

on the cover:

We turn our attention to caregivers and offer guidance on how to cope with the burden of cancer-and the stresses it puts on relationships.



04 REDUCING THE **SWELLING**

Occupational therapist Katherine Konosky offers strategies for preventing and treating lymphedema.



06 ON YOUR OWN

We offer tips for facing the challenges of cancer when you live alone.



08 FOCUSING ON THE **CAREGIVER**

U-M Cancer Center research examines ways to improve quality of life for caregivers.



We want to know what you think. What kinds of stories would you like to read in Thrive? What type of advice would be helpful? Do you have tips for other patients? Let us know. E-mail us at ThriveMagazine@med.umich. edu or write to us at 2901 Hubbard, Suite 2600, Ann Arbor, MI., 48109.



12 FINDING THE RIGHT HELP

Here's what you need to know when seeking out complementary therapists closer to home.



13 EATING RAINBOWS

Check out our color wheel of fruits and vegetables. Learn what colors can contribute to your health.



15 RESEARCH **ROUND-UP**

Read about the latest in research at the University of Michigan Comprehensive Cancer Center.

HERE'S A GUIDE TO WHAT YOU'LL FIND AT THRIVE ONLINE. VISIT MCANCER.ORG/THRIVE.

- Want a trusted opinion on cancer news? The board-certified oncology nurses from our Cancer AnswerLine regularly post videocasts on topics such as controversies in cancer screenings and practical advice about the flu for families affected by cancer.
- Get ideas about how to incorporate more colorful foods into your diet at
- our Cancer Center Recipes Just for You Web site.
- Learn more about the social networking resources mentioned in our feature story about living alone during cancer treatment. We've posted links to CarePages. org, LotsaHelpingHands.org and Amazon. com's Universal Wishlist.
- Check out our podcasts and videocasts on
- complementary therapy. We've also got links to trusted resources for finding practitioners.
- Coping with cancer causes tremendous emotional stress—for patients and caregivers. Our PsychOncology services are available to the families of all of our patients. Visit our Web site to learn how you can connect.

Fewer Surgeries, Better Care

NEW BREAST CANCER SERVICE SEEKS TO REDUCE LIKELIHOOD OF SECONDARY SURGERIES

TRADITIONALLY, BREAST CANCER PATIENTS WHO **UNDERGO SURGERY** WAIT SEVERAL DAYS FOR LABORATORY **RESULTS THAT** WILL DETERMINE WHETHER ANOTHER SURGERY WILL BE NECESSARY. AT LEAST 30 PERCENT OF WOMEN WHO OPT FOR BREAST-CONSERV-ING THERAPIES WILL REOUIRE MORE THAN ONE SURGERY.







A new treatment approach for breast cancer patients allows pathologists to consult with surgeons about test results during surgery.

In an effort to improve patient care, the University of Michigan Comprehensive Cancer Center is offering a new option to some patients that will allow on-site pathologists to perform microscopic exams of tissue samples while patients are still under anesthesia. After consulting with the pathologist, a surgeon may decide to remove additional tissue.

"Intra-operative diagnosis can help us in planning our surgical therapy and decrease the likelihood that a woman will have to come back for a second procedure," said Tara Breslin, M.D., a breast cancer surgeon and an assistant professor of surgery. "This new service may improve patient satisfaction and—as a bonus—reduce overall cost of care as well."

A surgeon's goal during a lumpectomy, or

breast-conserving surgery, is to remove the tumor as well as a small margin of unaffected tissue to ensure no cancerous cells are left behind in the breast. If an on-site pathologist finds cancerous cells in the margin, the surgeon will remove more tissue while the patient is still anesthetized.

The on-site pathologist also evaluates sentinel lymph nodes to identify metastasis. If a lymph node tests positive, the pathologist can advise the surgeon, who will then follow the standard of care and perform an axillary lymph node dissection. During this procedure, the surgeon removes two-thirds of the patient's lymph nodes. Traditionally, an axillary lymph node dissection is done at a later date, but with this new service, patients will

not need to come back for another surgery.

This surgical approach, which is performed in a new, state-of-the-art facility at the East Ann Arbor Ambulatory Surgery Center, may be an option for patients with invasive breast cancer or ductal carcinoma in situ, Breslin said. It is not offered to patients whose treatment plans call for more than one surgery, for example those who are undergoing sentinel node biopsy for a planned mastectomy and reconstruction.

"It's a great advantage for the surgeon and pathologist to have the opportunity to interact so that everyone fully understands the patient's individual situation," Breslin said. "It's a real advantage to be able to collaborate directly in real time."

