.S. are diagnosed with lung cancer each year. According to the National Cancer Institute, the five-year survival rate of sarcoma patients is 66 percent.

Dr. Riedel: Despite the large number of sarcoma subtypes, treatment for the majority of patients is very similar. Generally speaking, surgical resection with consideration for radiation therapy either before or after surgery is the "standard of care" for most soft tissue sarcomas. While chemotherapy plays an important role in patients with advanced disease, its role in patients with localized disease is controversial and its use is recommended on a case-by-case basis.

What are some challenges you encounter when treating and researching sarcoma?

Dr. Brigman: Sarcomas can occur in any part of the body, in patients of any age. Determining the best treatment plan requires a multidisciplinary approach from surgeons, medical oncologists, radiation oncologists, pathologists, and radiologists to individualize treatment for each patient. Since there are fewer patients with sarcomas, accruing enough patients to enroll for clinical trials to test new treatments can be challenging. In addition, there is less funding available to support research for rare cancers like sarcomas.

Dr. Riedel: Performing clinical trials on rare cancers can be challenging. To address this concern, we have partnered with SARC (Sarcoma Alliance for Research through Collaboration), a cooperative group of sarcoma centers from across the country dedicated to the development and support of clinical trial research.

Tell us more about the research being conducted on sarcoma at Duke.

Dr. Brigman: Dr. David Kirsch, a radiation oncologist, has created a mouse model for soft tissue sarcoma. This is an exciting first step to determine what treatments for sarcoma may be effective in humans. Dr. Corinne Linardic, a pediatric oncologist, is studying rhabdomyosarcoma, the most common soft tissue sarcoma of children and young adults, to learn more about the genetic mutations associated with this disease.

Dr. Riedel: Building on recent efforts through Duke's Institute for Genome Sciences & Policy, we hope to develop prediction tools for disease recurrence and treatment response by linking unique information provided by tumor samples with clinical data available from patients. While we have much to learn, it is clear that Duke is a leader both on the clinical and research fronts for patients with this rare and fascinating group of diseases.

CORRECTION:
In the 2007-2008 Annual Report, Mr. and Mrs. Brian Joseph McMerty should have been listed in the Cornerstone Society (giving between $5,000-24,999).

To contact Duke Comprehensive Cancer Center's Office of Development, call **919-667-2600** or visit **cancer.duke.edu/gift**

If you prefer to receive this newsletter by e-mail, please visit **cancer.duke.edu/notes** to register.