When should cancer screening stop?

Patients with incurable cancer continue to undergo routine cancer screening, according to a study published in the *Journal of the American Medical Association* (2010;304:1584).

The study, led by Camelia Sima, MD, MS, from Memorial Sloan-Kettering Cancer Center, evaluated the extent to which patients with advanced cancer continue to be screened for new cancers. The researchers believed that despite the lack of benefit of screening procedures, a small proportion of patients with advanced cancer continue to be screened for cancers other than their primary tumor. “It takes several years before clear survival benefit from cancer screening becomes apparent,” explained Stephen Taplin, MD, chief of the National Cancer Institute (NCI) Applied Cancer Screening Research Branch. “With breast cancer, for example, it takes at least 3 to 5 years after a screening test before fewer women in a screened group die than an unscreened group. That means that a woman needs to have a minimum life expectancy of at least 3 to 5 years to have breast cancer screening affect the length of her life in a meaningful way.”

Using information from the Surveillance, Epidemiology, and End Results (SEER) tumor registries, Dr. Sima and her team assessed the utilization of cancer screening procedures in 87,736 Medicare recipients 65 years or older who had advanced lung, colorectal, breast, gastroesophageal, or pancreatic cancer. A control group of 87,307 Medicare enrollees without a cancer diagnosis from a random SEER sample were matched by age, sex, race, and geographic location to the cancer patients. Overall, the rates of screening among the patients with cancer ranged from 35% to 55% of the rates observed in the cancer-free control subjects.

In both groups, higher socioeconomic status and being married were significantly associated with a higher probability of being screened, and the strongest predictor of screening in the cancer patients was having undergone screening previously, before a cancer diagnosis.

“The most plausible interpretation of our data is that efforts to foster adherence to screening have led to deeply ingrained habits,” the authors wrote. “Patients and their health care practitioners accustomed to obtaining screening tests at regular intervals continue to do so even when the benefits have been rendered futile in the face of competing risk from advanced cancer … [a] culture of screening on ‘autopilot.’”

Julia Rowland, MD, director of the NCI Office of Cancer Survivorship, explained that while some women with metastatic breast cancer can live for more than 5 years after treatment and may benefit from continued screening for other types of cancer, there needs to be an individual discussion between doctor and patient. According to the study’s authors, the situation is aggravated by the lack of “intelligent” technology that could help flag potentially unnecessary screening tests. Patients and physicians may also have difficulty discussing a poor prognosis and end-of-life issues. However, Dr. Rowland explained that the communication flaws exposed in the paper go beyond end-of-life discussions and highlight the lack of communication between doctors and patients about the risks and benefits of the screening procedures being performed.
Aspirin use lowered the risk of recurrence and distant metastases.

Aspirin may improve prostate cancer outcomes

PATIENTS WITH prostate cancer who use anticoagulants that include aspirin can reduce their disease-specific mortality by almost 60%, according to a study that will be presented at the upcoming American Society for Radiation Oncology (ASTRO) meeting.

For the study, researchers used the Cancer of the Prostate Strategic Urological Research Endeavor (CapSURE) database to analyze 5,295 men who had localized disease, reportedly used medication, and were treated with surgery or primary radiation therapy.

The study results indicated that patients with high-risk prostate cancer had an 80% lower risk of disease-specific mortality if they used anticoagulants. Disease-specific mortality was 1% at 7 years and 4% at 10 years among anticoagulant users compared with 4% and 10% in the control group. When high-risk patients were analyzed by baseline clinical and tumor characteristics, prostate cancer-specific mortality was 2% and 4% at 7 and 10 years in the anticoagulant group compared with 8% and 22% in the control group. Researchers found significant improvement in survival for intermediate-risk patients as well.

Patients on aspirin alone had a prostate cancer-specific mortality of 1% at 7 years and 2% at 10 years. Those who used a combination of aspirin and another anticoagulant had a prostate cancer-specific mortality of 0% at 7 years and 5% at 10 years. Those who used another anticoagulant without aspirin had a prostate cancer-specific mortality of 2% and 7% at 7 and 10 years, respectively. ■

New treatment targets lung cancer-related proteins

LUNG CANCER patients with a specific genetic abnormality may benefit from a new treatment drug that targets tumors, according to a study published in the New England Journal of Medicine (2010;363:1727).

