

thrive

**THE NEXT
GENERATION**
Building a family
after cancer



University of Michigan
Comprehensive Cancer Center



thrive

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For more information about the stories in *Thrive* or any other cancer-related information, please call the Cancer Answer Line at 800-865-1125.

*On the cover:
Ewelina Saputo gave birth to her twin sons about five years after she underwent a bone marrow transplant for an early form of leukemia.*



A change of address

BMT, pediatric cancer care move to new C.S. Mott Children's Hospital

The internationally recognized University of Michigan Blood and Marrow Transplantation Program has a new home. The adult and pediatric BMT programs, along with all pediatric cancer care, recently moved to the newly constructed C.S. Mott Children's Hospital—a facility equipped with the latest technology and amenities for patient safety and comfort.

Designed for privacy and efficiency, the new C.S. Mott Children's Hospital and Von Voigtlander Women's Hospital is the community's newest health resource, providing leading specialty services for newborns, children and women. Nearly an entire floor of the 1.1 million-square-foot facility, which consists of a 12-story inpatient tower and an eight-story outpatient clinic tower, is dedicated to the BMT program.

"There is a tremendous benefit from having inpatient and outpatient services integrated, as they are in the new facility," says Daniel Couriel, M.D., director of the Adult Bone and Marrow Transplant Program and the Adult Extracorporeal Photopheresis Program. "The biggest advantage is that communication is enhanced between inpatient and outpatient services, and the result is a much smoother patient transition between these areas."

The reason for housing the adult BMT program in the children's hospital has much to do with the fragile health of transplant patients, whose immune systems are compromised as a result of the transplant process. The new Mott facility is equipped with state-of-the-art HEPA-air filtration systems that ensure air quality and protect highly susceptible patients from infections.

The most apparent change is in size, however. The new BMT unit will house inpatient, clinic and infusion services in one larger, central location. Waiting areas, exam rooms and infusion units are all larger, increasing patient comfort and decreasing wait times. The unit has 32 dedicated private patient rooms for adults, which include bathrooms and space for overnight guests. The floor also has lounge, exercise and laundry facilities for guests.

The Extracorporeal Photopheresis Program has also been relocated to a larger space. The ECP program—one of the largest in the world—is continuing its research into graft-vs.-host disease, a disorder caused when a newly transplanted immune system attacks the patient's skin and organs.

Because pediatric infusion is also moving to Mott, a portion of Level B-1 in the Cancer Center will be remodeled, providing space for growing clinical needs as well as patient waiting areas.

"The pediatric infusion area will be converted to provide more space for other clinical services," says Jane Martin, director of clinical operations at the U-M Comprehensive Cancer Center. "Not only are we gaining a beautiful new home for the BMT program at the children's and women's facility, we're also opening up space at the Cancer Center for the other clinical areas that are currently overwhelmed." 



Photos by U-M Photo Services

It's natural to want to protect your children from life's scary situations. But figuring out the right way to do that can be difficult—particularly if the scary situation is a parent's cancer diagnosis.

We talked with Julie Kaplow, Ph.D., a University of Michigan assistant professor of psychiatry who specializes in helping children cope with traumatic events, about how parents with cancer can make the road ahead easier for their children.

Q: YOUR RESEARCH FOCUSES ON WAYS TO ENHANCE A CHILD'S WELL-BEING AFTER A PARENT HAS BEEN DIAGNOSED WITH CANCER. CAN YOU TELL US A LITTLE BIT ABOUT THAT?

A: It's surprising, but there are actually very few studies that have examined children's mental health when faced with a parent's cancer diagnosis. We know from other studies that adult family members of cancer

patients may have high levels of anxiety and post-traumatic stress related to the diagnosis, but this issue hasn't been examined in children. So we're looking at children's coping strategies: How does the child perceive the cancer? Is the child stressed? How frequently is the child communicating with the parents about the cancer? Is the family able to maintain a daily routine? Is the child receiving support? How are the parents coping? Are there certain events—such as

WHEN MOM HAS CANCER

Helping children cope with a parent's cancer diagnosis



a mother losing her hair—that might trigger an extreme reaction in a child?

Q: HOW DOES YOUR RESEARCH GET AT THIS INFORMATION?

A: One of our studies is enrolling mothers with breast cancer who have children between the ages of 6 and 12. We interview the mothers and children separately about their thoughts and feelings. We also ask them to complete standardized questionnaires to get a sense of their ability to cope. And then we conduct an interview with the parent and child together where we give mom some questions for the child to answer. The goal is to open up a dialogue around the cancer diagnosis.

Q: WHAT HAVE YOU LEARNED SO FAR?

A: Our preliminary data shows that open communication between mother and child really seems to be one of the key factors in preventing excessive anxiety or traumatic stress in children. The more mom can talk on an ongoing basis about the cancer and the more she can give her child permission to ask questions, the better that seems to help her child. Sometimes a parent can open the door to conversation, but the child may not know how to respond in that moment. If the child comes back in 10 days with a barrage of questions, it's important that the child feels that they have permission to ask them whenever they arise.

