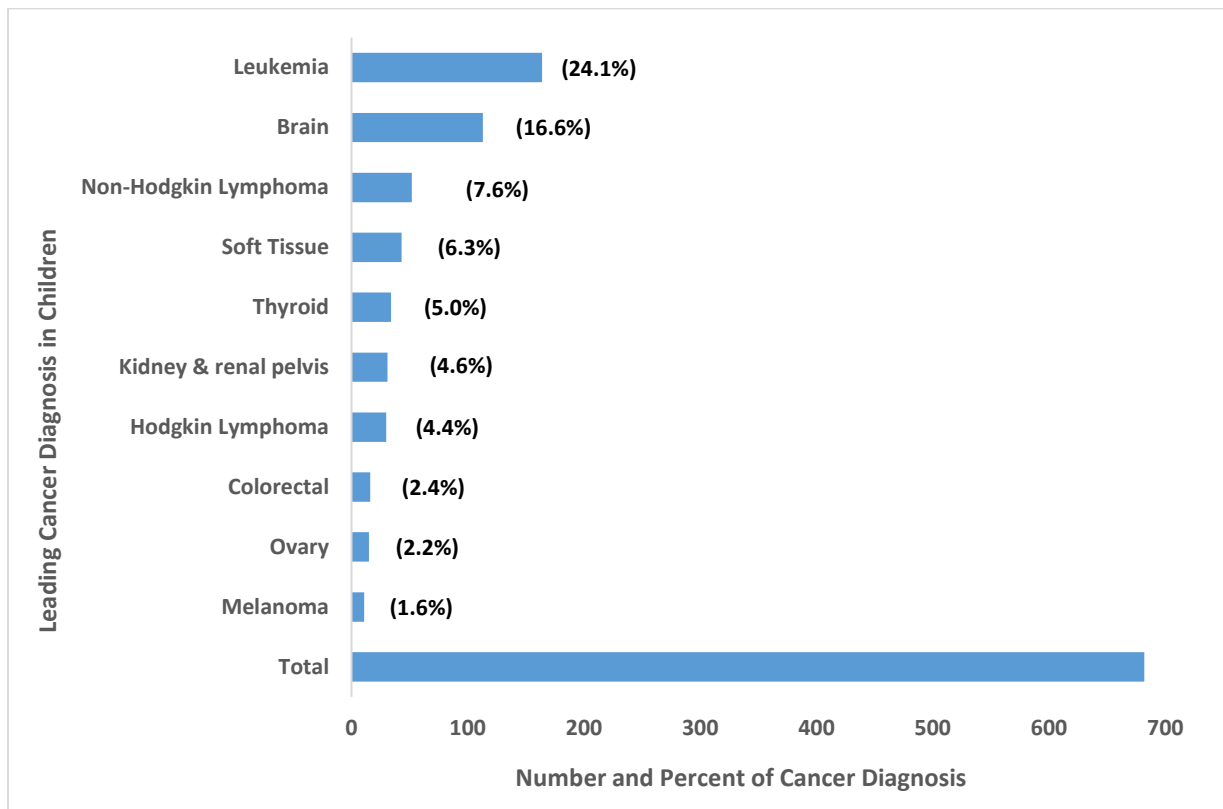


Chapter 9: Overall Cancer Incidence and Mortality among Kansas Children

Cancer incidence in Kansas children

Cancer types among children are different from those among adults. The more common adult cancers of the prostate, breast, lung, colorectum, uterus, and ovary all arise from cells that line cavities or glands. In contrast, childhood cancers are almost entirely leukemias, lymphomas, sarcomas, and cancers of the central nervous system, primarily neoplasms that arise from non-ectodermal tissue such as bone marrow, lymph glands, bone, and muscle.¹⁴ The most commonly diagnosed cancers among Kansas children less than 18 years during the time period 2013-2017 were leukemia (24.1%), brain (16.6%), and thyroid (7.6%) cancer (Figure 9-1).

Figure 9-1. Top 10 cancer diagnoses among children less than 18 years, Kansas 2013-2017



Source: 2013-2017 Kansas Cancer Registry. See Technical Appendix for details on how leading cancer diagnoses were defined.

¹⁴ ACS. 2000. Cancer facts and figures, 2000. Atlanta, GA:American Cancer Society.

The age-adjusted incidence rates for overall cancer among children less than 18 years during the period 2008-2017 were significantly higher than the rate during the period 1998-2002 (Table 9-1). The most recent data for Kansas shows a rate of 18.9 cases per 100,000 population (95% confidence interval (CI): 17.5 to 20.3). In the US, the most recent data (2013-2017) shows a rate of 18.9 cases per 100,000 population (95% CI: 18.8 to 19.0) among children 0-19 years.

