

Letter to Editor

In Regard to Mattes et al.

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We applaud Mattes et al¹ for highlighting the myriad potential benefits of increased physician workforce diversity in radiation oncology (RO). The authors noted that medical student members of the American Society for Radiation Oncology (ASTRO) were more likely to identify as Black or

African American and female than members-in-training, and suggested that ASTRO pursue “longitudinal engagement with these students” to “improve long-term diversity, equity, and inclusion in radiation oncology.”¹ Other studies have highlighted the lack of diversity within RO.²⁻⁶

		Total	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
White	US Census Population	61.9%	63.8%	63.4%	63.0%	62.6%	62.1%	61.7%	61.3%	60.8%	60.5%	60.1%
	US Medical School Population	60.8%	63.0%	62.5%	62.1%	61.7%	61.1%	60.8%	60.3%	59.8%	59.2%	58.5%
	Radiation Oncology Graduates	55.2%	56.1%	55.3%	50.6%	57.4%	59.9%	53.8%	57.1%	52.0%	56.3%	53.8%
Hispanic Latino or of Spanish Origin	US Census Population	17.5%	16.4%	16.6%	16.9%	17.1%	17.3%	17.5%	17.8%	18.0%	18.3%	18.5%
	US Medical School Population	2.7%	4.4%	3.3%	2.3%	1.5%	1.6%	2.0%	2.3%	2.7%	3.3%	3.9%
	Radiation Oncology Graduates	1.0%	0.0%	0.0%	0.0%	1.4%	0.6%	1.2%	0.0%	0.6%	1.1%	4.3%
Black or African American	US Census Population	12.4%	12.3%	12.3%	12.3%	12.4%	12.4%	12.4%	12.5%	12.5%	12.5%	12.5%
	US Medical School Population	6.6%	7.2%	7.1%	6.9%	6.8%	6.6%	6.5%	6.5%	6.3%	6.3%	6.2%
	Radiation Oncology Graduates	3.1%	4.7%	1.5%	2.6%	2.7%	3.2%	2.9%	4.5%	3.5%	1.1%	3.8%
Asian	US Census Population	5.3%	4.8%	4.9%	5.0%	5.1%	5.2%	5.4%	5.5%	5.6%	5.7%	5.8%
	US Medical School Population	19.5%	20.0%	19.8%	19.4%	19.0%	19.1%	19.0%	19.3%	19.5%	19.8%	20.2%
	Radiation Oncology Graduates	28.7%	25.0%	30.3%	34.6%	29.1%	22.3%	24.9%	28.8%	32.7%	30.6%	28.3%
American Indian and Alaska Native	US Census Population	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%
	US Medical School Population	0.3%	0.6%	0.5%	0.4%	0.3%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
	Radiation Oncology Graduates	0.1%	0.0%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Native Hawaiian and Other Pacific Islander	US Census Population	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
	US Medical School Population	0.1%	0.2%	0.2%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
	Radiation Oncology Graduates	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Multiple Race Ethnicity	US Census Population	2.0%	1.8%	1.9%	1.9%	2.0%	2.0%	2.0%	2.1%	2.1%	2.2%	2.2%
	US Medical School Population	6.9%	2.9%	4.7%	6.3%	7.8%	8.2%	8.2%	8.1%	7.9%	7.5%	7.2%
	Radiation Oncology Graduates	5.7%	4.7%	6.8%	6.4%	4.1%	4.5%	9.2%	3.4%	5.8%	6.6%	5.4%
Female	US Census Population	50.8%	50.8%	50.8%	50.8%	50.8%	50.8%	50.8%	50.8%	50.8%	50.8%	50.8%
	US Medical School Population	48.3%	45.8%	47.6%	49.2%	49.6%	49.5%	48.5%	48.6%	48.3%	47.8%	47.9%
	Radiation Oncology Graduates	31.0%	32.4%	39.4%	29.5%	36.5%	28.0%	32.4%	24.9%	28.7%	27.3%	33.7%

Fig. 1 Self-reported race/ethnicity data for U.S. radiation oncology graduates, the U.S. allopathic medical student body, and the U.S. population.

Sources of support: This work had no specific funding.

Disclosures: none.

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<https://doi.org/10.1016/j.adro.2021.100892>

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However, ensuring that the RO workforce mirrors the U.S. population may prove difficult. To illustrate the challenge, we obtained unduplicated, self-reported race/ethnicity data for 1629 RO residency graduates between 2010 and 2019 from the American Association of Medical Colleges. We then compared these data to that for enrolled U.S. allopathic medical students between 2001 and 2010 (corresponding to the years in which these RO residents graduated from medical school) and estimates for the U.S. population, which we obtained from a recent study by Morris et al and the U.S. Census Bureau, respectively.^{7,8}

Our results are shown in Figure 1. The majority of RO graduates self-identified as either white (55.2%) or Asian (28.7%) between 2010 and 2019. The proportion of Asian RO graduates exceeded that of U.S. allopathic medical schools (19.5%) and the U.S. population (5.3%). In contrast, the proportions of RO graduates who identified as Black or African American, Hispanic Latino or of Spanish Origin, American Indian or Alaska Native, and Native Hawaiian and Other Pacific Islander lagged behind those of U.S. allopathic medical schools and the U.S. population. RO graduates were also more likely to be male.

These data show that RO graduates have not been reflective of the U.S. allopathic medical student body, let alone the U.S. population, during the past decade. In its strategic plan approved in June 2017, ASTRO's board of directors included "Diversity and inclusion" as 1 of its 5 core values, and ASTRO has since launched a number of initiatives in pursuit of that goal.⁹ Our results make clear that all stakeholders in the field will have to redouble these and other efforts if RO is to diversify its workforce. Achiev-

ing a level of diversity that is reflective of the U.S. population, however, may prove elusive until the field of medicine as a whole makes diversity and inclusion a priority.

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