Canine Unicompartmental Elbow (CUE) Arthroplasty System

The CUE Arthroplasty System is designed to provide a surgical treatment option for medial compartment disease (MCD) of the canine elbow. This common cause of lameness has no treatment options that consistently result in full function outcomes with low morbidity and complication rates.

To date, 26 dogs have been enrolled in a limited clinical trial at 6 centers. Dogs were included based on a diagnosis of MCD of one or both elbows that had failed previous treatment(s). Preoperative assessments included orthopaedic examination, range of motion measurements, lameness evaluation, and radiographic assessment of the affected limbs. The CUE surgeries were performed using a standard operating protocol. Dogs were assessed at defined time points postoperatively using the same outcome measures as done before surgery.

Intraoperative complications occurred in 1 case (3.8%): cranial misplacement of the humeral implant that was corrected immediately. Short to mid-term complications occurred in 5 cases (19.2%): Major = 1 case of ongoing severe lameness at 11 weeks postop; Minor = 4 cases of mild carpal hyperextension and/or lameness which resolved by 6 months postop. No catastrophic complications have occurred to date. No implant problems have been noted on radiographic evaluations through 1 year after surgery.

Of the 26 total cases, 15 have been assessed ≥ 6 months after surgery. Four of these cases have undergone forcemat evaluation of limb function in addition to lameness grading. All 15 dogs (100%) have improved from their preop level of function and the degree of improvement was statistically (p<0.01) and clinically significant. Five second-look arthroscopies done 3 to 7 mos postop all showed stable implants with new fibrocartilage ingrowth adjacent to both implants and no evidence of inappropriate wear. Lateral compartment cartilage surfaces were unchanged compared to preop assessments with no evidence for abnormal wear or visible lesions.

Based on the initial results of the CUE Multicenter Clinical Trial, this procedure appears to be safe for treatment of medial compartment disease in the canine elbow and warrants continued clinical evaluation.

Surgeons contributing to the multicenter clinical study:

Dr. Kurt Schulz* - Burlington Veterinary Specialists
Dr. Sherman Canapp - Veterinary Orthopaedic & Sports Medicine
Dr. Peter Lotsikas - Veterinary Orthopaedic & Sports Medicine
Dr. Noel Fitzpatrick - Fitzpatrick Referrals
Dr. David Crouch - Western Carolina Veterinary Surgery
Dr. Ned Williams - Eastern Carolina Veterinary Referral
Dr. Ken Bruecker - Veterinary Medical and Surgical Group

Dr. James L. Cook* - University of Missouri
Dr. Dan Lewis - University of Florida
Dr. Antonio Pozzi - University of Florida
Dr. Wayne Whitney - Gulf Coast Veterinary Surgery
Dr. Mitch Gillick - Toronto Veterinary Emergency Clinic
Dr. Mark Albrecht - Gallatin Veterinary Hospital
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*Disclosure: Drs. Schulz & Cook are patent holders on the CUE and will receive royalties associated with sales of the CUE.