Updated 4/18/22

Dignity Health East Valley MRI Implanted Device Protocols

This document serves as a supplement—not a substitute—for the manufacturers' documentation.

Cardinal Health Kangaroo Feeding Tube with IRIS Camera

Applicable Models

Cardinal Health Kangaroo Feeding Tube with IRIS Camera

Covidien Kangaroo Feeding Tube with IRIS Camera

Scanner Parameters

Philips Ingenia 1.5T

Only the feeding tube itself may be brought into Zone IV.

Ensure the stylet and all other accessories have been disconnected and removed. This includes the console, power accessories, interface cable, stylet, insufflation device, mounting clamp, and carrying case.

Scan only in Normal Operating Mode.

After 15 minutes of continuous scanning, pause for 5 minutes before resuming the scan.

Philips Ingenia 3.0T

Only the feeding tube itself may be brought into Zone IV.

Ensure the stylet and all other accessories have been disconnected and removed. This includes the console, power accessories, interface cable, stylet, insufflation device, mounting clamp, and carrying case.

Scan only in Normal Operating Mode.

After 15 minutes of continuous scanning, pause for 5 minutes before resuming the scan.

Siemens MAGNETOM Altea 1.5T

Only the feeding tube itself may be brought into Zone IV.

Ensure the stylet and all other accessories have been disconnected and removed. This includes the console, power accessories, interface cable, stylet, insufflation device, mounting clamp, and carrying case.

Scan only in Normal Operating Mode.

After 15 minutes of continuous scanning, pause for 5 minutes before resuming the scan.

Codman MICROSENSOR or CereLink ICP Transducer

Applicable Models

Codman Microsensor

Codman CereLink

Scanner Parameters

Philips Ingenia 1.5T

Instruct neurosurgery service to follow and document the manufacturer's instructions for positioning.

Instruct neurosurgery service to document that the device was working immediately prior to being disconnected and. Do not scan if the device was damaged or not functioning.

Verify that the sensor has been positioned properly, coiled and taped on top of the patient's head in 6 cm diameter loops, and separated from the patient's scalp by 1cm thick gauze.

Only the sensor is MR conditional. The monitoring devices, cables, needles, trocars, stylets, and other accessories must not enter Zone IV.

Screen and remove other devices/conductors from the patient per existing policy. Always adhere to existing policies.

If more than one study is ordered, contact the radiologist to tailor the exam to the minimum sequences required.

Move the patient slowly within Zone IV to minimize Lenz's forces.

Do NOT transmit with head coil. Only transmit with body coil.

Scan only in Normal Operating Mode.

After 15 minutes of continuous scanning, pause for 5 minutes before resuming the scan.

Philips Ingenia 3.0T

Do not bring the patient into Zone IV without explicit radiologist approval

Siemens MAGNETOM Altea 1.5T

Instruct neurosurgery service to follow and document the manufacturer's instructions for positioning.

Instruct neurosurgery service to document that the device was working immediately prior to being disconnected and. Do not scan if the device was damaged or not functioning.

Verify that the sensor has been positioned properly, coiled and taped on top of the patient's head in 6 cm diameter loops, and separated from the patient's scalp by 1cm thick gauze.

Only the sensor is MR conditional. The monitoring devices, cables, needles, trocars, stylets, and other accessories must not enter Zone IV.

Screen and remove other devices/conductors from the patient per existing policy. Always adhere to existing policies.

If more than one study is ordered, contact the radiologist to tailor the exam to the minimum sequences required.

Move the patient slowly within Zone IV to minimize Lenz's forces.

Do NOT transmit with head coil. Only transmit with body coil.

Scan only in Normal Operating Mode.

After 15 minutes of continuous scanning, pause for 5 minutes before resuming the scan.

Depuy Synthes External Fixators

Applicable Models

Depuy Synthes Small External Fixator modular rod system

Depuy Synthes Medium External Fixator modular rod system

Depuy Synthes Large External Fixator modular rod system

Depuy Synthes Distraction Osteogenesis Ring System

Scanner Parameters

Philips Ingenia 1.5T

Obtain written attestation from orthopedic surgeon that only the components stated in one or more of the above systems have been used.

