

The tear film in French Bulldogs shows signs of a qualitative tear film deficiency when compared to non-brachycephalic dogs

Tear film evaluation in French Bulldogs and comparison with dolichocephalic and mesocephalic dogs

PURPOSE

To investigate the tear film characteristics of French Bulldogs in comparison to dolichocephalic and mesocephalic dogs

METHODS

- Schirmer Tear Test I
- Tear meniscus height measurement (TMH)
- Meibography
- Non-invasive tear film break-up time (NIBUT)
- Interferometry
- Osmolarity

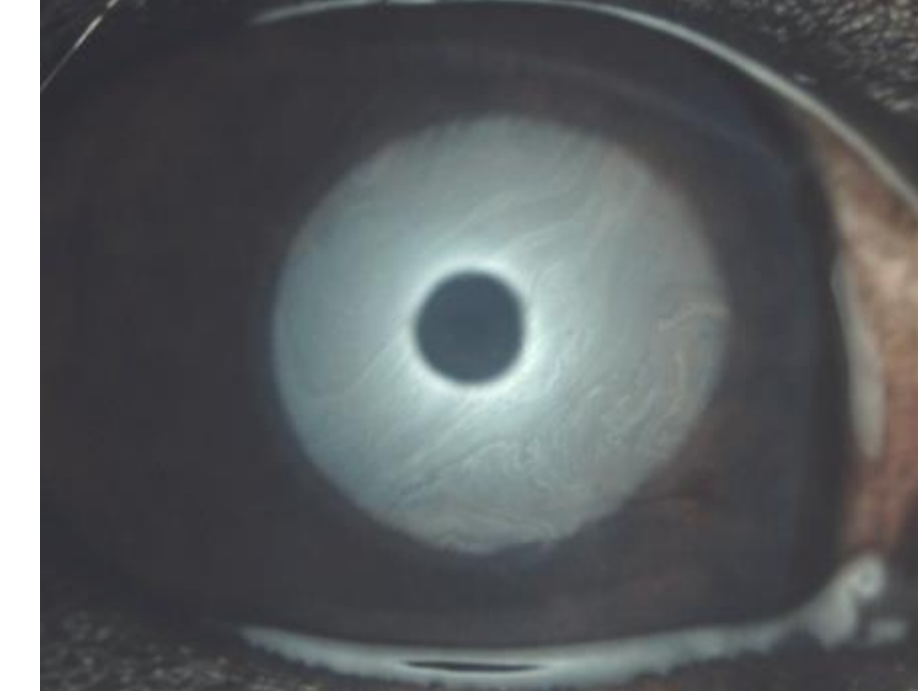
RESULTS

50 French Bulldogs (90 eyes) vs 30 mesocephalic or dolichocephalic dogs (58 eyes)

- Schirmer Tear Test I **19.05** vs. **16.88** ($p=0.017$)
- TMH **0.64** vs. **0.31** ($p=9*10^{-10}$)
- NIBUT **7.39** vs. **14.74** ($p=3.5*10^{-9}$)
- lower interferometry grading for French bulldogs
- tear osmolarity **296.6** vs. **299.8**

