4 Hour Gastric Emptying

Radiopharmaceutical: Tc^{99m} Sulfur Colloid in 2 egg whites with 2 pieces of bread, butter and jelly 120 ml water.
Dose: 1 mCi
$T^{1/2}$: 6 hours
Energy: 140 keV
CPT: 78264

Indications:

Clinical indications for a gastric emptying study include, but are not limited to:

1. Gastroparesis
2. Abdominal pain
3. Early satiety
4. Nausea
5. Vomiting
6. Diarrhea

Radiopharmaceutical:

- 1 mCi Tc^{99m} Sulfur Colloid in egg white meal with 120 ml of water. Oatmeal may be substituted in patient with egg allergy or intolerance. Butter will be added to one package of instant oatmeal for egg substitute. No bread given.
- Pediatric patients to receive 0.06 mCi/kg of body weight

Pharmacological intervention: None

Patient instruction:

- NPO for at least 6 hours
- Withhold any gastric medications for 24 to 48 hours (unless physician request they be taken)
- Appointment time is approximately 4 ½ hours
- Upon scheduling if patient has any pertinent prior studies, please instruct either the patient or the physician's office to make those available for comparison

Equipment:

1. GE 830 Discovery

Procedure:

- Acquire a 1 minute static image from the anterior and posterior projections at 0 min (immediately after ingestion of egg meal) 60, 120, 180 and 240 minutes post ingestion of meal

Acquisition Parameters:

- LEHRS collimator
- Matrix 128x128
- *Zoom* 1.47
- Standing: Vertical inside Hi

1. To calculate the amount remaining

$$counts \div decay\ factor \div zero\ minute\ counts$$

4 hour gastric emptying decay factors
0 min =1
60 min= 0.8912
120 min= 0.7943
180 min= 0.7079
240 min= 0.6309

Processing/Data sets for PACS

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4 Hr. Gastric Emptying

Approval: K. Shamlou, MD	rev:2	7/15/2026

- Screen shot of gastric emptying graph; ROI of the stomach using geometric mean data
- Composite screen shot of the dynamic data (anterior and posterior)
- Dynamic data set (if possible)