DUKE CANCER INSTITUTE
A National Cancer Institute-designated Comprehensive Cancer Center

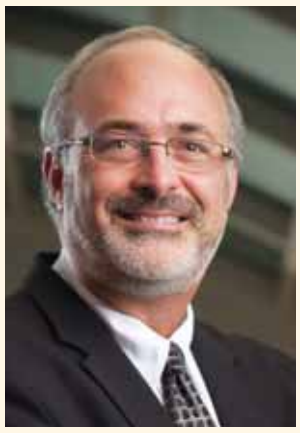
notes

FALL 2011

New Executive Director of Duke Cancer Institute Named

Michael B. Kastan, MD, PhD, a renowned cancer scientist and director of the Comprehensive Cancer Center at St. Jude Children's Research Hospital, has been named the executive director of the Duke Cancer Institute (DCI).

"Dr. Kastan's achievements as the director and driving force behind one of the world's preeminent cancer centers, as well as his widely recognized accomplishments in basic and clinical research, make him the ideal person to lead the Duke Cancer Institute and to implement a novel model of integrated cancer care and research," says Victor Dzau, MD, Duke University chancellor for health affairs.Kastan has directed St. Jude's cancer center since 2004 and led efforts that resulted in it becoming the only pediatric hospital designated by the National Cancer Institute (NCI) as a comprehensive cancer center.


Michael B. Kastan, MD, PhD

"Duke is a place with a great history and great people and I look forward to becoming a part of that tradition and making a contribution to advancing Duke's excellence in cancer," says Kastan.

A pioneer in describing molecular and cellular events that cause cancer and its progression, Kastan has garnered a national reputation as a visionary leader in cancer research and care.

"Mike Kastan stands out as one of the most thoughtful and important leaders of his generation of cancer physician-researchers," says Richard D. Klausner, MD, former director of the NCI, past executive director for global health at the Bill & Melinda Gates Foundation, and current member of the Duke University Health System board of directors.

"The Duke Cancer Institute is an innovative and groundbreaking commitment to the future of cancer research and cancer care," Klausner says. "Its success is not only important for Duke but for cancer patients and their families everywhere.

"Dr. Kastan's appointment as its first director represents a key event in fulfilling Duke's ambitious vision of the future of cancer care and progress against all cancer."

Kastan is eager to help shape the new DCI, which he believes will become a national model for the way cancer programs should be structured. The institute, which was launched in November 2010, brings together education, cancer research, and patient care into a seamless and unified venture.

"It is exactly what cancer medicine should be about," Kastan says. "It's the merging and strategic oversight of a seamless structure, including everything from basic research to patient care, all coordinated as part of a continuum."

In addition to the DCI's organizational structure, Kastan said, the cancer program will benefit from a new, seven-story facility, which is currently under construction at the heart of the medical center campus.

Slated to open in February 2012, the facility has been designed to provide convenient multidisciplinary patient care.

Kastan said he will also work to further develop the clinical research mission within DCI, collaborating with faculty and clinical research staff to achieve even greater levels of excellence in designing, implementing, monitoring, and reporting clinical research.

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Tisch Family Continues Philanthropy at Duke

New Gifts to Support Brain Tumor Research and New Cancer Center Building

The family of the late Preston Robert Tisch has continued their generous support of the Duke Cancer Institute and The Preston Robert Tisch Brain Tumor Center at Duke by making two additional gifts: to support construction of the new Duke Cancer Center building and to continue their support of brain tumor research.

The new Cancer Center building, which is scheduled to open in February 2012, includes 267,000 square feet of space dedicated to patient-focused cancer care, including more spacious treatment rooms, a rooftop terrace and gardens, quiet spaces for conversation or reflection, and a cafe. The new building will centralize services such as chemotherapy and imaging that have been spread throughout the medical center in the past.

The large, five-story atrium that patients and visitors will see as they enter modern building as well as the reception area will be named in honor of the Tisch family.


From left, Victor J. Dzau, MD, Duke University chancellor for health affairs; Laurie Tisch; Jonathan Tisch; Joan Tisch; Henry Friedman, MD, co-deputy director, Preston Robert Tisch Brain Tumor Center at Duke (PRTBTC); Lizzie Tisch; Allan Friedman, MD, co-deputy director, PRTBTC.

"We are pleased to continue to contribute to Duke's cutting-edge research and treatments to enable the center to take its work to the next level." — Steve Tisch

Their renewed commitment to brain tumor research at the Duke Cancer Institute and Preston Robert Tisch Brain Tumor Center will be used to conduct clinical research and clinical trials to study new therapies for brain tumor patients and to conduct genomic research of brain tumors.

"The Tisch family's past support of brain tumor researchers at Duke has already had a tremendous impact on our patients," says Henry Friedman, MD, co-deputy director of The

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Novel Study Focuses on Ovarian Cancer Risks

A Publication for Friends of Duke Cancer Institute

To make an appointment, call 888-ASK-DUKE.

TISCH FAMILY GIFT

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Preston Robert Tisch Brain Tumor Center. "We are pleased to continue to contribute to Duke's cutting-edge research and treatments to enable the center to take its work to the next level," says Tisch's son Steve.

A portion of the family's initial gift in 2005, in honor of their father Preston Robert Tisch, supported the work of Duke researcher John Sampson, MD, PhD. Sampson and his team have developed a vaccine which has proven successful in clinical trials at staving off recurrence of glioblastoma multiforme (GBM) tumors and has more than doubled survival in GBM patients compared to historic controls. A portion of the initial gift also was used to support preclinical research on the drug Avastin in brain tumor patients. Led by Duke's James Vredenburgh, MD, and Friedman the studies showed that Avastin was effective for brain tumors. The drug was subsequently approved by the Food and Drug Administration (FDA) for use in the treatment of glioblastoma.

