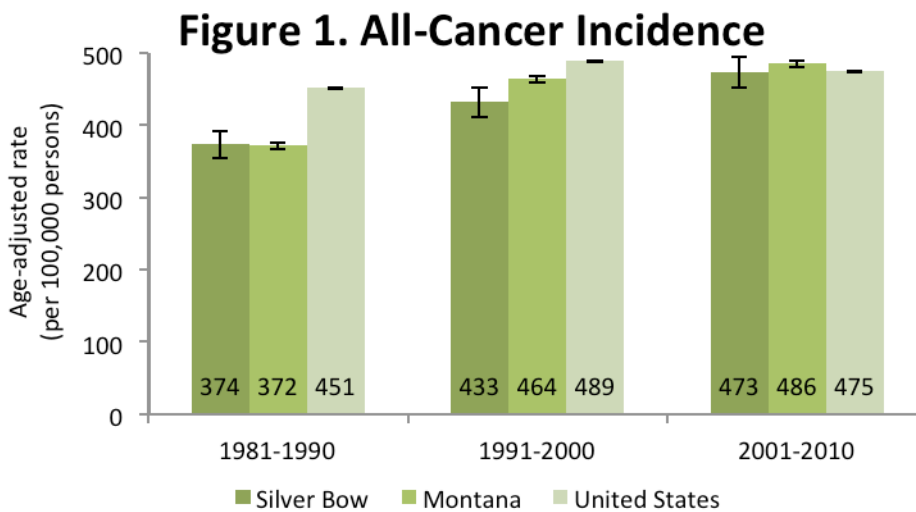


Title - Silver Bow County Cancer Incidence and Cancer Mortality Rates

Cancer incidence is not elevated in Silver Bow County

A new study by the Montana Cancer Surveillance and Epidemiology Program (MCSEP) (<http://www.dphhs.mt.gov/publichealth/cancer/datastatistics.shtml>) has shown that incidence rates for all cancers and for each of the four most common cancers were not elevated in Butte-Silver Bow County from 1981 through 2010 (Figure 1). The four most common cancers include those of the prostate, female breast, colorectal and lung/bronchus.



Over 95% of all cancer cases are reported.

The State of Montana maintains extensive data on cancer incidence, based on information from the Montana Central Tumor Registry (MCTR). Cancer mortality rates for Silver Bow County and Montana come from the Montana Office of Vital Statistics. The MCSEP study looked at incidence data for Silver Bow County compared to the State of Montana (excluding Silver Bow County) and to the United States. Mortality data for the county was compared only with the rest of Montana. All incidence and mortality rates in the study were age-adjusted to a standard reference population, correcting for the older population in the county.

The comparison of cancer mortality rates yields mixed results

Cancer incidence is a better measure of cancer rates than cancer mortality.

Cancer incidence rates, which are the number of newly diagnosed cancer cases in a population each year, can be used to assess cancer risk. Mortality rates, which are the number of deaths from cancer or disease in a population each year, depend both on risk of getting cancer and on the ability to get effective diagnosis and medical treatment.

Two communities can have similar incidence rates, but very different mortality rates. In fact, a community can have a relatively low incidence rate, but a relatively high mortality rate because access to medical services is limited. Therefore, incidence rates are the best way to compare the risk of getting a disease and mortality rates are a way to compare access to care and treatment after people become ill.

Overall cancer mortality rates were slightly elevated in Butte-Silver Bow County compared with the rest of Montana, although the difference was significant only from 1991 to 2000 (Figure 2). There were no significant differences between the county and the state in mortality rates for prostate cancer, female breast, and lung/bronchus cancer. In contrast, mortality due to colorectal cancer was consistently elevated (Figure 3). Because the incidence of colorectal cancer in Butte-Silver Bow County is the same as in the rest of Montana, higher colorectal mortality in the county may reflect poorer access to diagnosis and treatment for county residents (see text box discussing cancer incidence vs. mortality).

