

TUMOR SCAN WITH GALLIUM
UPDATED: MARCH 2011

CPT CODE: 78800,
78801, 78802, 78803

Indications:

Evaluations of tumors.
Tumors in which Ga-67 is particularly useful include: lymphoma and soft tissue sarcomas.
Ga-67 has proven useful in the management of patients with lymphoma for:

1. Staging the extent of disease
2. Detecting relapse or progression of disease
3. Determining response to therapy
4. Predicting outcome

Additional tumors that have been shown to be gallium-avid include:

1. Lung cancer
2. Melanoma
3. Hepatocellular carcinoma
4. Sarcoma
5. Testicular tumors
6. Multiple myeloma
7. Head and neck tumors
8. Neuroblastoma

Scheduling:

Gallium must be ordered from the manufacturer. Allow 24 hours for delivery.
Schedule first imaging at 96 hours to include whole body image and SPECT/CT the of chest and abdomen.
Allow 120 min for imaging. This will include a whole body and possible multiple SPECT with CT.

Radiopharmaceutical

& Dose:

10 mCi \pm 20% (8-12 mCi) Gallium-67 as Gallium Citrate, lesser when instructed by physician.
Adjust dose for patient weight per nomogram or NMIS.

Patient Prep:

If patient has infrequent bowel movements (one or less per day), suggest Dulcolax and Mag Citrate bowel preparations at the time of injection. Give patient the "Bowel Prep for Gallium" instruction sheet.

Imaging Procedure:

Imaging to be performed on INFINIA Room E or A, or IRIX with medium energy collimators.

For lymphoma patients, routine SPECT of chest and abdomen/pelvis is obtained. Check with staff physician after whole body is completed to see what area requires SPECT with CT.

Data Acquisition:

Whole Body Imaging:

Whole body scans are acquired for a minimum of seven (7) minutes per view. Scan time may be required to be increased for children given as matter dose.
Scan time to be adjusted accordingly for acquisition on the IRIX system.

SPECT + CT Acquisition

1. 128 x 128 matrix
2. 40 sec/stop. View angle = 5 for 72 total views over 360°.
3. Use full field of view for CT acquisition

PACS:

Send MIP screen, iterative reconstructive screens, and screen caps from Volumetrix.
Send SPECT and CT raw data sets to PACS and MD#2 station for physician review.
Send all save sets and whole body images.

Interpretation:

Gallium is excreted renally in the first 24 hours, so visualization of the kidneys at 72 hours is pathological. Gallium is excreted in the large bowel so that after 24 hours the colon is visualized. Normal liver is seen in Ga-67 scans, as are salivary glands, lacrimal glands, breasts, etc.

The study is performed at baseline for Hodgkin's and diffuse large cell lymphoma. Follow-up at three (3) months can verify successful treatment if the tumor uptake has gone. Persistent visualization of tumor uptake suggests that more aggressive therapy is required.

In the above named tumors, Ga-67-citrate scanning is very sensitive (85+%).

Bibliography: Society of Nuclear Medicine procedure guideline for Gallium Scintigraphy in the Evaluation of Malignant Disease.

Reviewed By: S. Perlman, D. Fuerbringer, S. Knishka

Scott B. Perlman, MD, MS
Chief, Nuclear Medicine

Derek Fuerbringer, CNMT
Manager, Nuclear Medicine

Scott Knishka, RPh, BCNP
Radiopharmacist

BOWEL PREP FOR GALLIUM
How to Prepare for your Imaging Procedure in Nuclear Medicine

****** IF PATIENT HAS CHRONIC DIARRHEA, OR IS AT PRESENT HAVING A BOUT OF
DIARRHEA, PLEASE CONSULT WITH PHYSICIAN ******

****** CONSULT PHYSICIAN, IF PATIENT IS UNDER 18 ******

Clear Liquid Diet

To clean out your bowel, you will need to follow a clear liquid diet. A clear liquid diet include any of he liquids below:

- √ Clear broth
- √ Coffee or tea (no cream, sugar is OK)
- √ Clear Jello (do not add fresh or canned fruit)
- √ Clear fruit juices of drinks – cranberry, grape or apple
- √ Carbonated beverages such as ginger ale, Seven-Up®, Sprite®, NO colas

DO NOT DRINK: *cola, milk, orange juice, or tomato juice*

Your Preparation Schedule starts, _____, the day BEFORE your imaging exam.
(date)

Breakfast, the day BEFORE the exam

Start your clear liquid diet at breakfast

Starting at 12:00 Noon

Between noon and 11 pm, drink eight 8-ounce glasses of water, unless your fluid intake in restricted. Be sure to have a clear liquid lunch as well.

At 5:00 PM

Have a clear liquid dinner.

At 5:30 PM

Take ten ounces of magnesium citrate, a laxative available without prescription from any pharmacy.

Day of Exam

Stay on clear liquid diet.

Please follow these instructions to the best of your ability. This may save you the inconvenience of having to return an additional day.