If more than one study is ordered, contact the radiologist to tailor the exam to the minimum sequences required.

Screen and remove other devices/conductors from the patient per existing policy. Always adhere to existing policies.

Move the patient slowly within Zone IV to minimize Lenz's forces.

Do not bring the implanted device into the narrow part of the bore (approximately 20cm in from the more open entrance to the scanner).

Do not allow the implanted device to contact the scanner walls; pad as needed.

Scan only in Normal Operating Mode.

Warn the patient before scanning and inquire during scanning about the potential for heating of the implanted device and nerve stimulation. If the patient complains of any such symptoms, stop the scan and contact the radiologist.

After 15 minutes of continuous scanning, pause for 5 minutes before resuming the scan.

Philips Ingenia 3.0T

Do not bring the patient into Zone IV without explicit radiologist approval

Siemens MAGNETOM Altea 1.5T

Obtain written attestation from orthopedic surgeon that only the components stated in one or more of the above systems have been used.

If more than one study is ordered, contact the radiologist to tailor the exam to the minimum sequences required.

Screen and remove other devices/conductors from the patient per existing policy. Always adhere to existing policies.

Move the patient slowly within Zone IV to minimize Lenz's forces.

Do not bring the implanted device into any part of the bore.

Do not allow the implanted device to contact the scanner walls; pad as needed.

If more than one study is ordered, contact the radiologist to tailor the exam to the minimum sequences required.

Scan only in Normal Operating Mode.

Warn the patient before scanning and inquire during scanning about the potential for heating of the implanted device and nerve stimulation. If the patient complains of any such symptoms, stop the scan and contact the radiologist.

After 15 minutes of continuous scanning, pause for 5 minutes before resuming the scan.

Impulse Dynamics Optimizer Smart IPG

Applicable Models

Optimizer Smart IPG with two ventricular leads (and one optional atrial lead) from the following list:

Medtronic CapSureFix Novus MRI SureScan 5076 (52cm or 58cm)

Abbott (St Jude Medical) 2088TC Tendril STS (52cm or 58cm)

Boston Scientific Ingevity 7741 and 7742 (52cm or 59cm)

Biotronik Solia S (52cm or 60cm)

Scanner Parameters

Philips Ingenia 1.5T

Ensure no other cardiac implants or leads.

IPG must be programmed to OOO mode prior to scanning

Do not scan patients with fever

Use transmit/receive head or knee coils only

Philips Ingenia 3.0T

Do not scan or bring the patient into Zone IV

Siemens MAGNETOM Altea 1.5T

Ensure no other cardiac implants or leads.

IPG must be programmed to OOO mode prior to scanning

Do not scan patients with fever

Use transmit/receive head or knee coils only

Inspire Upper Airway Neurostimulation System

Applicable Models

Model 3028

Scanner Parameters

Philips Ingenia 1.5T

For lower extremity scans, can use body RF coil ONLY if Inspire system remains outside of body RF coil; check with MRSO or MRMD if any doubts

Otherwise, transmit/receive head or knee coils only

Refer to manufacturer's documentation regarding B1+rms limits depending on T/R coil position

Philips Ingenia 3.0T

Do not scan or bring the patient into Zone IV

Siemens MAGNETOM Altea 1.5T

For lower extremity scans, can use body RF coil ONLY if Inspire system remains outside of body RF coil; check with MRSO or MRMD if any doubts

Otherwise, transmit/receive head or knee coils only

Refer to manufacturer's documentation regarding B1+rms limits depending on T/R coil position

Medtronic Deep Brain Stimulation Systems

Applicable Models

Activa PC Model 37601 neurostimulator*

Activa RC Model 37612 neurostimulator*

Activa SC Model 37603 neurostimulator*

*UNLESS used with a pocket adaptor

Scanner Parameters

Philips Ingenia 1.5T

Follow the manufacturer's protocol to identify leads, extensions, neurostimulator, and pocket adaptor (if present).

