The guidance provided in this letter is for healthcare providers and Medtronic representatives and applies to the following Medtronic device models:

<table>
<thead>
<tr>
<th>Model number, model name, description [Non-MRI Conditional devices]</th>
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</thead>
<tbody>
<tr>
<td>C154DWK Concerto CRT-D Cardiac Resynchronization Therapy Defibrillator</td>
</tr>
<tr>
<td>D154AWG Virtuoso DR Dual Chamber ICD</td>
</tr>
<tr>
<td>D154VWC Virtuoso VR Single Chamber ICD</td>
</tr>
</tbody>
</table>

This Standard Letter addresses Ablation (RF ablation or microwave ablation)

Ablation (RF ablation or microwave ablation) – Ablation is a surgical technique in which radio frequency (RF) or microwave energy is used to destroy cells by creating heat. Ablation used in cardiac device patients may result in, but is not limited to, induced ventricular tachyarrhythmias, oversensing, unintended tissue damage, device damage, or device malfunction.

Pulse-modulated ablation systems may pose higher risk for induced ventricular tachyarrhythmias. Medtronic cardiac devices are designed to withstand exposure to ablation energy. To mitigate risks, observe the following precautions:

- Ensure that temporary pacing and defibrillation equipment is available.
- Avoid direct contact between the ablation catheter and the implanted system.
- Position the return electrode patch so that the electrical current pathway does not pass through or near the device and leads.
- Always monitor the patient during ablation with at least two separate methods, such as arterial pressure display, ECG, manual monitoring of the patient’s rhythm (taking pulse) or monitor by some other means such as ear or finger pulse oximetry, or Doppler pulse detection.

To avoid or mitigate the effects of oversensing, if appropriate for the patient, initiate asynchronous pacing by implementing one of the following precautions;

- Suspend tachyarrhythmia detection by using a magnet or a programmer. If a programmer is used and ablation causes a device reset, the cardiac device resumes detection. After the ablation procedure, remove the magnet or restore device parameters.
- If appropriate for the patient, program the device to an asynchronous pacing mode (for example, DOO). After the ablation procedure, remove the magnet or restore device parameters.
LABELING

Clinicians Manuals
VIRTUOSO® DR D154AWG and VR D154VWC contrib_172184 M950962A001B; www.medtronic.com/manuals.
CONCERTO® C154DWK contrib_171358 M951964A001B; www.medtronic.com/manuals.

PATIENT MANAGEMENT GUIDANCE

This document is useful to health care professionals who perform medical procedures on patients with Medtronic implanted cardiac device systems and who consult with the patients’ cardiologists.

Additional comments

For further information please contact the following:

- **Technical questions**: Medtronic Technical Services can answer additional questions regarding these device operations.
- **Device labeling**: For additional device-specific guidance, consult the labeling associated with the device available on the Medtronic Manual Library website at www.medtronic.com/manuals.
- **Patient questions**: Patients who have questions can contact Medtronic Heart Rhythm Patient Services at 1-800-551-5544, Option 3, email at pshelp@medtronic.com, or see www.medtronic.com/rhythms for a variety of resources.