Assessment of repeatability of preoperative planning for the tibial tuberosity advancement procedure

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Cranial cruciate ligament (CrCL) tears are the most common reason for hindlimb lameness and pain in canine patients. Many procedures have been developed to address this problem, including the Tibial Tuberosity Advancement (TTA) procedure. Preoperative planning for the TTA procedure relies largely on the observer's ability to identify specific radiographic landmarks and make measurements, which may vary among individual observers. Our pilot study aims to investigate the learning curve required to develop competency in making these preoperative measurements. Radiographs underwent preoperative planning measurements by two individuals of different levels of education (second-year veterinary student and a board-certified veterinary surgeon). After the first round of measurements, the student had another training session, and the process was repeated. The results were analyzed for inter- and intraobserver differences. The concordance correlation coefficient increased from 0.79 to 0.97, indicating improved agreement between the two observers during round two. Further, the mean coefficient of variation was close to zero and improved during round two, indicating less variation among the observers. Overall, preliminary results show that the student's ability to recognize radiographic landmarks and make preoperative measurements significantly improved following the second training session.