"In the midst of their own struggle with the diagnosis of a brain tumor, the Tisch family chose to provide hope to others," says Victor J. Dzau, MD, chancellor for health affairs of Duke University. "Mr. Tisch's desire was to provide hope and cure for others with this devastating illness."

Highlights of the New Cancer Center Building

- Scheduled to open February 2012
- Seven floors, 267,000 square feet
- 123 clinical exam rooms
- 73 larger infusion stations
- Outdoor, garden terrace with infusion area for patients
- Three new linear accelerators
- Five story atrium with nearby registration, café, waiting area with fireplace, pharmacy, patient and family resource center
- Additional 200 staff and 70 faculty members will be hired to meet the increased need

KASTAN

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Kastan said an additional goal is to engage the expertise of university scientists outside the typical cancer disciplines.

"I have followed Mike Kastan's spectacular career for years, and I'm delighted that he will be the inaugural executive director of the DCI," says Nancy Andrews, MD, PhD, dean of the Duke University School of Medicine.

"He is very highly regarded and, importantly, he values all of our missions—patient care, innovation based on science, and training of the next generation of leaders."

In the 1990s, Kastan published a series of papers describing the p53 protein, the most commonly mutated gene in human cancer, and its role in cellular repair and responses to damage. These findings launched discoveries that have provided a greater understanding into the causes of cancer and new approaches to treatment.

"The announcement of Dr. Kastan as the DCI executive director was met with a high level of excitement by the cancer research community at Duke," says Donald McDonnell, PhD, chairman of the Department of Pharmacology and Cancer Biology. "He is an extremely accomplished cancer biologist whose pioneering work has provided fundamental insights into the mechanisms by which cancer cells evade the 'quality control' process present in normal cells and acquire their malignant properties. The therapeutic exploitation of targets within the pathways he has defined has already yielded drugs that are currently being evaluated in the clinic as cancer therapeutics."

In addition to working with the faculty and staff of the Duke Cancer Institute on campus and at Durham Regional Hospital and Duke Raleigh Hospital, he is looking forward to working with hospitals associated with the Duke Oncology Network (DON). There are nearly 20 hospitals located in the Southeast that have an oncology-affiliation with Duke.

Hai Yan, MD, PhD

Duke Research Deemed Most Important

A *New England Journal of Medicine* article by researchers at the Duke Cancer Institute and The Preston Robert Tisch Brain Tumor Center was recently deemed one of the most important cancer papers over the last two years, according to scientific leaders surveyed by the journal *Nature Medicine*. The study, published in 2009, reported the discovery of mutations in two genes that could become diagnostic markers and potential therapeutic targets in malignant glioma, a dangerous class of brain tumors. "I can say this is one of the most important and surprising discoveries in genetic studies on malignant gliomas in the past 10 years," says Hai Yan, MD, PhD, lead author of the paper. In addition to Yan, other Duke authors are Genglin Jin, PhD; Roger McLendon, MD; B. Ahmed Rasheed, PhD; Ivan Kos, PhD; Ines Batinic-Haberle, PhD; David Reardon, MD; James Herndon, PhD; and Henry Friedman, MD; Allan Friedman, MD; and Darell D. Bigner, MD, PhD, co-directors of The Preston Robert Tisch Brain Tumor Center.

To learn more about this research, go to bit.ly/qPYXES.

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DCI Scientists Discover Nature's Elegant Solution to Repairing DNA

A major discovery about an enzyme's structure has opened a window on understanding DNA repair. Scientists at the Duke Cancer Institute have determined the structure of a nuclease (a type of enzyme) that will help scientists understand several DNA repair pathways, a welcome development for cancer research.

DNA repair pathways are very important in the context of cancer biology and aging, but the tools the cell uses to make those repairs are not well understood.

Lorena Beese, PhD

"Until we saw the structure using X-ray crystallography, we didn't understand how it could recognize so many unusual DNA structures," says senior author of the study Lorena Beese, PhD, James B. Duke Professor of Biochemistry. "The discovery is important for understanding the mismatch repair pathway, and more generally, it will help us understand other pathways as well."

The study appeared in the journal *Cell*.

If mismatch repairs are not completed properly, this deficiency can have profound effects on human health, including genes that mutate spontaneously, forms of colorectal cancer, and the development of an estimated 15–25 percent of sporadic tumors, the authors note.

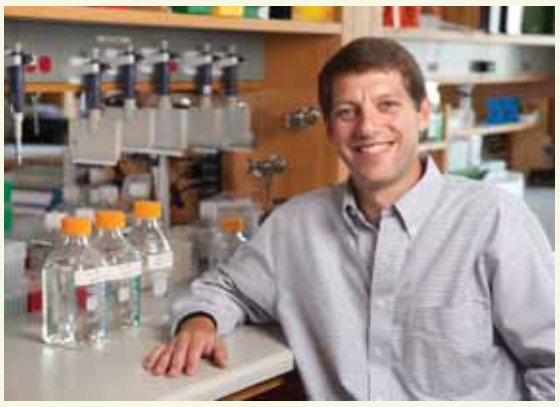
The next step is to study complexes of this molecule with other proteins in the repair pathway.

"Scientists have been interested in obtaining a detailed picture of where the atoms are in this protein for a long time," Beese says. "By understanding the interactions between proteins, we will get more insight into how it works and how the activities are regulated. In terms of future therapeutic strategies, these interfaces present exciting targets for new drugs."

Other authors—all from Duke—include Jillian Orans, PhD; Elizabeth A. McSweeney; Ravi R. Iyer, PhD; Michael A. Hast, PhD; Homme W. Hellinga, PhD; and Paul Modrich, PhD.

This work was supported by National Institutes of Health grants, including the Structural Biology of DNA Repair (SBDR) program project grant from the National Cancer Institute and support to Modrich from the Howard Hughes Medical Institute.

