

## Thyroid Nodules

- Thyroid nodules are extremely common! If I pulled 1000 people randomly off the street and did an ultrasound of the thyroid, I could find anywhere from 300-600 nodules!
- **Overwhelmingly, thyroid nodules are BENIGN.**
- When they are not benign, the malignant ones are overwhelmingly Papillary type, which by nature is very slow growing and indolent. It can take many years for it to actually cause significant harm.
  - There are a few exceptions to this, including Medullary or Anaplastic types, or an unusual variant of Papillary type.
- What do we do about thyroid nodules?
  - First we check if the thyroid hormones are affected at all. If the thyroid is overactive, it is exceedingly rare for a nodule to be malignant. In that case we treat the hyperthyroidism.
  - If the thyroid hormones are NORMAL, we need an ultrasound to tell us more about the nodule. The nodule is scored based on size and certain characteristics to help us determine if it should be biopsied.
  - If a nodule meets criteria for biopsy, it is done with a thin needle and lidocaine anesthetic, with an ultrasound to guide the biopsy. The radiologists are very good at doing this biopsy with a small number of samples.
  - **Occasionally, a biopsy may not be adequate:** either the sample didn't have enough cells to make a diagnosis, OR the cells look "funny" but it's not clear if they are necessarily problematic.
    - Usually we repeat those biopsies at another time.
    - Sometimes the result is consistently non-diagnostic, so we would consider using another test to evaluate molecular markers that would tell us how likely it is for that nodule to be dangerous.
- **Once a nodule is biopsied and found to be BENIGN**, we may follow it with ultrasound occasionally over the course of years. **It will probably grow, and that's OK.** But if it starts to look "different" then we would consider a new biopsy.
- **My biopsy showed potential/definite thyroid cancer. Now what?**
  - Depending on exactly what the pathologist said about that nodule, we may proceed to surgery to remove either the whole thyroid, or the part of the thyroid with the nodule in it.
  - Depending on what the pathologists say about that gland, we will decide if you should have radioactive iodine treatment.
  - We also will re-stratify your risk for recurrence periodically, and adjust the dose of levothyroxine to minimize that risk.
- Resources
  - American Thyroid Association <https://www.thyroid.org/thyroid-nodules/>
  - Mayo Clinic [www.mayoclinic.com](http://www.mayoclinic.com)

You can listen to this handout at: <https://youtu.be/SIXPicbVHrE> page 2 of 2

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