Pocket adaptors may NOT be scanned.

Acquire and review the MRI eligibility sheet signed by the DBS specialist.

If the eligibility sheet states the therapy should be turned off for the scan, confirm that therapy is off.

Do not bring the patient control device or clinician programmer into Zone IV.

Move the patient into and out of Zone IV slowly to minimize Lenz’s forces.

Scan only in Normal Operating Mode.

Set SAR limit to 0.1W/kg.

Do not exceed 30 minutes of continuous scan time per 90-minute window.

Maintain communication with the patient at all times. Assess for heating, excessive vibration, or other disturbances. Verify that the patient is feeling normal and is responsive between each sequence.

If the patient experienced an adverse effect, contact a radiologist and Medtronic.

Philips Ingenia 3.0T

Do not scan or bring the patient into Zone IV.

Siemens MAGNETOM Altea 1.5T

Do not scan as there is currently no way to limit SAR to 0.1W/kg.

Medtronic InterStim Neurostimulation System

Applicable Models

InterStim II Model 3058

InterStim Model 3023 (certain serial numbers only*)

For both models, the system must be fully implanted (not Stage 1 or test stimulation)

*Model 3023 serial numbers that are NOT eligible for scanning under these conditions:

Less than NBV132955H

Between NBV133037H and NBV133063H

Between NBV628045S and NBV628263S

Scanner Parameters

Philips Ingenia 1.5T

For Model 3023, confirm eligibility by serial number.

Turn off the neurostimulator per the manufacturer's instructions. Model 3023 must additionally have the magnet switch disabled.

Only the transmit/receive head coil can be used.

Move the patient into and out of Zone IV slowly to minimize Lenz's forces.

Scan only in Normal Operating Mode.

Do not exceed 30 minutes of continuous scan time per 90-minute window.

Maintain communication with the patient at all times. Assess for heating, excessive vibration, or other disturbances. Verify that the patient is feeling normal and is responsive between each sequence.

After the scan, if the patient has not experienced adverse effects, have the patient, clinician, or Medtronic representative restart stimulation outside of Zone IV.

Philips Ingenia 3.0T

Do not scan or bring the patient into Zone IV.

Siemens MAGNETOM Altea 1.5T

For Model 3023, confirm eligibility by serial number.

Turn off the neurostimulator per the manufacturer's instructions. Model 3023 must additionally have the magnet switch disabled.

Only the transmit/receive head coil can be used.

Move the patient into and out of Zone IV slowly to minimize Lenz's forces.

Scan only in Normal Operating Mode.

Do not exceed 30 minutes of continuous scan time per 90-minute window.

Maintain communication with the patient at all times. Assess for heating, excessive vibration, or other disturbances. Verify that the patient is feeling normal and is responsive between each sequence.

After the scan, if the patient has not experienced adverse effects, have the patient, clinician, or Medtronic representative restart stimulation outside of Zone IV.

Medtronic Neurostimulation Systems for Chronic Pain

Applicable Models

RestoreSensor SureScan MRI, Model # 97714

RestoreUltra SureScan MRI, Model # 97712

RestoreAdvanced SureScan MRI, Model # 97713

PrimeAdvanced SureScan MRI, Model # 97702

Scanner Parameters

Philips Ingenia 1.5T

Follow the manufacturer's device identification protocol.

Acquire and review the MRI eligibility sheet signed by the chronic pain specialist.

Have the patient, clinician, or Medtronic representative activate MRI mode on the device and verify personally prior to entering Zone IV.

The MRI-CS eligibility sheet print out or patient control device must indicate, with text and/or symbols, full-body scan eligibility:

MRI-CS FULL BODY SCAN ELIGIBLE

If the eligibility sheet or patient control device specify anything other than full scan eligibility, do not scan.

Do not bring the patient control device or clinician programmer into Zone IV.

