

Synovial Fluid Lubricin Increases in Spontaneous Canine Cruciate Ligament Rupture

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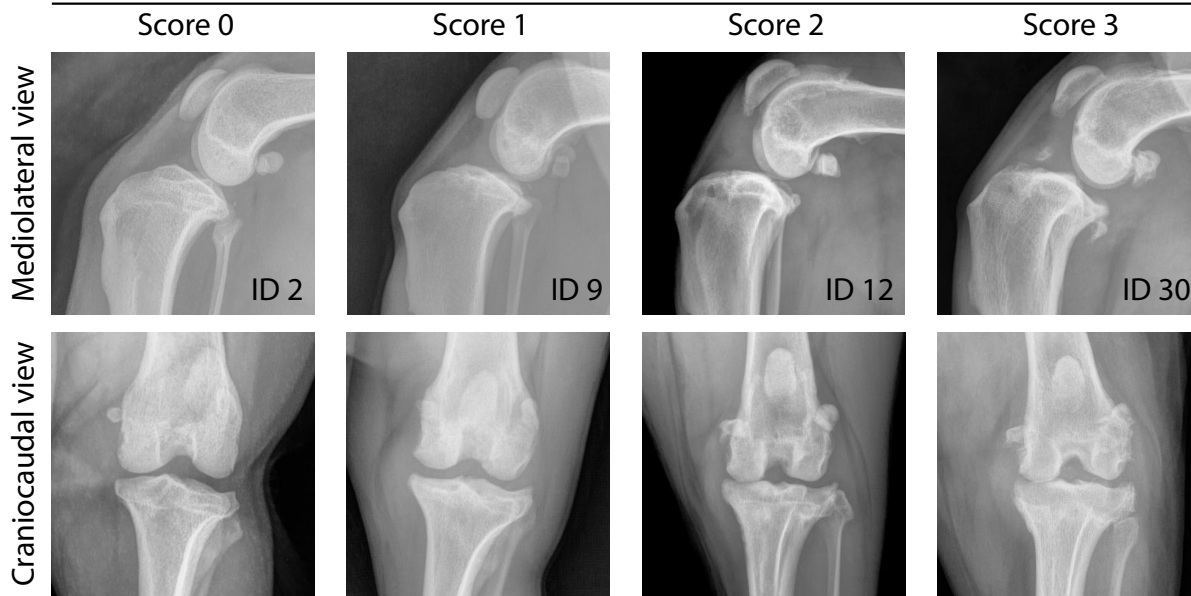
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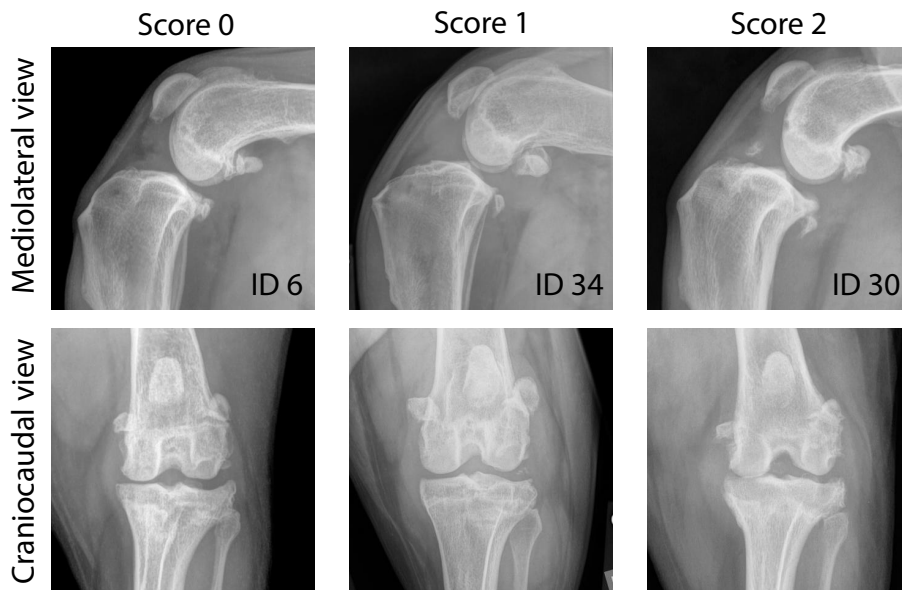
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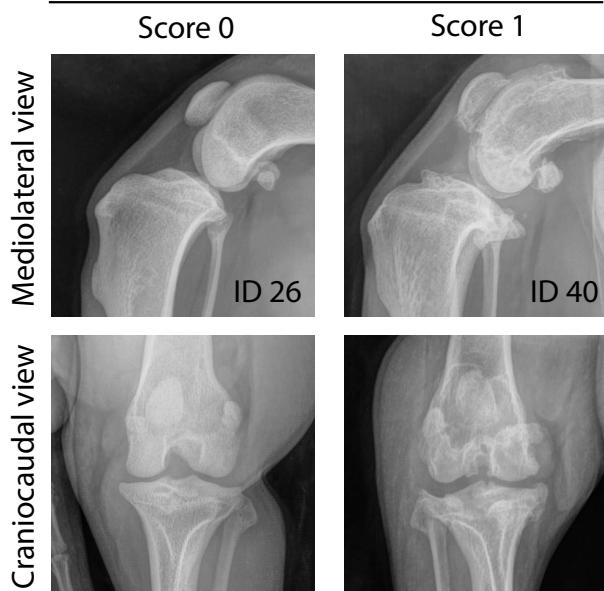
Global OA Score



