



The James

Ohio State is a Comprehensive Cancer Center designated by the National Cancer Institute

AUTUMN | 08

frontiers

TURNING CANCER DISCOVERIES INTO TREATMENTS

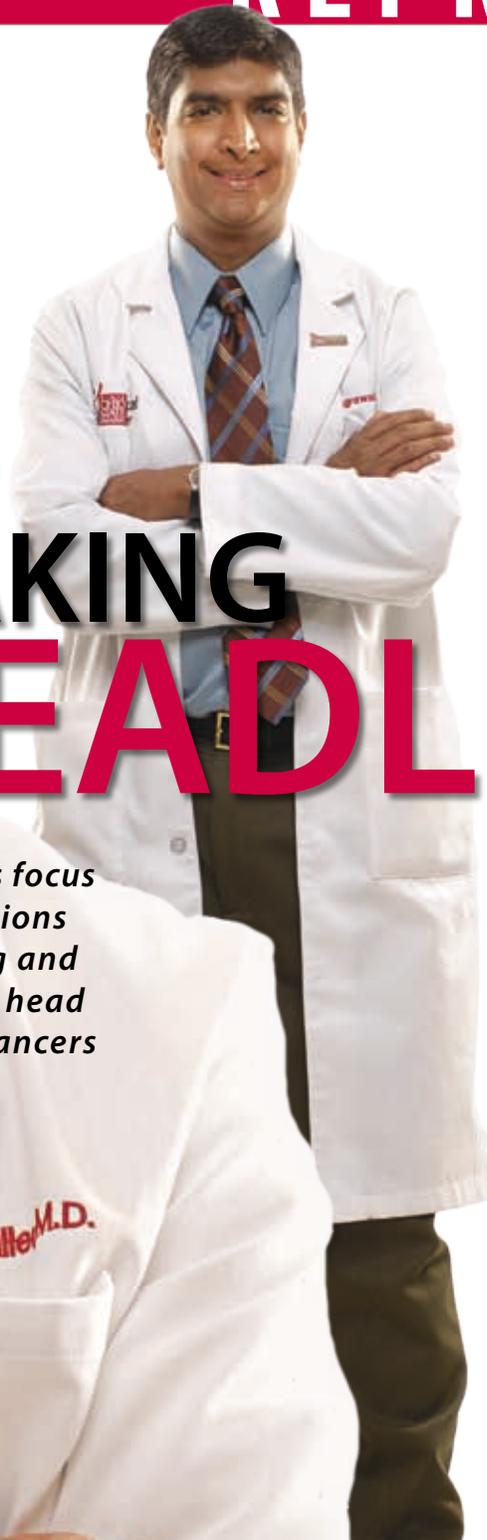
REPRINT



MAKING HEADLINES

Ohio State researchers focus on new options for treating and preventing head and neck cancers

David E. Schutter M.D.



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OHIO STATE UNIVERSITY COMPREHENSIVE CANCER CENTER—JAMES CANCER HOSPITAL AND SOLOVE RESEARCH INSTITUTE



beyond the clouds

Survivorship research at Ohio State

BY JARON M. TERRY

PHOTOGRAPH BY ROMAN SAPECKI

“We survivors tend to wait for the other shoe to drop,” says Lori Elliott who had her first breast biopsy at age 18.

What turned out to be a non-cancerous cyst started Elliott on a long road to personal vigilance and annual mammograms for benign fibrocystic breast disease. “I’m the poster child for mammograms,” she says with a smile. At age 49, Elliott’s mammogram resulted in a mastectomy for invasive ductal breast cancer.

“I came to the James because I wanted to survive this. I told my doctor here that I never wanted my children to say, ‘Oh, if Mom had only done this, she would still be with us.’” She began a chemotherapy regimen and opted for a second, prophylactic mastectomy, followed by breast reconstruction.

Lori Elliot participated in an OSUCCC study examining the effects of yoga on mood, fatigue and immune function in breast-cancer survivors.

PRESCRIPTION FOR SURVIVORSHIP

Recently designated as a Lance Armstrong Cancer Survivorship Center of Excellence, The Ohio State University Comprehensive Cancer Center (OSUCCC) is tackling survivorship issues on three fronts: patient care, research and education.

“Our goals for the Survivorship Center are in lockstep with the mission of the Medical Center—to improve cancer patients’ lives by advancing research, education and supportive care,” says Charles Shapiro, MD, director of the Survivorship Center and of Breast Medical Oncology at the James Cancer Hospital and Solove Research Institute.