Figure 2. All-Cancer Mortality

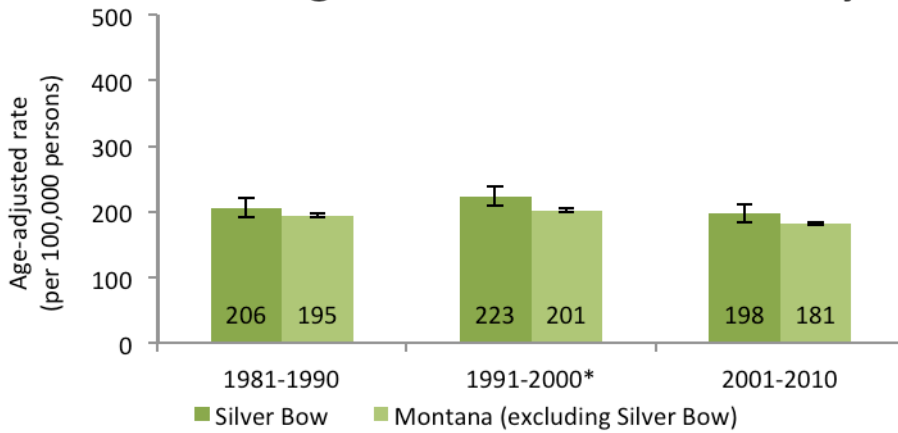
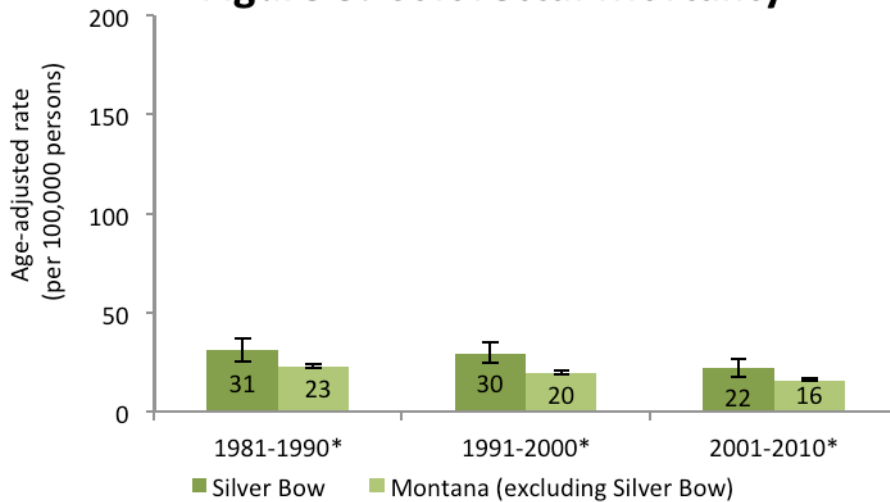


Figure 3. Colorectal Mortality



Cancers associated with environmental chemical exposures

Cancer is a common disease in Montana and the United States. Approximately, 5,000 Montanans are diagnosed with cancer each year. A person can develop cancer for many reasons: genetics, environmental exposures, and life style behaviors (such as cigarette smoking, drinking alcohol, etc.). Very few cancers are thought to be associated with environmental chemicals, making it difficult to detect any changes in cancer rates due to chemicals.

Among the most common types of cancer in Butte-Silver Bow County (prostate, female breast, colorectal and lung/bronchus) only lung cancer rates might be suspected of being affected by arsenic or other metals associated with historical mining practices. However, neither lung cancer incidence nor mortality is elevated in Butte-Silver Bow County. The MCSEP study also examined rates of rarer cancers (bladder, kidney and liver cancer) that might be associated with chemicals present in Butte, and neither incidence nor mortality rates were elevated for any of these cancers. These results cannot be viewed as conclusive because of the small number of cases reported (it should be noted that during a few time periods, there were too few cancers or deaths reported to calculate county rates).