What is a central nervous system tumor?
A central nervous system (CNS) tumor occurs when healthy cells in the brain or spinal cord change and grow out of control, forming a mass. A CNS tumor can be cancerous or noncancerous. A cancerous tumor can grow and spread to other parts of the body. A noncancerous tumor can grow but will not spread. The most common types of CNS tumors diagnosed in children are astrocytoma, brain stem glioma, ependymoma, germ cell tumor, and medulloblastoma.

What is the function of the central nervous system?
The brain and spinal cord make up the central nervous system, which controls all vital body functions. The brain is the center of thought, memory, and emotion. It controls the 5 senses, movement, and other basic functions, including heartbeat, circulation, and breathing. The spinal cord is made up of nerves that carry information back and forth between the body and the brain. It controls sensation and the ability to use muscles.

What does stage and grade mean?
The stage is a way of describing where the tumor is located, if or where it has spread, and whether it is affecting other parts of the body. Most CNS tumors are also described by their grade. For CNS tumors, grade describes how much the tumor cells look like healthy cells under a microscope and the specific genetic features of the tumor. Low-grade tumors are less likely to grow and spread than high-grade tumors. Find more information at www.cancer.net/cns.

How are central nervous system tumors treated?
The treatment of a CNS tumor for a child depends on the type of tumor, the size and location of the tumor, whether it is cancerous, whether the tumor has spread, possible side effects, the family’s preferences, and the child’s age and overall health. Surgery may be used to try to completely remove a tumor. If a tumor cannot be removed with surgery, called inoperable, radiation therapy may be used. Chemotherapy is also used to treat many cancerous CNS tumors; it may be given after surgery or radiation therapy. Sometimes chemotherapy is used at the same time as radiation therapy. When making treatment decisions, consider a clinical trial; most children with cancer are treated as part of one. Talk with your child’s doctor about all treatment options. The side effects of CNS tumor treatment can often be prevented or managed with the help of your child’s health care team. This is called palliative care and is an important part of the overall treatment plan.

How can I help my child or teen cope with a central nervous system tumor?
Helping your child or teenager understand a cancer diagnosis is a key part of the coping process. Children and adolescents with a CNS tumor should be treated at a pediatric cancer center. These centers not only provide access to the latest treatments, they offer age-appropriate programs for social and emotional needs. Encouraging your child and other family members to share their emotions can be helpful in managing the diagnosis, treatment, and healing process.

ASCO ANSWERS is a collection of oncologist-approved patient education materials developed by the American Society of Clinical Oncology (ASCO) for people with cancer and their caregivers.
Questions to ask the health care team

Regular communication is important in making informed decisions about your child’s health care. Consider asking your child’s health care team the following questions:

- What type of CNS tumor has been diagnosed? What does this mean?
- Where is the tumor located? Is it cancerous?
- Can you explain my child’s pathology report (laboratory test results) to me?
- What grade is the tumor? What does this mean?
- Would you explain my child’s treatment options?
- What clinical trials are available for my child? Where are they located, and how do I find out more about them?
- What treatment plan do you recommend for my child? Why?
- What is the goal of each treatment? Is it to eliminate the tumor, help my child feel better, or both?
- Who will be part of the treatment team, and what does each member do?
- How will this treatment affect my child’s daily life? Will he or she be able to go to school and perform his or her usual activities?
- What short-term and long-term side effects may be associated with my child’s treatment?
- What are the chances that the cancer will come back after treatment?
- What follow-up tests will my child need, and how often will he or she need them?
- If I’m worried about managing the costs of medical care, who can help me?
- Where can I find emotional support for my child? For my family?
- Whom should I call with questions or problems?

Find more questions to ask the health care team at www.cancer.net/cns. For a digital list of questions, download Cancer.Net’s free mobile app at www.cancer.net/app.

The ideas and opinions expressed here do not necessarily reflect the opinions of the American Society of Clinical Oncology (ASCO) or The Conquer Cancer Foundation. The information in this fact sheet is not intended as medical or legal advice, or as a substitute for consultation with a physician or other licensed health care provider. Patients with health care-related questions should call or see their physician or other health care provider promptly and should not disregard professional medical advice, or delay seeking it, because of information encountered here. The mention of any product, service, or treatment in this fact sheet should not be construed as an ASCO endorsement. ASCO is not responsible for any injury or damage to persons or property arising out of or related to any use of ASCO’s patient education materials, or to any errors or omissions.

To order more printed copies, please call 888-273-3508 or visit www.cancer.net/estore.