

# BECOMING A RADIOLOGIST IN THE UNITED STATES FOR THE REST OF US: A REVIEW OF AVAILABLE OPTIONS

Claudia Cotes, MD., Vidhyulatha Sanata, MD., Abeer Abdelhafez, MD., Kiran Chang, MD., Shima Aran, MD.

## Background

The disbalance between the rising imaging volumes and radiologist availability has been an ongoing concern for the radiology community. The AAMC predicted a shortage of radiologists by 2034, highlights the need for immediate action. The increased demand for radiologists, paired with short-staffed practices, has increased burnout within our specialty, with studies reporting up to 62% of severe burnout(1). Of the subspecialties, breast imaging has had the highest demand in recent years (2). Studies have showed that breast imagers experience significant burnout, with high levels of emotional exhaustion (69%) and depersonalization (63%) (3). Strategies to increase the radiology and breast imaging workforce are imperative to address these challenges.

## Purpose

- Review the current market for radiologists and the 2023 MATCH data to identify potential gaps and opportunities
- Explore strategies to increase the number of breast imagers in the U.S..
- Inform about the pathways available to become a radiologist and breast imager in the U.S., both for U.S. and International Medical Graduates (IMGs)
- Evaluate the challenges for IMGs through the process of becoming a breast imager in the U.S.

## Job Market

Currently, of the 1,692 jobs on the job board on the ACR Career Center, there are 277 breast imaging job vacancies (4). Similarly, the Society of Breast Imaging (SBI) Career Center lists 366 job postings seeking radiologists (5). These numbers contrast with the amount of graduating radiology residents and breast imaging fellows. Several other factors contribute to the shortages, including provider burnout, which has further worsened after the COVID-19 pandemic, changes in practice styles (more physicians leaning toward part-time and locums tenens with reduced FTWs, and provider aging, as up to 30% of practicing physicians are 60 and older(6).

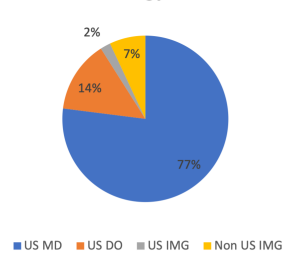
## References:

1. Fawzy, N. A. et al. Incidence and factors associated with burnout in radiologists: A systematic review. *Eur J Radiol Open* 11, 100530 (2023).
2. Dibble, E. H. et al. The 2021 ACR/RBMA Workforce Survey: Practice Types, Employment Trends, and Hiring Needs. *Journal of the American College of Radiology* 0, (2023).
3. Parikh, J. R., Sun, J. & Mainiero, M. B. Prevalence of Burnout in Breast Imaging Radiologists. *Journal of Breast Imaging* 2, 112–118 (2020).
4. RaAmerican College of Radiology Career Center, a program under the Commission on Membership and Communications. Data 01/01/2019 through 12/31/2023.
5. Recent Jobs - radiologist - Society of Breast Imaging Inc. <https://rad.sbi.associationcareernetwork.com/jobs/?keywords=radiologist>.

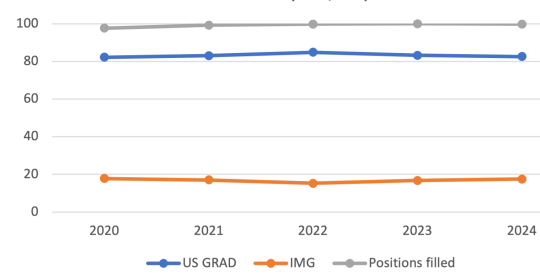
## NRMP MATCH data

There were 1017 available PGY-2 positions for Diagnostic Radiology in the 2023 MATCH, of which 1016 (99.9%) were filled. The number of available positions has increased by 27 since 2020, but the number of positions filled, and type of applicant remains stable. 77% of the positions were filled by U.S. MDs and 91% by U.S. graduates (MD and DO)(7).

