### PHARMACIST'S Corner



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

### UNDERSTANDING ORAL MEDICATIONS FOR CANCER

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

Cancer medications taken by mouth may be more convenient and, in some cases, require less frequent doctor visits than intravenous treatments (infusion). As more is known about how cancers develop and spread, a growing number of oral medications that target particular pathways or receptors have been developed.

Oral medications have also been developed to provide patients with a realistic option for long-term therapy. Oral anticancer medications are an important addition to other cancer treatment options and have been shown to improve patient survival and quality of life.

Tips for success in taking your oral medication:

- Take it at the same time each day (use a medication chart, pill box, calendar, etc.).
- Contact your oncology provider before starting any new medications (over-the-counter, herbal or prescription).
- Understand side effects, how to manage them and when to call a care provider.
- Utilize resources, such as the Patient Education Resource Center and the medication record, to help with questions or concerns.

To help patients manage the challenges of oral medications, the U-M Comprehensive Cancer Center now has a service to help:

- manage your medication at home
- identify possible drug interactions
- find resources to help you cover the high cost of oral cancer medication
- understand your medication through educational materials



Contact the Oral Medications for Cancer Therapy Service at 734-232-6366.

### JUST A PHONE CALL AWAY

Art Therapy: 877-907-0859

Cancer AnswerLine: 800-865-1125

Clinical Trials: 800-865-1125

Development: 734-998-6893

Fertility Counseling: 877-907-0859

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Patient Education Resource Center: **734-647-8626** 

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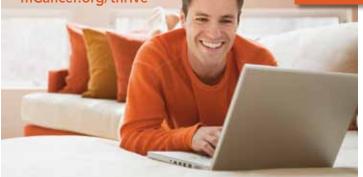
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Symptom Management and Supportive Care: 877-907-0859



### mCancer.org/thrive



### THRIVE ONLINE

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

- Tips to transform your favorite comfort food recipes, like meatloaf and pizza, into healthier options
- A video about why participation in clinical trials is so important
- More information on caring for wounds at home
- Over 100 organizations nationwide that provide cancer support services to patients and families
- What to expect if you visit the Cancer Genetics Clinic
- What you can expect from oral chemotherapy

### SCREEN YOUR GENES

How understanding your heredity may help you dodge cancer









# thrive

### FALL 2012 CONTENTS

### 04

### THE FINE LINE OF FDA APPROVAL

A U-M doctor and researcher explains what it takes for cancer drugs to be developed, tested and made available to patients with FDA approval.

### 06

### SHARING SUPPORT

How a pair of transplant patients met and supported each other before, during and after treatment.

### 80

### **COMFORT FOODS**

Tips to transform your favorite comfort recipes into healthier options without compromising taste or experience.

#### On the cover: From right to left, patient Paula Wishart; her mother, Isa Di Rita; and daughter Isa Wishart used genetic testing to understand their risks for cancer.

### **10** UP AND DOWN THE FAMILY TREE

See how one family used genetic testing to identify Lynch Syndrome and take preventative measures to avoid cancer.

### 13

### HELP IN HEALING

Read about one man's experience healing a treatment-related wound and measures you can take to help your body heal.

### 15

### **RESEARCH ROUND-UP**

Learn about the latest in research at the U-M Comprehensive Cancer Center.



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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.

### Prompt and personalized

### Oncology care when you need itwithout the ER



Patients needing urgent care get personalized attention from caregivers who know and understand cancer.



### THE AMBULATORY TREATMENT CENTER

- Located in the U-M Comprehensive Cancer Center
- Expanded hours: 8 a.m.-8 p.m.
- Dedicated nurses and physician assistants
- P.A.s review request and contact referring physician
- New simplified referral form to expedite the process
- P.A.s contact the patient's primary oncologist after a visit

Have you ever gone home after chemotherapy infusion only to spike a fever and experience terrible nausea? Setting up an appointment with your primary oncologist could take days. Your regular physician might send you to the emergency room. The last thing you want to do is take yourself to the emergency room. You want oncology care and you need it now!