Reducing the Swelling

NEW LASER THERAPY AMONG TREATMENT OPTIONS **FOR LYMPHEDEMA**



LYMPHEDEMA—WHICH CAUSES SWELLING IN THE ARMS OR LEGS—CAN BE A FRUSTRATING AND CHRONIC LONG-TERM SIDE EFFECT OF CANCER TREATMENT. WE TALKED WITH KATHERINE KONOSKY, AN OCCUPATIONAL THERAPIST WHO SPECIALIZES IN LYMPHEDEMA TREATMENT, ABOUT WHAT PEOPLE CAN DO TO ALLEVIATE SYMPTOMS. BE SURE TO CHECK OUT HER TIPS FOR PREVENTION AS WELL.



What is lymphedema and why does it occur?

Lymphedema is an accumulation of fluid in the tissue spaces of the body that causes swelling. When we're talking about cancer patients, lymphedema occurs when lymph nodes are removed or damaged in the course of treatment. For example, a patient may need a lymph node dissection to determine whether the cancer has spread. Or radiation may damage lymph nodes. Any time lymph nodes are injured, there's a chance the person will develop lymphedema.

With what types of cancers is this most commonly associated?

We see people who have been treated for cancers of the breast, ovaries, prostate, colon, and head and neck, as well as melanoma.

What are the signs?

Initially, someone might feel firmness in the affected arm or leg. You might be able to push your thumb into your arm or leg, and the thumbprint remains. Or parts of your limb might feel denser or have a different texture, for example swelling around the ankle.

What treatments are available?

People with lymphedema should see an occupational therapist for manual lymph drainage, a special form of light massage. A therapist can also teach patients deep breathing and stretching exercises that can increase the rate of fluid return. Compression garments or bandages may be helpful. In addition, we now offer a painless, low-level laser therapy that has been proven to help patients maintain fluid reductions or increase fluid reductions up to six months after treatment.

If we're being honest, most of us don't remember our high school biology classes well enough to remember what the lymphatic system does. Can you give us a refresher?

Lymph is a fluid in your body that contains white blood cells-which fight infection. Lymph flows through the body via a network of thin tubes, called lymph vessels, and small bean-shaped structures, called lymph nodes. If part of your lymphatic system is damaged or blocked, lymph cannot drain from nearby tissues. That's when you start to see swelling in an arm or a leg.



Are some people at higher risk of developing lymphedema?

Anyone who has undergone lymph node dissection or radiation that has damaged the lymph nodes is at risk. People who are overweight or have diabetes are at greater risk. But we don't fully understand why one person may develop lymphedema immediately, while another person may develop it several years down the road and a third person may never develop it. We do think that inflammation may play a role in its development, so we caution patients to be careful to prevent any type of trauma to the body, particularly to the limb affected by treatment.



CALL

To make an appointment with an occupational or physical therapist, call 734-936-7070. For more information on lymphedema, visit mcancer.org/thrive.

Attend a class at the U-M Comprehensive Cancer Center to learn more about lymphedema. Call 734-615-4012.

7 THINGS YOU CAN DO TO PREVENT LYMPHEDEMA



1. Take precautions before long airplane rides. If your flight will last more than three hours, use compression sleeves, stockings or bandages to lower your risk of developing lymphedema.



2. Maintain a healthy body weight. The body stores fat in the same tissue spaces as lymphatic fluid, so people who are overweight are at higher risk of developing lymphedema.



3. Eat a low-fat, low-salt diet. The lymphatic system helps to process fat, so give it a break by eating less of it. Salt can also lead to more fluid production, so it's best to limit it. If you plan to eat saltier food, drink plenty of water.



4. Don't be a weekend warrior or a couch potato. By all means, exercise, but start slowly so your body isn't traumatized. Include gentle stretches. If you are at risk of lymphedema in your legs, get up and move around. Don't fall asleep in recliners or with legs flexed.



