

Neurological Deficits in the Upper Quarter Screening Reveals Papillary Thyroid Carcinoma in a Collegiate Baseball Player



MOUNT ST. JOSEPH
UNIVERSITY

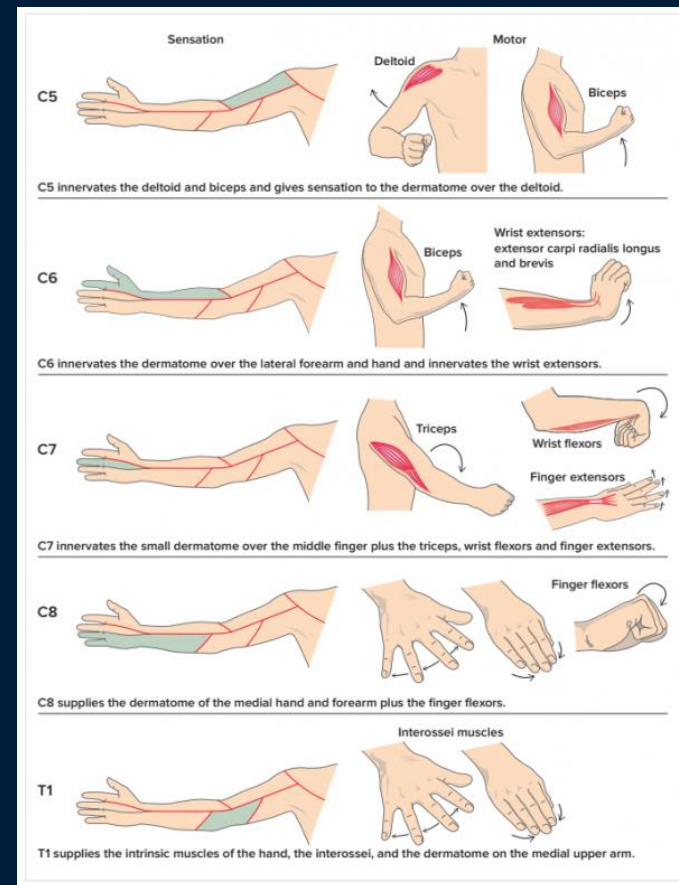
Gooding TM

Goodale AC

Charles-Liscombe RS

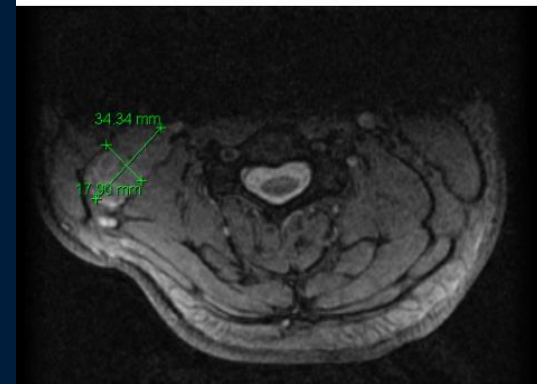
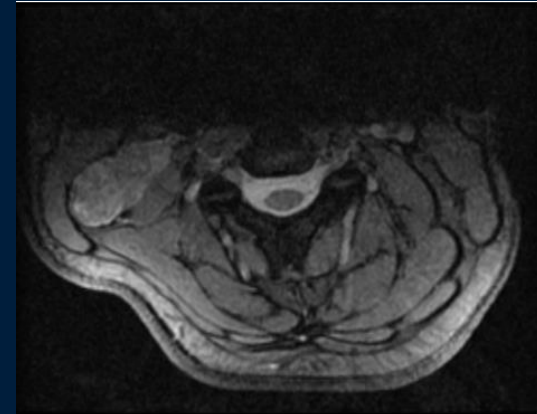
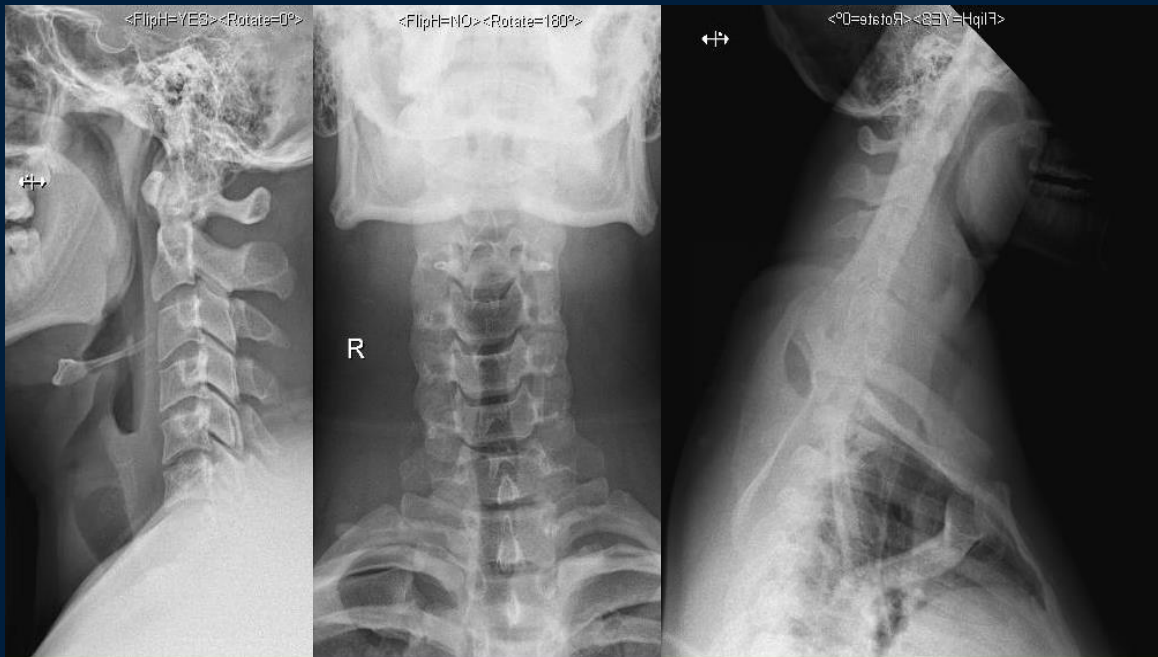
Patient Profile & Initial Evaluations

- 21 y/o male baseball pitcher walked into clinic c/o “burning scalpel” pain down his left neck and flank with no known mechanism.
- 11/7 AT initial Evaluation:
 - TTP left neck, shoulder, flank
 - Altered C5-T1 myotomes & C5 dermatome
 - Diminished shoulder flexion & ext. rotation
- 11/10 Team Physician Findings:
 - 5/5 UE Strength Testing
 - (+) Left Spurlings
 - (+) Empty Can Test