Blood Proteins May Identify Which Patients with Pancreatic Cancers Could Benefit from Avastin



Andrew Nixon, PhD, MBA

Tiny tumor proteins circulating in blood may be used to identify which pancreatic cancer patients would benefit from the drug Avastin, researchers at the Duke Cancer Institute (DCI) have found.

The findings, reported at the 2011 annual meeting of the American Society of Clinical Oncology, could explain why Avastin did not extend lives for pancreatic cancer patients during clinical trials.

DCI scientists believe a more targeted approach of the use of Avastin based on blood markers could improve results, particularly if a simple blood test could pinpoint who stands to benefit from the drug and who should forego it, says Andrew Nixon, PhD, MBA, lead author of the study and co-director of the DCI's Phase I Biomarker Laboratory. The study's principal investigator and senior author is Herbert Hurwitz, MD, associate professor of medicine.

"Preliminary results of the study suggest using this blood test may help determine which patients should or should not get a treatment," says Nixon.

Avastin works by stemming the growth of new blood vessels in tumors, effectively starving them. It has been approved by the U.S. Food and Drug Administration to fight colorectal, kidney, glioblastoma, and non-small cell lung cancers, but against other cancers, Avastin has not had as much success.

In a study reported last year, researchers at Duke and elsewhere reported that Avastin did not extend the lives of patients with advanced pancreatic cancer when added to the chemotherapy agent gemcitabine, which has been the primary drug used against the disease.

New therapies are urgently needed, Nixon says, "Pancreatic cancer remains a difficult disease to both detect and treat."

Even as the negative findings were reported for the combination of Avastin and gemcitabine, Nixon and colleagues were hunting for blood proteins in 328 patient blood samples that might correspond to Avastin's success or failure.

Several proteins were identified, and three were found to be potentially predictive of a pancreatic cancer patient's overall survival on the combination therapy compared to chemotherapy alone.

Nixon says the Duke team hopes its work will lead to the development of a blood test that could help steer patients to the right treatment.

Other Duke researchers in this national study include Herbert Pang, PhD; Mark Starr; and Donna Hollis.

The study was sponsored by the Cancer and Leukemia Group B, a national oncology cooperative group funded by the National Cancer Institute.

Blood Thinner May Protect Cancer Patients from Potentially Fatal Clots

A new type of anti-clotting drug called semuloparin has been found to reduce the development of potentially fatal blood clots in the veins that often occur in cancer patients, researchers at the Duke Cancer Institute (DCI) in collaboration with scientists from around the world have discovered.

In a large phase III clinical trial involving 3,212 cancer patients, semuloparin provided a 64 percent reduction in the risk of venous thromboembolism (VTE), the blockage of an artery, compared to a placebo, the study's authors reported at the 2011 annual meeting of the American Society of Clinical Oncology.

"Venous thromboembolism is a leading cause of death among cancer patients," says Daniel George, MD, director of genitourinary oncology at the DCI and one of the study authors. "But we don't do much to prevent these events. We need interventions to reduce this risk of complication."

Daniel George, MD

The drug, manufactured by Sanofi, had previously shown benefit in preventing blood clots among orthopaedic surgery patients, who tend to develop VTEs from lengthy recuperations that keep them from being active.

Studies have shown that patients with cancer have nearly a six-fold increased risk of VTE compared with non-cancer patients, accounting for about 20 percent of all new VTE events. Chemotherapy use further increases this risk.

Currently, blood thinners are offered to cancer patients when a clot is discovered.

The study—which was sponsored by Sanofi—tested the use of semuloparin as a way to prevent VTEs, not just treat them after the fact.

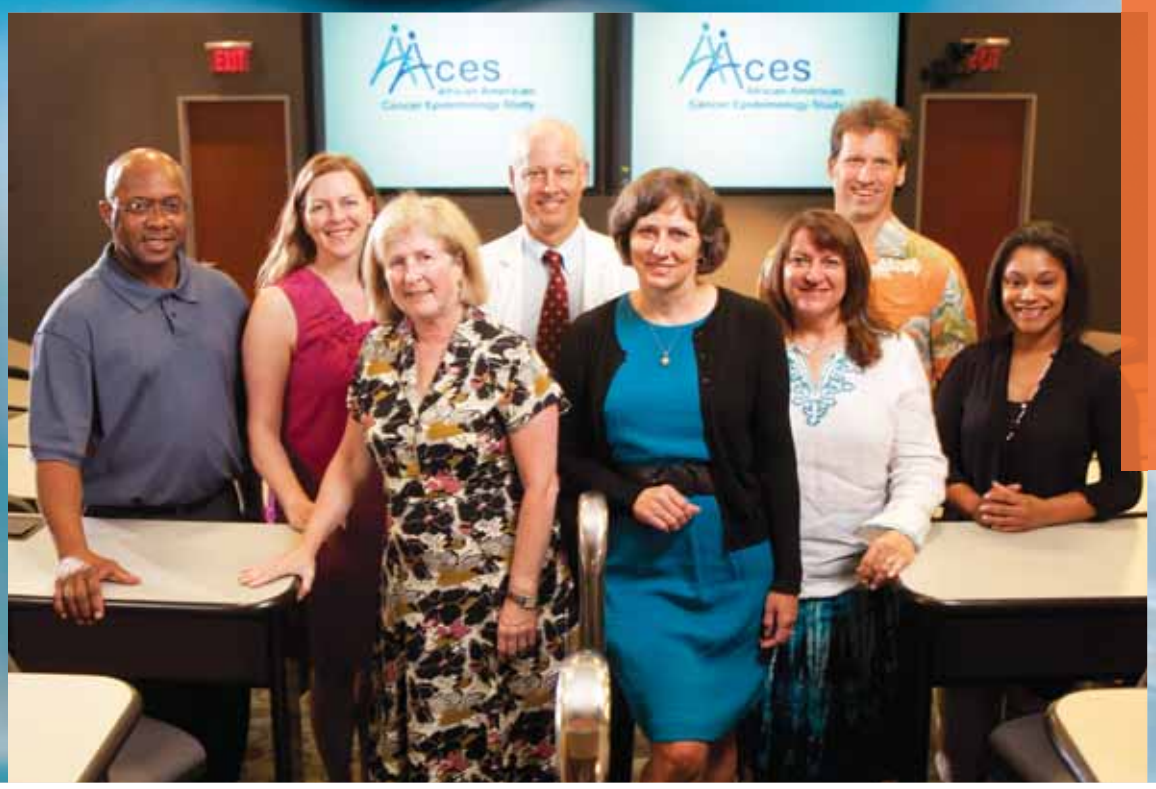
"These data support a shift in our practice toward actively preventing this disease rather than waiting for symptoms," George says.