Q: STARTING A CONVERSATION ABOUT CANCER CAN BE DIFFICULT. DO YOU HAVE ANY TIPS?

A: The bottom line is, there's no right or wrong way to talk to a child about cancer. And it's not a one-shot deal: You don't have just one chance to explain it in the most perfect way possible. What you want to do is open up the door of communication. Approach the subject in a simple, more factual way, if possible, so as to not overwhelm your child with details. And then open it up for questions. Make a point of reassuring your child that she will still be cared for and that this is an unfolding

process you'll all go through together as a team.

Q: IS IT OK TO CRY IN FRONT OF YOUR CHILDREN?

A: Yes, it's OK if you get a little choked up. It helps to normalize the feelings and to let kids know it's OK to be sad and anxious, because you don't know exactly what's going to happen. Tell your children that you want to know what they're feeling and that you want to hear what they have to say if they're feeling scared.

Q: HOW DOES THE PARENTS' ABILITY TO COPE AFFECT THE CHILD?

A: The parents' psychiatric health—particularly mom's—is very important. If a child picks up that mom is anxious and depressed, it may have a negative impact on the child. The more mom feels supported in her own situation—either from a partner or family and friends—the more it seems to indirectly buffer the strain on the child's mental health.

Q: IS IT EVER HELPFUL TO HIDE A CANCER DIAGNOSIS FROM A CHILD?

A: Kids know what they're not supposed to know. If parents keep secrets, kids pick up on that immediately, and often their fantasies of what's happening are much, much worse than reality. Being as open as possible—without overwhelming a child with too much information—will alleviate a child's fear and anxiety.

Q: WHAT IF A CHILD DOESN'T WANT TO TALK ABOUT THE CANCER DIAGNOSIS?

A: We believe that children who try to avoid thinking about or talking about a parent's cancer may do poorly over time. So we think it's crucial to help these children find ways of communicate about this. Some ways you might do that is to offer the



Julie Kaplow, Ph.D., a University of Michigan assistant professor of psychiatry, is working on a study to identify ways to help children cope with a parent's cancer diagnosis.

child a journal that he can use to jot down thoughts, feelings and questions. Or sometimes the child isn't comfortable talking to the parent; help him identify someone else he can confide in.

Q: HOW DO YOU HANDLE DISCUSSIONS ABOUT DEATH AND DYING?

A: I really encourage parents who are facing late-stage cancers to enlist a partner or a family member in having this conversation. Being honest is important. It's OK to encourage hope, but be realistic and talk through what could happen. The most important message you can convey to the child, though, is: "You will always be cared for, and we will always make sure you are safe and protected." 



To learn more about participating in Kaplow's parent-child study, email julieb@umich.edu or ellerner@umich.edu. For more parenting resources, call the Patient Education Resource Center at 734-647-8626.



The next gene

Building a family after cancer

It's a frustrating fact: Preserving fertility for women who face cancer treatments that damage their reproductive organs is much more complicated than it is for men. But the options are slowly expanding for women who would like to build families after treatment.

For years, a myth about young people with cancer has circulated: If you're facing a life-threatening illness, who cares about infertility? But for the nearly 6 million adults of reproductive age who have survived adult or childhood cancer, fertility is a significant factor in preserving quality of life after treatment, says Senait Fisseha, M.D., medical director of the University of Michigan Center for Reproductive Medicine.

The key is to seek out fertility counseling before treatment begins to understand the options, even if the options for women aren't as straightforward as sperm banking, says Marcia Leonard, N.P., who leads the U-M Comprehensive Cancer Center's Fertility Counseling program.

"I firmly believe that a fertility consult is extremely valuable. As a woman becomes knowledgeable about what's going to happen, she gains some control," Leonard says. "She can learn about her options and then decide if they're in her best interests. Having that knowledge and control makes it a whole different ball game than finding out in 10 years that she's infertile."

Deciding which path to pursue to build a family is a personal choice. We talked with three women to learn how they became mothers after cancer.

EMBRYO AND EGG PRESERVATION

Ewelina Saputo was 23 when she was diagnosed with leukemia. It was a shock, since she hadn't had any symptoms; the cancer was found during a routine blood test at a doctor's



ration

appointment. When she learned that the medications she would take in preparation for a bone marrow transplant would likely cause infertility, she asked about her options.

Saputo was a good candidate for embryo preservation because her cancer was caught early, she said. She was taking Gleevec to keep the disease at bay while she waited to find a match for her transplant—a process that would take nearly seven months.

In the meantime, Saputo got engaged to her then-boyfriend, Dominic, and went through hormone therapy to stimulate her ovaries to produce eggs. The eggs were removed, fertilized with her soon-to-be husband's sperm and frozen. Saputo underwent the bone marrow transplant—and a 75-day stay in the hospital—and remains cancer-free today.

In 2009, two years after the Saputos married, two embryos were implanted in Saputo's uterus. Her two sons, Antonio and Julian, were born on June 1, 2010.

"It's amazing and hectic, but it's fun," Saputo says. "I think we were in shock. We couldn't believe we were having twins after everything we went through."

