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NEWS RELEASE Meet Audra – A TPLO success story!



Left: Auda before her surgery. Right: This postoperative radiograph shows an example of a dog following a tibial plateau levelling osteotomy (TPLO).

Pretoria - The <u>University of Pretoria</u>'s (UP) <u>Onderstepoort Veterinary Academic Hospital</u> (OVAH) at the university's <u>Faculty of Veterinary Science</u>, is dedicated to helping pets regain their mobility and quality of life. Recently, we had the pleasure of treating Audra, who underwent a tibial plateau levelling osteotomy (TPLO)—a surgical procedure designed to stabilize the knee joint after a cranial cruciate ligament (CCL) rupture.

According to 13-year-old Audra's owner, <u>Prof Karen Keddy</u>, who is also the HOD: <u>Veterinary Tropical Diseases</u> at the faculty, they became aware of her problem when they noticed that Audra was limping and favouring her right leg when she was taken for a walk in the morning. "Her regular veterinarian suspected osteosarcoma/bone cancer, but the correct diagnosis was made by <u>Dr Adriaan Kitshoff</u> at the faculty's Onderstepoort Veterinary Academic Hospital (OVAH)," Prof Keddy says.

Audra recovered extremely well after her surgery and in December 2024 she was running around at the beach without any discomfort. Her mobility was back to normal. "As grateful owners we just want to thank Dr Kitshoff,

staff and veterinary and veterinary nursing students at the OVAH," she says. According to Dr Kitshoff cranial cruciate ligament rupture doesn't have to be the end of an active life. "With TPLO surgery, Audra got a second chance, one where pain no longer holds her back and every step is filled with the joy of movement," he says.

In this article, Dr Kitshoff, who is a small animal specialist surgeon and head of the faculty's <u>Small Animal Surgery</u> <u>Section</u>, defines a cranial cruciate ligament (CCL) rupture, what the signs of CCL rupture are and the use of a tibial plateau levelling osteotomy (TPLO) procedure to change the biomechanics of the knee to restore stability with a success rate of between 90% and 95% to regain normal or near-normal function.

What is a Cranial Cruciate Ligament Rupture?

The cranial cruciate ligament (CCL) in dogs is similar to the anterior cruciate ligament (ACL) in humans. It plays a crucial role in stabilizing the knee (stifle) joint, preventing the tibia (shin bone) from sliding forward when a dog walks or runs.

When this ligament ruptures—whether due to age-related degeneration, genetics, obesity, or sudden injury—it results in pain, limping, and joint instability. Left untreated, CCL rupture leads to arthritis, muscle loss, and further joint damage.

Signs of a CCL Rupture:

- Sudden limping or lameness in a hind leg
- Difficulty standing up or jumping
- Decreased activity and reluctance to play
- Swelling around the knee joint
- "Toe-touching" (not fully bearing weight on the leg)
- Sitting with the affected hindlimb pointing forward

How Does TPLO Work?

Unlike human ACL repairs, TPLO does not replace the torn ligament. Instead, the procedure changes the biomechanics of the knee to restore stability.

- A curved cut is made in the tibia (shin bone).
- The top portion (tibial plateau) is rotated to a more level angle.
- A metal plate and screws secure the bone in its new position.
- This new alignment allows the dog to bear weight without excessive joint movement, reducing pain and improving function.
- This eliminates the need for the CCL, allowing dogs to regain mobility without relying on the damaged ligament.

How Well Do Dogs Recover?

- 90-95% of dogs regain normal or near-normal function.
- Most dogs walk within days of surgery.
- With proper post-op care, dogs can return to full activity in 3-6 months.

Will My Dog Need Surgery?

Although larger, active breeds (like Labradors, Golden Retrievers, and Rottweilers) benefit from TPLO surgeries this procedure is also very effective in small breed dogs.

If your dog is limping, struggling to get up, or reluctant to exercise, they might have a CCL injury. Early diagnosis and treatment are key!

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ABOUT THE UNIVERSITY OF PRETORIA

The University of Pretoria (UP) is one of the largest contact and residential universities in South Africa, with its administration offices located on its Hatfield Campus in Pretoria. This 115-year-old institution is also one of the largest producers of research in South Africa.

Spread over seven campuses, it has nine faculties and a business school, the <u>Gordon Institute of Business</u> <u>Science</u> (GIBS). It is the only university in the country with a <u>Faculty of Veterinary Science</u>, which is ranked the best in Africa. UP has 120 academic departments and 92 centres and institutes, accommodating more than 56 000 students and offering about 1 100 study programmes. It has the most academic staff with PhDs (70%), NRF-rated researchers (613).

The 2025 Times Higher Education subject rankings placed UP first in South Africa in the fields of <u>Accounting</u> and <u>Finance</u>; <u>Architecture</u>; <u>Electrical and Electronic Engineering</u>; Law; Sport Science; and Veterinary Science. UP's Faculty of Law has been ranked as the top law school in Africa for a remarkable eighth consecutive year.

Quacquarelli Symonds (QS) ranked the University among the top five in Africa, as part of their <u>2024 World</u> <u>University Rankings (WUR)</u>. UP was the only South African university featured in the <u>2023 World University</u> <u>Rankings for Innovation (WURI)</u>, falling within in the 101-200 range of innovative universities.

For more information, please go to www.up.ac.za