

Cancer Screening in Washington State: Does Location Matter?



Take Home Points for the Department of Health

Purpose

- Find out whether some geographic areas have:

- Lower prevalence for cervical, female breast, or colorectal cancer screening.

- Higher likelihood of late detection of female breast or colorectal cancer.

1. Collaboration among the Community Health Systems, Cancer Registry, and Center for Health Statistics was crucial to identify where screening activities were lowest and where late detection cases were highest in the State.
2. Cancer Registry data show that female breast cancer is likely to be detected at a more advanced stage in Eastern Washington than in the rest of the State.
3. Strengthening primary care infrastructure and promoting Medical Homes in rural eastern Washington will likely increase the number of people with personal Health Care Providers (HCP), which will improve screening rates for cervical, female breast, and colorectal cancer.
4. Screening interventions in rural areas should target low-income residents, since their access to health care services is the most limited.

Screening: Cervical, Breast and Colorectal Cancers

Recommended Screenings

Cervical Cancer (Women Age 18+): Pap smear test within the last three years.

Female Breast Cancer (Women Age 40+): Mammogram within the last 2 years.

Colorectal Cancer (Adults Age 50+): A blood stool test in the past year, or sigmoidoscopy in the past five years, or colonoscopy in the past 10 years.

Who Gets Screened

- Screening for cervical, female breast, and colorectal cancer is least prevalent among residents of rural areas (Table 1).
- Having a personal Health Care Provider (HCP) is the most important factor favoring screening for all three cancers studied (Charts 1, 2, and 3).
- The likelihood of receiving cancer screening is associated with age, marital status, race and ethnicity, education level, and household income, as well as location of residence. Gender differences are not statistically significant, and thus not reported.
- Adjusting for these factors, the likelihood of not being screened for colorectal cancer is highest in large rural towns (see Chart 3).
- As income and education levels increase, the likelihood of getting screened rises for all three cancers. People of low socioeconomic status are the least likely to be screened.

Table 1: Screening Prevalence by Rural-Urban Location of Residence, BRFSS, 2004&2006

	Cervical Cancer Women age 18+ % Screened (CI)	Breast Cancer Women Age 40+ %Screened (CI)	Colorectal Cancer Adults Age 50+ % Screened (CI)
Urban	81 (±1)	74 (±1)	61 (±1)
Large Town Rural	78 (±1)	75 (±2)	57 (±2)
Small Town/ Isolated Rural	75 (±2)	70 (±2)	57 (±2)

Chart 1: Cervical Cancer Screening BRFSS, 2004&2006

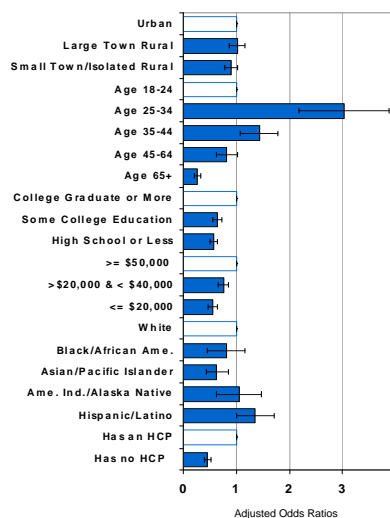


Chart 2: Female Breast Cancer Screening BRFSS, 2004&2006

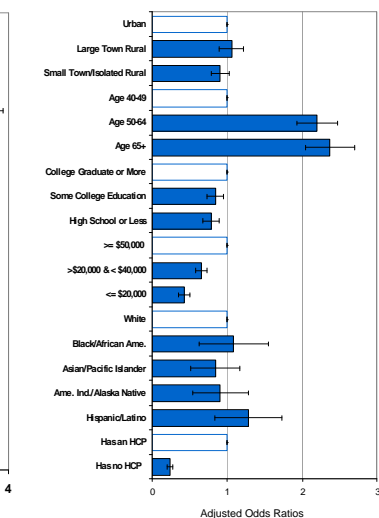
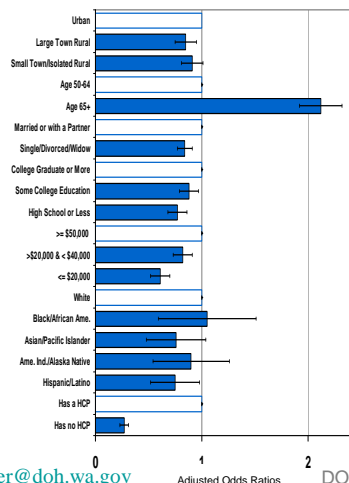


