

OBESITY AND CANCER RISK

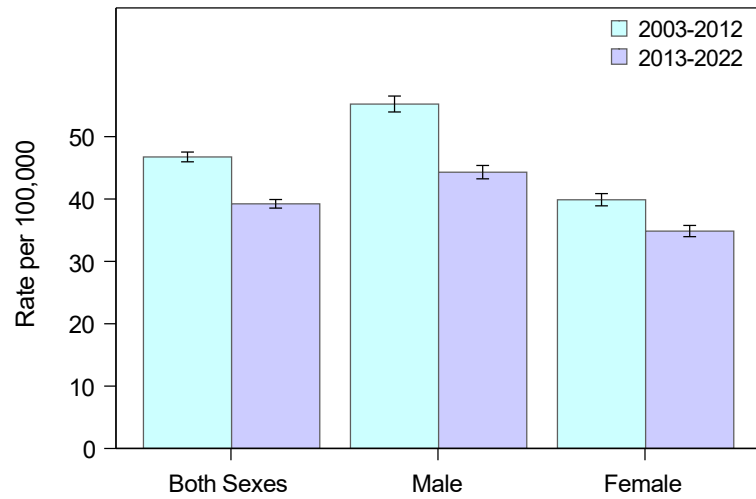
Obesity is a condition in which a person has an abnormally high and unhealthy proportion of body fat. According to the Kansas Behavioral Risk Factor Surveillance System, in 2020, about 35.3% of Kansas adults aged 18 years and older were obese compared with only 21.6% in 2001. Obesity has been noted for 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 2003-2022 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.

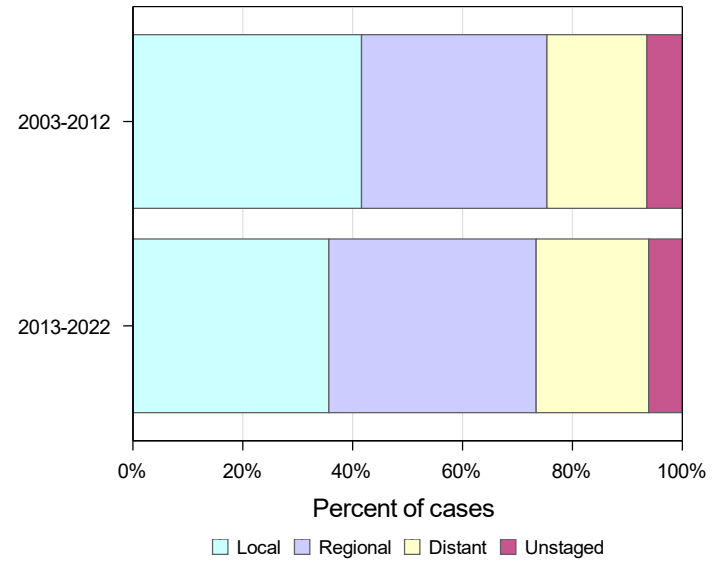
Invasive Colorectal Cancer in Kansas, 2003-2022

