

OBESITY AND CANCER RISK

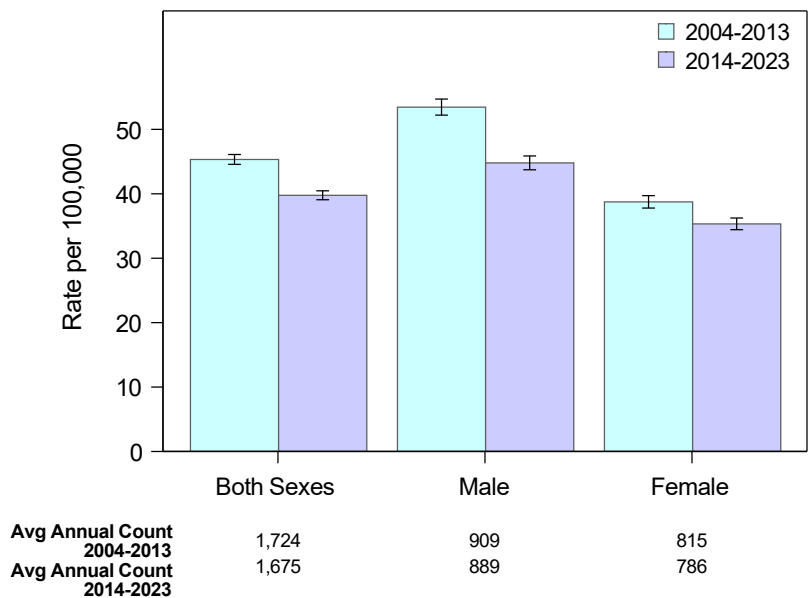
Obesity is a condition in which a person has an abnormally high and unhealthy proportion of body fat. According to the Kansas Behavioral Risk Factor Surveillance System, in 2020, about 35.3% of Kansas adults aged 18 years and older were obese compared with only 21.6% in 2001. Obesity has been noted for its association with cancer of the following anatomic sites: esophagus, breast (postmenopausal), colon and rectum, endometrium, ovary, gall bladder, kidney, pancreas, thyroid, gastric cardia, liver, meningioma and multiple myeloma. In an obese person, there is an energy imbalance due to an excess of nutrients being consumed. The result of this imbalance is oxidative stress and abnormalities of fatty acid metabolism which results in DNA damage, cell division and delayed cell death. Also, fat tissue, which produces certain hormones, growth factors, and pro-inflammatory factors, could be fueling the growth of tumors. Although obesity is linked to an overall increase in the incidence of cancer, it does not have the same effect on every type of cancer. The mechanisms leading to cancers resulting from obesity and/or being overweight also vary by cancer type. Some mechanisms are well understood while others remain unclear. In this report, incidence data from 2004-2023 for Kansas residents are presented for esophagus cancer, colorectal cancer, pancreas cancer, postmenopausal female breast cancer, uterine cancer, kidney cancer, and thyroid cancer. Postmenopausal female breast cancer was approximated by limiting analysis to women aged ≥ 50 years. Because most cancers (95%) of the corpus uterus are diagnosed in the endometrium, uterine cancer rates were used to describe endometrial cancer.

REFERENCES

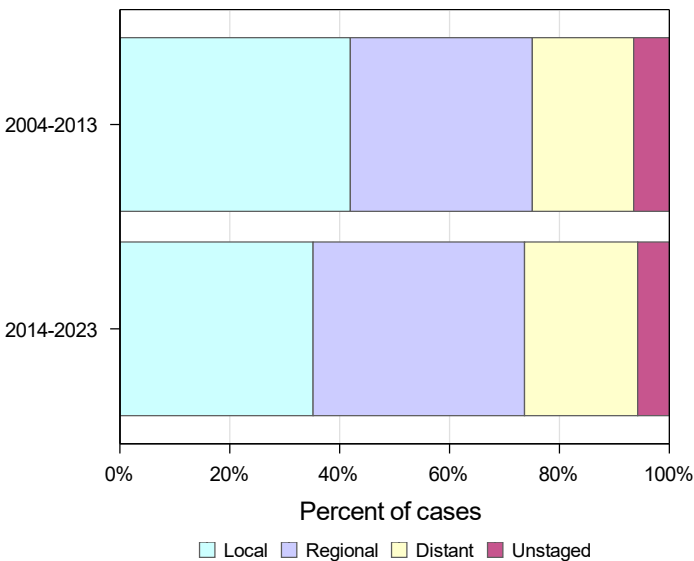
- National Cancer Institute. Obesity and Cancer Risk Fact Sheet. Available from <http://www.cancer.gov/cancertopics/factsheet/Risk/obesity>
- Kansas Behavioral Risk Factor Surveillance System, <https://www.kdhe.ks.gov/1734/Kansas-Behavioral-Risk-Factor-Surveillan>
- Colditz GA, Peterson LL. Obesity and Cancer: Evidence, Impact, and Future Directions. Clin Chem. 2018 Jan;64(1):154-162. doi: 10.1373/clinchem.2017.277376. Epub 2017 Oct 16. PMID: 29038151.

