

# American Indian/ Alaska Native Childhood Cancers



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**The purpose of this document is to provide information on American Indian/Alaska Native (AI/AN) childhood cancers including:**

- Leading common childhood cancers
- AI/AN cultural considerations
- Childhood cancer resources

This document is part of a series of information sheets developed by our University of Arizona NACP Outreach team. More information is available at: <https://www.fcm.arizona.edu/research/research-programs/partnership-native-american-cancer-prevention-nacp>

## What is Childhood Cancer?

Cancer is not one disease but a larger group of diseases that can affect any part of the body. Cancer cells grow in an uncontrollable way which can affect normal cells. If not detected, the cancer cells can spread through the body.<sup>1</sup> Unfortunately, cancer can occur in children.

Ribbons have been used to represent different cancer types, and gold is for childhood cancers (Figure 1).

In 2023, an estimated 15,190 children and adolescents, between the ages of 0-19 years, were diagnosed with cancer. Cancer is the second leading cause of death for children under 15 years of age and is the fourth leading cause of death for adolescents between the ages of 15-19 years.<sup>2</sup>

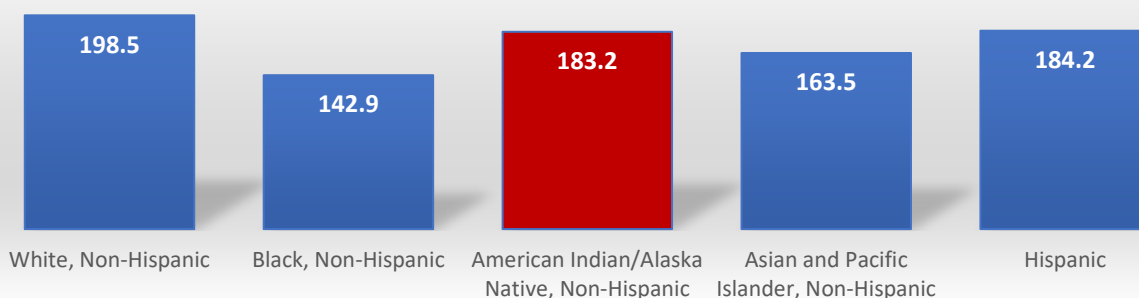


Figure 1. The gold ribbon represents childhood cancers

## American Indian/Alaska Native (AI/AN) Childhood Cancer

Between 2016-2020, AI/AN children aged 0-19 years had the third highest rate of new cancers, compared to other races, at 183.2 per 100,000 (Figure 2).<sup>3</sup>

**Figure 2. Rate of New Cancers Per 100,000 By Race and Ethnicity, Both Sexes, International Classification of Childhood Cancer (ICCC), Ages 0-19, 2016-2020**



