Case 1

A 31-year-old woman

Case Study

- **A 31-year-old healthy woman is referred for evaluation of a newly discovered thyroid nodule.**

- **On examination, there is a firm, freely mobile nodule in the isthmus/left lobe and no cervical lymphadenopathy.**

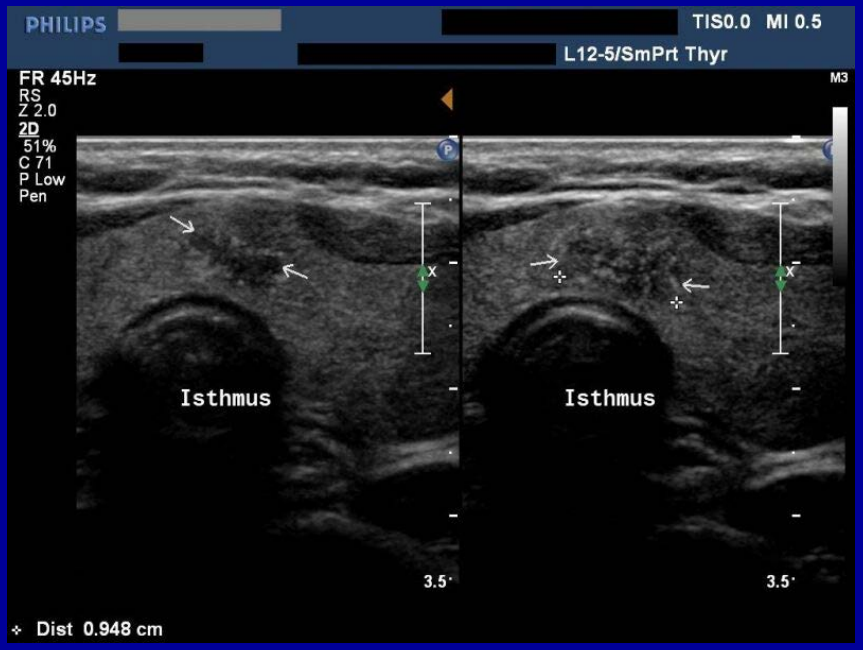
31-Year-Old Woman

She enjoys good general health and reports no symptoms. There is no history of radiation.

Labs show serum TSH 3.6 mIU/L, FT4 1.4 ng/dL, & thyroglobulin (Tg) 19 ng/mL.

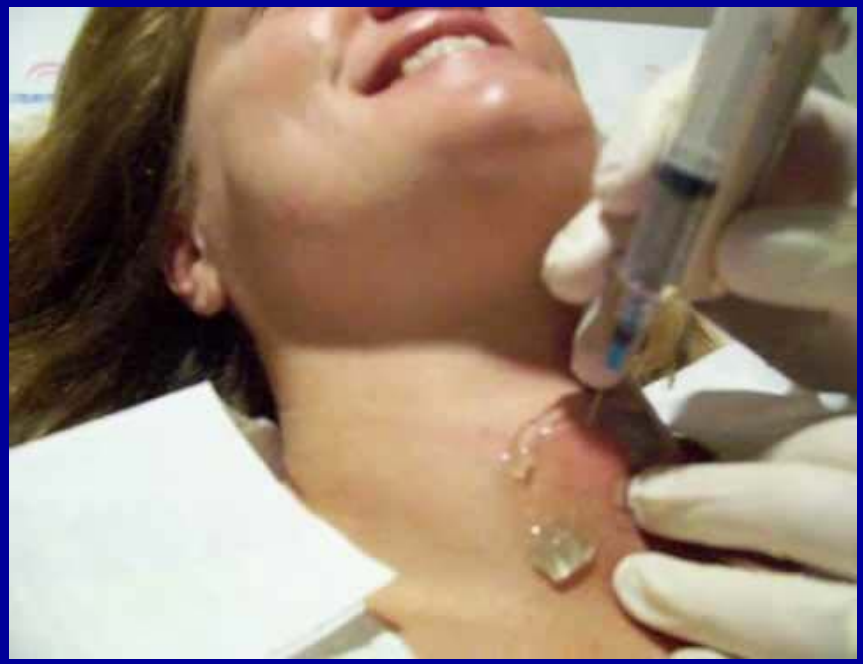
Case

- Thyroid US shows a 1.0-cm, solid, hypoechoic nodule with some calcification on the left side and no other abnormalities.



Case

- Ultrasound-guided fine-needle aspiration shows little colloid & microfollicular architecture. A follicular neoplasm cannot be excluded.



31-Year-Old Woman

The nodule is non-functioning on radioiodine scan.

