UNDERSTANDING THE CURRENT ATA GUIDELINES FOR THYROID NODULE MANAGEMENT AND THEIR IMPACT ON TBSTC
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ATA: American Thyroid Association
• Leading organization of thyroid physicians/endocrinologists
• 1500+ members
• q 5 years, guidelines for thyroid nodule/thyroid cancer management

2015 American Thyroid Association Management Guidelines for Adult Patients with Thyroid Nodules and Differentiated Thyroid Cancer
The American Thyroid Association Guidelines Task Force on Thyroid Nodules and Differentiated Thyroid Cancer

2015 ATA Management Guidelines for Patients with Thyroid Nodules and Differentiated Thyroid Cancer
• Thyroid nodules to management of side effects from chemotherapy
• 133 pages
• 101 recommendations
• 1078 references
• 17 tables
• 8 figures

The underlying theme of the 2015 ATA guidelines is that “less is more.”
An Epidemic of Thyroid Cancer Overdiagnosis

- Detection of cancers that are not destined to cause symptoms or death
- Increased incidence largely due to improved imaging
- Shifting criteria for PTC diagnosis

Davies and Welch JAMA Otolaryngology (2014)

Less is More

Perform fewer FNAs

Risk stratification

- Nodule Selection for FNA
  - Ultrasonographic features
  - Size

Risk of malignancy


Davies and Welch JAMA Otolaryngology (2014)
ATA Guidelines and TBSRTC

- 2009
  - Precedes TBSRTC
  - Generally recommends surgery for "indeterminate" aspirates
- 2015
  - “Thyroid nodule FNA cytology should be reported using diagnostic groups outlined in TBSRTC”

Nondiagnostic FNA

- Most (92-98%) will end up Benign
- Recommend repeat FNA
  - With US guidance
  - And with ROSE if available
  - Timing: sooner if US is suspicious
  - Not necessary to wait 3 months
- Repeatedly nondiagnostic?
  - if US is NOT suspicious – close observation or surgery
  - if US IS suspicious, or nodule grows, or clinical risks - surgery

Benign

- Repeat FNA
  - Dictated by ultrasound pattern
  - Not growth
  - High suspicion
    - Repeat FNA within 1 year
    - Low-intermediate suspicion
      - Repeat US in 1-2 years
      - Consider repeat FNA with growth or altered imaging
  - Benign FNA x2
  - No further evaluation

Management Recommendations

“Language is permissive rather than directive”

Kim et al Thyroid (2016)

AUS/FLUS

- Repeat FNA
  - Endorsed by ATA Guidelines
  - Especially valuable when limited cellularity contributed to diagnosis
- Consider molecular testing
  - Not as a reflex test
- Surveillance or diagnostic excision
  - Depending on clinical risk, US appearance and patient preference
Suspicious for a Follicular Neoplasm

- Diagnostic excision (lobectomy) is standard of care
- Consider molecular testing
  - Depending on clinical risk, US appearance and patient preference

Suspicious for Malignancy

- Surgery
  - Lobectomy
  - Subtotal thyroidectomy
- Mutational testing
  - “if such data would be expected to alter surgical decision-making”

Molecular Testing

- Should be performed in a CLIA/CAP certified laboratory
- No single test is specifically endorsed in recognition of the rapidly changing landscape
- Afirma gene expression classifier only for AUS/FLUS, SFN
- Mutational testing for all indeterminate categories

Malignant

- When might surgery not be indicated?
  - Papillary microcarcinomas w/o spread
  - Co-morbidities that prevent surgery
  - Short life span
  - Other medical/surgical issues requiring treatment

Less is More

- Perform fewer FNAs
- More conservative surgical management

Surgical Management for Malignancy

- For low-risk papillary or follicular carcinoma

<table>
<thead>
<tr>
<th>Size</th>
<th>Other</th>
<th>Surgery</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;1 cm</td>
<td>uMO, no gross ETE</td>
<td>Lobectomy</td>
</tr>
<tr>
<td>&gt;1 cm and &lt;4 cm</td>
<td>uMO, no gross ETE</td>
<td>Lobectomy or bilateral thyroidectomy</td>
</tr>
<tr>
<td>&gt;4 cm</td>
<td>NT, gross ETE, M1</td>
<td>Bilateral thyroidectomy</td>
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- Completion thyroidectomy offered if bilateral thyroidectomy would have been recommended had the diagnosis been available before the initial surgery
Modified Initial Risk Stratification (MIRS) System

High Risk
- Gross extrathyroidal extension
- Tumor size > 4 cm
- 4 or more LNs involved
- >5 mm T1 NO disease
- Family history

Intermediate Risk
- Aggressive biology: tumor size > 4 cm or >5 mm T1 NO disease
- >5 mm T1 NO disease
- Family history

Low Risk
- >5 mm T1 NO disease
- Family history

FNAs: fewer
- Surgical management: more conservative
- RAI: less frequent use and lower dose

Radioactive Iodine Therapy
- Not used for low-risk disease
- Minimal rationale for use
  - >4 cm
  - Microscopic ETE
  - Unfavorable histology (e.g., tall cell, columnar, hobnail PTC, widely invasive FC, PD CAR)
  - N1 or >5 micromets (<0.2 cm)
  - 30 mCi favored dose for low-intermediate risk

What about NIFTP?
- A "semantic" change for non-experts and patients
- Management remains surgical
- Does not alter 2015 ATA guidelines

ATA Task Force recommendation statement
- The histopathologic nomenclature for eFVPTC without invasion may be reclassified as NIFTP, given the excellent prognosis of this neoplastic variant. Prospective studies are needed to validate the observed patient outcomes (and test performance in predicting thyroid cancer outcomes), as well as implications on patients' psychosocial health and economics.
- (Weak recommendation, moderate-quality evidence)

American Thyroid Association Guidelines on the Management of Thyroid Nodules and Differentiated Thyroid Cancer Task Force Review and Recommendation on the Proposed Renaming of Encapsulated Follicular Variant Papillary Thyroid Carcinoma Without Invasion to Noninvasive Follicular Thyroid Neoplasm with Papillary-Like Nuclear Features
Summary
• Less is more approach
• Strong reliance on risk stratification
• Permissive rather than directive language for many decisions

Summary
• Perform fewer FNAs
  • <1 cm discouraged
  • US risk stratification
• Endorsement of TBSRTC
• More conservative surgical management options
  • Observation - low-risk cancers <1 cm
  • Lobectomy - low-risk cancers 1-4 cm
• Fewer completion thyroidectomies
• RAI
  • Less frequent use
  • Lower dose

THANK YOU