Age-Adjusted Incidence Rates by Sex

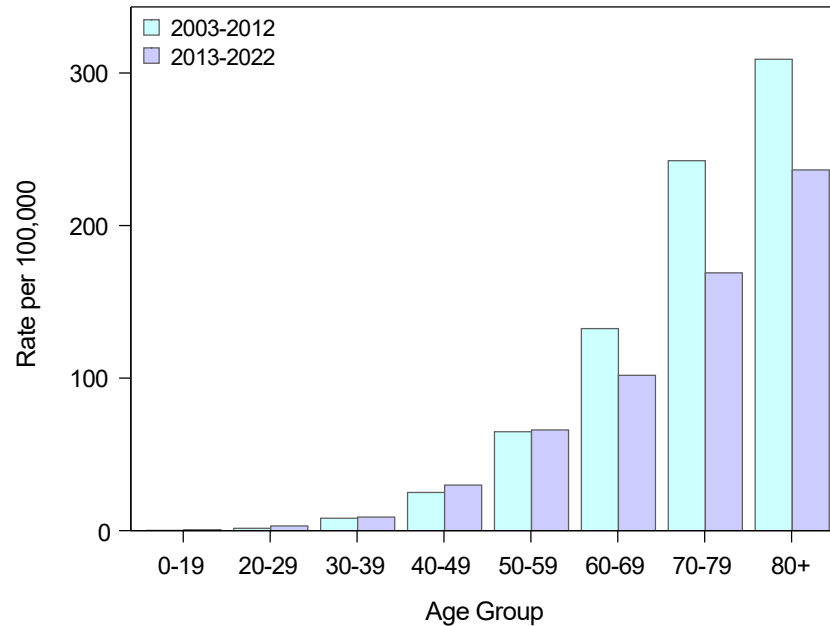


	Both Sexes	Male	Female
Avg Annual Count 2003-2012	1,756	923	834
Avg Annual Count 2013-2022	1,649	872	777

Stage at Diagnosis



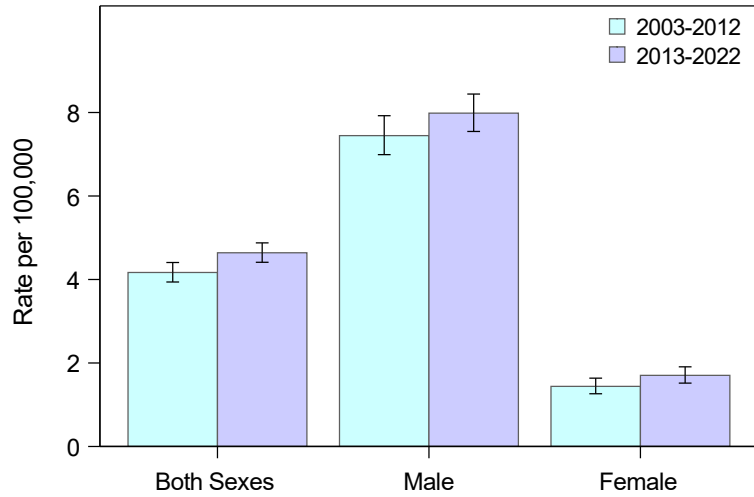
Age-Specific Incidence Rates



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, 2003-2022

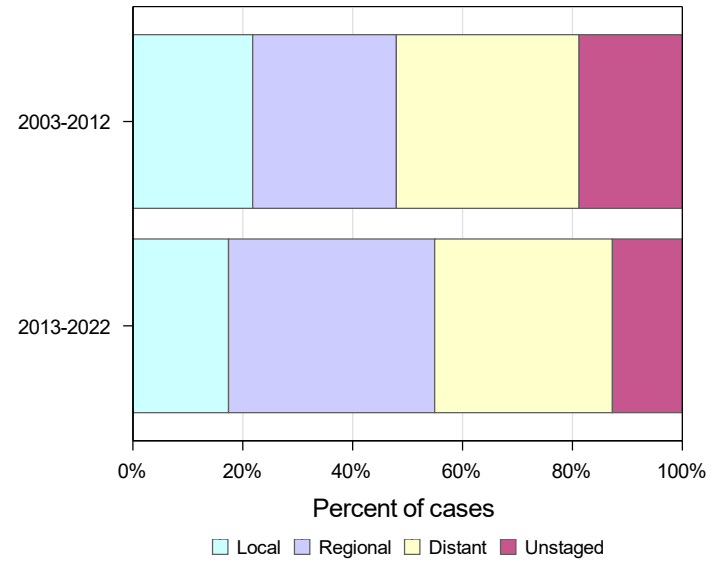
Invasive Esophagus Cancer in Kansas, 2003-2022

