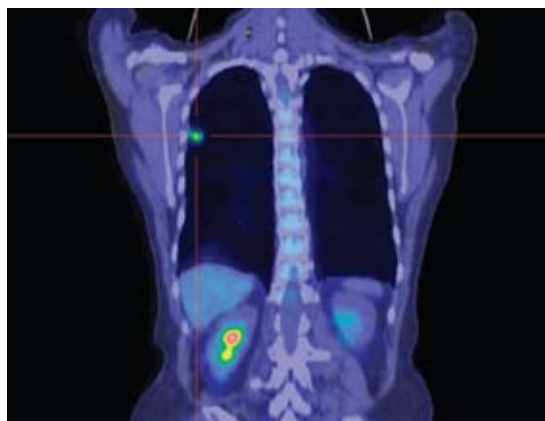


Assay can predict survival

A NEW molecular test can predict which patients with early-stage nonsquamous non-small cell lung cancer (NSCLC) are at high risk for death after surgical resection more accurately than conventional methods. This knowledge could help at-risk patients receive additional therapy immediately after surgery, before any residual cancer has the opportunity to metastasize.

The frequent recurrence of early-stage NSCLC is attributed to undetected metastatic disease, according to a team of investigators co-led by David M. Jablons, MD, head of the thoracic oncology program at the Helen Diller Family Comprehensive Cancer Center at University of California–San Francisco (UCSF). As the researchers explained in *The Lancet*, treatment is based on prognostic staging of the cancer. Jablons and colleagues sought to develop and validate a practical, reliable assay that improves risk stratification compared with conventional staging.

Working with a cohort of 361 patients with nonsquamous NSCLC at UCSF, the investigators developed an assay that measures the activity of 14 genes in the cancerous tissue. The assay, which uses quantitative polymerase chain reaction (PCR), was then independently validated in 433 patients with stage 1 nonsquamous NSCLC at the Kaiser Permanente hospitals in California and in 1,006 patients with stage 1–3 nonsquamous NSCLC at several cancer centers in China.



PET/CT fusion image (frontal section) showing NSCLC of the right lung. The small spot indicates an early stage.

Five-year overall survival was predicted to be 71.4% in low-risk, 58.3% in intermediate-risk, and 49.2% in high-risk patients in the northern California group. Corresponding 5-year survival rates for the Chinese patients were 74.1%, 57.4%, and 44.6%. The assay improved prognostic accuracy beyond National Comprehensive Cancer Network (NCCN) criteria for stage 1 high-risk tumors and differentiated low-risk, intermediate-risk, and high-risk patients within all disease stages.

These and related findings underscore the need for a practical assay that reliably identifies subsets of patients who have different statistical outcomes despite similar staging by conventional criteria—a need answered by this new molecular test.

The investigators are now planning a prospective study in which patients with stage 1 disease who have been identified as high risk by the 14-gene assay will be randomized to observation vs chemotherapy. ■

Nurses report quality of care is better with EHRs

RESULTS OF A large study show that nurses working in hospitals with basic electronic health records (EHRs) consistently reported less frequent problems with poor patient safety and other quality-related outcomes than did their counterparts in hospitals without EHRs.

Ann Kutney-Lee, PhD, RN, and Deena Kelly, MS, RN, both of the University of Pennsylvania School of Nursing in Philadelphia, analyzed nurse and hospital survey data from 16,352 nurses working in 316 hospitals in four states. The investigators reported in the *Journal of Nursing Administration* (2011;41[11]:466–472) that they found nurses in hospitals with fully implemented EHRs were significantly less likely to report unfavorable patient-safety issues, frequent medication errors, and low quality of care, suggesting that the level of detail available in the EHR may allow for more comprehensive unit-transfer reports and discharge summaries to outside providers.

“Nursing administrators should be fully engaged in the process of EHR adoption and implementation to ensure effective use and success in creating seamless transitions for patients throughout the health care continuum,” advised Kutney-Lee in a statement describing the study findings. ■

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New tool helps survivors set, reach exercise goals

A BROCHURE FROM the University of Colorado (CU) Cancer Center in Aurora helps cancer survivors meet exercise recommendations that can improve their quality of life.

General Exercise Guidelines for Cancer Survivors provides guidance for choosing an exercise, setting short- and long-term goals, monitoring progress, and revising goals as needed. The brochure addresses such questions as “Why should I exercise?” and “What’s a good long-term exercise goal?” It also includes a sheet for tracking weekly physical activity and exercise intensity level.

According to brochure authors Catherine M. Jankowski, PhD,

investigator at the CU Cancer Center, and Ellyn E. Matthews, PhD, RN, of the CU College of Nursing, a major challenge for cancer survivors is the belief that exercise will compound the fatigue they may experience as a result of their treatments, but Jankowski and Matthews contend that the reverse is true: In persons with cancer, as in the general population, exercise can actually reduce tiredness. The exercise recommendations in the brochure are similar to those for persons without cancer, but acknowledge that cancer survivors might need more time and support to reach their exercise goals.