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Leukemia



Brain Cancer



Lymphoma

Figure 3. Cancer ribbons for Leukemia, Brain Cancer, and Lymphoma

### Leading Types of Childhood Cancers – Under 15 years old<sup>4</sup> (Figure 3)

1. Leukemia
2. Brain cancer
3. Lymphoma

### Leading Types of Childhood Cancers – 15 – 19 years old<sup>4</sup> (Figure 3)

1. Brain cancer
2. Lymphoma
3. Leukemia

### Common Childhood Cancers (in alphabetical order), with a brief description<sup>5</sup>

Cancer Type	Description
<b>Bone cancer</b>	Cancer of the bones.
<b>Brain &amp; Spinal Cord Tumors</b>	Abnormal growth of immature nerve or supportive cells in the brain or spine.
<b>Ewing Sarcoma</b>	Develops around the pelvis, ribs, shoulder, upper legs, and arms. It is a less common type of bone cancer.
<b>Leukemia</b>	Cancer of the bone marrow cells where red blood cells, white blood cells, and platelets are produced.
<i>Acute Lymphoid Leukemia (ALL)</i>	Abnormal growth of lymphoblasts (a type of immature white blood cell).
<i>Acute Myeloid Leukemia (AML)</i>	Abnormal growth of myeloblasts and monoblasts (types of white blood cells).
<b>Lymphoma</b>	Cancer of the lymph system. The lymph system includes lymph nodes, lymph vessels, spleen, thymus, bone marrow, and tonsils.
<i>Hodgkin Lymphoma</i>	Most common in adolescents.
<i>Non-Hodgkin Lymphoma</i>	Less common cancer and occurs more in younger children.
<b>Neuroblastoma</b>	Cancer of immature nerve cells.
<b>Osteosarcoma</b>	Develops around the knee and during the growth spurt of puberty.
<b>Retinoblastoma</b>	Cancer of the eye. The pupil of the eye will have a white or pink color rather than a red color from the blood vessels.
<b>Rhabdomyosarcoma</b>	Abnormal growth of immature muscle cells.
<i>Alveolar Rhabdomyosarcoma</i>	Common in teenagers. Commonly found in large muscles of the central part of the body, arms, and legs.
<i>Embryonal Rhabdomyosarcoma</i>	Common in infants and young children. Commonly found in head, neck, bladder, prostate, testicles, and vagina.
<b>Wilms Tumor</b>	A common type of pediatric kidney cancer.

### AI/AN Cultural Considerations

AI/ANs may seek spiritual healing through traditional ceremonies as part of their culture. It is important to respect the patient and their family’s wishes for privacy and disclosure when seeking western medicine consult or treatment. Praying, singing, drumming, and the use of herbal medicines may be examples of traditional healing.

## Signs and Symptoms

It can be hard to recognize signs and symptoms of cancer early because they can be overlooked as common illnesses and injuries. If the symptoms persist and/or progress, it is recommended to see a doctor for further evaluation. Figure 4 on the right provides a list of common signs and symptoms to be aware of.<sup>6</sup>

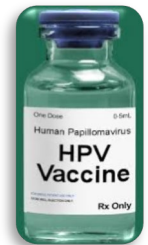
## Primary Prevention

Although the causes of most childhood cancers are largely unknown<sup>7</sup>, it is important to educate children and adolescents on primary prevention to minimize any behavioral or lifestyle risk factors:



**Sun Safety** – Wear a hat, sunglasses, sunscreen (SPF of 15 or higher), and wear protective clothes to cover arms and legs. Stay in the shade as much as possible to protect your skin from sunburns. These protective actions will help prevent skin cancers.<sup>8</sup>

**HPV Vaccination** – Human Papillomavirus (HPV) is a virus that can be passed through sexual contact. It is recommended for pre-teens to be vaccinated by the age of 11 years, and vaccinations can start as early as age 9 years. These protective actions will prevent certain cancers of the vagina, penis, anus, and oropharynx.<sup>8</sup>



**Healthy Lifestyle** – The benefits of maintaining a healthy lifestyle cannot be stressed enough and include better sleep, more energy, improved mental health, better mood, better confidence, increased productivity, and better weight control. Learning and adapting healthy habits at a young age can impact long-term health. Examples of healthy habits include:<sup>9</sup>



- Make sure to eat from all the food groups and fruits and vegetables should be included as healthy snacks.
- Be active for at least 60 minutes a day. Running, jump roping, or playing basketball are activities to help the heartbeat faster and build muscle. Walking is strongly recommended, and activity can be spread throughout the day!
- Drink plenty of water to prevent dehydration, manage body weight, and increase energy and mood.
- Exercise and talk with family, friends, and professionals to reduce stress, worry, or anxiety.

**No Smoking** – Cigarettes and e-cigarettes contain harmful substances that can harm brain development and have a negative impact on learning and attention span. Smokers are more at risk of developing heart disease, stroke, and lung cancer.<sup>10</sup>



Figure 4. Cancer Signs and Symptoms

- C**ontinued, unexplained weight loss
- H**eadaches, often with early morning vomiting
- I**ncreased pain in bones, joints, or legs
- L**umps or unexplained masses
- D**eveloped or excessive bruising, bleeding, or rash
- C**onstant infections
- A**whitish color behind the pupils
- N**ausea which persists or vomiting without nausea
- C**onstant tiredness or noticeable paleness
- E**ye or vision changes which occur suddenly
- R**ecurrent or persistent fevers of unknown origin

