22M s/p total thyroidectomy for diffuse sclerosing variant of papillary thyroid carcinoma with rising thyroglobulin

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Whole Body I-131

- 8 days post I-131 therapy with 151.4 mCi radioactive iodine
- CT chest one month prior:
  - stable 4 mm LLL nodule.
  - stable 3 mm RLL pleural associated nodule
  - new 2 mm RML nodule
Thyroid Cancer
Miliary Lung Metastasis
Whole Body I-131

Diffuse lung uptake

Focal uptake in thyroid bed
Papillary Thyroid Cancer

- Poor prognostic indicators: >1.5cm, >45yo, extracapsular spread
- LN involvement common via lymphatic spread
- **Distant mets to lungs** (and bones)
  - Distant mets rate <10%
- Usually radioactive Iodine Avid; loss of activity occurs with tumor dedifferentiation
- Sclerosing variant:
  - Prevalence 0.3 to 5.3%.
  - Variant of PTC have a high incidence of recurrence
  - Prognosis same as the classic type of PTC
Miliary Pattern

• Term refers to innumerable small (<5 mm) nodules scattered in random distribution in secondary pulmonary lobule

• Differential:
  – Mycobacterial
  – Mets
  – Disseminated fungal infection
  – Sarcoid
  – Viral pneumonia,
  – Silicosis
  – Talcosis
  – Alveolar microlithiasis

• Miliary metastases typically larger than those of tuberculosis

• Most frequently seen with
  – Melanoma
  – Thyroid carcinoma
  – Choriocarcinoma
  – Renal cell carcinoma
References

1. Statdx