Age-Adjusted Incidence Rates by Sex

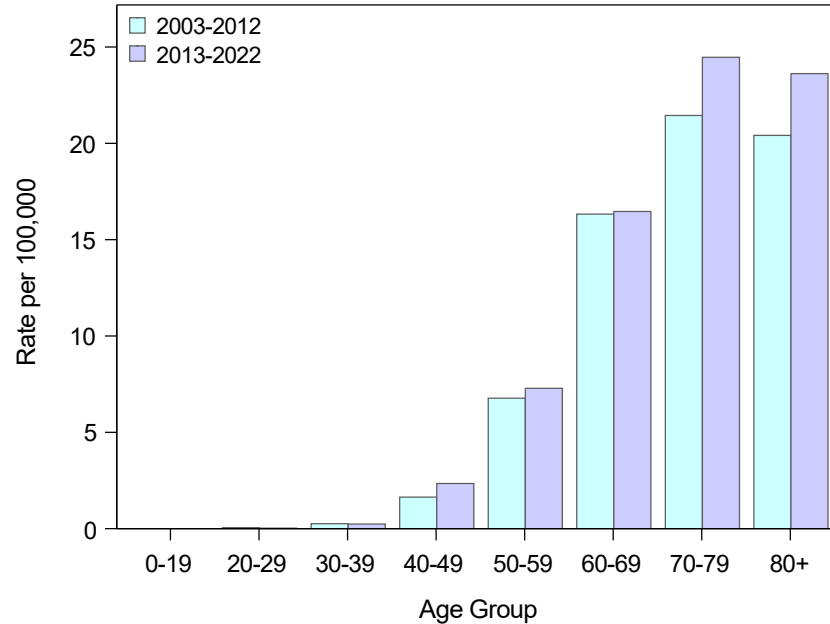


	Both Sexes	Male	Female
Avg Annual Count 2003-2012	158	128	31
Avg Annual Count 2013-2022	203	163	40

Stage at Diagnosis



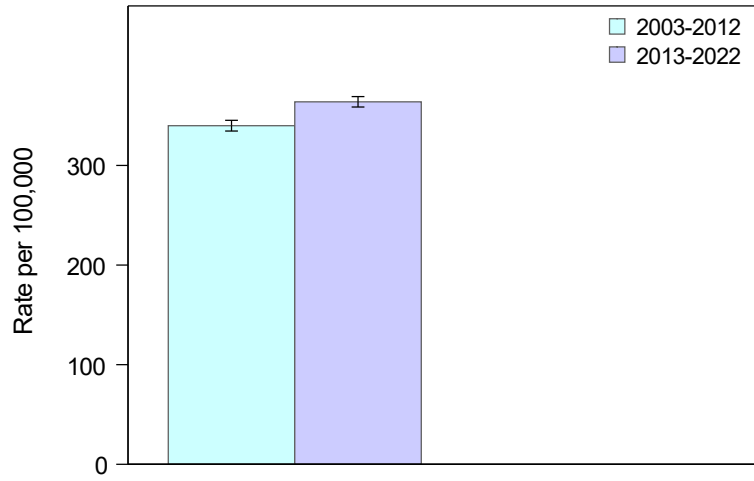
Age-Specific Incidence Rates



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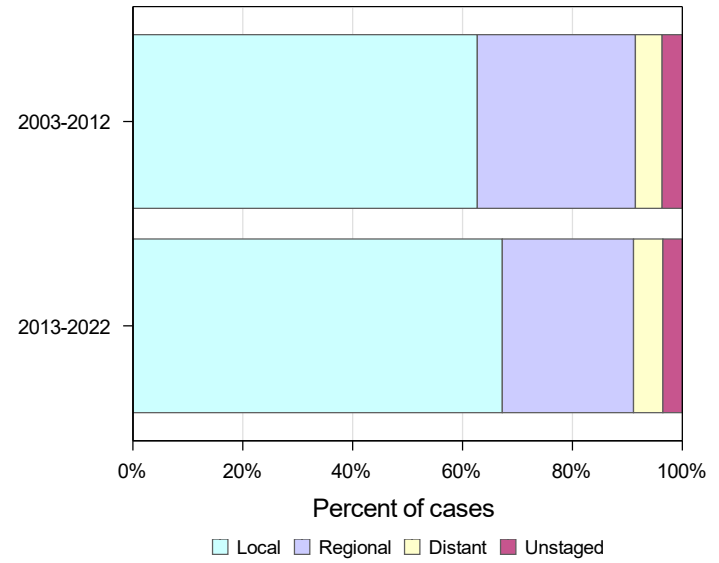
Invasive Female Breast Cancer Age 50 Yrs and Up in Kansas, 2003-2022