## September is Childhood Cancer Awareness Month

## Resources

**American Childhood Cancer Organization (ACCO)** provides information, support, and advocacy for children and adolescents with cancer and their families. <https://www.acco.org/>

**Cancer.Net** provides resources and comprehensive information for childhood cancer patients and their families. <https://www.cancer.net/navigating-cancer-care/children>

**CancerCare** provides free, professional support services including resource navigation, counseling, support groups, educational workshops, publications, and financial assistance for cancer patients, caregivers, and families. <https://www.cancercare.org/>

**Leukemia & Lymphoma Society (LLS)** provides free information and support services and is the voice for all blood cancer patients seeking access to quality, affordable, coordinated care. <https://www.lls.org/>

The **American Cancer Society** provides detailed information on childhood diagnosis, treatment, support, and more. <https://www.cancer.org/cancer/types/cancer-in-children.html>

The **National Cancer Institute (NCI)** provides information on childhood cancer and cancer research. <https://www.cancer.gov/types/childhood-cancers>

The **National Pediatric Cancer Foundation (NCCS)** provides emotional, financial, and educational support to children with cancer, their families, and survivors. <https://thenccs.org/>

**Together - St. Jude Children's Research Hospital** provides comprehensive medical information, supportive care, and resources for patients, caregivers, and families. <https://together.stjude.org/en-us/>

## References

<sup>1</sup>What are the differences between cancers in adults and children? (2019). American Cancer Society. Retrieved January 8, 2024, from <https://www.cancer.org/cancer/types/cancer-in-children/differences-adults-children.html>

<sup>2</sup>Siegel RL, Miller KD, Wagle NS, Jemal A. Cancer statistics, 2023. *CA Cancer J Clin.* 2023; 73(1): 17-48. doi:10.3322/caac.21763

<sup>3</sup>U.S. Cancer Statistics Working Group. U.S. Cancer Statistics Data Visualizations Tool. (2023). U.S. Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute. Retrieved January 29, 2024, from <https://www.cdc.gov/cancer/dataviz>.

<sup>4</sup>Childhood Cancer: Statistics. (2023). Cancer.Net. Retrieved January 8, 2024, from <https://www.cancer.net/cancer-types/childhood-cancer/statistics#:~:text=In%20teens%20ages%2015%20to,the%20most%20commonly%20diagnosed%20cancers>.

<sup>5</sup>Types of cancer that develop in children. (2019). American Cancer Society. Retrieved January 8, 2024, from <https://www.cancer.org/cancer/types/cancer-in-children/types-of-childhood-cancers.html>

<sup>6</sup>Childhood Cancer: Symptoms and Signs. (2022). Cancer.Net. Retrieved January 8, 2024, from <https://www.cancer.net/cancer-types/childhood-cancer/symptoms-and-signs>

<sup>7</sup>Savelli S & Prasad P. (2019). Types of Childhood and Adolescent Cancers. *American Academy of Pediatrics*. Retrieved on January 8, 2024, from <https://www.healthychildren.org/English/health-issues/conditions/cancer/Pages/Childhood-Cancer.aspx>

<sup>8</sup>Cancer Prevention Starts in Childhood. (2023). Centers for Disease Control and Prevention. Retrieved on January 8, 2024, from <https://www.cdc.gov/cancer/dpcp/resources/features/cancerandchildren/index.htm>

<sup>9</sup>Healthy Weight, Nutrition, and Physical Activity. (2023). Center for Disease Control and Prevention. Retrieved on January 8, 2024, from <https://www.cdc.gov/healthyweight/index.html>

<sup>10</sup>Youth and Tobacco Use. (2023). Centers for Disease Control and Prevention. Retrieved on January 8, 2024, from [https://www.cdc.gov/tobacco/data\\_statistics/fact\\_sheets/youth\\_data/tobacco\\_use/](https://www.cdc.gov/tobacco/data_statistics/fact_sheets/youth_data/tobacco_use/)

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