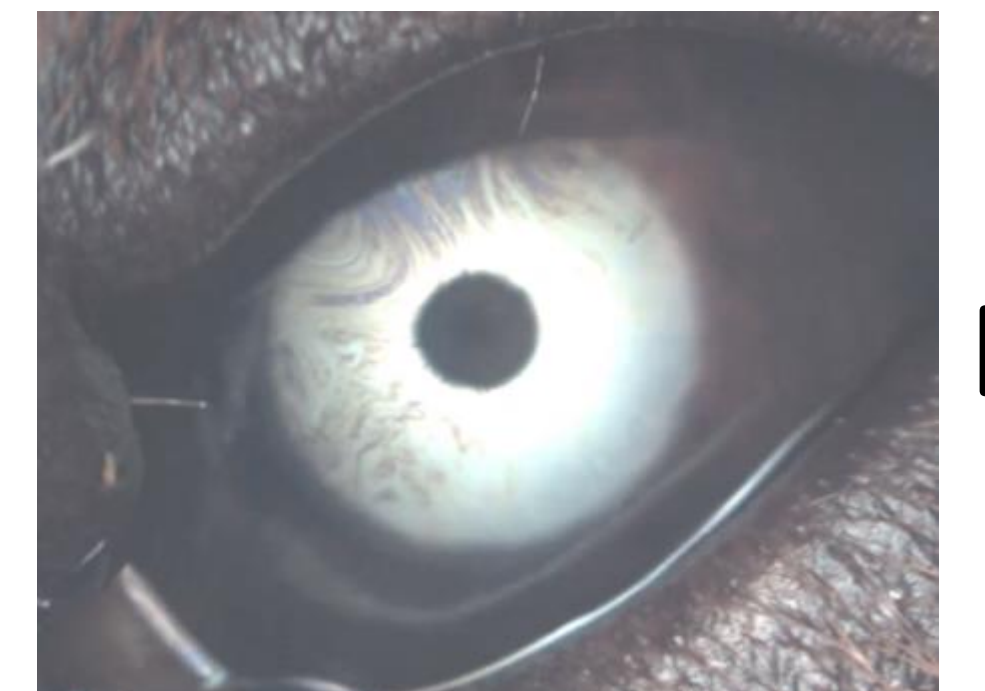
Interferometry: French Bulldogs vs dolichocephalic and mesocephalic dogs