George says one concern about adding anticoagulant drugs to current cancer treatments is that patients could develop serious bleeding problems. Patients in the trial, however, did not have higher rates of those complications.

George serves as a consultant for and receives honoraria from Sanofi.

Novel Study Focuses on Ovarian Cancer Risks, Survival in African American Women

DUKE CANCER INSTITUTE RESEARCHERS LEAD NATIONAL STUDY



> "While African Americans are often underrepresented and under-studied in research, we can't just assume that all ovarian cancer is created equal."
>
> — Joellen Schildkraut, PhD

Faculty and staff involved in the African American Cancer Epidemiology Study.
Dennis Wiltshire; Sydnee Crankshaw, MPA; Joellen Schildkraut, PhD; Andrew Berchuck, MD; Patricia Moorman, PhD; Christine Bard; Ed Iversen, PhD; and LaTonda Briggs
Not pictured: Rex Bentley, MD, and Jeffrey Marks, PhD

Ovarian cancer is a relatively rare, but highly lethal, disease. It is the eighth most commonly diagnosed cancer among U.S. women (to put it in perspective, there are about 20,000 cases per year in the U.S., versus about 200,000 for breast cancer), but the fifth most common cause of cancer death among American women. Unfortunately, because no screening test exists and early symptoms tend to be vague, most women are not diagnosed until the disease has reached stage 3 or 4, when it is more difficult to treat.

Although African American women have lower incidence rates for ovarian cancer, they have worse survival rates from this disease. And, although survival rates for Caucasian women have improved modestly over the past four decades, there has been no improvement for African American women.

Why is there such a major difference between African American and Caucasian women when it comes to developing and surviving ovarian cancer? No one yet knows the answer, but a team of Duke Cancer Institute (DCI) researchers is working to solve this medical mystery.

Answering questions about risk factors for disease in a specific group of people is the purview of epidemiologists. Joellen Schildkraut, PhD, and Patricia Moorman, PhD, are Duke epidemiologists who specialize in ovarian cancer. They have collaborated with Andrew Berchuck, MD, director of Duke's Division of Gynecologic Oncology, on a variety of studies to identify the causes of ovarian cancer.

For the past decade Schildkraut has led the North Carolina Ovarian Cancer Study (NCOCS), a study of more than 1,000 women—both those diagnosed with ovarian cancer and a similar control group who have not been diagnosed—to look at potential genetic and lifestyle risk factors. The ongoing study includes just 144 African American women—a proportion much lower than the 22 percent of North Carolina residents who are African American. This disparity is due to the lower incidence among African American women and possibly because African Americans have been less inclined to take part in medical research. Additional research was needed to understand these issues more fully.

"African Americans as well as other minority groups are under-represented in clinical research for many reasons," says Valarie Worthy, RN, Duke's treatment navigator for health disparities. Her job is to educate the community about cancer and clinical research using tailored-made interventions. "The community must understand that research is for the mutual benefit of all partners."

"While African Americans are often under-represented and under-studied in research, we can't just assume that all ovarian cancer is created equal," says Schildkraut, who leads the DCI's Cancer Prevention, Detection, and Control Research Program.

As they planned the next generation of NCOCS, Schildkraut, Moorman, and Berchuck, along with DCI statistician Ed Iversen, PhD, molecular biologist Jeffrey Marks, PhD, and pathologist Rex Bentley, MD, quickly recognized that the study would need to be conducted at multiple centers to get enough African American patients enrolled to yield meaningful results. They reached out to colleagues at other medical centers and launched a multicenter collaboration with eight other sites in the East and Midwest, funded by the National Cancer Institute. For the past year, epidemiologists and oncologists from these sites have been planning the study, developing patient brochures and questionnaires, and recruiting participants for the study. They also received the input of an African American cancer survivor to help tailor effective communications to this community.

The new study is called AACES—the African American Cancer Epidemiology Study—and is the first study of ovarian cancer exclusively in African American women. The goal is to enroll 1,000 women with a recent diagnosis of ovarian cancer, as well as 1,000 women who have never had the disease for comparison, in order to better understand the causes of ovarian cancer in this population. Recruitment for the study has begun and will continue for the next four years.

African American women with ovarian cancer are identified through state cancer registries and are contacted with their physician's consent to see if they would consider participating. African American women without the disease are selected as part of a random sample representative of the population in the nine states where AACES is being conducted. Those who agree to participate complete a confidential, one-hour telephone interview about their medical and family history and everyday experiences and activities, complete a diet survey, and give a small blood sample.

The blood samples are used for genetic analysis, while the questionnaires provide important information on lifestyle, background, and experiences. Together, this information will help Duke researchers determine how risk factors for developing and surviving ovarian cancer in African Americans differ from those of Caucasian women, and explore other relevant factors including issues of access to care, obesity, or socioeconomic status.