Age-Adjusted Incidence Rates

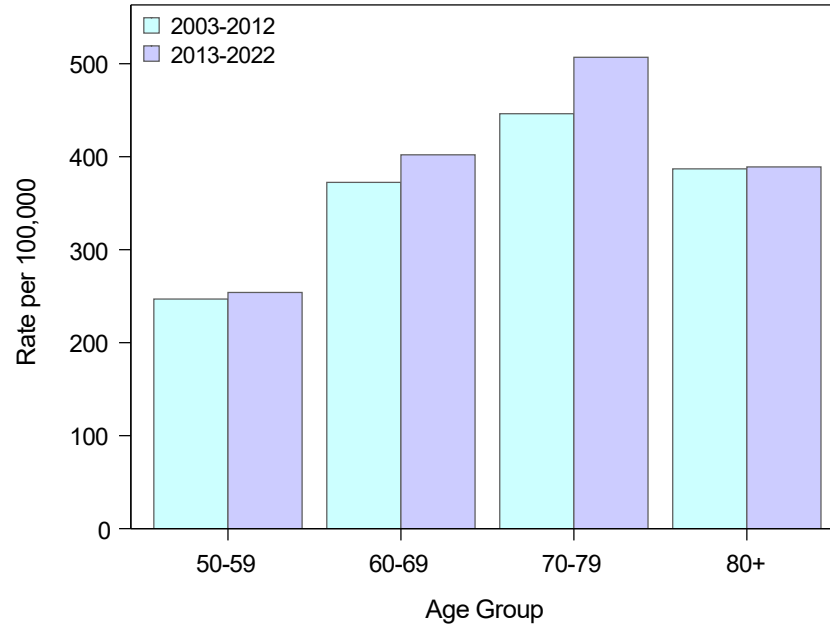


Avg Annual Count
2003-2012 1,961
Avg Annual Count
2013-2022 2,406

Stage at Diagnosis



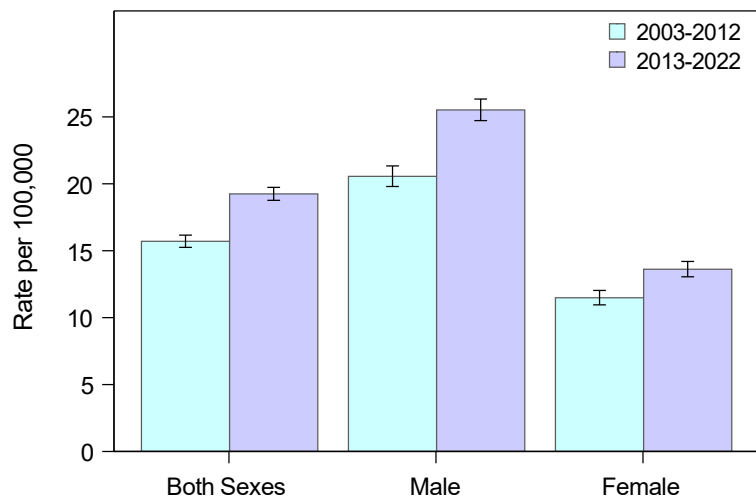
Age-Specific Incidence Rates



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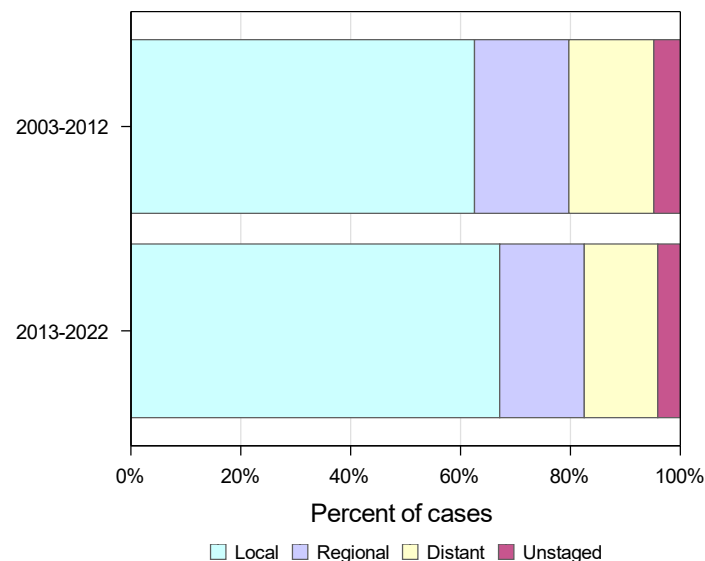
Invasive Kidney and Renal Pelvis Cancer in Kansas, 2003-2022

