

# Fibrosarcoma

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Fibrosarcoma is a cancerous tumor of the deep structures of the skin, specifically the fibrous connective tissue. This type of tissue normally serves to protect, support and bind together various organs. Fibrosarcomas can arise anywhere in the body, but most often affect bone. The outer surface of bones is called the periosteum and a component of this is fibrous connective tissue. A fibrosarcoma may develop directly in the bone or it may begin in soft tissue and spread to the bone either through the bloodstream or by direct invasion. It is the third most common type of bone tumor. Sites commonly affected are the lower jaw, nasal sinuses, vertebrae of the spine and the radius (one of the forearm bones). The femur (thigh bone) and tibia (a lower leg bone) are often affected as well.

Fibrosarcomas can spread or metastasize to the lungs, heart, kidneys and lymph nodes.

## Clinical Signs

This disease is often first noted by the appearance of a mass on the jaw, skull or a leg. Pain may be evident. Additional signs are dependent on the site of origin and possibly on the site of

metastasis. For instance, limping will be noted if an extremity is involved. Problems with eating, loose teeth, mouth odor, etc. will be seen if the jaw is affected (usually the lower jaw). Lymph nodes will be enlarged if the fibrosarcoma has metastasized to them and systemic signs may be obvious if other organs are involved.

## Diagnosis

Diagnosis begins with a physical exam including palpation for masses and swollen lymph nodes. Also, the veterinarian will listen to heart and lung sounds as well as evaluate the dog's general condition. The work-up usually includes complete blood count, chemistry panel, urinalysis and x-rays of affected bony structures and, possibly, the chest and abdomen.

Computerized tomography (CAT Scans) and Magnetic Resonance Imaging (MRI) are additional diagnostic tools to determine extent of local invasiveness and presence of metastases. As with all cancers, a definitive diagnosis can only be made by biopsy.

## Treatment

Surgery is the mainstay of treatment for fibrosarcoma. If an extremity is affected, this might mean amputation of that limb. Surgery may be the only treatment necessary, but if the tumor is unable to be completely removed, or metastases are likely or present, adjuvant treatment will be offered. This may consist of radiation therapy, hyperthermia (heat),

photodynamic

(laser) therapy, chemotherapy or immunotherapy (to boost the body's own defenses). Any combination of these may be part of the treatment plan. If chemotherapy is advised, it is usually a combination chemotherapy in which several drugs are given.

## Prognosis

A histopathologic study of the tumor's cells can help determine the aggressiveness of the tumor. Some fibrosarcomas undergo cell division and multiplication more rapidly than others. Some metastasize earlier than others, although for the most part, fibrosarcomas are considered to have a low potential for metastasis. Young dogs with oral fibrosarcomas have a higher potential for metastasis. If the site of origin is other than the oral cavity, the fibrosarcoma can sometimes be locally controlled for long periods of time by removing the mass each time it recurs.

## References

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