



PAW HEALTH NETWORK, INC.

CRANIAL CRUCIATE INJURY

ABOUT THE DISEASE

Partial or complete damage to the cranial cruciate ligament is the most common orthopedic problem in canine patients. Injury will lead to arthritis of the knee joint which will require long term medical management.

Signs of injury include limping of a back leg, stiffness following exercise, unwilling to play, and sometimes clicking of the knee joint.

OBTAINING A DIAGNOSIS

A physical examination by a veterinarian with a clinical consultation provides most of the diagnosis for CCL injury. Radiographs (x-rays) are often required to help establish the diagnosis, to determine extent of arthritis, and to help guide decisions for surgery.

TREATMENT

Surgery is often the treatment of choice. However, even with surgery, approximately 50-70% of canine patients will injury the other knee.

1. Non-Surgical Options: Please review our resource on *Osteoarthritis* for additional information and care.
2. Surgical Options
 - a. *Tibial Plateau Leveling Osteotomy (TPLO)*
 - i. A bone cutting technique which alters the joint angle to limit joint slippage.
 - b. *Tibial Tuberosity Advancement (TTA)*
 - i. A bone cutting technique which changes muscle forces to limit joint slippage.
 - c. *Lateral Suture Stabilization (LAT)* is the most common technique.
 - i. Uses a surgical monofilament anchored to the tibial bone and behind the knee to aid in tight scar formation to replicate knee stability.
 - d. *TightRope CCL (TR)*
 - i. Uses a synthetic ligament-like biomaterial, called *FiberTape*[®] to create a bone-to-bone stabilization of the knee. This Kevlar-like material is also used in human orthopedic surgery.
 - ii. *TightRope's FiberTape*[®] material has the highest strength and the least amount of fiber relaxation (creep) when compared to five other surgical materials on the market.
 - iii. An independent analysis found that the *TightRope* has the highest safety to efficacy ratio when compared to the other surgery options.
 - iv. No current technique consistently resulted in a normal, pain-free function of all patients. However, mid- and long-term outcomes of the *TightRope* are not different than the *TPLO* or *TTA*.
 - v. A multi-center clinical study showed that in 2500+ cases, *TightRope* had a ~94.9% success rate (64.6% full function, 30.3% acceptable function.)
 - vi. Only 9.8% of cases showed major complications, including meniscal tears (5.2%), infection (1.7%), and mechanical failure (2.9%). Approximately 9.7% showed minor incision complications. As few as 0.2% showed catastrophic complications.

TIPS FOR SUCCESS

- Keep patients at an ideal weight
- Strictly follow post-operative activity restrictions
- Keep your follow-up appointments
- Continue wellness care to pinpoint the onset of arthritis