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Commentary

# Sarcoma: A Common Type of Tumor

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## DESCRIPTION

Sarcoma is a type of cancer that develops in the soft tissues (muscles, tendons, fat, blood vessels and connective tissues) or in the bones. It is relatively rare compared to other types of cancer, such as breast or lung cancer. Sarcomas can occur in any part of the body but are commonly found in the arms, legs, chest, abdomen or pelvis.

### Subtypes of sarcoma

Various subtypes of sarcoma, each originating from different types of tissues within the body. Some of the common subtypes of sarcoma include:

**Leiomyosarcoma:** This type of sarcoma develops in smooth muscle tissue, which is found in organs such as the uterus, gastrointestinal tract and blood vessels.

**Liposarcoma:** Liposarcoma arises from fat tissue and commonly affects the deep tissues of the thighs, abdomen or retroperitoneum (the area behind the abdominal cavity).

**Synovial sarcoma:** Synovial sarcoma typically affects the soft tissues near the joints, such as the knees or ankles. Despite its name, it does not originate from synovial tissue.

**Rhabdomyosarcoma:** This subtype primarily affects children and arises from immature muscle cells. It is most commonly found in the head and neck region, urinary and reproductive organs or limbs.

**Osteosarcoma:** Osteosarcoma is a bone sarcoma that develops from bone-forming cells. It often occurs in the long bones, such as the arms or legs and is more prevalent in children and young adults.

**Ewing sarcoma:** Ewing sarcoma primarily affects bones, but it can also develop in soft tissues. It most commonly occurs in children and young adults, usually in the bones of the pelvis, legs, ribs or arms.

**Fibrosarcoma:** Fibrosarcoma arises from fibrous tissue, typically found in tendons, ligaments and deep skin layers. In the body, it can happen everywhere.

**Dermatofibrosarcoma protuberans:** This subtype of sarcoma affects the skin, usually the trunk or limbs. It is a slow-growing tumor but has a high likelihood of recurrence if not completely removed during surgery.

### Treatment of sarcoma

The treatment plan for sarcoma is individualized and depends on factors such as the location, stage, size and grade of the tumor, as well as the patient's overall health. A multidisciplinary team, including orthopedic surgeons, medical oncologists, radiation oncologists and pathologists, collaborates to develop the most appropriate treatment approach for each patient. The primary treatment modalities for sarcoma include:

**Surgery:** Surgery is often the mainstay of treatment for sarcoma. The goal is to remove the tumor along with a margin of healthy tissue to minimize the risk of recurrence. Reconstructive surgery could be required in some circumstances to restore look and functionality.

**Radiation therapy:** High-energy beams are used in radiation therapy to target and kill cancer cells. It may be used before surgery (neoadjuvant radiation) to shrink the tumor or after surgery (adjuvant radiation) to kill any remaining cancer cells. Radiation therapy may also be used for inoperable tumors or to alleviate symptoms in advanced cases.

**Chemotherapy:** Chemotherapy uses medications to destroy cancer cells all over the body. It is commonly used for high-grade sarcomas, metastatic sarcomas or as adjuvant therapy after surgery to reduce the risk of recurrence. Different chemotherapy regimens are available based on the specific sarcoma subtype.

**Targeted therapy:** Some sarcomas have specific genetic mutations or molecular abnormalities that can be targeted by certain drugs. Targeted therapy aims to interfere with the growth and survival of cancer cells while sparing healthy cells. This approach is more commonly used in specific sarcoma subtypes, such as Gastrointestinal Stromal Tumors (GISTs).

**Immunotherapy:** Immunotherapy is a form of cancer treatment that activates the immune system. While it has shown promising results in some types of cancer, its use in sarcoma is still under investigation and its effectiveness may vary depending on the specific subtype.

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