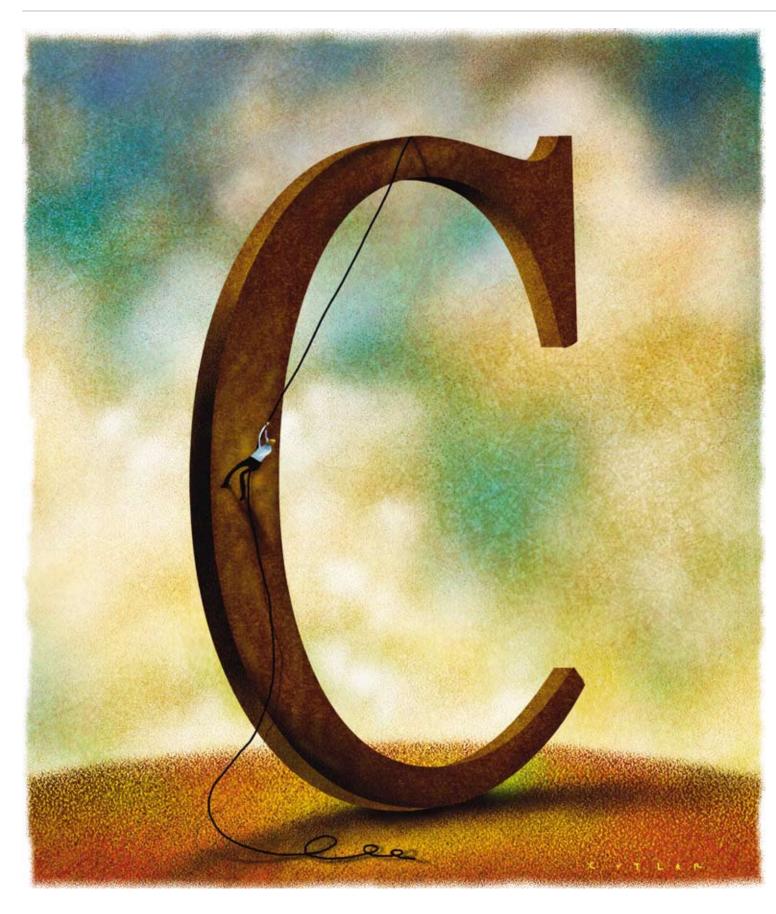
5. Take care of your skin. Lymphedema is thought to be triggered by viruses and bacteria that can enter the body through breaks in the skin. Use bug repellent to ward off mosquito bites and be sure to use sunscreen to prevent burns, which can cause your body to produce more fluid. Don't wear tight clothing.



6. Keep cool. Drink plenty of water when you are in warm climates and when you exercise. Your lymphatic system pushes more fluid into your system to cool the body, so do what you can to maintain your body temperature.



7. Get a good night's sleep. The lymphatic system works best during sleep. Set a regular time to go to bed and make sure the TV is turned off well in advance. If you're having difficulty getting your rest, talk to your health-care team.



On Your Own

FACING THE CHALLENGES OF CANCER WHILE LIVING ALONE

Cancer can turn any household upsidedown, but facing cancer while living alone can add to the challenges of coping.

Who will help pay the bills if you can't work? How do you get to the clinic for treatment if the medicine makes you too sick to drive? Who will help you take your pills on that day when the kitchen is just too far to walk?

Aryana Robbins, a social worker at the University of Michigan Comprehensive Cancer Center, said people with cancer who live alone face a lot of unique challenges.

"We help a lot of patients who live alone with the practical aspects of their care," she said, "but we also try to encourage them to seek out emotional support as well. It's difficult to be the patient, the caregiver and the advocate at one time."

Asking for help is the key for people who live alone. Connecting to people and services in your community helps to alleviate a sense of isolation that is common among people with cancer who live in a household of one. Here are some tips on how to do that.

NETWORK. Reach out to friends, acquaintances, members of your community of faith and co-workers. People often are willing to lend a hand if they know you need it. Give them options, depending on your level of comfort, about how they can get involved.

An office fundraiser may be appropriate for one person, while another may feel more comfortable asking neighbors for help with meals or rides. Ask a friend to coordinate offers of help with the tasks that need to be completed.

REACH OUT TO COMMUNITY ORGA-

NIZATIONS. Local non-profit and religious organizations may offer assistance. In particular, the American Cancer Society, United Way and Area Agencies on Aging may be able to connect you with volunteers who can help with transportation, shopping, housekeeping, meals and companionship in difficult times.

USE THE WEB. Several online tools are available to help you share your story with friends and family—and inspire them to contribute everything from kind words to a Sunday casserole to a case of nutritional drinks. CarePages.com is offered free to University of Michigan patients. The site offers free space to post updates about your condition; this is especially helpful if family is spread out across the country. LotsaHelpingHands.com (see back cover) is a useful tool for soliciting and organizing help. Also, consider setting up a wishlist via Amazon.com to let people know what supplies you need, even if they aren't offered for sale by Amazon.



BRING A TAPE RECORDER. If you don't feel comfortable inviting a friend to your medical appointments, bring a tape recorder to help you remember what your doctor says. You can listen to these conversations again later if questions pop up. You can also ask your doctor to be sure that a copy of the clinical notes from each visit is mailed to you.

GET SUPPORT. No matter how independent you are, it's important to have an emotional outlet during these difficult times. Make regular phone calls to catch up with friends socially. And consider talking with a therapist, counselor, member of the clergy or spiritual care provider.

