# A New Model for Student Learning for Palpation of the Canine Stifle

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## Summary and Introduction

- Canine cranial cruciate ligament rupture (CCLR) is the most common orthopedic condition in dogs, resulting in stifle joint instability allowing cranial tibial translation during weight bearing, leading to inflammation, osteoarthritis, and medial meniscal injury.
- The cranial drawer test (CDT) and tibial compression test (TCT) are two tests used to diagnose CCLR.
- Many students do not gain experience with these skills until clinical rotations.
- Our goal was to create a life like model to allow students to develop the skills to perform the CDT as day one ready veterinarians.
- Using models with adjustable mechanisms stimulating intact and torn CCLs, student and expert testing was conducted evaluating the replication of the CDT in a dog.
- Majority of both groups agreed the model would make a good teaching tool to increase student confidence in performing the CDT.
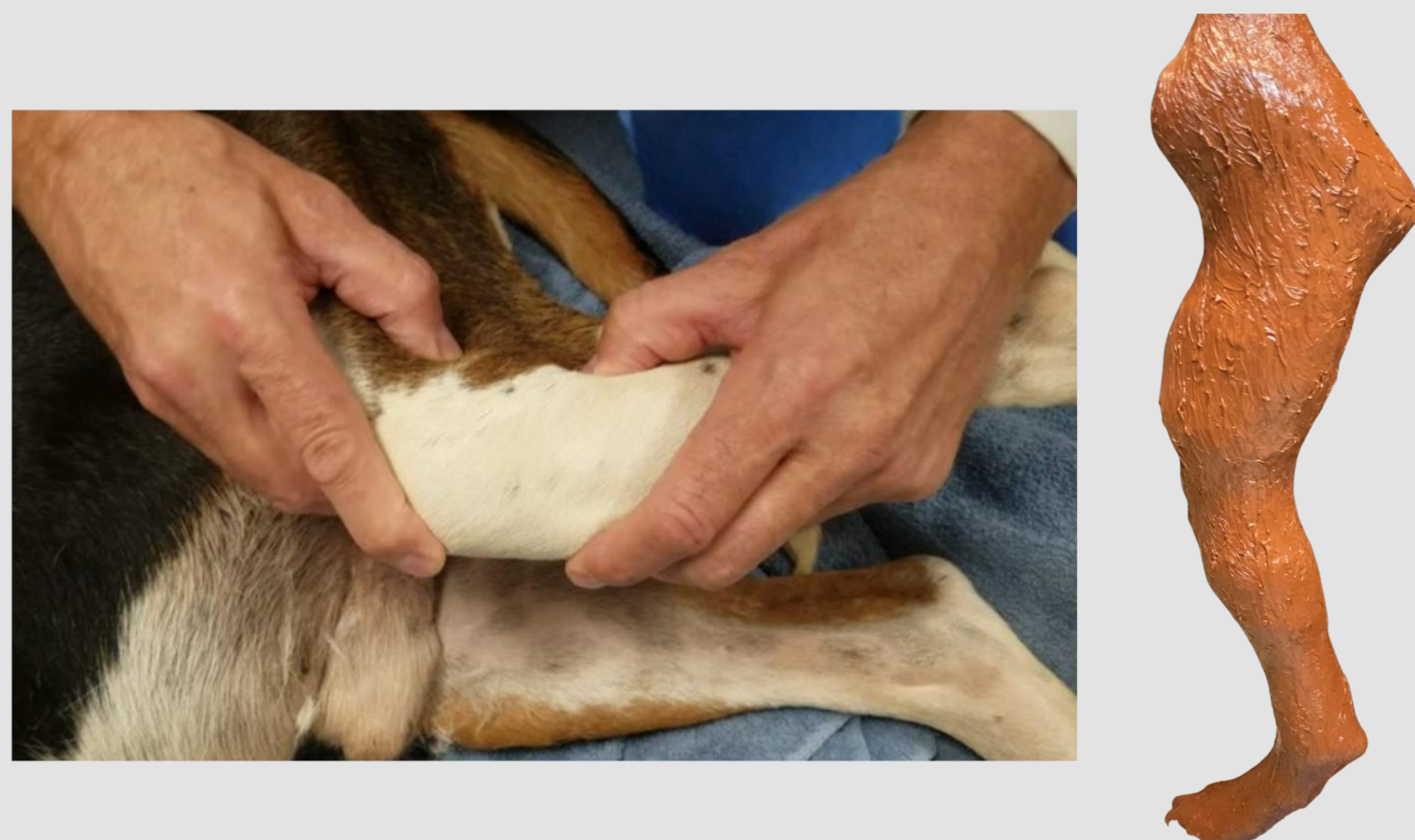
## Study Design

- Two models were used in the study, one set to replicate an intact cruciate ligament and the other set to replicate a completely torn ligament.
- Participants alternated palpating the intact or torn cruciate ligament first.
- Students were then asked to fill out a survey. For each model they were asked if cranial drawer was present. They also were asked if the model had adequate landmarks, looked and felt realistic, was easy to use, and had improved the CDT skill.
- The expert survey included additional questions about the model's suitability for teaching and assessing the CDT skill, whether the model gave a general idea of the tactile experience when performing this skill, and whether the model would be helpful for students to practice the skill before performing it on a live animal.