French Bulldog 9 y



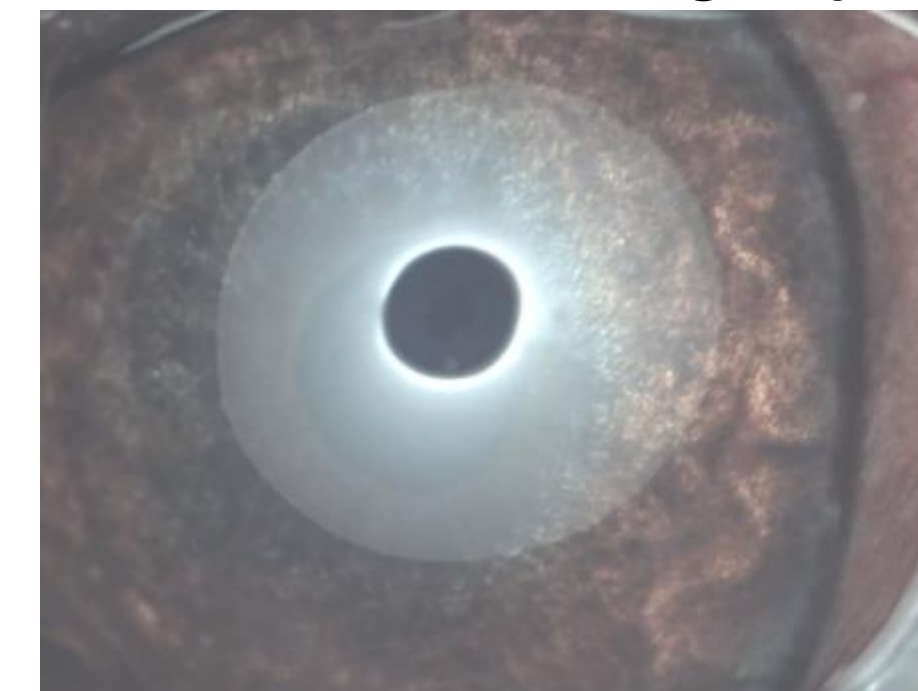
B

Golden Retriever 6 y



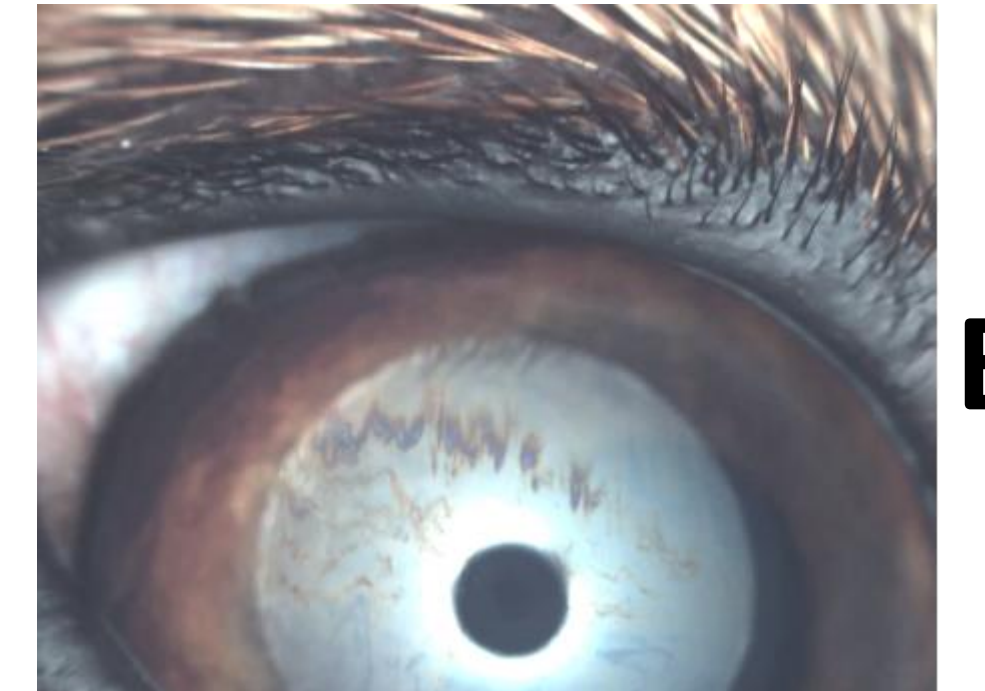
