OUR RESIDENCY RESEARCH METHODOLOGY

Doximity’s Residency Navigator is a tool built to help medical students make informed residency decisions and to increase transparency in the residency match process.

Residency Navigator is comprised of three major parts - (1) current resident and recent alumni satisfaction survey data, (2) reputation data, and (3) objective data. The satisfaction survey is derived from survey responses from each residency’s current residents and recent graduates. As of August 2016, there were over 25,000 unique respondents to the satisfaction survey. Reputation data is derived from peer nominations from over 35,000 U.S. board-certified physicians. Objective data is compiled from a variety of public sources as well as our proprietary Doximity database, which covers all U.S. physicians, regardless of membership with Doximity.

Search results on the public site are limited to 10 results. Doximity members also have access to additional search parameters and measures such as program size, demographics (see search page data and program page data below). From the search page, members can generate a customized list of programs that best suits their preferences and needs by selecting the parameters that are most important to them. In addition, members can get detailed information by accessing individual residency program pages.

The following document provides a detailed overview of the definition, source and data methodology used in the Residency Navigator.

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ABOUT DOXIMITY

Doximity is the largest online professional network for U.S. physicians. Its comprehensive physician database includes every United States physician as identified by National Provider Identifier (NPI) number. Physician information was compiled from hundreds of sources including the United States Department of Health and Human Services NPI Registry, state medical boards, and specialty boards (e.g., American Board of Medical Specialties, American Board of Surgery). Doximity’s proprietary database is additionally bolstered by more than 500,000 registered and verified physician members who review and update their profiles to provide another set of primary data.

RESIDENT SATISFACTION SURVEY
All physician members who are current residents or recent graduates of U.S. residency programs were surveyed beginning June 2016. If a user completed the survey in 2015 they were not prompted to recomplete.

Eligible physicians met the following criteria:

- Graduated from medical school within the past 10 years
- Either completed residency or were currently in residency for the following specialties:
  - Anatomic & Clinical Pathology
  - Anesthesiology
  - Child Neurology
  - Dermatology
  - Diagnostic Radiology
  - Emergency Medicine
  - Family Medicine
  - Internal Medicine
  - Medical Genetics
  - Medicine/Pediatrics
  - Neurological Surgery
  - Neurology
  - Nuclear Medicine
  - Obstetrics & Gynecology
  - Ophthalmology
  - Orthopedic Surgery
  - Otolaryngology
  - Pediatrics
  - Physical Medicine & Rehabilitation
  - Plastic Surgery
  - Preventative Medicine
  - Psychiatry
  - Radiation Oncology
  - Surgery
  - Thoracic Surgery
  - Urology
  - Vascular Surgery

The results of the 2016 Satisfaction Survey were pooled with those from 2015 surveys such that only the most recent (2016) responses were counted for physicians.
A screenshot of the Satisfaction Survey instrument is below:
The 2016 survey for peer nominations across 23 specialties was conducted throughout June 2016. Surveyed specialties were limited to those that participated in Electronic Residency Application Service (ERAS).

Design for the survey was modeled, with permission, on the annual physician survey that is a component of U.S. News & World Report’s Best Hospitals rankings. U.S. News editors also provided informal input into the design of the survey.

Eligible physicians who were Doximity members were prompted to submit peer nominations when they signed in to the Doximity website or via email. Eligible physicians who were not Doximity members were also able to share their nominations by registering and verifying with Doximity before the end of the survey period.

