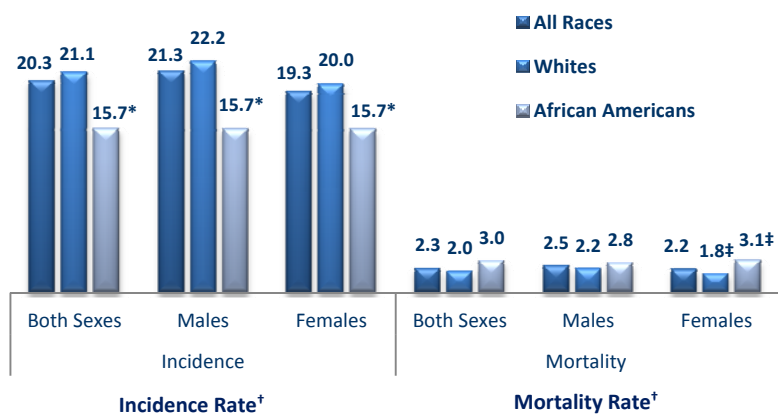




CHILDHOOD CANCER is very rare, representing less than 1 percent of all new cancer diagnoses.¹ According to the American Cancer Society, approximately one in 285 children in the United States will be diagnosed with cancer before the age of 20. Although uncommon, cancer is the second leading cause of death among children ages 1-14.¹ There were 341 cases of cancer and 34 cancer-related deaths among Indiana children ages 0-19 during 2014. In general, childhood cancer trends in Indiana are similar to what is seen throughout the United States. For most cases of childhood cancer, the cause is unknown.²

Figure 1. Incidence and Mortality Rates among Children Ages 0-19 Years by Sex and Race — Indiana, 2010-2014



*Rate is significantly lower ($P < .05$) among African Americans than among whites

†Age-specific rate per 100,000 children

‡Rate is unstable as counts are <20.

Source: Indiana State Cancer Registry

CHILDHOOD CANCER incidence rates for the most recent comparable U.S. and Indiana data, show that Indiana rates for ages 0-19 (17.6 cases per 100,000 children) were similar to the national rates (18.1 cases per 100,000 children) during 2008-2012.³ During the same period, the Indiana and U.S. childhood cancer mortality rates were 2.3 and 2.4 deaths respectively per 100,000 children.³

Figure 2. Burden of Cancer among Children Ages 0-19 Years — Indiana, 2010-2014

	Average number of cases per year (2010–2014)	Rate per 100,000 children (2010–2014)	Number of cases (2014)	Rate per 100,000 children (2014)
Indiana Incidence	362	20.3	341	19.3
Indiana Deaths	42	2.3	34	1.9

*Age-specific

Source: Indiana State Cancer Registry

Who Gets Childhood Cancer Most Often?

According to the *Indiana Cancer Facts and Figures 2015* report:

- White children. During 2010-2014, in Indiana, white children had a significantly higher incidence rate than African American children (21.1 versus 15.7 cases per 100,000 children). These differences in rates between races are also seen nationally. The reasons for these differences are not known.
- Children born with certain genetic disorders or familial syndromes. Children with a familial neoplastic syndrome, inherited immunodeficiency, certain genetic syndromes, and chromosomal abnormalities are at a greater risk for developing various types of childhood cancer.
- Boys born with undescended testes. They are at greater risk for testicular cancer.
- Additional risk factors include:
 - Radiation exposure, especially prenatally (includes x-rays).
 - Tanning bed or sun exposure increases the risk of melanoma, one of the more common cancers among teenagers.
 - Prior chemotherapy with an alkylating agent or epipodophylotoxin.
 - Infection with the Epstein-Barr virus is associated with certain types of lymphoma.
 - Insecticide exposure, especially prenatally, is associated with leukemia.

Using the International Classification of Childhood Cancer system, the most common cancer types diagnosed among Indiana children ages 0-14 were leukemias and brain tumors. In children ages 15-19, the most common cancer types were lymphomas and a group of cancers that include epithelial cancers (cancers that develop from the cellular covering of internal and external body surfaces or related tissues in the skin, hollow viscera and other organs) and melanoma.



Common Signs and Symptoms of Childhood Cancer

Childhood cancer is rare, but your child should be examined by a health care provider if you notice any of these potential cancer-related signs and symptoms:⁴

- ❑ Unusual mass or swelling
- ❑ Prolonged, unexplained fever or illness
- ❑ Unexplained paleness or loss of energy
- ❑ Frequent headaches, often with vomiting
- ❑ Sudden tendency to bruise
- ❑ Sudden eye or vision changes
- ❑ Persistent, localized pain
- ❑ Excessive, rapid weight loss

Early Detection

Early symptoms are usually nonspecific. Parents should ensure that children have regular medical checkups and should be aware of any unusual symptoms that persist.

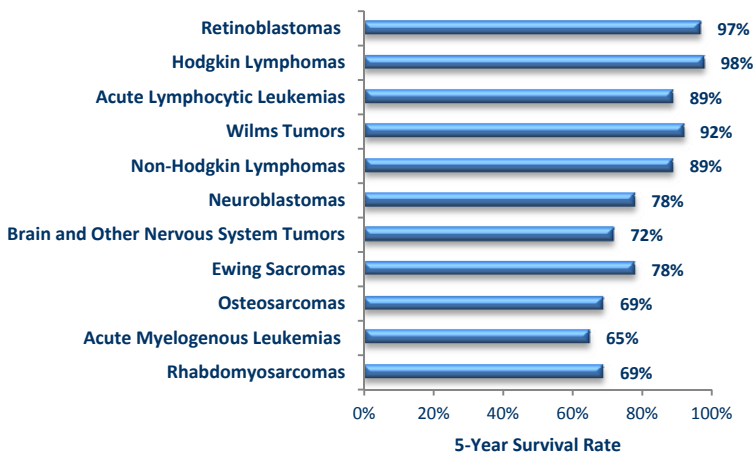
What Factors Influence Childhood Cancer Survival?²

Overall, United States childhood deaths due to cancer have dropped more than 50 percent since 1975 because of improved treatment options. The five-year survival rate for childhood cancers is now 83 percent. However, rates vary considerably depending on cancer type; moreover, within the major categories, cancer subtypes might vary in response to treatment or survival characteristics [Figure 3].

The earlier a cancer is diagnosed and treated, the better. Childhood cancers can be treated by a combination of therapies (surgery, radiation, and chemotherapy) chosen based on the type and stage of cancer. Treatment is coordinated by a team of experts, including pediatric oncologists, pediatric nurses, social workers, psychologists, and others. Because these cancers are uncommon, outcomes are more successful when treatment is managed by a children’s cancer center.

Survivors of childhood cancer might experience treatment-related side effects. Information for survivors of childhood cancer is available at www.survivorshipguidelines.org.

Figure 3. Five-year Survival Rates for the Most Common Childhood Cancers — United States, 2005-2011⁴



GET INVOLVED: Join the Indiana Cancer Consortium (ICC)

- ❑ The ICC is a statewide network of over 100 agencies including the Indiana State Department of Health.
- ❑ The ICC seeks to reduce the cancer burden in Indiana through the development, implementation and evaluation of a [comprehensive plan](#) that addresses cancer across the continuum from prevention through palliation.
- ❑ Become a member at www.indianacancer.org.

Community Resources

- ❑ For a childhood cancer toolkit with resources and information, visit www.indianacancer.org/indiana-childhood-cancer-toolkit/.
- ❑ To learn more about the childhood cancer burden in Indiana, refer to the [Indiana Cancer Facts and Figures 2015](#) report at www.indianacancer.org.

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