

Fighting Cancer with Food



In this special prevention issue:

Joining forces with St. Joseph's • Balancing act • Food as medicine
Funding the future • An evening with the Phoenix Friends

Director's message



Cancer is our enemy.

It is widely believed and discussed that 40 percent of all cancer deaths are preventable.

At The University of Arizona Cancer Center, our mission, our raison d'être, for more than 35 years has been "To prevent and cure cancer." It's important that those first words in our mission are "to prevent."

I've been an oncologist for my entire professional career, and I firmly believe that many malignancies can be prevented by a change in lifestyle.

One of my favorite phrases is – "stay out of the refrigerator and get off the couch." What I mean, of course, is if you consume a healthful diet and participate in as little as 30 minutes of exercise at least five times a week, you can

reduce your risk of cancer. It's estimated that at least one-third of all cancer deaths are linked to poor diet, being overweight and physical inactivity.

In addition to individuals taking control of their lives, researchers at the Cancer Center work tirelessly in our labs and in clinics to bring prevention therapies and early cancer detection technologies to patients. From skin and breast cancer to colon polyps, and superficial bladder cancer, the UACC is in the forefront of cancer prevention. You can read about our work throughout the publication.

Sincerely,

David S. Alberts, MD
The University of Arizona
Cancer Center Director

On the cover

Cynthia Thomson, PhD, RD, CSO, believes that food can be medicine. See pages 4-5 to read more.

Photo by www.csrichards.com



Patricia Thomson, PhD, is the director of the Cancer Prevention and Control Program at The University of Arizona Cancer Center.

BALANCING ACT

How do you treat someone who doesn't have a disease? It's a question Patricia Thomson, PhD, has spent a lifetime trying to answer.

As the new director of the Cancer Prevention and Control Program at The University of Arizona Cancer Center, Dr. Thomson is at the forefront of an exciting, yet remarkably challenging, field of cancer research.

"It's a balancing act," Dr. Thomson said. "We have certain medications and treatments that we know prevent cancer, but some of them have potentially serious side effects. In prevention, we can accept no toxicity, because we're treating a healthy person who may or may not battle cancer one day, as opposed to treating someone who already has cancer."

It takes a certain amount of flexibility to excel in such a volatile and unpredictable area of research – something this self-described "small-town girl from West Texas" possesses in spades.

Dr. Thomson completed her undergraduate work at Angelo State University in her hometown of San Angelo, Texas, before moving on to the University of Texas Health Sciences Center in San Antonio, where she earned her PhD in microbiology and immunology.

After she completed her PhD program, Dr. Thomson accepted a position with the National Center for Toxicological Research in Jefferson, Ark., where she trained in a new program for combining molecular biology with epidemiology (the branch of medical science that deals with the incidence, distribution, and control of diseases).

"I felt like taking that information to the patient population would create this wonderful opportunity to cross-train in how we take everything we have learned from the laboratory and apply to humans," Dr. Thomson said.

Her work there led to an eventual collaboration with the CPC group at The University of Arizona Cancer Center. "I clearly remember standing outside the 'new' Arizona Cancer Center building just after they finished construction and looking out toward the mountains and desert skyline," Dr. Thomson said. "I said to myself, 'What an absolutely gorgeous place.'"

She completed her training in Arkansas, and she accepted a faculty position at the University of Texas, MD Anderson Cancer Center in Houston in 1999.

At the time, she never thought she'd end up in Tucson – she was a Texan, after all. But she maintained her collaborative relationship with UACC, and when a position in the CPC group opened up in 2001, she jumped at the opportunity.

She was thrilled to join what she called one of the nation's largest and most productive cancer-prevention programs. Dr. Thomson developed into one of the Cancer Center's key contributors in its expansive prevention clinical trials program and leads a major effort to identify modifiable risk factors for cancer.

Dr. Thomson took over as the CPC director in November 2011 from Elena Martínez, PhD, who recently relocated to the University of San Diego, Calif., and Peter Lance, MD, who is now the UACC Chief Cancer Control Officer.

"I'm truly standing on the shoulders of giants here," Dr. Thomson said. "The work Dr. David Alberts and then, subsequently Drs. Lance and Martínez and the CPC have done here has really put Tucson on the map in terms of cancer prevention. I'm very lucky because the program has been built by such incredible leadership."

Dr. Thomson takes over at a crucial time in the field's progression. She hopes to use this leadership position to highlight the CPC's successes and keep finding clever, innovative ways to prevent the disease before it can occur.