With the goal of meeting the needs of cancer patients, last summer marked the opening of the University of Michigan Comprehensive Cancer Center's Ambulatory Treatment Center. The improved service provides ongoing support for U-M Cancer Center patients as well as regular clinic visits for physician appointments and treatment.

"We know prompt and directed care is important and valuable to our patients," says Krisinda Palazzolo, P.A.-C., and a lead team member of the Ambulatory Treatment Center. "We needed a dedicated center for cancer patients needing attention. This could be a time your oncologist is not available and your primary doctor isn't a good fit, or we don't want you in the emergency department because you're immunosuppressed. We want patients to be able to see oncology staff."

For existing patients at home, a potential trip to the Ambulatory Treatment Center begins with a phone call to their primary Cancer Center team, just as they would normally call with a question or problem. Patient calls are then triaged through their health care team and, if the Ambulatory Treatment Center is determined to be the best resource, a visit might be scheduled.

"Identifying the best place for a patient to go is critical," Palazzolo says. "Also important is involving a patient's primary oncology team, as these individuals know the patient's history best."

For instance, a patient might come to the Cancer Center for an infusion appointment, but isfound to be dehydrated or not well enough for treatment. Infusion nurses often recognize when a patient needs attention and can work in collaboration with the patient's primary team to refer him or her to the Ambulatory Treatment Center for a more detailed and focused evaluation.

"We want to create an ideal patient experience," says Palazzolo. "Patients need prompt attention to their symptoms from oncologyfocused providers who are in touch with what they are experiencing."

After a visit to the Ambulatory Treatment Center, information is reported back to the patient's hematologist/oncologist to provide a seamless experience.





### The fine line of FDA approval

What it takes for new drugs to be tested and reach patients

News reports often talk about revolutionary new drugs in development to treat cancer. Or, we'll see a story about a research breakthrough that could change the future of cancer treatment ... if the drug is approved by the U.S. Food and Drug Administration (FDA) down the road. Sometimes that's the last time we'll hear about it. Other times, it takes years before we'll hear about it again.

What goes into researching and developing a cancer drug and what is required for FDA approval? We sat down with Moshe Talpaz, M.D., associate director of translational research at the U-M Comprehensive Cancer Center, for a closer look at the FDA approval process. What is the general time frame for a new drug to be approved by the FDA so it can be available to patients?

From beginning to end, typical clinical drug development takes around seven to 10 years. If a drug is showing remarkable activity and serves an unmet medical need, an accelerated process can go much quicker, maybe around three years after the onset of clinical trials. This is generally speaking, as every drug is unique in its own way. What is the first part of the process to develop a new drug?

When does research begin with actual patients? The pre-clinical process is quite elaborate. Academic medical centers like U-M have the role of discovering what governs a disease, to discover the mutation that drives an illness like cancer. We first focus on the biology to show the full sequence of events in the body. We develop various laboratory approaches to demonstrate that shutting off the abnormal protein kills the cancer cell.

Drug companies then get involved to develop what is called a lead compound. Medicinal chemists study many different molecules to identify one that has the characteristics of potentially becoming a drug. A lead compound then becomes the subject for extensive testing on animals to determine whether it has adequate pharmacologic behavior and a good toxicology profile. In other words, that it works safely in the body.

The pre-clinical studies are followed by Phase I testing in humans to find the maximum tolerated dose. We start with very low doses, of course, to check for toxicity. If patients can tolerate it, we try a higher dose. We end up with a safe dose to recommend for use in a Phase II study.

Phase II involves more extensive testing and is where we demonstrate whether the compound is effective and which tumors respond to it. We want to see what percentage of patients with a certain disease respond to the compound, although the number of patients in this phase may not be sufficient for definitive assessment.

Phase III is a randomized study of large groups of patients that compares the potential drug to the current standard of care. If the compound reaches a significant goal, which is acceptable to the FDA, the FDA approves it as a new drug and it is given a trade name. What do researchers look for in a promising drug?

What about drugs that go through the accelerated process for FDA approval? Are there disadvantages when drugs go through the process quickly?

What good things do you see in the future for the development of cancer drugs? People may not realize that nine out of 10 Phase I trials fail. A compound may not reach the intended target or it might not be safe for patients because it is too toxic.

