

## Disparities in Radiation Oncology

# The pervasive crisis of diminishing radiation therapy access for vulnerable populations in the United States, part 2: American Indian patients

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## Abstract

**Introduction:** American Indian/Alaska Native (AI/AN) patients with cancer disproportionately present with more advanced stages of disease and have the worst cancer-specific survival rates of any racial/ethnic group in the United States. The presence of disparities in radiation therapy (RT) access for AI/AN patients has rarely been examined.

**Methods and materials:** National Cancer Institute (NCI) initiatives toward addressing AI/AN disparities were examined. Additionally, an extensive PubMed literature search for studies investigating RT access disparities in AI/AN patients was performed.

**Results:** Literature describing RT access disparities for the AI/AN patient population is sparse, revealing only 3 studies, each of which described initiatives from the Walking Forward program, the NCI Cancer Disparity Research Partnership initiative to address barriers to cancer screening among AI populations in the Northern Plains region (eg, geographic remoteness and mistrust of health care providers). This program has used patient navigation, community education, and access to clinical trials for more than 4000 AI/AN patients to combat high cancer mortality rates. Over the course of its 15-year existence, the program has resulted in patients presenting with earlier stages of disease and experiencing higher cure rates. Lung cancer, the most common cause of cancer-related mortality in AI/AN patients, is the most recent and ongoing focus of the program.

**Conclusion:** The amount of information regarding RT access in AI/AN patients is limited, with nearly all peer-reviewed published progress in this area being associated with the Walking Forward program. Further initiatives from this program will hopefully inspire similar initiatives throughout the country to reduce the barriers to optimized cancer care that these patients face. Given the

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similarities with cancer disparities of populations worldwide, the AI/AN experience should be included within the broad issue of a global shortage of cancer care among underserved populations. © 2017 The Author(s). Published by Elsevier Inc. on behalf of the American Society for Radiation Oncology. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

## Introduction

Populations that historically have faced displacement, marginalization, and structural disadvantages in the United States also face the painful and often life-threatening reality of disparities in modern health care access. Part 1 of the current series investigated the disparities in radiation therapy (RT) access faced by African-American patients.<sup>1,2</sup> In this review, we examine a population that has suffered arguably more structural violence and disadvantage than any other population in U.S. history, American Indian/Alaska Natives (AI/ANs), and the barriers they face in receiving optimal cancer care.

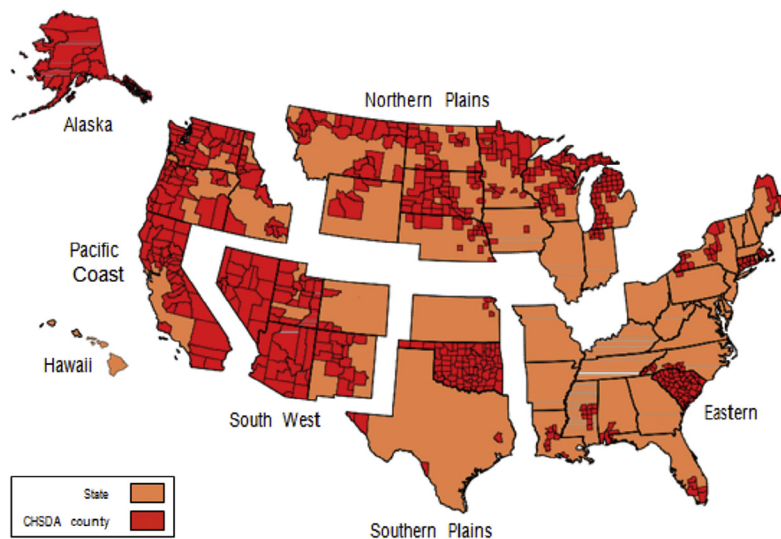
Approximately 5.2 million AI/ANs live in the United States, belonging to 566 federally recognized tribes that comprise 6 geographic regions as defined by the Indian Health Service (Fig 1).<sup>3</sup> Over a recent 20-year period (1990-2009), overall cancer death rates for AIs linearly increased while simultaneously linearly decreasing for Caucasians.<sup>4</sup> Cancer is the leading cause of death among AI/ANs nationwide,<sup>5</sup> and AI/ANs disproportionately present with more advanced stages of disease.<sup>6,7</sup>

Indian Health Service geographic regions demonstrate distinct patterns in cancer incidence rates. In the East, Northern Plains, Southern Plains, and Pacific Coast, the most

common cancer diagnoses for women were breast, lung, and colorectal cancer; for men, they were prostate, lung, and colorectal cancer.<sup>4</sup> In the Southwest, the most common cancer diagnoses for women were breast, colorectal, and uterine cancer; for men, they were prostate, colorectal, and kidney cancer. In Alaska, the most common cancer diagnoses for women were breast, colorectal, and lung cancer; for men, they were lung, colorectal, and prostate cancer.<sup>4</sup>

Low- or no-income status, historical trauma with its resulting mistrust from events such as Wounded Knee and the 1880 Indian Wars, lack of adequate government health care funding, low rates of cancer screening and physical activity, geographic isolation, and high-risk health behaviors have all contributed to the reality that AI/AN populations have the worst cancer-specific survival rates of any racial/ethnic group in the United States<sup>8,9</sup>; this is especially true for AIs.<sup>5,10</sup> Furthermore, the northern plains AI population has some of the highest poverty rates in the United States, approaching 90% in some areas, particularly on the reservations in western South Dakota.<sup>5,11</sup>

In 2002, the National Cancer Institute (NCI) created the Cancer Disparity Research Partnership (CDRP) program for community cancer centers that worked with these vulnerable populations.<sup>12</sup> Patient navigation was part of the CDRP program as a potential strategy to mitigate the



States and Contract Health Service Delivery Area (CHSDA) Counties by Indian Health Service Region, 1999-2009. *American Journal of Public Health*, 2014. Published online ahead of print April 22, 2014

**Figure 1** Six Indian Health Service geographic regions in the United States.

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