Invasive Colorectal Cancer in Kansas, 2004-2023

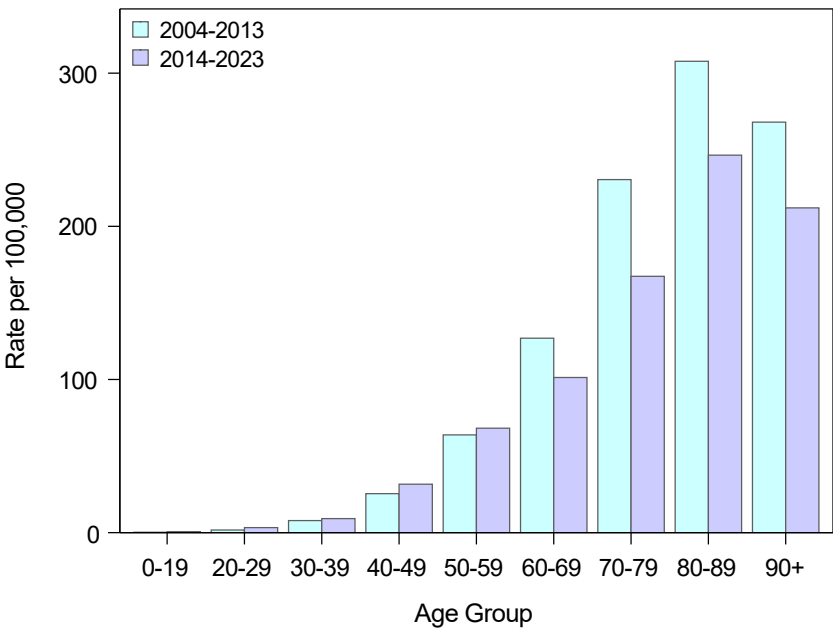
Age-Adjusted Incidence Rates by Sex



Stage at Diagnosis



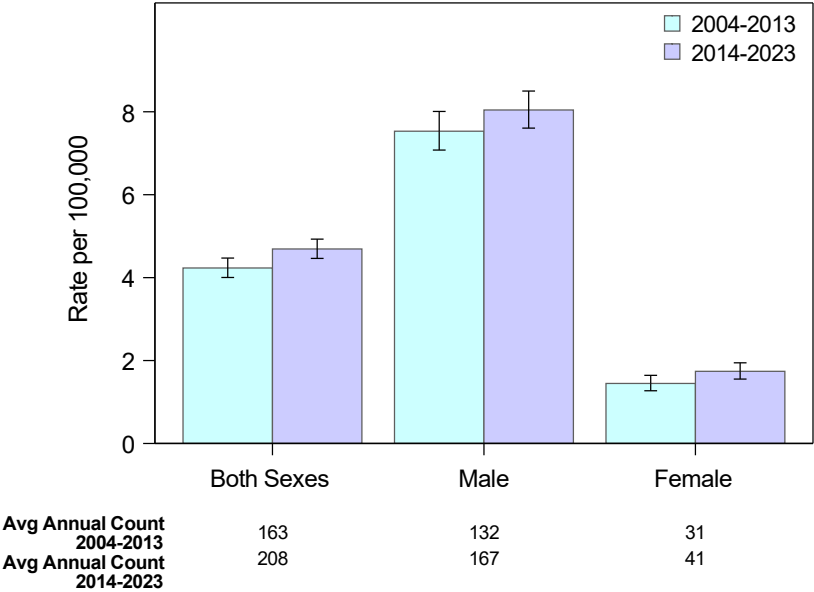
Age-Specific Incidence Rates



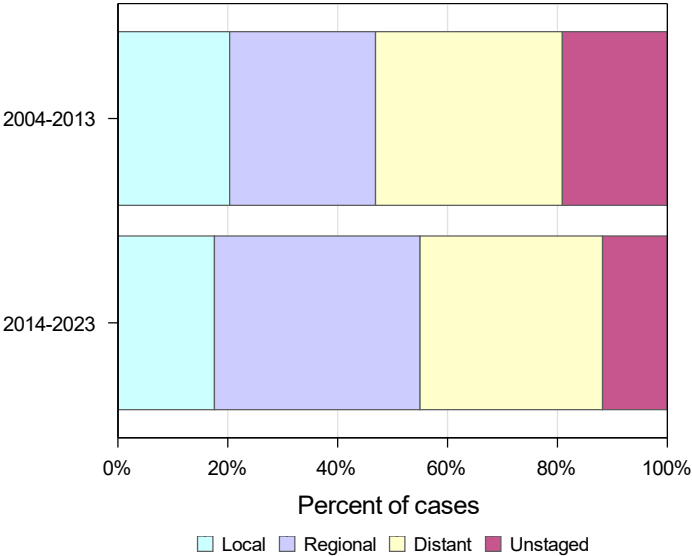
Rates are per 100,000 population. Age-adjusted rates calculated using the 2000 U.S. Standard Population.
Suggested citation: Kansas Cancer Registry, Obesity-Associated Cancers, 2004-2023