Eligibility to participate in the survey was determined by a physician’s board certification (see table below):

<table>
<thead>
<tr>
<th>PROGRAM</th>
<th>BOARD</th>
<th>SPECIALTY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anatomic &amp; Clinical Pathology</td>
<td>American Board of Pathology</td>
<td>Anatomic &amp; Clinical Pathology</td>
</tr>
<tr>
<td>Anesthesiology</td>
<td>American Board of Anesthesiology</td>
<td>Anesthesiology</td>
</tr>
<tr>
<td>Child Neurology</td>
<td>American Board of Psychiatry and Neurology</td>
<td>Child Neurology</td>
</tr>
<tr>
<td>Dermatology</td>
<td>American Board of Dermatology</td>
<td>Dermatology</td>
</tr>
<tr>
<td>Diagnostic Radiology</td>
<td>American Board of Radiology</td>
<td>Diagnostic Radiology</td>
</tr>
<tr>
<td>Emergency Medicine</td>
<td>American Board of Emergency Medicine</td>
<td>Emergency Medicine</td>
</tr>
<tr>
<td>Family Medicine</td>
<td>American Board of Family Medicine</td>
<td>Family Medicine</td>
</tr>
<tr>
<td>Internal Medicine</td>
<td>American Board of Internal Medicine</td>
<td>Internal Medicine</td>
</tr>
<tr>
<td>Medicine/Pediatrics</td>
<td>American Board of Internal Medicine and American Board of Pediatrics</td>
<td>Medicine/Pediatrics</td>
</tr>
<tr>
<td>Neurological Surgery</td>
<td>American Board of Neurological Surgery</td>
<td>Neurological Surgery</td>
</tr>
<tr>
<td>Neurology</td>
<td>American Board of Psychiatry and Neurology</td>
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<tr>
<td>Nuclear Medicine</td>
<td>American Board of Nuclear Medicine</td>
<td>Nuclear Medicine</td>
</tr>
<tr>
<td>Obstetrics &amp; Gynecology</td>
<td>American Board of Obstetrics and Gynecology</td>
<td>Obstetrics &amp; Gynecology</td>
</tr>
<tr>
<td>Ophthalmology</td>
<td>American Board of Ophthalmology</td>
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</tr>
<tr>
<td>Pediatrics</td>
<td>American Board of Pediatrics</td>
<td>Pediatrics</td>
</tr>
<tr>
<td>Physical Medicine &amp; Rehabilitation</td>
<td>American Board of Physical Medicine and Rehabilitation</td>
<td>Physical Medicine &amp; Rehabilitation</td>
</tr>
<tr>
<td>Plastic Surgery</td>
<td>American Board of Plastic Surgery</td>
<td>Plastic Surgery</td>
</tr>
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<td>American Board of Psychiatry and Neurology</td>
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<td>Radiation Oncology</td>
<td>American Board of Radiology</td>
<td>Radiation Oncology</td>
</tr>
<tr>
<td>Surgery</td>
<td>American Board of Surgery</td>
<td>Surgery</td>
</tr>
<tr>
<td>Urology</td>
<td>American Board of Urology</td>
<td>Urology</td>
</tr>
</tbody>
</table>
Each physician could nominate up to 5 residency programs using a survey instrument similar to the one below:

![Survey Instrument](image)

Over 35,000 verified, board-certified physicians have participated in the peer nomination process. The results of the 2016 nomination survey were pooled with those of the 2014 and 2015 surveys such that only the most recent (2016) responses were counted for physicians that have completed the survey more than once.

To account for “self-votes”, raw votes were divided into alumni-votes and non-alumni votes. Alumni votes were weighted according to the % of the eligible physician population that a particular program accounts for within that specialty (number of alumni divided by total eligible within the specialty).

**MEASUREMENT OF RESEARCH OUTPUT**

Profile data of all U.S. physicians, regardless of membership with Doximity, were used to calculate research output score for each residency program’s recent alumni base. This score was calculated from a combination of the collective h-index of publications authored by alumni graduating within the past 15 years, as well as research grants awarded. Each program’s research output was then compared to all other programs within the same specialty to create a percentile score. Research Output may be refreshed periodically to account for new alumni publication and clinical trial data. These updates may affect the Research Output sort order.
An example program page is below. These complete pages are available to signed-in users only.
The following section provides further explanation of the main data listed on the program page not explained on the page itself. Unless otherwise specified, objective data derived from the Doximity database covers all
physicians, regardless of Doximity membership status. Program pages may be refreshed throughout the year to account for updated data such as new alumni publications, fellowships, board certifications and practice settings. This may affect the Research Output, Percent Subspecialize and Percent Board Certified rates as well as their respective sort orders.