Move the patient into and out of Zone IV slowly to minimize Lenz's forces.

Scan only in Normal Operating Mode.

Do not exceed 30 minutes of continuous scan time per 90-minute window.

The patient must be awake. Maintain communication with the patient at all times. Assess for heating, excessive vibration, or other disturbances. Verify that the patient is feeling normal and is responsive between each sequence.

After the scan, if the patient has not experienced adverse effects, have the patient, clinician, or Medtronic representative restart stimulation outside of Zone IV.

If the patient experienced an adverse effect, contact a radiologist and Medtronic.

Philips Ingenia 3.0T

Do not scan or bring the patient into Zone IV.

Siemens MAGNETOM Altea 1.5T

Follow the manufacturer's device identification protocol.

Acquire and review the MRI eligibility sheet signed by the chronic pain specialist.

Have the patient, clinician, or Medtronic representative activate MRI mode on the device and verify personally prior to entering Zone IV.

The MRI-CS eligibility sheet print out or patient control device must indicate, with text and/or symbols, full-body scan eligibility:

MRI-CS FULL BODY SCAN ELIGIBLE

If the eligibility sheet or patient control device specify anything other than full scan eligibility, do not scan.

Do not bring the patient control device or clinician programmer into Zone IV.

Move the patient into and out of Zone IV slowly to minimize Lenz's forces.

Scan only in Normal Operating Mode.

Do not exceed 30 minutes of continuous scan time per 90-minute window.

The patient must be awake. Maintain communication with the patient at all times. Assess for heating, excessive vibration, or other disturbances. Verify that the patient is feeling normal and is responsive between each sequence.

After the scan, if the patient has not experienced adverse effects, have the patient, clinician, or Medtronic representative restart stimulation outside of Zone IV.

If the patient experienced an adverse effect, contact a radiologist and Medtronic.

Medtronic SynchroMed Infusion Systems

Applicable Models

SynchroMed II, Model # 8637

SynchroMed EL, Model # 8627

Scanner Parameters

Philips Ingenia 1.5T

The referring physician or consulting physician must confirm, in writing, that the patient may safely be deprived of drug delivery.

The radiologist must confirm that the pump is not oriented 90° to the z-axis.

Move the patient into and out of Zone IV slowly to minimize Lenz's forces.

Scan only in Normal Operating Mode.

Do not exceed 30 minutes of continuous scan time per 90-minute window.

Maintain communication with the patient at all times. Assess for heating, excessive vibration, or other disturbances. Verify that the patient is feeling normal and is responsive between each sequence.

After the scan, the clinician or Medtronic must interrogate the pump to ensure proper function.

Philips Ingenia 3.0T

The referring physician or consulting physician must confirm, in writing, that the patient may safely be deprived of drug delivery.

The radiologist must confirm that the pump is not oriented 90° to the z-axis.

Move the patient into and out of Zone IV slowly to minimize Lenz's forces.

Scan only in Normal Operating Mode.

Do not exceed 30 minutes of continuous scan time per 90-minute window.

Maintain communication with the patient at all times. Assess for heating, excessive vibration, or other disturbances. Verify that the patient is feeling normal and is responsive between each sequence.

After the scan, the clinician or Medtronic must interrogate the pump to ensure proper function.

Siemens MAGNETOM Altea 1.5T

The referring physician or consulting physician must confirm, in writing, that the patient may safely be deprived of drug delivery.

The radiologist must confirm that the pump is not oriented 90° to the z-axis.

Move the patient into and out of Zone IV slowly to minimize Lenz's forces.

Scan only in Normal Operating Mode.

Do not exceed 30 minutes of continuous scan time per 90-minute window.

After the scan, the clinician or Medtronic must interrogate the pump to ensure proper function.

Nevro Senza Nerve Stimulation System

Applicable Models

IPG1000

IPG 1500

Scanner Parameters

Philips Ingenia 1.5T

May be eligible for transmit body coil or transmit head coil depending on position of isocenter.

Ensure all components of the system are identified and compatible.