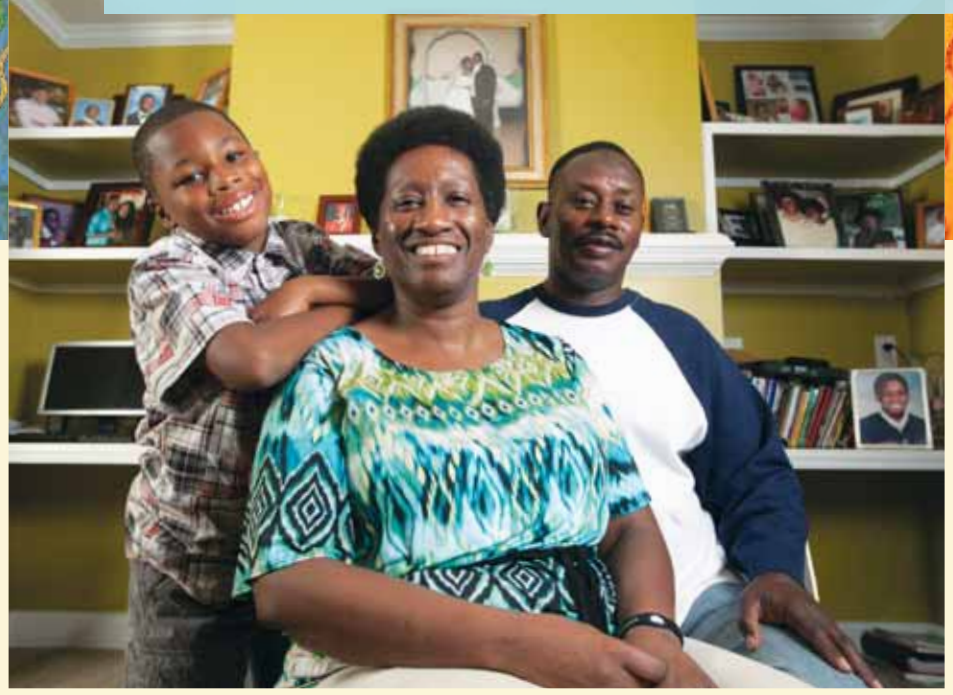
Because ovarian cancer is not very common, developing effective screening tests for the entire population—like mammograms for breast cancer, or colonoscopies for colon cancer—may be cost-prohibitive. But, notes Berchuck, results from AACES and similar studies could help identify and target specific populations that are more at-risk. "It would be great if we could identify genetic factors so we could say, 'The average woman's risk for developing ovarian cancer is around 1 percent, but because you have these genetic factors, your risk is 3 percent or 5 percent.' For those identified at higher risk, we could take preventive measures to reduce that risk."

DCI investigators will share data from AACES with their colleagues in the international Ovarian Cancer Association Consortium, greatly expanding the number of cases of African American descent that are currently in the consortium's database.

"Ultimately, we hope that AACES will help us identify risk factors for both incidence of the disease and those that predict survival, and that this knowledge can be used to develop interventions to reduce mortality from ovarian cancer in all women," says Moorman.

For more information on the study, visit cancer.duke.edu/aaces

"As I tell other people with cancer: It is difficult, it changes your life, but you can get through it. Just keep the faith and don't give up." — Barbara Muhammad, cancer survivor



Barbara Muhammad with grandson Malik and husband El Muslim

Patient refuses to give in to ovarian cancer

Listening to Barbara Muhammad talk about her journey, you can't help but feel inspired.

Muhammad, who was diagnosed with stage 3 ovarian cancer in April 2010, relies on what she calls "the three Fs: faith, family, and friends."

"That's what gets me through," she says. "I truly believe that God won't put more on me than I can bear, and I have a wonderful husband, daughter, sisters, mother, grandsons, and friends."

Muhammad wasn't always so upbeat. She learned she had ovarian cancer after she went to her primary care physician for back pain and her doctor sent her for a CT scan.

"I had just gotten home from the scan when the doctor called. I knew immediately that something was wrong," she recalls. "I gave the phone to my husband because I was so upset. All I could think was, 'I'm going to die.'"

"My doctor says, 'I'm going to send you to the best person I know for this type of illness,' and she directed me to Dr. Laura Havrilesky at Duke Raleigh Cancer Center."

A few days after receiving the diagnosis, Muhammad had surgery, and soon after started weekly chemotherapy—each time accompanied by a family member or friend for support. "I just love the people at Duke Raleigh," she says. "They're compassionate, they make you feel like they're here just to help you, and that's what I've needed."

Those early days were tough, the side effects from chemotherapy weighing heavily on Muhammad. Things improved over time. At Havrilesky's suggestion, Muhammad enrolled in a study of the drug Avastin. While already approved by the Food and Drug Administration to treat certain types of colon, brain, kidney, and lung cancers, the drug is still being studied to treat other types of cancer such as ovarian cancer.

"I thought, 'Someone else was once in a study that made it possible for me to get the treatment I got, so maybe me being in this study will help extend the lives of other women who have ovarian cancer or breast cancer.'" Duke offers patient care and clinical trials for ovarian cancer in both Durham and Raleigh.

Despite the chemotherapy, Muhammad was determined to return to work right away to maintain a sense of normalcy. A patient account representative at UNC Healthcare, she said can now relate even better to the cancer patients she talks to who are concerned about their bills.

Muhammad completed chemotherapy in August 2010, and will continue to be monitored regularly. She's looking forward to feeling good enough to go out dancing again with her husband.

As she looks to the future, Muhammad knows how far she has come. "I have good days and bad days, but even with cancer, my good days outweigh the bad. I thank God that I'm doing as well as I'm doing, and I hope and pray that this is finished and it doesn't come back," she says. "As I tell other people with cancer: It is difficult, it changes your life, but you can get through it. Just keep the faith and don't give up."