- **TOP SUBSPECIALTIES BY ALUMNI** Data is derived from Doximity physician profile data of alumni who graduated within the past 10 years, taking into account current subspecialty, board certification, and fellowship data. The most common subspecialties for alumni following their residency are displayed. Any discrepancy between the overall percentage who subspecialize and the aggregate top subspecialty percentages is because physicians may have more than one subspecialty.

- **BOARD PASS RATES** Data is self-reported and published by individual boards for the specialties of Internal Medicine, Family Medicine, General Surgery and Pediatrics, but has not yet been released by other specialty boards. For specialties whose boards have not released board pass rate data **PERCENT BOARD CERTIFIED** was calculated, measuring presence of an ABMS board certification for alumni who graduated between 2006 and 2014. Expected lag in board certification post graduation and the volume of alumni who continued on to fellowship were factored into the population.

- **ALUMNI PUBLICATION PERCENTILE** Publication percentile is calculated from a combination of the collective h-index of publications authored by program alumni. Data is derived from Doximity profiles of alumni who graduated within the past 15 years.

- **ALUMNI CLINICAL TRIAL PERCENTILE** Alumni clinical trial percentile is calculated from clinical trial and grant data derived from Doximity profiles of alumni who graduated within the past 15 years.

- **SATISFACTION RATINGS AND REVIEWS** Data is derived from the responses of verified physician members who are current residents or recent alumni of the particular program. Responses are anonymized before publication. Published data reflects the 6 questions and 1 free text review prompts of the Satisfaction Survey instrument:
  - Overall satisfaction: Willingness to recommend this program to others
  - Work hours: Tolerability of shift and call schedules
  - Schedule flexibility: Accommodation for weddings, pregnancy, deaths, etc.
  - Career guidance: Support around job/fellowship placement; quality of mentorship
  - Culture: Cohesiveness of the residency and clinical community
  - Surgical volume (Surgical residencies): Adequacy of surgical case load
  - Clinical diversity (Non-surgical residencies): Exposure to differing populations, diseases, and practice settings

- **FEEDER MEDICAL SCHOOLS** Data is derived from Doximity user profile data of alumni who graduated within the past 10 years. The most common medical schools among the alumni of a given residency are displayed.

- **ALUMNI METRO AREAS** Data is derived from Doximity user profile data of alumni who graduated within the past 10 years. Metro areas are as defined by the US Census Bureau.

- **ALUMNI LOCATIONS (MAP)** Data is derived from Doximity user profile data. When an alumni population is significantly large, a subset of profiles will be displayed.

MARKETING USAGE
Public search results may be announced and used in marketing materials by residency institutions.

The correct attribution for the data is “research conducted by the physician network Doximity” and the best URL to share is residency.doximity.com. U.S. News & World Report assisted with Doximity on the research, but these residency nominations are not official U.S. News & World Report rankings. Programs can receive assistance with their press outreach by emailing pr@doximity.com.

2017-2018 DATES OF INTEREST

The data supporting Residency Navigator will be updated twice a year.

- September 2017: Satisfaction survey will remain open until at least the end of September 2017. Data displayed on program pages will be refreshed monthly.

- December 2017: Doximity will refresh all data related to the individual program page in preparation for increased website traffic coinciding with student preparation for their 2018 rank list submissions. Reputation order published in July 2017 will not be changed.

- Spring 2018: The satisfaction and nomination survey will be distributed again in Spring 2018.

- Summer 2018: Doximity will refresh all data in preparation for September application season.

Updated May 2017