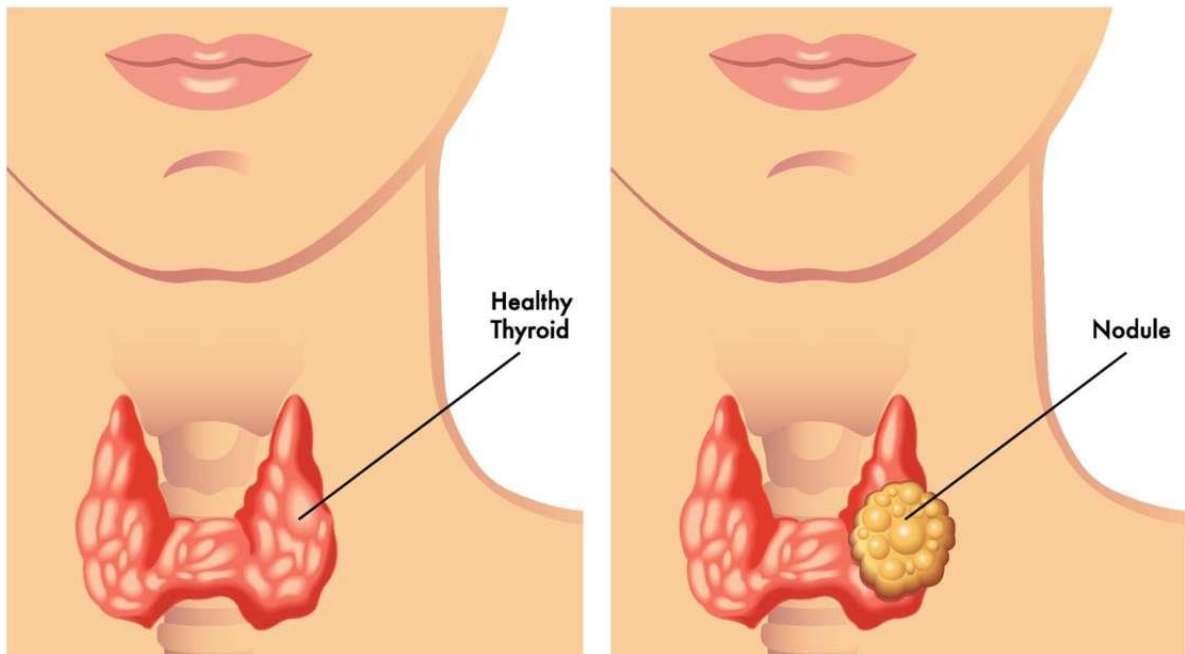


# SOLITARY THYROID NODULE

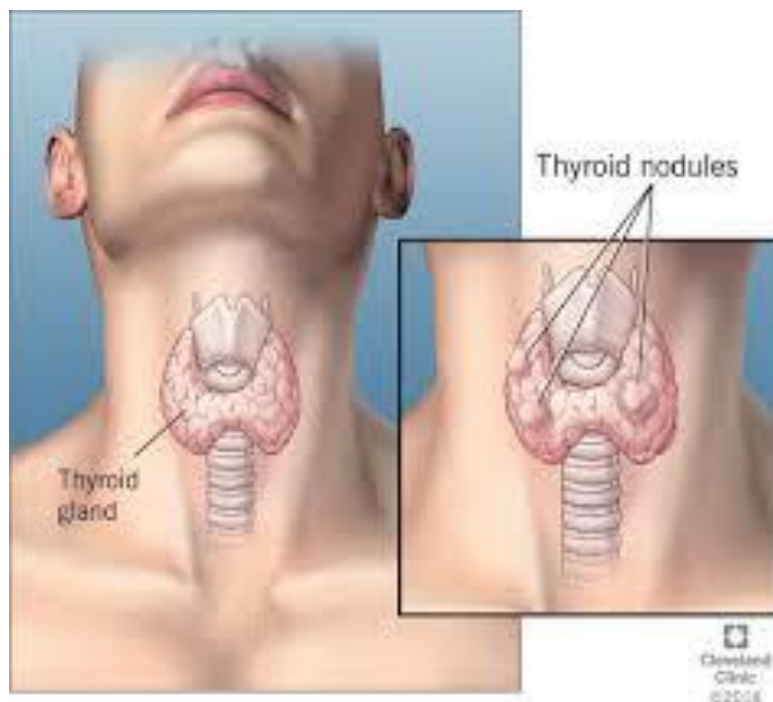
★ **Definition:** A single nodule in an otherwise normal thyroid gland.



★ **Incidence:** More common in females.

★ **Aetiology:**

1. *The commonest is simple nodular goitre* with one palpable nodule (dominant nodule) and the other nodules are not clinically palpable .