“Cancer treatment is no longer about just getting patients through the treatment,” says Shapiro, who co-chairs the American Society of Clinical Oncology’s (ASCO) taskforce on adult survivorship guidelines and is a member of a national ASCO committee on cancer survivors. “We also need to identify

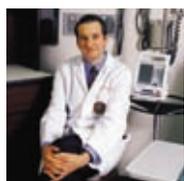
and address the long-term needs of survivors, recognizing that survivorship is a distinct phase of the cancer experience and should be treated as an essential element of cancer care.”

In addition, Shapiro says, “The National Cancer Institute Office of Cancer Survivorship considers individuals to be cancer survivors from the time of diagnosis and throughout the balance of life, and they have expanded this definition to include caregivers, as well.”

Some 12 million Americans are living as cancer survivors today. Not only is the outlook greatly improved for life after diagnosis, but an entirely new field of medicine has developed dedicated to improving their quality of life.

The Institute of Medicine (IOM) of the National Academies predicts in its 2005 report, *From Cancer Patient to Cancer Survivor: Lost in Transition*, that the number of cancer survivors will continue to grow as a result of cancer screening, improved treatment and the aging of the population.

ACCORDING TO THE NATIONAL INSTITUTES OF HEALTH’S NATIONAL CANCER INSTITUTE’S OFFICE OF CANCER SURVIVORSHIP, AN INDIVIDUAL IS CONSIDERED A “CANCER SURVIVOR” FROM THE TIME OF DIAGNOSIS THROUGH THE BALANCE OF HIS OR HER LIFE.



CHARLES SHAPIRO, MD ▶▶

“We are raising awareness among cancer patients and their physicians that long-term survivors need to be vigilant about the possible health consequences of their therapy.”

The report notes cancer patients require ongoing, comprehensive and coordinated care to prevent or treat permanent or disabling symptoms, which can include psychological distress, sexual dysfunction, infertility, impaired organ function and limitations in mobility, communication and cognition.

The IOM, along with other agencies, calls for research initiatives focused on cancer-patient follow-up to improve understanding of the prevalence and impact of late effects from cancer therapies. Large long-term studies are needed to establish evidence-based care and best practices for the alleviation of symptoms, enhancement of function and development of interventions to improve the life of cancer survivors, their families and caregivers.

“My Ohio State colleagues and

I have been conducting clinical trials with the goal of improving the short- and long-term side effects of cancer treatments,” says Shapiro, who has extensively studied the risk of bone loss for breast-cancer survivors who undergo premature menopause due to chemotherapy. His findings point to the need for early intervention and close bone-health follow-up of breast-cancer survivors.

“We are also raising awareness among cancer survivors and their physicians about the possible adverse health consequences of cancer treatment and the importance of maintaining and promoting optimal health through lifestyle changes,” he adds.

PSYCHOLOGICAL TREATMENT

OSUCCC researcher Barbara L. Andersen, PhD, professor of Psychology, has studied breast-cancer survivors for three decades. Today, she is principal investigator of the Stress and Immunity Breast Cancer Project. Funded by the National Cancer Institute (NCI) and the American Cancer Society, the project seeks to understand the interactions of psychological, behavioral and biological factors in cancer.

One of Andersen’s most recent studies examined whether psychological intervention for women undergoing breast-cancer treatment will bolster the immune system and improve survival. Of 227 women with stage II or stage III breast cancer, half were randomly selected to receive intensive psychological support for 12 months following surgery. Immune-system studies include measuring the activity of natural killer cells and T-lymphocytes.

The results confirmed the effectiveness of the psychological treatment. Women treated with the intervention showed lower stress levels, healthier behaviors and increased immune responses. Andersen and her colleagues will soon report their final results after ten years of follow-up.

Because women have participated continuously in the trial, Andersen’s data also provide a unique perspective on survivors coping with recurrence. “The most compelling story that we can tell is how resilient individuals are in the face of cancer, whether being free of disease or living with recurrence.”

A study with Shapiro examined sexual functioning. “Following diagnosis, the sexual lives of breast-cancer patients are disrupted, with loss of desire, stress from body changes and other aspects. Activity can decline even further with recurrence, but what is important are patients’ continuing efforts to maintain intimacy with their partners,” Andersen says.

Because of patients’ long-term commitment to the trial, the study is yielding novel behavioral data indicating that early psychological intervention should be part of a prescription for breast-cancer survivors. Andersen’s latest effort includes a specialty clinic for cancer patients and survivors coping with depression.