CT Scan & Biopsy

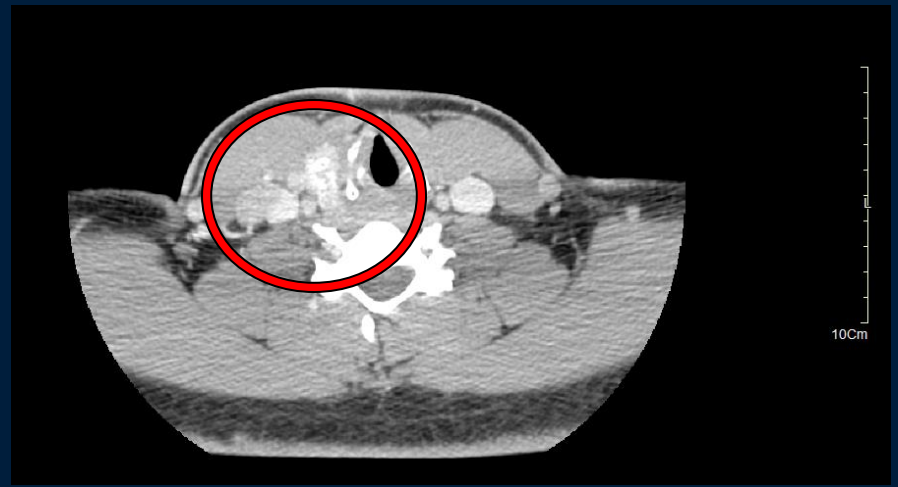
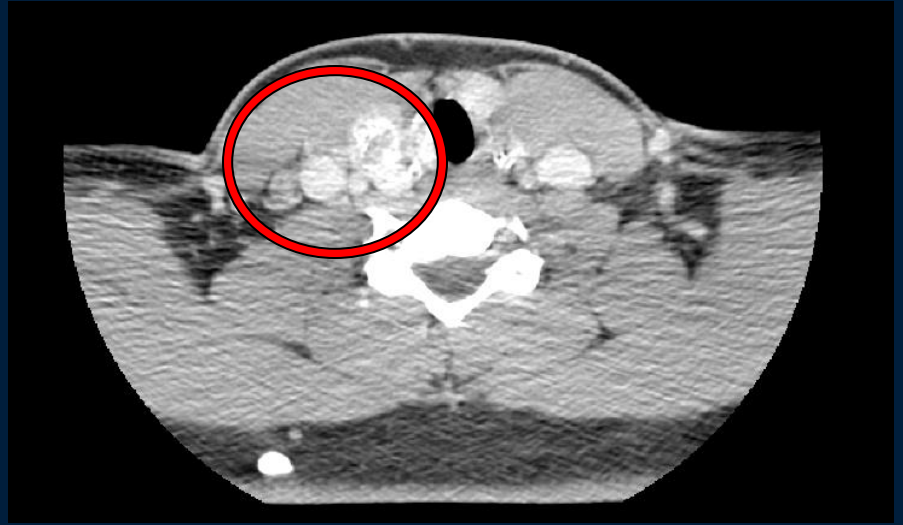
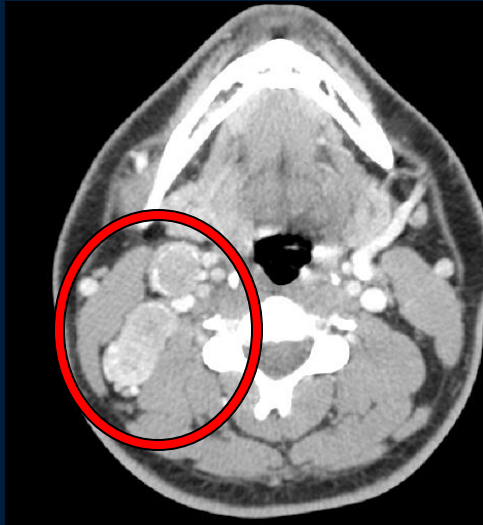
- X-ray: No observable Findings
- MRI: C3-C5 thickening of Posterior Longitudinal Ligament
Partially visible mass at right cervical neck.



CT Scan & Biopsy

- CT scan revealed 3 masses along the right side of the neck
 - 2.71 x 2.51 x 2.24cm
 - 2.01 x 1.31 x 2.71cm
 - 3.36 x 1.88 x 2.54cm
- Right Thyroid Lobe was also compromised
 - 2.01 x 1.31 x 2.71cm
 - Irregular Borders
 - Diffuse Calcifications
- Fine Needle Aspiration (FNA) confirmed suspicion of stage III metastatic papillary thyroid carcinoma (PTC.)