Age-Adjusted Incidence Rates by Sex

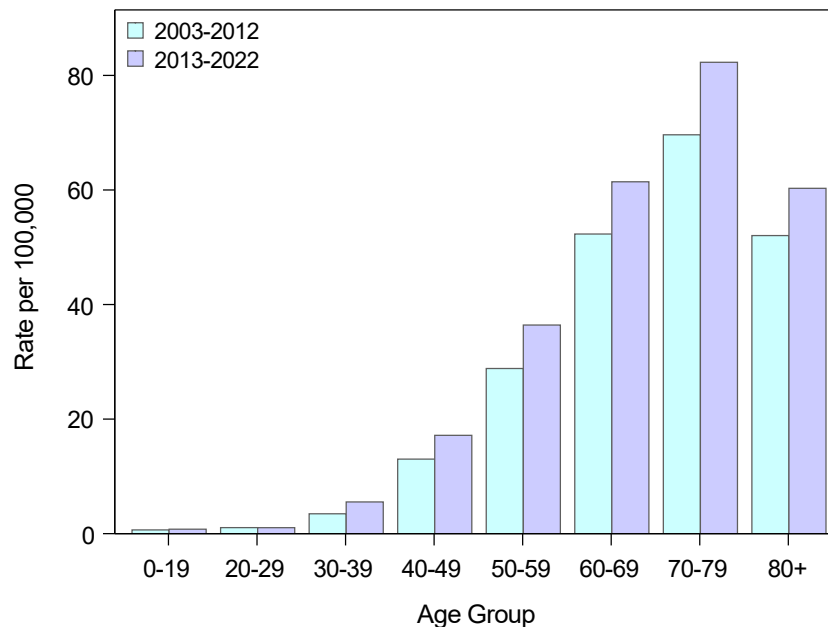


	Both Sexes	Male	Female
Avg Annual Count 2003-2012	583	356	227
Avg Annual Count 2013-2022	810	515	295

