

Patients with unstable angina and diabetes have twice the risk of mortality as similar patients without diabetes, according to researchers at Duke Clinical Research Institute in North Carolina.

An analysis of 3100 patients with diabetes from the Sibrafiban versus Aspirin to Yield Maximum Protection from Ischemic Heart Events Post-acute Coronary Syndromes trials indicates an 11.4% major adverse cardiac event rate for patients with diabetes compared with 9% for patients without diabetes. Follow-up results after 1 year indicate a 6% mortality rate for patients with diabetes compared with 3.5% for patients without diabetes. Further, there was an increased risk of death associated with insulin-providing therapy (12%) compared with insulin-sensitizing therapies (5%), indicating that hyperinsulinemia and insulin resistance may be risk factors for mortality.

The report was presented at the scientific session of the American College of Cardiology.

Women with metastatic breast cancer that overexpressed HER-2 who received trastuzumab (Herceptin) and chemotherapy had significant survival benefit compared with women who received chemotherapy alone, according to a study conducted by researchers at the University of California at Los Angeles.

Scientists randomly assigned 469 patients to groups who received chemotherapy plus trastuzumab or chemotherapy alone. Patients who received trastuzumab and chemotherapy had a longer time to disease progression (7.4 months) and a longer survival (25.1 months) compared with patients who received chemotherapy alone (4.6 months and 20.3 months, respectively).

The most serious adverse event was cardiac dysfunction, which occurred in 27% of patients who received an anthracycline,

cyclophosphamide, and trastuzumab; 8% of patients who received anthracycline and cyclophosphamide alone; 13% of patients who received paclitaxel and trastuzumab; and 1% of patients who received paclitaxel alone. Other adverse events included fever and hematologic toxicity.

The report can be found in the March 15 issue of the *New England Journal of Medicine*.

Patients with advanced metastatic gastrointestinal cancers who did not respond to standard therapy had favorable responses to injections of autologous dendritic cells injected into the tumors. Dendritic cell therapy may be promising, according to researchers at Tokyo Women's Hospital, because the cells secrete interleukin 12, which induces a tumor immune response that migrates throughout the lymph nodes where cancers have spread. The process makes its own tumor vaccine in the body.

The study involved 15 elderly patients with advanced metastatic cancers who failed chemoradiation or had surgery. Injections of 100 million dendritic cells—generated from the patient's blood cells and supplemented with interleukin 2—were injected into the tumors.

Four patients responded, with tumor reduction in three patients seen on computed tomography and tumor reduction for all four patients according to biomarkers, though all patients died.

The report was presented at the annual meeting of the American Association for Cancer Research.

Several hospitals in the United States have critical drug shortages—particularly anesthetics used during surgery—according to the American Society of Anesthesiologists. The society has requested a meeting be-

tween the Food and Drug Administration (FDA), the Drug Enforcement Administration, and drug manufacturers to discuss the problem.

Although shortages of the principal drug used during surgery, fentanyl citrate, are expected to ease, shortages of other drugs have increased, including sufentanil citrate and alfentanil hydrochloride, for surgery and cancer pain management, and succinylcholine chloride and rapacuronium, for muscle relaxation. Shortages are attributed to increases in demand and manufacturing problems, as well as to a shortage of FDA-approved raw materials for manufacturing in the United States.

The report can be found at the American Society of Anesthesiologists Web site at www.asahq.org.

Patients with mild or moderate hypertension who received the angiotensin-converting enzyme, perindopril (ACEON tablets), had significant changes in blood pressure and pulse wave velocity, according to researchers at the L'Institut CardioVasculaire in Paris, France, who conducted the first long-term trial of antihypertensive treatment for arterial stiffness, which was evaluated using pulse wave velocity.

The 6-month international study involved 1700 patients with untreated mild or moderate hypertension or previously treated hypertension with uncontrolled blood pressure who received perindopril 4 mg/d, with the dose increased to 8 mg/d for 22% of patients and the addition of indapamide 2.5 mg/d for 11% of the population if blood pressure was uncontrolled. Assessment of arterial stiffness in hypertensive patients was evaluated with the use of a device called the Complior, which calculates the time it takes pulse waves to travel between two recording sites on the skin.

After 6 months, the average reduction in systolic blood pressure for patients who

received perindopril was 24 ± 17 mm Hg, and the average reduction in diastolic blood pressure was 14 ± 10 mm Hg, with significant reductions in pulse wave velocity values, all of which equals a 20% reduction in arterial stiffness within 6 months. Scientists note that reductions in blood pressure were greater in previously untreated patients than in those treated for hypertension.

