



GENDER { gap }

? — WHY AREN'T MORE FEMALE MEDICAL STUDENTS ENTERING RADIOLOGY?

BY ALYSSA MARTINO

Women account for 74 percent of OB/GYN residents, 64 percent of pediatric residents, and 50 percent of family medicine residents. Why then are only 25 percent of radiology residents female? It's equally puzzling that, despite an increasing number of women entering medical school, the ratio of female radiologists has remained steady for the past 20 years.¹ What factors have contributed to this discouraging statistic?

Surely, it's not the benefits, which range from technologic advances to accommodating hours and work-home life balance to the choice of diverse subspecialties. Radiologists can opt for a more patient-based focused specialty, such as breast imaging, interventional radiology, radiation oncology, or practice general diagnostics. Yet, women remain grossly underrepresented in the profession.

What will it take to attract more women to the specialty?



As a radiology resident, Kristin M. Krizmanich-Conniff, M.D., has lectured her colleagues about the gender gap in radiology.

Delving Into Disparity

Kristin M. Krizmanich-Conniff, M.D., a radiology resident at the University of Michigan in Ann Arbor, recently gave a grand rounds lecture about gender divisions in the field to her colleagues. (View her slides at <http://slidesha.re/womeninradiology>.) “Each medical class is 50-percent female,” she explains. “So, for a lot of different specialties, the percentage of women [physicians] is growing proportionally to the percentage of women in medical school.” But, that’s not the case for radiology.

Many studies have tried to unearth the cause of this discrepancy. In “Women Medical Students’ Interest in a Radiology Career,”² first-year medical students were asked to rate 10 factors impacting their residency choice and general interest in imaging. Results showed that women with high levels of interest in radiology were likely to rate “role models” and “patient contact” as the most influential factors in their decision, as opposed to men, who rated “work is technological” and “work is visual” higher.

that a radiology mentor was an important factor in their decision to become a radiologist, while no female participants said that mentors impacted them.³ In other words, many men were guided into the field by mentors, but women did not receive this guidance.

Krizmanich-Conniff says that one obstacle to increasing mentorship is that fewer women are staying in academic radiology. “People are flooding more toward private practice so there are fewer female role models,” she says. In addition, female radiologists in academic practice may be unaware of the significance of sharing their expertise with burgeoning physicians, according to Krizmanich-Conniff.

Zhongzong Liao, M.D., professor of thoracic radiation oncology at The University of Texas MD Anderson Cancer Center in Houston, concurs about the impact female radiologists can have on young women choosing their residency focus. Liao, current president of the American Association for Women Radiologists (AAWR), says, “I can never emphasize mentorship enough, not only for women, but for anyone.”



According to Gerald R. Aben, M.D., FACR, some women prefer a female radiologist for breast and gynecological imaging procedures.



Mentorship is essential to bringing in more women radiologists, according to AAWR President Zhongzong Liao, M.D.



M. Ines Boechat, M.D., FACR, believes more research is necessary to assess the gender gap in the specialty.

“The number of patients is growing rapidly, but the number of imagers is not.”

— Kristin M. Krizmanich-Conniff, M.D.



Vijay M. Rao, M.D., FACR, president-elect of the American Association of Women Radiologists, hopes to provide female radiologists a voice.

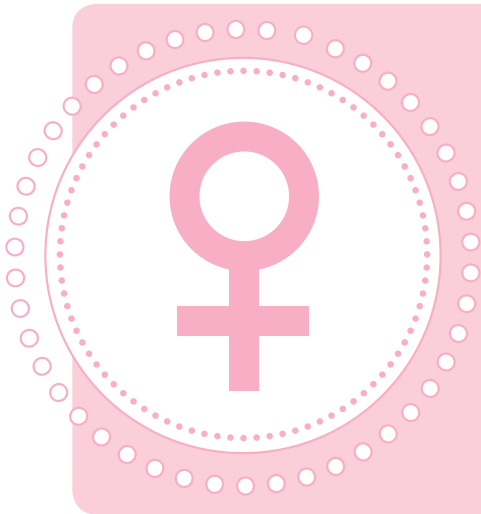
But is the study a valid assessment of the gender gap in radiology? Co-author Gerald R. Aben, M.D., FACR, from Michigan State University in East Lansing, says, “The problem we have in radiology is we don’t get a lot of exposure to students when they’re trying to decide on their future.” As a result, he adds, the misconception that radiologists are “hidden away in a closet some place” overpowers the benefits that imaging offers.

