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

Krithika Srikantham, MD
David Karimeddini, MD
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