Once researchers show that a compound is safe and has activity against the intended target, it will be pursued further. Our goal is to develop therapeutic cancer drugs, but not further injure patients. If severe toxicity occurs during Phase I testing, the compound is unlikely to be further developed. To ensure patient safety, a Phase I study must be tightly monitored and every event must be documented.

As far as cancer drugs go, I believe the FDA approval process is streamlined and efficient. Even though at times it seems like the FDA is overly conservative, I feel it is a fair and well-structured process. If a compound proves to be good and there is no question about it, it moves forward quickly in the approval process.

When a drug goes through the accelerated process, it receives conditional approval from the FDA. This means that testing on the drug continues once patients are using it and the drug must meet additional milestones later, such as survival improvement.

Cancer is now the major focus of drug development. We need new concepts and a better understanding of what targets to go after. We are just beginning the process of discovering targets and developing diagnostic tools.

One project of clinical importance we're working on in the U-M Cancer Center is the idea of precision or personalized medicine. This involves what is called next-generation sequencing, or studying a tumor's genetic makeup to identify mutations. The idea is to see what mutations can be acted upon and whether we can target them so we'll have a large selection of compounds available to match specific mutations.

We at the Cancer Center have also developed a Phase I translational research center. We have a great team and are aiming to partner with drug companies throughout the drug development process.

# Sharing support

### A story of friendship as a pair of cancer patients help each other heal

Sherron Tornow says she's a lucky woman. After her physician diagnosed the lump on her neck as lymphoma, family, friends and neighbors rallied to offer support. She also shared her cancer experience with an unexpected new friend who was key to her support system: a fellow patient she met while preparing for a stem cell transplant.

"Rani and I met when we were having our stem cells harvested," Tornow says of patient Achamma (Rani) Geevarghese. "She was in the bed right next to me. She had been there for several days trying to harvest enough stem cells of her own. She finally got them." Tornow got through the process of harvesting her stem cells within a few days. "When I got ready to leave, Rani said to me, 'I hope we're in the hospital at the same time for transplants.' I agreed it would be nice to know somebody going through the same thing."

The 68-year-old Tornow, a mother of two and grandmother of six from Adrian, was surprised when, lo and behold, Geevarghese arrived at the Adult Blood and Marrow Transplant (BMT) service the day after she was admitted. She went to say hello immediately and get reacquainted. Barb Rose, L.M.S.W., a clinical social



worker on the floor, says it's not uncommon for patients to meet during the harvest process and again for the transplant. And, though every patient must have an assigned healthy caregiver, it can be difficult for caregivers to understand issues facing patients during their three- to four-week inpatient stay. Patients can face depression, isolation and risk of infection from having no immune system.

"We never know how the body will react to transplant," Rose says. "Patients tell us nobody understands that fatigue or feeling as if you have to live in a bubble to prevent infection."

Unexpected illness, financial worries and emotional ups and downs can be difficult for any patient dealing with cancer, says Donna L. Murphy, L.M.S.W., C.C.L.S., co-director of the PsychOncology Program at the U-M Comprehensive Cancer Center. It is important for patients to ask and understand what support and services are available to reduce the burdens that cancer can bring.

"People are altruistic," Rose says. "They want to share their experience with someone else if it means helping them. Patients feel it's meaningful if they can inspire someone else."

"We compared notes," Tornow says of the three-day period she received high doses of chemotherapy before her transplant. The friends checked in with each other to see how sick the other felt, what symptoms were being experienced and whether they felt like eating.

After both women had their transplants, Tornow suggested Geevarghese accompany her on a walk around the floor, something bone marrow transplant patients are encouraged to do daily. The two began 66 After I got released, I went back to see the doctor in two days. Rani was there! Meeting Rani was really the key.

-Sherron Tornow

Patients Sherron Tornow and Achamma (Rani) Geevarghese took walks together, became friends and compared notes on how the other was feeling.

walking the halls together regularly.

"She was a former school teacher, I was a deli manager," Tornow says. "We talked about food a lot because she couldn't eat much. Her husband would bring in Indian food. A sister-in-law came up from Texas and gave her great support and cooked for her."

