2019 Monitoring Adherence to Evidence Based Treatment Guidelines: Thyroid Cancer

Std 4.6 Cancer Committee study selection for 2019 was discussed at the 5/15/19 meeting. At that time, Ravi Rao, MD, cCARE Medical Oncologist voiced concern about the inconsistent post-operative management of Thyroid Cancer within the community. Committee members agreed with his assertions and that a study may uncover need for improvement. It was advised that due to the current national cancer abstraction/reporting situation, completion of 2018 case year had not been finalized and would likely be delayed until well into October. Therefore, it was the decision of the Committee that physician review of 2017 analytic thyroid cancer cases would suffice with the proviso that 2018 case review may be requested depending on Dr. Rao's assessment.

Cancer Registry data was generated and upon initial physician review there was concern that there may be a high number of cases missing treatment, which lead to additional concerns about those cases recorded to have had less than a total thyroidectomy and whether data was accurate.

Following the Cancer Registry manager's review, data was found to be mostly missing hormonal treatment, which was located and updated in the registry database. Ultimately, there remained three cases missing documentation of adjuvant treatment; one Stage I, missing verification of planned I-131 treatment, one Stage I missing hormonal treatment and one Stage IV, who transferred care to Kaiser immediately following diagnosis. Upon further case review, histology coding was also found to be an issue. Cancer Registrars were provided education and corrections were made per California Cancer Registry advisement, 'Q Tips Papillary Carcinoma Coding Guidelines, cases diagnosed 2007 through 2017'. A couple of cases required minor correction of surgery codes. With the exception of a few cases Follow-up including Tumor Status was brought up to date.

2017 SAMC Analytic Thyroid Cancer Study N=50

Validation of clinical work-up and completeness of staging was completed. Assessment of clinical work-up included voice assessment, imaging obtained, diagnostic fine needle aspirate (FNA) performed as well as whether family history of malignancy was reported and/or a consideration in treatment management. With the exception of (2) cases referred for adjuvant I-131 treatment only, all of the remaining (48) patients had undergone appropriate clinical evaluation and the AJCC (7th Edition) staging assignments appeared to be complete and accurate.

Of the 50 patients within our cohort, 24% (12) were male and 76% (38) female. As typically seen in Thyroid Cancer, not only were the majority female, many of our patients were young at the time of their diagnosis; hence, the study group comprised 58% (29) under the age of 50 with 42% (21) age 50 or older. Overall breakdown of age at diagnosis noted 10% (5) were ages 10-19, 34% (17) 20-39, 26% (13) 40-59 and 30% (15) between the ages of 60-79.

During 2017, the majority of patients seen at Saint Agnes Medical Center and/or receiving all or part of first course treatment at the facility were diagnosed with early stage disease; specifically, 70% (35) were Stage I, 6% (3) Stage II, 20% (10) Stage III and 4% (2/male) Stage IV. Of interest, (1) patient age 13, referred for adjuvant I-131 only, was noted to be pathologic T3N1b cM1, Stage II, indicating the presence of metastatic disease at the time of diagnosis.

The breakdown of Histology again reflects an expected observation for Thyroid Cancer with the majority, 68% (34) being papillary adenocarcinoma, followed by 26% (13) papillary carcinoma follicular variant, 4% (2) follicular adenocarcinoma and 2% (1) mixed medullary-papillary carcinoma. Please refer to Table 1.

Histology	**Male** N=12	**Female** N=38	**Total**
Papillary adenocarcinoma, nos	10	24	34
Follicular adenocarcinoma, nos	1	1	2
Papillary carcinoma follicular variant	1	12	13
Mixed medullary-papillary carcinoma	0	1	1

Treatment Summary

All 50 patients underwent surgery which included (45) total thyroidectomies and (1) thyroidectomy, not otherwise specified (referred for I-131 only with limited documentation). Of the (4) who were treated with less than total thyroidectomy, all but one demonstrated localized disease, (2) T1a, (1) T1b and (1) T3N0. One of those with T1a disease initially presented with a thyroid nodule and was discovered to be pregnant. Appropriate clinical work-up was obtained and she was followed by ultrasound until the third trimester when the nodule showed significant growth, resected pT1aN0. Of note, she subsequently developed a second thyroid primary 34 months later and underwent completion thyroidectomy (2019). The other T1a was managed by surveillance only (no hormonal suppression) and remains free of disease. The patient with T1b had undergone a right lobectomy and left subtotal lobectomy followed by hormonal therapy and, reportedly, remains free of disease. The one patient T3N0 did have clinical presentation of Stage I disease. Subsequent completion thyroidectomy was accomplished followed by adjuvant I-131 ablation and hormonal therapy, and she also remains without evidence of disease. Of the 46 patients who underwent total thyroidectomy/nos, (32) 70% underwent adjuvant I-131 radioactive iodine (RAI). No patients received external beam radiation, which appeared to be appropriate management in each circumstance. Forty-eight of the 50 patients were placed on TSH suppressive therapy.