In vitro fertilization remains one of the most reliable means of preserving fertility after cancer treatment, Fisseha says, but many women don't have the option of delaying cancer treatment as long as Saputo did. Until recently, it took four to six weeks to complete the process that would allow a woman's eggs to be harvested; that has been trimmed to two to three weeks, regardless of where a woman is in her cycle. The shortened time frame has helped many women, but it remains an obstacle to those who can't afford to delay cancer treatment due to the aggressive nature or advanced stage of the disease.



Ewelina Saputo opted to undergo in vitro fertilization, knowing that her cancer treatment would likely compromise her fertility. Her twin sons, Antonio and Julian, were born about five years after she underwent a bone marrow transplant.

Photos by Robert Neumann

The Millers adopted their daughter, Natalie, after it became clear that abdominal radiation Erin Miller had undergone as a child had caused ovarian failure.

“We had been through the classes and we kind of knew what to expect, but it’s sort of a surreal feeling: You’re really letting us leave with this baby?”

—Erin Miller



In addition, technologies for freezing eggs—rather than embryos, which are eggs that have been fertilized with sperm—has vastly improved, Fisseha says. This is a breakthrough for teenagers and women who may not be in committed relationships and don’t have a male partner to provide sperm.

However, for some, the cost of egg or embryo preservation is prohibitive: It can range from \$16,000 to \$18,000 in some cases. But thanks to a partnership with the Livestrong Fertile Hope initiative, the U-M Center for Reproductive Health offers the service to qualified cancer patients for as low as \$5,500.

“We don’t want money to be the reason patients aren’t doing this,” Fisseha says. “It’s too important.”

OVARIAN SUPPRESSION

For women who cannot wait to begin chemotherapy that may damage their ovaries, a new, experimental option is available. Monthly injections of gonadotropin releasing hormone analog (or GnRHa) are given to women during chemotherapy with the goal of temporarily shutting down the ovaries, Fisseha says.

The approach evolved from the observation that the ovaries in pre-pubescent girls who receive chemotherapy usually do not fail after treatment. Fisseha says researchers think this is because ovaries that are not active are less of a target for damage.

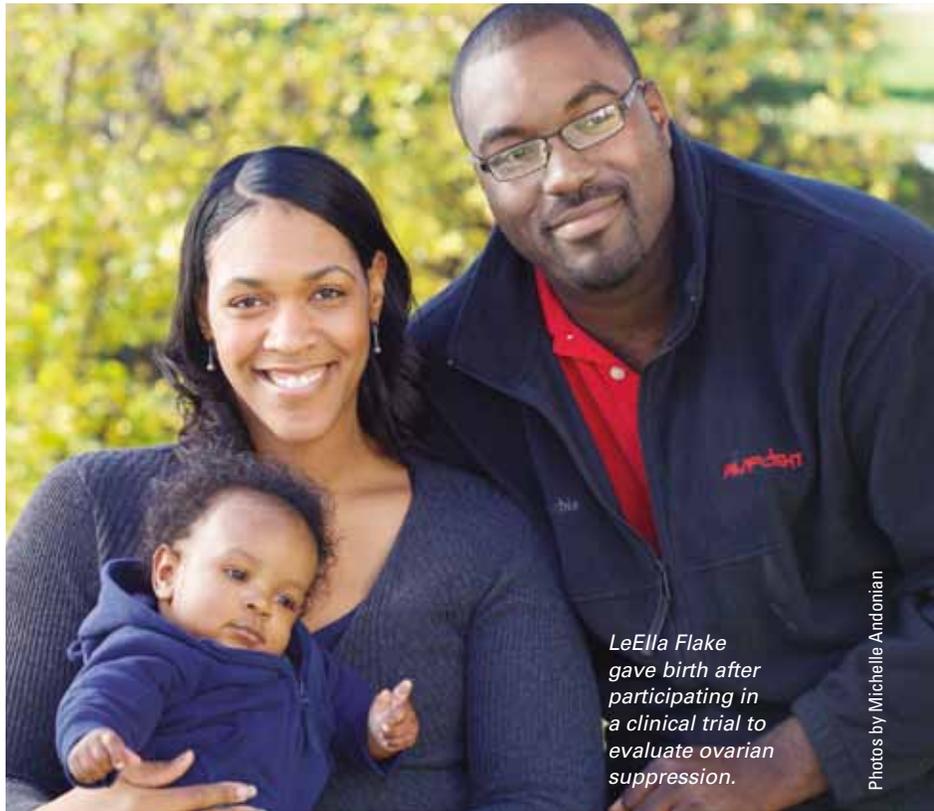
The benefits of GnRHa are not yet definitively proven, Fisseha says, but there is little risk of harm and the treatment is relatively low-cost and often covered by insurance.

“A recent study in the *Journal of the American Medical Association* showed significant benefits,” she says. “It may not be for everybody, but at least some portion of the patient population may benefit.”

LeElla Flake may be one of those patients. Flake, a breast cancer patient, received the

WEB EXCLUSIVE

Connect with fertility resources and read more about how these and other cancer survivors coped with the specter of infertility at mCancer.org/thrive.



LeElla Flake gave birth after participating in a clinical trial to evaluate ovarian suppression.