Invasive Esophagus Cancer in Kansas, 2004-2023

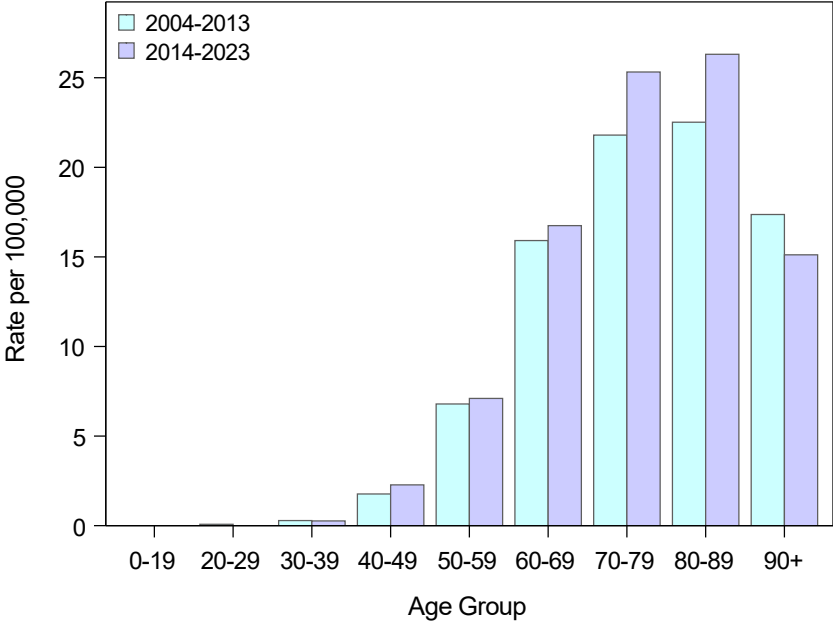
Age-Adjusted Incidence Rates by Sex



Stage at Diagnosis



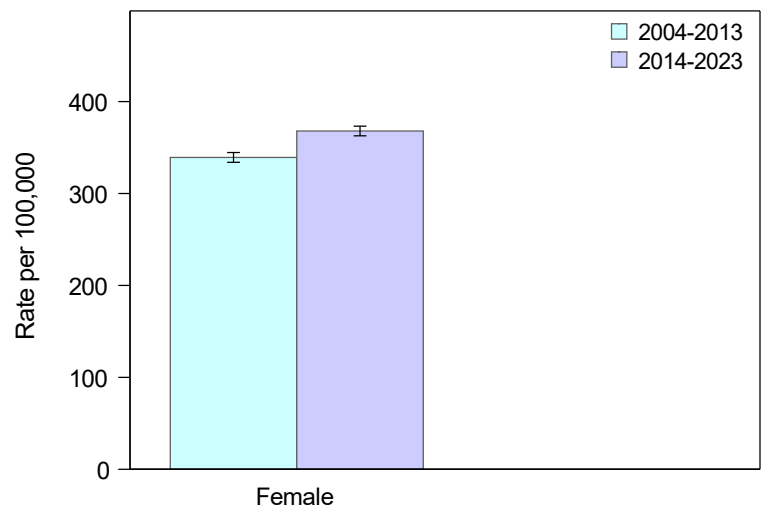
Age-Specific Incidence Rates



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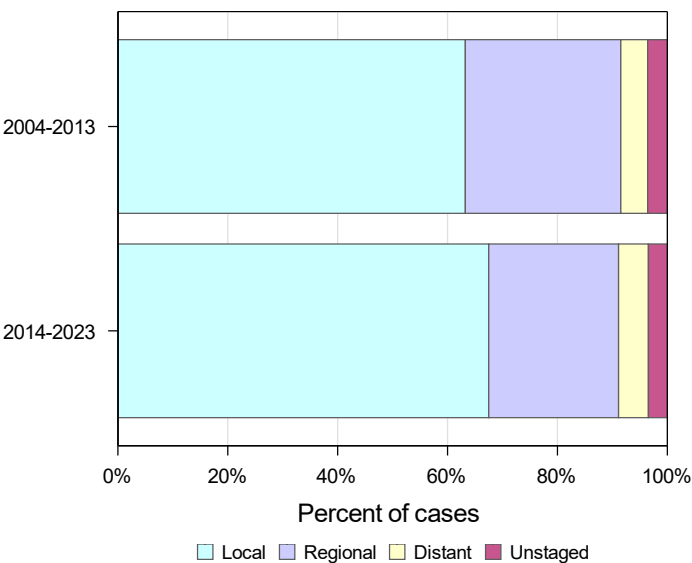
Invasive Female Breast Cancer Age 50 Yrs and Up in Kansas, 2004-2023