While social workers address practical matters such as obtaining financial aid and understanding insurance issues, the main emphasis, says Rose, is on the mental health of patients and families dealing with all kinds of cancers. Rose and other social workers work with patients on an individual basis, as well as in groups, to share stories and experiences.

"We have a weekly support group for patients and caregivers that is open to everybody including post-transplant patients," Rose says. "Every Wednesday before group, we go to patient rooms and invite them to participate and talk about why it's helpful to come to the group. We publicize the support group to clinic patients, as well."

The inpatient BMT nurses also hold occasional family fun days where patients and families gather to create an art project or do an activity that gives them the chance to relax and meet other people. On any given day, some patients arrange to meet in the family lounge to talk.

After 22 days in the hospital, Tornow was discharged; Geevarghese went home the next day. The two women continue to see each other at follow-up visits and plan to keep in touch despite living two hours apart. Tornow, now back in Adrian among family and friends, is thankful for her wide range of support.

"My neighbor Terri is a nurse," she says. "She goes to many of my appointments with me and helps me understand what the doctors are saying. We now take walks at 6 a.m. and are up to two miles."

Although Tornow must restrict her activity for 100 days to give her immune

system time to rebuild, she is thankful to be home and cancer-free. She hopes to resume her normal hobbies, such as biking, riding horses and golfing, once she gets the "all-clear" from her doctor.



Visit mCancer.org/thrive for support group times and meeting locations.

### WhatNext

WhatNext is an online support network developed in partnership with the American Cancer Society. The site provides a way for individuals to share their cancer journeys and insights so others can get a better idea of what to expect during their own journeys. Find users most like you based on cancer type, treatment experiences and other diagnosis details. Visit **whatnext.com**.

### WEB EXCLUSIVE

Visit **mCancer.org/thrive** for a list of more than 100 organizations nationwide that provide emotional, practical and financial support for people with cancer and their families.

### WEB EXCLUSIVE

K

Visit **mCancer.org/thrive** for specific tips on how to modify some of your favorite comfort recipes without sacrificing the taste or experience.



## Comfort foods

### Eat for your health

### by Nancy Burke, R.D., Danielle Karsies, M.S., R.D., and Melissa Shannon-Hagen, R.D., CSO U-M Comprehensive Cancer Center Symptom Management and Supportive Care Program

Although food is fuel for our bodies, most of us eat for the pleasure of taste and experience. A creamy bowl of macaroni and cheese may make you think of lazy days with grandma. A few slices of cheesy pizza with golden crust may remind you of all the good times you had at sleepovers or in college. During cancer treatment and survivorship, these feel-good foods can provide the comfort we need and be a great source of nutrition.

Traditionally, many comfort foods are high in calories and fat and low in nutrient-dense vegetables and whole grains. This can be easily modified so you can reminisce without remorse.

Instead of:	Try:
1 cup cream	1 cup evaporated skim milk
Cream to thicken soups	Pureed vegetables or potatoes
Oil base for marinade	Citrus juice or flavored vinegar
White rice	Brown rice, bulgur, quinoa or whole-wheat couscous
Bread crumbs	Toasted wheat germ or whole-wheat bread crumbs

#### COOKING TIPS

### **BAKING TIPS**

Instead of:	Try:
1 egg	2 egg whites or ¼ cup of liquid egg substitute
Frosting	Pureed fruit or a light dusting of powdered sugar
Pastry pie crust	Phyllo or graham cracker crust
½ cup butter or margarine	¼ cup applesauce or prune puree + ¼ cup of canola oil, butter or margarine
1 cup all-purpose flour	1 cup finely milled whole-wheat flour (also called whole-wheat pastry flour)

If you're currently undergoing cancer treatment and losing weight, now is the time to indulge in comfort foods. Macaroni and cheese, chicken noodle soup, meatloaf, mashed potatoes and ice cream can be great options as their high calories, creamy textures and low-fiber content make them easy to chew and digest. Indulging in these foods without modifications can help you to get the calories and protein your body needs to get you through your treatment. The nostalgic feelings are just an added bonus.



Visit mCancer.org/thrive for tips on modifying some of your favorite comfort food recipes without sacrificing taste or experience.