“Our program is geared toward small steps, reaching goals, and



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Exercise can help reduce the fatigue some cancer survivors may experience.

then modifying them as needed,” explained Jankowski. “You have cancer survivors who overestimate or underestimate their abilities, or fear returning to exercise.”

The brochure, available at http://thecancerjourney.org/survivor/media/thecancerjourney/docs/general_exercise_brochure_v5.pdf, is endorsed by the American College of Sports Medicine. ■

Siblings of cancer patients can be coached to cope

A TWO-SESSION intervention might improve how well a youth adjusts to the cancer diagnosis of a brother or sister.

Siblings of pediatric cancer patients are at risk for emotional, behavioral, and social problems, according to a team led by Dr. Alice Prchal of the University Children’s Hospital Zurich (Switzerland). As they noted in their report in *Child and Adolescent Psychiatry and Mental Health*, the healthy siblings often face changed daily routines in the family and less physical and emotional availability of their parents. These children also observe the physical and emotional pain of their sick brother or sister. These

Siblings showed better psychological well-being, had better medical knowledge, and reported receiving social support from more people.

circumstances can generate feelings of fear, loneliness, sadness, anger, jealousy, or guilt within the healthy child.

In their study of 30 siblings of pediatric cancer patients, aged 6 to 17 years, Prchal and colleagues randomized the participants to an active control group with standard psycho-oncological care or to an intervention group. The members of the intervention group received medical information and information on coping with stressful situations in two sessions with Prchal, a clinical psychologist.

The sessions lasted approximately 50 minutes each and took place during the first 2 months after the ill child’s cancer diagnosis—a

period shown to be the most vulnerable time for sibling adjustment. In addition, the parents were given an educational booklet.

The healthy siblings and parents completed measures of social support, quality of life, medical knowledge, posttraumatic stress symptoms, and anxiety at 4 to 6 weeks after the cancer diagnosis and again at the 4-month and 7-month marks. At follow-up, the intervention did not demonstrate any impact on posttraumatic stress symptoms or anxiety. However, siblings in that group showed better psychological well-being, had better medical knowledge, and reported receiving social support from more people. ■

Cancer screening rates reflect disparities

A FEDERAL STUDY by the Centers for Disease Control and Prevention (CDC) and the National Cancer Institute (NCI) revealed significant disparities in cancer screening rates among racial and ethnic populations. According to the report, the percentage of US citizens screened for cancer remains below national targets.

Healthy People 2020 sets national objectives for improving the health of all Americans, including the use of screening tests for breast, cervical, and colorectal cancers recommended by the United States Preventive Services Task Force (USPSTF). Recommendations include:

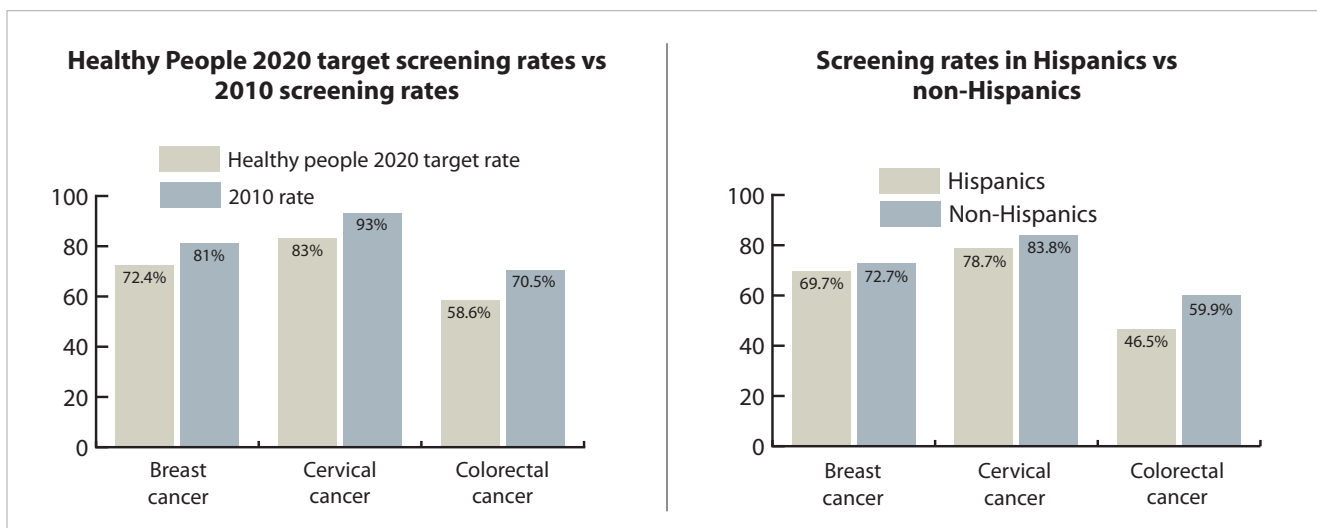
- Women aged 50 to 74 years should be screened for breast cancer with a mammography every 2 years.
- Women who have been sexually active for 3 years or are aged 21 to 65 years should be screened for cervical cancer with a Pap test at least every 3 years.
- Colorectal cancer screening is recommended for average-risk men and women aged 50 to 75 years, using a high-sensitivity fecal occult blood test (FOBT), done at home every year; sigmoidoscopy every 5 years, with high-sensitivity FOBT every 3 years; or colonoscopy every 10 years.

