

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

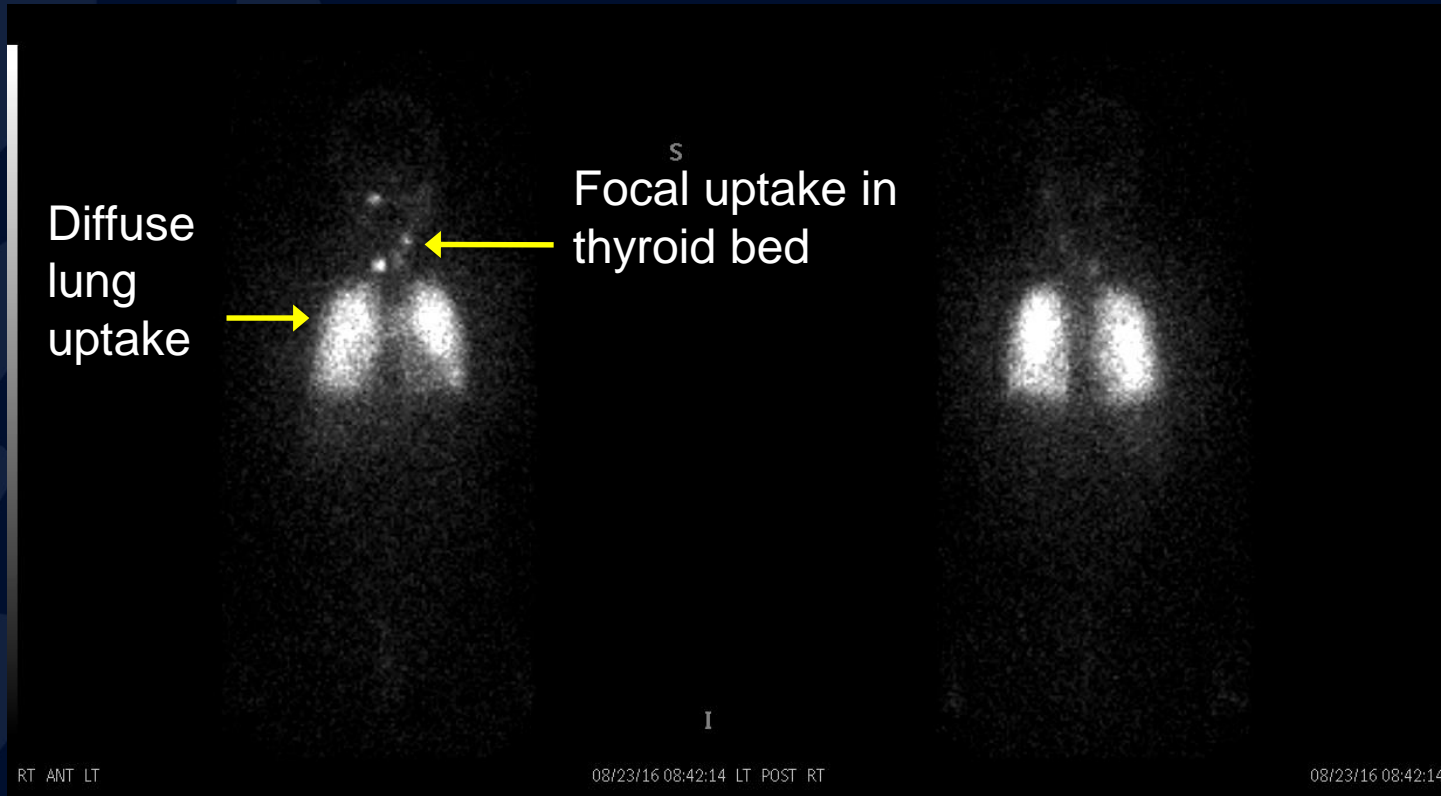
A large, stylized oak leaf graphic in a dark blue color, positioned on the left side of the slide. It features detailed vein patterns and a lobed edge.

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# Thyroid Cancer Miliary Lung Metastasis

# Whole Body I-131



# 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
2. Okuyama C, Kimura M, Oda M, Kodani N, Aibe N, Yamazaki H. A Case of Thyroid Papillary Carcinoma: Remarkable Decrease in Multiple Lung Metastases within 40 Years after a Single Administration of Radioiodine without Thyroidectomy and with Later Anaplastic Transformation. *Case Rep Oncol.* 2017;10(3):928-937. Published 2017 Oct 17. [doi:10.1159/000481500](https://doi.org/10.1159/000481500)
3. Gkountouvas A, Chatjimarkou F, Thomas D, Kaldrimidis P. Miliary lung metastasis due to papillary thyroid carcinoma. *BMJ Case Rep.* 2009; [2009:bcr06.2008.0322](https://doi.org/10.1136/bcr06.2008.0322).