D

French Bulldog 1 y



0

Beagle 6 y



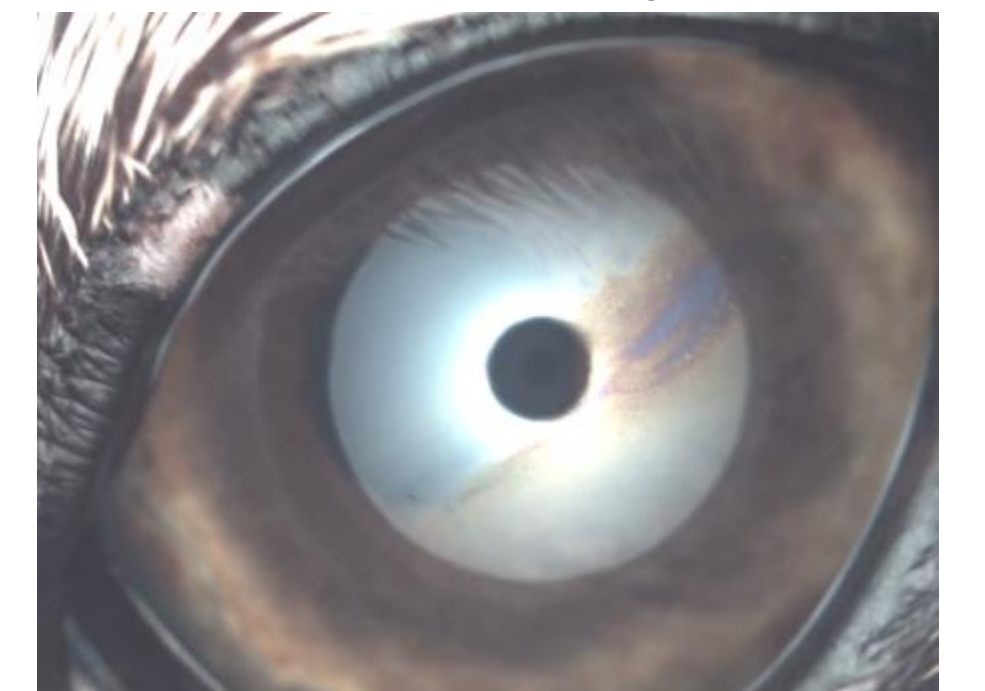
E

French Bulldog 8 y



