How are thyroidectomy patients assigned to General Surgeons or Head and Neck Surgeons?

Mai Al Khadem, MBBCh; Vaninder K. Dhillon, MD; Ralph P. Tufano, MD, MBA; Jonathon O. Russell, MD
Department of Otolaryngology, Division of Head and Neck Surgery, Johns Hopkins University School of Medicine, Baltimore, MD, USA

Introduction

Multiple departments manage surgical thyroid and parathyroid pathology at various institutions, but patients are usually treated by General Surgeons (GS) or Otolaryngology-Head and Neck Surgeons (OLHNS). Access to high volume endocrine surgeons is vital especially since it has been reported that most of endocrine surgeries have been performed by low volume surgeons.[1] How non-referred patients are assigned to either group is not always clear. Online sources and call-in numbers may route some patients preferentially to one department over another. We hypothesize that non-referred patients will be randomly but equally distributed between GS and OLHNS. When either department offers equitable care, multidisciplinary thyroid centers with both specialties may offer the most equitable and appropriate method to distribute and manage endocrine surgical pathology.

Objectives

1) Conduct an online search using two major search engines to determine if non-referred thyroidectomy patients are equitably triaged and routed to GS or OLHNS using specific keywords.
2) By acting as a mock patient requiring thyroidectomy, determine if non-referred patients are equitably triaged and routed to GS or OLHNS when calling the main hospital patient access line.
3) Analyze programs with multidisciplinary institutes related to thyroid and parathyroid disorders and determine if triage patterns are more equitable than peer institutions without multidisciplinary thyroid institutes.

Methods and Materials

Design: Cross-sectional survey

Methods:
Part 1: Online survey of all ACGME accredited academic OLHNS sites through two online search engines (Google and Bing) using keywords 'thyroid surgery' and 'thyroid cancer', respectively. There were a total of 100 ACGME accredited institutions with OLHNS programs that were searched. Among the top three results, we determined whether or not each result (link) directed patients to General Surgery or OLHNS (or individual surgeons associated with either department). This resulted in 600 possible search results (300 each for Google and Bing). If the link directed to a GS program or surgeon within that institution a tally was marked for "GS." If the link directed to an OLHNS program or surgeon, a tally was made for 'OLHNS'. If the link did not pertain to a direct contact for either GS or OLHNS, the result was marked "Neither." For each search, if there was a tie in the tally between GS, OLHNS and Neither (eg, one tally for GS, one for OLHNS, and one for Neither), then the overall tally was considered "Equitable." Among the "Equitable" category, we included results channeling patients to multidisciplinary groups including both General Surgeons and OLHNS.
Part 2: Direct phone calls to patient-accessible main hospital numbers listed for all hospitals with ACGME accredited academic OLHNS programs was conducted. All 100 institutions in this study had a main website with an appointment line for patients. Our tally was determined between GS or OLHNS if the final outcome and appointment was scheduled with a surgeon within either department.
All paid ads were excluded during our online search.

Results

Of a possible 400 search results, 117 (29.25%) were directed to GS and 50 (12.5%) were directed to OLHNS. An additional 181 (45.25%) were directed to neither group ("Neither") (Figure 1,2). Google was slightly more biased towards GS than Bing. For part 2, 62 patients (62%) were ultimately assigned to a General Surgeon, as opposed to 38 (38%) for OLHNS (Figure 5).
Among the groups labeled 'Equitable', a total of 5 institutions offered a multidisciplinary group composed of both GS and OLHNS using Bing search engine and 11 using Google search engine. Each of these institutions resulted in GS and OHLN representation through a link to the multidisciplinary group when searched independently using Bing or Google (Figure 3, 4).

