

Care Network of the state of São Paulo, Brazil

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Approximately 25-30% of women in the state of São Paulo had to travel for breast or cervical cancer treatment. In certain Health Care Networks, this percentage was even higher. Over a ten-year period, no significant reduction in the need for travel for oncologic treatment was observed.

BACKGROUND

The state of São Paulo, located in southeastern Brazil, is home to over 44 million people. In 2023, it is estimated 20,470 new cases of breast cancer and 2,470 new cases of cervical cancer in the state. Cancer treatment within the Brazilian Unified Health System (SUS) is provided by hospitals accredited by Ministry of Health. In São Paulo, these hospitals are distributed across 17 Health Care Networks (HCN), which represent organizational structures of health services with varying levels of technological complexity. These networks aim to ensure comprehensive care, optimize costs, and enhance the use of available health resources. Since 2010, the SUS has been organized according to these HCNs. While women with breast or cervical cancer are expected to receive comprehensive care within their local HCN, some may need to travel to another HCN for treatment. This study aims to compare the geographical accessibility of breast and cervical cancer treatment in accredited hospitals across the HCNs in the state of São Paulo before and after the implementation of the HCN organization, examining travel needs for treatment over two three-year periods (2007-2009 and 2017-2019).

METHODS

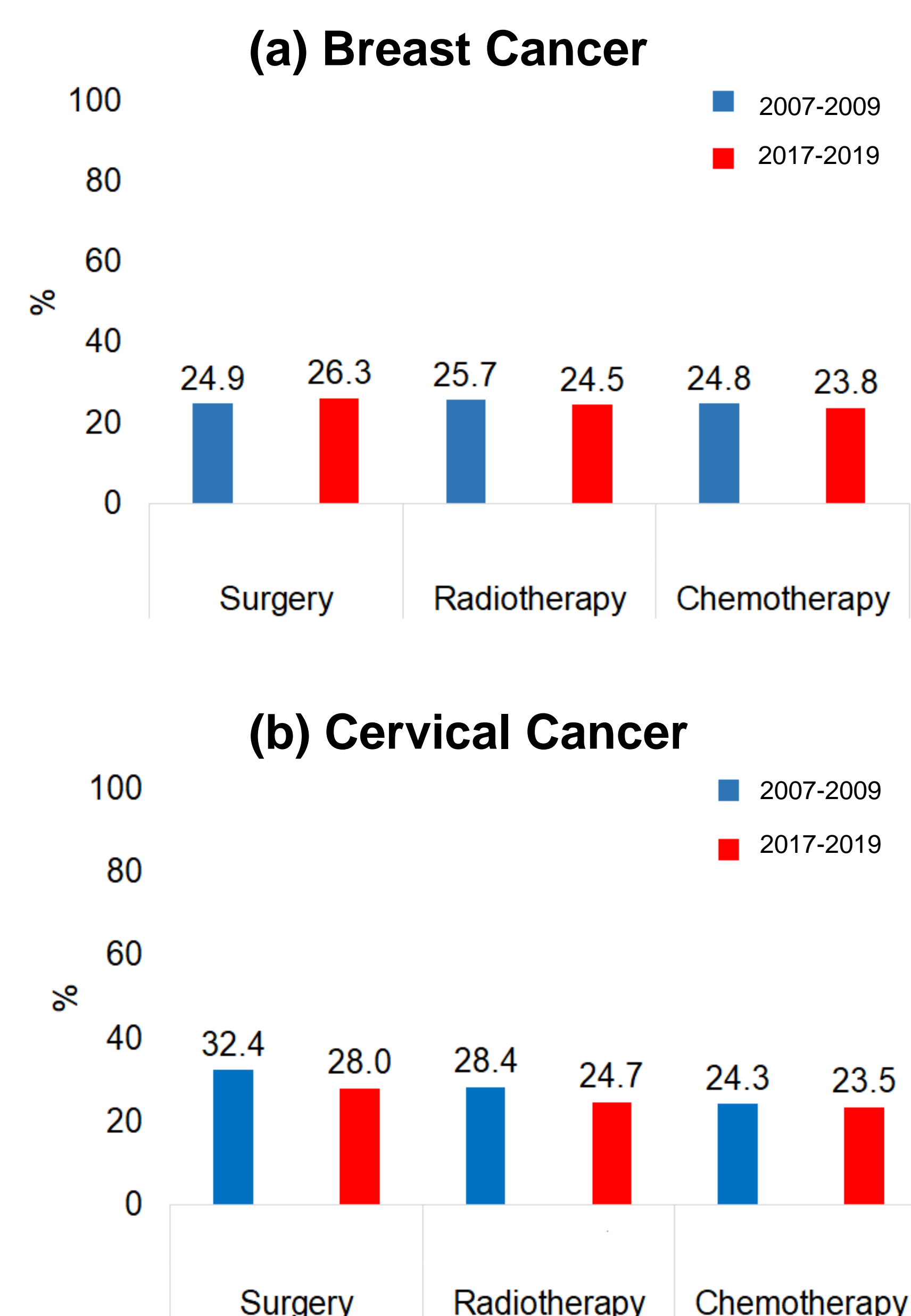
This before and after cross-sectional analysis compared two independent three-year periods using data from the Hospital Cancer Registry of the State of São Paulo (HBCR): 2007-2009 and 2017-2019. The HBCR compiles data on cancer patients treated at 81 hospitals accredited by the SUS. The study included all women aged 20 years or older who received surgery, chemotherapy, or radiotherapy for breast cancer (ICD-O-3 code C50) or cervical cancer (ICD-O-3 code C53), including in situ cases. Geographic accessibility was evaluated based on patient travel between Health Care Networks (HCN). Travel was defined as the percentage of patients from their HCN of residence who sought treatment at another HCN. The percentage variation (%Δ) between study periods were calculated.

RESULTS

A total of 40,420 breast cancer treatments (2007-2009: 16,413 vs. 2017-2019: 24,007) and 12,600 cervical cancer treatments (2007-2009: 5,755 vs. 2017-2019: 6,845) were analyzed. Between the two periods, the same number of hospitals accredited by SUS was maintained.

Around 25-30% of patients in the State of São Paulo had to travel among HCN to receive cancer treatment over time. In São Paulo State, patient's travels for cervical cancer treatment decreased by -13.6% for surgery, -13.0% for radiotherapy, and -3.3% for chemotherapy. Conversely, for breast cancer, patient's travels decreased for chemotherapy (-4.0%) and radiotherapy (-4.7%), while travels increased by 5.6% for surgery.

Figure 1. Percentage of patient travel in the São Paulo State for (a) breast cancer and (b) cervical cancer, 2007-2009 and 2017-2019.



Disparities were observed among HCNs. **Specifically, 100% of women living in two HCNs had to travel for oncologic treatment due to the absence of a SUS-accredited hospital in those regions. In contrast, three HCNs required less than 10% of women to travel, while five saw more than 50% of women traveling for treatment.** Additionally, there were no changes in the profile of the RAS between the two three-year periods studied; they consistently remained either centers of attraction or rejection for oncology patients.

CONCLUSIONS

Despite the implementation of the HCN strategy, there were no significant improvements in the travel percentages for cancer patients in the state of São Paulo after ten years. However, modest reductions were observed, particularly for cervical cancer. The percentage of travel required for cancer treatment remains high, especially given that São Paulo has the largest number of accredited cancer hospitals in Brazil. Further analysis is needed to assess geographic accessibility for other types of tumors. This will help provide a comprehensive understanding that the HCN strategy has had on improving cancer treatment for patients across the state of São Paulo.

ADDITIONAL KEY INFORMATION

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