Age-Adjusted Incidence Rates

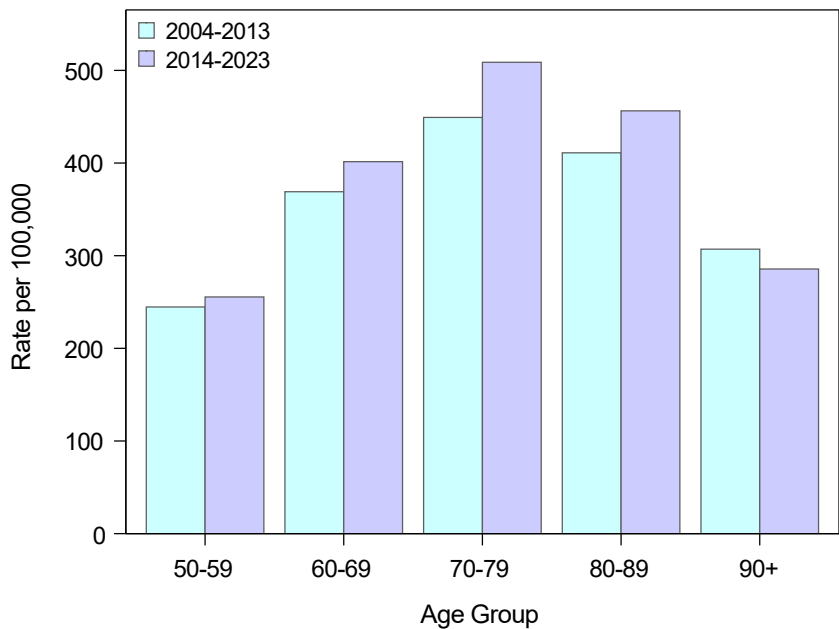


Avg Annual Count
2004-2013 1,987
Avg Annual Count
2014-2023 2,450

Stage at Diagnosis



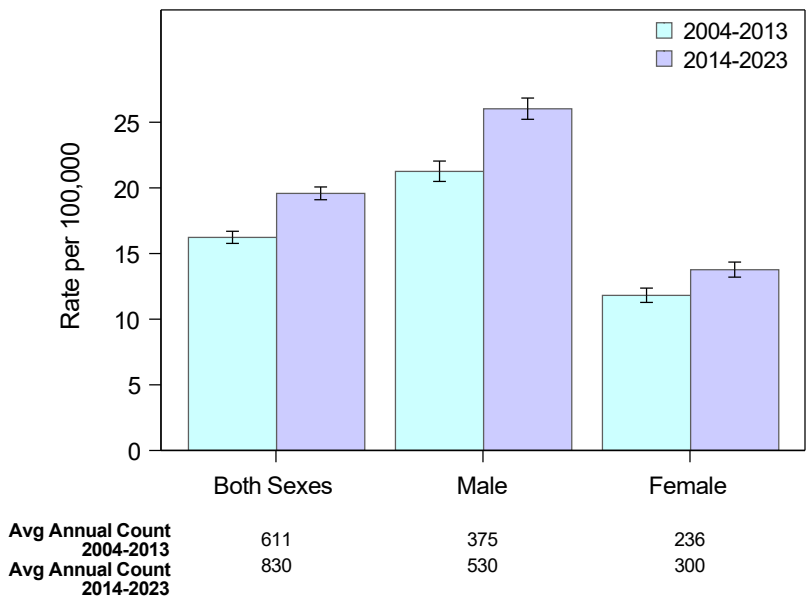
Age-Specific Incidence Rates



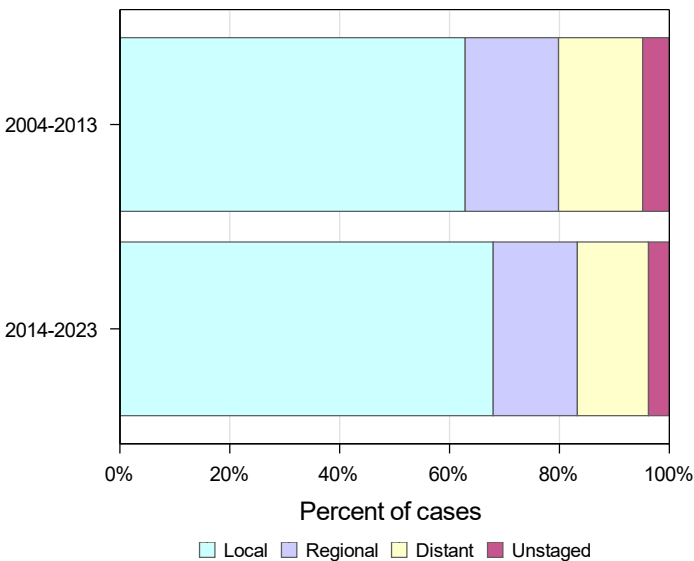
Rates are per 100,000 population. Age-adjusted rates calculated using the 2000 U.S. Standard Population.
Suggested citation: Kansas Cancer Registry, Obesity-Associated Cancers, 2004-2023

