

Electrosurgical Cautery and Radio Frequency Ablation and Biotronik ICD Patients

BIOTRONIK recommends placing a magnet over any BIOTRONIK ICD during procedures where electrocautery or radiofrequency ablation will be used. Alternatively, tachycardia therapy can be programmed to OFF. Both methods are acceptable to prevent inappropriate therapy caused by the electrical signals associated with the use of electrocautery or radiofrequency ablation.

Note: Placing a magnet over the device will disable therapy for a maximum duration of eight hours. If the magnet is applied continuously for longer than eight hours, the device will resume tachycardia detection and therapy even if the magnet remains placed over the device. Removing and reapplying the magnet will restart the eight-hour interval.

Electromagnetic interference (EMI) from electrocautery or radiofrequency ablation can be perceived by the ICD as a tachyarrhythmia and result in inappropriate tachycardia therapy. The easiest method to prevent this reaction is to use a pacemaker magnet to suspend the ICDs tachycardia detection and therapy features. Secure the magnet over the ICD with tape for the entire electrocautery/ablation portion of the procedure. At the end of the procedure, remove the magnet. Detection and therapy will be automatically re-enabled, and suspended features will be reactivated. Monitor the patient's heart rhythm during the procedure so that if the patient should have an episode of tachycardia, the magnet can be quickly removed to ensure that the ICD will detect and deliver programmed therapies. External rescue should also be available.

If the procedure is lengthy or causes difficulty with positioning the magnet, it may be necessary to program tachycardia therapies OFF until the surgical procedure is completed. External defibrillation capabilities should be immediately available if the patient develops a tachycardia episode. Tachyarrhythmia detection and therapy will need to be programmed back ON at the end of the procedure.

BIOTRONIK recommends the following additional precautionary steps to ensure patient safety during electrocautery/ablation:

- The current path and ground plate should be kept as far away from the pulse generator/ICD and leads as possible (at least 6 inches / 15 cm).
- The bipolar setting on the electrocautery equipment should be used, if available.
- The electrocautery ground pad should be placed on the same side of the patient that electrocautery will be performed.

For pacemaker dependent patients: electrocautery and radiofrequency ablation can cause EMI that is perceived by the ICD as noise. BIOTRONIK ICDs respond to noise by delivering asynchronous pacing in the affected channel (where noise is detected). Therefore the patient's heart rhythm should be monitored during the entire procedure to detect whether asynchronous pacing is present.

Please contact Technical Services with any questions: (800) 284-6689

BIOTRONIK, Inc.
6024 Jean Road Lake Oswego, OR 97035
Ph: 800-547-0394 Fax: 503-210-1656
www.biotronik.com