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>
</tr>
</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 Diagnostic radiology

Diagnostic radiology (CT scans, fluoroscopy, mammograms, x-rays) – Diagnostic radiology refers to the following medical procedures:

- Computed axial tomography (CT or CAT scan)
- Fluoroscopy (an x-ray procedure that makes it possible to see internal organs in motion by producing a video image)
- Mammograms
- X-rays (radiography, such as chest x-rays)

Normally, the accumulated dose from diagnostic radiology is not sufficient to damage the device. If the device is not directly exposed to the radiation beam, no risk of interference with device operation occurs. However, if the device is directly in a CT scan beam, see the following precautions in “CT scan”. Similar interference may be observed for some forms of high-intensity fluoroscopy.

CT scan – A CT scan is a computerized process in which two-dimensional x-ray images are used to create a three-dimensional x-ray image. If the device is not directly in the CT scan beam, the device is not affected. If the device is directly in the CT scan beam, oversensing may occur for the duration of time the device is in the beam.

If the device will be in the beam for longer than 4 s, 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. After completing the CT scan, remove the magnet or restore device parameters.
- If appropriate for the patient, program the device to an asynchronous pacing mode (for example, DOO). After completing the CT scan, 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.