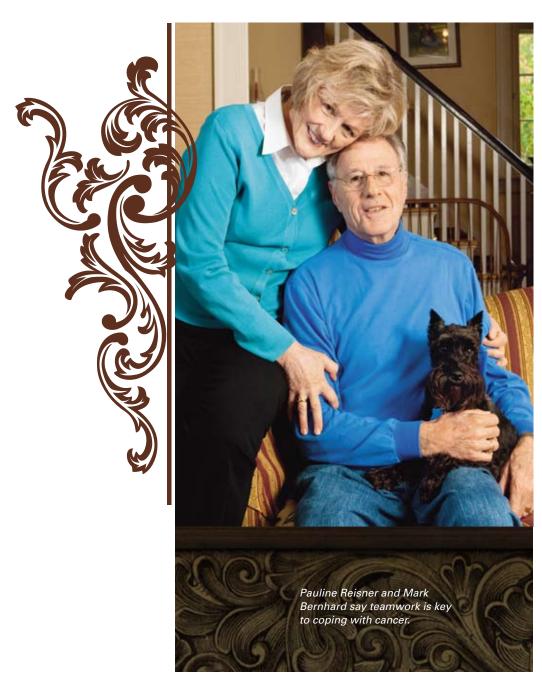
We help a lot of patients who live alone with the practical aspects of their care, but we also try to encourage them to seek out emotional support as well. It's difficult to be the patient, the caregiver and the advocate at one time. 55



CALL

If you need help managing your care, call **800-888-9825** to talk with a social worker. For more on the resources in this story, visit **mcancer.org/thrive**.

Focusing on the Caregiver



U-M RESEARCH **OFFERS INSIGHT INTO** HELPING CAREGIVERS COPE

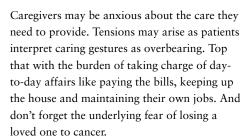
SIXTEEN YEARS AGO, MARK BERNHARD WAS DIAGNOSED WITH COLORECTAL CANCER. FIVE YEARS LATER, HE SURVIVED PROSTATE CANCER, BY THE TIME THE COLORECTAL CANCER REAPPEARED IN SPRING 2007 AND SPREAD TO HIS LUNGS, MARK AND PAULINE REISNER, HIS WIFE OF 30 YEARS, KNEW THEY COULD HANDLE WHATEVER CAME ALONG.

And so, when Bernhard and Reisner were invited to participate in a University of Michigan Comprehensive Cancer Center study measuring the impact of various interventions on quality of life for both cancer patients and caregivers, they said yes. As part of the study, a nurse met with the couple to talk about how they were coping and to provide them with information and support.

"I really appreciated the support and the focus on the caregiver," Pauline said. "I looked forward to the visits. It's not that I had desperate feelings. I knew I had support, but it was about being able to talk about where we are.

"Without this, I probably wouldn't have recognized the need to talk or gone about finding resources on my own."

As cancer invades the body, it breaches the boundaries of relationships, too. Husbands, wives, partners, mothers, fathers, brothers, sisters and friends take on the unfamiliar role of caregiver—and with it, a tremendous bundle of responsibility and emotion. Consider first:



Although cancer care focuses almost solely on patients, a growing body of research is documenting the impact of cancer on caregivers. Studies have shown that people who care for loved ones with cancer suffer as much emotional distress as the patients themselves. And yet there are far fewer resources tailored to caregivers' needs.

That's why Laurel Northouse, Ph.D., R.N., co-director of the Cancer Center's Socio-Behavioral Research program, and her colleagues designed the study in which Bernhard and Reisner participated.

"Caregivers are often viewed as support persons to patients and seldom as care recipients," Northouse said. "Most people are not prepared for becoming a caregiver, and this lack of preparation can have a negative effect on them. We now have a better understanding of the caregivers' experience. The next step is to determine the best ways to provide this care not just to patients, but to their caregivers as well."



At the core of Northouse's work are five components identified in earlier research that seem to help people fare better in the face of a cancer diagnosis. The goal of the FOCUS studiesnamed from the acronym of each of the components (see sidebar, page 11)—is to encourage families to develop these healthy behaviors in order to handle the demands of the illness.

As part of the trial, nurses with advanced degrees met with caregivers and patients in their homes to discuss ways to work as a team to manage the illness; to develop a more optimistic outlook; to find ways to cope with cancer directly,

rather than by pretending it isn't an issue; to reduce the uncertainty that comes with a cancer diagnosis; and to manage symptoms-both for the patient and for the caregiver.

Northouse and her colleagues have conducted three FOCUS studies involving breast, prostate, lung and colorectal cancer patients. Although results of the latest study are still pending, earlier studies with breast and prostate cancer patients have been promising.

In an article published in the journal Cancer, Northouse reported that after four months of the program, caregivers for spouses with prostate cancer reported higher quality of life and more confidence in their ability to provide care; better communication with their partners; less negative appraisal of the caregiving experience; and less uncertainty, hopelessness and symptom distress than caregivers who did not receive the intervention. Patients also reported less uncertainty and better communication after four months, as compared with those who did not receive the intervention. Some effects were sustained up to a year later.

For Kate and Nick Ebli, participating in the FOCUS program led to a revelation that Kate hadn't expected. Kate was originally diagnosed with breast cancer in 2004; last year, doctors found that it had returned and spread to her lungs and liver. During one of the FOCUS sessions, the couple was asked to talk about what they most feared.