"I will not give up. I have a whole lot to live for. I have cancer, but it doesn't have me."

Volunteers provide transportation for patients

Ellen Parks, RN, OCN, a nurse in Duke's Oncology Treatment Center, says that on any given day, 10 to 20 percent of patients do not show up for their appointment. While there can be many reasons for this, she says that some of these patients are not coming because they don't have transportation to and from their appointments.


Ellen Parks, RN, OCN

"I have heard so many stories about patients not being able to make their appointments or having to leave during treatment in order to get a ride home," she says. "This is a serious problem because our patients need to receive the treatments as prescribed by their physician."

In an effort to remedy this problem, Parks teamed with the American Cancer Society to bring its Road to Recovery Program to Duke in May 2010. This free service matches patients living in Durham County who need rides with local volunteers who are willing to drive them to oncology appointments at Duke University Hospital and clinics and Durham Regional Hospital.

In a given month, the program receives more than 100 requests for transportation. As more patients learn about the program, the need is increasing. To keep up with the demand, more volunteers are needed to drive patients. Volunteers can participate where and when it is convenient for them.

Even for those patients who are able to drive, some may not feel up to it after spending several hours receiving chemotherapy. While it may be possible for patients to have a family member or friend help drive some of the time, there are often times where these people are busy or the patients feel they are being too much of a burden.

Parks has received numerous awards for her work with the Road to Recovery program including the Lane Adams Quality of Life Award from the American Cancer Society and the Strength, Hope, Caring Award from Duke University Health System. She also was nominated for Duke Medicine's Dr. Martin Luther King Jr. Community Caregiver Award Winner.

Other Duke employees instrumental in bringing Road to Recovery to Duke are Gregory Bankoski, MSW, a social worker in the Duke Cancer Institute's outpatient clinics, and Valarie Worthy, RN, a treatment navigator.

Oncology patients receiving treatment at Duke University Hospital and clinics or Durham Regional Hospital who need transportation to their appointments or those who would like to volunteer as a driver, should call 1-800-ACS-2345. Donations of gas cards are also accepted. Gas cards are distributed by Gregory Bankoski (919-668-6676) to patients who have a car but have difficulty paying for gas.

Duke Oncologist Named "Man of the Year"

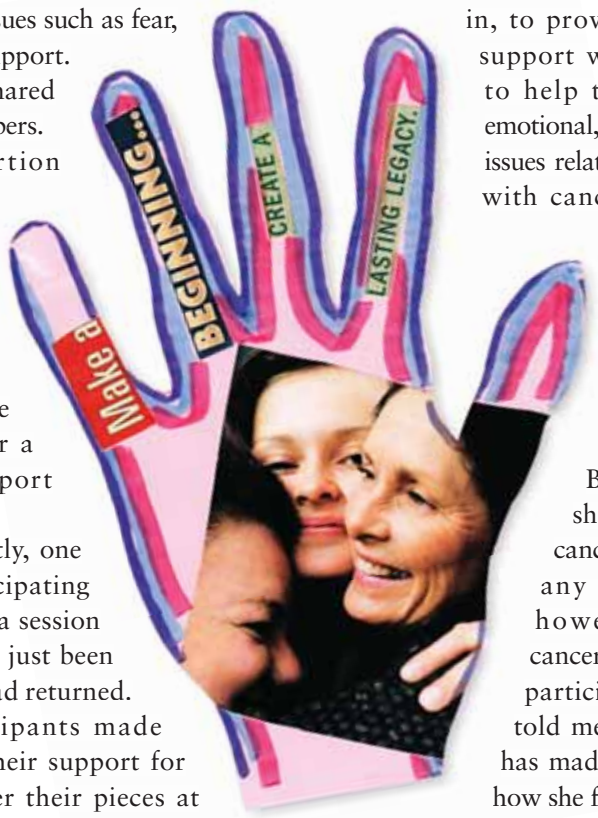
Joseph Moore, MD, medical director at the Duke Raleigh Cancer Center and longtime medical oncologist at the Duke Cancer Institute, was named "Man of the Year" for the Raleigh-Durham area by the Leukemia and Lymphoma Society. In addition to the title, Moore will also have a Leukemia and Lymphoma Society-funded research award named in his honor.

Two New Programs Offer Comfort and Support to Patients

The Duke Cancer Patient Support Program is offering two new support groups for patients and caregivers. One uses art to comfort while the other uses mind-body approaches to provide support and coping strategies.

The art therapy group offers patients an alternative way to express their feelings about their cancer experience. Each session features a different art project that encourages patients to create images, collages, or sculptures about cancer-related issues such as fear, hope, strength, and support. The pieces are then shared with other group members.

"The sharing portion of each session is almost as important as the creation of the artwork," says Geoffrey Vaughn, MA, LMFT, ATR, facilitator for the group. "It allows for a strong sense of support among the group."



For example, recently, one of the patients participating in the group came to a session visibly upset. She had just been told that her cancer had returned. Other group participants made collages expressing their support for her and they gave her their pieces at the end of the day to hang at her home. "The patient told me that these collages helped her get through some pretty dark days," says Vaughn.

The Mind-Body Approaches to Coping with Cancer support group seeks to provide physical and emotional benefits through the application of mind/body skills and techniques. Cancer patients and their caregivers come together to support one another, learn meditation techniques, and discuss relevant application of the approaches to their lives. These skills demonstrate that patients' minds and how they think have an effect on their physical selves.

"It is a different—but often effective—way for patients to deal with all the stresses in their lives, both with cancer and everything else," says Tracy Berger, MS, LMFT, co-facilitator for the group. "We try to teach the patients that what they think about really has an impact on their physical selves."