Based on findings of past studies that genetic abnormalities that trigger uncontrolled cell growth underlie several types of cancer, a multi-institutional research team conducted a study to investigate the effect of crizotinib in patients whose tumors were driven by alterations in the anaplastic lymphoma kinase (ALK) gene.

For the first part of the study, patients with any solid tumor that had not responded to standard therapies received increasing daily oral doses of crizotinib to establish the highest dose that would not cause intolerable side effects. With the data obtained, the research team was able to establish the maximum tolerated dose. When researchers found that two of the participants that had ALK-altered non-small cell lung cancer (NSCLC) showed symptom improvement, the study was expanded to include NSCLC with ALK-rearranged tumors.

During the second phase of the study, researchers reported that crizotinib shrank the tumors of more than half of those patients whose tumors were driven by alterations in the ALK gene, and in one-third of the study participants, crizotinib treatment suppressed tumor growth. Specifically, of the 82 patients with ALK-altered tumors who eventually enrolled in the trial, crizotinib treatment reduced tumor size in at least 47 patients and halted tumor growth in 27. And among those participants, 63 have continued receiving the drug. “This therapy is allowing patients to function without pain or a constant cough,” Eunice Kwak, MD, PhD, of the Massachusetts General Hospital Cancer Center and corresponding author of the study, explained.

“The most rewarding thing about treating patients with this drug is watching them change from being completely controlled by their cancer to resuming a very normal life.” ■
New data define broad time window for pancreatic cancer development

Pancreatic cancer cells seen on scanning electron microscope

Pancreatic cancer metastasizes in the later stages of tumor development, according to a study published in the journal Nature (2010;467:1114). Study investigators from Johns Hopkins Medicine collected tissue samples during autopsies of seven patients who died from pancreatic cancer that had metastasized to other organs.

“The results of the study show that many pancreatic cancer cases have a long lag time before they are detected through conventional tests,” revealed Bert Vogelstein, MD, professor and director of the Ludwig Center for Cancer Genetics & Therapeutics at the Johns Hopkins Kimmel Cancer Center and an investigator at the Howard Hughes Medical Institute. Specifically, researchers found that in all patients, metastatic deposits were found in two or more sites in the body, most often the liver, lung, and peritoneum. In addition, similar mutations were found to be present in both the areas of metastasis and in the primary pancreatic tumors from which the metastasis arose.

During their study, researchers were also able to identify and classify those mutations that had occurred before metastasis and those that had occurred after the cancer had spread.

To study the timing of pancreatic cancer progression, researchers used a mathematical model to estimate an average of 11.7 years before the first cancer cell develops within a high-grade pancreatic lesion, an average of 6.8 years as the cancer grows and at least one cell has the potential to spread, and an average of 2.7 years until a patient’s death.

“For the first time, we have a quantifiable estimate of the development of pancreatic cancer and when it would be best to intervene, so there is potentially a very broad window for screening,” said Christine Iacobuzio-Donahue, MD, PhD, associate professor of pathology and oncology at Hopkins’ Sol Goldman Pancreatic Cancer Research Center.

Update affirms breast cancer treatment guidelines

THE CLINICAL Practice Guidelines in Oncology for Breast Cancer, published by the National Comprehensive Cancer Network (NCCN), have been updated to affirm the existing recommendation regarding the use of bevacizumab (Avastin) for the treatment of metastatic breast cancer.

As part of NCCN’s most current guidelines on management strategies for breast cancer, the update affirmed the existing recommendation of bevacizumab in combination with paclitaxel (Taxol) as an appropriate therapeutic option for metastatic breast cancer. This affirmation is supported by the 2A evidence designation, which means that it is based on lower level evidence and uniform agreement of the panel as to its appropriateness.

For preferred agents with bevacizumab, the related footnote was revised to state the following: “Randomized clinical trials in metastatic breast cancer document that the addition of bevacizumab to some first or second line chemotherapy agents modestly improves time to progression and response rates but does not improve overall survival. The time to progression impact may vary among cytotoxic agents and appears greatest with bevacizumab in combination with weekly paclitaxel.”

NCCN Guidelines are developed and updated on a continual basis through an evidence-based process with explicit review of the scientific evidence integrated with expert judgment by multidisciplinary panels of expert physicians from NCCN member institutions.