

## **Informed Consent**

### **Arthrodesis (Joint Fusion)**

Your pet has been diagnosed with a severe abnormality of its wrist (carpus) or ankle (tarsus). A salvage procedure, called arthrodesis (joint fusion), has been recommended in an attempt to save the leg from being amputated. Arthrodesis is performed by: 1) remove the joint cartilage in the regions of interest, 2) provide rigid fixation (usually in the form of a bone plate and screws), 3) provide bone graft to help stimulate bone healing in the areas treated, and 4) rigid external support, usually in the form of a cast or splint. The purpose of arthrodesis is to allow a region with a very poor prognosis for function to fuse, so that function of that area is no longer required for limb use. Basically, a bad problem with a joint is treated by fusing the joint. The joint function cannot be saved, but the function of the joint can be sacrificed to save the limb function and improve the patients comfort. The prognosis is generally very good with surgery, however, we need to make you aware of a few of the common complications that could arise after arthrodesis surgery. If you have any questions or concerns, please let us know.

The risks of complications after arthrodesis is low, about 10-20% of cases. Here are some potential risks:

Incision infection- this is a risk with any surgery and is usually treatable with antibiotic therapy. Osteomyelitis is a rare bone infection that would likely require additional therapies.

Delayed union- one of the goals of surgery is to allow bone to heal across joint spaces. These gaps can be large and healing can be prolonged in some cases. Healing is monitored using X-rays. External support, in the form of a cast or splint is recommended until significant healing is noted on the X-rays.

Nonunion of the bone, with persistent joint mobility despite fusion- in some cases, the joints do not fully fuse on X-ray. This may not be a problem with function, however, in some cases, additional surgery is recommended.

Implant-related complications- a bone plate and screws are usually used to hold the joint in place during healing. The screws could break or loosen, the plate could break, or there could be infection of the plate. If pins were used, they could migrate. If any of these occur, either revision surgery or surgery to remove the implants may be recommended.

Bandage complications- most often, a bandage with either cast or splint support is used to help protect the repair. Good bandage care is key after surgery. The bandage must be kept

clean, dry, intact, and in place. A bandage that has slipped or that has been damaged (ie chewed) is not providing the support it is supposed to and can compromise the repair, a wet bandage or a dirty bandage can lead to nasty skin infections or sores. All of these things could lead to additional surgery. If your pet is bothering the bandage, there is a good possibility that there are problems with the bandage or the skin beneath. Good bandage care is key.

Joint malalignment- one of the goals in surgery while fusing the joint is to provide anatomic (“normal” straight, functional) alignment. We can see results where the joint is slightly bent, curved, or rotated abnormally. Usually these abnormalities are mild and do not affect function. Rarely, revision surgery may be indicated.

Rare complications- these may include but are not limited to fractures of the involved or adjacent bones, loss of function (persistent lameness- more common with fusion of the entire tarsus (ankle) or carpus (wrist), and a rare infection of the bone called osteomyelitis