## Up and down the

### How genetic testing helped one patient dodge cancer

Paula Wishart, 48, is many things: married to her college sweetheart, a mother of two, a professional development consultant in higher education and a person who loves to cook Italian food with her mother and daughter, both named Isa.

She's also a cancer dodger. Thanks to the University of Michigan Cancer Genetics Clinic, Wishart was diagnosed with Lynch Syndrome, a hereditary condition that greatly increases the chances of developing colon and other cancers earlier in life than what's considered typical.

She attributes her good fortune to her

mother's openness about her health and willingness to go through genetic testing.

The Cancer Genetics Clinic provides screening and counseling to educate patients and their families about their risks for cancer. Physicians and genetic counselors help patients and their families understand how their genes might contribute to cancer and what actions they can take to manage their risk.

"We take care of families as a whole," says Elena Stoffel, M.D., director of the Cancer Genetics Clinic. "To identify familial cancer syndromes you have to look beyond a single diagnosis. If there are other cancers in the family, and those diagnoses fit a particular pattern, there may be more going on."

This was the case with Wishart's mother.

"My mother had uterine cancer and colon cancer separately, so I've been vigilant about my health," Wishart says. "Looking back at my history, my grandfather died of cancer. So did my aunt and my cousin. My mom agreed to genetic testing to see whether there was a genetic mutation."

In the process, doctors identified the mutated gene responsible for the cancer

66 My mom's openness to letting us get involved in her health care has been a benefit to our whole family. I encourage people to get genetic testing and counseling.

–Paula Wishart





Wishart stresses the importance of communicating with your physician about your family history of cancers and other health issues. Be your own patient advocate.

diagnoses in her family and confirmed the diagnosis of Lynch Syndrome. This meant Wishart and her family members could be tested for Lynch Syndrome. She and her twin brother have the mutation. Her other three siblings do not.

The family history of cancer prompted Wishart to push her physician to schedule annual colonoscopies before the recommended age. Within a year's period, a small spot on her colon had grown into a large adenoma.

"It might take a regular person 10 years to develop this kind of pre-cancerous

growth. Because I have Lynch, it happened much more quickly," Wishart says.

Preventative cancer screenings are one way patients with Lynch Syndrome can stay healthy or detect cancer early. In Wishart's case, the adenoma was too large to remove so she opted to have surgery to remove half of her colon. And, because the Lynch mutation is linked to a high risk for endometrial cancers, she followed her physician's recommendation to have a hysterectomy and oophorectomy, which includes removing all reproductive organs.

Wishart worked with U-M Certified

Genetics Counselor Jessica Everett to understand her cancer risks and options for reducing them. This counseling, which included discussions of fears and future scenarios, was a large factor in her decision to have the surgery.

"It was a hard decision but, after I woke up from surgery, I was so grateful," she says. "There were a lot of people on the floor fighting cancer, like so many of my family members. I felt very aware this could have been me. I felt blessed."

Now, with routine colonoscopy screenings, Wishart's risk for developing colon



cancer has been dramatically reduced. She advocates for genetic testing, speaks on panels, and educates medical students on the connection between colon cancer and Lynch Syndrome as well as the importance for doctors to push patients for family health history.

"From my perspective, your genetics are up and down your family tree," she says. "Genetic testing has enabled me to impact my family in ways that are very important to me. I am avoiding cancer, which my cousin wasn't able to do. I value my life more than those individual organs I had removed."

Wishart's other children, ages 11 and 13, are too young to be tested for Lynch Syndrome. The family openly discusses Lynch and cancer so they will be able to make the decision whether or not to be tested for the Lynch mutation once they are young adults.

"The fear of knowing can be so strong for people," Wishart says. "I feel like knowing gives you strength."

### **GENETIC TESTING**

Is genetic testing right for you? What doctors look for before recommending genetic testing:

- cancer at an early age
- one person with multiple primary cancers
- cancer in both paired organs or more than one tumor in an organ
- the same type of cancer in close relatives
- cancer in multiple generations of a family
- rare tumors
- unusual presentation of cancer, such as male breast cancer

### **GENETICS EVALUATIONS**

The Cancer Genetics Clinic offers genetic evaluations for these cancers:

- familial colon
- breast
- ovarian
- uterine or endometrial
- prostate
- melanoma
- thyroid
- sarcoma
- childhood cancers
- less common tumors



Visit www.mcancer.org/thrive for more information on the Cancer Genetics Clinic.



