

Gastrointestinal Bleeding Study

Special Instructions **When *in vitro* labeling is performed, erythrocyte labeling patient verification must be performed. Refer to Radiology - Nuclear Medicine - Handling of Blood Products Procedure. Follow instructions in UltraTag kit for red blood cell labeling. If an allergy to heparin exists, ACD (Anticoagulant Citrate Dextrose) may be substituted (ACD must be ordered from Pharmacy).**

Be sure that the acquisition has been started before the injection.

To be performed at UNMH and SRMC.

Radiopharmaceutical: Tc-99m *in vitro* labeled red blood cells (UltraTag™)

Dose (Adult/Pediatric): Refer to Nuclear Medicine Dose Chart

Route of Administration: Intravenous

Patient Preparation: None.

Equipment Setup: Gamma Camera:

- LFOV for adults
- LFOV camera with zoom for small children

Collimator:

Orbiter: LEAP

SPECT-CT/ECAM/Evo/Symbia E: High resolution

Computer setup:

- Dynamic acquisition
- 128 x 128 matrix
- **Zoom 1.0 (greater for children)**
- 1 min/frame
- 90 frames
- 90-minute acquisition time.

Right lateral of abdomen/pelvis:

- Static acquisition
- 128 x 128 matrix
- **Zoom 1.0 (greater for children)**
- 2 min/image
- 1 image

Gastrointestinal Bleeding Study (continued)

Patient Positioning:

- Anterior with the liver placed at top left of screen and stomach slightly visible on the top right of screen.
- Iliac vessels should be centered.

Procedure:

- Start the acquisition just prior to injecting the labeled red blood cells.
- The radiopharmaceutical is injected as a **bolus** with the tourniquet on, and then the tourniquet is released.
- Adjust the field of view to include the distal rectum (just below symphysis and bladder). If bleeding is obvious, notify the supervising radiologist.
- At the conclusion of the 90-minute acquisition, show the images to the radiologist to assess whether additional images are required.
- **If the study is performed after hours, ALWAYS obtain a right lateral image to include the pelvis (to help distinguish bladder or penile activity from a distal colon bleed).**

Processing:

- Process in the acquisition workflow by clicking on the flexible display tab and making savescreens of each of the following pages:
 - Dynamic display savescreen 1 min/frame with labels of all views
 - Lateral static view display savescreen 2 min/image with label
 - Anterior images display savescreen 5 min/image

Items Required For Complete Study:

- Dynamic anterior images (cine), 1 min/frame
- Lateral view of abd/pelvis, 2 min/image
- Lightbox/snapshot of anterior images, 5 min/image
- Transfer all digital images to PACS
- Complete the examination in RIS