

Diversity by Race, Hispanic Ethnicity, and Sex of the United States Medical Oncology Physician Workforce

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Background/Purpose

Diversification of the oncology physician workforce has been identified as a means to address cancer disparities, yet limited data exist regarding the current status of its diversity.

The purpose of this study was to assess the diversity of the United States Medical Oncology physician workforce by race, Hispanic ethnicity, and sex, with particular attention to the fellow trainee level.

Materials and Methods

Publicly available American Medical Association, American Association of Medical Colleges, Accreditation Council for Graduate Medical Education, and US census registries were used to assess differences for 2010 amongst Medical Oncology academic faculty,

Hematology and Oncology fellows and Oncology fellows separately and combined into a single category as “Medical Oncology” fellows, Internal Medicine residents, and the US population, and 2008 Oncology practicing physicians – the most recent year available for this group – by using binomial tests; adjusting for multiple comparisons among different groups, differences with $P < 0.001$ were considered significant.

To assess significant changes over time in percentages by different race, ethnicity, and sex for all reported academic years 1986 – 2011, the slope and associated 95% confidence intervals for each group were estimated using a simple linear regression model with year as the independent variable.

Results

Over the past 26 years of available data, female representation as Medical Oncology fellows has increased significantly, 1.001 (95%CI: 0.867, 1.137; $P < 0.001$) (see Figure 1).

Meanwhile, there has been no significant change in representation of traditionally underrepresented minorities in medicine (URM) – Blacks, Hispanics, American Indians, Alaska Natives, Native Hawaiian, and Pacific Islanders (AI/AN/NH/PI) – over the past 17 years of available data: AI/AN/NH/PI -0.018 (95%CI: -0.132, 0.096; $P = 0.726$), Blacks -0.063 (95%CI: -0.153, 0.028; $P = 0.165$), Hispanics 0.063 (95%CI: -0.032, 0.158; $P = 0.178$).

Within the overall Medical Oncology physician workforce,

females and URM groups are underrepresented as practicing physicians (38.1% and 7.8%, respectively), faculty (22.4%, 5.7%), and fellows (45.0%, 10.9%), compared to the US population (50.8%, 30.0%), ($P < 0.001$) (see Figure 2).

As faculty, females (22.4% vs. 38.1%, respectively), Blacks (1.8% vs. 3.5%), and AI/AN/NH/PI (0 vs. 0.2%) were underrepresented compared to practicing physicians ($P < 0.001$).

As fellows, females (45.0%) and Hispanics (7.5%) were increased compared to both faculty and practicing physicians ($P < 0.001$); for Black fellows (3.1%) there were no differences compared to faculty or practicing physicians.

When comparing Medical Oncology fellows to Internal Medicine residents, there were no differences for AI/AN/NH/PI (0.3% vs. 0.6%, $P = 0.137$), Hispanics (7.5% vs. 8.7%, $P = 0.139$), and females (45.0% vs. 44.7%, $P = 0.853$); Blacks were underrepresented as fellows (3.1%) compared to Internal Medicine residents (5.6%), $P < 0.001$.

Conclusions

Females and URM are underrepresented in the Medical Oncology physician workforce relative to the US population.

Female representation as fellows has increased significantly over the past 26 years at approximately 1% per year and is increased relative to practicing physicians and academic faculty, indicating historical gains.

Meanwhile, there are no significant increases in URM groups over the past 17 years, suggesting that racial and ethnic diversity are not increasing.

Furthermore, for Blacks alone, representation as fellows is decreased compared to Internal Medicine residents, suggesting a greater disparity in Blacks entering the oncology workforce.

Given existing cancer disparities and an increasingly diverse society, future research and training efforts should address increasing trainee diversity.