Treatment by Stage at Diagnosis is displayed in Table 2 below.

	Stage 0	Stage I	Stage II	Stage III	Stage IV	Total
Surgery Only	0	1	0	0	0	1
Surg + Horm	0	16	0	0	1	17
Surg + Radiation	0	0	1	0	0	1
Surg + Rad + Horm	0	18	2	10	1	31
TOTAL	0	35	3	10	2	50

Genetics

We observed one patient simultaneously diagnosed with thyroid cancer and Lymphoma. In addition, there were a total of (5) patients with multiple primaries. There were (3) patients with a reported family history of thyroid cancer; none had a known pathogenic variant in the thyroid-cancer associated genes. One case of mixed medullary-papillary carcinoma histology was also reported but did not undergo genetic testing. One patient with strong family history was tested and found not to have a genetic mutation.

In conclusion, radioactive iodine (RAI) is to be administered in patients with high-risk disease (node positive disease, eg). Documentation of the rationale for use of RAI needs to be improved. TSH suppressive therapy needs to be done routinely and needs to be documented. Overall, compliance with treatment guidelines per NCCN was appropriate. Education of the Cancer Registry staff with regard to utilization of correct histology coding was completed.

Recommendations: proper documentation can help with assessing appropriateness of therapy. When available, the Cancer Registry abstract should reflect this documentation. Additionally, those with a diagnosis of medullary carcinoma, even of mixed histology, should be offered genetic counselling and testing as appropriate. Although, no overt issues were noted for the Genetic cases as mentioned above, it is suggested that the Genetic Counsellor review these cases for completeness of the study.

Respectfully submitted by,

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For our readers we have included general information regarding thyroid cancer (see below). For additional information, please refer to the American Cancer Society website at www.cancer.org.

Thyroid Cancer is a cancer that starts in the thyroid gland. This gland is located at the front of the neck beneath the voice box (larynx). The thyroid produces hormones that regulate the body's metabolism rate and other systems in the body.

Thyroid cancer has had the fastest increase in incidence of any cancer in recent years.

It is important to note that thyroid cancer may have no symptoms. In fact, some are detected only because x-rays or imaging tests on the neck or upper back area pick up the image of a suspicious thyroid nodule.

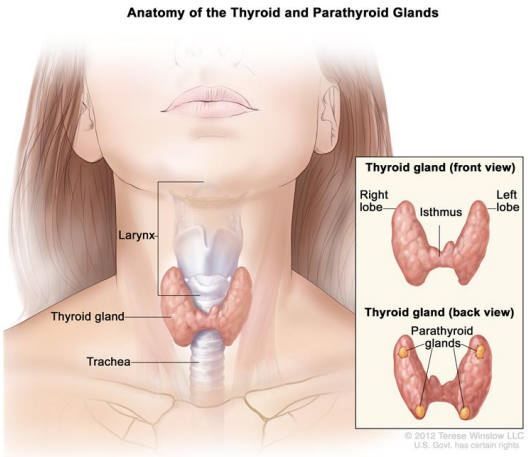
Thyroid cancer affects people of all ages, from young children to seniors.

When symptoms are present, they may include a palpable lump or nodule, a feeling of fullness in the throat, hoarseness, and difficulty swallowing. But again, one can be diagnosed with thyroid cancer, despite a lack of symptoms.

Both women and men get thyroid cancer; although, more than two-thirds of those affected are women. About two out of every three people diagnosed are between ages 20 and 55.

It is always prudent to speak with your physician or primary care provider whenever you have any health related questions or concerns. A simple Neck Check done by a medical professional during a routine appointment can detect a thyroid nodule. Fortunately, most thyroid nodules are benign, not cancer.

When found early, thyroid cancer is usually treatable.
The five-year survival rate for localized and regional disease is near 100%.



https://www.cancer.gov/images/cdr/live/CDR719086-750.jpg

SOURCES:

Saint Agnes Medical Center Cancer Registry database; www.samc.com
*Comment: This report is developed from our hospital based registry experience which is not 'population based' data.

American Cancer Society; www.cancer.org

National Cancer Institute; www.cancer.gov