Results Continued

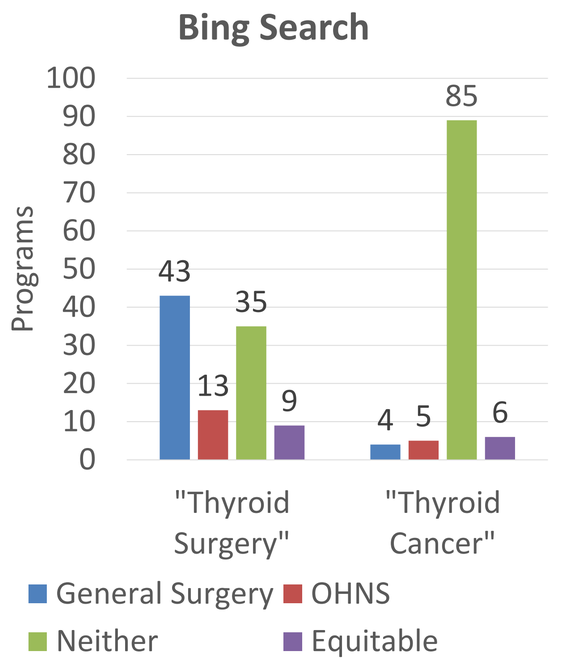

Figure 1. Bing Search results of "Thyroid Surgery" and "Thyroid Cancer"

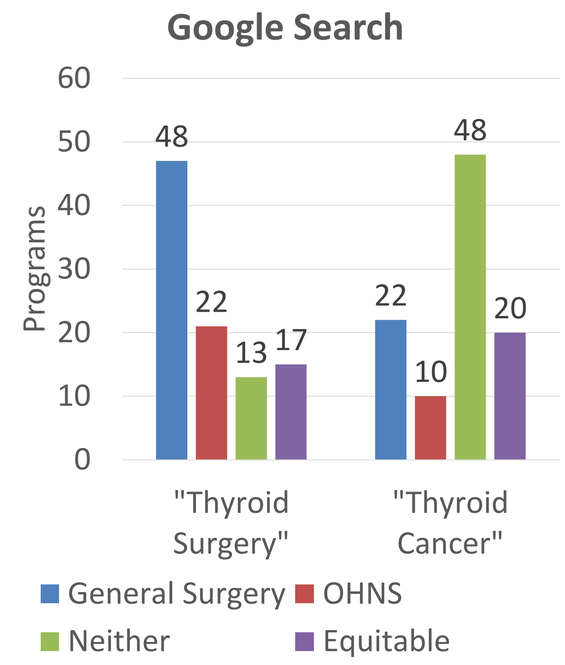

Figure 2. Google Search results of "Thyroid Surgery" and "Thyroid Cancer"

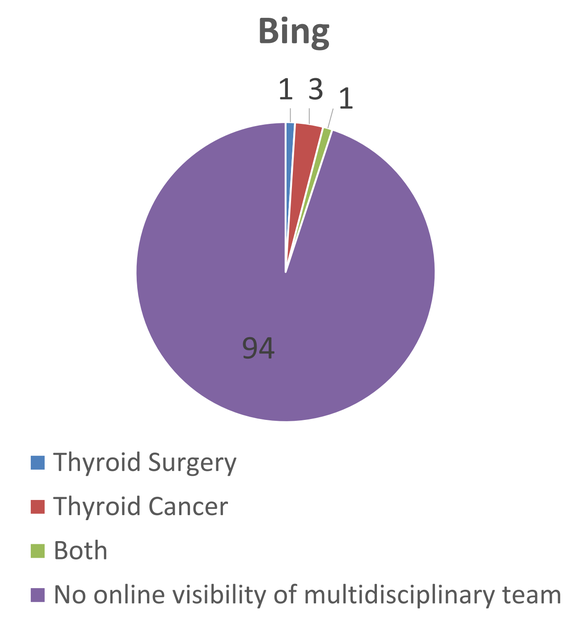

Figure 3. The visibility of multidisciplinary groups among the "equitable" category in Bing through keyword search of "thyroid surgery" and "thyroid cancer".