Figure 1. Medical Oncology Fellows by Race, Hispanic Ethnicity, and Sex

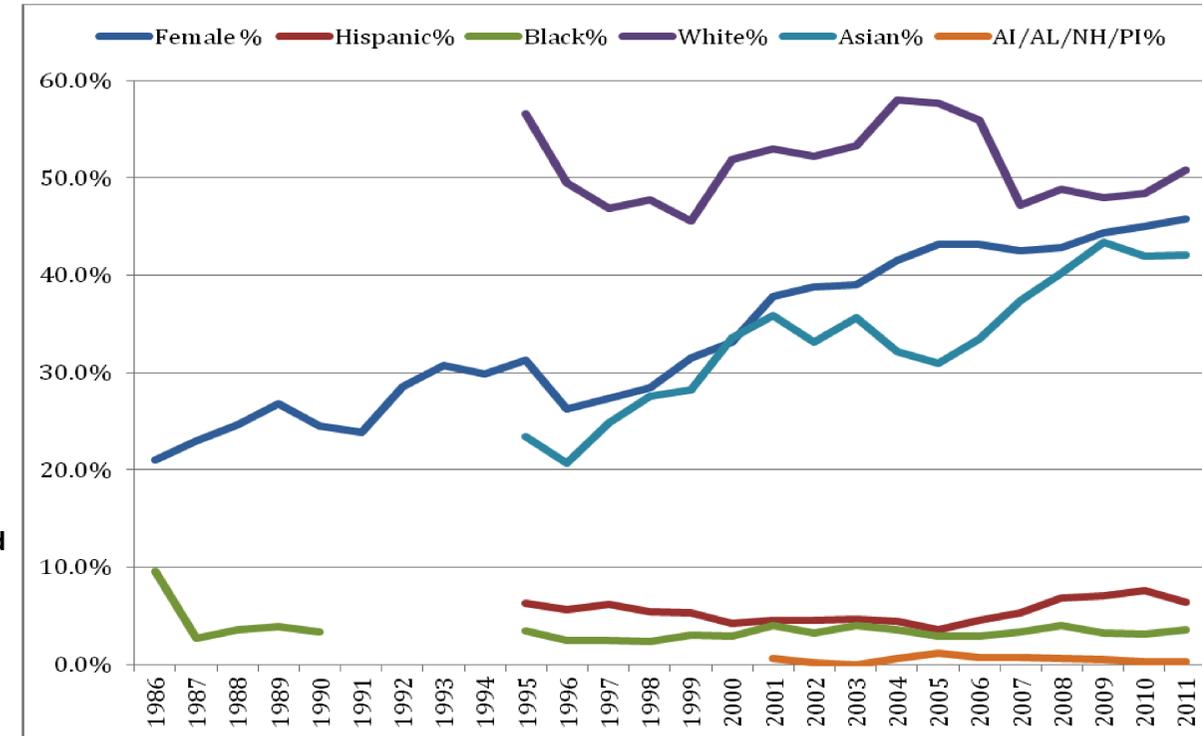
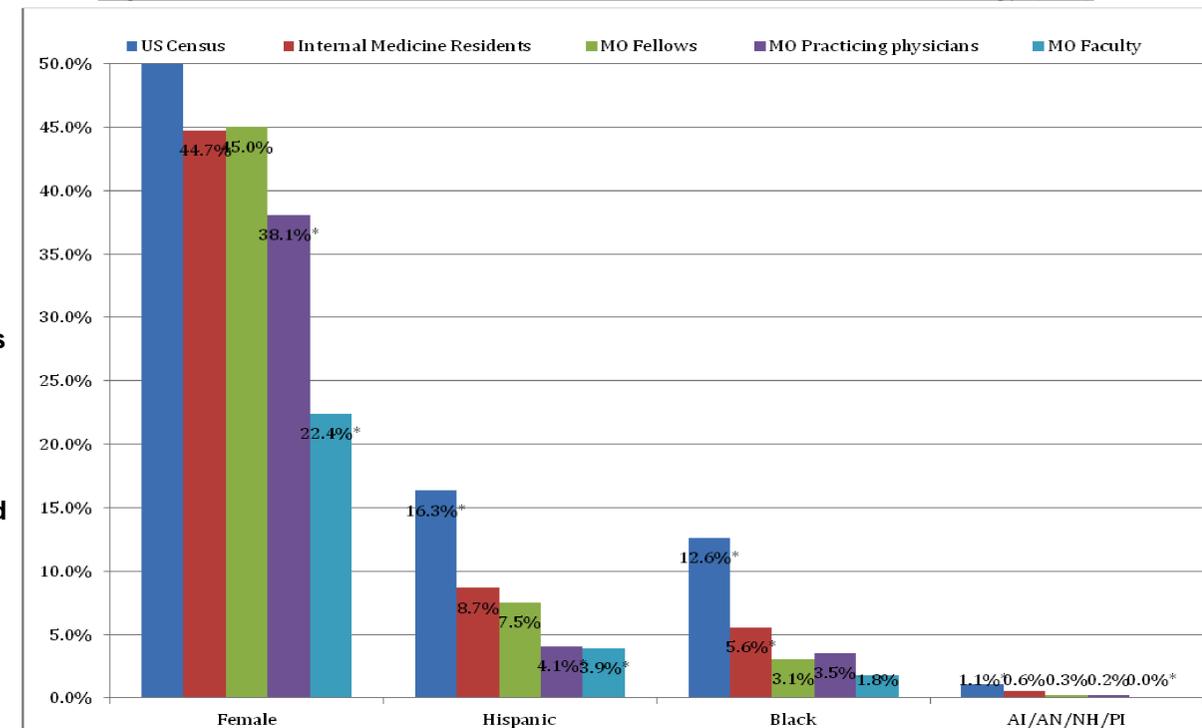


Figure 2. Current Female and URM Representation in Medical Oncology (MO)



*asterisk indicates significant difference in representation relative to Medical Oncology fellow category.

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