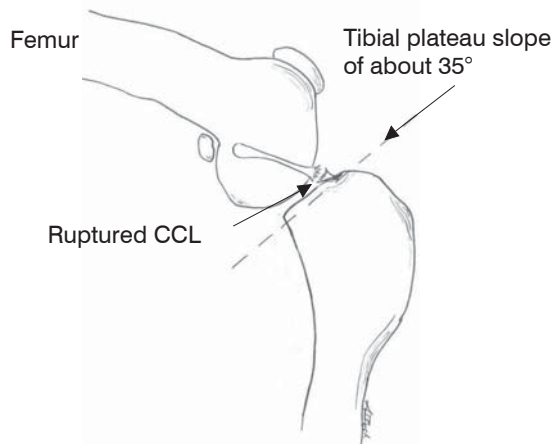


CRANIAL CRUCIATE LIGAMENT RUPTURE

The most common injury we see in our canine patients is a rupture of the cranial cruciate ligament (CCL). A rupture of this ligament can cause pain and lameness, injury to other structures of the knee, such as the meniscus, and will lead to arthritis in the joint. The injury is very common in all sizes and types of dogs. The CCL is analogous with the ACL in people. There are currently two surgical procedures that Dr. Tudor performs in order to treat the CCL injury. The **Tibial Plateau Leveling Osteotomy (TPLO)** which is usually reserved for larger (over 50 pounds) more active and younger dogs. The **Extra Capsular Repair (ECR)** has the most consistent results with smaller and less active dogs. Long term prognosis for pets with repaired CCL is good with clinical reports of improvement in 85-95% of the cases.

CCL rupture may occur acutely (with or without obvious trauma) or it may be more chronic in nature. Acute injury is usually associated with hyperextension and internal rotation of the leg. There are a variety of proposed causes of chronic disease including age related deterioration of the ligament, obesity, conformation abnormalities and immune mediated disease.



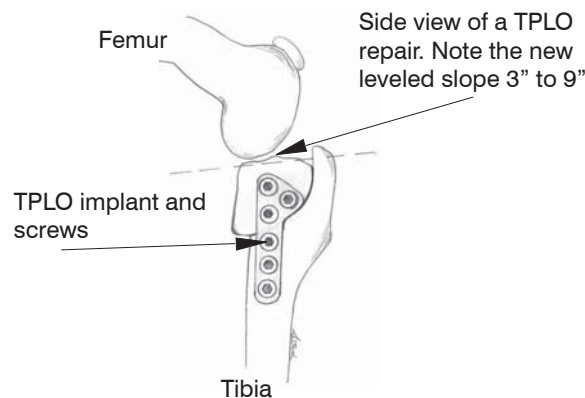
DIAGNOSIS

Lameness may be very obvious right away or it may appear gradually. The discomfort exhibited varies from mild intermittent lameness to continuous non-weight bearing lameness. A definitive diagnosis and evaluation of each patient requires palpation and manipulation of the knee. Radiographs (x-rays) and palpation under sedation are required for preoperative evaluation and surgical planning.

SURGICAL REPAIR

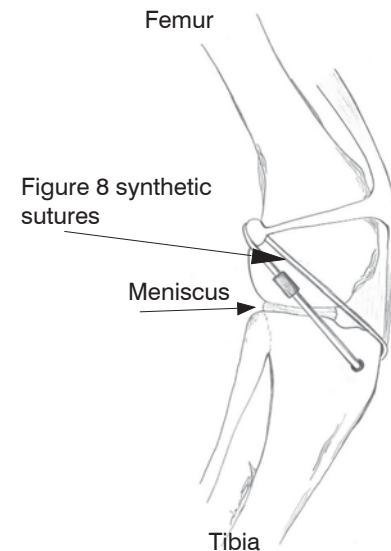
TPLO

The TPLO procedure stabilizes the knee biomechanically by leveling the tibial plateau. Specific radiographs of the knee will be taken prior to surgery and Dr. Tudor will measure your pet's tibial plateau angle (slope). During surgery, the joint is examined in order to remove the remnants of the ligament as well as inspect the other structures in the joint. If damage to the meniscus (the fibrocartilagenous pad between the femur and tibia) is found, the damaged portion is removed. After the joint is closed, a cut is made through the tibia using a bone saw. This cut allows rotation of the tibial plateau so that the load-bearing surface of the tibia is "leveled" (usually somewhere between 5 and 7 degrees). After the rotation, a specialized bone plate is then secured to the bone with screws in order to stabilize the bone. By leveling the tibial plateau we have eliminated cranial tibial thrust and stabilized the joint.



ECR

Just like the TPLO, this surgery starts with a joint exploration which allows for removal of the cruciate remnants and well as inspection of the rest of the knee joint. Once the joint is closed, heavy duty nylon (usually 2 strands) is placed in the tissue between the femur and the fabella. The nylon is then passed under the patella tendon and back thru a small hole made in the top portion of the tibia. Each strand of the nylon is secured to itself with a stainless steel crimp. This procedure eliminates the instability in the knee joint. Over the first 8-12 weeks after surgery, your pet will be laying down scar tissue around the joint which essentially takes over for the nylon as it can weaken or loosen over time.



Side view of knee with an extracapsular repair