See product labeling for parameters and restrictions.

Philips Ingenia 3.0T

Only eligible for scans with transmit/receive head coil and only if head coil does not cover any component of the system.

See product labeling for parameters and restrictions.

Siemens MAGNETOM Altea 1.5T

May be eligible for transmit body coil or transmit head coil depending on position of isocenter.

Ensure all components of the system are identified and compatible.

See product labeling for parameters and restrictions.

Non-Conditional Cardiovascular Implantable Electronic Devices (CIEDs)

Applicable Models

Any non-conditional CIED

Process

MRI ordered on patient with CIED.

Radiologist reviews a chest radiograph performed after most recent CIED intervention and not older than 30 days.

Fractured, abandoned, or malpositioned leads? Stop.

If the CIED is clear by imaging, the MRI technologist will refer to the manufacturer's documentation.

If MRI Conditional, proceed with scanning according to conditions.

If not MRI Conditional and has an epicardial lead, stop.

If not MRI Conditional and does not have an epicardial lead, continue below.

MRI technologists passes request to radiologist.

Radiologist and ordering physician discuss necessity of and alternatives to MRI.

If radiologist and ordering physician come to agreement for MRI, ordering physician will consult patient's cardiologist unless not credentialed at CRMC in which case the on-call cardiologist will be consulted.

The cardiologist interrogates the CIED and if not pacer dependent and no malfunction, completes CIED consent with patient and approves scan.

MRI coordinates with the cardiologist to do immediate pre- and post-MRI reprogramming of CIED.

<u>1.5T Scanner Only.</u>

An ACLS-trained nurse monitors the patient during the scan including ECG and pulse oximetry.

Defibrillator/monitor with external pacing function is immediately available.

The cardiologist must be immediately available during scan but not necessarily present in room (direct supervision).

The cardiologist coordinates patient follow-up within 1 week for re-interrogation.

Ossur Resolve Halo Vest

Applicable Models

ReSolve® Halo System- ReSolve® Halo Vest and ReSolve® Glass-composite Halo Ring with ceramic skull pins

ReSolve® Halo System- ReSolve® Halo Vest and ReSolve® Glass-composite Halo Ring with titanium skull pins

Scanner Parameters

Philips Ingenia 1.5T

Scan either model in Normal Operating Mode

Philips Ingenia 3.0T

ONLY THE CERAMIC PIN SYSTEM IS CONDITIONAL AT 3T

DO NOT SCAN THE TITANIUM PIN SYSTEM

Obtain written confirmation from the surgeon or manufacturer's representative that the skull pins are ceramic

Scan in normal operating mode

Siemens MAGNETOM Altea 1.5T

Scan either model in Normal Operating Mode

Rhythmlink EEG Electrodes

Applicable Models

MR Conditional/CT Cup and Webb Electrodes

During daytime hours, the EEG electrodes are to be completely removed by the EEG technologist prior to MRI. The protocol below is only for STAT exams after hours that cannot wait until the morning.

Scanner Parameters

Philips Ingenia 1.5T

Ensure at least 2 of the electrodes per array are applied to the patient and that there are no more than 4 arrays.

Ensure extension cables have been removed. Extension cables are MR Unsafe.

Scan only in Normal Operating Mode.

Scanning protocol may not exceed 20 minutes.

Body transmit coil only unless using T/R knee coil on knee.

May use any receive-only coil.

Philips Ingenia 3.0T

Ensure at least 2 of the electrodes per array are applied to the patient and that there are no more than 4 arrays.

Ensure extension cables have been removed. Extension cables are MR Unsafe.

Scan only in Normal Operating Mode.

Scanning protocol may not exceed 20 minutes.

Body transmit coil only unless using T/R knee coil on knee.

May use any receive-only coil.

Siemens MAGNETOM Altea 1.5T

Ensure at least 2 of the electrodes per array are applied to the patient and that there are no more than 4 arrays.

Ensure extension cables have been removed. Extension cables are MR Unsafe.

