



Endocrine Surgery Thyroid Nodule Referral Guidelines (SCGH)

Scope

Site	Service/Department/Unit	Disciplines
SCGH	Endocrine Surgical Services Unit	Medical

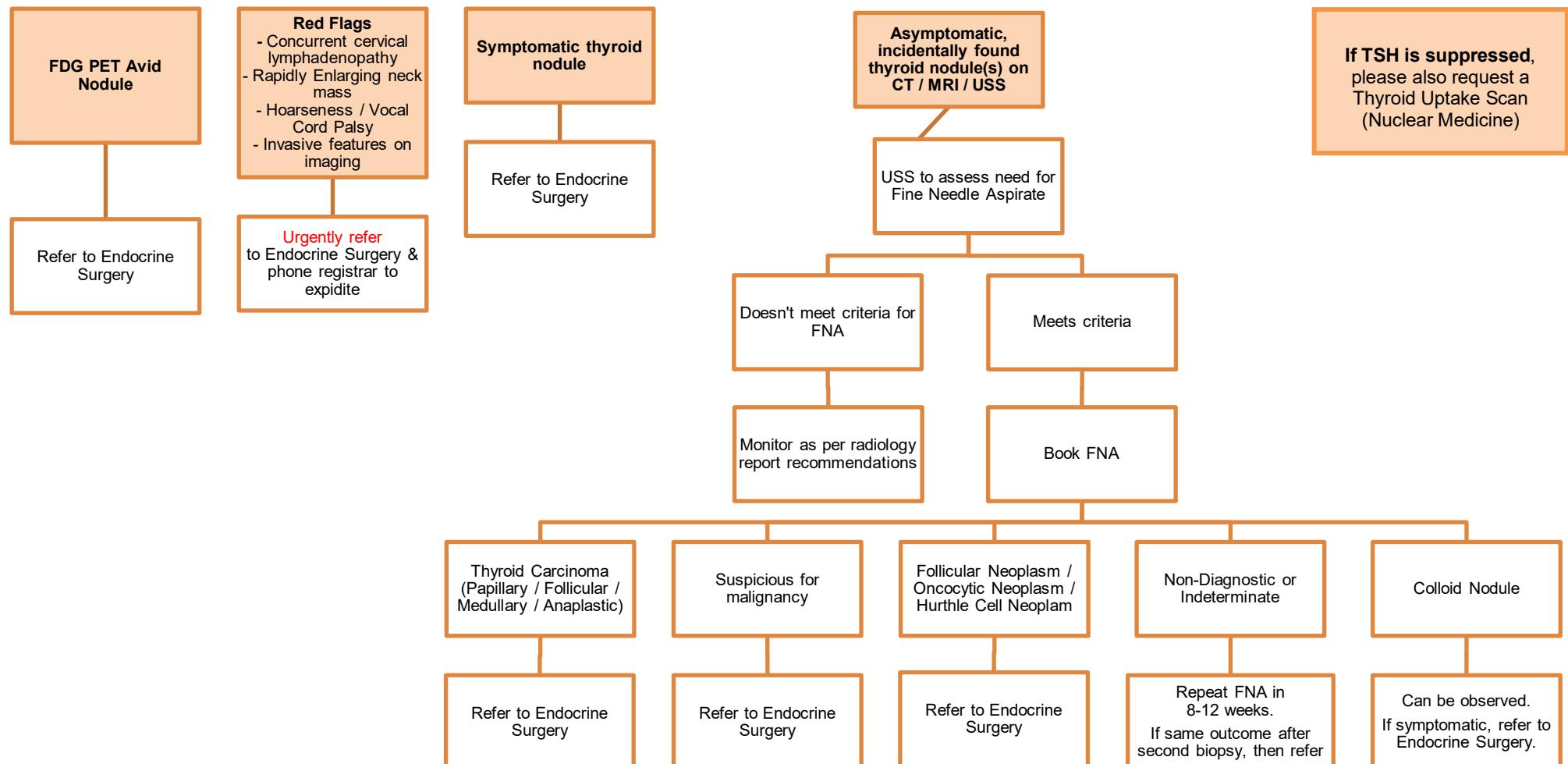
Introduction

The purpose of this guideline is to ensure the safe, appropriate and timely management of patients diagnosed with undifferentiated thyroid nodules / masses / lumps.

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Risk Statement	Error! Bookmark not defined.