Berger explains that many patients worry about the worst possible scenarios of how cancer will impact them. Berger teaches the patients and their caregivers techniques to "turn off" the distractions in life and to enjoy the present.

"These new groups, in addition to our other support programs, are great resources for our patients and their families to participate in, to provide a community of support with their peers, and to help them cope with the emotional, relational, and spiritual issues related to their experiences with cancer," says Cheyenne Corbett, PhD, LMFT, director of the Duke Cancer Patient Support Program.

"I know a cancer patient whose cancer has come back," says Berger. "The first time she was diagnosed with cancer she didn't seek out any support programs, however, now that the cancer has returned she has participated in several and told me several times that it has made a huge difference in how she feels."

For more information on either of these programs or to learn about any of the 11 support groups sponsored by the Cancer Patient Support Program, call 919-684-4497 or go to dukehealth.org/cancersupport.

The featured multimedia collage, above, is by a participating cancer patient.

Art Therapy Group

First and fourth Tuesday of the month
2:00–4:30 p.m.

To register and receive the location call 919-684-4497

Mind-Body Approaches to Coping with Cancer

First and third Thursday of the month
3:00–4:30 p.m.

Duke Clinic Conference Room 1993
(across from Clinics 1B and 1C)

Duke Scientists Conduct Lymphoma Research in Memory of Student

Matt Cossa was a gifted young man both academically and athletically. He graduated from high school with a 4.5 GPA while playing football, basketball, and baseball. Born in New York, Matt spent much of his life in Cary, a North Carolina town about 30 minutes southeast of Duke University.


Matt Cossa

After high school, Matt attended the University of North Carolina at Chapel Hill. During his first semester, he was diagnosed with Hodgkin lymphoma and was treated at the Duke Cancer Institute (DCI) by hematologists/oncologists John Chute, MD, and David Rizzieri, MD.

"Even though he missed a lot of school, he worked with his professors to do the work outside of class and worked with the physicians to schedule treatments so he could still attend special events with friends," says Matt's father Bill. "Matt was known for his smile, an infectious can-do attitude, and a magnetic personality."

Matt lost his lymphoma battle in 2006, two years after he was diagnosed.

Determined to keep Matt's memory alive and to raise money for lymphoma research, friends from his high school created Bats for Matt, a high school baseball event. Funds from the inaugural event were donated to the Leukemia and Lymphoma Society. The second year, Matt's parents decided to get involved and thought that the money raised should be donated to Duke to support lymphoma research.

"We wanted the money to stay locally and go directly towards research to find a cure for blood cancers since that was the disease that took Matt from us," says Bill. "This allows us to continue his fight."

Bats for Matt, which takes place each April, has grown and in just four years has brought in more than $100,000.

Rizzieri, associate director of clinical research in the Hematological Malignancy Program at the DCI, thought that the best use of the gift would be to research new targeted therapies for lymphoma patients. These treatments have the potential to improve outcomes in patients. Targeted therapies attack the cancer more directly and have fewer and less toxic side effects than traditional chemotherapy, which also kills the cancer but can damage healthy tissue and have unwanted side effects.

With targeted therapies, one drug or a combination of two or more drugs may help. The key is finding which drug or combination of drugs work best for each patient since a combination that works well for one patient may not help another, says Rizzieri.

Rizzieri and his team are studying the biology of four experimental drugs: two drugs for patients with slow-growing refractory lymphoma and two for rapid-growing refractory lymphoma. Refractory lymphoma is lymphoma where previous treatment is unsuccessful. At the same time, they are also conducting a clinical trial using these same drugs. The goal of the research is to develop methods to predict which drug or combination of drugs will work best to fight each patient's tumor.

Sandeep Dave, MD, is leading the team studying the biology of the drugs and how these drugs affect various lymphoma cell lines in the lab. The team is looking for any patterns within the gene signature of a cell that may predict responses to the drug.

Anne Beaven, MD, is leading the clinical trials using the same drugs. Tumors from patients participating in the trials will be analyzed to see whether the gene signature that predicted response in lymphoma cell lines also predicts response in patients. The researchers hope to determine through genetic markers which drug (or combination of drugs) works best for which person and eventually be able to prescribe the most effective drug first through simple tests of tumor cells.

"We hope that these studies will be a step towards our goal of truly personalizing lymphoma care," says Beaven.

"One great thing about the Duke Cancer Institute is our laboratory scientists are working closely with physicians who are treating patients," says Rizzieri.

"It is always very meaningful for us to do research in memory of someone who has fought this terrible disease," continues Rizzieri. "With the help of Matt's friends and family, we are making progress against lymphoma."

Event Raises $1.8M for Brain Tumor Research

Henry Friedman, MD; Darell Bigner, MD, PhD; Allan Friedman, MD, co-leaders of The Preston Robert Tisch Brain Tumor Center at Duke

In April, the annual Angels Among Us 5K and Family Fun Walk raised more than $1.8 million to support brain tumor research at The Preston Robert Tisch Brain Tumor Center at Duke. The event has raised over $10 million since it began in 1994. Next year's event will take place on April 28. For more information, visit angelsamongus.org.

Coach P Named Spokesperson for Duke Cancer Fund

Joanne P. McCallie (Coach P), head coach of the women's basketball team at Duke, has been named the spokesperson for the Duke Cancer Fund and will help spread the word about the importance of cancer research and the need for funds to support the work of Duke Cancer Institute scientists. The Duke Cancer Fund provides unrestricted support for high-priority cancer research at the Duke Cancer Institute.

"We are extremely pleased to have Coach P as part of our team to highlight the importance of the Duke Cancer Fund," says Karen Cochran, executive director of development for the Duke Cancer Institute. "The fund helps to support critical research of all types of cancer here at Duke."

