



My Thoughts/My Surgical Practice

Finding a cancer surgeon: How hospital websites make this difficult for their patients[☆]

Health care and its delivery has changed dramatically with the advent of the electronic medical record, integration of global research, novel surgical devices, and the accessibility of medical information via the internet. Websites allow patients to research their providers, and in many cases to self-refer to specialists. There is growing research to show that a significant number of patients are beginning to self-refer, even for more serious diseases such as cancer.¹ Among providers, there have been drastic changes as well. Websites such as surgical blogs are becoming more common sources of information and communication amongst surgeons.² The internet has also permeated the process of recruiting new surgeons, with residency program websites becoming even more important in the application process.³

While patient autonomy is desirable, self-referral can potentially be harmful to the patients with low health literacy, as this has been shown to lead to worse health outcomes.⁴ In addition, technology literacy is a growing concern with regard to this problem, especially in older generations who may be less adept with technology. Because of these concerns, as well as increasing oncologic diagnoses with age, it is imperative that hospital websites be user-friendly and direct patients to the most appropriate providers. We hypothesized that the variability in hospital websites and provider searches could pose a challenge for patients in finding a cancer surgeon.

Using the US News and World Report's Best Hospitals from 2018 to 2019, we searched the "Find a Doctor" function on each website for the top 20 academic medical centers in the US. Three common conditions were searched: "pancreas cancer," "melanoma," and "colon cancer." We recorded gender, academic rank, attendance of a US medical school, training in a US residency program, and medical subspecialty for all medical providers. Aggregate information regarding the overall breakdown of gender, academic rank, and medical school and residency information was then assessed for each hospital included in the study. Descriptive statistics were used to analyze the data.

Of the 20 hospitals ranked, 16 (80%) provided a "Find a Doctor" function on their website. The median number of providers listed per search was 28 (range = 3–513) (Table 1). Fifteen of the 16 institutions suggested a majority of male providers (range = 49–85%) (Fig. 1). All institutions provided a list of predominantly US-medical school educated (range = 62–99%), US-residency trained personnel (range = 72–100%). With regard to academic rank, 2

(13%) institutions listed predominantly professors, no institutions suggested predominantly associate professors, and the remaining 14 (87%) institutions suggested primarily assistant professors.

When "pancreas cancer" was searched, only 1 institution (6%) suggested predominately surgical oncologists. One institution did not suggest any surgical oncologist for care. More commonly medical subspecialists were suggested for "pancreas cancer" [8/16 (50%)]. Again, for "melanoma," no institution had surgical oncologists as the predominant providers, and 1 institution did not list any surgeon. Instead dermatologists were the most commonly listed providers, with 11/16 (69%) institutions listing them most frequently. Finally, when "colon cancer" was searched, only 1 (6%) institution listed colorectal surgeons as the predominant provider, and again, 1 institution did not list any surgeons. Medical oncologists and gastroenterologists were the most common medical specialties suggested for this oncologic diagnosis.

The results showed a wide range in the number of providers and medical specialties that were most commonly suggested. For instance, a single institution listed up to 513 individuals, which for even a medical professional would be overwhelming to

Table 1
Surgeons listed as providers for common oncologic diagnoses by institution.

Institution	Total Providers n=	Pancreas Cancer n= (%)	Melanoma n= (%)	Colon cancer n= (%)
Mayo Clinic	52	1 (1.9)	3 (5.7)	9 (17.3)
Cleveland Clinic	245	0	0	30 (12.2)
Johns Hopkins	172	7 (4.1)	3 (1.7)	14 (8.1)
Massachusetts General	35	2 (5.7)	5 (14.3)	4 (11.4)
University of Michigan	1030	10 (0.9)	3 (.02)	17 (1.6)
UCSF	18	1 (5.5)	1 (5.5)	2 (11.1)
Cedars-Sinai	78	2 (2.5)	5 (6.4)	11 (14.1)
Stanford	99	2 (2.0)	3 (3.0)	5 (5.0)
New York Presbyterian	84	1 (1.2)	2 (2.4)	9 (10.7)
Mayo Clinic Phoenix	40	2 (5)	4 (10)	4 (10)
Northwestern	31	3 (9.7)	3 (9.7)	0
University of Pennsylvania	242	5 (2.1)	3 (1.2)	8 (3.3)
NYU Langone	88	4 (4.5)	5 (5.7)	9 (10.2)
UPMC	279	6 (2.1)	8 (2.9)	5 (1.8)
Duke	184	7 (3.8)	2 (1.1)	10 (5.4)
Brigham and Women's	39	2 (5.1)	2 (5.1)	5 (12.8)

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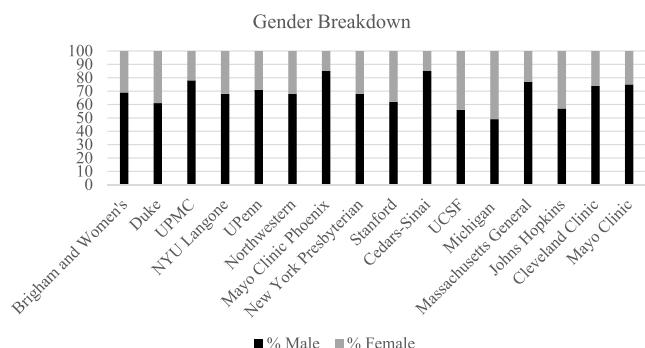


Fig. 1. Provider gender breakdown by institution.

navigate. Because these three common oncologic diagnoses are often treated by surgeons, the lack of surgeons generated by the search was surprising. However, this is not an issue that is confined only to surgical oncology. A recent study discovered similar trends among hospital websites for endocrine surgery,⁵ showing that this is a widespread issue among institutions for their surgical faculty.

Medicine has historically been a male-dominated field,⁶ and a large gap between male and female providers was evident in our findings (Fig. 1). While the representation of women has increased dramatically in the last 20 years, women still make up only 19% of the editorial board positions of surgery journals.⁷ Additionally, there still remains a compensation gap for female surgeons at major academic medical centers.⁸ Some institutions included nurse practitioners (NPs) and physician assistants (PAs) in their provider search. Given that these institutions had a drastic female predominance of NPs and PAs (all >85%), the gender discrepancies among physicians for these institutions is likely greater than reported. Despite more women entering surgical specialties and assuming leadership roles within surgery departments,⁹ this is an issue that should be addressed across most medical institutions in the United States.

Our study is not without limitation. While we demonstrate how using the “Find a Doctor” function could be problematic in finding the correct surgical specialist(s), we did not survey patients directly. However, in order to remedy the potential difficulties in self-referral, surgeons must play an active role with leadership and institutional administration to modify hospital websites. Special care should be taken to ensure that providers of both genders are represented in these public forums. In this way, patients can

more easily connect with the proper surgical specialists and providers will have a more streamlined referral pattern and equally represented.

Declaration of competing interest

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Zachary L. Gentry

University of Alabama School of Medicine, Birmingham, AL, USA

Herbert Chen, Jessica Fazendin*

Department of Surgery, University of Alabama at Birmingham, Birmingham, AL, USA

* Corresponding author. Boshell Diabetes Building #6181808 7th Ave. S Birmingham, AL, 35233, USA.
E-mail address: jmfazendin@uabmc.edu (J. Fazendin).

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