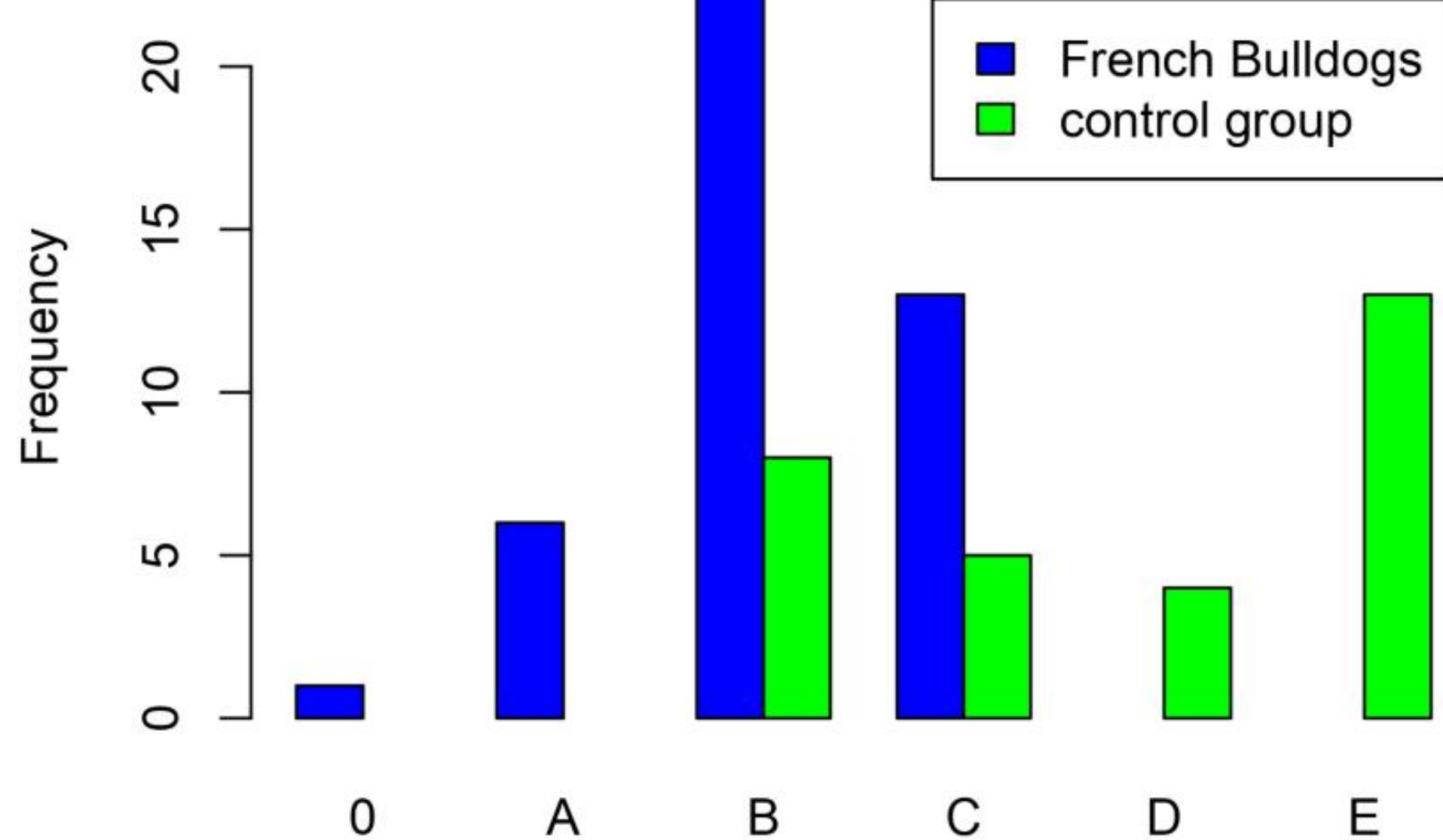
A

Saluki 7 y



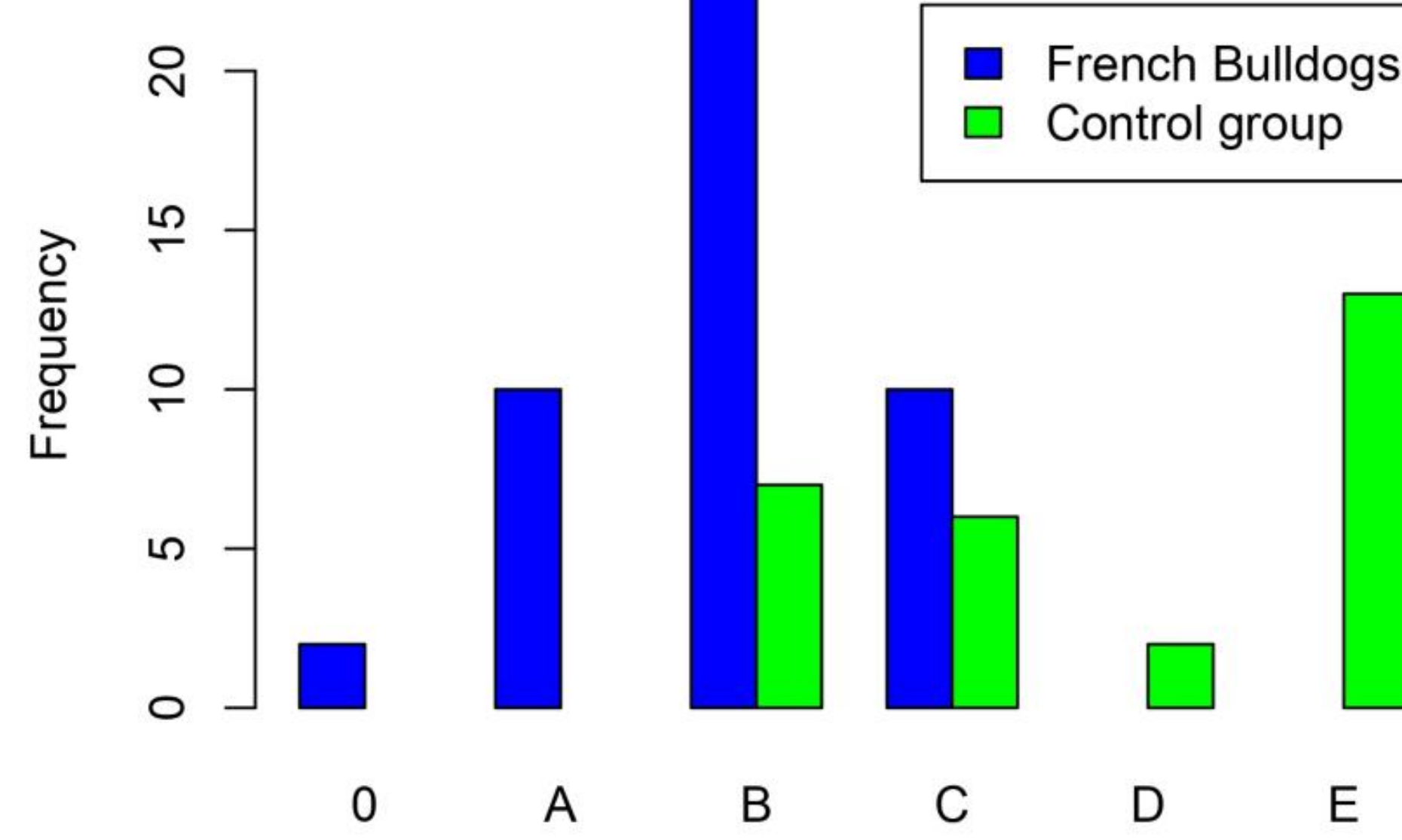
E

Interferometry Grade (left eye)