"I thought his response would be losing me, but his response was not being in a position to help me—being somehow helpless to attack this dragon," said Kate, a state representative from Monroe County. "I hadn't thought about that."

"It's just very hard for me to walk away from something without fixing it," said Nick, a retiree and Marine Corps veteran who served in Vietnam.

"We've been married for a very long time, we have a great relationship with each other, we have wonderful support from family and friends, but it was helpful to acknowledge that there are some things you just don't want to talk about," Kate said. "You just want to go

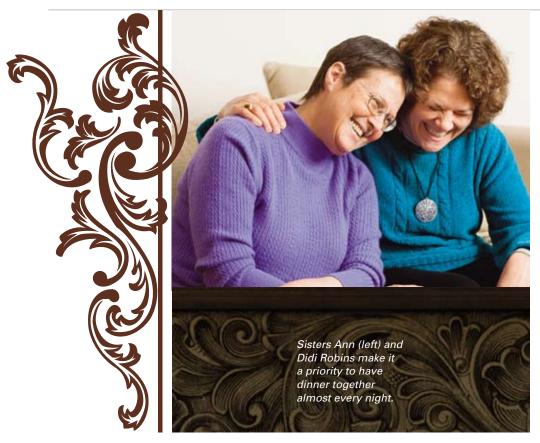


about living life and enjoying life, but when circumstances are such that you have to deal with cancer, I found it helpful to have someone else there to help us talk about it. And I didn't think we were the people who needed that."



Given the state of the economy in Michigan, caregiver needs may continue to grow. A 2009 survey conducted by the National Alliance for Caregiving and Evercare indicated that half of caregiver respondents reported that, as a result of the economic downturn, they experienced increased stress about being able to care for loved ones.

Northouse and her colleagues are looking for ways to develop more cost-effective interventions for families. Some of the ideas they are



pursuing are training nurses with bachelor's, rather than master's degrees, to deliver the intervention; developing Web-based tools to accomplish the same goals; and collaborating with The Wellness Community to pilot the program using small groups of patients and caregivers.

The Wellness Community initiative—which will be tested by the Ann Arbor chapter—is funded by a \$100,000 grant from the Rosalynn Carter Institute for Caregiving.

"It's certainly less costly to deliver the intervention to a group," Northouse said. "And we may find that there's more synergy in small groups of couples meeting regularly. We may discover added benefits with this model."

Another future goal for the FOCUS program is to better understand whether gender plays a role in how caregivers cope. The latest study, which involves lung and colorectal cancer patients, may help to shed light on that question, she said.

Although most who have participated in the studies have been married or committed couples, other types of caregivers have been

represented as well. Ann and Didi Robins, two sisters, participated in the latest study.

Ann, who has been fighting metastatic colon cancer since 2001, moved to Ann Arbor from New York City two years ago to be closer to her sister. The sisters live across the street from one another.

"We have our independence," Ann said.

"But in the first six weeks, we almost killed each other," Didi said.

The sisters have dinner together almost every night. Didi said she makes time, despite the hectic pace of her work as a professor of human genetics at the U-M Medical School. And on weekends, the Robinses head to Ann's basement to work on decorative wall hangings that they're constructing from discounted Motawi tiles.

Although Ann and Didi are close—and close in age as well with only 15 months between them—the things that are emotionally difficult for each of them are very different. They said the FOCUS program helped them to talk about those things.

"I would begin, but I couldn't open my

mouth to say it: What do you want to be done afterward? Do you want to be buried or cremated?" Didi said.

"I don't find that hard at all," Ann said. "But it was hard for me to say. I'm this hard-as-rock, butter-wouldn't-melt-in-mymouth scientist person, and there are things that just the mere thought of them brings tears to my eyes," Didi said. "Ann's always been the warmer, cuddlier one."

"It's very hard for both of us," Ann said. "We're very close, and I can't bear the thought of my sister being alone. It's really hard for her to think about me not being here."

"She's known me my entire life since childhood," Didi said. "She knows how we got to be the way we are, for better or worse."

"You don't get to choose your sisters the way you choose spouses," Ann said. "You get the good side and the bad side."

"Spouses can remarry, but I'm not going to get another sister," Didi said.



Talking about cancer and death isn't easy. But Northouse said her research suggests that people who are able to cope with it directly rather than through avoidance—fare much better emotionally. Often, people try to protect one another by not talking about their fears and sadness.

"People put a lot of energy into not talking about it," Northouse said. "Caregivers don't want to upset patients or put an extra burden on them. But it's really hard to support one another when you don't know what the other is feeling."

All the families *Thrive* interviewed agreed that talking through their situation with a nurse helped them to feel more comfortable.

For Bernhard and Reisner, it was reassuring,

"It helped us to focus on the really positive things we have going for us," Pauline said. "It also made us think about how fortunate we were that we had a strong relationship and we could be supportive of each other.