Photos by Michelle Andonian

drug as part of a clinical trial. A year after her ovaries woke up, she became pregnant with her son.

“I didn’t focus on the cancer anymore. That didn’t scare me. It was ‘Oh, I want a baby; what am I going to do about that?’” says Flake of the moment when she learned cancer treatment could impact her fertility. “And so when they brought up the clinical trial I just felt like I could focus on the cancer, because the possibility was back.”

ADOPTION

Erin Miller had always expected to adopt a child. Miller was 12 years old when she learned that the abdominal radiation she had received as a 5-year-old for a Wilms’ tumor had caused ovarian failure. She had cousins who were adopted, so she was pretty comfortable with the idea of adoption.

But after Miller married her husband, the couple decided to pursue in vitro fertilization using eggs donated by her sister. After three cycles, though, it was clear that Miller’s uterus was compromised as a result of radiation therapy and couldn’t support a pregnancy.

So in 2002, the Millers embarked on the process of adopting a child. On their first attempt, the birth mother changed her mind. So the Millers waited patiently for another two years. But then a move to Grand Rapids caused them to switch adoption agencies. The very day their paperwork was approved, an expectant teenager chose the Millers to raise her child. The baby—a girl they named Natalie—was born three weeks later.

“We had been through the classes and we kind of knew what to expect, but it’s sort of a surreal feeling: You’re really letting us leave with this baby?” Miller says. “With adoption, you wait, but you never know when that’s going to change.”

And it may change again for the Millers: The family is seeking to adopt again. **t**



To make an appointment for fertility counseling, call **734-763-4323**.

WHO’S AT RISK?

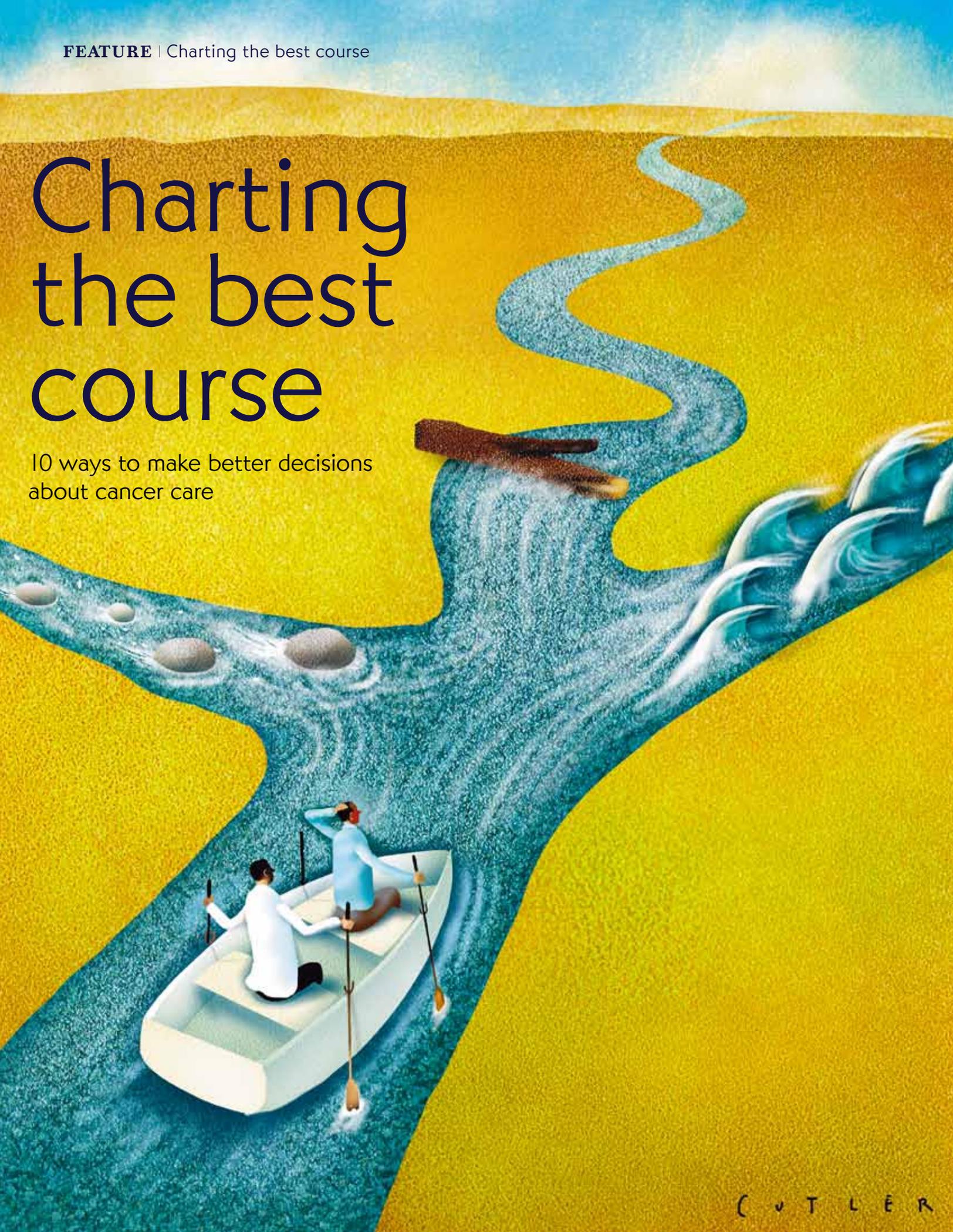
All cancer treatments do not cause infertility, but the therapies or factors listed here increase the risk:

- Patients receiving radiation therapy to the abdomen or pelvis
- Patients receiving alkylating agent chemotherapy or certain other forms of chemotherapy depending on the dose and duration
- Women 30 and older who are receiving cancer treatment

Always talk to your doctor to understand the impact of your treatment on your fertility and other aspects of your life. To get a better sense of your risk, visit **FertileHope.org**.

Charting the best course

10 ways to make better decisions about cancer care



Talking with doctors about cancer and cancer treatments can feel like learning a new language. People facing cancer diagnoses often need help to understand their treatment options—and the risks and benefits of each choice.

“People are making life-and-death decisions that may affect their survival and they need to know what they’re getting themselves into. Cancer treatments and tests can be serious. Patients need to know what kind of side effects they might experience as a result of the treatment they undergo,” says Angela Fagerlin, Ph.D., associate professor of internal medicine at the University of Michigan Medical School and a U-M Comprehensive Cancer Center researcher.

Fagerlin and colleagues recently published a commentary in the *Journal of the National Cancer Institute* that outlines 10 things health care professionals can do to improve the way they communicate information about treatment risks to patients. Here, they explain how patients can tap into these same best practices to become fluent in the language of cancer care and better understand their options.

1 | Insist on plain language. If you don’t understand something your doctor says, ask him or her to explain it better. “Doctors don’t know when patients don’t understand them. They want patients to stop them and ask questions,” Fagerlin says.

2 | Focus on the absolute risk. The most important statistic to consider is the chance that something will happen to you. “It’s important that patients and doctors know how to communicate these numbers, and patients need to have the courage to ask their doctor to present it so they can understand,” Fagerlin says.

Sometimes, the effect of cancer treatments is described using language like “this drug will cut your risk in half.” But, such relative-risk statements don’t tell you anything about how likely this is. Research has shown that using relative risk makes both patients and doctors more likely to favor a treatment because they believe it to be more beneficial than it actually may be.

If, instead, your doctor told you that “the drug will lower your risk of cancer from 4 percent to 2 percent,” now you know that most people won’t get cancer regardless. And it will give you the exact benefit you would get from taking the drug. Fagerlin suggests asking doctors for this absolute-risk information for a truer picture.

3 | Visualize your risk. Instead of just thinking about risk numbers, try drawing out 100 boxes and coloring in one box for each percentage point of risk. So, if your risk of a side effect is 10 percent, you would color in 10 boxes. This kind of visual representation, called a pictograph, can help people understand the meaning behind the numbers. Ask your doctor to draw it out for you or do it yourself.

4 | Consider risk as a frequency rather than as percentages. What does it mean to say 60 percent of men who have a radical

prostatectomy will experience impotence? Imagine a roomful of 100 people: 60 of them will have this side effect and 40 will not. Thinking of risk in terms of groups of people can help make statistics easier to understand.

5 | Focus on the additional risk. You may be told the risk of a certain side effect occurring is 7 percent. But if you didn’t take the drug, is there a chance you’d still experience that? Ask what the additional or incremental risk of a treatment is. “You want to make sure the risk number you’re being presented is the risk due to the treatment and not a risk you would face no matter what,” Fagerlin says.

6 | The order of information matters. Studies have shown that the last thing you hear is most likely to stick. When making a treatment decision, don’t forget to consider all of the information and statistics you’ve learned.

7 | Write it down. You may be presented with a lot of information. At the end of the discussion, ask your doctor if a written summary of the risks and benefits is available. Or ask your doctor to help you summarize all the information in writing.

8 | Don’t get hung up on averages. Some studies have found that learning the average risk of a disease does not help patients make good decisions about what’s best for them. Your risk is what matters—not anyone else’s. Focus on the information that applies specifically to you.

9 | Less may be more. Don’t get overwhelmed by too much information. In some cases, there may be many different treatment options, but only a few may be relevant to you. Ask your doctor to narrow it down and only discuss with you the options and facts most relevant for you.

10 | Consider your risk over time. Your risk may change over time. “What seems like a small risk over the next year or two may look a lot larger when considered over your lifetime,” says study author Brian Zikmund-Fisher, Ph.D., assistant professor of health behavior and health education at the U-M School of Public Health.

If you’re told the five-year risk of your cancer returning after a certain treatment, ask what the 10-year or 20-year risk is. In some cases, this data might not be available, but always be aware of the time frame involved. 



For assistance in learning more about cancer treatments and accompanying risks, call the Patient Education Resource Center at 734-647-8626.

Help or harm?

Research on nutritional supplements and herbal products is far from conclusive, but an estimated 65 percent to 80 percent of cancer patients already use them. With so many possible agents to investigate, conclusive evidence of true benefit is hard to come by.

