

# Access to Radiation Therapy in Costa Rica

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## Introduction

Radiation Therapy in Costa Rica is not accessible to many people in the country.

Being one of the more medically affluent countries in Central America, they have limited access to radiation oncology treatment facilities.

In Costa Rica, there are 2 linear accelerators for 5 million people,  
= 2.5 million people per accelerator

To compare, there are 3,521 linear accelerators in the United States, for about 329 million people,  
= 93,439 people per accelerator



## Compare

How does this compare to other Latin American countries?

- Cancer is a leading cause of disease and death in Latin America and surrounding countries.
- The patterns of cancer diagnosis reflect underlying sociodemographic changes that have occurred over the last decade.
- Life expectancy is rising giving way to an elderly heavy population
- Lack of care and lack of access to healthcare across Latin America and Central America
- Lack of established healthcare system

## Key Findings

Barriers to Treatment:

Screening Availability

- Patients in low-income countries typically present with more extensive disease, and therefore have fewer treatment options available to them, regardless of accessibility (Rosenblatt et al., 2018).
- Patients in high-income countries have increased access to early detection and early screening techniques, which offers them a more comprehensive range of treatment options and a better prognosis (Fantin et al., 2020a).
- When made available, prostate cancer screening not only provides early disease detection but, in the long term, will decrease mortality rates overall (Taitt, 2018).
- When patients can be screened for PCa regularly, doctors and other healthcare professionals can document their prostate-specific antigen (PSA) levels.
- Doctors can observe the recorded levels and quickly identify discrepancies, which leads to further testing, an early diagnosis, and a more complex array of treatment options (Taitt, 2018).



## Key Findings

-Geographical Location to Treatment Facilities

In Costa Rica, screening availability is limited due to geographical location and social inequalities.

There is an apparent wealth disparity between the social classes in Costa Rica, which is a significant factor in access to healthcare, and therefore access to screening (Fantin et al., 2020b).

Like most Latin American countries with different social classes, access/lack of access to healthcare also leads to significant life expectancy discrepancies.

Some research suggests that due to the geographical barriers most Latin American countries encounter, including Costa Rica, more extensive research needs to be done to gauge if better prostate cancer management needs to be focused in rural or urban areas (Reis et al., 2020).

From these studies, not enough research is available to suggest that Costa Rica possesses enough resources to handle the large number of prostate cancer diagnoses.

-Central Location of Public Linear Accelerator

The other obvious barrier in Costa Rica is the small number of linear accelerators in the country available in the public health sector (Saborio et al., 2018).

In a country of almost 5 million people, Costa Rica is considered a relatively small country covering a large amount of terrain. The central location makes geography an additional barrier to treatment accessibility.

Costa Rica is one of the few countries in Central America with a government-sponsored, universal-coverage healthcare system, which as of 1973, covers all of its citizens.

Under this system, there are two public radiation therapy centers available. These centers offer two clinical linear accelerators used for the majority of treatments and two cobalt treatment machines used for palliative treatment (Saborio et al., 2018).

In addition to their public healthcare, Costa Rica also has a growing private healthcare sector that can afford more advanced technology and treatment modalities for prostate cancer patients. This private sector of healthcare is not widely available to all citizens.



## Future Research/Conclusion

In order to better manage the treatment accessibility for cancer patients, new treatment facilities should be made available in more northern and southern locations in Costa Rica

More research needs to be conducted on the geographical barriers and how they effect access to healthcare.

Specifically, where treatment facilities could be added in order to provide public healthcare to a larger number of citizens.



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