"It really makes you realize how much teamwork is involved."

TIPS FOR HEALTHY CAREGIVING RELATIONSHIPS

- Keep the communication open. It's helpful for patients and caregivers to talk through their emotions with one another. Often, people take it for granted that they know what other people are thinking or feeling. Even if you know another person intimately, you may be surprised to learn how he or she feels.
- But share responsibly. You don't have to talk about everything you're feeling. Dumping feelings on one another can lead to more stress.
- Set aside longstanding conflicts. Now is not the time to settle old fights. Save your energy to deal with the cancer.
- Begin to accept that the only certainty is uncertainty. Coping with uncertainty is key. It may not be pleasant, but try to remember that uncertainty is part of life—with or without cancer.
- Re-prioritize. Consider what's most important to you now and let other obligations fall by the wayside. Learn to say no.
- Maintain a healthy lifestyle. This is important for caregivers and patients—both physically and emotionally. Caregivers, don't ignore or delay treatment for your own health problems. Exercise can help relieve stress, so take time to go to the gym or for a walk in the park. The healthier you are, the better caregiver you will be.

- Allow each other space. It's good to spend time with other people, too. Caregivers, in particular, often feel too guilty to leave the house. Take time to recharge emotionally by spending a night out with friends.
- Let cancer recede into the background. Take time for enjoyable distractions. Try not to let your worries consume your life.
- Ask for help. Many of the tips offered here are challenging.

 Consider seeking out professional counseling to help you work through this.





For more resources, including links to the Cancer Center's PsychOncology program, visit mcancer.org/thrive.

KEY POINTS OF THE FOCUS PROGRAM

Five components are at the core of caregiver research conducted by Laurel Northouse, co-director of the Cancer Center's Socio-Behavioral Research program.

- AMILY INVOLVEMENT: Patients and caregivers are encouraged to work as a team to manage the illness.

 This includes supporting one another and maintaining open communication about the illness.
- PTIMISTIC OUTLOOK: Families are advised to set short-term goals they can reach, to concentrate on what's going well and to stay hopeful.
- OPING: Caregivers are provided with tools to help them cope with cancer directly, rather than pretending it's not an issue. Nurses promote active, healthy lifestyles while stressing how important it is for caregivers to take care of their own well-being—physically and emotionally.
- NCERTAINTY REDUCTION: Nurses help families get the information they need to reduce the uncertainty that comes with a cancer diagnosis—and they help families find strategies for coping with questions that have no answers.
- SYMPTOM MANAGEMENT: In some cases, addressing symptoms related to cancer treatment may bring to light issues that caregivers are having. For example, when addressing male sexual dysfunction after treatment for prostate cancer, nurses will encourage female partners to address their own sexual health concerns that may be related to menopause.

TIPS FOR SEEKING OUT COMPLEMENTARY THERAPY PROVIDERS IN YOUR HOMETOWN

You're curious about art therapy, but you live too far away from the University of Michigan Comprehensive Cancer Center to try a session. Or maybe that group session of guided imagery just won't fit into your schedule.

That's why we've put together tips for finding complementary therapy practitioners in your hometown.

Complementary therapies—such as art therapy or massage therapy—have been shown to be beneficial to people with cancer. The Society of Integrative Oncology published a report last year stating that "Mind-body modalities are recommended as part of a multidisciplinary approach to reduce anxiety, mood disturbance, (and) chronic pain and (to) improve quality of life."

"Complementary therapies can be a powerful tool in helping to maintain a sense of wellbeing during cancer treatment," said Donna Murphy, director of Complementary Therapies at the U-M Cancer Center. "Many options are available to people who would like to take a comprehensive, mind-body approach to their care. Our goal is to connect our patients with these resources so that they can experience some relief of symptoms and learn coping techniques that will be helpful to them throughout their lives."

Ask for a referral. Talk to your primarycare doctor or call a local hospital to ask for recommendations to a practitioner. Often, if you attend a group session in your area, you may find an instructor or other like-minded people who can offer suggestions for one-onone assistance.

Seek out practitioners who specialize in legitimate fields. Evidencebased research, such as what is published in peer-reviewed journals like the Journal of the American Medical Association, are the best way to predict the potential impact of a particular therapy. Services the Cancer Center recognizes as having benefit to patients include art therapy, music therapy, massage therapy, guided imagery, yoga and creative writing.

Look for professionals who are licensed, board certified or registered.

Accreditation indicates that a practitioner has trained in a particular field and is held to a code of professional ethics. Accredited art therapists may use the letters "ATR-BC" after their names; accredited music therapists use "MT-BC." If you're seeking out a massage therapist, make sure the person is certified specifically in oncology massage. Certified oncology massage therapists have had special training to ensure that they do not put patients at further risk for lymphedema (For more on lymphedema, see page 4).