Because of this, the American Institute for Cancer Research does not recommend the use of supplements to protect against cancer. But if you do take a nutritional supplement or herbal product, the goal is to do no harm: Avoid supplements that may interfere with treatment, cause side effects that could hinder adequate nutrition, or cause significant discomfort or damage to your body.

The following is a list of common nutritional supplements and herbal products used for the treatment of cancer or associated side effects. Use it to start a conversation with your health care team about what is best for you during your treatment.



* Turmeric is likely safe for most people, but it should be avoided during chemotherapy, radiation or blood-thinning therapies.

NUTRITIONAL SUPPLEMENT	CLAIMS	SIDE EFFECTS	WHEN NOT TO TAKE IT
ESSIAC	Antioxidant, enhance immune system, stimulates secretion of gastrointestinal motility	Increased stool, flu-like symptoms, slight headaches, swollen glands	Due to antioxidant properties, it should be avoided with certain chemotherapy agents and with radiation therapy. Data has shown stimulation of breast cancer cells. There are multiple potential interactions with chemotherapy due to its effects on the liver metabolism of some of these agents.
CURCUMIN (TURMERIC)	Anti-inflammatory, stimulates bile production	Nausea or diarrhea, but generally well tolerated	It should be avoided during chemotherapy for several reasons, including its antioxidant properties, its impact on platelet function and its effects on liver metabolism. It also should be avoided during radiation and blood-thinning therapies. Curcumin has some estrogenic properties and should be avoided by breast cancer patients.
ACAI BERRY	Antioxidant properties	None reported	Due to antioxidant properties, it should be avoided with certain chemotherapy agents and with radiation therapy.
FLAX SEED	Estrogenic, anti-inflammatory properties	Bloating, flatulence, abdominal pain, diarrhea, constipation, dyspepsia and nausea. Higher doses carry higher risk of side effects.	Avoid if you have breast or endometrial cancers. Take with caution with metoprolol, ketoprofen and furosemide, as well as antidiabetic, antibiotic and acetaminophen medications.
ASTRAGALUS	Immune enhancing	Inflammation in the nose, throat and GI tract; nausea	Avoid while taking cyclophosphamide, immunosuppressants and lithium. Individuals with lymphoma should not take it because it may stimulate B cells.

View our expanded nutritional supplement chart online at mCancer.org/thrive.

Nutritional supplements and cancer treatment often don't mix

By Nancy Burke, R.D.; Joan Daniels, R.D.; Danielle Karsies, M.S., R.D.; and Emily Mackler, Pharm.D., of the U-M Comprehensive Cancer Center Symptom Management and Supportive Care Program

IS IT SAFE TO TAKE OTHERWISE?

Not recommended due to lack of evidence to support claims.

Likely safe

Likely safe

Likely safe

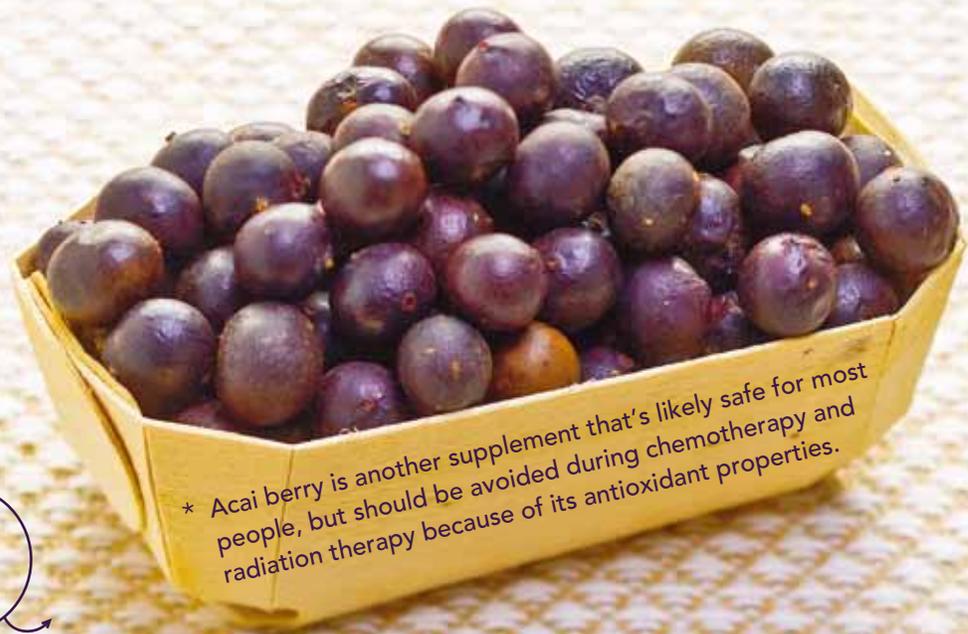
Possibly safe when taken in small doses during a short term.