Intra-articular mineralization



Caudal tibial shelf

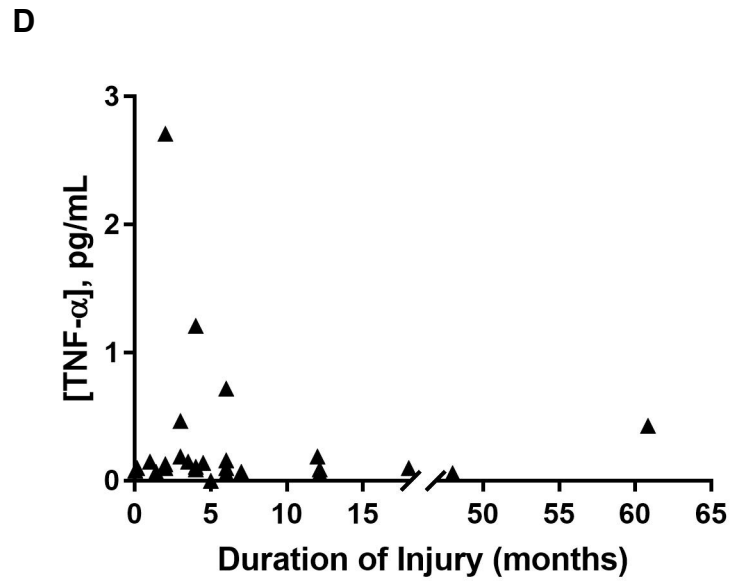
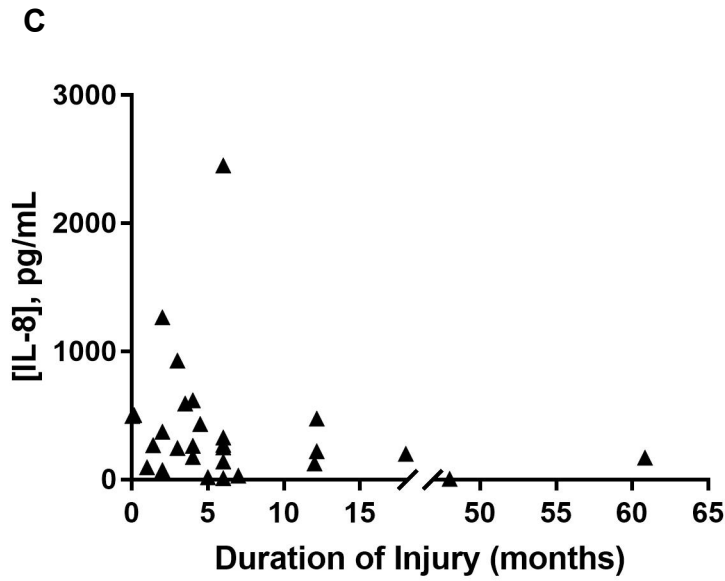
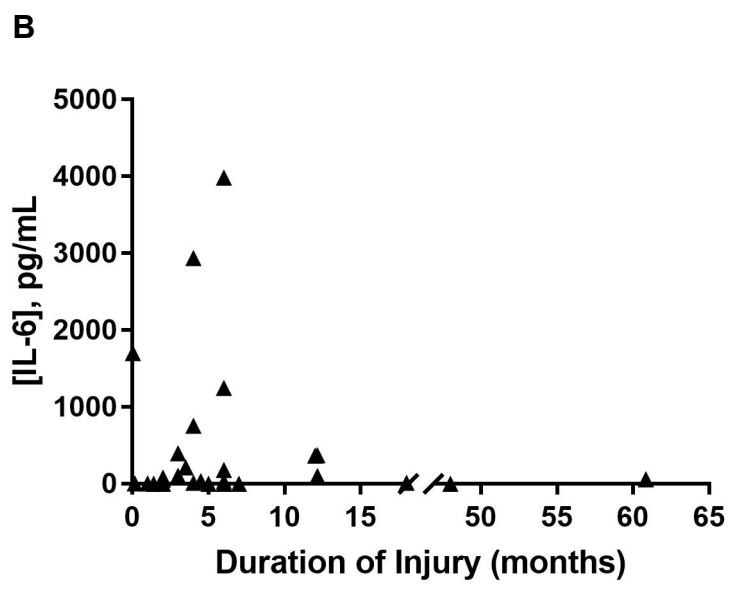
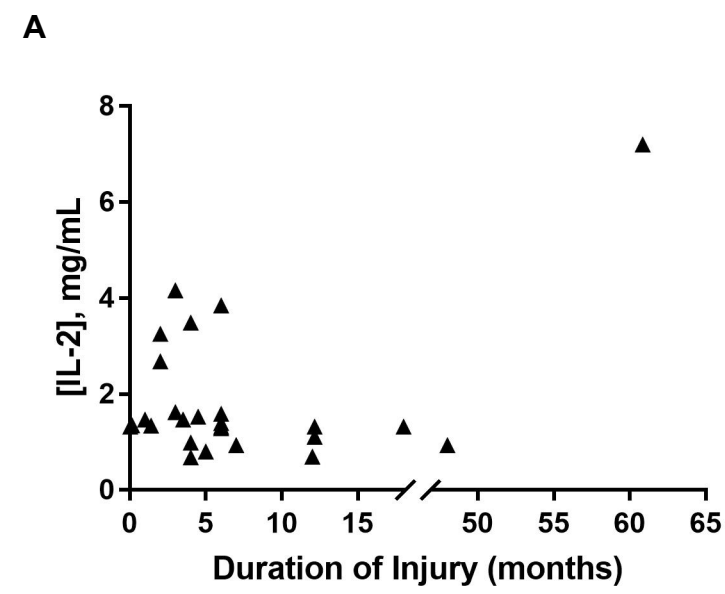


