

## MR SIM: Cholangiocarcinoma

10/13/2016 EP

### Patient Preparation:

- Have patient change into gown only
- Confirm GFR > 60 within 45 days

### Equipment (Coils, Immobilization Devices, etc):

- Spine array coil
- (2) Large flex (surface) coils
- (2) Coil bridges
- (2) Nylon straps
- G9 fiberglass flat table overlay
- Respiratory bellows and Bluetooth transceiver
- Headphones
- Patient-specific immobilization device (whole body vac-fix or alpha cradle)



### Setup and Landmark:

1. Remove everything from MR table except spine array coil.
2. Secure G9 fiberglass in place over spine array.
3. Secure patient's alpha cradle.
4. Lay respiratory bellows on immobilization device.
5. Setup the patient head-first supine with arms above head. Verify pelvic crest is above S8 on the spine array coil.
6. Place IV line into patient arm. Fill injector with **Eovist**.
7. Call radiation therapists (x53809) to verify patient setup.
8. Place **RF coil bridges over abdomen** in scanner table slots and adjust to conform to patient surface anatomy.
9. Arrange **both** body flex coils circumferentially over RF coil bridges and secure with two Nylon straps.
10. Administer **1mg Glucagon** IV (1/2 at start of exam, 1/2 midway through exam).
11. Place **head phones** on patient, if possible, to hear breathing instructions.
12. Landmark over diaphragm.

### Protocol:

- USER → MR SIM → ABDOMEN → LIVER (Cholangiocarcinoma)

### Scans:

- LOC – Free Breathing
- LOC – Breath Hold at **end expiration**
- Ax T1(f) DIXON CAIPI BH Pre (0:12):
  - Breath hold at **end expiration**. Must have **full liver coverage**.
- AX T1+(f) DIXON CAIPI BH Art (0:12):
  - Breath hold at **end expiration**. Copy "AX T1(f) DIXON CAIPI BH Pre" prescription.
- AX T1+(f) DIXON CAIPI BH Ven (0:12):
  - Breath hold at **end expiration**. Copy "AX T1(f) DIXON CAIPI BH Pre" prescription.
- AX T1+(f) DIXON CAIPI BH Eq (0:12):
  - Breath hold at **end expiration**. Copy "AX T1(f) DIXON CAIPI BH Pre" prescription.
- Ax T2(f) HASTE (3:30):
  - Navigator-gated with navigator (switch to bellows if needed). Center over Ax T1(f) prescription.
- Ax DWI b=150/500/800 (6:30):
  - Gated (50% phase). Copy AX T2(f) HASTE prescription, adjust volume, and navigator.
- Ax T1+(f) DIXON CAIPI BH 20min delay (0:12):
  - Breath hold at **end expiration**.
- Cor T1+(f) DIXON CAIPI BH 20min delay (0:14)
  - Breath hold at **end expiration**.
- Ax T1+(f) DIXON CAIPI BH 30min delay (0:12):
  - Breath hold at **end expiration**.
- Cor T1+(f) DIXON CAIPI BH 30min delay (0:14):
  - Breath hold at **end expiration**.

### Post-Scanning:

- **Distortion-correct all images** (in the Browser window, select a series and then go to Evaluation → 3D Distortion Correction. Note: After correction the corrected images will have a "\_DIS3D" suffix).
- Send the distortion-corrected images (i.e., those with a "\_DIS3D" suffix) to **MIM Clinical** and **PACS**.
- **If advanced imaging performed**, transfer raw k-space data with Yarra client (Ctrl+Esc → Transfer Raw Data).