The report can be found in the March issue of the *Journal of Hypertension*.

Patients with metastatic breast cancer treated with high-dose chemotherapy who have increased levels of HER-2—shed extracellular domain in serum can be predicted to have worse overall survival. HER-2 overexpression measured by immunohistochemistry and fluorescent in situ hybridization is not associated with worse overall survival, suggesting that the method of measuring HER-2 is important in predicting clinical outcomes.

The 7-year Duke University study involved 425 patients with metastatic breast cancer. HER-2 extracellular domain was positive in 29% of patients before doxorubicin-based therapy and in 11.7% of patients before therapy with high-dose alkylating agents, indicating that high levels of HER-2 extracellular domain preceding therapy may be a predictor of worse overall survival.

The report can be found in the March issue of the *Journal of Clinical Oncology*.

A total of 0.8% of patients with acute coronary syndromes who received heparin had myocardial infarction or reinfarction within 12 hours of discontinuation of the antithrombin—with a 5.8-fold risk during the first 4 hours that remained significant up to 8 hours—compared with 0.3% in the group that received hirudin, in a study that compared the antithrombin modes of therapy. Previous studies indicated increased risk of reinfarction after heparin was discontinued.

The study, which includes data for incidence of infarction by type and timing of antithrombin treatment, involved 8943 patients—215 of whom had myocardial infarction or reinfarction. Twelve hours

after discontinuation of an antithrombin, 49 patients had reinfarctions. Further, patients who had myocardial infarction had higher 30-day mortality (23.6%) and 1-year mortality (35.2%) than patients without infarction (2.4% and 6.7%, respectively).

Scientists note that clinical characteristics including age, female sex, diabetes, and prior coronary artery disease may help physicians identify patients most likely to have reinfarction after discontinuation of antithrombin therapy.

The report can be found in the March 15 issue of the *Journal of the American College of Cardiology*.

New mothers who suffer postpartum physical spousal abuse seek the same level of well-baby care—though they may not attend to their own injuries—as mothers who are not abused, placing pediatricians in a key position for spousal abuse screening. This is the first population-based study of postpartum spousal abuse.

The study, designed to analyze patterns of physical abuse before, during, and after pregnancy, involved 2648 new mothers. The prevalence of abuse before pregnancy was 6.9% compared with 6.1% during pregnancy and 3.2% for the 3.6 months after pregnancy. Of the 3.2% of women abused after pregnancy, 77% were injured, but only 23% received medical care, though they used well-baby care.

In response to the findings, the American Academy of Pediatrics, the American Medical Association, and the American College of Obstetricians and Gynecologists endorse screening by pediatricians of female patients for abuse and referral to appropriate services.

The report can be found in the March issue of the *Journal of the American Medical Association*.

A protein that appears to fortify lung cancer cells against chemotherapy drugs has been identified by researchers at the University of Florida.

Patients with lung cancer who have chemotherapy frequently respond well after diagnosis, but relapse over time and have cancer that is resistant to treatment. Previ-

ous study results suggest that drug resistance in patients with small-cell lung cancer occurs when cancerous cells transform into the non-small-cell cancer type known to resist chemotherapy. The current study links protein kinase C-epsilon to the cell's transition.

Scientists introduced the gene for the protein—which is present but inactive in small-cell cancer cells—in laboratory cultures of small-cell cancer. The cells produced kinase C-epsilon and became resistant to two chemotherapy drugs, etoposide and doxorubicin.

Lung cancer is the most common cancer-related cause of death. Although 80% of patients initially respond to treatment, the 5-year survival rate for patients whose cancer recurs is only 3% to 8%.

The report can be found at www.health.ufl.edu/hssc/news.

Men with high work-related stress levels have increased likelihood of atherosclerotic disease.

An 18-month study involved 467 men and women between the ages of 40 and 60 years who completed questionnaires designed to ascertain work-related stress levels. Periodic measurement of intima-media thickness showed that men with increased stress had an increased likelihood of carotid lesions and artery-wall thickening than men who had less stress, with 36% of those with the highest stress levels having carotid lesions compared with 21% in the lowest stress group.

Although women in the study reported similar stress levels, no association between stress and atherosclerotic disease was found, which scientists say may be attributable to the protective effect of a hormone or to measures on the questionnaire that are not valid for this population.

As an association between work-related stress and early stages of atherosclerosis was found in men, efforts to reduce stress levels in men with thickened intima-media complexes may help to prevent later focal plaques.

The report can be found in the March issue of *Epidemiology*. ♦