Meaningful Mentorship

Krizmanich-Conniff believes that mentorship is indeed one of the more heavily weighted factors for all medical students when deciding on a residency focus. In one study, 22 percent of men reported

“Very Severe Situation”

Female mentorship is especially important since the subspecialties women are generally attracted to — like breast imaging — consistently have the highest proportion of unfilled positions, with vacancies in nearly 30 percent of radiology practices. Since 75 percent of all breast imagers are women, this field cannot survive without more of them.⁴ “The lack of a growing proportion of women in radiology has had an especially large impact on breast imaging,” says Krizmanich-Conniff. “Usually, women occupy more than 80 percent of breast fellowship spots. The number of patients is growing rapidly, but the number of imagers is not.”



“Many female [patients] prefer one-on-one interaction with another woman.”
 — Gerald R. Aben, M.D., FACR

The shortages have had detrimental consequences for patients, as well, according to Krizmanich-Conniff. “It’s leading to increased wait times,” she explains. Liao adds, “Breast imaging is always in a shortage. You [may] have to wait three months to get a mammogram. It’s a very severe situation.”

“It’s a known fact and statistic that women are drawn to patient-care subspecialties,” says Krizmanich-Conniff, who will begin her breast-imaging fellowship in July 2011. “If you’re not highly technological or physics-driven, [the concept of becoming a radiologist] can be alarming,” she notes. What residents of both sexes may not realize is that many subspecialties, like breast imaging and interventional radiology, involve a significant amount of radiologist-patient interaction. “You can find a niche within radiology for everyone,” adds M. Ines Boechat, M.D., FACR, from the University of California, Los Angeles, past president of the AAWR.

Still, one study in the *American Journal of Roentgenology* reported that 94 percent of female medical students and 97 percent of male medical students said lack of direct patient contact was the number one factor in their decision not to specialize in radiology.³ Undoubtedly, radiologists need to promote more patient-centered subspecialties to medical students early in their studies. Yet, according to Aben, the first time radiologists really have access to students is during their senior rotation, when “it’s almost too late.”

Radiology’s lack of visibility to medical students is problematic because growing the number of women in radiology is vital to patients. “Radiologists don’t have much time to establish rapport with the patient and that can lead to anxiety,” explains Aben. “Many female [patients] prefer one-on-one interaction with another woman, especially if you’re in a multicultural area or you’re dealing with women’s imaging, such as breast or gynecological exams,” he adds.

Overturing the Trend


So, how are individual radiologists and radiology associations working to increase the number of women in imaging? In Ann Arbor, Krizmanich-Conniff and colleagues began a group called Women in Radiology that meets every two to three months. “We discuss concerns and ideas for how to recruit more women to radiology,” she explains.

Furthermore, the ACR and the AAWR continually strengthen their cooperative efforts and met at the 2010 RSNA conference to discuss joint initiatives. “We maintain open communication and dynamic conversation between the two organizations,” says Liao. Currently, the AAWR has one liaison — Kimberly E. Applegate, M.D., M.S., FACR — who sits on the ACR Council Steering Committee. “We’d really like to become the women’s voice for the ACR,” adds Vijay M. Rao, M.D., FACR, chair of radiology, Jefferson Medical College at Thomas Jefferson University in Philadelphia, president-elect of the AAWR.

Despite the commitment to progress by organizations like the AAWR and the ACR, “More gender research is needed [to understand the lack of female radiologists entering the field],” says Boechat. Action items, such as conducting research, increasing visibility among medical students, furthering awareness of patient-based subspecialties, building powerful mentorships, and highlighting the specialty’s benefits, are steps forward in tackling the disparity. Through them, the gender gap in radiology may soon begin to narrow. //

ENDNOTES

1. Applegate, K.E. “The Future Workforce in Academic Radiology: Gender, Generational, and Cultural Influences.” *JACR* 2005;2:133–138.
2. Roubidoux, M.A. et al. “Female Medical Students’ Interest in a Radiology Career.” *JACR* 2009;6:246–253.
3. Fielding, J. et al. “Choosing a Specialty in Medicine: Female Medical Students and Radiology.” *American Journal of Roentgenology* 2007;188:897–900.
4. Sunshine, J.H. et al. “Update on the Diagnostic Radiology Employment Market: Findings through 2007–2008.” *JACR* 2008;5:827–833.

WEB EXCLUSIVE 

To learn more about the value of mentorship, view a 2010 AMCLC presentation to the ACR’s RFS by Richard B. Gunderman, M.D., Ph.D., FACR. Visit <http://rfs.acr.org/#/Videos> to view the clip.