Invasive Kidney and Renal Pelvis Cancer in Kansas, 2004-2023

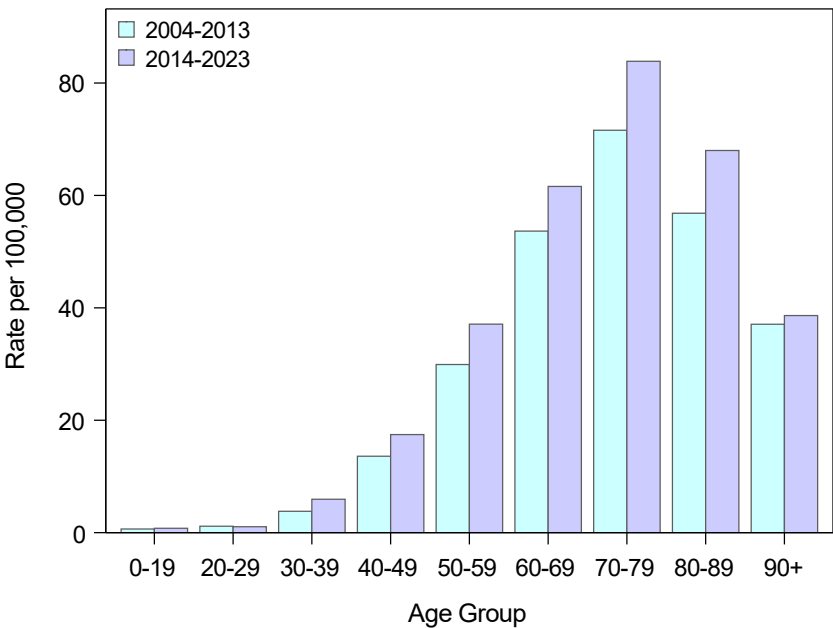
Age-Adjusted Incidence Rates by Sex



Stage at Diagnosis



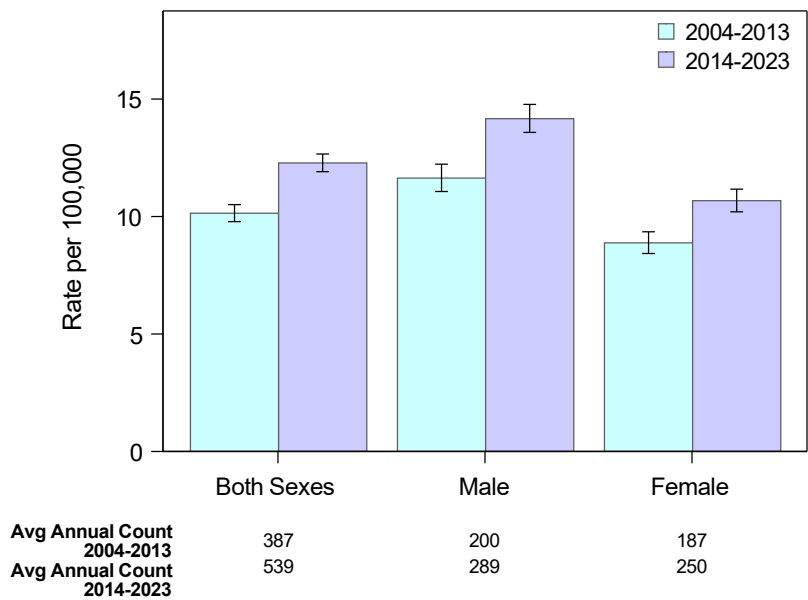
Age-Specific Incidence Rates



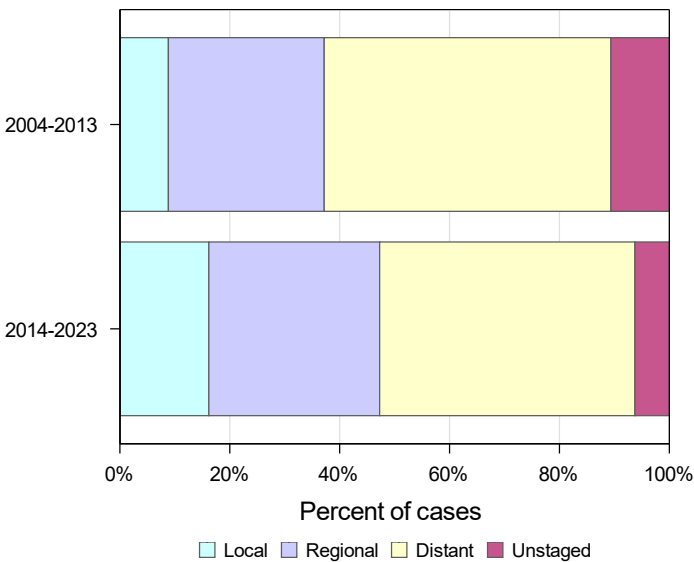
Rates are per 100,000 population. Age-adjusted rates calculated using the 2000 U.S. Standard Population.
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Invasive Pancreas Cancer in Kansas, 2004-2023