"We're in a new era," Dr. Thomson said. "We have proof of principle that we can prevent some cancers. Now, how do we conduct studies of highly promising agents that can help high-risk people who don't have disease, but do so in a way where we won't have to wait 10 to 20 years and spend millions of dollars to find out whether we should pursue it?"

"There are always going to be challenges, but there are also new opportunities every day," she adds. "It's up to us to promote the message that the real cure for cancer is prevention."

UACC joins forces with St. Joseph's



Rendering courtesy ZGF Architecture

The University of Arizona Cancer Center and St. Joseph's Hospital and Medical Center in Phoenix have created an affiliation which leverages the strengths of both organizations, in collaboration with community-based oncologists, to transform the delivery of cancer care and to establish a premiere center for ambulatory and inpatient oncology, with an emphasis on high quality, patient-centered, evidence-based multidisciplinary care, and clinical/translational research.

"We envision our operations in Phoenix – at St. Joseph's and at our future outpatient facility – as a national and international model of integrated healthcare to fight cancer," said David S. Alberts, MD, University of Arizona Cancer Center Director.

"Both UA and St. Joseph's have national reputations for excellence and both attract medical talent and patients from around the

world," said Linda Hunt, senior vice president of operations, Dignity Health Arizona and president and CEO of St. Joseph's Hospital and Medical Center.

St. Joseph's, an established healthcare leader in the Valley, will serve as the University of Arizona Cancer Center at Phoenix's primary inpatient clinical site. St. Joseph's also will provide outpatient clinical facilities at its central Phoenix medical center campus, with eventual expansion of Cancer Center outpatient activities to a multi-story, 250,000-square-foot outpatient center to be constructed on the downtown Phoenix Biomedical Campus.

This alliance will provide invaluable opportunities for Arizona's cancer patients, advocates, health practitioners, and students to address a broad variety of oncology problems, and let the organizations work together to provide innovative solutions.

- By Sara Hammond

Photo by www.csrichards.com

- By Nick Prevenas



Photo by www.esrichards.com

Cynthia Thomson, PhD, RD, CSO, has more than 30 years of clinical and research experience in diet, obesity and cancer.

FOOD AS MEDICINE

The most effective cancer prevention therapy can't be found in a miracle pill or through an expensive series of medical procedures. Cynthia Thomson, PhD, RD, CSO, said the best treatment can be found in the produce section of your local supermarket.

“Many of the compounds and bioactive chemicals that occur naturally in vegetables and fruit act to protect us against cancer,” Dr. Thomson said. “Many of the medicines we use to treat people are derived from these foods.”

Dr. Thomson has been an active researcher and clinician at The University of Arizona since 1992 and a University of Arizona Cancer Center member since 2000. She was recently named the director of the Canyon Ranch Center for Prevention and Health Promotion at the Mel and Enid Zuckerman College of Public Health.

Dr. Thomson has more than 30 years of clinical and research experience in diet, obesity and cancer. She is a nationally recognized expert in the area of diet and health, having served as a national spokesperson for the American Dietetic Association, and she co-authored the American Cancer Society's consumer book for diet, physical activity and cancer prevention guidance for survivors of cancer.

She has led several dietary intervention trials and directed the graduate program at the Department of Nutritional Sciences in the UA College of Agriculture and Life Sciences. These experiences make her uniquely positioned to improve the health of the public through effective and strategic research, interventions, community engagement, outreach and new, innovative training programs.

And, in perhaps her most impressive achievement, she came up with a plan to convince her two sons to make healthful eating a lifelong routine.

In the mid 1990s, Dr. Thomson embarked on “The Year of Fruits and Vegetables” with her boys, Daniel and Patrick. When the Thomsons would shop for groceries, she asked her sons to pick out a fruit

or vegetable none of them had ever tried before. Eventually, this adventure led the Thomsons to Asian markets, farmers' markets, and even to Willcox to visit the independent farms.

“We would always find a new treat or some new way to prepare an old stand-by,” Dr. Thomson said. “It was a lot of fun. The boys were old enough to get involved, but not quite old enough to have their eating habits set in stone.”

Today, Dr. Thomson's sons have carried those healthful eating lessons into their early-to-mid 20s.

“People have these horrible memories of vegetables they tried to eat when they were young kids and they never try again,” Dr. Thomson said. “Healthy eating can be challenging if you hang on to old preferences. It's about being creative and finding new ways to enrich your diet.”

A good rule of thumb is to make sure one-third of your shopping cart is filled with fruits and vegetables. Color variance is important, as well. This is an easy way to make sure your body is getting all of the nutrients essential for cancer prevention.

