Controversial Changes to the ATA Guidelines for the Management of Thyroid Cancer

What were they thinking?

R Michael Tuttle, MD
Professor of Medicine
Memorial Sloan Kettering Cancer Center
New York, New York
2015 American Thyroid Association Management Guidelines for Patients with Thyroid Nodules and Differentiated Thyroid Cancer

The American Thyroid Association (ATA) Guidelines Taskforce on Thyroid Nodules and Differentiated Thyroid Cancer

Bryan R. Haugen, M.D. (Chair)*, Erik K. Alexander, M.D., Keith C. Bible, M.D., Ph.D., Gerard M. Doherty, M.D., Susan J. Mandel, M.D., M.P.H., Yuri Nikiforov, M.D., Ph.D., Furio Pacini, M.D., Gregory W. Randolph, M.D., Anna M. Sawka, M.D., Ph.D., Martin Schlumberger, M.D., Kathryn Schuff, M.D., Steven I. Sherman, M.D., Julie Ann Sosa, M.D., David L. Steward, M.D., R. Michael Tuttle, M.D., Leonard Wartofsky, M.D.

*Authors are listed in alphabetical order and were appointed by ATA to independently formulate the content of this manuscript. None of the scientific or medical content of the manuscript was dictated by the ATA.

Haugen et al, Thyroid 2016
Guidelines Development

New Members

2 term limit

Input from ATA, other clinicians and patients

Developed a series of clinical questions

2 members assigned to each question

Literature based written reviews

Formalized grading system

Largely expert opinion based on literature published before 2015
Unifying Theme

Risk Stratification
Balancing Risk and Benefit

- Evaluation of Nodules
- Initial Risk Assessment
- Initial Treatment
- Initial Follow-up
- Response to Therapy
- Additional Therapies
- Long Term Follow-Up
Overview of the 2015 Guidelines

Compared with 2009 Guidelines
80% of the recommendations are the same or very similar
20% either new or substantially updated
Controversial Changes

Management recommendations for subcentimeter highly suspicious thyroid nodules (including active surveillance options)

CT with contrast as an initial staging tool in patients that will need RAI ablation/adjuvant therapy

Pre-operative voice (vocal cord) evaluation recommendations

Thyroid lobectomy for papillary thyroid cancer
(Really? Is that topic back again?)

Surgery vs observation for structural disease recurrence in cervical lymph nodes
Case Example

75 year old male
Asymptomatic
Normal thyroid function test
US for carotid artery evaluation
    Normal carotid
    8 mm thyroid nodule

Dedicated thyroid US
    8 mm
    “Highly suspicious thyroid nodule”
    “Recommend cytological evaluation”
ATA Nodule Sonographic Pattern Risk of Malignancy

High Suspicion  
70-90%

Intermediate Suspicion  
10-20%

Low Suspicion  
5-10%

Very low Suspicion  
<3%

Benign  
<1%

Prepared by Susan Mandel, U Penn
Recommendations for diagnostic FNA based on sonographic features of thyroid nodules

RECOMMENDATION 8

- FNA recommended for sonographic features of high suspicion and $\geq 1\text{cm}$

- FNA is not required for thyroid nodules that do not meet the above criteria, including all nodules $< 1\text{ cm}$
RECOMMENDATION 24
Nodules may be detected on ultrasound that do not meet criteria for FNA at initial imaging. The strategy for sonographic follow up of these nodules should be based upon the nodule's sonographic pattern.

A) Nodules with high suspicion US pattern (<1cm): repeat US 6-12 months

C) Nodules < 5 mm without high suspicion US pattern do not require routine sonographic FU and if repeated, the US should be performed at 24 months or later
Case Example

75 year old male
Asymptomatic
Normal thyroid function test
US for carotid artery evaluation
Normal carotid
8 mm thyroid nodule

The biopsy reveals Papillary thyroid cancer

What do you recommend?
RECOMMENDATION 12
A cytology diagnostic for a primary thyroid malignancy will almost always lead to thyroid surgery. However, an active surveillance management approach can be considered as an alternative to immediate surgery in:

(a) patients with very low risk tumors (e.g. papillary microcarcinomas without clinically evident metastases or local invasion, and no convincing cytologic evidence of aggressive disease,
(b) patients at high surgical risk because of co-morbid conditions,
(c) patients expected to have a relatively short life span (e.g. serious cardiopulmonary disease, other malignancies, very advanced age), or
(d) patients with concurrent medical or surgical issues that need to be addressed prior to thyroid surgery.
Case Example

56 year old male
- Presents with new onset hoarse voice
- 5 cm mass in the thyroid
- Mass is fixed to the deep structures in the neck
- FNA is papillary thyroid cancer

The surgeon wants a CT of the neck with contrast to guide management.