Interview prospective practitioners.

Here are a few questions you should ask: Where did you get your training? How long have you been practicing? What type of experience have you had? Have you worked with people with cancer before? What evidence do you point to that your practice is effective?

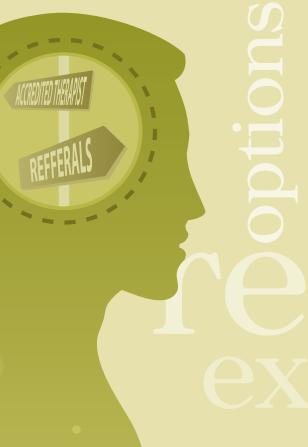
Talk about money up front. Make sure you understand the practitioner's fee structure and when payment will be due. Ask if the practice will bill third-party insurance companies. Although it's very rare, some insurance plans will cover guided imagery or meditation if it's coded as "biofeedback."

Ask about any spiritual content in a provider's practice. Some practitioners, particularly those who offer guided imagery or meditation, may have a strong religious orientation. Make sure you are comfortable with the practitioner's viewpoint before proceeding.

Look for red flags. Don't go to anyone who is trying to sell you products, such as CDs or vitamins. Also, avoid someone who wants to jump into treatment without first doing an assessment to learn about you, what you're experiencing and what you're hoping to get out of the therapy. If someone starts your first visit by saying, "Oh, I've treated cancer patients before and I know just what to do," walk out the door.



For more on complementary therapies offered by the Cancer Center or to view related videocasts, visit mcancer.org/thrive.





Eating Rainbows

CHOOSING COLORFUL FOODS LEADS TO HEALTHY DIETS

By Joan Daniels, R.D., and Nancy Burke, R.D.

WHEN YOU WERE A KID, YOU WANT-ED THE BIG BOX OF CRAYONS, THE ONE WITH THE MOST COLORS. YOU WOULDN'T HAVE DREAMED OF DRAWING A PICTURE IN DRAB NEUTRALS.

The same rule should apply to your dinner plate. Don't settle for the boring browns of meat, the beige blahs of potato chips and the worthless whites of refined carbohydrates, like white bread, white rice and white sugar.

Paint your plates with fruits and vegetables in a variety of colors. Color often signifies valuable nutrients that can help in fighting cancer. We've put together a color wheel to help you learn about the phytochemicals—or plant chemicals—that may be beneficial to you. Although we don't fully understand how these chemicals work individually, we do know that eating a well-rounded diet by combining a variety of colorful fruits, vegetables and legumes creates a synergistic effect that helps to promote good health and lower disease risk.

Turn the page for a guide to eating colorfully.











RED: tomatoes, watermelon, pink grapefruit, guava, papaya, cranberries

Lycopene, an antioxidant that may help to protect against cancers of the prostate, stomach and lung, lends some fruits and vegetables their reddish cast. Foods that are high in lycopene—including tomatoes-have been linked to lower risk of cancer and heart attacks. Cooked tomato sauce is an especially great source of lycopene, as the cooking helps the body to absorb carotenoids more easily.

ORANGE: carrots, mangos, cantaloupe, winter squash, sweet potatoes, pumpkins, apricots

Orange-colored foods may contain beta-cryptoxanthin, beta-carotene and alpha-carotene, nutrients that can be converted into vitamin A. The beta-carotenes in some orange fruits and veggies also may play a role in reducing risk of lung, esophagus and stomach cancers.

BROWN: beans, chickpeas, lentils

Nope, we're not talking about a big hunk of meat. Lentils, black beans and chickpeas can play a big role in preventing heart disease. They are all full of folate, a B vitamin that counteracts homocysteine, an amino acid that can help blood clots to form.

GREEN: broccoli, cabbage, bok choy, brussels sprouts

Cruciferous vegetables, such as broccoli and cabbage, are rich in isothiocyanates and indoles two phytochemicals that may have anticancer properties. Leafy green vegetables also have been linked to reduced risk of heart disease. **Green vegetables** are powerhouses of nutrients; they're also packed with folic acid, vitamin K, carotenoids and omega-3 fatty acids.

PURPLE: blueberries, eggplant, blackberries, prunes, plums, pomegranates, beets, purple cabbage

Purple and blue fruits and vegetables draw their color from anthocyanin, an antioxidant. The anti-inflammatory properties of anthocyanin may be beneficial for lowering risk for cancer and heart disease, while also lessening the painful effects of arthritis.



For recipe ideas, visit mcancer. org/thrive. To make an appointment with a dietitian, call 734-647-8902.

Source: Produce for Better Health Foundation



STUDY CONFIRMS HIGHER RISK OF PANCREATIC CANCER IN LYNCH SYNDROME FAMILIES

A new study has documented a ninefold higher risk of pancreatic cancer in individuals with Lynch syndrome, a rare genetic cancer predisposition syndrome.

