

SALIVARY GLAND WITH LEMON
UPDATED: APRIL 2011

CPT CODE: 78231

Indications: To differentiate malignant from benign salivary tumors, or to evaluate salivary gland function after radiotherapy.

Patient Prep: None. Patient should not have been given KI or Perchlorate within 48 hours preceding the scan.

Scheduling: 90 minutes camera time.

Radiopharmaceutical & Dose: Tc99m Pertechnetate 10mCi +/- 20% (8-12 mCi) administered intravenously. Dose will be adjusted for patient weight per nomogram or NMIS.

Imaging Device: Gamma camera with LEHR collimator.

Imaging Procedure:

PRE-LEMON

1. **Dynamic Study:** With patient supine, position in the anterior view with neck extended. One image/sec for 60 sec, 128 x 128 matrix.
2. **Static:** 15 min post-injection acquire static images, 128 x 128 matrix, 3 min/view, with anterior, left and right lateral views. The distance from the patient's head to collimator should be measured and reproduced for each set of images.

POST-LEMON

Lemon: Obtain lemon juice from the food service department. Saturate gauze and place on both sides of the mouth packed between cheek and gums. Leave gauze in place for 5 min and give patient a basin to expel excess saliva into. Remove gauze after 5 min. Patient should be given a glass of water prior to imaging post lemon statics.

Static: 5-min post-lemon, 128 x 128 matrix, 3 min/view, with anterior, left and right lateral views. Repeat statics at 15 and 30 min post-lemon.

If a mass is palpated, images with markers will be taken.

** No marker is needed for exams performed to evaluate salivary gland function in patients undergoing radiotherapy**

Data Analysis: Draw ROI's about thyroid, submandibular gland, and parotid gland on the appropriate lateral views. Record statistics, and repeat on all sequential timed images for salivary function evaluation. Screen capture all on one display.

Display: Display flow study reframed to 5 sec/frame. Screen capture pre- and post-lemon views (anterior, right lateral, and marker images).

Photo as follows for each time frame.

PACS: All raw and screen captured images should be sent to PACS.

Interpretation:

Benign (Warthin's) tumors show a predisposition to retain tracer within the mass. These tumors are unique in this respect. Normal salivary glands will show a significant decrease in activity after lemon administration. Malignant tumors usually show no tracer uptake.

Comments:

A Nuclear Medicine staff or resident physician should be consulted to determine if additional views are indicated.

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