Subcutaneous Implantable Defibrillator Approved For Sudden Cardiac Arrest

/PRNewswire/ -- Sudden cardiac arrest (SCA) is a condition in which the heart suddenly stops pumping blood. When this occurs, blood stops flowing to the brain and other major organs. Recent estimates show that approximately 850,000 people in the United States are at risk of SCA, and most of the people who have SCA, die from it. But, rapid treatment of SCA by using an implantable defibrillator can be lifesaving.

On September 28 th, 2012, the FDA approved the world's first totally subcutaneous implantable defibrillator (S-ICD). Northwestern's Bluhm Cardiovascular Institute [1] is one of the first 20 institutions in the country to have access to this technology. Since FDA approval, the Bluhm Cardiovascular Institute is one of the first ten places to implant in the U.S.

"The S-ICD system provides physicians with a new treatment option for patients who are at risk of sudden cardiac arrest," said Bradley Knight, MD [2], electrophysiologist and medical director of the Center for Heart Rhythm Disorders. "The system sits entirely below the skin without requiring the need for placing wires in the heart, which leaves the heart and blood vessels untouched."

The Boston Scientific S-ICD® System has two main components. One is called the pulse generator, which powers the system, monitors heart activity and delivers a shock if needed. The other main component is the electrode. This enables the device to sense the heart rhythm and deliver shocks when necessary. Both are implanted just under the skin, providing protection without touching the heart and reliable defibrillation without transvenous wires.

"Patients who previously could not undergo the implantation of a transvenous defibrillator, now have a device option to protect them from deadly arrhythmias," said Dr. Knight.

The S-ICD system is commercially available in many countries in Europe as well as New Zealand. More than 1,400 devices have been implanted in patients around the world.

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