Case

- **Which one of the following would you recommend as the best next step?**

A. Measure serum calcitonin

B. Perform left thyroid lobectomy

C. Perform ultrasonography and fine-needle aspiration again in 6 months

D. Prescribe a 12-month trial of levothyroxine suppression

65-Year-Old Man

During cancer evaluation PET scan showed focal uptake in right thyroid lobe

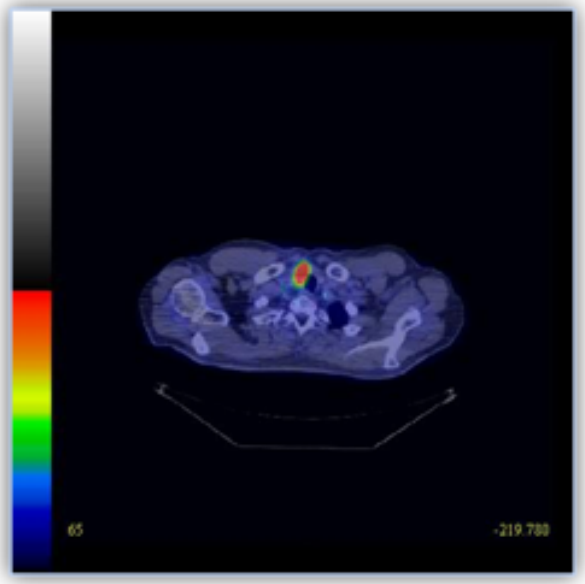
What is the risk of malignancy in this nodule?

A. 5%

B. 15%

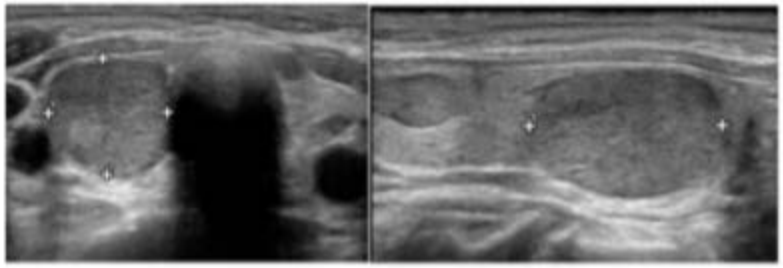
C. 35%

D. 90%



Case 1

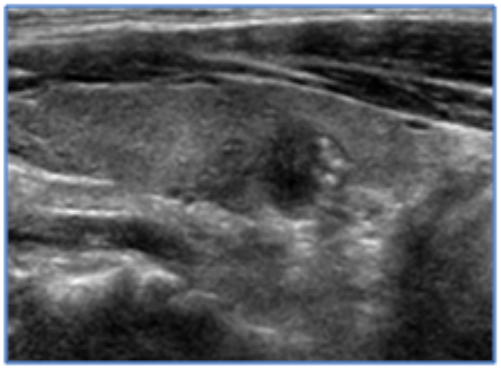
A 58-year-old woman presents with a palpable 2-cm right-sided nodule. There are no compressive symptoms. Her thyrotropin level is normal, and she denies family history of thyroid cancer or personal history of radiation exposure. An ultrasound of the neck demonstrates a 1.4- × 1.4- × 2.1-cm nodule. What is the ATA risk classification of this nodule?



A. Benign
B. Very low risk
C. Low risk
D. Intermediate risk
E. High risk

68-Year-Old Man

Referred for an incidental thyroid nodule found on chest CT performed for cough. No radiation history and no family history of thyroid disease. TSH is 2.8 mIU/L.



US shows an 8 mm solid, hypoechoic nodule, with poorly defined margins and possible microcalcifications. No abnormal nodes were noted.

What do you recommend next for this patient?

A. Perform US-FNA

B. Ask surgeon to see for thyroidectomy

C. Active surveillance with repeat US in 6 months

D. Scent-trained sniff dog

32-Year-Old Woman

Found to have a 2.5 cm right thyroid nodule on pre-employment examination. FNA biopsy shows nuclear changes suspicious for PTC & serum TSH is 0.8 mIU/L.

What additional preop test should you order?

A. Serum Tg
B. Radioisotope scan
C. Thyroid US
D. Neck CT with contrast

32-Year-Old Woman

Found to have a 2.5 cm right thyroid nodule on pre-employment examination. FNA biopsy shows nuclear changes suspicious for PTC & serum TSH is 0.8 mIU/L.

What additional preop test should you order?

A. Serum Tg
B. Radioisotope scan
C. Thyroid US
D. Neck CT with contrast

22-Year-Old Woman

Found to have a thyroid nodule on pre-employment exam. US showed a 9 mm solid left lobe nodule without suspicious adenopathy. FNA was suspicious for PTC. TSH is 2.2 mIU/L

Next step in management?

