Thyroid Nodule Evaluation

This practice algorithm has been specifically developed for MD Anderson using a multidisciplinary approach and taking into consideration circumstances particular to MD Anderson, including the following: MD Anderson’s specific patient population; MD Anderson’s services and structure; and MD Anderson’s clinical information. Moreover, this algorithm is not intended to replace the independent medical or professional judgment of physicians or other health care providers.

Note: Consider Clinical Trials as treatment options for eligible patients.

**INITIAL EVALUATION**

- Thyroid nodule found on palpation or imaging
  - Check serum TSH and consider referral to Endocrine Center at MD Anderson

**ADDITIONAL EVALUATION**

- TSH low?
  - Yes
    - Perform thyroid uptake scan
  - No
    - Neck ultrasound

- Hot nodule?
  - Yes
    - Assess and treat for thyrotoxicosis as indicated
    - Consider referral to Endocrine Center at MD Anderson
  - No
    - FNA clinically indicated by ultrasound criteria?
      - Yes
        - Ultrasound-guided FNA
        - See findings on Page 2
      - No
        - See Benign pathway on Page 2

**TREATMENT**

- Ultrasound-guided FNA
  - See findings on Page 2

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TSH = thyroid stimulating hormone
FNA = fine needle aspiration

1 Detection of abnormal lymph nodes should lead to FNA of the lymph node as well.
2 Reference the American Thyroid Association (ATA) guidelines
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CLINICAL PATHOLOGIC FINDINGS

- Malignant/Suspicious for malignancy
- Follicular/Hurthle Cell Neoplasm
- Atypical Cells of Undermined Significance (ACUS)/Follicular lesion
- Non Diagnostic

Cytopathological findings on FNA

TREATMENT

- Risk factors present?
  - Yes
    - Repeat ultrasound and TSH in 6-12 months
    - Stable?
      - Yes
        - Consider referral to Endocrine Center at MD Anderson
        - Follow malignancy guidelines as clinically indicated
      - No
        - Consider lobectomy ¹,²
        - Consider repeat FNA for molecular testing
        - Consider observation with repeat ultrasound in 6-12 months
  - No
    - Repeat ultrasound and TSH in 12-36 months
    - Stable?
      - Yes
        - Observation with repeat ultrasound in 6-12 months
        - Consider repeat FNA
        - Lobectomy ¹,² if worrisome feature
      - No
        - Repeat ultrasound guided FNA within 3-6 months³
        - Consider lobectomy ¹,²

1 Surgery can be extended to total thyroidectomy for bilateral disease or high risk, which includes family history of thyroid cancer, radiation exposure, unilateral nodule greater than or equal to 4 cm, especially in men, or patient’s preference.

2 For patients who underwent lobectomy, Thyroid Function Tests (TFT) should be repeated at 4 to 8 weeks, 6 months and 12 months post-op to rule out hypothyroidism.

3 If repeat FNA is nondiagnostic, consider surgery or follow-up as benign pathology with risk factors.

⁴ Risk factors:
  - Family history of thyroid cancer
  - History of radiation exposure to the head/neck
  - Suspicious ultrasound features
  - Childhood cancer survivor
  - Familial adenomatous polyposis
  - Cowden syndrome

Reconsider FNA if worrisome feature

Discharge to community provider

Reconsider TSH and ultrasound in 12-18 months and then consider every 2-3 years if stable

Reconsider FNA
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SUGGESTED READINGS


Thyroid Nodule Evaluation

This practice consensus algorithm is based on majority expert opinion of the Endocrine Center Faculty at the University of Texas MD Anderson Cancer Center. It was developed using a multidisciplinary approach that included input from the following endocrinologists, pathologists, surgical oncologists, radiologists, and nuclear medicine physicians.

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**Core Development Team** Or use to identify core team leads

**Clinical Effectiveness Development Team**

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5 Core Development Team

* Clinical Effectiveness Development Team