

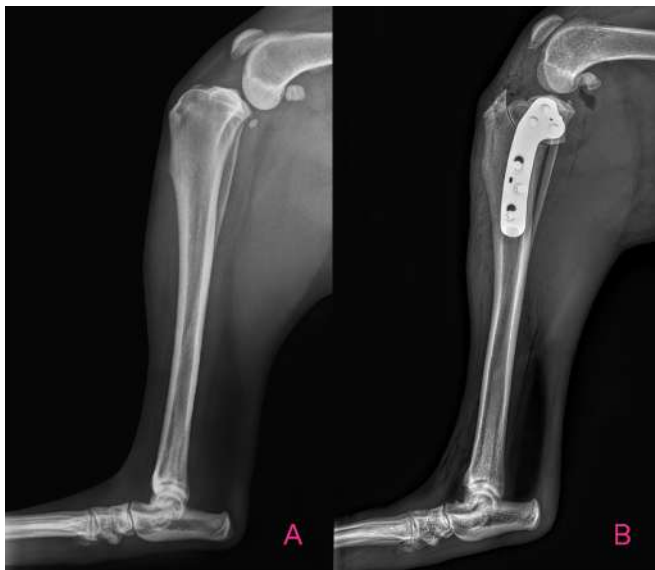


## CRANIAL CRUCIATE LIGAMENT RUPTURE

**Cranial Cruciate Ligament Rupture (CCLR)** is a degenerative condition of uncertain cause. The most likely hypothesis to date is a genetic origin.

Partial CCLR almost always progresses to complete CCLR within less than 2 years. Since CCLR is degenerative, the other knee may deteriorate over time. Approximately 30 to 50% of dogs that develop CCLR will also develop a lesion of the cranial cruciate ligament in the other knee in the following years. Therefore, the other knee may require future surgery.

## SURGERY



**Figure 1**  
A) Medio-lateral radiograph of the knee of a patient with CCLR  
B) Medio-lateral radiograph of the knee of a post-TPLO patient

TPLO stands for Tibial Plateau Leveling Osteotomy. TPLO involves cutting the proximal tibia to change the knee anatomy and thus stabilize the joint. The leveling of the tibial plateau is maintained using a plate and screws made of surgical-grade steel.

In certain specific cases, **both knees may be operated on at the same time**. The risks of complications are slightly higher than when the knees are operated on at different times. Recovery is a bit more difficult for the patient during the first postoperative week. A 2-month period of complete rest must be strictly observed to limit the risks of complications. There is an advantage for the patient who will only have to live through one postoperative period and for the owners since the costs of a second intervention are avoided.

## PROGNOSIS

**The surgical prognosis is excellent** when TPLO is performed by a surgeon who has completed a residency in surgery with the ACVS (American College of Veterinary Surgeons) or the ECVS (European College of Veterinary Surgeons).

Since cats are also athletes, they benefit as much as dogs from the advantages of TPLO compared to surgical alternatives.

There are different surgical alternatives to stabilize a knee affected by CCLR. The short, medium, and especially long-term success is superior with TPLO, for both small and large patients. Other surgical approaches (extra-capsular lateral suture [Flo], TTA, Tightrope, TTO, etc.) are only considered if the budget does not allow for a TPLO, which is recognized as **the best surgery to stabilize a knee**.

## RISKS OF COMPLICATIONS

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The most common complications of TPLO are **infections** (3-5%), **late meniscal tears** (3-5%), and in rare cases, implant breakage (<1%).

- **Infection**

**Infections** can occur during the first few weeks after surgery or several months later. Clinical signs associated with infections include lameness, an abnormal appearance of the wound (redness, swelling, discharge, etc.), and discomfort upon palpation of the implants.

When an infection is associated with surgical implants, it is often necessary to plan to remove the implants. Removing implants when bone healing is complete will not impact the prognosis since the bone is healed. If an infection is diagnosed before the scheduled 2-month postoperative follow-up, antibiotics will be prescribed until bone healing is achieved.

- **Late Meniscal Tear**

The menisci are evaluated during surgery. If a meniscal lesion is identified, meniscal release or partial meniscectomy will be performed. Some patients may develop a **late meniscal tear** several weeks to several months after surgery.

In most cases of late meniscal tear, the definitive treatment will be to remove the meniscal tear by arthrotomy. Patients with a meniscal tear will have more arthritis in the medium and long term than patients whose menisci are preserved.

- **Implant Breakage**

This complication is **rare** and generally occurs when recommendations for complete rest are not followed.

## FOLLOW-UPS

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Bone healing is completed after 2 months of complete rest in the majority of patients. The patient will be in recovery during this whole period, so it is normal for them to have a slight lameness of the operated limb until the radiographic follow-up. This lameness should gradually improve throughout the healing period. If deterioration is noted, prompt follow-up with your veterinarian or at an emergency center is indicated.

Two follow-ups are generally sufficient to ensure the adequate progression of the surgery.

- The **first follow-up** scheduled **2 weeks after surgery involves** assessing the patient's gait, the progression of wound healing, and if adequate, removing the sutures.
- The **second follow-up** scheduled **2 months after surgery** involves evaluating the patient's gait, palpating the stability of the knee and kneecap, and performing knee radiographs under deep sedation. At this follow-up, 2 radiographic views will be taken and sent to Coupez for the evaluation of bone healing.

Rehabilitation will be completed 4 months after surgery. The patient should no longer be limping at this stage. If it is the case, a follow-up is indicated.

**Last update:** March 2024