“The biochemicals present in vegetables and fruit can act as a small, low dose of medication,” Dr. Thomson said. “If you get that dose every single day of your life, it's going to help protect you. Hopefully, you won't have to take that large dose through pharmaceuticals later in life.”

Dr. Thomson added that it is important that consumers get in the habit of reading food labels and knowing what those numbers mean. Just because a food is marketed as healthy doesn't mean that it necessarily delivers on that promise.

“For example, we've found that green tea has many positive health benefits, including a reduction in cancer risk for certain people,” Dr. Thomson said. “But now, you see it bottled up with dozens of other flavors and sweeteners. We had this healthy product that has now been diluted to the point where the beneficial compounds in some products have been minimized.”

Some people might not see this as such a big deal. After all, a diet low in essential nutrients can be fixed by a multivitamin regimen, right?

Well, not quite.

“What we've been able to ascertain through our studies is that multivitamin use is typically a marker of other good health habits,” Dr. Thomson said. “Those people who take multivitamins tend to be the people who are also eating balanced diets, reading labels, not smoking and receiving regular health screenings.” In addition, multivitamins do not contain the important, naturally occurring bioactive compounds found in vegetables and fruit.

So now you're eating a healthful diet and you know what foods to avoid. What else can you do to minimize your cancer risk?

For starters, increase your physical activity. Most people mistakenly believe that a few minutes of serious exercise per day is enough, but that's only the beginning.

“What we're now realizing is that even people who exercise for 30 minutes several times a week may sit at their televisions and computers for hours at a time without moving. That is a major health risk,” Dr. Thomson said. “I set the alarm on my phone to remind me to get up and move every hour if I've been at my desk for too long.”

There are no quick-fix solutions to improve one's health and reduce one's risk for cancer. Consistency is the key. It comes from a daily diet rich in vegetables and fruit. It comes from regular physical activity. It comes from a healthy body weight. And it comes from creativity.

“I'd hate to one day live in a world like The Jetsons, where all your nourishment comes in pill form,” Dr. Thomson said. “With the internet, anyone can find fun, innovative and simple ways to prepare healthy foods.”

- By Nick Prevenas



Dr. Thomson is recruiting 150 breast cancer survivors who are currently taking tamoxifen. The participants will receive either a placebo or a bioactive found in broccoli called DIM (diindolylmethane) for six months. The hypothesis is that the tamoxifen-DIM combination may increase the drug's efficacy by modifying hormone levels and/or breast density.

If you or someone you know may be interested, contact Julie West at jwest2@email.arizona.edu or (520) 321-7748.

RECIPES FOR HEALTHY EATING

Eating healthy doesn't have to be a chore. With the recipes and tips presented in “Recipes for Healthy Eating,” proper nutrition can become part of your daily routine.

Recipes for this book were chosen by faculty, staff and volunteers of The University of Arizona Cancer Center. In addition to more than 70 high-fiber, low-fat recipes ranging from main courses to side dishes to salads, shakes and desserts, this booklet contains healthy eating tips provided by the National Cancer Institute (NCI) and The University of Arizona Cancer Center's “More Matters” project, as well as a guide to in-season fruits and vegetables provided by Arizona Grown.

To obtain your copy of “Recipes for Healthy Eating,” send an e-mail with your name and mailing address to azcc@azcc.arizona.edu.



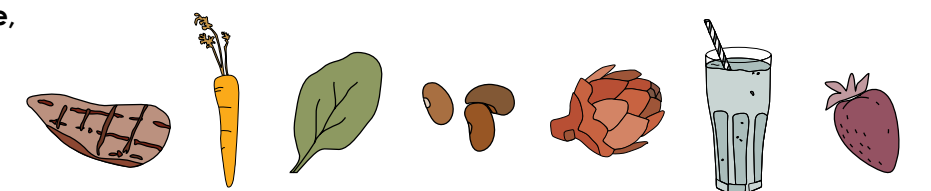
Southwestern Pepper Cups

Makes 10 servings

- 5 medium red, yellow or green peppers, halved and seeded**
- 1/3 cup onion minced**
- 1 clove garlic, minced**
- 1 1/2 teaspoons olive oil**
- 3 cups cooked brown rice**
- 1 can (10 1/2 ounces) tomatoes with chilis, diced and undrained**
- 1 can (8 1/2 ounces) whole kernel corn, drained**
- 1/3 cup reduced-fat sharp cheddar cheese, shredded**

Preheat oven to 350°F. Blanch peppers (boil 2 to 3 minutes, then plunge in ice water or place under cold running water); drain and set aside. In medium skillet, cook onion and garlic in oil over medium-high heat for 3 minutes. Combine rice, tomatoes, corn and onion mixture; mix well. Spoon into pepper halves. Place filled peppers on baking sheet coated with cooking spray. Bake at 350°F for 10 minutes or until hot. Sprinkle with cheese. Bake for 5 to 10 minutes or until cheese melts.

