Disclaimer: This algorithm has been developed for MD Anderson using a multidisciplinary approach considering circumstances particular to MD Anderson’s specific patient population, services and structure, and clinical information. This is not intended to replace the independent medical or professional judgment of physicians or other health care providers in the context of individual clinical circumstances to determine a patient’s care. This algorithm should not be used to treat pregnant women.

Note: Consider clinical trials as treatment options for eligible patients.

Thyroid Nodule Evaluation

INITIAL EVALUATION

- Thyroid nodule found on palpation or imaging
  - Check serum TSH and consider referral to Endocrine Center at MD Anderson
    - TSH low?
      - Yes
        - Perform thyroid uptake scan
        - Hot nodule?
          - Yes
            - Assess and treat for thyrotoxicosis as indicated
            - Consider referral to Endocrine Center at MD Anderson (if not already done)
          - No
            - Ultrasound neck
            - FNA clinically indicated by ultrasound criteria
      - No
        - Ultrasound-guided FNA

ADDITIONAL EVALUATION

- 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 College of Radiology Thyroid Imaging, Reporting and Data System (TI-RADS) for FNA criteria
3 Reference the American Thyroid Association (ATA) guidelines

TREATMENT

- Ultrasound-guided FNA
  - Yes
    - See Cytopathological Findings on Page 2
  - No
    - See Benign Pathologic Findings on Page 2

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TSH = thyroid stimulating hormone
FNA = fine needle aspiration
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.

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

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

Note: Consider clinical trials as treatment options for eligible patients.

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**Clinical Pathologic Findings**

<table>
<thead>
<tr>
<th>Cytopathological findings on FNA</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Malignant/suspicious for malignancy</td>
<td>Consider referral to Endocrine Center at MD Anderson (if not already done)</td>
</tr>
<tr>
<td>Follicular/Hürthle cell neoplasm</td>
<td>Consider lobectomy¹ ²</td>
</tr>
<tr>
<td>Atypical cells of undermined significance (ACUS)/follicular lesion</td>
<td>Consider repeat ultrasound-guided FNA with molecular testing</td>
</tr>
<tr>
<td>Non-diagnostic</td>
<td>Consider observation with repeat ultrasound neck in 6-12 months</td>
</tr>
</tbody>
</table>

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**Treatments**

- Stable²?
- Repeat ultrasound neck and TSH in 6-12 months
- Repeat ultrasound neck and TSH in 12-36 months

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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

⁵ Reference the American Thyroid Association (ATA) guidelines.

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SUGGESTED READINGS


Thyroid Nodule Evaluation

This practice consensus statement is based on majority opinion of the Endocrine Center Faculty workgroup at the University of Texas MD Anderson Cancer Center for the patient population. These experts included:

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