Bone Cancer - Latest Research [1]

This section has been reviewed and approved by the Cancer.Net Editorial Board [2], 08/2014

ON THIS PAGE: You will read about the scientific research being done now to learn more about this type of cancer and how to treat it. To see other pages, use the menu on the side of your screen.

Doctors are working to learn more about bone cancer, ways to prevent it, how to best treat it, and how to provide the best care to people diagnosed with this disease. The following areas of research may include new options for patients through clinical trials [3]. Always talk with your doctor about the diagnostic and treatment options best for you.

Intraoperative radiation therapy. Clinical trials are evaluating the usefulness of radiation therapy given inside the body during surgery for some Ewing sarcoma tumors. This is called intraoperative radiation therapy or internal radiation therapy.

Myeloablative therapy. A supplement to the treatment options for Ewing sarcoma is known as ?myeloablative therapy with stem cell support.? Myeloablative therapy is an intense regimen of very high doses of chemotherapy. It aims to destroy all cells that are dividing rapidly. This includes cancer cells but also some healthy cells. Stem cells may be given to the patient after myeloablative therapy to renew the blood cells more rapidly. Stem cells are cells that create all other types of cells in the body, in this case cells that will help new blood cells be made faster. Stem cells are typically taken from the bone marrow or blood of someone with cancer or a blood relative before high-dose myeloablative therapy.

Targeted therapy. Targeted therapy is a treatment that targets the cancer?s specific genes, proteins, or the tissue environment that contributes to cancer growth and survival. This type of treatment blocks the growth and spread of cancer cells with greater specificity than regular chemotherapy, which damages the DNA of cancer cells and normal cells alike. As a result, targeted therapy helps limit damage to healthy cells. Learn more about targeted treatments [4].

Immunotherapy. Immunotherapy, also called biologic therapy, is designed to boost the body's natural defenses to fight the cancer. It uses materials made either by the body or in a laboratory to improve, target, or restore immune system function. One type of immunotherapy currently being tested for bone cancer uses muramyl tripeptide phosphatidylethanolamine (MTP-PE), which is a protein that stimulates the immune system. When combined with the standard chemotherapy of ifosfamide, mifamurtide (Junovan) improved survival for patients at six years from 70% to 78%. Mifamurtide is approved as a bone cancer treatment in some European countries, but it is not currently approved in the United States.

Supportive care. Clinical trials are underway to find better ways of reducing symptoms and side effects of

current bone cancer treatments in order to improve patients? comfort and quality of life.

The next section addresses how to cope with the symptoms of the disease or the side effects of its treatment. Use the menu on the side of your screen to select Coping with Side Effects, or you can select another section, to continue reading this guide.

Links:
[1] http://www.cancer.net/cancer-types/bone-cancer/latest-research
[2] http://www.cancer.net/about-us
[3] http://www.cancer.net/node/18542
[4] http://www.cancer.net/node/24729