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MEDICAL IMAGING

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Cardiovascular News Update

Dear Colleague,

Westside Medical Associates of Los Angeles (WMALA) in conjunction with Westside Medical Imaging (WMI) would like to provide you with this weekly update on important new developments in cardiovascular care.

Westside Medical Imaging will be participating in research efforts that suggest that molecular imaging effectively detects atherosclerosis-causing inflammation. "Researchers at Oregon Health & Science University show molecular imaging is effective in detecting early stage inflammation that leads to atherosclerosis," according to research reported in the journal *Circulation*. Study leader Dr. Jonathan R. Lindner said that the "vascular adhesion molecule known as VCAM-1, which shows up on the walls of blood vessels at the onset of inflammation and plays an important role in the early development of atherosclerotic plaque, could be successfully highlighted in ultrasound images."

Study suggests antioxidants do not reduce heart risks for at-risk women. "Supplements of the antioxidants beta carotene, vitamin C, and vitamin E may be good for you, but a new study reports that they have no effect, either alone or in combination, in preventing heart attack, stroke or death among women at risk for cardiovascular disease." Nancy R. Cook, lead author and an associate professor of epidemiology at Harvard, and researchers "randomly assigned more than 8,000 women to take regular doses of vitamin E, vitamin C, beta carotene, or placebos, and followed them for more than nine years." All of the participants "either had had cardiovascular disease or were at high risk for it." Throughout the study, "1,450 women had a heart attack, a stroke, or cardiac surgery, and there were 395 deaths from heart disease." Those women taking vitamin E only had a statistically insignificant advantage over the women in the placebo group, and "combinations of the antioxidants had no effect either, except for a slight reduction in stroke among those taking both vitamins C and E together." The research was reported in the Aug. 13 issue of the *Archives of Internal Medicine*.

Early detection saves lives. That's what we do. Find out more at Westside Medical Imaging's website at www.westsidemedimaging.com

Individualized warfarin dosing using genetic profiling may be safer, more predictable. "Safer, more predictable Coumadin (warfarin) therapy could come from pretreatment genotyping to individualize dosing," according to research reported in the Sept. 1 issue of *Blood*. "Combining data on polymorphisms for two genes with clinical variables resulted in an algorithm that accounted for 79 percent of the variability in therapeutic dose in orthopedics patients," reported Brian F. Gage, M.D., of Washington University, in St. Louis, and colleagues. According to the authors, "Given the current knowledge about these markers, we hypothesize

that for a given [international normalized ratio] a patient who is a slow metabolizer of warfarin may need a more cautious adjustment in their dose than a similar patient who is a normal metabolizer." The authors added, "Ultimately, with further validation and refinement, this pharmacogenetic model should yield a streamlined approach to refining the dose and improving the safety and efficiency of warfarin initiation."

Not all HDL is protective with certain proteins in HDL exacerbating vessel damage. Reports that "some people's HDL is more protective for their hearts than others, and..certain proteins in HDL can exacerbate vessel damage, particularly in people with heart disease," according to research scheduled to be reported Wednesday at the American Chemical Society's annual meeting in Boston. Researchers located many "previously unrecognized HDL proteins, including 22 that play roles in cholesterol metabolism." Dr. Jay Heinecke, a professor of medicine at the University of Washington, Seattle, said, "With LDL cholesterol it's simple -- the lower the better," but "[w]ith HDL, it's much more complicated. The protein composition of people with and without heart disease is different." Heinecke pointed out that "measuring blood levels of LDL and HDL cholesterol is not as predictive of cardiac risk, as has been assumed." Instead, he said, "Protein composition [in HDL cholesterol] may be a better handle on whether someone is at risk.", "Animal studies have found 'dysfunctional' HDL cholesterol, which works against coronary health, Heinecke said. 'It is proposed that the same thing is going on in humans,' he noted." However, the researchers may have also "uncover[ed] a new means by which HDL boosts cardiovascular health." According to Heinecke, HDL "may be inhibiting inflammation." He continued, "What we found in HDL is a whole series of proteins that inhibit proteases," which suggests that "part of [HDL's] protective effect is to prevent rupture."

Obese people who undergo weight-loss procedures less likely to die prematurely, studies suggest. "Severely obese people who have weight-loss surgery are less likely to die from heart disease, diabetes, and cancer seven to 10 years following the procedure than similarly heavy people who don't have the operation," according to two studies reported in the *New England Journal of Medicine*. In one study, University of Utah School of Medicine researchers "examined data on about 10,000 patients who had gastric bypass surgery...and compared their mortality rates with almost 10,000 severely obese patients who had not had surgery." The researchers reported that "during the follow-up period, which averaged seven years, the surgery patients had a slightly higher risk of death from non-disease causes, such as accidents and suicides, but were much less likely to die from heart disease, cancer, or diabetes than the control group." In a separate study, "scientists in Sweden compared data on 2,010 obese people who had bariatric surgery with 2,037 heavy people who received a range of weight-loss help from no guidance to sophisticated lifestyle intervention." The patients "who had surgeries lost and kept off a significant amount of weight; those in the control group didn't." During the follow-up period, "there were 101 deaths in the surgery group compared with 129 in the control group."

Study suggests that ICDs in patients with heart failure cut death rates by 20 percent. "ICDs in patients with heart failure cut death rates by 20 percent," according to research reported in the Aug. 21 issue of *Annals of Internal Medicine*. Justin A. Ezekowitz, M.B., and a team of researchers from the University of Edmonton in Canada "analyzed data from all

major clinical trials and observational studies of ICDs." They found that although "the device cuts the overall risk of death by 20 percent" in heart failure patients, only about "one in three

patients with an ICD ever gets a therapeutic shock from the device." Furthermore, "for every 100 years of use, clinical trials suggest, ICDs give 19 inappropriate shocks," which "may increase, rather than decrease, a patient's risk of death." Ezekowitz and his colleagues believe "that researchers must do a better job of identifying patients who truly benefit from getting the implant

Westside Medical Associates of Los Angeles (WMALA) and Westside Medical Imaging (WMI) are premier centers in cardiac diagnosis and treatment.

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