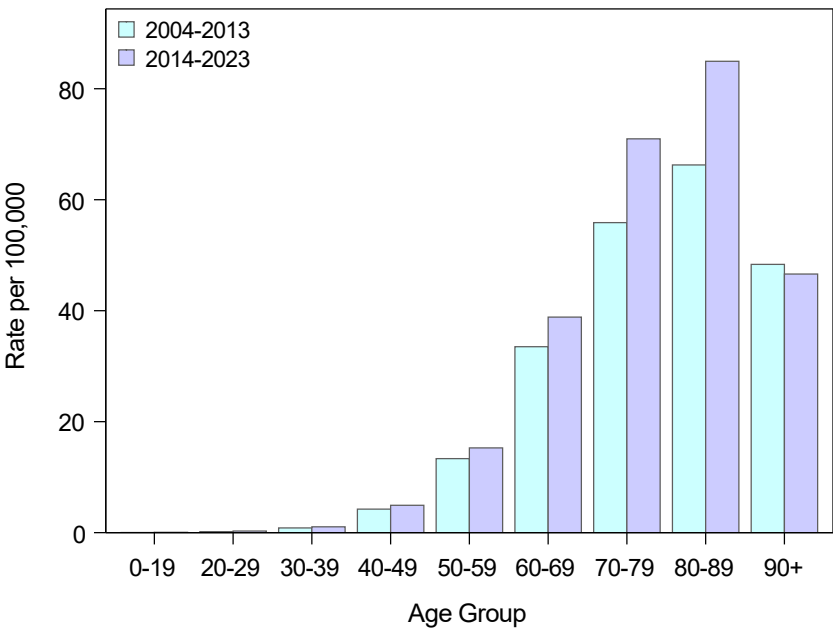
Age-Adjusted Incidence Rates by Sex



Stage at Diagnosis



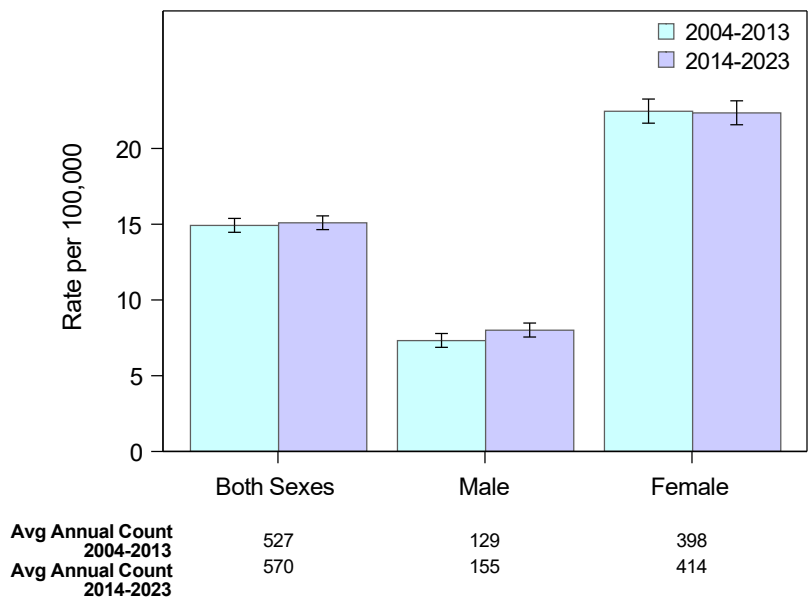
Age-Specific Incidence Rates



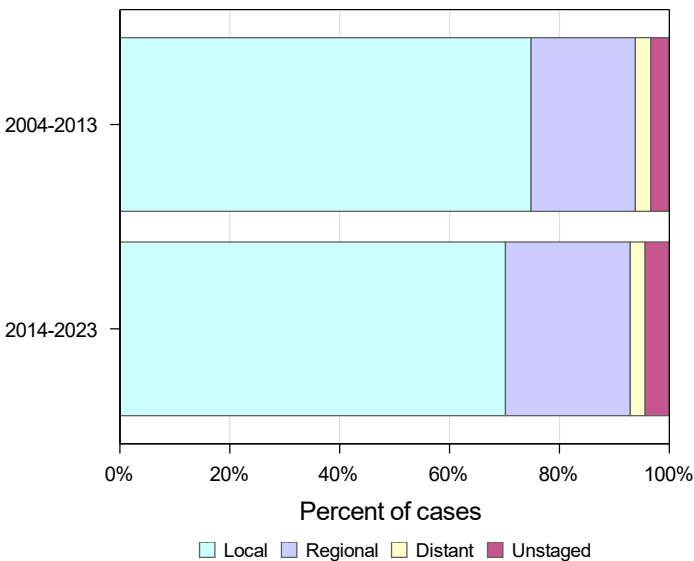
Rates are per 100,000 population. Age-adjusted rates calculated using the 2000 U.S. Standard Population.
Suggested citation: Kansas Cancer Registry, Obesity-Associated Cancers, 2004-2023