ROLE OF ENERGY BALANCE

Perhaps the largest and longest-running study of women’s health to date is the Women’s Health Initiative (WHI). Launched in 1991 and sponsored by the National Heart, Lung, and Blood Institute, the national study involves 161,808 generally

SURVIVOR GUIDES

CLINICS

The Survivorship Center, with the support of the James Cancer Hospital and the OSUCCC, is in the process of establishing Survivorship Clinics for survivors of adult cancers and for survivors of childhood cancer who are entering adulthood. Individuals may be referred by physicians or self-referred to receive a consultation that reviews their cancer treatment and provides an individualized survivorship care plan.

EDUCATION

OSUCCC held its first “Update in Cancer Survivorship Care” conference in March 2008. Under the auspices of the OSUCCC Survivorship Center of Excellence, the conference featured nationally known speakers from Harvard, Fred Hutchinson Cancer Research Center, MD Anderson Cancer Center, Mayo Clinic and Memorial Sloan-Kettering Cancer Center, as well as the OSUCCC.

healthy postmenopausal women.

Now a new study looks at women who were diagnosed with breast cancer while enrolled in the WHI. The WHI Cancer Survivor Cohort study is being led by Electra Paskett, PhD, associate director for Population Sciences at the OSUCCC.

The WHI Cancer Survivor Cohort study seeks to understand the effect of energy balance—the relationship between energy intake (diet) and energy expenditure (physical activity)—on new cancer events among women diagnosed with an estrogen-related cancer. A positive energy balance results in obesity.

“This study will investigate the effect of energy balance on cancer recurrence or development of a new primary tumors cancer among this subset of women,” says Paskett. “Specifically, we want to learn how changes in energy balance may influence tumor dormancy.”

Paskett at the OSUCCC and colleagues at three other WHI sites have enrolled women in the study. The WHI Cancer Survivor Cohort study is sponsored by the Breast Cancer Research Foundation.

COUNTERINTUITIVE INTELLIGENCE

Will exercise give a cancer survivor with chronic fatigue more energy? Janice Kiecolt-Glaser, PhD, director, Division of Health Psychology, is working to answer that question through a study, “Breast Cancer Survivors: Physical Activity, Inflammation, Fatigue, and Immune Function.”

Chronic fatigue is a common side effect of breast-cancer treatment that continues for months to years in some women. Other studies have

shown that breast-cancer survivors who are fatigued have higher levels of inflammatory cytokines that are associated with fatigue.

Her study examines the effects of yoga on mood, fatigue and immune function in breast-cancer survivors, and how blood levels of inflammatory cytokines change in women who practice yoga.

“We know that stress and depression both increase inflammation, and that inflammation is linked to a range of diseases, including type 2 diabetes, osteoporosis, frailty, functional decline and heart disease. That’s why we chose hatha yoga as our study exercise,” says Kiecolt-Glaser. “It is very accessible for women who have never exercised and has known restorative properties to reduce stress,” she adds.

“Our first group is very enthusiastic, and I am encouraged that benefits of this study could include an improved understanding of how yoga may alter moods and produce immunological and hormonal changes that are relevant to health,” Kiecolt-Glaser says.

Today, Lori Elliott is happily back to her routine as bank manager, homemaker, wife and mother, and she has gained strength, energy and a sense of peace through participation in Kiecolt-Glaser’s study.

“When I enrolled in the trial, I thought I would be asked to bend like pretzel,” she recalls. “Instead, I learned how to stop dwelling on the possibility of cancer recurrence and relax, breathe and focus on happy thoughts. I now know if my cancer does reoccur, I know how to ‘do cancer’ and so, don’t have to worry about it. I also know I can survive cancer and survive it well.” ■



‘SHIP MATES

OSUCCC Named to Lance Armstrong Survivorship Network

In 2007, The Ohio State University Comprehensive Cancer Center—James Cancer Hospital and Solove Research Institute became one of only eight centers nationwide to be named to the Lance Armstrong Foundation Livestrong™ Survivorship Center of Excellence Network. The Network provides survivorship services and strives to increase the effectiveness of survivorship care through research, development of interventions and sharing of best practices. OSUCCC also received a five-year, \$1.25 million grant from the Lance Armstrong Foundation to establish a Survivorship Center of Excellence and bolster research, education and support efforts on behalf of cancer survivors. Charles Shapiro, MD, professor of Internal Medicine and director of Breast Medical Oncology at Ohio State, is the director, and Electra Paskett, PhD, associate director for Population Sciences at OSUCCC, co-directs the survivorship center.