# CASE SUMMARY

## Canine, "Deedee", TPLO (Tibial Plateau Leveling Osteomy) rehabilitation

**COMPANION** ANIMAL HEALTH

*Case Courtesy of:*
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**Signalment:** Canine, 11yo, F, Labrador/Staffordshire Bull Terrier mix

**History:** Deedee became acutely lame on the right pelvic limb after playing outside. She was diagnosed with a right cranial cruciate ligament (CCL) rupture; surgery was recommended. Her owners pursued physiotherapy before and after TPLO surgery.
Prior to this, the patient was known to have osteoarthritis affecting the thoracic limbs.

**Diagnostics and Exam Findings:** Deedee was 9/10 lame on the right pelvic limb and was non-weight bearing at a trot. She was hesitant to fully extend her right stifle and cranial drawer and crepitus were present. The quadriceps and hamstrings of the right hind limb were atrophied and there was moderate hypertonicity and trigger points of the epaxials.

**Treatment Details:** Physiotherapy sessions began prior to surgery and resumed three weeks postoperatively, once to twice weekly. Sessions included laser therapy of the right stifle (8J/cm²), passive range of motion, massage, and therapeutic exercise including underwater treadmill walking. Exercise intensity and session frequency were based on improvement with weight bearing in the pelvic limbs as shown by the stance analyzer. Sessions were reduced to one per month once weight-bearing percentages were near-normal.

**Stance Analysis:** Stance analyzation preoperatively showed that Deedee bore only 3% of her weight on the right hind limb (normal 20%). To compensate, she was placing 34% of her weight on the left hind limb (normal 20%). Within 8 post-operative rehabilitation sessions, weight bearing of the right hind limb became normal at 20% and the primary limb of compensation, the left rear, reduced to 25%. The left hind limb continued to improve over the next two months and returned to normal at 21% (figures 1 & 2).

**Other Treatments:** Meloxicam was used postoperatively.

**Comments:** The stance analyzer was important for determining the treatment plan. The physiotherapist stated, "Thanks to the stance analyzer, I have been able to use the quantitative data from our sessions in a way that has allowed me to monitor progress and, in turn, I have been able to provide a clear and tailored set of exercises and activities for the dog and owner which ensured continued recovery from injury and surgery. We continue to use the stance analyzer at maintenance sessions to monitor Deedee, especially with the known arthritis of the forelimbs and reported degeneration of the left CCL".
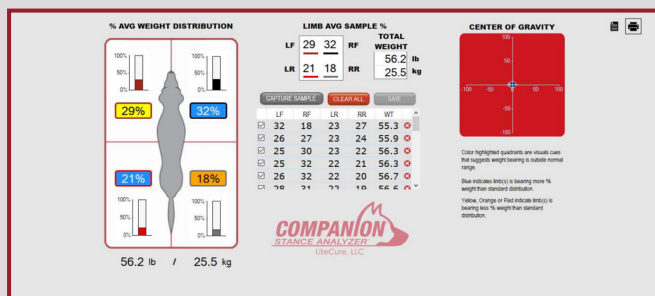


**Figure 1 –** Weight-bearing percentages 5 months post-TPLO



**Figure 2 –** Weight-bearing percentages 1 month before surgery and 3 and 5 months post-TPLO

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