Type of Applicant Matching for Radiology 2023

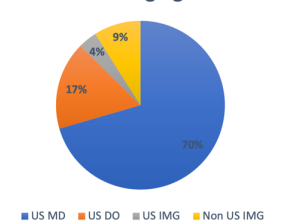


Positions filled in Diagnostic Radiology US Graduates (MD,DO) vs IMG

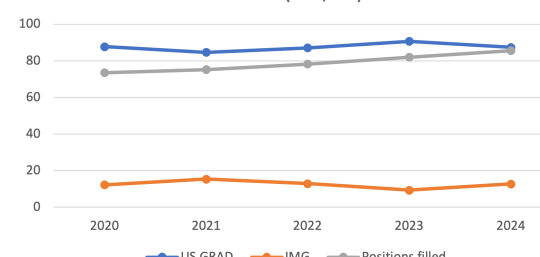


There were 194 available positions for Breast Imaging Fellowship in the 2023 MATCH, of which 166 (85.6%) were filled. 60% of the positions were filled by U.S. MDs and 87% by U.S. graduates (MD and DO). The number of available positions has increased from 166 in 2020 to 194 in 2024, however, the percentage of U.S. graduates matching to the specialty compared to all other applicants is grossly stable(8).

Type of Applicant Matching for Breast Imaging 2023



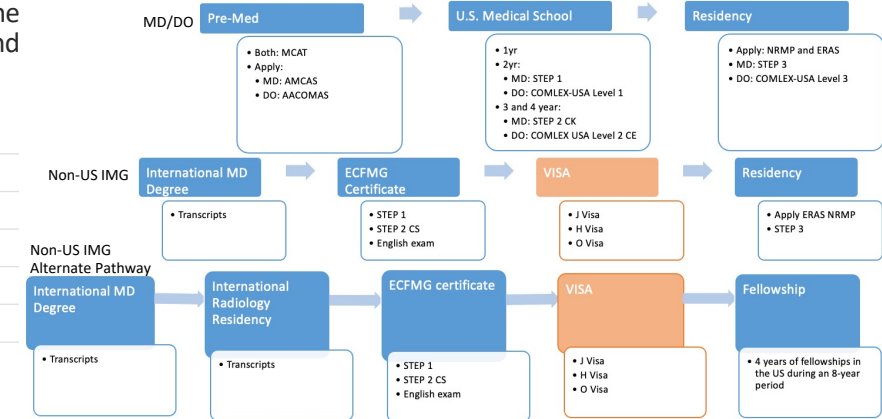
Positions filled in Breast Imaging US Graduates (MD,DO) vs IMG



Can IMGs fill the approximately 15% gap of unmatched positions in breast imaging? What are the barriers for these applicants?

## Becoming a Breast Imager in the U.S.: A longer path for IMGs

The graphs below depict the pathway to become a subspecialized radiologist in the U.S. Note that non-citizen IMGs have longer processes and Visa limitations.



Visa Type	Pros	Cons
H-1B Visa	Allows for temporary employment in the U.S.	Limited number of visas available annually.
J-1 Visa	Can eventually lead to a green card application	Requires sponsorship by employer
J-1 Visa	Opportunity for medical training in the U.S.	Requires return to home country for 2 years after completion or Waiver
J-1 Visa	Can be extended for residency training	Limited options for transitioning to a different visa
O-1 Visa	Allows for individuals with extraordinary ability	Stringent eligibility requirements
O-1 Visa	No cap on number of visas available	Limited to individuals with exceptional achievements

## Conclusion

Strategies to strengthen the radiologist workforce are imperative to address anticipated shortages and alleviate the prevailing burnout crisis. Given the existing gap of filled positions in breast imaging fellowships, exploring the utilization of interested IMGs for fellowship roles emerges as a viable solution to aid in meeting part of these demands. Radiology programs should recognize the recruitment challenges associated with this physician cohort and provide support for the requisite steps to enhance our workforce. These principles are applicable to other subspecialties within radiology.

6. Understanding and Revitalizing the Radiology Workforce: RSNA Take-Aways to Enact Change for a Bright Future • APPLIED RADIOLOGY. <https://appliedradiology.com/Articles/understanding-and-revitalizing-the-radiology-workforce-rsna-take-aways-to-enact-change-for-a-bright-future#>.
7. Residency Data & Reports. NRMP <https://www.nrmp.org/match-data-analytics/residency-data-reports/>.
8. Fellowship Data & Reports | NRMP. <https://www.nrmp.org/match-data-analytics/fellowship-data-reports/>.
9. International Medical Graduates (IMG) toolkit: Types of visas & FAQs. American Medical Association <https://www.ama-assn.org/education/international-medical-education/international-medical-graduates-img-toolkit-types-visas> (2024).

Reference 9.