Nutritional Analysis Per Serving: Calories, 131; Fat, 2 g; Cholesterol, 4 mg; Fiber, 2 g; Sodium, 78 mg. Percent calories from fat, 16.



FUNDING THE FUTURE

According to the Centers for Disease Control, specifically unique circumstances of culture, location, history and health care produce unique patterns of cancer occurrence among Native Americans.

Former Tohono O'odham Nation chairman Vivian Juan-Saunders witnessed this firsthand. She saw countless members of her tribe succumb to the ravages of this disease. As a result, she wrote a letter to University of Arizona Cancer Center Director David Alberts, MD.

Her message was simple: "We need your help."

This was a major moment in that tribe's fight against the disease. Traditionally, Native Americans are reluctant to make their feelings known on this issue.

"Many tribal elders won't even speak about it," said research administrator Jennifer Prissel. "They believe if you talk about cancer, then you'll end up getting cancer. Many Native Americans believe that if you put an idea out there, it will come back around and haunt you. It's our goal to educate on the prevention, screening and treatment of all cancers."

The Partnership for Native American Cancer Prevention (NACP) was established in 2001 to help alleviate the unequal burden of cancer among Native Americans of the Southwest through research, training and outreach programs.

This collaboration between the UACC, Northern Arizona University, and the National Cancer Institute primarily develops sustainable community education programs and research for cancer prevention that meet the unique needs of the Hopi Tribe and the Navajo and Tohono O'odham Nations.

In addition, it aims to strengthen the level of education and treatment opportunities available to tribal members, as well as develop programs that facilitate the successful transition of Native American students into these research areas.

In any given school year, roughly 100 Native American students take part in this program. Some are hoping to become biomedical research scientists, while others are studying to become social workers or behavioral scientists. Through this collaborative effort, these students are able to return to their

tribes and establish proper prevention, screening and/or treatment techniques.

The positive affects of that collaboration works both ways, as well. "When I first started working here [in 2006], the relationship between us and the tribal members was a work in progress," Prissel said. "They treat us like family now. They don't even have to call us because they know that we're there, ready to help at a moment's notice."

The NACP is one of only a handful of U54 grants currently receiving funding from the National Cancer Institute. U54 grants fund cooperative, interrelated research programs that focus on specific problems or themes. This current five-year renewal — which began in 2009 — will bring in a total of \$15 million to the program through 2014.

However, there are still dozens of practical concerns — transportation and education among them — that fall outside of the funding parameters. That's where generosity and altruism come in.

In December 2011, Marilyn Lobell donated \$100,000 to the UACC, which she asked to be used for disparities among Native Americans.

"Each year, anywhere between three and six students hoping to earn their master's or PhD come to us and ask for help," Prissel said. "These are brilliant students who are often at the end of their rope financially. Donations like this make it possible for us to establish scholarships to help students in these situations finish their education."

Lobell's late husband, Michael, was among the UACC's most influential researchers on this subject. He was key in establishing the foundation for these tribal relationships.

"Donations like this could change the lives of dozens of kids, which could change the future of an entire tribe or nation," Prissel said.

- By Nick Prevenas

FROM LEFT: Tony Ward, Monica Yellowhair and Amanda Tachine study at the University of Arizona as part of the Partnership for Native American Cancer Prevention.



Highlights in giving



An evening with the 'Friends'

The 26th annual "Evening with the Friends" will feature fabulous silent and live auctions, dinner, dancing and a commitment by the 50 amazing "Friends" to support The University of Arizona Cancer Center's quest to prevent and cure cancer.

The Phoenix Friends have commissioned a piece of fine art for this year's auction, and an original piece of art graciously donated by noted artist Timothy Chapman and Wilde Meyer Gallery will be a featured auction item.

The Phoenix Friends

The Phoenix Friends of the University of Arizona Cancer Center have raised more than \$5 million for the UACC. Their gifts have supported essential cancer research programs and new technology for more than 25 years.

Please visit www.phoenixfriends.org for more information about "An Evening with the Friends" and the Phoenix Friends of the University of Arizona Cancer Center.

Phoenix Friends fund cutting-edge clinical trial

The Phoenix Friends have stepped up to provide generous support for an upcoming clinical trial that will measure tumor acidosis in patients with breast or ovarian cancer.