Table 9-1. Five-Year Trend in Age-adjusted Overall Cancer Incidence Rates among Children less than 18 years old, 1998-2017 Kansas

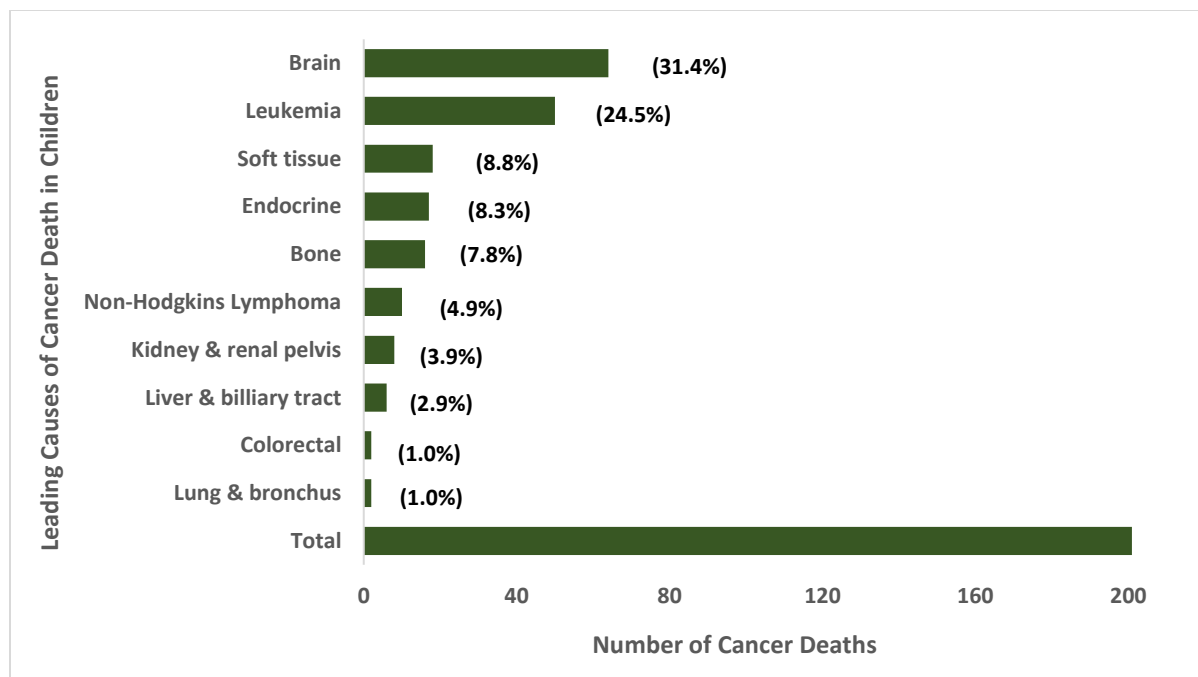
| 5-Year Interval | Age-adjusted Rate | Lower CL | Upper CL | Standard Error |
|-----------------|-------------------|----------|----------|----------------|
| 1998-2002 | 14.9 | 13.7 | 16.2 | 0.6 |
| 2003-2007 | 16.4 | 15.1 | 17.8 | 0.7 |
| 2008-2012 | 17.8 | 16.5 | 19.2 | 0.7 |
| 2013-2017 | 18.9 | 17.5 | 20.3 | 0.7 |

Source: 2013-2017 Kansas Cancer Registry. See Technical Appendix for details on how leading cancer diagnoses were defined.

Cancer deaths in Kansas children

Similar to cancer incidence among children, the leading causes of deaths due to cancer among children are different from adults. Although the leading causes of deaths due to cancer among adults are due to lung and bronchus, colorectal, female breast, and prostate cancers, the leading causes of deaths due to cancer among children are due to brain, leukemia, and Non-Hodgkin’s lymphoma.¹⁵ Brain cancer (31.4%) and leukemia (24.5%) constitute more than half of cancer-related deaths among Kansas children during the period 2014-2018 (Figure 9-2).

Figure 9-2. Top 10 causes of cancer death among children less than 18 years, Kansas 2014-2018



Source: 2014-2018 Kansas Vital Statistics, Bureau of Epidemiology and Public Health Informatics, KDHE. See Technical Appendix for details on how leading causes of cancer death were defined.

¹⁵ Siegel RL, Miller KD, Jemal A. 2018. Cancer statistics, 2018. CA Cancer J Clin 68:7-30.

The age-adjusted mortality rate for all cancers among children less than 18 years old has not significantly changed between 1999 and 2018 (Table 9-2). The most recent data for Kansas shows a rate of 2.5 deaths per 100,000 population (95% CI: 2.0 to 3.0). In the US, the most recent data (2013-2017) shows a rate of 2.3 deaths per 100,000 population (95% CI: 2.2 to 2.3) among children 0-19 years.

Table 9-2. Five-Year Trend in Age-Adjusted Overall Cancer Mortality Rates among Children less than 18 years old, 1999-2018 Kansas

| 5-Year Interval | Age-adjusted Rate | Lower CL | Upper CL | Standard Error |
|-----------------|-------------------|----------|----------|----------------|
| 1999-2003 | 2.0 | 1.6 | 2.5 | 0.2 |
| 2004-2008 | 2.4 | 1.9 | 2.9 | 0.3 |
| 2009-2013 | 2.6 | 2.1 | 3.2 | 0.3 |
| 2014-2018 | 2.5 | 2.0 | 3.0 | 0.3 |

Source: 2014-2018 Kansas Vital Statistics, Bureau of Epidemiology and Public Health Informatics, KDHE. See Technical Appendix for details on how leading causes of cancer death were defined.