

Are ICDs up to par with patients living longer?

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Most patients with ischemic cardiomyopathy (ICM) and dilated cardiomyopathy (DCM) who have an implantable cardioverter-defibrillator (ICD) now live more than seven years and those ICD patients with hereditary heart disease can live for decades, based on a scientific paper that will be presented at the American College of Cardiology (ACC) Scientific Sessions in New Orleans, April 1-3.

With ICM, the left ventricle of the patient's heart pumps blood poorly due to [coronary artery disease](#). With DCM, the heart has become weakened and enlarged, and cannot pump blood efficiently. Therefore, these conditions often require ICDs to improve [blood flow](#) and prevent sudden cardiac death.

"These patients commonly contend with [sudden cardiac death](#) and [heart failure](#)," according to lead author Robert Hauser, MD, a cardiologist at the Minneapolis Heart Institute at Abbott Northwestern Hospital in Minneapolis. However, the long-term survival of these patients treated with contemporary ICDs is "unknown due to the lack of clinical studies that followed these patient populations after implantation," Hauser says, and this information would be valuable for improving ICD therapy.

Therefore, Hauser and his colleagues retrospectively assessed survival for ICD patients implanted at Minneapolis Heart Institute® between 2000 and 2009.

Between 2000 and 2009, 1,555 patients (mean age: 64.9 years; gender: 75.2 percent male) received initial single chamber (18.5 percent), dual chamber (42.2 percent) or cardiac resynchronization (39.3 percent) ICDs.

The average survival for these patients was seven years, and individuals with hereditary [heart disease](#) lived much longer since they were generally younger at the time of implantation.

"We were pleased to discover how long these patients were living," Hauser said. "Because these patients are living this long, it has significant implications for how long the devices need to last. Typically, ICDs last between four to six years, but these findings indicate that the devices require long-lived batteries."

The researchers concluded that their findings, which were consistent across all ICD manufacturers, also underscore the need for long-lived ICD pulse generators and leads.

"Contemporary ICDs need to be flexible and durable enough to adapt to the evolving clinical needs of the patient who is living longer," Hauser says.

Provided by Minneapolis Heart Institute Foundation

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