Stage at Diagnosis



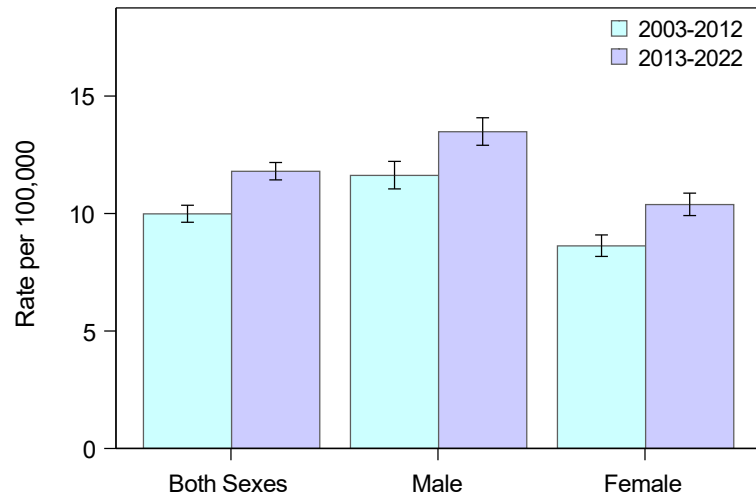
Age-Specific Incidence Rates



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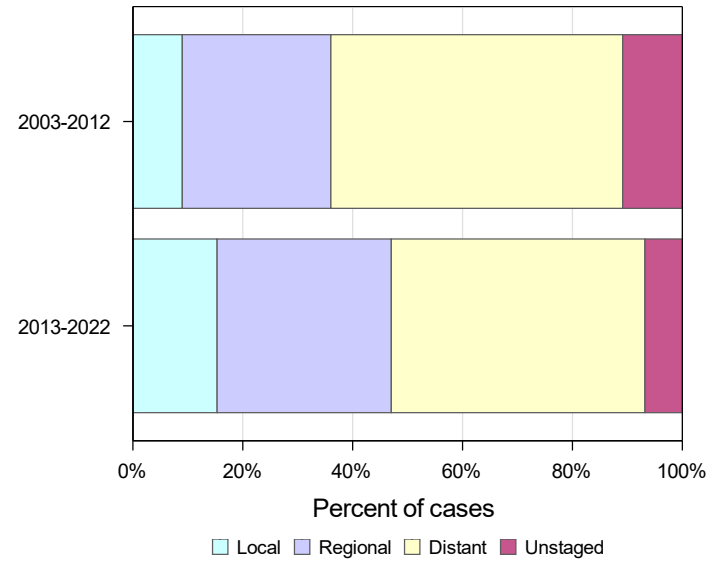
Invasive Pancreas Cancer in Kansas, 2003-2022

Age-Adjusted Incidence Rates by Sex

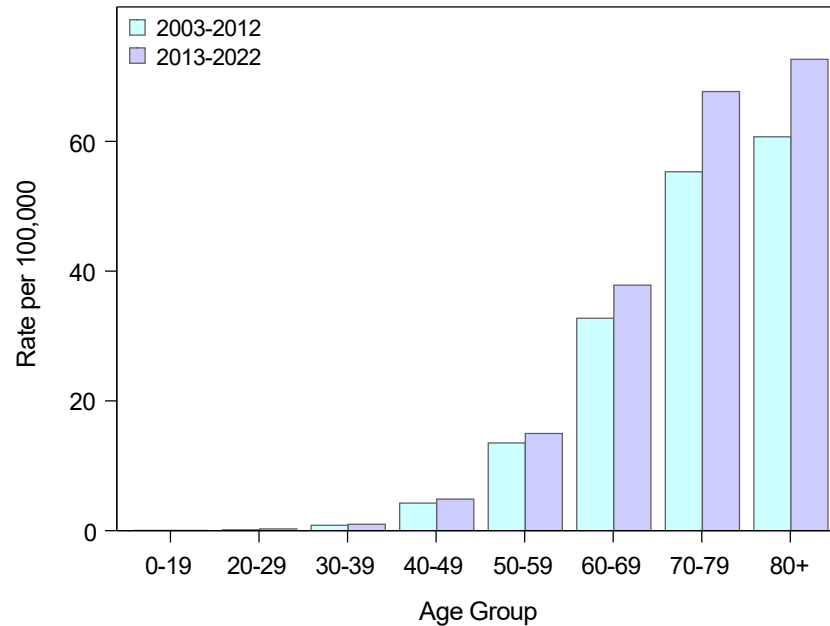


	Both Sexes	Male	Female
Avg Annual Count 2003-2012	375	196	179
Avg Annual Count 2013-2022	514	271	243