Scan only in Normal Operating Mode.

Scanning protocol may not exceed 20 minutes.

Body transmit coil only unless using T/R knee coil on knee.

May use any receive-only coil.

Smith & Nephew JET-X Bar External Fixation System

Applicable Models

JET-X Bar External Fixator System

Scanner Parameters

Philips Ingenia 1.5T

Obtain written attestation from orthopedic surgeon that only the components from the JET-X system have been used.

If more than one study is ordered, contact the radiologist to tailor the exam to the minimum sequences required.

Screen and remove other devices/conductors from the patient per existing policy. Always adhere to existing policies.

Move the patient slowly within Zone IV to minimize Lenz's forces.

Do not allow the implanted device to contact the scanner walls; pad as needed.

Scan only in Normal Operating Mode.

Warn the patient before scanning and inquire during scanning about the potential for heating of the implanted device and nerve stimulation. If the patient complains of any such symptoms, stop the scan and contact the radiologist.

If using body coil and implanted device is brought within 30 cm of isocenter, the patient must be conscious, alert, and able to communicate pain to the technologist. Pause for 5 minutes after every 15 minutes of continuous scanning.

Philips Ingenia 3.0T

Do not bring the patient into Zone IV without explicit radiologist approval

Siemens MAGNETOM Altea 1.5T

Obtain written attestation from orthopedic surgeon that only the components from the JET-X system have been used.

If more than one study is ordered, contact the radiologist to tailor the exam to the minimum sequences required.

Screen and remove other devices/conductors from the patient per existing policy. Always adhere to existing policies.

Move the patient slowly within Zone IV to minimize Lenz's forces.

Do not allow the implanted device to contact the scanner walls; pad as needed.

Scan only in Normal Operating Mode.

Warn the patient before scanning and inquire during scanning about the potential for heating of the implanted device and nerve stimulation. If the patient complains of any such symptoms, stop the scan and contact the radiologist.

If using body coil and implanted device is brought within 30 cm of isocenter, the patient must be conscious, alert, and able to communicate pain to the technologist. Pause for 5 minutes after every 15 minutes of continuous scanning.

St. Jude Medical (formerly Abbott) Deep Brain Stimulation System

Applicable Models

Follow the manufacturer's eligibility checklist do identify conditional systems and configurations.

Scanner Parameters

Philips Ingenia 1.5T

Eligible for:

- Head scans using the transmit/receive head coil
- Head scans using the body transmit coil
- Scans with isocenter inferior to C1 using the body transmit coil
- Knee scans with transmit/receive knee coil

Follow the manufacturer's checklist.

After 30 minutes of active scanning, allow 30 minutes of rest.

Philips Ingenia 3.0T

Do not scan or bring the patient into Zone IV.

Siemens MAGNETOM Altea 1.5T

Do not scan as there is currently no way to limit SAR or B_{1+rms}.

St. Jude Medical Neurostimulation System

Applicable Model

Follow the manufacturer's eligibility checklist do identify conditional systems and configurations.

Scanner Parameters

Philips Ingenia 1.5T

Eligible for:

Head scans using the transmit/receive head coil

Knee, lower leg, ankle, and foot using the transmit/receive head coil

Elbow, forearm, wrist, and hand using the transmit/receive head coil

Follow the manufacturer's checklist.

Scan only in normal operating mode.

After 30 minutes of active scanning, allow 30 minutes of rest.

Philips Ingenia 3.0T

Do not scan or bring the patient into Zone IV.

Siemens MAGNETOM Altea 1.5T

Eligible for:

Head scans using the transmit/receive head coil

Knee, lower leg, ankle, and foot using the transmit/receive head coil

Elbow, forearm, wrist, and hand using the transmit/receive head coil

Follow the manufacturer's checklist.

Scan only in normal operating mode.

After 30 minutes of active scanning, allow 30 minutes of rest.

