

**Title:** Risk factors for cranial cruciate ligament rupture in dogs participating in canine agility

**Version:** 1 **Date:** 14 Oct 2021

**Reviewer:** David L. Dycus

**Reviewer's report:**

This is a great addition to the veterinary literature. There is paucity of information on agility/sporting dogs and even less information on the concept of fitness/strength/endurance, etc. While the authors recognize the limitations of this being a client driven data set, I find the information useful to begin to ask the clinical questions that will need to be addressed in the future. This manuscript is an excellent start to that and I for one will be happy to see it published.

In general the manuscript flows well. The introduction provides a brief history of CCL pathology, and then introduces agility with the pitfalls of paucity of information. The authors do a good job of linking what is known on the human side to create the argument for the need for this topic. The methods are straight forward and would be easy to reproduce. Unfortunately I was not able to access the supplementary files to review the questionnaire. The statistical analysis appears appropriate and complete for the data the authors are evaluating. The results are presented in an organized manner and the usage of tables help with decoding the data/results. The discussion does a great job of expanding on the results without simply re-listing them and in addition, the authors do not make claims that are not supported by their results.

Specific comments are below:

Line 50: I will leave it up to the AE and EIC on determining terminology usage. However, in this reviewer's opinion I would not use the word "injury" unless the objective of this study is to evaluate CCL injuries (damage inflicted on the body by and external force) in agility dogs assuming this is different from the degenerative process of CCL disease in most canines. Personally I believe this can get confusing because agility dogs are susceptible to injuries not otherwise seen in companions so one could technically suffer injury to the cranial cruciate ligament. However, it appears the authors are describing the typical degenerative process of CCL disease. I would recommend changing "injury" to "disease". In addition, the authors use the word "disease" in line 53. I would recommend remaining consistent in terminology to avoid confusion.

Line 56: Pending the journal's requirements this reviewer would prefer to see the Odds ratios or p values reported in the results section of the abstract along with the findings.

Line 103: How was the questionnaire designed? Was it by the 2 authors and what was it based on?

Line 110-112: I did not see access to the supplementary files. Was the pre-injury physical activities section within both groups the same set of questions?

Line 120-122: Why was the date range of when the questionnaire was available different between the 2 groups?

Line 169: I assume the body condition score was based on owner provided feedback so I would question the validity of this. In addition in looking at Table 1 the BCS median along with the 25th and 75th percentile are exactly the same. How was there a statistical difference?

Line 277-279: I'm confused how this conclusion was reached? Is this an assumption that younger dogs would be competing at a lower level simply because they are younger? Or did the data

breakdown and find that a higher % of younger dogs competed at a lower level compared to older dogs?