Supplemental Figure 1.

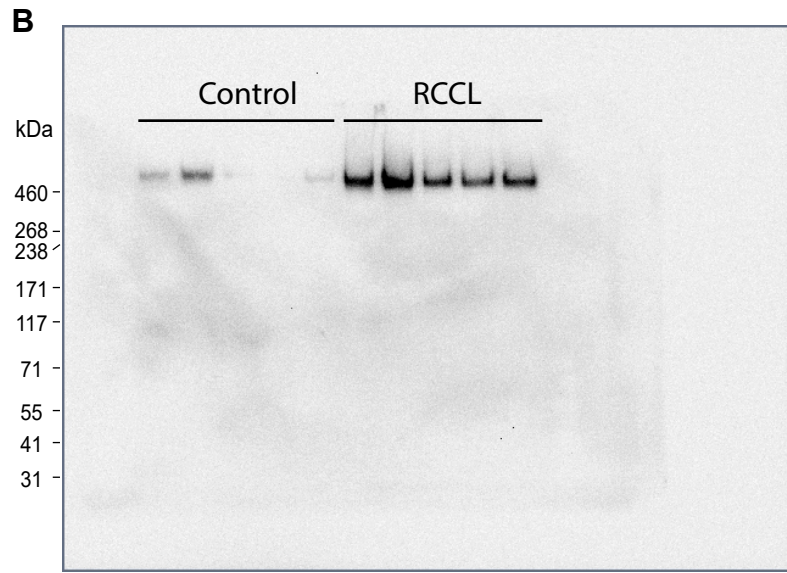
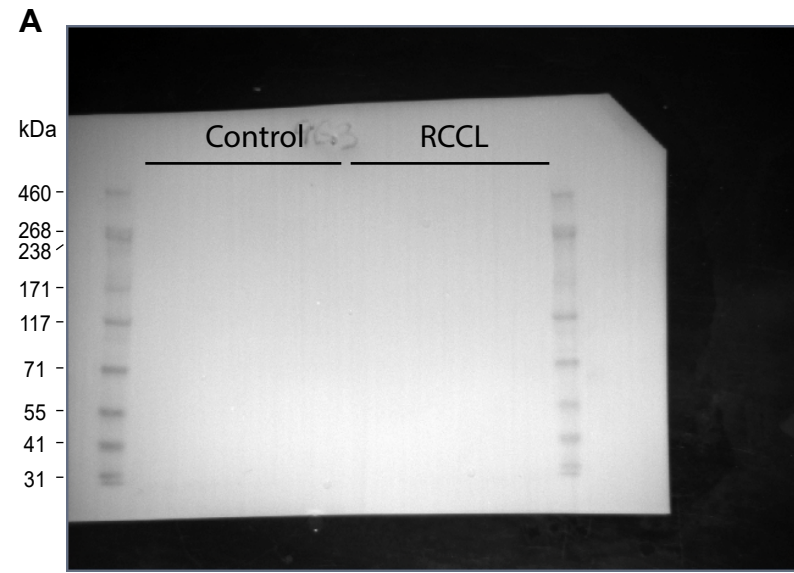
Paired mediolateral and craniocaudal radiographs from individual canine patients representing the range of possible scores for: global OA (0-3), intra-articular mineralization (0-3) and caudal tibial shelf (0-1).