Stryker Hoffmann 3 External Fixation System

Applicable Model

Stryker Hoffmann 3 External Fixation System

Scanner Parameters

Philips Ingenia 1.5T

Obtain written attestation from the orthopedic surgeon that only the components stated in the Stryker Hoffmann 3 External Fixation System have been used.

If more than one study is ordered, contact the radiologist to tailor the exam to the minimum sequences required.

Screen and remove other devices/conductors from the patient per existing policy. Always adhere to existing policies.

Move the patient slowly within Zone IV to minimize Lenz's forces.

Do not bring the implanted device into any part of the bore.

Do not allow the implanted device to contact the scanner walls; pad as needed.

Scan only in Normal Operating Mode.

Warn the patient before scanning and inquire during scanning about the potential for heating of the implanted device and nerve stimulation. If the patient complains of any such symptoms, stop the scan and contact the radiologist.

After 15 minutes of continuous scanning, pause for 5 minutes before resuming the scan.

Philips Ingenia 3.0T

Do not bring the patient into Zone IV without explicit radiologist approval.

Siemens MAGNETOM Altea 1.5T

Obtain written attestation from the orthopedic surgeon that only the components stated in the Stryker Hoffmann 3 External Fixation System have been used.

If more than one study is ordered, contact the radiologist to tailor the exam to the minimum sequences required.

Screen and remove other devices/conductors from the patient per existing policy. Always adhere to existing policies.

Move the patient slowly within Zone IV to minimize Lenz's forces.

Do not bring the implanted device into any part of the bore.

Do not allow the implanted device to contact the scanner walls; pad as needed.

Scan only in Normal Operating Mode.

Warn the patient before scanning and inquire during scanning about the potential for heating of the implanted device and nerve stimulation. If the patient complains of any such symptoms, stop the scan and contact the radiologist.

After 15 minutes of continuous scanning, pause for 5 minutes before resuming the scan.

VNS Therapy (LivaNova)

Applicable Models

See manufacturer’s documentation

Scanner Parameters

Philips Ingenia 1.5T

Follow the manufacturer's protocol to identify the leads and generator.

Obtain radiographs to locate generator and ensure intact leads. Generator must be in left neck/chest at or above armpit. Do not scan broken or abandoned leads.

Have the provider complete the manufacturer's Patient MRI Form.

Do not bring the patient magnet or programming device into Zone IV.

Move the patient into and out of Zone IV slowly to minimize Lenz’s forces.

Group A and Group B devices can use a transmit/receive coil placed anywhere outside of C7-T8.

Group A devices can use a transmit body coil ONLY IF ISOCENTER IS BELOW L3.

Group B devices CANNOT BE SCANNED WITH THE TRANSMIT BODY COIL.

Scan only in Normal Operating Mode.

Do not exceed 15 minutes of continuous scan time per 30-minute window.

The patient must be awake. Maintain communication with the patient at all times. Assess for heating, excessive vibration, or other disturbances. Verify that the patient is feeling normal and is responsive between each sequence.

If the patient experienced an adverse effect, contact a radiologist and VNS Therapy.

Have the representative assess the device immediately following the scan.

Philips Ingenia 3.0T

Follow the manufacturer's protocol to identify the leads and generator.

Obtain radiographs to locate generator and ensure intact leads. Generator must be in left neck/chest at or above armpit. Do not scan broken or abandoned leads.

Have the provider complete the manufacturer's Patient MRI Form.

Do not bring the patient magnet or programming device into Zone IV.

Move the patient into and out of Zone IV slowly to minimize Lenz's forces.

Group A and Group B devices can use a transmit/receive coil placed anywhere outside of C7-T8.

Group A devices can use a transmit body coil ONLY IF ISOCENTER IS BELOW L3.

Group B devices CANNOT BE SCANNED WITH THE TRANSMIT BODY COIL.

Scan only in Normal Operating Mode.

Do not exceed 15 minutes of continuous scan time per 30-minute window.

The patient must be awake. Maintain communication with the patient at all times. Assess for heating, excessive vibration, or other disturbances. Verify that the patient is feeling normal and is responsive between each sequence.

