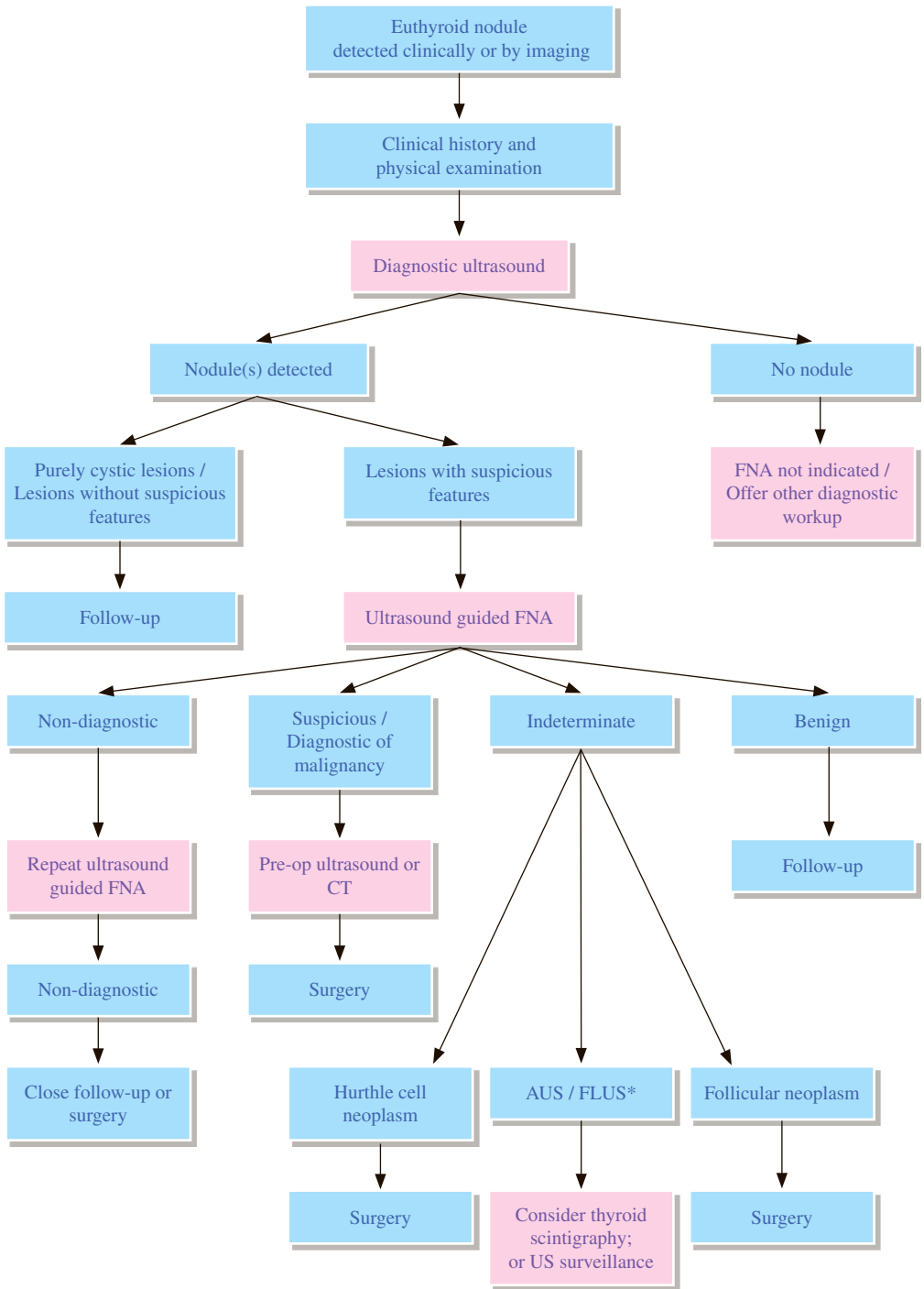


TI 2 Euthyroid nodule



*AUS: atypia of undetermined significance; FLUS: follicular lesion of undetermined significance

REMARKS

1 Clinical history

- 1.1 Underlying high-risk factors for thyroid cancer should be sought from clinical history:
 - 1.1.1 Family history of thyroid cancer
 - 1.1.2 Personal history of thyroid cancer with surgery done
 - 1.1.3 Previous external beam irradiation to the neck
 - 1.1.4 Exposure to ionizing radiation in childhood
 - 1.1.5 Thyroid nodule is F-18 FDG PET positive

2 US

- 2.1 US can confirm the presence of a thyroid nodule and assess the size, location and sonographic features of the lesion. It can also provide information on the number of nodules, and characterize nodules based on their solid and / or cystic constituents.
- 2.2 US can detect non-palpable nodules, extra-thyroidal lesions and associated cervical lymphadenopathy if present.
- 2.3 Fine needle aspiration (FNA) or biopsy of nodules with suspicious features can be performed using US guidance with good accuracy.
- 2.4 Suspicious sonographic features of thyroid nodules include:
 - 2.4.1 Presence of microcalcifications
 - 2.4.2 Marked hypoechogenicity compared to the normal thyroid parenchyma
 - 2.4.3 Increased intra-nodular vascularity
 - 2.4.4 Irregular infiltrative margins
 - 2.4.5 Taller than wide configuration on transverse scan
 - 2.4.6 Disrupted rim calcifications with extruding soft tissue component
 - 2.4.7 Associated cervical lymphadenopathy

3 Nuclear medicine

- 3.1 Thyroid scintigraphy provides functional information about the thyroid nodules. Non-functioning or hypofunctioning nodules are associated with increased likelihood of malignancy and should be considered for US correlation. FNA is suggested for those with suspicious sonographic features. Tc-99m pertechnetate is the most commonly used tracer.
- 3.2 In follicular lesions at FNA cytologic evaluation, thyroid scintigraphy is able to identify a functioning nodule that may be benign; however, most such nodules are cold on scintigraphy.

4 CT

4.1 CT can provide better as well as additional anatomical information about the thyroid nodules prior to operation, including:

4.1.1 Retrosternal extension

4.1.2 Invasion of adjacent structures

4.1.3 Tracheal compression

4.1.4 Lymph node metastasis

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