Stage at Diagnosis



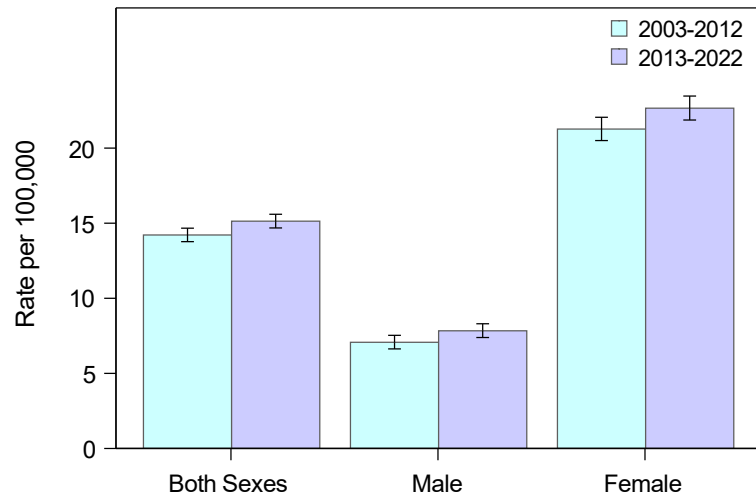
Age-Specific Incidence Rates



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, 2003-2022

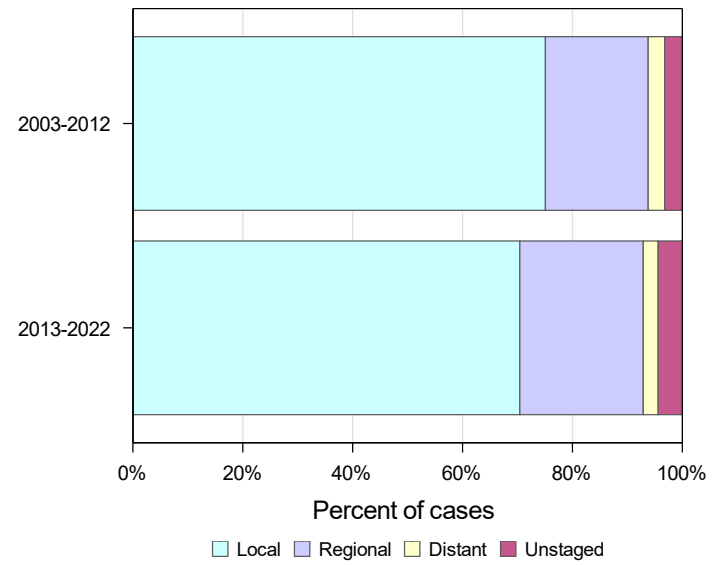
Invasive Thyroid Cancer in Kansas, 2003-2022

Age-Adjusted Incidence Rates by Sex

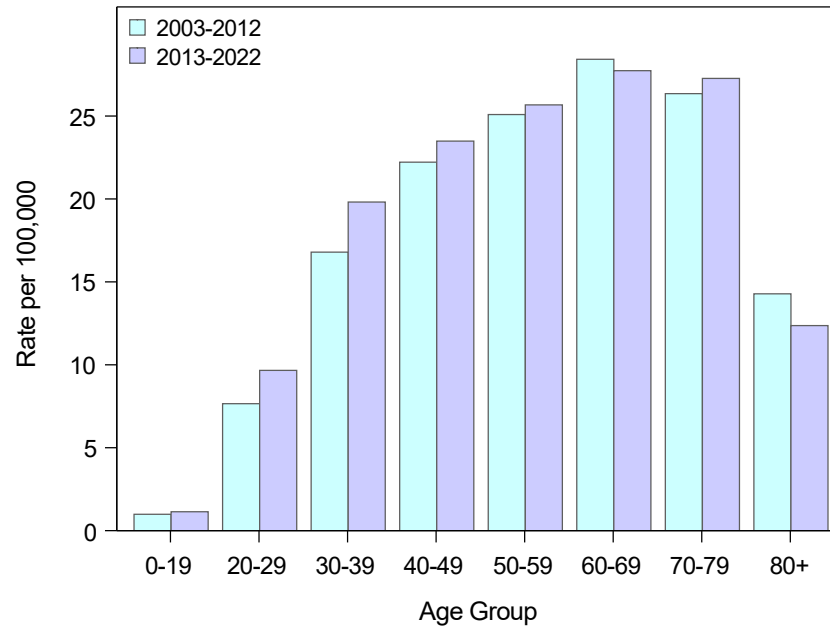


	Both Sexes	Male	Female
Avg Annual Count 2003-2012	499	123	376
Avg Annual Count 2013-2022	568	151	417