A general multivitamin with minerals containing no more than 200 percent to 300 percent of the Daily Reference Intake may be beneficial, but it is important to know manufacturers of nutritional supplements are not obligated to follow the strict government regulations written for drug manufacturers. This means the content, strength and purity of a supplement may vary among brands and even different batches of the same brand. To ensure the supplement you are taking contains the ingredients listed and does not contain harmful levels of contaminants, look for the U.S. Pharmacopeia, Consumer Lab.com or NSF international seal of approval.

The bottom line is that a healthy, well-balanced diet including lots of plant-based foods—such as whole grains, fruits and vegetables—is most strongly and consistently associated with cancer reduction and lower recurrence rates. The beneficial effects of the vitamins and minerals contained in these foods just can't be matched with an isolated nutritional supplement or herbal product. **i**



To make an appointment for nutritional counseling or medication management, call 877-907-0859.



* LIKELY SAFE

* Acai berry is another supplement that's likely safe for most people, but should be avoided during chemotherapy and radiation therapy because of its antioxidant properties.

Watch videos about art therapy at the U-M Comprehensive Cancer Center and try a project at home.

Photos by U-M Photo Services



Creative control

Art therapy offers artistic freedom and empowerment to people with cancer

Linda Westervelt enjoys making her own choices. Too often as a cancer patient, however, she has to leave decisions about her treatment and health in the hands of her doctors.

But when Westervelt participates in the art therapy program at the University of Michigan Comprehensive Cancer Center, she's in control.

"It's nice to make decisions in art therapy, and it's a good outlet for that," Westervelt says. "There are a lot of things going on outside of a patient's control, and although my doctors give me choices once in a while, they're the ones who know the right way. Art therapy is a great environment to make my own decisions."

U-M offers one-on-one art therapy sessions for cancer patients and survivors, led by Margaret Nowak, the Cancer Center's art therapist. The sessions are designed to help patients increase self-awareness and cope with symptoms, stress and traumatic experiences.

Nowak says that the dynamic of these sessions allows patients control they sometimes lack in other aspects of their lives. Sessions begin with a discussion about the patient's health and well-being, and from there, Nowak helps direct the patient toward an artistic avenue of their choice.

"Patients always control the session," says Nowak. "They're pretty self-directed. Sometimes they say, 'I know that I have been holding in a lot of feelings, and I'm trying to stay strong, but for my health I need to let some things go. I've never painted before, and I want to know what it's like.'"

Westervelt says channeling her thoughts and feelings through various art projects can be a relaxing distraction.



Linda Westervelt (left) works with art therapist Margaret Nowak.

"It gives me a real lift," she says. "It's very nice to have an outlet for creativity and thinking about something. Making something of my own gives me a really satisfying feeling."

Nowak offers patients the opportunity to not only paint, but to use other art supplies such as colored pencils, pastels and pens, as well as craft items like wooden picture frames, bird houses, ceramic tiles and paper

for origami. She brings her "art studio on wheels"—a cart filled to the brim with various arts and crafts supplies—to the one-on-one sessions.

Although Nowak says she's worked with patients who have an artistic background, many patients have no art experience at all.

"People will say, 'I don't think I'm really interested in art,' and then I'll show them things on the cart," she says. "A half hour goes by, and they say, 'That was really fun.' Many people who have had no interest find that simple art projects are really therapeutic."

Nowak says the sessions can help patients increase their self-awareness and alleviate mental and physical pain. She says patients will sometimes begin a session saying their pain is at an 8 or 9 out of 10. But by the end of the session, things are different.

"It's amazing to both me and them, that they'll say the pain is at one or none, it's gone," Nowak says. "Part of it is just being in the moment. People realize this is a benefit that can make them feel better physically."

Westervelt agrees.

"I feel so much better," she says. "It's like I've done something worthwhile and useful to me. I believe it's improving my health, and I feel like I can cope better." 



For more information about art therapy, call 877-907-0859.

The U-M Comprehensive Cancer Center Art Therapy Program is funded by generous donors. To learn how you can help, call 734-998-6893.

NEW URINE TEST HELPFUL IN EARLY DETECTION OF PROSTATE CANCER

A new urine test can aid early detection of and treatment decisions about prostate cancer, a study from the University of Michigan Comprehensive Cancer Center finds.

The test supplements an elevated prostate specific antigen, or PSA, screening result and could help some men delay or avoid a needle biopsy, while pointing out men at highest risk for clinically significant prostate cancer.

The test looks for a genetic anomaly that occurs in about half of all prostate cancers: an instance of two genes changing places and fusing together. This gene fusion, *TMPRSS2:ERG*, is believed to cause prostate cancer. But because the gene fusion is present only half the time, the researchers also included another marker, *PCA3*. The combination was more predictive of cancer than either marker alone.

"Testing for *TMPRSS2:ERG* and *PCA3* significantly improves the ability to predict whether a man has prostate cancer," says lead author Scott Tomlins, M.D., Ph.D., a pathology resident at the U-M Health System. "We think this is going to be a tool to help men with elevated PSA decide if they need a biopsy or if they can delay it."

In a recent study published in *Science Translational Medicine*, researchers looked at urine samples from 1,312 men. The men all had elevated PSA levels and had undergone either a biopsy or surgery to remove their prostates. The researchers evaluated the urine samples for *TMPRSS2:ERG* and *PCA3* for low, intermediate and high scores, indicating their risk of cancer. They then compared this to biopsy results.