According to a federal study, the percentage of US citizens screened for cancer remains below national targets.

Researchers analyzed data from the 2010 National Health Interview Survey to assess the use of recommended cancer screening tests by age, race, ethnicity, education, length of residence in the United States, and the source and financing of health care. For the ethnic subgroups, Asians were classified as Chinese, Filipino, or other Asian, and Hispanics as Puerto Rican, Mexican, Mexican-American, Central or South American, or other Hispanic. To read the full report, go to http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6103a1.htm?s_cid=mm6103a1_w. ■

Screening rates among racial groups for breast, cervical, and colorectal cancer

Racial Groups	Breast cancer screening	Cervical cancer screening	Colorectal cancer screening
American Indian/Alaska Native	69.4%	78.7%	49.5%
Asians	64.1%	75.4%	46.9%
Black/African American	73.2%	85.0%	55.0%
White	72.8%	83.4%	59.8%



Source: Cancer screening—United States, 2010. CDC Web site. http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6103a1.htm?s_cid=CancerPR126E_6. Accessed January 26, 2012.

FDA Update

The FDA approved **vismodegib (Erivedge)** for the treatment of metastatic basal cell carcinoma in adults or locally advanced basal cell carcinoma that has recurred following surgery or who are not candidates for surgery, and who are not candidates for radiation.

The FDA now requires a Boxed Warning for **brentuximab vedotin (Adcetris)** to highlight the risk of progressive multifocal leukoencephalopathy (PML), a rare but potentially fatal brain infection. In addition, brentuximab vedotin carries a new contraindication warning that advises against its use with the chemotherapy agent bleomycin (Blenoxane) to avoid increased risk of lung toxicity.

The FDA approved **glucarpidase (Voraxaze)** for the treatment of persons with toxic blood levels of methotrexate. Commonly used in chemotherapy, methotrexate can cause kidney failure, among other problems. Glucarpidase breaks down methotrexate to a form that can be eliminated by the body.

The FDA approved **axitinib (Inlyta)** for the treatment of advanced renal cell carcinoma in patients who have not responded to another drug for this type of cancer. ■

ACS updates recommendations

ACHIEVE AND maintain a healthy weight throughout life, adopt a physically active lifestyle, follow a healthful diet that emphasizes the consumption of plant-based foods, and, if you drink alcohol, limit your intake to no more than one drink per day if you are a woman or two drinks per day if you are a man.

These are the four major recommendations put forth by the American Cancer Society (ACS) in its update to 2006 guidelines on nutrition and physical activity for cancer prevention. Health care providers may now receive outside help in promoting these messages to patients, as the latest version of *American Cancer Society Guidelines on Nutrition and Physical Activity for Cancer Prevention* includes guidance for community action to accompany the four major recommendations that individuals can take to reduce their cancer risk.

The ACS calls upon public, private, and community organizations to collaborate on policy and environmental changes that:

- Increase access to affordable, nutritious foods in communities, the workplace, and schools
- Reduce access to and marketing of unhealthful foods and beverages, particularly to children



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Achieve and maintain a healthy weight, adopt a physically active lifestyle, follow a healthful diet, and limit alcohol intake.

- Provide safe, enjoyable, and accessible environments for physical activity in schools and the workplace, and for transportation and recreation in communities.

The report, which is available on the ACS website (www.cancer.org/acs/groups/cid/documents/webcontent/002577-pdf.pdf), includes specific dietary and exercise recommendations, such as limiting consumption of processed meat and red meat and having adults engage in at least 150 minutes of moderate-intensity or at least 75 minutes of vigorous-intensity activity each week, preferably spread throughout the week. The document also contains a review of evidence on diet and physical activity factors that affect risks for select cancers as well as a section on common questions about diet, physical activity, and cancer. ■

HPV INFECTION AMONG WOMEN, BY AGE

5.3%
18-24 years

40.5%
25-44 years

38.1%
45-59 years

Source: *Women's Health USA 2011*. Rockville, MD: US Department of Health and Human Services, 2011.