Stage at Diagnosis



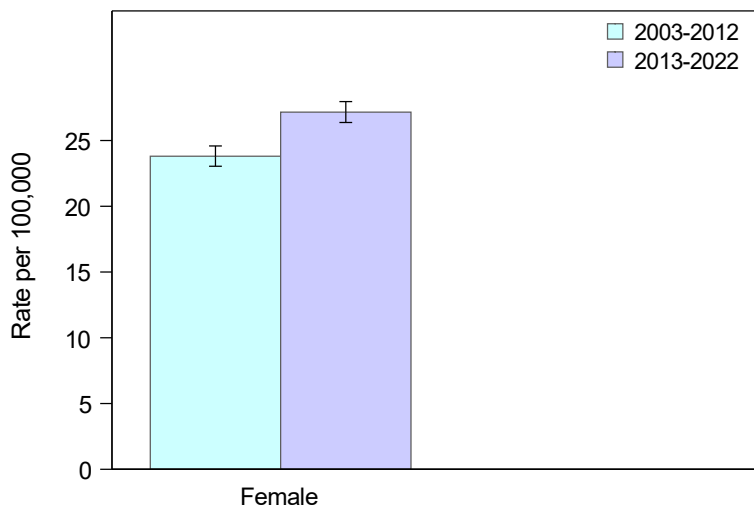
Age-Specific Incidence Rates



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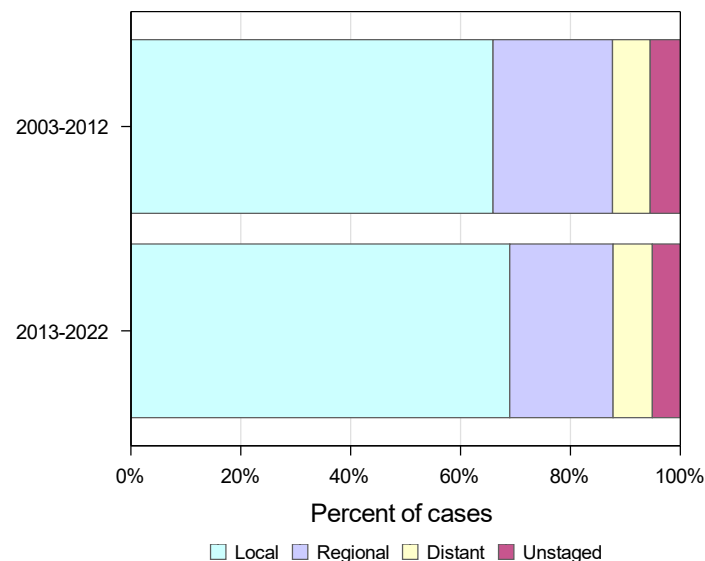
Invasive Corpus Uteri (incl NOS) Cancer in Kansas, 2003-2022

Age-Adjusted Incidence Rates

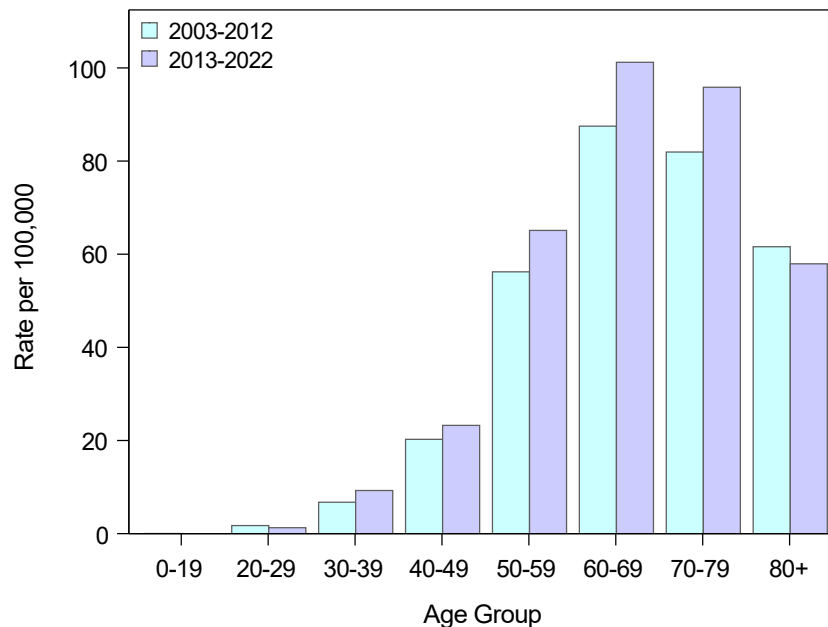


Avg Annual Count
 2003-2012 474
 2013-2022 606

Stage at Diagnosis



Age-Specific Incidence Rates



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