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## **Stage at diagnosis and relative differences in breast and prostate cancer incidence in India: comparison with the United States.**

Hebert JR, Ghumare SS, Gupta PC.

Source

South Carolina Statewide Cancer Prevention and Control Program, University of South Carolina, Columbia, SC 29208, USA. jhebert@sc.edu

### **Abstract**

**PURPOSE:** To examine and reconcile differences in incidence rates and stage-at-initial-presentation of prostate and breast cancers in India, a country in epidemiologic transition.

**METHODS:** Age-adjusted prostate and female breast cancer incidence rates and proportion of cases by stage-at-diagnosis were compared. Data were derived from the National Cancer Registry Program of India, other Indian registries, the International Agency for Research on Cancer, and the US/ NCI Surveillance, Epidemiology, and End Results (SEER) Program.

**RESULTS:** Average annual cancer incidence rates in India ranged from 5.0 to 9.1 per 100,000/year for prostate and 7.2 to 31.3 per 100,000/year for female breast. Comparative rates in the US for prostate cancer are 110.4 for Whites and 180.9 for Blacks; for female breast, the rates are 86.6 for Blacks and 96.4 for Whites. Notable differences were observed between rural and urban areas in India, while such differences by rurality appear to be much smaller in the US. Overall, about 50-55% of breast cancer cases and about 85% of prostate cancers were detected at late (III and IV) stage; in contrast to the US where 15% of either cancer is diagnosed at late stage.

**CONCLUSIONS:** Differences in stage-at-diagnosis help explain variations in incidence rates among cancer registries in India and rate differences between India and the US. These findings indicate that erroneous inferences will result from incidence-rate comparisons that do not take into account stage-at-diagnosis. Results also point to epidemiologic studies that could be conducted to deepen understanding of the etiology of these cancers. By enhancing data on staging, the Indian cancer registries could widen the scope of collaborative, cross-national research.

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