A. Left lobectomy

B. TTX

C. TTX plus lateral neck dissection

D. Nodulectomy

22-Year-Old Woman

Found to have a thyroid nodule on pre-employment exam. US showed a 9 mm solid left lobe nodule without suspicious adenopathy. FNA was suspicious for PTC. TSH is 2.2 mIU/L

Next step in management?

A. Left lobectomy

B. TTX

C. TTX plus lateral neck dissection

D. Nodulectomy

Case

- A 46 Y/O man referred for 3 cm thyroid nodule on palpation
- No FH of thyroid cancer, no history of head and neck radiation
- He has tachycardia over the last 6 month and lost 3 pounds
- Lab tests: TSH: 0.15, FT4:1.1 ng/dl, T3: 197ng/dl
- What is the best next step?

A : Thyroid ultrasound

B : FNA of papable nodule

C : Thyroid scan

D : Start methimazole

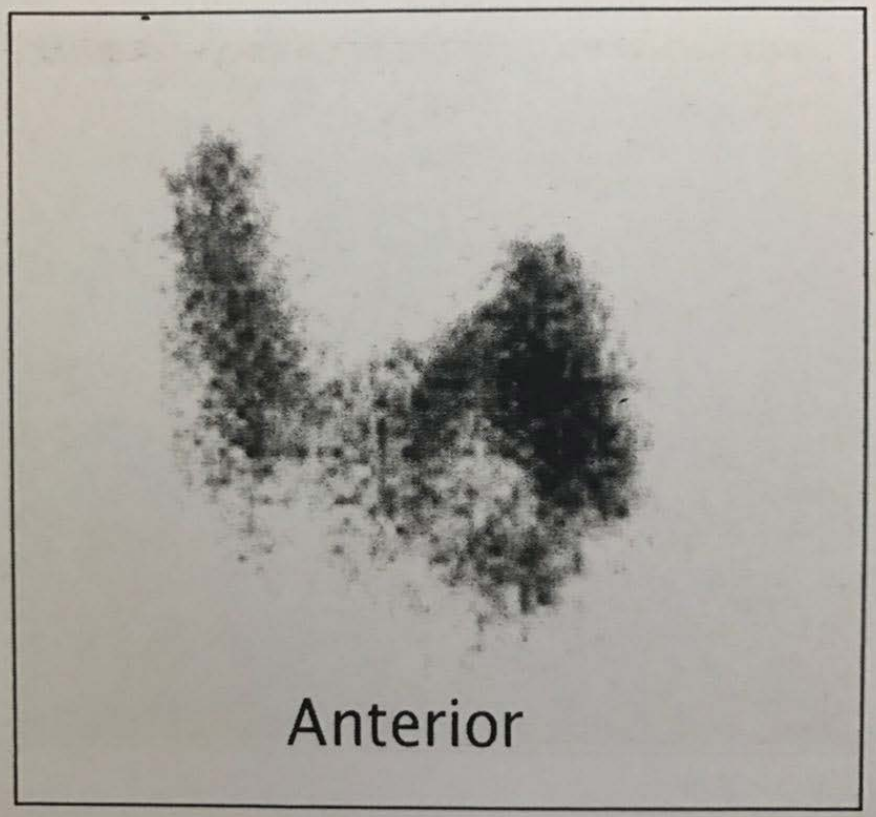


FIGURE 4: 123I scan anterior view. 24-hour radioiodine uptake 32%.

What is the best next step in management?

A: FNA of the cold nodule in the left mid to lower pole

B :Thyroid US

C: Iodine therapy of hyperthyroidism

D: Tc 99 Pertechnetate thyroid scan

Ultra sound report

- A mixed cystic solid nodule in the left mid/lower thyroid lobe, solid component is located superiorly and laterally.
- Right lobe US: 2 nodules including

a right mid solid noncalcified isoechoic nodule(1.4 x 1.5 x 1.7 cm)and a right lower mixed cystic/solid noncalcified nodule (1.8 x 1.6 x 1.9 cm)

What do you next recommend?

A: FNA of right mid nodule

B: Right lobectomy

C: FNA of right lower nodule

D: Total thyroidectomy

FNA of right mid nodule:

- Folicular lesion of undetermined significance(betesta class 3)
- What are the next step:

A: Right lobectomy

B: Repeat FNA for cytology in 2-3 month

C: Repeat FNA for molecular marker testing

D: Near total thyroidectomy

Multinodular Goiter Since Puberty

She is a-29-year old woman with a history of goiter since puberty. She is euthyroid, and feels pressure when she puts her hands over her head. FT4 = 1.4 ng/dl (0.8-2), T3 = 160 ng/dl (80-200), TSH = 0.4 mU/L. What would you recommend?