



# Google Trends may be used as a predictive tool to gauge medical students' interest in Otolaryngology-Head and Neck Surgery residency and provide insight into future trends regarding unfilled residency positions and increased shortages of Otolaryngology-Head and Neck Surgery physicians graduating from US medical schools.

Table 1. National Residency Match Program Data

Year	No. Positions offered	No. of U.S. Senior Applicants	No. of U.S. Senior Applicants Matched	No. of Total Applicants Matched	No. Positions unfilled
2018	315	299	284	303	12
2017	305	303	279	291	14
2016	304	314	272	302	2
2015	299	375	283	298	1
2014	295	376	279	295	0
2013	292	387	276	290	2
2012	285	342	277	283	2
2011	283	323	269	280	3
2010	280	335	259	279	1
2009	275	343	263	273	2
2008	273	313	253	269	4



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## The Problem

Recently the number of Oto-HNS Electronic Residency Application Service (ERAS) applications have trended downwards as fewer United States (U.S.) senior medical students are applying to Oto-HNS even when compared to other highly competitive specialties.

In 2017 and 2018, Oto-HNS residency match experienced a “crisis” as the number of positions available exceeded the number of U.S. senior applicants according to the National Residency Match Program (NRMP) data.<sup>1</sup> Here, we evaluate the association between the U.S. senior applicant pool for Oto-HNS residency programs and internet search queries for Oto-HNS residency.

## Key Results

The relative number of applicants to Oto-HNS residencies mirrored the same relative number of Google Trend inquiries during the “match crisis” in 2017, thus demonstrating the potential benefit of Google Trends as a predictive tool.

Given the continual competitiveness and recent irregularity of the Oto-HNS residency match, further analysis of online search data may provide useful foresight into medical school graduates’ interest in pursuing Oto-HNS for residency.

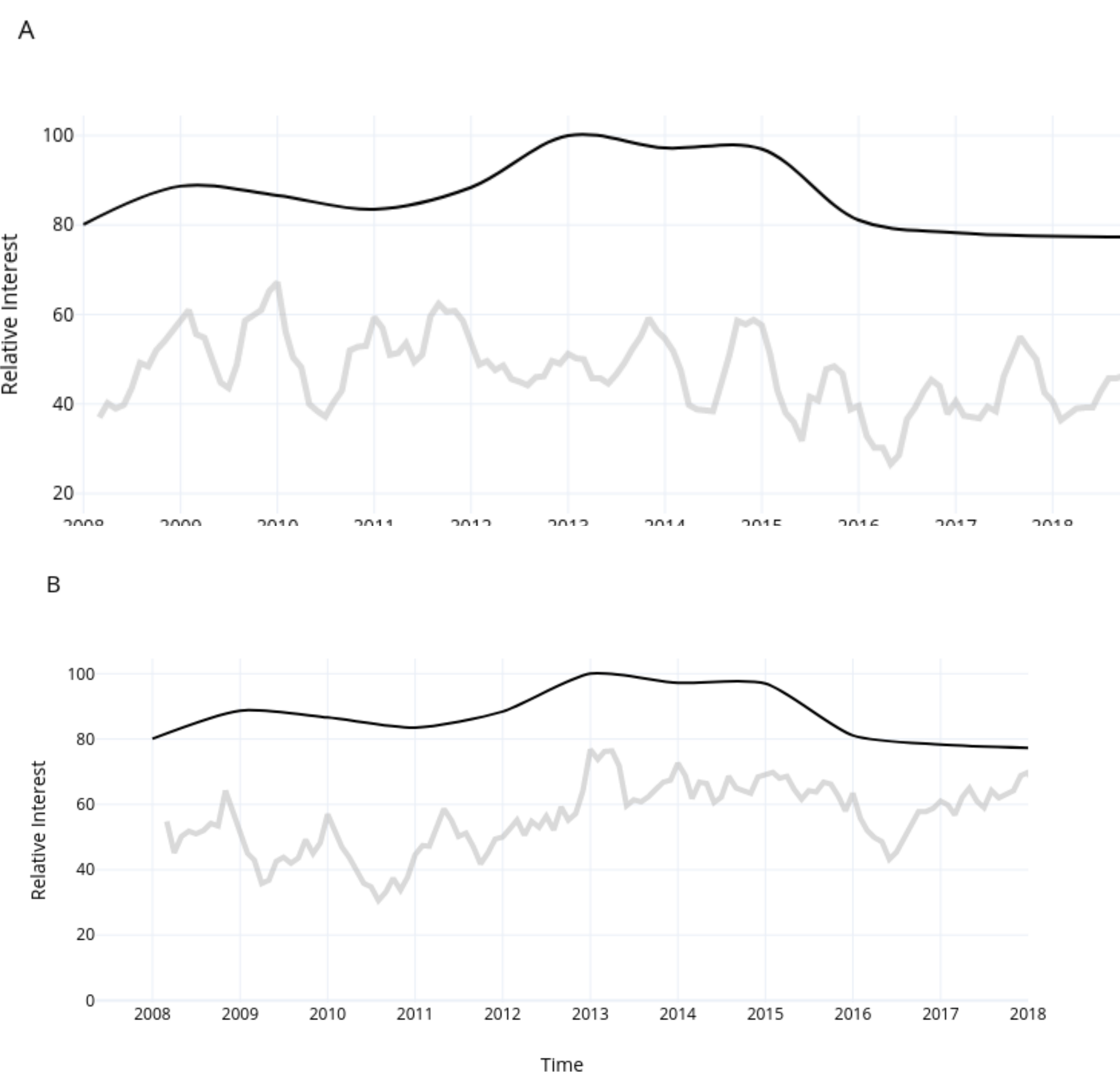


Figure 1: Otolaryngology/ENT Residency Search Trends

<sup>A</sup> Relative search interest in “Otolaryngology Residency” over time (gray) corresponding with the relative number of U.S. otolaryngology residency applicants over time (black).

<sup>B</sup> Relative search interest in “ENT Residency” over time (gray) corresponding with the relative number of U.S. otolaryngology residency applicants over time (black). Google Trends (<http://google.com/trends>) is a publicly available tool which measures the relative search volume of a given term from 0-100 with 100 representing the highest volume of searches for the given time interval.



1. Report Archives - The Match, National Resident Matching Program. The Match, National Resident Matching Program. <http://www.nrmp.org/report-archives/>. Accessed August 17, 2019.

# Interest in Otolaryngology-Head and Neck Surgery Residency: Can Google Trends be a Predictive Tool?

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