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Improving Diversity: The Shifting Landscape of a Regionally and Nationally Growing Cancer Center Network

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Abstract
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Abstract

Purpose

Many cancer hospitals have established large networks of satellite facilities to increase their patient catchment and improve access for underserved populations. This study aims to capture the impact of an expanding radiation oncology (RO) network on patient characteristics and demographics.

Methodology

Unidentified RO patient data was collected from the electronic medical record at City of Hope (COH), consisting of the main campus (MC) at Duarte, its group of 16 locations throughout Southern California (CA), and recently opened sites in Illinois (IL), Georgia (GA), and Arizona (AZ). Demographics included age, gender, race, ethnicity, language, interpreter use, tobacco, insurance, and primary cancer type. Statistical comparisons were made using chi-squared or Mann-Whitney U test for categorical or numerical data, respectively.

Results

Between October 30, 2023 and October 18, 2024, 9,002 RO patients were seen in consultation at COH network (N) facilities compared to 2,165 seen at MC. Differences between N and MC included median age (N: 66 [range 19-100] vs. MC: 65 [7-101]; p<0.001), gender (N: 56.8% female vs. MC: 51.9%; p<0.001), language (N: [85.7% English, 9.0% Spanish, 1.0% Chinese, 4.3% other]; MC: [77.7% English, 10.7% Spanish, 6.9% Chinese, 4.7% other; p<0.001]), and use of an interpreter (N:11.3% vs. MC: 18.9%; p<0.001). Cancer type varied (N: [30.7% breast, 21.2% genitourinary, 9.3% gastrointestinal, 8.7% lung, 5.7% gynecologic, 3.9% head and neck, 3.9% neurologic, 4.0% musculoskeletal, 2.4% hematologic, 4.4% other]; MC: [17.2% breast, 17.6% genitourinary, 10.7% gastrointestinal, 10.4% lung, 7.3% gynecologic, 5.0% head and neck, 3.6% neurologic, 3.3% musculoskeletal, 15.6% hematologic, 2.8% other; p<0.001]). Stratifying by state, patients from IL (N=1658), GA (N=617), and AZ (N=550) differed from CA (N=8342) with regards to race (CA: [65.1% White, 6.6% Black, 13.5% Asian]; IL: [75.2% White, 16.5% Black, 2.4% Asian; p<0.001]; GA: [48.8% White, 36.1% Black, 0.8% Asian; p<0.001]; AZ: [62.7% White, 5.6% Black, 1.1% Asian; p<0.001]), ethnicity (CA: [26.9% Hispanic or Latino]; IL: [6.5%; p<0.001]; GA: [1.9%; p<0.001]; AZ: [13.3%; p<0.001]), tobacco use (CA: [6.5% current, 25.5% former, 57.5% never]; IL: [9.6% current, 29.3% former, 36.6% never; p<0.001]; GA: [9.2% current, 27.1% former, 46.4% never; p<0.001]; AZ: [7.1% current, 29.6% former, 42.4% never, 20.9%; p<0.001]), and insurance (CA: [47.5% Medicare, 17.7% Medicaid, 33.4% commercial]; IL: [38.1% Medicare, 5.2% Medicaid, 53.4% commercial; p<0.001]; GA: [40.7% Medicare, 1.8% Medicaid, 54.6% commercial; p<0.001]; AZ: [49.3% Medicare, 5.6% Medicaid, 40.4% commercial; p<0.001]).

Conclusion

Expansion to regional and out-of-state locations appears to diversify population demographics of the COH RO network and broadens representation of patient characteristics, such as race/ethnicity, smoking status, and insurance type. Caring for diverse and medically underserved populations can reduce health disparities, expand demographic representation on institutional prospective trials, and ultimately, improve patient outcomes.