The study, published in the Journal of the American Medical Association, is the first using rigorous statistical methods to confirm the elevated risk, the authors say. Previous studies yielded conflicting results.

"In light of these findings, we believe that if you have Lynch syndrome and there is pancreatic cancer in your family, you should be aggressively screened," said Sapna Syngal, M.D., M.P.H., of Dana-Farber and Brigham and Women's Hospital. Syngal is the report's senior author along with Stephen B. Gruber, M.D., Ph.D., M.P.H., associate director for cancer prevention and control at the University of Michigan Comprehensive Cancer Center.

Carriers of the Lynch syndrome gene mutations have an 80 percent risk of colorectal cancer beginning at a young age, as well as an array of other cancers of



Stephen B. Gruber, M.D., Ph.D., M.P.H.

the digestive system, brain and skin, and endometrium and ovaries in women.

While colorectal cancer is increasingly being detected early and prevented thorough colonoscopies and removal of precancerous polyps,

there is currently no effective means of early diagnosis for pancreatic cancer. Scientists are testing imaging techniques and are searching for biomarkers that might signal the early stages of the disease.

Mutations in several "mismatch repair" genes that fix copying errors in DNA underlie Lynch syndrome. The researchers designed the study to estimate the risk of pancreatic cancer in families with these inherited mutations. A total of 147 families were drawn from colorectal cancer registries at Dana-Farber and the U-M Cancer Center.

"Because pancreatic cancer is a relatively rare cancer, pooling together the databases at the University of Michigan and Dana-Farber was critical to this analysis," said co-first author Bhramar Mukherjee, Ph.D., a biostatistician at the U-M School of Public Health.

The analysis revealed a nine-fold increase in risk of the disease compared with the general population, and the cancer tended to appear earlier. The absolute risk of pancreatic cancer in the Lynch families was 1.31 percent at age 50 and 3.68 percent at 70 years. In the general population, there is only a 0.04 percent risk at 50 years and a 0.52 percent risk at age 70.

Syngal noted that pancreatic cancers appear to "cluster" in some Lynch syndrome families, while others don't have an increased incidence of the disease. For that reason, she said, screening is recommended only for patients carrying the Lynch mutations who also have a family history of pancreatic cancer.

MRI MAY CAUSE MORE HARM THAN GOOD IN NEWLY DIAGNOSED EARLY BREAST CANCER

A new review says using magnetic resonance imaging before surgery to assess the extent of early breast cancer has not been shown to improve surgical planning, reduce follow-up surgery or reduce the risk of local recurrences.

The review, appearing in CA: A Cancer Journal for Clinicians, says evidence shows that MRI increases the chances of more extensive surgery over conservative approaches, with no evidence that it improves surgical care or prognosis.

Randomized controlled trials have shown that women with early stage breast cancer who are treated with lumpectomy followed by radiation have the same survival rates as those who undergo mastectomy. Recently,

MRI has been used in preoperative staging for women with newly diagnosed breast cancer because it detects additional areas of cancer that do not show up on conventional imaging.

In this review, Nehmat Houssami, MBBS, Ph.D., of the University of Sydney, Australia, and Daniel F. Hayes, M.D., director of the breast oncology program at the University of Michigan Comprehensive Cancer Center, reviewed available data on preoperative MRI's detection capability and its impact on treatment.

The use of preoperative MRI scans in women with early stage breast cancer has been based on assumptions that MRI's detection capability will improve treatment by guiding surgeons to remove additional disease detected by MRI and by potentially reducing recurrence

in the treated breast. The authors say emerging data show that this approach leads to more women being treated with mastectomy without

evidence of improvement in surgical outcomes or long-term prognosis.

"Overall, there is growing evidence that MRI does not improve surgical care, and it could be argued that it has a potentially harmful effect," conclude the authors. They say well-designed, randomized controlled trials are needed to quantify potential benefit and harm, including careful evaluation of its impact on quality of life.



Daniel F. Hayes, M.D.

thrive

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Resource Exchange



Organizing the Battalion

Coordinating the logistics of cancer care can feel like a major military operation. Getting to and from various appointments, taking care of meals and handling the usual routine of daily life can set your head swimming.

That's why we think LotsaHelpingHands.com is a Web site worth knowing. Although the site offers the usual blogging tools and photo sharing, its core value lies in its calendaring functions. Users can set up a Web site and invite friends and family to view it. Members of your online community can then sign up for various tasks and activities. It's a simple site that will help you stay organized.

Need to get your mom to her chemotherapy infusion at the same time as your kids' soccer practice? Post a call for help. It saves lots of phone calls and e-mails to figure out who can do what when. And it gives you an easy answer when someone asks how they can help.

Next time someone asks for marching orders, send them to

LotsaHelpingHands.com.

