



PURPOSE/OBJECTIVES

- Pennsylvania had the 8th highest cancer incidence rate of all states in the US
- Purpose: To examine cancer in rural Pennsylvania and to identify disparities in cancer incidence and mortality in these counties compared to rural counties within the United States.

METHODS

- Data from NAACCR* were used to calculate age-adjusted rates (and 99% confidence intervals) for incidence of and mortality from common cancers from 2004-2008.
- Cancers of focus included:
 - All cancers combined
 - Breast
 - Colorectal
 - Lung
 - Prostate
 - Urinary Bladder.
- Analysis limited to white non-Hispanics[‡]

* North American Association of Central Cancer Registries
[‡] To control for possible confounding by race and ethnicity.

RESULTS

Incidence

Place of Residence	All Sites Rate (99% C.I.)	Colorectal Rate (99% C.I.)	Lung Rate (99% C.I.)	Bladder Rate (99% C.I.)	Prostate Rate (99% C.I.)
Rural PA	569.7 (563.3-576.2)	63.4 (61.3-65.6)	89.7 (87.2-92.3)	46.3 (44.4-48.1)	150.9 (147.7-154.2)
Rural US	560.2 (558.3-562.1)	60 (59.3-60.6)	97.6 (96.8-98.4)	42 (41.5-42.5)	142.6 (141.7-132.6)

Table 1: Age Adjusted Incidence Rates for Selected Cancer Sites in Men by Place of Residence, WNH only

Place of Residence	All Sites Rate (99% C.I.)	Colorectal Rate (99% C.I.)	Lung Rate (99% C.I.)	Bladder Rate (99% C.I.)	Breast Rate (99% C.I.)
Rural PA	433.5 (428.3-438.8)	46.5 (44.9-48.2)	53.5 (51.8-55.3)	11.4 (10.6-12.2)	118.1 (115.4-120.9)
Rural US	422.1 (420.5-423.6)	43.5 (43-44)	61.4 (60.9-62)	10.4 (10.1-10.6)	119.1 (118.3-119.9)

Table 2: Age Adjusted Incidence Rates for Selected Cancer Sites in Women by Place of Residence, WNH only

Mortality

Place of Residence	All Sites Rate (99% C.I.)	Colorectal Rate (99% C.I.)	Lung Rate (99% C.I.)	Bladder Rate (99% C.I.)	Prostate Rate (99% C.I.)
Rural PA	238.8 (234.6-243.1)	23.4 (22.1-24.8)	73.0 (70.7-75.3)	8.6 (7.8-9.5)	23.5 (22.2-24.9)
Rural US	243.2 (241.9-244.5)	22.6 (22.2-23)	81.0 (80.3-81.8)	8.1 (7.8-8.3)	23.9 (23.5-24.4)

Table 3: Age Adjusted Mortality Rates for Selected Cancer Sites in Men by Place of Residence, WNH only

Place of Residence	All Sites Rate (99% C.I.)	Colorectal Rate (99% C.I.)	Lung Rate (99% C.I.)	Bladder Rate (99% C.I.)	Breast Rate (99% C.I.)
Rural PA	160.1 (157.1-163.2)	15.8 (14.9-16.8)	36.7 (35.3-38.2)	2.4 (2-2.7)	25.7 (24.5-27.0)
Rural US	162.6 (161.6-163.6)	15.8 (15.5-16.1)	45.6 (45.1-46.2)	2.2 (2.1-2.4)	23.6 (23.2-24)

Table 2: Age Adjusted Mortality Rates for Selected Cancer Sites in Women by Place of Residence, WNH only

Red= Significantly **higher** than the rate in Rural US counties
 Blue= Significantly **lower** than the rate in Rural US counties

- Compared to rural US counties, incidence was higher among both men and women living in rural Pennsylvania for all sites combined, colorectal and bladder cancer.
- Men had higher incidence rates for prostate cancer.
- Lung cancer incidence was lower in rural Pennsylvania for both sexes.

RESULTS

- Compared to residents of rural US counties, mortality was higher for breast cancer among rural Pennsylvania women, but lower for all sites combined among men and lung cancer among men and women.
- While incidence rates were higher for all cancer sites combined, colorectal, bladder and prostate, mortality was not elevated for these sites.

CONCLUSIONS

- The significantly elevated breast cancer mortality among rural Pennsylvania women suggests improved access to screening and or treatment is needed in these communities.
- Although lung cancer incidence and mortality rates were lower than in rural US counties, lung cancer remains the leading cause of cancer death in rural Pennsylvania.

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