Marty Pagel, PhD, presented his work with imaging studies at the Phoenix Friends' Christmas luncheon. The group responded so enthusiastically to his work that they raised \$25,000 on the spot for the next part of the clinical trial. Dr. Pagel, along with Alison Stopeck, MD, Setsuko Chambers, MD, and Phillip Kuo, MD, PhD, are excited to finally test these cutting-edge methods in the clinic.

The support from The Phoenix Friends will allow these researchers to bring these advancements to their clinics and their patients.

Palo Verde Country Club raises \$8,000

It takes more than a little bit of cold weather to deter the generous golfers at the Palo Verde Country Club.

The ladies' golf club held its annual fundraiser on Dec. 6, raising more than \$8,000 for The University of Arizona Cancer Center.

Thanks to tournament chair Cheri Almond, along with fundraising committee Sandy Patton-Joseph, Christy Thomas, Gwen Curtis, Carolyn Tagatz, Linda Reber and Ellen Bond for their hard work and generosity.

Finding new ways to treat breast cancer

Ginny Clements and Tom Rogers hosted an evening of cheer with food, friends and inspiration about our efforts to find new ways to treat breast cancer.

Friends were invited to learn about an exciting new drug developed at The University of Arizona Cancer Center that may save the lives of those with metastatic breast cancer.

Dr. David Alberts and Dr. Joyce Schroeder shared the incredible and exciting advances in breast cancer drug development.

For more information on how you can help Dr. Schroeder's work, please call our development office at (520) 626-5279.

FROM LEFT: Tom Rogers, Ginny Clements, Dr. Joyce Schroeder, Heather Alberts, Dr. David S. Alberts, Dr. Jeanne Louderbough.



By making a planned gift to The University of Arizona Cancer Center, you provide a legacy that benefits future generations. Please consider creating a legacy for you and your family. To learn more, please visit www.arizonacancercenter.org, e-mail development@azcc.arizona.edu or call (800) 327-5279.

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more information



www.arizonacancercenter.org

EVENTS CALENDAR

February

Cancer Awareness Month

17-19 Kona Bikes 24 Hours in the Old Pueblo: Benefitting the UACC.
www.epicrides.com.

21 Musical HOPE Campaign: Presented by cancer survivor and inspirational singer/songwriter Charlie Lustman, aka "Made Me Nuclear." UACC - North Campus, 3838 N. Campbell Ave.
www.mademenuclear.com

21 Better Than Ever Fitness Run/Walk Program Information Session: Sign up to have fun, be fit and help fight cancer!
www.arizonabte.org.

23 Better Than Ever Fitness Run/Walk Program Information Session:
www.arizonabte.org.

25 Better Than Ever Fitness Run/Walk Program Kickoff Event:
www.arizonabte.org.

March

Colorectal Cancer Awareness Month

23 Vida! Education Series - Promoting Good Health:
For additional information please contact: Bettina Hofacre (520) 626-3265.

24 Kiss Me Dirty Race: Pima County Fairgrounds - 11300 S. Houghton Rd. Benefitting the UACC.
www.kissmedirty.com.

25 Susan G. Komen Race for the Cure: 5K at Reid Park.
www.komensaz.org.

31 An Evening with the Friends: 26th annual gala event presented by The Phoenix Friends of The University of Arizona Cancer Center. A dinner and silent auction benefiting the UACC.
www.phoenixfriends.org.

April

National Cancer Control Month

7 Catalina State Park Trail Run & Walk: Better Than Ever goal event. Partial proceeds benefit the UACC.
www.everyoneruns.net.

28 Laura B. Carrillo Breast Cancer Foundation Conference: At the UACC Kiewit Auditorium, 1515 N. Campbell Ave.
www.laurabcarrillobreastcancerfoundation.com

UACC PLACES NO. 1 IN WEBSITE QUALITY

The University of Arizona Cancer Center placed No. 1 in a published study in the *Journal of Healthcare Management* that assesses U.S. hospital and health system website performance.

To identify the top-performing systems, the study measured each website's accessibility, content, marketing reach, technology and overall performance, assigning the site an overall score on a 10-point scale. The UACC's website, arizonacancercenter.org, earned the top overall score with 8.4, along with top-five showings in the accessibility and technology categories.

By comparison, the average score for the health systems studied was 6.37.

iHealthBeat.com, a website that specializes in reporting on technology's impact on health care, first reported the study's findings on Jan. 24.

Please visit www.arizonacancercenter.org for more information about The University of Arizona Cancer Center.