Findings Today

Nuboi is a 1 year old neutered male Akita who presented to UF Orthopedics Service today for evaluation of previously diagnosed Grade IV medial patellar luxation. Nuboi was taken into Akita Rescue one month ago from Georgia. His owners report that he has an abnormal gait and appears to be weak in the hind limbs but they do not report that he is painful. The primary veterinarian, Dr. Lazar, prescribed Rimadyl 100mg Q24h. He also receives Glucosamine supplements, Advantage and Ivermectin (1cc monthly). Nuboi's heartworm status is unknown.

On physical exam Nuboi was bright and alert. He has significant muscle atrophy (wasting) on both pelvic legs from the stifles (knees) up to his hips. When we watch him walk he hyperextends his stifle and tarsus which means that he walks with straighter than normal legs. There is internal rotation of both rear paws, especially the right. His patellas are medially luxated on both rear legs and we can feel some effusion (swelling) in both stifle joints. His patellas are a Grade 4/4 which means that the patella sits on the medial (internal) aspect of the stifle and can not be forced back into it's normal position. This is the most severe grade of medial patella luxation.
Nuboi's left cranial cruciate ligament was found to be torn. This is a structure that gives support to the stifle and prevents hyperextension and internal rotation. His right cranial cruciate ligament is not currently torn however there is radiographic evidence to suggest that this may also be occuring. When dogs have medial patellar luxation there is greater strain on the ligaments in the knee which predisposes them to cranial cruciate ligament rupture.

As discussed today, medial patellar luxation (MPL) is a developmental disease. This means that this condition developed as Nuboi's legs grew. There are several structural abnormalities that can contribute to developing MPLs. If the muscles of the thigh, the quadriceps, are medially (towards the inside of the leg) displaced this can pull the patella over outside of the patellar groove. The patellar groove deepens during development due to the normal pressure that the patella exerts on it. When the patella is not sitting in this groove there is no stimulation for it to deepen which results in an abnormally shallow groove. Some dogs also have a curving of the femur and/or tibia that contributs to their malformation. Prior to surgery it is important that we determine which of these abnormalities are present in Nuboi so that our surgical plan is appropriate to give us the most desirable outcome. Today we recommended additional radiographs to further evaluate Nuboi's femurs and tibias. Radiographs confirmed the patellar luxation. It also revealed distal femur varus which means that Nuboi's femurs are curved inward at the level closest to the stifles.

Should you choose to surgically correct Nuboi's stifles we would perform the surgerie(s) on one stifle followed by the other after a 2-3 month recovery period. During recovery, Nuboi's will need to be confined to a kennel or small room for three months. He can be taken outside on a leash for urination and defecation but no running, jumping, playing, or walking up or down stairs. We will also send you home with rehabilitation exercises to perform.

At this time you have decided to bring Nuboi home to discuss options with the rescue before proceeding with surgery. You also expressed an interest in seeing Dr Lewis if possible to perform the surgery. As a reminder, he will

be back on clinics on November 17th. Depending on the surgeon that you see, they may require further radiographs and potentially also a CT scan. Under sedation we found that he has a torn left cranial cruciate ligmament. There are some specific radiographs that will likely be needed before surgery, to aid in planning for this part of the surgery.

The left leg appears to be the worst affected at this point, especially with the left cranial cruciate ligament rupture. Surgery would likely involve a corrective osteotomy on the left femur, a TPLO with a tuberosity lateralization, a trochlear groove deepening and some soft tissue modification. Based on how things look at the time of surgery, further procedures may be necessary. The cost of the surgery for the left leg would likely cost $4000- $5000. The right leg also is showing signs that the cruciate ligament may be tearing. If this does tear, the cost and procedures performed would likely be very similar to the left leg; the main difference being that a correction to the femur may not be needed. Again, that decision may need to be made at the time of surgery.

Diagnostics Performed Today:

Radiographs-left hind leg: Medial patellar luxation. Increased soft tissue opacity (suggesting effusion) in the stifle joint. Distal femoral varus (left (~20 degrees) greater than right ~12 degrees)).

Final radiogrpahic report pending.

Radiographs-right hind leg: Medial patellar luxation. Increased soft tissue opacity (suggesting effusion) in the stifle joint. Distal femoral varus (left greater than right).

Final radiogrpahic report pending.