	PJ vs. HR	HR vs. DG	PJ vs. DG
Global OA score	0.659	0.674	0.312
Joint effusion	0.736	0.567	0.502
Osteophytosis	0.712	0.712	0.700
Intra-articular mineralization	0.493	0.396	0.393
Medial buttress	0.433	0.570	0.474
Caudal tibial shelf	0.692	0.665	0.479

Supplemental Table 1. Linear weighted Kappa interrater agreement for canine radiographic osteoarthritis scoring. Strength of agreement was interpreted with kappa values: 0-0.2 being poor, 0.21-0.40 being fair, 0.41-0.60 being moderate, 0.61-0.80 being good, and 0.81-1.00 being very good for interrater agreement between scores for three co-authors, including the second (DG), sixth (PJ) and final co-author (HR).



Supplemental Figure 2. Synovial fluid A) IL-2, B) IL-6, C) IL-8, and D) TNF- α concentrations plotted as a function of injury duration in dogs with RCCL (n = 28).



Supplemental Figure 3. Anti-lubricin western blots of synovial fluid from 5 randomly selected control and RCCL dogs. A) Bright field image of standard ladders (HiMark™ Pre-stained Protein Standard, cat. #LC5699, Invitrogen), 5 μ L/lane, B) chemiluminescence, exposure time: 15 s; sample loaded: 10 μ L/lane.

Cytokine/Chemokine	Lubricin	Duration of Injury
IL-2	-0.23 (n.s.)	-0.31 (n.s.)
IL-6	-0.24 (n.s.)	-0.02 (n.s.)
IL-8	-0.11 (n.s.)	-0.39 (n.s.)
TNF- α	-0.25 (n.s.)	-0.17 (n.s.)

Supplemental Table 2. Correlation of inflammatory cytokine/chemokine concentrations, lubricin concentrations and injury duration in dogs with RCCL (n = 28). Data reported as Spearman's ρ , n.s.: not significant, Spearman's test, $\alpha = 0.05$.

	Control	RCCL
Number	N = 9	N = 30
Age	3.3 - 7.6 yrs, mean = 5.5 yrs	2.6 – 11.0 yrs, mean = 6.2 yrs
Sex	Intact male	13 neutered male 14 spayed female 2 intact male 1 intact female
Breed	Beagle	1 Bernese Mountain Dog 1 Boxer 1 Bulldog, English 1 Cane Corso 2 English Springer Spaniel 1 German Shepherd 3 Golden Retriever 9 Labrador Retriever 1 Mastiff 6 Mixed Dog 1 Pembroke Welsh Corgi 2 Rottweiler 2 Staffordshire Bull Terrier
Duration of injury	N/A	0 - 60.8 months, mean = 8.4 months

Supplemental Table 3. Demographics of the RCCL and control groups