

***GUNDERSEN HEALTH SYSTEM NUCLEAR MEDICINE DEPARTMENT  
PROTOCOL MANUAL***

**PROCEDURE:**                    **THYROID IMAGING  
(Both I-123 and I-131)**

**SECTION:**                    **ENDOCRINOLOGY        3.1**

**ORIGINAL DATE:**            **4 - 3 - 00**

**DATE REVISED:**            **9 - 12 - 18**

**REVIEWED:**                **ANNUAL**

Indications	<p>Evaluation of palpable nodules.</p> <p>Evaluation of abnormal gland to palpation, but without definite nodules.</p> <p>Evaluation of patients who had irradiation of the head and neck in childhood with or without palpable nodules.</p> <p>Evaluation for ectopic thyroid tissue, e.g. Struma Ovarii (image over pelvis) and lingual thyroid (image upper neck and jaw).</p>
Contraindications	<p>The provider will interview patient regarding the following contraindicated meds. The patient must be off the following for at least:</p> <ol style="list-style-type: none"> <li>1. Thyroxine (T-4)..... 6 wks</li> <li>2. Triiodothyronine (T-3)..... 2 wks</li> <li>3. Propylthiouracil (PTU) ..... 3 days</li> <li>4. Tapazole (Methimazole)..... 3 days</li> <li>5. Iodinated contrast..... 4 wks</li> </ol> <p>Other substances that might interfere with accurate uptake: Kelp (4 wks), herbal preparations, certain vitamins/minerals (4 wks), Lugol's solution and SSKI (4 wks), some cough medicines (4 wks), perchlorate (4 wks), and pertechnetate (1 wk). Reference: Dr Caplan 11/2008 + 7/2013</p>
Exam time length	60 minutes
Patient Preparation	See contraindications above.
Radiopharmaceutical & Dose	<p>123 I dose: Adult: 200 – 400 microCi (2-100 microCi Caps) Substernal thyroid I 123: 300 microCi (3 -100 microCi Caps); Pediatric: 100-200 microCi. ( 1-100 microCi cap)</p> <p>131 I dose: 100 – 150 microCi Staff perform bioassay within 3 days after administration of any of the following:</p> <ul style="list-style-type: none"> <li>• any dose of liquid I-131; or</li> <li>• dose &gt;100mCi I-131 in capsules; or</li> <li>• total dose administered by same tech in one 24hr period &gt;100 mCi I-131 in capsules</li> </ul>
Administration Technique	Oral

STATIC ACQUISITION PARAMETERS	
Time interval between tracer injection & imaging	Provider will specify 4 hour or 24 hour exam
Collimator	123 I __ LEAP 131 I __ Hi energy
Patient position	Supine, head first
Energy	123 I __ 159 KeV 131 I __ 364 KeV
Matrix	128 x 128 for both energies
Time /View	Ant, 1.5 zoom, 5 min Ant w/ marker, 1.5 zoom, 30 sec Ant, 3.0 zoom, 10 min RAO/LAO, 3.0 zoom, 10 min, use L mode, pan X 26, pan Y -13
Images taken	ANT ANT with marker on SSN, may also mark any palpable nodules, Mark chin & SSN on post thyroidectomy scan, Transmission image may be taken if needed to define activity seen. If needed do chest view for sublingual thyroid (1.5 zoom, 10 minutes)  For UPTAKE VALUES > 5%, include: ANT with zoom RAO/LAO with zoom
Screen caps to make	Add together Ant & marker image(s), display result along with all other images taken, Measure both lobes with electronic ruler and move off to side, 6 on 1, label all views and landmarks. Chest image may be included for sublingual thyroid.
Send to FUJI	Screencaps;type the % uptake on our thyroid uptake/scan screen captures