

A summary of general medicine news that affects your patients, your practice, and you.

Bypass Surgery Associated With Fewer Major Cardiac Events Than Stents

Heart bypass surgery protected patients from major adverse cardiac events better than artery-opening angioplasty with drug-eluting stents, according to a report in the *New England Journal of Medicine*.

Patrick Serruys, MD a cardiologist at Erasmus University in Rotterdam, and colleagues randomly assigned 1,800 patients with three-vessel or left main coronary artery disease to undergo coronary-artery bypass grafting (CABG; n=900) or percutaneous

coronary intervention (PCI; n=900).

The researchers found rates of major adverse cardiac or cerebrovascular events at 12 months were significantly higher in the PCI group ($P=.002$), which was due in large part to an increased rate of repeat revascularization ($P<.001$). At 12 months, the rates of death and myocardial infarction were similar between the two groups; however stroke was significantly more likely to occur with CABG (2.2%, vs. 0.6%; $P=.003$), the study authors said.

FDA-Approved Bioengineered Goats Produce Anticlotting Drug

Atryn (GTC Biotherapeutics, Framingham, MA), a human anticlotting drug extracted from the milk of genetically engineered goats, was recently approved by the US Food and Drug Administration (FDA), according to a news release. The FDA also approved the goats used to make the drug under guidelines that the agency adopted to regulate the use of transgenic animals in the nation's drug and food supply.

The bioengineered goats live under carefully controlled conditions on a farm in central Massachusetts, according to GTC Biotherapeutics. All 200 goats were fully vaccinated and none of the goats in the herd, including nontransgenic goats used as surrogate mothers nor any of their milk, will be allowed in the food supply, a company spokesperson said.

Ovation Pharmaceuticals, Inc. (Deerfield, IL), will sell Atryn in the United States, the news release said. Atryn was approved by European Commission regulators for the prophylactic treatment of deep vein thrombosis in patients with hereditary antithrombin deficiencies who are undergoing surgical procedures.

Safety of CT Scans Questionable

In a study of 1,965 patients undergoing cardiac computed tomography angiography (CCTA; CT scans) at over 50 sites around the world, German researchers at the Universität München found that patients undergoing CT scans are exposed to radiation roughly equivalent to 600 chest X-rays, or about 12 millisievert (mSv) of radiation. By comparison, traditional angiography, a technique in which a catheter is snaked through a blood vessel and dye is injected near the heart,

exposes patients to approximately half the radiation dose of CT angiography, the study authors said. Notably, doses of CCTA differed between study sites and CT systems used, with the median radiation dose ranging from 4.6 to 30 mSv.

Caloric Intake May Affect Memory in Healthy Elderly Individuals

Caloric restriction improves memory in healthy elderly individuals, according to a study in the *Proceedings of the National Academy of Sciences*.

In a prospective interventional study, investigators at the University of Münster, Germany, divided 50 healthy, normal to overweight elderly individuals (mean age, 60.5 years) into three groups: (1) 30% caloric reduction, (2) 20% increased intake of unsaturated fatty acids, with total fat unchanged, and (3) control.

The investigators assessed patients' memory performance before the study commenced and after 3 months. The investigators found a mean 20% increase in verbal memory scores after caloric restriction ($P<.001$). This was correlated with decreases in fasting plasma levels of insulin and high sensitive C-reactive protein, which was most pronounced in patients with best adherence to the diet ($P<.05$), the researchers said. Levels of brain-derived neurotrophic factor remained unchanged. No significant memory changes were observed in the other two groups.

The investigators speculated that higher synaptic plasticity and stimulation of neurofacilitatory pathways in the brain due to improved insulin sensitivity and reduced inflammatory activity were the mechanisms responsible for memory improvement.

Genetic Test Estimates Appropriate Initial Dose of Blood Thinner Medication

A pharmacogenetic algorithm can help predict a stable therapeutic dose of the blood thinner warfarin (Coumadin; Bristol Myers Squibb, New York, NY), according to a study in the *New England Journal of Medicine*.

Researchers used clinical and genetic data from 4,043 patients to create a dose algorithm based on clinical variables only and an algorithm in which genetic information was added to the clinical variables. In a validation cohort of 1,009 individuals, the potential clinical value of each algorithm was evaluated by calculating the percentage of patients whose predicted dose of warfarin was within 20% of the actual stable therapeutic dose.

In the validation cohort, the pharmacogenetic algorithm accurately identified larger proportions of patients who required 21 mg of warfarin or less per week and of those who required 49 mg or more per week than did the clinical algorithm, which is based on age, weight and other characteristics. The greatest benefits were observed in the 46.2% of the population that required 21 mg or less of warfarin per week or 49 mg or more per week for therapeutic anticoagulation, the study said.

CDC Finds Fewer Women Are Receiving Mammograms

Nearly two-thirds of the US states had a 6% decrease in mammography utilization from 2000 to 2006, according to a study by the Centers for Disease Control and Prevention (CDC).

The study, which was reported in the *American Journal of Roentgenology*, found that although mammography use in 17 states had increased slightly during the period, usage in the remaining states and the District of Columbia had a slight decrease. The decrease ranged from 0.3% to 5.3%, the study said. Agency officials reported that the rising cost of insurance copays for mammograms had an impact on the decrease.

The CDC also found that between 2000 and 2004 all states except Tennessee had a decrease in rates of breast cancer. There was no clear pattern among the states in regard to region, average age, average income, or population density, the CDC said.

David S. Boyer, MD, is a Clinical Professor of Ophthalmology at the University of Southern California Keck School of Medicine, Department of Ophthalmology in Los Angeles. He is a member of the Retina Today Editorial Board. Dr. Boyer may be reached at +1 310 854 6201; fax +1 310 652 7250; or via e-mail: VITDOC@aol.com.



RetinaToday.com

RetinaToday.com

RetinaToday.com

RetinaToday.com

RetinaToday.com

RetinaToday.com

RetinaToday.com

RetinaToday.com

RetinaToday.com

RetinaToday.com

RetinaToday.com

RetinaToday.com

RetinaToday.com

RetinaToday.com

RetinaToday.com