Invasive Thyroid Cancer in Kansas, 2004-2023

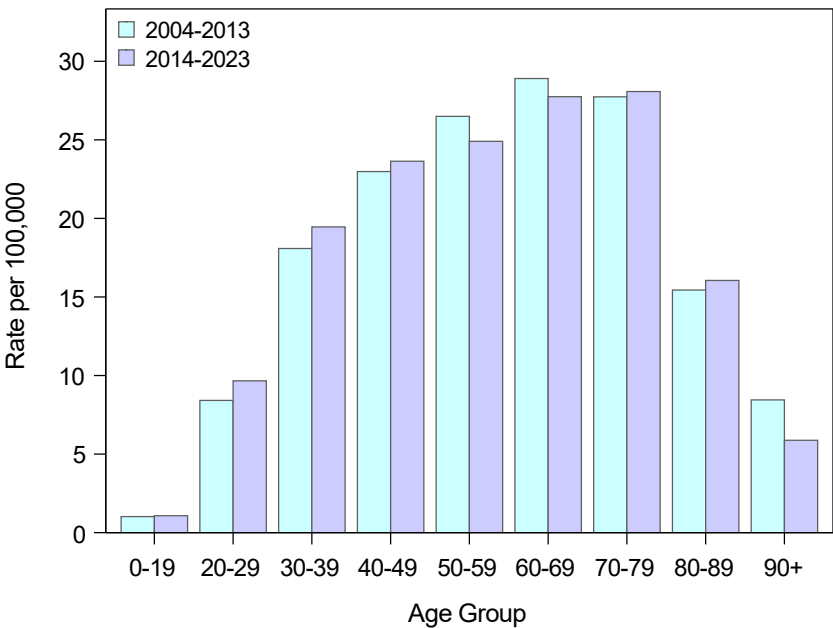
Age-Adjusted Incidence Rates by Sex



Stage at Diagnosis



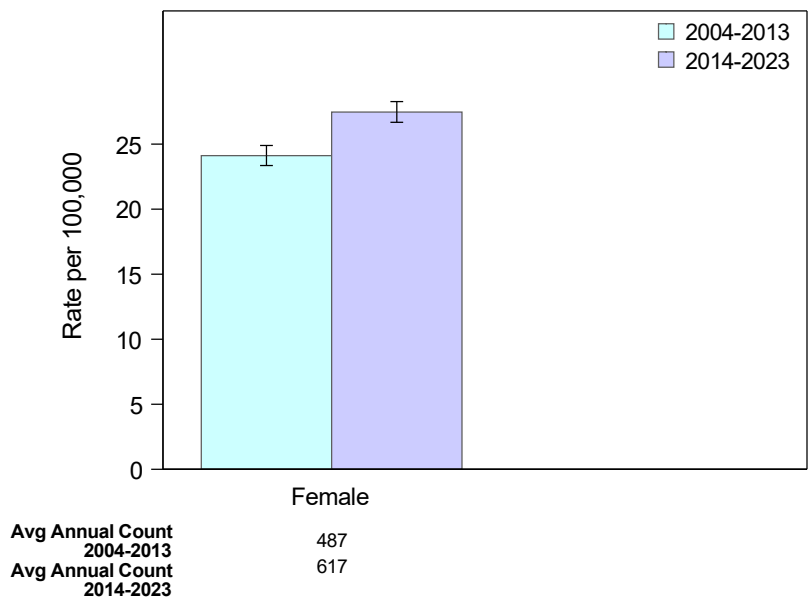
Age-Specific Incidence Rates



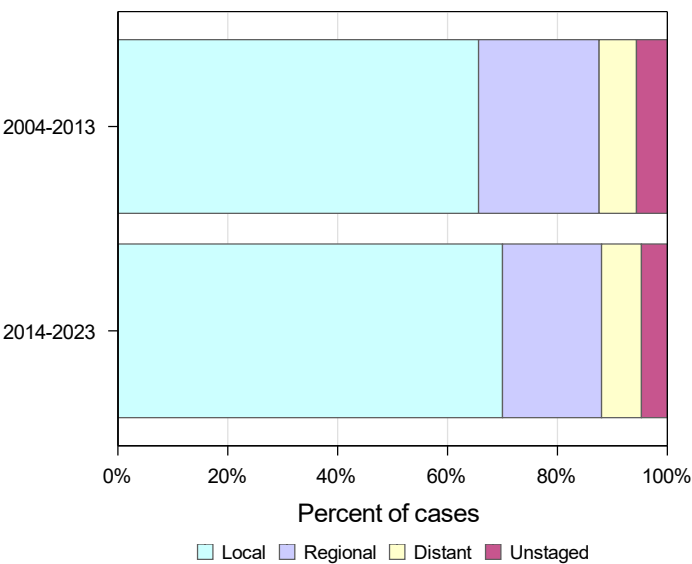
