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## DX Technology

BIOTRONIK **DX technology** offers complete atrial diagnostics in a single-chamber implantable cardioverter defibrillator (ICD), encompassing the benefits of single- and dual-chamber devices.

### **What type of patients benefit from DX?**

The DX system serves a previously unmet need for single-chamber ICD candidates. Standard single-chamber ICDs are designed to sense ventricular (lower heart chamber) rhythm changes but are unable to sense abnormal atrial (upper heart chamber) rhythms like atrial fibrillation, a serious condition that increases the risk of inappropriate shock and can result in a stroke.

### **Why use a DX system?**

ICDs with DX technology are the only single-chamber ICDs that provide atrial and ventricular electrograms. Physicians are able to record three-channel intracardiac electrograms with high-resolution atrial, ventricular and far-field signals. This precisely locates the origin of the fast heart rhythm (tachycardia), improving treatment efficiency.

Standard single-chamber ICDs use only ventricular information to make therapy decisions, which can result in the delivery of inappropriate shocks during atrial tachyarrhythmias. DX devices' SMART Detection algorithm discriminates supraventricular tachycardias from atrial fibrillation and atrial flutter, helping safely reduce the risk of inappropriate shocks.

### **Advantages of a single lead**

With a single lead, DX systems have less hardware than dual-chamber ICDs. This benefits patients and physicians by easing the implantation process and reducing the risks that come with an additional lead – without compromising dual-chamber diagnostics.