What do you tell her/him?
RECOMMENDATION 33

A) Preoperative use of cross-sectional imaging studies (CT, MRI) with intravenous contrast is recommended as an adjunct to ultrasound for patients with clinical suspicion for, or sonographic evidence of, advanced disease including invasive primary tumor as well as clinically apparent lymph node involvement.
Case Example

56 year old male
- Presents with new onset hoarse voice
- 5 cm mass in the thyroid
- Mass is fixed to the deep structures in the neck
- FNA is papillary thyroid cancer

Does he require pre-operative visualization of his vocal cords in addition to standard cross sectional imaging?

What if he had a normal voice?
[B12] Preoperative voice assessment

■ RECOMMENDATION 40
All patients undergoing thyroid surgery should have *preoperative voice assessment* as part of their pre-operative physical examination. This should include the patient’s description of vocal changes, as well as the physician’s assessment of voice.

■ RECOMMENDATION 41
Preoperative laryngeal exam should be performed in all patients with:
A) Preoperative voice abnormalities
B) History of cervical or upper chest surgery which places the RLN or vagus nerve at risk
C) Known thyroid cancer with posterior extrathyroidal extension or extensive central nodal metastases
44 year old female
Diagnosed with a 2 cm PTC by FNA
Pre-op US
  Normal contralateral lobe
  No abnormal lymph nodes
  2 cm PTC not near the thyroid border

What are her surgical options with regard to her thyroid?
Surgery for a biopsy diagnostic for follicular cell-derived malignancy

**RECOMMENDATION 35**

For patients with thyroid cancer >1 cm and < 4 cm without extrathyroidal extension, and cN0, the initial surgical procedure can be either a bilateral procedure (near-total or total thyroidectomy) or a unilateral procedure (lobectomy).

Thyroid lobectomy alone may be sufficient initial treatment for low and moderate risk papillary carcinomas; however, the treatment team may choose total thyroidectomy to enable RAI therapy or to enhance follow-up based upon disease features and/or patient preferences.
Case Example

35 year old male
  • 2 years ago, total thyroidectomy, central and right lateral neck dissection
  • 3.5 cm tall cell variant PTC, cN1b disease, 35/42 LN involved, largest LN 3 cm
  • RAI ablation
  • Persistent abnormal suppressed Tg values, slowly rising
  • US now shows highly suspicious lymph node in the right lateral neck, 0.5 x 0.4 x 0.9 cm

What do you recommend?
What is the optimal directed approach to patients with suspected structural neck recurrence?

RECOMMENDATION 71

Therapeutic compartmental central and/or lateral neck dissection in a previously operated compartment, sparing uninvolved vital structures, should be performed for patients with biopsy-proven persistent or recurrent disease for central neck nodes >8mm and lateral neck nodes >10mm in the smallest dimension that can be localized on anatomic imaging.

Observe 4 x 8 x 12 mm
What is the role of preoperative staging with diagnostic imaging?  

Neck imaging—ultrasound

RECOMMENDATION 32

(B) US-guided FNA of sonographically suspicious lymph nodes > 8-10mm in the smallest diameter should be performed to confirm malignancy if this would change management.
Active Surveillance of Cervical LN Mets

- Highly suspicious cervical lymph nodes < 8-10 mm in smallest dimension can be followed with active surveillance.

- No specific guidance given as to how that should be done.

- Follow a similar approach to active surveillance in papillary microcarcinoma (location, rate of growth, histology, FDG avidity).

- Approach may differ depending on whether or not the abnormal LN is in a compartment that has been previously dissected.
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