If the patient experienced an adverse effect, contact a radiologist and VNS Therapy.

Have the representative assess the device immediately following the scan.

Siemens MAGNETOM Altea 1.5T

Follow the manufacturer's protocol to identify the leads and generator.

Obtain radiographs to locate generator and ensure intact leads. Generator must be in left neck/chest at or above armpit. Do not scan broken or abandoned leads.

Have the provider complete the manufacturer's Patient MRI Form.

Do not bring the patient magnet or programming device into Zone IV.

Move the patient into and out of Zone IV slowly to minimize Lenz's forces.

Group A and Group B devices can use a transmit/receive coil placed anywhere outside of C7-T8.

Group A devices can use a transmit body coil ONLY IF ISOCENTER IS BELOW L3.

Group B devices CANNOT BE SCANNED WITH THE TRANSMIT BODY COIL.

Scan only in Normal Operating Mode.

Do not exceed 15 minutes of continuous scan time per 30-minute window.

The patient must be awake. Maintain communication with the patient at all times. Assess for heating, excessive vibration, or other disturbances. Verify that the patient is feeling normal and is responsive between each sequence.

If the patient experienced an adverse effect, contact a radiologist and VNS Therapy.

Have the representative assess the device immediately following the scan.

Zimmer XtraFix External Fixation System

Applicable Models

XtraFix Large 11mm System
XtraFix Small 6mm System

Scanner Parameters

Philips Ingenia 1.5T

Obtain written attestation from orthopedic surgeon which components were used, including types of bars (glass-fiber, carbon fiber, etc.)

If more than one study is ordered, contact the radiologist to tailor the exam to the minimum sequences required.

Screen and remove other devices/conductors from the patient per existing policy. Always adhere to existing policies.

Move the patient slowly within Zone IV to minimize Lenz's forces.

Do not allow the implanted device to contact the scanner walls; pad as needed.

Scan only in Normal Operating Mode.

Warn the patient before scanning and inquire during scanning about the potential for heating of the implanted device and nerve stimulation. If the patient complains of any such symptoms, stop the scan and contact the radiologist.

Scan location:

> XtraFix Large 11mm System with glass fiber bars: Can scan any anatomic region if patient is conscious, alert, and able to communicate pain to the technologist. Otherwise, treat as non-glass fiber system (below). Pause for 5 minutes after every 15 minutes of continuous scanning.
>
> XtraFix Large 11mm System with bars other than glass fiber: Must keep implant at least 30cm from isocenter OR use T/R coil away from implant.
>
> XtraFix Small 6mm System: Must keep implant at least 30cm from isocenter OR use T/R coil away from implant.

Philips Ingenia 3.0T

Do not bring the patient into Zone IV without explicit radiologist approval

Siemens MAGNETOM Altea 1.5T

Obtain written attestation from orthopedic surgeon which components were used, including types of bars (glass-fiber, carbon fiber, etc.)

If more than one study is ordered, contact the radiologist to tailor the exam to the minimum sequences required.

Screen and remove other devices/conductors from the patient per existing policy. Always adhere to existing policies.

Move the patient slowly within Zone IV to minimize Lenz's forces.

Do not allow the implanted device to contact the scanner walls; pad as needed.

Scan only in Normal Operating Mode.

Warn the patient before scanning and inquire during scanning about the potential for heating of the implanted device and nerve stimulation. If the patient complains of any such symptoms, stop the scan and contact the radiologist.

Scan location:

> XtraFix Large 11mm System with glass fiber bars: Can scan any anatomic region if patient is conscious, alert, and able to communicate pain to the technologist. Otherwise, treat as non-glass fiber system (below). Pause for 5 minutes after every 15 minutes of continuous scanning.
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> XtraFix Large 11mm System with bars other than glass fiber: Must keep implant at least 30cm from isocenter OR use T/R coil away from implant.
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> XtraFix Small 6mm System: Must keep implant at least 30cm from isocenter OR use T/R coil away from implant.