CT Scan & Biopsy



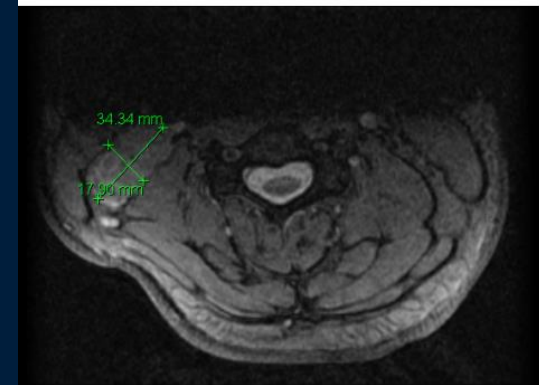
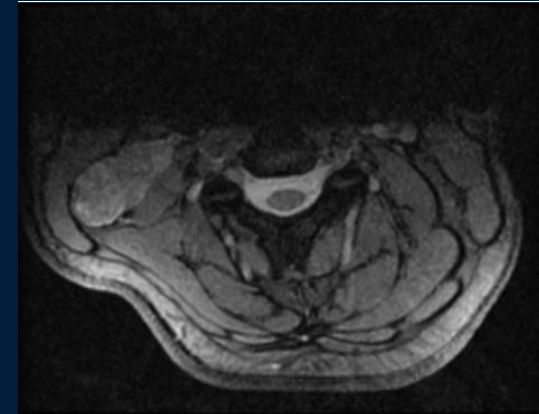
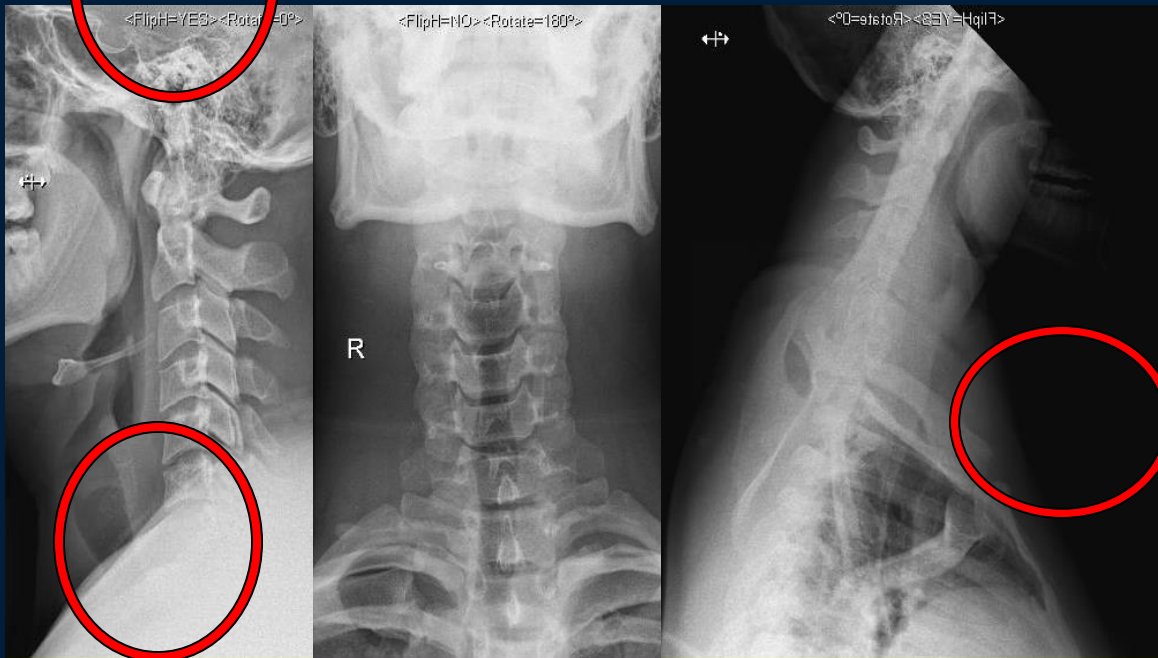
Invasive Interventions

- First surgery over winter break (12/19)
 - Total Thyroidectomy
 - Modified Right Radial Neck Dissection (21/52 removed L.N. cancerous)
 - Taking Cytomel (25mcg bid) and Ca⁺ Supplements (2000mg)
 - Scheduled for 8-week follow up
- ~~Chemotherapy TBD after 8-week follow up~~
- Second Surgery 3/1
 - Modified Left Radial Neck Dissection (2/26 removed L.N. cancerous)
 - Included 1 positive lymph node from Superior Mediastinum
 - s/p began experiencing globus sensation in larynx



CT Scan & Biopsy

- X-ray: No observable Findings
- MRI: C3-C5 thickening of Posterior Longitudinal Ligament
- Partially visible mass at right cervical neck.



