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Large Percentage of Oncologists Still Ordering Tumor Markers for Early Breast Cancer

BY ROBERT H. CARLSON

When it comes to ordering serum marker tests for older women after initial treatment for early-stage cancer, almost half of cases reviewed in a study showed that many oncologists are not adhering to recommendations of the American Society of Clinical Oncology.

The research, online ahead of print in the *Journal of Clinical Oncology* (***doi: 10.1200/JCO.2014.55.5409***), found that 42 percent of oncologists had ordered tests for CEA and CA15-3/CA27.29 for women age 65 and over in the period between 2001 and 2007, even though there was not any evidence—and still isn't—that the tests increase overall survival for this group.

"We had heard 10 percent, maybe 20, but not 42 percent," said the study's first author, Scott D. Ramsey, MD, PhD, Director of the Hutchinson Institute for Cancer Outcomes Research (HICOR) at the Fred Hutchinson Cancer Research Center and Professor of Medicine, University of Washington. "That's a huge proportion of women getting these tests. No one knew."

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'Rapidly Moving' Evidence Showing Benefits of Physical Activity in Cancer Prevention & Survivorship

BY PEGGY EASTMAN

WASHINGTON—Evidence is becoming more and more persuasive that physical activity not only can lower the risk of certain cancers, but also provide important benefits to cancer survivors. That was the word from speakers here at the American Institute for Cancer Research (AICR) Annual Conference.

"This field has moved very rapidly in the last 10 to 15 years, and programs are being developed for cancer patients across the continuum," said Christine Friedenreich, PhD, Scientific Leader for the Department of Cancer Epidemiology and Prevention Research of CancerControl Alberta and the Head of the Division of Preventive Oncology at the University of Calgary, who chaired a session on physical activity and cancer survivorship. "We're certainly not there yet, but we're getting there."

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'Missing Piece of Myeloma Puzzle' Defined

BY MEERI KIM, PHD

A new retrospective cohort study has for the first time defined the clinical course of light-chain smoldering multiple myeloma—i.e., the disease stage preceding light-chain multiple myeloma.

A subset of patients with idiopathic Bence Jones proteinuria were found to have an increased risk of disease progression to light-chain multiple myeloma, which accounts for approximately 15 to 20 percent of all myeloma patients. The subset is identified by monoclonal light-chain excretion of 0.5 g in 24 hours or higher, at least 10 percent bone marrow plasma cells, or both, in the absence of end-organ damage. These parameters define the new entity, called light-chain smoldering multiple myeloma (LC-SMM).

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PERIODICALS

'RAPIDLY MOVING' EVIDENCE SHOWING BENEFITS OF PHYSICAL ACTIVITY IN CANCER PREVENTION & SURVIVORSHIP

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She cited relatively consistent evidence from 23 cohort studies showing that higher levels of self-reported physical activity, both before and after a diagnosis of breast cancer, are associated with a decreased risk of both breast cancer-specific and all-cause mortality as well as possibly a lower risk of breast cancer recurrence.

As noted in a recent report from the World Cancer Research Fund's Continuous Update Project: "Evidence shows that women who are physically active—both before and after diagnosis—have a greater chance of surviving breast cancer" (***http://bit.ly/1svO6JW***).

Study in Hispanic Women

The role of physical activity in cancer prevention is becoming increasingly important as U.S. rates of obesity rise, since being physically active can help people maintain a normal body weight. A large study reported at the AICR meeting showed that obesity increases the risk of postmenopausal estrogen-receptor positive and progesterone-receptor positive breast cancer among Hispanic women.

Almost 50 percent of all Hispanic women are obese, according to the data presented. Up until now, most studies on body weight and breast cancer risk have been done in white women.

In the study, also now available online ahead of print in the AACR journal *Cancer Epidemiology, Biomarkers & Prevention* (***doi: 10.1158/1055-9965.EPI-13-1007-T***),

Esther M. John, PhD, MSPH, Senior Research Scientist at the Cancer Institute of California, and colleagues found that Hispanic women whose body mass index (BMI) increased during adulthood had a higher risk of estrogen-receptor positive and progesterone-receptor positive breast cancer after menopause. The study of approximately 3,000 subjects is the largest of its kind among Hispanic women, the researchers noted.

"The data show that obesity is a risk factor in Hispanic women just like it is in white women, African American women, and Asian women," John said in an interview. And while breast cancer risk is still lower in Hispanic women than in white women, breast cancer remains a major cause of death in Hispanic women, and their risk goes up the longer they live in the United States.

As for who should educate Hispanic women about the link between obesity and postmenopausal breast cancer risk, she said health care providers could definitely play a role, and that it is especially important to reach children and help them avoid obesity as they grow older, and that Spanish-speaking media, social media, schools, and churches are also key.

Colorectal Cancer

Also at the meeting, **Jeffrey A. Meyerhardt, MD, MPH,** Senior Physician in the Gastrointestinal Cancer Center at Dana-Farber Cancer Institute, Director of the Clinical Trials Office, and Associate Professor of Medicine at Harvard Medical School, noted that it has been known that as is true for breast cancer in postmenopausal women, physical activity also lowers the risk of developing colorectal cancer. Now, however, evidence is mounting that physical activity can also lower the risk of death following a diagnosis of colorectal cancer.

"Only in the past decade has there been data in regard to the impact of physical activity on patients already diagnosed with colorectal cancer," he said, explaining that the emerging data show that physical activity confers an improvement in colorectal cancer survival, and he referred to a recent meta-analysis of 5,299 patients with pre-diagnosis physical activity measurements and 6,348 with post-diagnosis physical activity and outcomes.

Physical activity can also lower insulin-related growth factors and the level of COX-2 as a marker of inflammation, he said.