Chart 3: Colorectal Cancer Screening BRFSS, 2004&2006

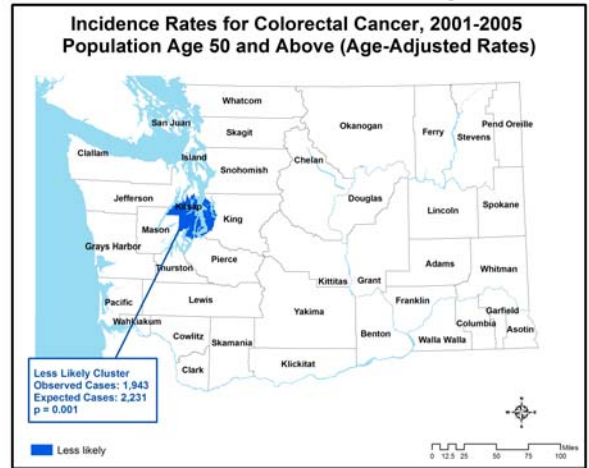
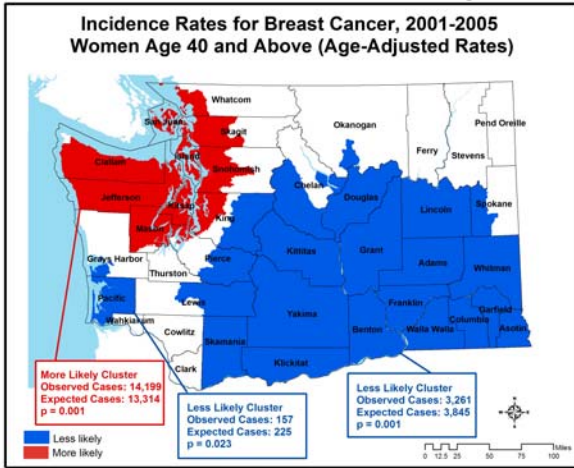


Early & Late Stage Female Breast and Colorectal Cancers

(Color blue represents clusters with relatively desirable results, and color red represents clusters with undesirable results)

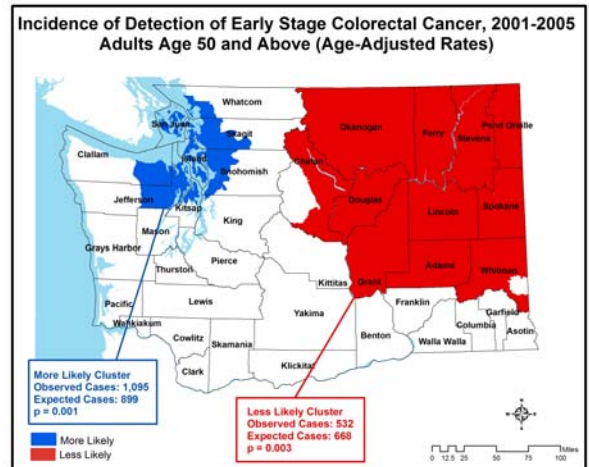
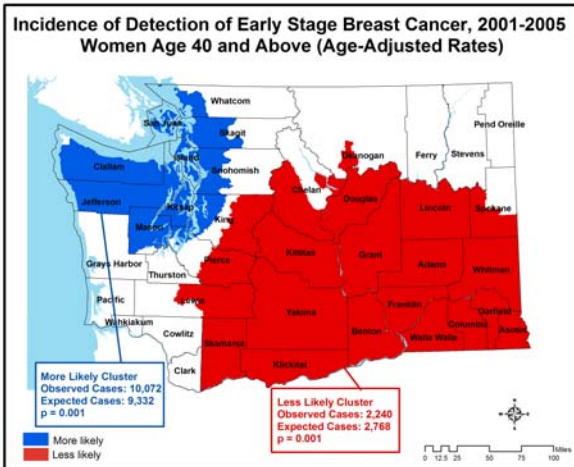
Female Breast Cancer Analysis

Colorectal Cancer Analysis



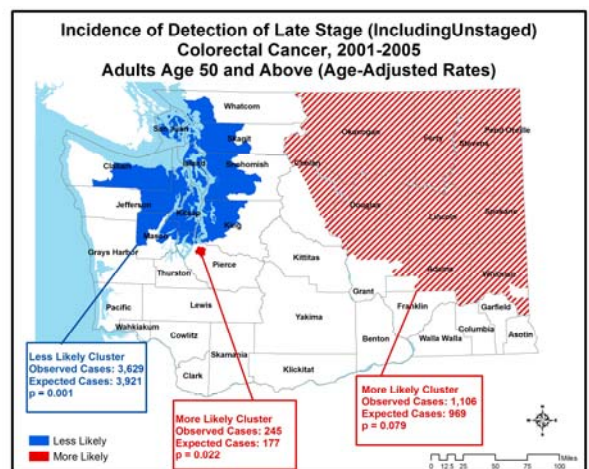
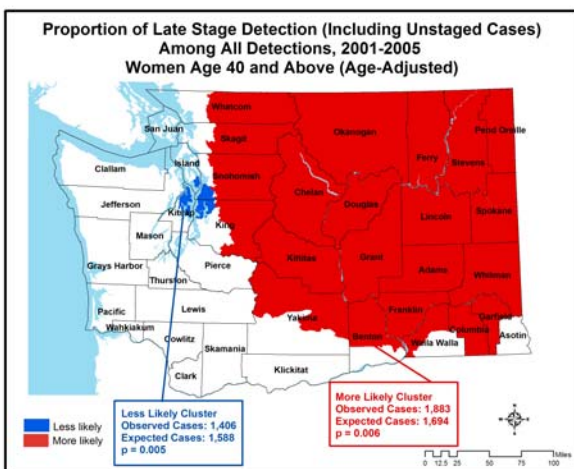
The Puget Sound area shows the highest breast cancer detection rates, and the blue area shows the lowest detection rates. This is probably due to better screening in the Puget Sound area.

The only statistically significant cluster occurs tightly around Seattle, showing less likely detection. This may be due to distinctive life-style factors such as diet and exercise.



Early stage breast cancer is more likely to be detected in the blue area, again pointing to better screening.

Early stage colorectal cancer is more likely to be detected in the blue area, again pointing to possible life-style advantages.



The red cluster shows higher likelihood of late stage detection among all cases in that area, while the blue cluster shows lower likelihood.

The red hatched cluster shows higher likelihood of detections with late stage at the 0.08 level of statistical significance. The results are suggestive, but less robust than other findings in the study