



What is the Disease?

Malignant bone tumor that usually develops during the period of rapid growth which occurs in adolescence, as a teenager matures into an adult.

Primary cancer of the bone rather than cancer that starts in another place and spreads to the bone

Prevention

There are no known lifestyle changes that can prevent osteosarcoma

What are the Risk Factors?

Risk for development is greatest during the teenage "growth spurt"

Genetic factors such as Li-Fraumeni Syndrome

Prior diagnosis of Retinoblastoma

Prior radiation treatment (radiation induced osteosarcoma as a secondary cancer)

Genetic predisposition to non-cancerous bone diseases such as Pagets disease

Affected Population

Most common in teenagers but can occur at any age

Average age at diagnosis is 15
·900 new cases each year in US of which 400 will be under the age of 20

·Slightly more males than females

OSTEOSARCOMA

A Practitioner's Quick Reference Guide

Medical Aspects

Where Does it Occur?

- While it can occur in any bone, it most commonly occurs in the extremities of the long bones near the growth plates
- Most common sites are the femur, tibia and humerus. Most cases occur around the knee
- Metastases most commonly occur in the lungs which is the primary cause of death

Signs and symptoms of Osteosarcoma

- Pain in the affected bone is the most common complaint.
- Swelling in the area of the pain which may not occur until weeks later
- Initial presentation to primary care physician with pain/swelling in affected area
- Misdiagnosis is common due to rarity of the disease

Survival Rates

- Localized- 70% five year survival rate
- Metastatic-30% five year survival rate
- Overall 5-yr survival rate of 63%

Stages of Osteosarcoma

- Localized- cancer has not spread outside the bone or nearby tissue
- Metastatic-cancer has spread from the bone to other parts of the body- primarily the lungs (85%)
- Recurrent- cancer returns after it was treated- most often recurs in the lungs

Treatment Options

- Surgery- complete resection of tumor with wide margins via limb salvage surgery or amputation
- Chemotherapy- combination drugs Cisplatin/Adriamycin/Ifosomide prior to and after surgery
- Radiation of affected area- recent research has shown some positive results

Methods of Diagnosis

- X-ray/MRI of the affected area
- CT-scan of the chest to see if cancer has spread to the lungs
- Total body bone scan
- Bone biopsy (removal of a sample of tissue)

Psychosocial Implications

Psychological

Stress on family- financial and emotional. Patient should be treated by a pediatric oncologist or sarcoma specialist if possible at a comprehensive cancer center.

May require frequent travel or relocation for treatment at CCC for an extended period of time.

Anxiety about treatment, side effects and pain

Frequent hospitalizations causing disruption with work/school

Fear of losing a limb or long term physical effects of limb-salvage

Fear of dying

Self image issues related to loss of hair or limb

Anger, "why me?"

Denial of seriousness of diagnosis

Limited coping resources for teens and young adults

Depression

Family and Friends

Independence vs. dependence on parents and caregivers

Loss of friends-

- inability to attend school for an extended period of time
- friends fears about cancer and not knowing what to say

Social isolation- multiple hospitalizations and treatment away from home

Disruption of "normal" family life affects parents/siblings

Sexuality and Intimacy

Reproductive issues resulting from chemotherapy and radiation

- reduced sperm production in males
- ovarian function in females
- early menopause
- permanent sterility

Poor self image due to amputation or limb salvage

Long-term survival issues

Learning disabilities

Risk of secondary cancers

Heart and lung problems from chemotherapy agents

Slow growth and development

Hearing loss from chemotherapy

Insurance Aspects

Standard treatments are covered by most insurance plans including Medicaid/Medicare

Out of pocket expenses may be extremely high due to multiple hospitalizations and medications required during treatment

Clinical trials may not be covered

Coping Strategies

Counseling and support for patient, siblings and parents (individual and/or family therapy)

Support groups

Family education regarding disease, treatment and side effects

Humor-do fun things and laugh when possible

Spirituality, faith and prayer

Maintain "normal" life as much as possible

Supportive services surrounding end-of-life issues

Resources

Association of Cancer Online Resources-ACOR Osteosarcoma Support Group www.acor.org

CanCare Houston- www.cancare.org

Chemo Angels- volunteer organization providing support to cancer patients on IV therapy- www.chemoangels.com

Planet Cancer- an online community for young adults with cancer www.planetcancer.org/