Background

Women and traditionally underrepresented groups in medicine (URM) – Blacks, American Indians and Alaska Natives (AI/AN), Native Hawaiians and Pacific Islanders (NH/PI), and Hispanics – are currently underrepresented in the US Radiation Oncology physician workforce.

Purpose

The purpose of this study was to assess changes in Radiation Oncology resident diversity by race, Hispanic ethnicity, and sex, over the past 20 years.

Methods

Racial, ethnic and sex groups were defined as consistent with US Census Bureau and URM as defined by American Association of Medical Colleges (AAMC). Racial groups included: White; Black or African American, referred to as Black; Asian or Asian American, referred to as Asian; AI/AN; NH/PI; and Other, defined in this study, as any person with unknown racial information and/or not classifiable into previous categories. Ethnic groups included Hispanic and non-Hispanic.

Resident data for the academic years 1991-1992 through 2011-2012 were obtained and accumulated from annual Journal of the American Medical Association supplements, which report the American Medical Association and AAMC database of information on graduate medical education training programs accredited by the Accreditation Council for Graduate Medical Education and of the residents and fellows in them. Data for Asian, Black, Other, and Hispanics were first reported for 1995-1996, and for AI/AN and NH/PI in 2001-2002.

To assess the changes in the percentages of different race, ethnicity, and sex in residents over 20 academic years, the slope and the associated 95% confidence intervals for each group were estimated using a simple linear regression model where year was used as independent variable.

Results

Number of Radiation Oncology Residents by Race, Ethnicity, and Sex: 1992-2012

- **Total Residents:** 5612
- **White:** 2731
- **Asian:** 3467
- **Black:** 251
- **AI/AN:** 402
- **NH/PI:** 32
- **Other:** 36

Percentage of Radiation Oncology Residents by Race and Ethnicity: 1992-2012

- **Total:** 100.0%
- **White:** 48.5%
- **Asian:** 62.2%
- **Black:** 0.4%
- **AI/AN:** 5.4%
- **NH/PI:** 0.2%
- **Other:** 0.6%

Conclusions

Despite the ongoing diversification of medical school graduates over the past 20 years, overall diversity by race, ethnicity, and sex, of Radiation Oncology residents has changed minimally over the past 20 years with subtle increases for Asians and Females, and either decrease (Blacks) or no significant changes (AI/AN, NH/PI, and Hispanics) for traditionally underrepresented groups in medicine.

Future research should examine the reasons for the underrepresentation of women and minority groups in Radiation Oncology with the ultimate goal of helping to create and maintain a diverse workforce that will serve that needs of the multicultural population in the United States.