



## CHRISTIANA CARE HEALTH SYSTEM

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### **Christiana Care Health System's William Weintraub, M.D. is Lead Author in Study Published in the Latest Issue of The New England Journal of Medicine**

(WILMINGTON, DE – March 21) A study led by [Christiana Care Health System's](#) William Weintraub, M.D. has been published today in The New England Journal of Medicine, the world's most prestigious medical journal. Dr. Weintraub is the director of Christiana Care's Center for Outcomes Research and the health system's Chair of Cardiology. The take-away message from this study is that patients who undergo bypass surgery appear to experience a higher long-term survival rate.

The ASCERT study– the most comprehensive study of its kind in the history of research on patients with coronary heart disease – will help guide treatment options. Dr. Weintraub will present the research today in Chicago at the American College of Cardiology's 61st Annual Scientific Session, the premier cardiovascular medical meeting of cardiovascular professionals. ASCERT study is a major collaboration of the American College of Cardiology Foundation and the Society of Thoracic Surgeons.

“The patients in our study are a microcosm of the patients in the United States who each day are in need of intensive treatments for their blocked arteries,” Dr. Weintraub said. “The results of this study will help guide doctors as they make treatment decisions. Our ASCERT study sets the methodologic standard for comparative effectiveness research.”

Weintraub's study analyzed health outcomes of almost 190,000 patients across the United States to compare the results of bypass surgery to those of percutaneous coronary intervention, also known as angioplasty. The study found that patients who underwent angioplasty had a higher death rate in the first four years after treatment than those who had opted for bypass surgery. Specifically, the death rate for patients who underwent bypass surgery only had a death rate of 16.41 percent, while the death rate among patients who underwent angioplasty was 20.8 percent.

Previous studies had suggested the two treatments have similar long-term outcomes, while others also have shown better outcomes from bypass surgery. Patients and their doctors have long been challenged by the decision of whether to pursue bypass surgery or opt for the less-invasive angioplasty. Since angioplasty is less invasive, patients and doctors tend to turn to that procedure when both treatments are an option.

The study combined data from several large databases to determine the results, which enabled the researchers to compare results across many subgroups. The study was funded with a \$4.2 million grant by the National Institutes of Health's National Heart, Lung and Blood Institute.

"The sheer scale of the data allowed unprecedented analysis of subgroups based on age, race, and various health factors such as diabetes or having had a previous heart attack," said Michael Lauer, M.D., director of the NHLBI Division of Cardiovascular Sciences.

The study's data was from 2004 to 2008 and were derived from three databases: the American College of Cardiology Foundation Cath PCI database, the Society of Thoracic Surgeons CABG database and the Medicare database. Survival rates among 86,000 bypass surgery patients were compared against 103,000 angioplasty patients.

"We were surprised to find out that no matter what analytic approach was used, the results were consistent across all subgroups in that survival was superior with coronary surgery," Dr. Weintraub said. "This study should strengthen informed decision-making when patients with stable ischemic heart disease are facing the choice of revascularization."

But Dr. Weintraub cautioned that a major limitation of observational studies such as this one is that the groups for both bypass surgery and angioplasty may not have the same level of risk. For that reason, it is possible that the worse outcomes in the angioplasty patients were related to those patients being sicker overall.

"Sophisticated statistics were used to account for different levels of risk, but there may be differences between the two groups that we could not account for," Dr. Weintraub said. "Our study, however, is the most broad study ever developed since it taps into data from across the entire nation. Also, many of those patients from the study were treated in Delaware, including right here at Christiana Care."

Dr. Weintraub also cautioned that the results do not mean bypass surgery is best for every patient. "While this study does push the needle toward coronary surgery, it does not overwhelmingly push that needle," Dr. Weintraub said. "What we can take from this is that when we're recommending coronary surgery to patients, we can now have a little more confidence that the decision is a good one. This is the case even though coronary surgery is a bigger intervention than angioplasty."

Coronary heart disease is the leading cause of death in the United States. It occurs when a fatty buildup narrows or blocks the heart's arteries. The procedure of bypass surgery

involves a surgeon opening the patient's chest cavity and creating a detour around the blocked artery using a vein from another part of the body. Angioplasty is less invasive and involves a surgeon threading instruments through a small incision to clean out the blockage and inserting a wire stent, or tube, to keep the artery open. Sometimes, a small balloon also may be used to open the artery.

This is the 9<sup>th</sup> study published by Dr. Weintraub that has appeared in The New England Journal of Medicine, which is the most widely read general medical journal in the world, with a readership of more than 600,000. The New England Journal of Medicine is the only American medical journal ever to receive the Polk Award for journalistic merit. Fewer than 200 of the 4,000 annual research submissions to the journal find their way into print.

The latest study is titled "Survival after PCI or CABG in Older Patients with Stable Multivessel Coronary Disease: Results from the ACCF-STS Database Collaboration on the Comparative Effectiveness of Revascularization Strategies."

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