Flow Chart for incidentally found thyroid nodules



INVESTIGATIONS TO FACILITATE SPECIALIST REVIEW

Strongly recommended:

Ultrasound thyroid | Thyroid Function Tests (TSH & T4) | Thyroid Uptake scan if TSH is suppressed.

Helpful:

Full blood count | Urea, Electrolytes, Creatinine | Parathyroid Hormone | Calcium | Ionised Calcium

1. Background

Asymptomatic thyroid nodules are discrete thyroid lesions identified on examination or imaging performed for unrelated indications, in the absence of compressive symptoms or thyroid dysfunction. They are common due to widespread use of ultrasound and cross-sectional neck imaging. Prevalence ranges from 20–70% on ultrasound and up to 25% on CT or MRI, increasing with age and in women (1–3). Most thyroid nodules are benign. When malignancy is present in asymptomatic nodules, it is usually differentiated thyroid cancer with favourable disease-specific outcomes (2,4). Assessment therefore focuses on identifying clinically important disease while ensuring appropriate specialist input and follow-up.

Incidental detection often prompts referral because next steps are unclear to non-specialists. Distinguishing cases that require expedited review from those suitable for routine assessment can be difficult. Cytology terminology is also frequently misunderstood. The label “follicular neoplasm” is commonly interpreted as a confirmed cancer diagnosis, rather than a cytological category that includes both benign follicular adenoma and follicular carcinoma, which cannot be distinguished without histology (5). These factors contribute to inconsistent referral urgency and variable communication of risk to patients. A shared understanding of epidemiology, malignancy risk, and diagnostic limits supports timely referral to endocrine surgical services and clearer patient counselling.

2. Excluded Populations

- Paediatric patients (<16 y/o)
- Individuals with previously diagnosed thyroid cancer

3. High Risk Factors

- **Concurrent cervical lymphadenopathy** substantially increases the likelihood of malignancy in the setting a thyroid nodule. (1).
- **Rapidly enlarging neck mass** should prompt concern for aggressive histology, including anaplastic carcinoma or thyroid lymphoma. (6,7).
- **Hoarseness or vocal cord palsy** implies possible recurrent laryngeal nerve involvement. In the absence of an alternative explanation, voice change associated with a thyroid nodule is uncommon and carries a high association with locally invasive malignancy, even when the nodule itself is not large (6).
- **Invasive features on imaging** such as extrathyroidal extension, loss of tissue planes with the trachea or oesophagus, or vascular encasement indicate loss of normal anatomic containment. (6,7).
- **FDG-avid thyroid nodules** identified on PET imaging, even when incidental, carry a substantially higher malignancy prevalence than non-FDG-avid nodules. (6,8).

4. Ultrasound Classification Systems

Thyroid ultrasound reports in Western Australia usually describe nodule risk using one of two established systems: ACR TI-RADS or the American Thyroid Association (ATA) sonographic classification.

ACR TI-RADS uses a points-based approach, assigning scores to individual ultrasound features to generate an overall risk category. The ATA system instead groups nodules into defined sonographic patterns that correlate with malignancy risk.

Both systems are commonly used by radiologists in Perth. In local practice, however, endocrine surgeons generally favour ATA-based reporting, as it aligns more closely with surgical decision-making and guideline-driven management.

Well-constructed reports will assign an ATA or TI-RADS risk category and outline the recommended next step, such as surveillance imaging (and time interval) or fine-needle aspiration, according to the chosen system.

5. Understanding Terminology in Cytopathology Reports

These commonly seen terms in thyroid cytopathology reports' conclusions are based of the Bethesda classification system.

Cytological Conclusions	Estimated Risk of Malignancy	Included Histology / Notes
Non-diagnostic / Unsatisfactory	5–10%	Insufficient cellularity or poor specimen quality
Benign	0–3%	Consistent with benign thyroid pathology
Atypia of Undetermined Significance; or Follicular Lesion of Undetermined Significance	10–30%	Not commonly seen reported
Follicular neoplasm or suspicious for follicular neoplasm, including Oncocytic (Hürthle cell) type	25–40%	Within thyroid cytopathology, 'neoplasm' is an umbrella term that includes both adenoma and carcinoma.
Suspicious for Malignancy	50–75%	Cytological features strongly suggestive but not diagnostic of malignancy
Malignant	97–99%	Cytology diagnostic of malignancy

6. References

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