A leukemia diagnosis last spring took Ralph May, 64, by surprise. In a matter of weeks, he'd gone from hauling automotive machinery and equipment in his Kenworth rig to receiving chemotherapy in Clarkston, Mich. During his three-week stay at the U-M Comprehensive Cancer Center for a bone marrow transplant, he developed a sacral wound that wouldn't heal and persisted into the summer.

Wounds are a common side effect of cancer and cancer treatments, says Nurse Practitioner Suzette Walker, co-director of the Cancer Center's Symptom Management and Supportive Care Clinic. Chemotherapy or oral drugs can cause skin toxicities like rashes and dry skin that can be uncomfortable and bothersome to patients. Certain cancers develop tumors underneath the skin that can break down, leak and cause unpleasant odor and infection.

Or, as was May's case, during hospitalization, pressure wounds can develop from unrelieved pressure that damages the skin and underlying tissue.

"When the wound wasn't healing I was just having terrible pains," May says. "I have an upbeat attitude and laughed and giggled about its location, but it was hurting. When I was sitting and lying, I had to be just right to keep it from aggravating me." With his cancer treatment complete and his wound on the mend, Ralph May can enjoy time with his Great Dane Diesel who, at 4 years old, stands 6 feet 5 inches tall on his hind legs.

### Help in healing

Wound care service gives patients hope and wound management



### SYMPTOM MANAGEMENT | Help in healing

Pain relief is just one reason it is important to care for open wounds, says Dawna Allore, R.N., who manages the clinic's new wound care program. Healing a wound takes energy away from a patient's ability to tolerate chemotherapy and other cancer treatments.

In addition, wounds have a significant social impact. Not only does a wound cause physical discomfort, it is in many cases right there for everyone to see. Patients often isolate themselves because they're worried about their physical appearance or because a wound has an unpleasant odor.

"Some wounds we can heal, so this is the focus," Allore says. "Other wounds, such as those caused by a tumor, are ongoing so we are teaching patients how to live with it. There are many things people can do to create a new normal in which living with a wound is much more tolerable."

May experienced a significant reduction in pain after his first visit to the wound care clinic when Allore introduced a new antibacterial bandage with a heart-shaped bandage to wear over it.

"People sometimes think changing a dressing several times a day is best," Allore says. "You actually lose healing time when you change a dressing because the temperature of the wound bed changes. Each time you change it, you can lose up to four hours of healing time."

May has also tried a variety of creams to help with pain.

Another important part of wound care is nutrition. May sees Registered Dietitian Danielle Karsies each time he visits the clinic; they discuss the kinds of foods that promote healing.

"Both protein and fluids are essential to wound healing. Protein is the main building block for tissue growth and cell renewal, and fluids promote blood flow to the area," Karsies says. "Mr. May was already doing a multivitamin, which was good, but we also tried supplemental vitamin C and zinc because his wound got stagnant. His fluids were very low so we're working on that to get the blood flow going to the wound."

Keeping blood sugars under control is also important to healing wounds. Diabetic patients are encouraged to adhere to a diet low in sugar, fat and salt, eat small portions throughout the day and focus on complex carbohydrates.

"Some of our patients are healed from their cancer," Karsies says. "We're helping them live with day-to-day problems from treatment including long-term symptoms that are bothersome and a hindrance to daily life."

After finding a perfect bone marrow donor with 10 matching protein markers, three weeks in the hospital for transplant, an additional week in the hospital for treatment for a fever and 100 days of recovery, May's biopsy showed no cancer.

He hopes to return to his rig soon and relieve his 27-year-old son of the driving duties.

"I am cancer-free as of right now. My doctor says I'm living on my donor cells," May says. "Thanks to the care I've received, I'm now healing and in minimal pain. It is working."