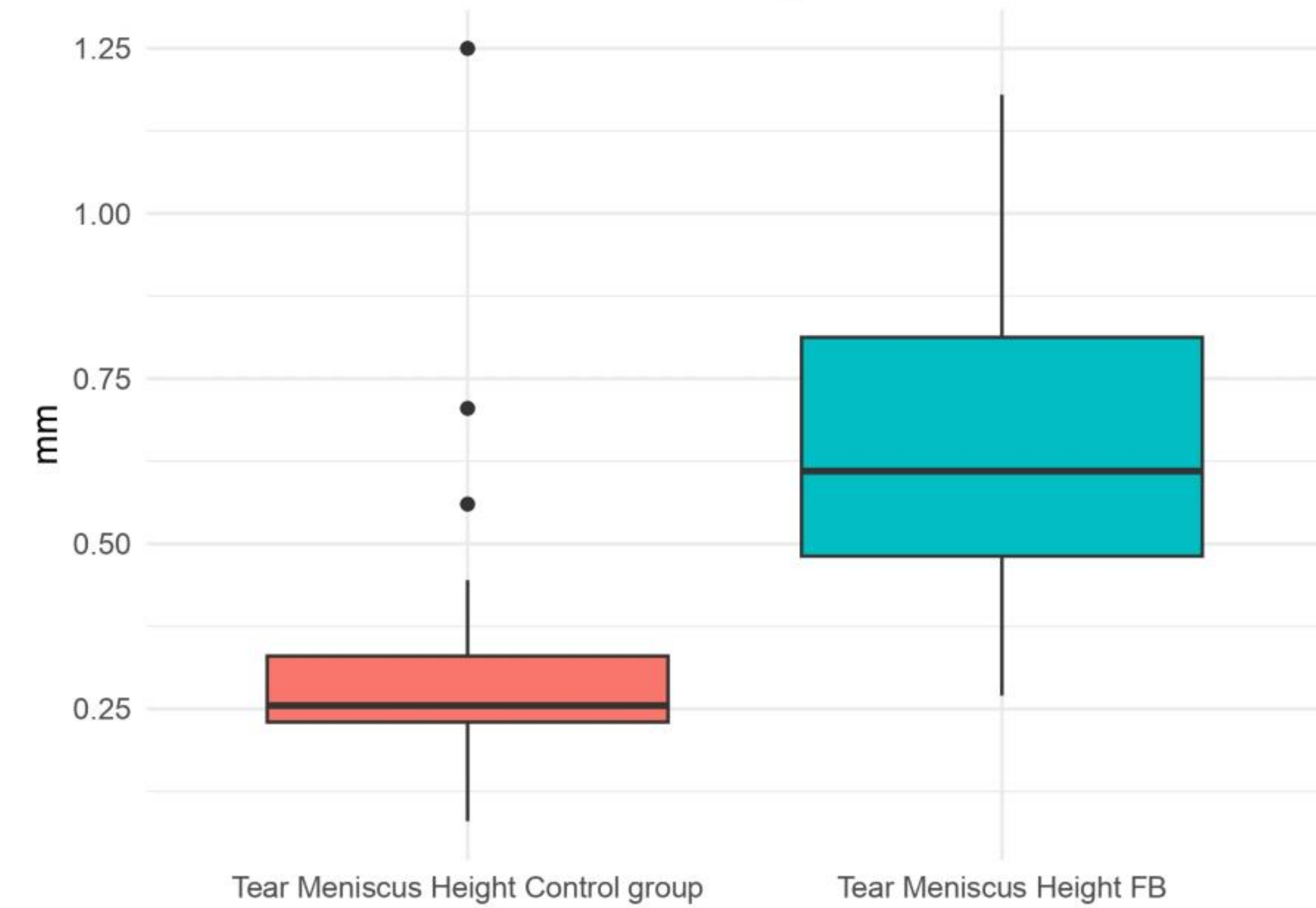
Note: Grade F was not included because no dog examined achieved this score

Interferometry Grade (right eye)



Note: Grade F was not included because no dog examined achieved this score

Tear Meniscus Height



Interferometry grading score (I.C.P. OSA-Vet®)