McCallie says that she is honored to be the spokesperson. She was treated at Duke for the skin cancer melanoma. "Duke researchers have given so much hope to cancer patients," she says. "They really are making a difference in patients' lives by conducting cutting-edge research that leads to better treatments everyday."

To learn more about the Duke Cancer Fund, visit dukecancerfund.org.

Race Supports Duke Cancer Institute

The Duke Medicine Ramblin' Rose, a women's half marathon, took place in Durham on October 16. Proceeds from the event support research and patient care at the Duke Cancer Institute (DCI).

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ask the expert

COLON CANCER

Colon cancer is the third most common cancer with more than 100,000 adults diagnosed annually. Duke oncologist **Herb Hurwitz, MD**, associate director of clinical research for the Duke Cancer Institute's Gastrointestinal Program, is one of the leading experts on colon cancer. In 2004, the drug Avastin was approved by the Food and Drug Administration (FDA) for the treatment of advanced or metastatic colon cancer as a result of a large, national clinical trial led by Hurwitz. Since then, Avastin has been FDA approved to treat other types of cancer and is the world's most prescribed cancer treatment.


Herb Hurwitz, MD

Describe the colon and the role it plays in our bodies.

DR. HURWITZ: The colon is part of the digestive system. After food is digested and absorbed through the stomach and small intestine, what's left goes to the colon where water from the food is resorbed. The rectum is the final portion of the colon, where waste is temporarily stored and then eliminated.

What are the risk factors for colon cancer?

DR. HURWITZ: The biggest risk factor for colon cancer is diet. Eating a diet high in fiber and low in refined sugars greatly reduces the risk. Also, regular exercise reduces the risk of being diagnosed with colon cancer. Those who have a family history of colon cancer are at greater risk as are those who have inflammatory bowel diseases, such as ulcerative colitis or Crohn's disease.

Another risk factor is having polyps in the colon. These are small growths—think of a mole on the skin. Most are usually not cancerous. However, a small percentage of them can develop into tumors if not found and removed early.

What are the symptoms of colon cancer?

DR. HURWITZ: The most obvious symptom is a change in bowel habits. In addition, blood on the toilet paper is another sign. While there can be numerous explanations for this, patients should see their physician if they find blood in their bowel movements, so the cause of the blood can be checked.

How is colon cancer detected?

DR. HURWITZ: The colonoscopy is the best way to determine if a patient has polyps so we can remove any pre-cancerous polyps before they develop into cancer. In addition, we can use colonoscopies to find early stage cancer when it is still easily treatable. A majority of colon cancers can be prevented by eating well and having a colonoscopy.

How are colon cancers treated?

DR. HURWITZ: When detected early, colon cancer is curable in 95 percent of patients. Patients may receive one or a combination of treatments including surgery, chemotherapy, radiation, and targeted therapies (such as Avastin). When patients are treated at Duke for colon cancer, they receive care from a multidisciplinary team. The surgical oncologists, radiation oncologists, and medical oncologists all work closely to create a treatment plan to ensure the patient is getting the best possible care. With the opening of the new Duke Cancer Center building in February 2012, this will be even easier and more convenient for patients and physicians because the team of physicians will be located near one another. Our multidisciplinary team of specialists treats patients at our Duke Raleigh Cancer Center location as well.

What new research focused on colon cancer is being conducted at Duke?

DR. HURWITZ: I can proudly say that we are doing a wide variety of research. A number of scientists are looking at how colon cancers develop. Dr. Gerry Blobe is looking at TGFβ, an important switch in some cancer cells (such as colon cancer) that when turned on, causes certain cancer cells to grow. With his research, he hopes to develop a drug that targets—and turns off—this switch. One of the strengths of the Duke Cancer Institute is the enhanced ability to conduct translational research—taking what is learned and developed in the laboratory and using that to treat our patients.

Also in the laboratory, we have researchers such as Dr. Andy Nixon (see page 3) who are studying tumor tissues to see if they can determine which drugs work best on which particular types of tumors based on molecular markers. The goal is to determine what treatments will work best for a given patient. Dr. Nixon's work has also identified several factors that are likely to soon be targeted in new clinical trials. Similarly, Dr. David Hsu is looking at genomic models that would enable physicians to determine which drug may work best to treat which individual patient.

Radiation oncologists such as Drs. Chris Willett and Brian Czito are researching better ways to deliver radiation to tumors in the rectum so that nearby organs are spared. Surgeons such as Drs. Christopher Mantyh, Julie Thacker, and Linda Farkas are researching improved and less invasive surgical techniques that could hopefully improve bowel function in the long term. Dr. Bryan Clary is own of the world's experts on surgically removing cancer that has spread to the liver.

Prevention—or at least early detection—is really the best way to help patients. We also have physicians at Duke, such as Drs. Joanna Wilson and Jane Onken, who are experts in the management of patients at higher risk for colorectal cancer and Drs. Paul Jowel and Jorge Obando who are experts in the technique known as endoscopic ultrasound. Dr. Yousuf Zafar studies the social and medical factors that affect the success of different treatments.

I work closely with several colleagues at the Duke Cancer Institute, such as Drs. Hope Uronis, Michael Morse, Fatima Rangwalla, and John Strickler. Together, we are conducting many clinical trials for advanced colon cancer (cancer that has metastasized or spread to other parts of the body). We are trying to determine which drugs—or combination of drugs—work best. I also have an interest in what are known as phase I studies. These are trials at the very start of when a new drug is tested in patients. These trials are primarily focused on defining how the body handles these new drugs and their safety. However, many times these new medicines will also help shrink or control a patient's cancer when nothing else has worked. While dramatic results are not common, when they occur, it is a special feeling for our team to have been one of the first to bring this kind of option to patients. These types of studies are usually only offered at larger medical centers like Duke and sometimes offered through community hospitals that are part of the Duke Oncology Network.