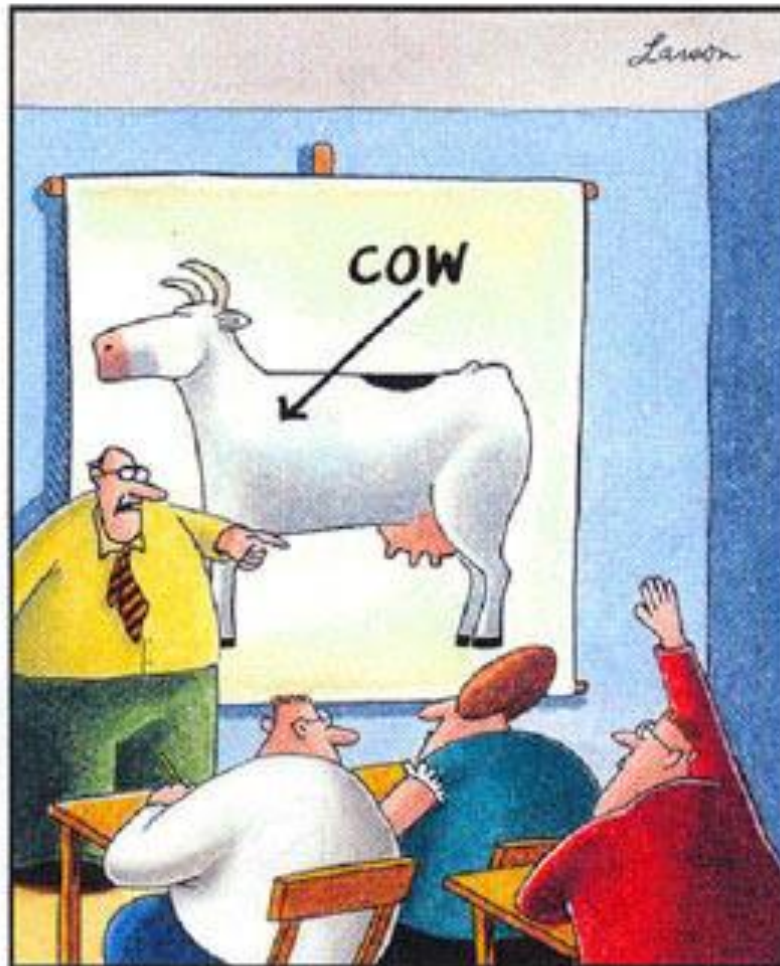
Therapy and Return

- Underwent Radioactive Iodine Ablation Therapy (RAI) (April)
- June Follow-up
 - Doing well, cleared for light cardiovascular training and weight lifting
 - Began taking Levothyroxine (T4)
- September, 6-month follow up
 - Still experiencing globus sensation
 - Tested (-) Non-Hodgkin Lymphoma
 - Diagnosed with Vocal Cord Dysfunction (VCD)
 - Began speech & vocal cord therapy for VCD
- December (Exactly 1 year post-initial surgery)
 - Cleared by Endo and ENT care team
- Athlete is fully participating and is cancer free!!!

Clinical Implications

- Rare in sports medicine realm!
- Unique presentation of symptoms
 - Not able to palpate/observe neck mass due to patient's physique
 - Symptoms appeared on contralateral side of neck from the initial neoplasm
 - No prior family history, no prior symptoms reported before initial evaluations
- 5-year survival rate and lifelong impact
- Current AT literature doesn't support use of Upper Quarter Neurologic Screening to detect cancer
 - Future research involved?
 - More prevalent disease in our scope as profession expands?
 - Treatment pathways and patient relationships remain the same in AT regardless of diagnosis involved.

Questions?



"Yes ... I believe there's a question in the back."

Citations

- Haugen BR, Alexander EK, Bible KC, et al. 2015 American Thyroid Management Guidelines for Adult Patients with Thyroid Nodules and Differentiated Thyroid Cancer. *Thyroid*. 2015; 26(1): 1-133.
- American Cancer Society. Thyroid Cancer Early Detection, Diagnosis, and Staging.
<https://www.cancer.org/content/dam/CRC/PDF/Public/8855.00.pdf> Published 2016. Accessed, November 11, 2017.
- <https://www.thyroid.org/radioactive-iodine/>
- <http://www.thyca.org/>
- <https://www.cancer.org/cancer/cancer-basics/cancer-prevalence.html>