Cancer

Symptoms or Behaviors

- Easy bruising
- Bleeding without clotting
- High fever
- Continual weakness
- Chronic fatigue
- Pain in bones and joints
- Recurrent infections

Side effects which may occur with chemotherapy and/or radiation:

- Hair loss
- Nausea/vomiting
- Weight changes
- Discomfort, which may contribute to anxiety, inability to concentrate

Minnesota Low Incidence Project

About the Disorder

Cancer is not a single disease, but a large, heterogeneous group of diseases that share certain features such as abnormal tissue growth, division and proliferation of cells, the spread of cells to other parts of the body, and the phenomenon of cells invading and destroying normal organs and tissues. Cancer in children is different from cancer in adults. Childhood cancers are comprised of solid tumors and the leukemias. Malignant tumors are non-communicable growths that can occur in any part of the body. The signs, symptoms, and the response to treatment in each patient depend on the location and type of tumor. Leukemia in children is a non-communicable malignant disease of the hematopoietic, or blood-making system of the body in which increased production of immature, abnormal, or poorly developed white blood cells inhibit the production of normal blood cells in the bone marrow. The two most common forms of leukemia are acute lymphoid leukemia (ALL) and acute nonlymphoid leukemia (ANLL). Both have similar characteristics: the proliferation of immature white blood cells, systemic problems including organ failure, CNS involvements, thin and weakening bones, severe bone and joint pain.

Why cancer occurs is unknown, however it is known that environmental factors such as exposure to radiation or certain chemicals, viruses, or defects in body chemistry may contribute to the disease. Several genetically determined disorders, such as Down Syndrome, are also known to be associated with an increased incidence of leukemia.

Leukemia accounts for approximately 30% of all pediatric cancers, with ALL being the most common type, occurring in about 80% of the cases. Leukemia is found more commonly in boys, regardless of race. Incidence peaks between the ages of 2 and 6, and is the second leading cause of death in children between the ages 2 and 15.

The goal of treatment of any cancer is to remove or destroy the abnormal cells by surgery, radiation, chemotherapy, or a combination of these methods. Supportive therapy also plays a major role in protecting patients, allowing them to survive the critical period needed for the benefits of chemotherapy to take effect. It may include antibiotics, germ-free isolation, and transfusions of white blood cells, and platelets.

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Educational Implications

The child will most often be able to participate in a regular school program. It is important that school staff be knowledgeable about the student's illness. In the publication *Students with Cancer: A Resource for the Educator*, produced by the National Cancer Institute (1990), it is suggested that the teacher contact the student's parents to obtain the following information before the student returns to school:

- Specific type of cancer and how it is being treated.
- Treatment the student is taking, when it is administered, what potential side effects are, and effects on appearance and behavior.
- Approximate schedule of upcoming treatment, procedures, or tests that may result in the student's absence.
- Limitations, if any, on the student's activities (with periodic updates).
- What the student knows about the illness.
- For younger students, what the family would like classmates and school staff members to know.
- For adolescents, whether the student wishes to talk directly with teachers about any of the above points.

It is also important that the teacher meet with the student to address concerns such as:

- Will others stare at me because I look funny?
- Will I still be included, or dropped out of my group?
- Are teachers upset with me because I missed so much school?
- Will I not know as much as other kids?

Respect a student's choice of not speaking with teachers or peers about how they are doing or feeling.

Although over-protectiveness is a frequent emotional response of school staff, children need to know limits, and be expected to follow rules. Many studies have shown the importance of having the student return to a normal daily routine as soon and as much as possible.

Instructional Strategies and Classroom Accommodations

- Curriculum modifications (extra time for assignments, every other problem, not time limits, alternative ways to test and get information).
- Buddy system for notes, teacher outlines.
- Absences may require repeated instruction, modified requirements as noted above.
- Tutorial services/homebound instruction when necessary.

Resources

Leukemia and Lymphoma Society
5217 Wayzata Blvd. #221
St. Louis Park, MN 55416
(952) 545-3309

American Cancer Society
www.cancer.org
(800) 227-2345
information and resources

Candlelighters Childhood Cancer Foundation
www.candlelighters.org
(800) 532-6459
information and resources

Leukemia Society of America
Hotline for information
(800) 955-4LSA

Hill, Jennifer Leigh. (1999) *Meeting the Needs of Students with Special Physical and Health Care Needs.* Prentice Hall.

Students with Cancer: A Resource for the Educator. (1990). Produced by the National Cancer Institute. (800) 422-6237

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