### TIPS

### Tips for wound care

- Wash hands before and after changing bandages.
- Never re-use bandages.
- Keep the wound clean.
- Dress wounds as instructed by your doctor or nurse.
- If bleeding, clean the wound and apply pressure with a cool cloth or ice pack.
- Avoid scratching, rubbing or picking.
- Eat high-protein foods, take a multivitamin with minerals and drink at least 64 ounces of fluid daily.

Call a doctor if you develop a fever of 100.5° F or higher, or when the wound:

- bleeds for more than 15 minutes
- is red around edges, hot or swollen
- is more painful than usual
- develops an unpleasant odor
- oozes yellow or green liquid

Source: American Cancer Society



Contact the Symptom Management and Supportive Care Program to learn more about its wound management service at 877-907-0859.

### Unmet needs: Adolescents and young adult cancer patients lack psychological, social support

A cancer diagnosis for adolescents and young adults can be especially challenging, and new research shows the social, psychological and informational needs these patients have might be going unmet.

Compared to children and older adult cancer patients, adolescents and young adults, ages 14–39, demonstrate a different set of psychosocial needs and issues. Whether these patients are treated in a pediatric or adult setting can influence their clinical and psychosocial well-being.

A new study led by University of Michigan Comprehensive Cancer Center researchers shows significant proportions of patients in this age group are not getting their care needs met.

"When patients in this age group are diagnosed with cancer, they face issues like premature confrontation with mortality, changes in physical appearance, disruptions in school or work, financial challenges and loss of reproductive capacity, which can all be particularly distressing," says Bradley Zebrack, Ph.D., M.S.W., M.P.H., associate professor of social work at the University of Michigan.

"Whether it's mental health care, information for topics like infertility, or other aspects of care such as camps or retreat programs, this study shows that many of these patients aren't getting the care they need to address these unique challenges."

The researchers surveyed 215 newly diagnosed cancer patients between the ages of 14 and 39, and looked at their use of and desire for information resources, emotional support services and practical support services. They found that patients in their 20s were significantly less likely than teens and patients in their 30s to report using mental health services and were more likely to report an unmet need for information about cancer, infertility, and diet and nutrition.

Additionally, compared with teens treated in pediatric settings, young adults treated in adult facilities were more likely to report an unmet need for age-appropriate websites,



Bradley Zebrack, Ph.D., M.S.W, M.P.H.

mental health services, camp and retreat programs, transportation assistance, and complementary and alternative health services.

Zebrack says the results of this study might help medical professionals better tune their care to meet the needs of their adolescent and young adult patients.

### U-M offers new skin cancer mobile application

A new, free application for iPhone and iPad lets users create a photographic baseline of their skin to allow them to discover skin cancer at its earliest stages. Developed at the University of Michi-



Michael Sabel, M.D.

gan Health System, the app lets users photograph suspicious moles or other skin lesions, taking them step-by-step through a skin self-exam. The app, UMSkinCheck, sends automatic reminders so users can monitor changes to a skin lesion over time, and provides pictures of various types of skin cancers



for comparisons.

The app is designed for the iPhone and iPad and is available to download on iTunes at **itunes.apple.com**.

"Whole-body photography is a wellestablished resource for following patients at risk for melanoma. However, it requires a professional photographer, is

not always covered by insurance and can be an inconvenience. Now that many people have digital cameras on their phones, it's more feasible to do this at home," says Michael Sabel, M.D., associate professor of surgery at the U-M Medical School.

More than 2 million Americans are diagnosed with skin cancer each year, and some 50,000 will be diagnosed with melanoma, the most serious kind. Regular skin checks can help people discover melanoma in its earliest stages.

The app guides users through a series of 23 photos, covering the body from head to toe. Users' photos are stored within the app and serve as a baseline for future comparisons. The app will create a reminder to repeat a skin self-exam on a regular basis.

If a mole appears to be changing or growing, the photos can then be shared with a dermatologist to help determine whether a biopsy is necessary.

"We recommend skin self-exams for everyone in order to detect skin cancer at the earliest stages, when treatment is less invasive and more successful. If you have fair skin or burn easily, have had sunburns in the past, used tanning beds or have a family history of melanoma, you are considered high-risk, so it's even more important," Sabel says.

The app includes a risk calculator that allows users to input personal data to calculate individual risk.