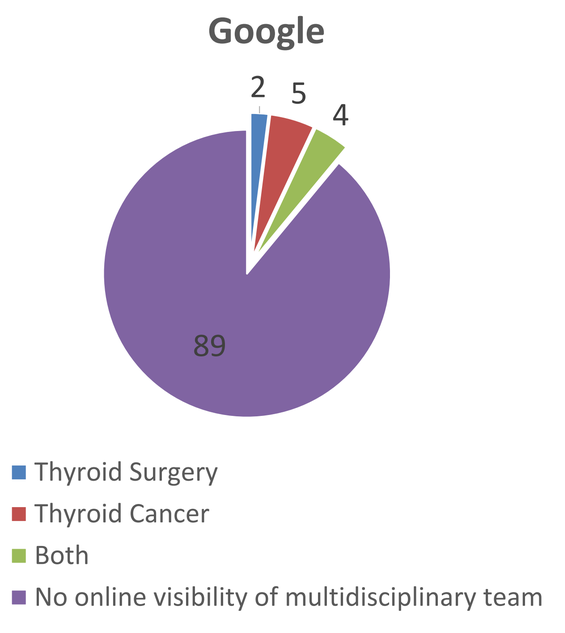

Figure 4. The visibility of multidisciplinary groups among the "equitable" category in Google through keyword search of "thyroid surgery" and "thyroid cancer".

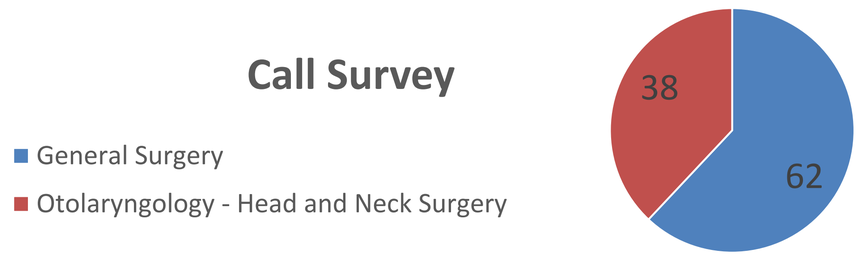

Figure 5. Call survey referral of patients calling the main line of the hospital.

Discussion

Our online search using Google, Bing and telephone calls made to main academic centers resulted in larger distribution of results towards General surgery dedicated websites for endocrine surgery compared to Otolaryngology/Head and Neck surgery ones. This distribution was similar to the referral pattern of endocrinologists.[2]
The number of multidisciplinary groups online representing both General Surgery and Otolaryngology are few and while equitable, are small in number to compare triage patterns compared to counterparts. Our results were aimed to mimic the pathway a non-referred patient would take, and are contingent on the choice of keywords, our search engines and the telephone script we used for each institution.

Conclusions

There is not a random and equal distribution of non-referred patients with thyroid and parathyroid surgical pathology through online sources to either general surgery or otolaryngology. It is important that Otolaryngologists acknowledge the uneven distribution and work toward garnering accessibility online to capture thyroid and parathyroid surgical disease as it is an important component of head and neck surgery. Those programs with multidisciplinary centers focused on thyroid and parathyroid surgical disease, are the models in which to analyze triage of these patients effectively.

Contact

Jonathon O. Russell, MD
Johns Hopkins Hospital
Email: jrusse41@jhmi.edu
hopkinsmedicine.org/profiles/results/directory/profile/10000644/Jonathon-Russell
Phone: 410-955-6420

References

1. Saunders BD, Wainess RM, Dimick JB, Doherty GM, Upchurch GR, Gauger PG. Who performs endocrine operations in the United States? Surgery 2003; 134:924-931; discussion 931.
2. Cervera I, Boucai L, Andreopoulou P, Libutti SK, Hughes DT. Referral patterns for endocrine surgical disease. Endocrine practice : official journal of the American College of Endocrinology and the American Association of Clinical Endocrinologists 2014; 20:571-575.