



**VETERINARY VOICE:  
Tips of the Trade**

**Surgery – Tibial Tubercle Advancement (TTA)**

<p><b>What is the TTA?</b></p>	<p>The Veterinary Specialty Center of Tucson now offers a new procedure to treat cranial cruciate ligament tears. This procedure is called the Tibial Tubercle Advancement (TTA). Cruciate ligament injuries are by far the most common orthopedic ailment in our canine patients. The TTA surgery is the latest surgical advancement to treat cruciate ligament rupture, and complements the Tibial Plateau Leveling Osteotomy (TPLO) procedure. The TTA procedure has been used for the last three years and long-term follow-up studies are not yet available, however, early results are positive.</p>
<p><b>How does it work?</b></p>	<p>Doctors Montavon and Tepic from Switzerland determined that by advancing the tibial tuberosity in a cruciate deficient stifle, the patellar ligament can be positioned perpendicular to the tibial plateau and this eliminates cranial tibial thrust and any tensile load on the deficient cranial cruciate ligament. This technique preserves the normal range of motion of the joint, increases the lever-arm of the quadriceps group, and reduces retropatellar forces, thereby reducing the risk of osteoarthritis.</p>
<p><b>What is the procedure?</b></p>	<p>Precise radiographic measurements are made to determine the proper degree of tibial tuberosity advancement required. The tibial tuberosity is osteotomized and advanced cranially using a specifically designed titanium cage, which acts as a bone spacer. The construct is stabilized using a low profile titanium plate, which is secured to the tibial tuberosity with specially designed titanium hooks. The plate is then secured to the tibia with two screws. As a final step, cancellous autograft or a corticocancellous allograft is packed in the tibial osteotomy to promote healing.</p>
<p><b>TTA vs. TPLO?</b></p>	<p>The TPLO is an excellent procedure to stabilize the cruciate deficient stifle and has certain benefits over TTA such as being able to correct for limb alignment. Both procedures can be used to correct for concurrent patellar luxations. However, patients that do not require limb alignment correction are good candidates for the TTA. The decision to perform a TTA versus a TPLO procedure is one that the surgeons at VSCT will determine based on an individual examination of the pet.</p>
<p><b>Questions?</b></p> <p><b>Surgical Experts:</b></p> <p><b>Jim Boulay, DVM, MS DACVS</b>  <b>Barb Gores, DVM, DACVS</b>  <b>Sharon Shields, DVM, DACVS</b></p>	<p>The Veterinary Specialty Center of Tucson has board-certified surgeons available for questions and consultations on surgical conditions during the weekdays. A member of the surgery team is on-call 24/7 to provide consultations to VSCT emergency doctors and to perform emergency surgery for patients seen by the VSCT emergency service. Board-certified surgeons have four additional years of training are certified by the American College of Veterinary Surgeons to assure competency in advanced veterinary surgery.</p>