



For Immediate Release

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## Christiana Care's EP lab explores new devices to "jump-start" tired hearts

### *CONTRIBUTIONS TO LANDMARK RESEARCH STUDIES*

Wilmington, DE (July 21, 2004) – Electrophysiologists at Christiana Care are contributing to vital research helping to improve the lives of heart failure patients and reduce heart failure deaths. Their work includes testing new devices and methods to electrically signal the heart to beat normally using a technique called cardiac resynchronization therapy (CRT). According to EP research nurse, Lynne Bittner, RN, "Offering patients this new technology under controlled study conditions, affords the opportunity for benefits they would not expect otherwise for years to come."

#### **How does CRT work?**

The CRT system includes an implantable pacemaker with three electrical leads that connect to the heart. The right leads are placed in the right atrium (upper chamber) and right ventricle (lower chamber). The left lead is placed via catheter into the cardiac vein that runs along the outside of the heart.

Atrial pacing (stimulating the top of the heart) has been shown to help treat rapid, irregular heart beats. Different studies are looking at how effectively implantable cardiac rhythm devices detect fast or irregular atrial heart action and what adjustments can be made to make patients more comfortable while these devices do their work. For example, past methods paced the heart at a fixed rate that was consistently faster than normal. A new system proposes to "overdrive" (pace at a rate above the heart's normal rate) the atrium in a manner that is only slightly above the natural heart rate, which patients may find more tolerable.

#### **Slowing killer heart rates**

The CRT system may also include an implantable cardiac defibrillator (ICD) designed to recognize and correct potentially lethal, fast heart rates (tachyarrhythmias). Christiana Care has participated in two recently completed ICD trials that have contributed important findings about the potential for ICDs to reduce heart failure deaths. Another study is looking at whether episodes of atrial tachycardia or atrial fibrillation recorded by pacemakers, ICDs or other CRT devices are effective predictors of future clinical outcomes such as stroke, heart attack or blood clots.

#### **Improving quality of life**

Physical activity can be compromised in patients who have ICDs. One study is looking at different types of sensors that will help the heart respond more normally to increased activity, making it easier for patients to perform even simple maneuvers, like climbing stairs. Another study is evaluating a standardized set of ventricular arrhythmia detection and therapy settings to make ICD use more effective and more comfortable. A home monitoring system is being tested to allow doctors to more closely follow patients on ICD therapy and medications without an office visit and to more quickly detect episodes of irregular heart beats or equipment problems.



Six electrophysiologists in four different private practices conduct research at Christiana Care. Angela DiSabatino, RN, MS, research manager, cites their commitment and cooperation that makes this work possible. "The electrophysiologists alternate lead investigator responsibilities, and each tries to bring in new study opportunities that will benefit the greatest number of patients across all the practices," she says. For more information about electrophysiology studies in progress, contact the Cardiovascular Research office at 302-733-2658.

Christiana Care Health System, which traces its roots back to 1888, is one of the region's largest not-for-profit health care providers, serving the people of Delaware as well as neighboring Maryland, Pennsylvania and New Jersey. A teaching hospital, Christiana Care is recognized as a regional center for excellence in cardiology, cancer and women's health services, as well as Level-I trauma care and Level-3 neonatal intensive care (both highest intensity). Christiana Care operates two hospitals, long-term and transitional care services and an extensive range of outpatient and home health services. Christiana Care, a 2004 Distinguished Hospital for Clinical Excellence, provided more than \$37 million of charity care last year.