Unanswered questions for clinicians so far, he said, relate to the timing of physical activity relative to the initiation of cancer therapy; the length of physical activity; and the intensity of physical activity.

Asked in an interview what advice about physical activity he gives his colorectal cancer patients, he said he suggests they start slowly, by walking several blocks and then increasing their distance. "I advise them to have patience and slowly build up a level of endurance."

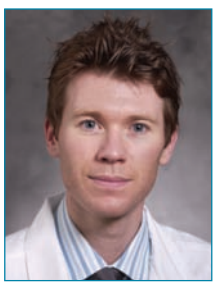
Meyerhardt added that splitting up physical activity sessions is fine, such as 15 minutes in the morning and 15 minutes in the afternoon. "At the end of treatment we talk about exercise with survivors. Exercise is the number one issue I talk about."

He said that some patients can pursue physical activity regimens on their own, while others do better with an exercise trainer, such as the one at Dana-Farber. For now, though, he said he also worries that the encouraging data about the benefits of physical activity are reaching only a very small number of cancer survivors.

Also, he said, now that cancer survivors are living longer, it is important to think of physical activity in the context of the patient's co-morbidities—"At some point the risk of cardiovascular disease exceeds the patient's risk of cancer recurrence, so paying attention to these other co-morbidities is important."

"Children diagnosed with acute lymphoblastic leukemia are "at risk of becoming overweight or obese early in treatment, and these increases in weight are likely to be maintained throughout treatment and beyond.

Building Cardiovascular Fitness



That is where exercise designed to build cardiovascular fitness comes in, said **Lee W. Jones, PhD**, Director of the Cardiology-Oncology Research Program at Memorial Sloan Kettering Cancer Center and an Attending Physiologist in the Department of Medicine.

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"Worries that cardiovascular training might cause cancerous tumors to grow faster are unfounded. In fact, the increased blood flow causes the tumors to become less hypoxic, and hypoxia is a major driver of metastases."

EXERCISE

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Chemotherapy drugs and radiotherapy can cause cardiovascular damage, such as chemotherapy-induced impairments in systolic function, resulting in a fundamental decrease in cardiovascular fitness, he explained. "These oncology treatments can have a dramatic effect on your cardiovascular reserve capacity."

In addition, cardiovascular capacity declines about 10 percent in every decade of life. Therefore, for cancer patients, "the incidence of overt cardiovascular disease occurs at a much earlier age than that observed in patients without a history of cancer." In short, cancer patients dealing with the "multiple hit" of late effects of therapy plus an age-related decline in cardiovascular capacity can find themselves "running on empty." Physical activity, though, can counter the damaging effects of cancer therapies by helping patients build up their cardiovascular fitness, such as increasing their VO2 max (maximal oxygen uptake) measurement.

"We definitely can train people during chemotherapy," he said of increased physical activity programs. "Structured exercise training is an effective countermeasure."

He said physical activity is additive to chemotherapy, not synergistic, and that such programs can help patients build up their aerobic capacity. One caveat: aerobic training is not indicated for patients who have both heart failure and cancer, as it will lead to higher mortality in this population group.

Jones addressed concerns that the increased blood flow into cancerous tumors caused by aerobic exercise might fuel tumor growth. Actually, he said, the increased blood flow causes cancerous tumors to become less hypoxic, and hypoxia is a major driver of metastases. So, he said in an interview, worries that cardiovascular training might cause cancerous tumors to grow faster are unfounded.

> "Lifestyle interventions are needed to target weight control early during treatment, particularly for patients who are overweight or obese at diagnosis and those who experience substantial weight gain during induction."

Same for Survivors of Childhood Cancers

Speakers said the emerging evidence on physical activity's benefits for adult cancer survivors also applies to survivors of childhood cancers. "Many of the chronic health conditions experienced by childhood cancer survivors, like obesity, insulin resistance, cardiovascular disease and stroke, are associated with an inactive lifestyle among members of the general population," said **Kirsten K. Ness, PT, PhD,** a physical therapist and clinical epidemiologist and an Associate Member of the faculty at St. Jude Children's Research Hospital.

"Unfortunately, childhood cancer survivors are also at risk for a sedentary lifestyle; sedentary behavior appears to start early and increases with increasing age," she added.

Specifically, children diagnosed with acute lymphoblastic leukemia (ALL), the most common childhood cancer, are "at risk of becoming overweight or obese early in treatment, and these increases in weight are likely to be maintained throughout treatment and beyond," said Susan K. Parsons, MD, MRP, Professor of Medicine and Pediatrics at Tufts University School of Medicine and Associate Director of the Tufts Cancer Center for Population Science and Community Involvement.

As for why that would be, she explained that very early in treatment clinicians are focused on achieving remission, not on lifestyle factors. Also, children are felt to be vulnerable, and so parents may be permissive in what the children eat, such as junk food, and be enablers of inactive, sedentary habits.

"We found that diet quality was overall quite poor," Parsons said. In addition, she noted, corticosteroid treatment may cause weight gain in children with ALL.

In a retrospective cohort of 83 pediatric ALL patients consecutively diagnosed during 1985 to 2010, Parsons and colleagues found that 21 percent of the patients were overweight or obese at diagnosis, and that at the end of treatment and five years post-treatment, that remained unchanged in about 40 percent of the group.

Parsons said she expected that the children with ALL would have had some weight gain due to corticosteroids, but what surprised her was that the spike in weight gain remained even when the children went back to school and resumed their normal activities. She said she considers the study findings especially important for these children's future because the findings show that "lifestyle interventions are needed to target weight control early during treatment, particularly for patients who are overweight or obese at diagnosis and those who experience substantial weight gain during induction."