2. *Toxic nodule.*
3. *Malignant nodule.*
4. *Inflammatory nodule* (thyroiditis): very rare.
5. *True benign tumor* of thyroid: follicular adenoma.
6. *Thyroid cyst* which may be benign or malignant.

★ **Clinical picture:** The importance of solitary nodule lies in the risk of malignancy.

**A. Malignant manifestations:** The patient is euthyroid. Malignancy is suspected in the following conditions:

1. *Recent onset & rapid growth especially in young or elderly patient .*
2. **Pain** in the goitre or referred to the ear.
3. *The nodule* is hard, irregular with limited mobility.
4. Evidences of *infiltration* of surrounding structures (mention in short).

**B. Toxic manifestations:** (see thyrotoxicosis but *no autoimmune manifestations as true exophthalmos or Graves' dermopathy* ).

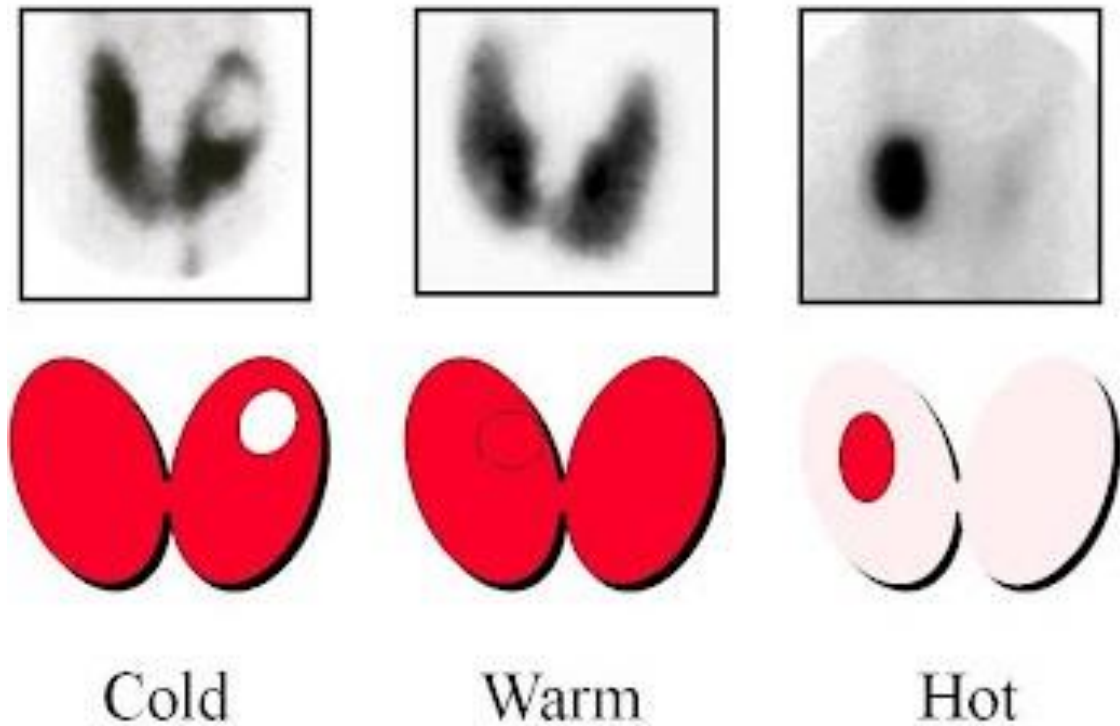
**C. Cases which are not frankly malignant or toxic:**

◆ In these cases, *investigations are essential* to diagnose the case.

## ★ Investigations:

1. *Thyroid scanning:* One of the followings results may be obtained:

- a) **Hot nodule** (over active) and the patient is hyperthyroid → toxic nodule, rarely malignant or functioning adenoma.
- b) **Warm nodule** (active) and the patient is euthyroid → usually simple nodule , rarely functioning adenoma and possibility of malignancy is only 3%.
- c) **Cold nodule** (inactive) and the patient is euthyroid → malignant nodule 10-15 % but it may be degenerated, cystic or calcified simple nodule and rarely inflammatory.



2. Level of TSH & *free T<sub>3</sub> & T<sub>4</sub>* especially for patient with toxic manifestation or hot nodule.
3. *Ultrasonography*: ( look for U/S in carcinoma of thyroid ) .
4. *Biopsy is diagnostic* & the most important investigation (Mention its types).
5. *Estimation* of thyroid antibodies may be needed to exclude thyroiditis.

### ★ Treatment:

1. *Malignant nodule*: (mention treatment of carcinoma in short).
2. *Toxic nodule*: Radioactive iodine or preoperative preparation followed by hemithyroidectomy.
3. *Cases which are not frankly malignant or toxic*: **Hemithyroidectomy** and histological examination, i.e excision biopsy & frozen section.
  - ◆ If not malignant → nothing more is needed.
  - ◆ If malignant → (mention treatment of carcinoma in short).