Biopsies indicated cancer in 21 percent of men from the low-score group, 43 percent in the intermediate group and 69 percent in the high group. Further, the urine test scores correlated with how aggressive the cancer was. Only 7 percent of men in the low-score group had an aggressive tumor while 40 percent of those in the high-score group did.

"Many more men have elevated PSA than actually have cancer, but it can be difficult to determine this without biopsy. This test will help in this regard. The hope is that this test could be an intermediate step before getting a biopsy," says senior study author Arul Chinnaiyan, M.D., Ph.D., director of the Michigan Center for Translational Pathology.

The Michigan Center for Translational Pathology hopes to offer the new combined test to U-M patients within the year. *PCA3* screening alone is available to U-M patients as follow-up to elevated PSA. Men with questions about prostate cancer screening should speak to their doctors or call the U-M Cancer AnswerLine at **800-865-1125**.



Arul Chinnaiyan, M.D., Ph.D.

U-M CANCER CENTER RECEIVES \$3.5 MILLION GRANT TO STUDY BREAST CANCER STEM CELLS



Researchers at the University of Michigan Comprehensive Cancer Center have been awarded a \$3.5 million grant from Susan G. Komen for the Cure to study cancer stem cells in an aggressive form of breast cancer that disproportionately affects African-Americans.

Triple-negative breast cancer is resistant to the latest targeted therapies that have helped to advance breast cancer treatment. Among women with breast cancer, this subtype represents about 15 percent of diagnoses in white American women, 26 percent in African-American women and 82 percent in African women.

"We urgently need to develop novel approaches to treat triple-negative breast cancer in order to reduce racial disparities. Through this Komen grant, we propose to develop novel therapies capable of attacking and destroying the lethal seeds driving these cancers, the cancer stem cells," says principal investigator Max S. Wicha, M.D., distinguished professor of oncology and director of the U-M Comprehensive Cancer Center.

Cancer stem cells are the small number of cells within a tumor that are believed to fuel the tumor's growth and spread. Wicha and colleagues were the first to identify cancer stem cells in solid tumors, finding them in breast cancer tissue in 2003.

Researchers believe traditional cancer treatments often become ineffective because they do not kill the cancer stem cells, and that the key to future treatments is to develop drugs that target and kill these cells. Research suggests that triple-negative breast cancers have a higher proportion of cancer stem cells.

This grant will fund the study of tumor cells from African and African-American women to look for molecular differences in triple-negative tumors and the impact of targeting breast cancer stem cells within them. The researchers plan to launch at least three phase I clinical trials to investigate new treatments that target cancer stem cells. Based on the results of these trials, a larger randomized clinical trial will be planned.

"If the cancer stem cell model is correct, then the successful targeting of this cell population should result in significantly improved outcome for women with breast cancer," Wicha says.



Learn more about the latest cancer research at the University of Michigan at mCancer.org/thrive.



Visit mCancer.org/thrive to watch a videocast with Emily Mackler, Pharm.D., about pain management.

Art Therapy:
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877-907-0859

DISPELLING MYTHS ON THE TREATMENT OF CANCER PAIN

By Emily Mackler, Pharm.D., U-M Comprehensive Cancer Center Symptom Management and Supportive Care Program

Myth No. 1: My pain can't be treated.

The World Health Organization reports that in 85 percent to 97 percent of all cancer cases, pain can be controlled. Although pain may not be completely eliminated, there are many treatment options to manage pain and meet individual goals. These include pain medications, procedures to treat pain, radiation therapy and others.

Myth No. 2: I will become addicted to pain medication.

This is not true. People do not become addicted to opioids, or narcotic medications, when they are taking them for the treatment of pain. Addiction is a psychological dependence that results in a need to use drugs for non-medical purposes rather than for pain relief. People with addictions are driven to take the medication based on a craving for it rather than physical pain.

Myth No. 3: I should avoid taking pain medications now and wait until my pain is much worse, since I may not have options available to me when I really need them.

Again, I'd like to stress that many options are now available for the treatment of pain. In some cases, we may combine several different approaches to obtain the best pain relief possible. Addressing pain early doesn't limit one's ability to achieve pain control later.



The Cancer Center Symptom Management and Supportive Care Clinic works with patients along with their oncologists and other pain specialists to develop effective pain treatment plans. To make an appointment, call 877-907-0859.



Do you have a question for the pharmacist?
Email us at ThriveMagazine@med.umich.edu.



THRIVE ONLINE

Thrive doesn't end here! Visit mCancer.org/thrive for more. Here's what you'll find:

- More patient stories about building a family after cancer treatment and links to resources on preserving fertility and adoption.
- Links to the U-M Cancer Center's Patient Education Resource Center and more information about making good choices about cancer care.
- An expanded chart detailing the benefits and risk of more nutritional supplements.
- Videocasts about art therapy, including projects you can try at home.
- More information about the latest research at the U-M Comprehensive Cancer Center and resources for connecting with clinical trials.