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Invasive Corpus Uteri (incl NOS) Cancer in Kansas, 2004-2023

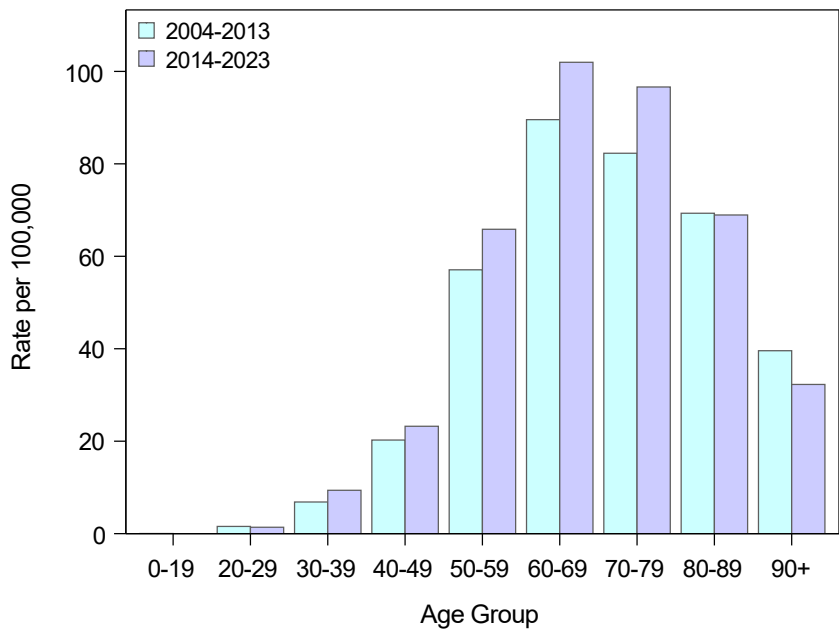
Age-Adjusted Incidence Rates



Stage at Diagnosis



Age-Specific Incidence Rates



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