## Results

All veterinarians agreed that the model was easy to use; it would teach students the proper steps to perform the CDT; it would help students practice the skill before performing on a live animal; and it would be adequate to use in student assessment of the skill. As shown in Figure 1, most participants agreed the model had adequate landmarks, was easy to use, was life-like, and helped improve or teach them the skill.

Figure 1: Results of the Study

Participants agreed or strongly agreed
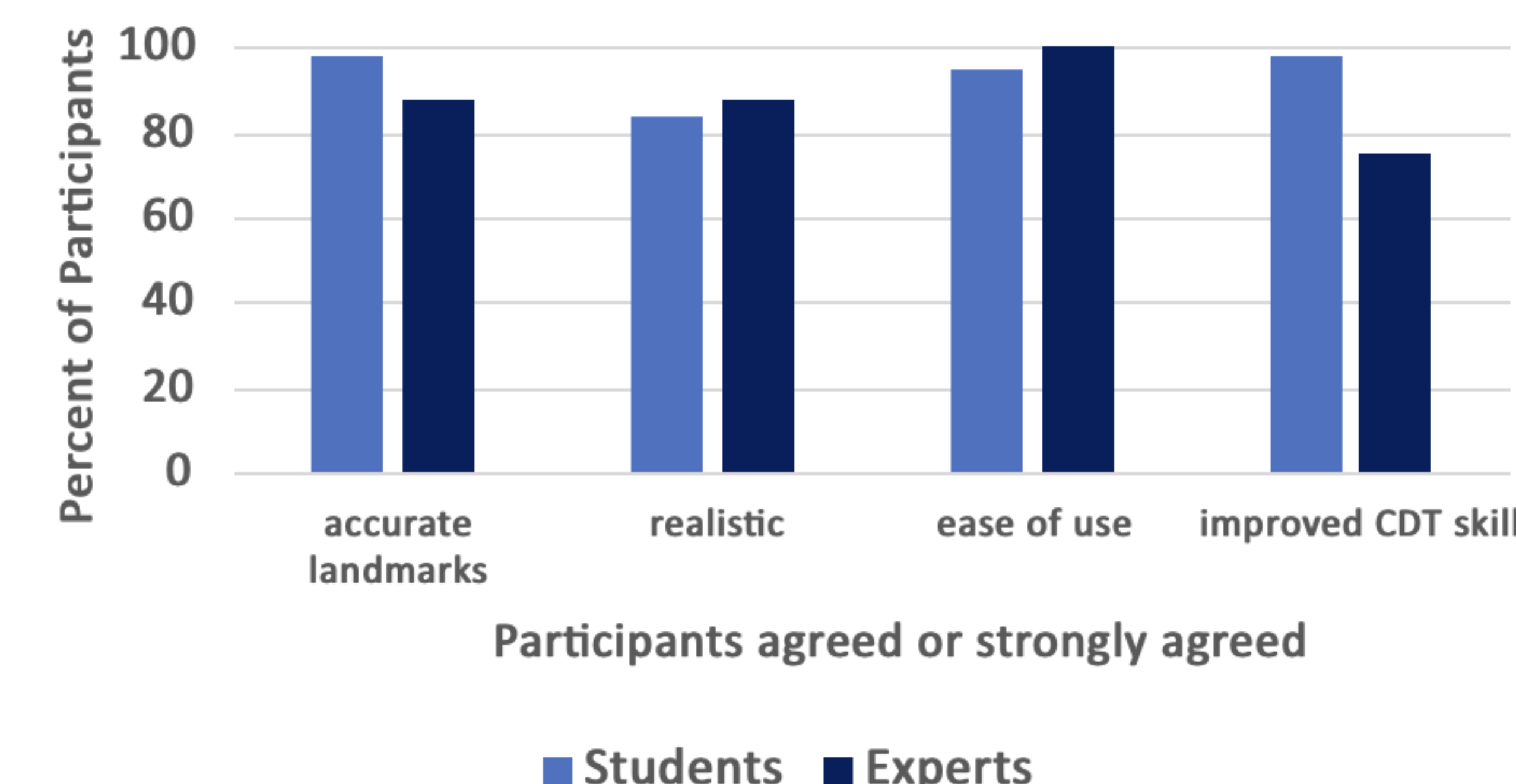
■ Students  ■ Experts

## Conclusion

- The expert data collected in this study provided content validation supporting the model's use in teaching and assessing students performing the CDT.
- Student survey data supported that the model was easy to use and well accepted.
- Use of this model would allow students to practice the CDT without the presence of a live patient.

## Future Directions

Further validation testing on the canine stifle model will collect and compare performance data from experts and students. Future iterations of the model may consider including the tibial compression test, adding another skill for students to practice before entering clinical practice.

## Acknowledgements