



Royal
Kennel
Club

BVA/RKC/ISDS Glaucoma survey – summary of findings

April 2026



Why did we do this survey?

- We wanted to determine:
 - Whether there is an association between BVA/RKC/ISDS PLA grade and clinical outcome
 - Whether there are any differences between breeds and disease outcome
 - Whether age can impact a dog's grade
 - What outcomes and treatment methods were used in clinically affected dogs



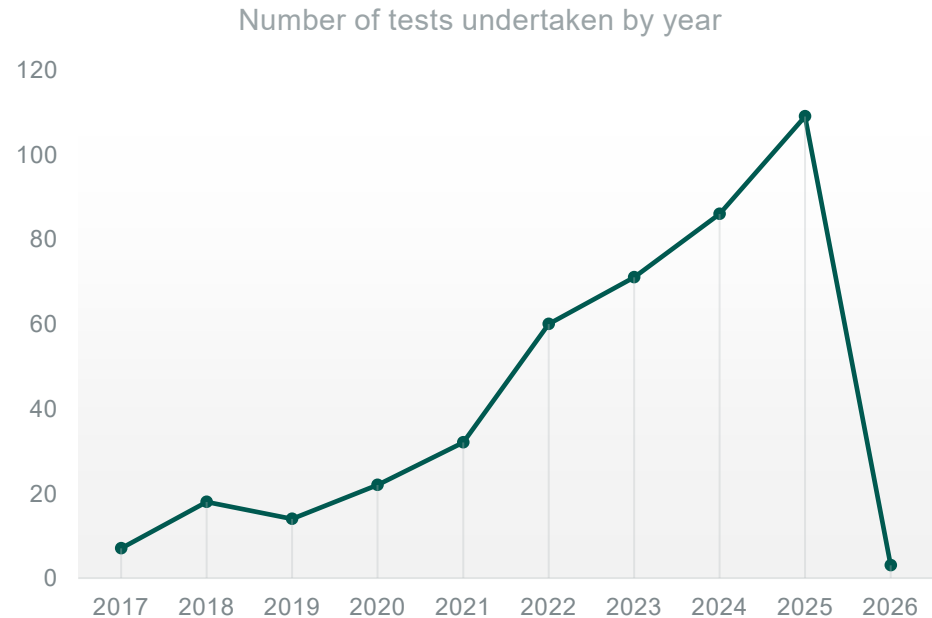
What did we ask of our respondents?

- We emailed 15,111 owners, and shared the survey across our social media platforms
- Respondents were asked to give us details on their individual dog, including their dog's breed, KC reg details, date of birth, date of test, PLA grade, clinical outcome, and any treatment used in affected dogs
- The survey closed on 16/03/2026
- In total 521 complete responses were received, across 21 breeds and a crossbreed
- *NB: 99 dogs that were reported as graded before July 2017 (when the grading system for the PLA scheme was introduced) were discarded from analysis, resulting in a total of 422 dogs. Further, the analysis is split into the 4 grades that were applicable at the time of survey (0,1,2,3). The grading system changed to 1,2 and 3 from the beginning of January 2026.*



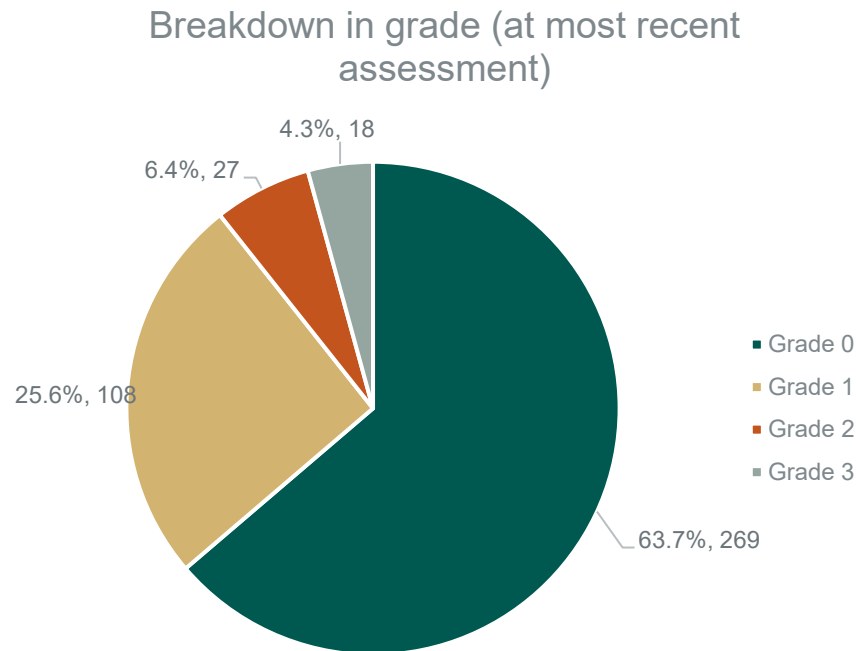
Yearly scheme uptake

- The number of PLA test results by date of test reported by owners has gradually increased year on year, which mirrors what we have seen from RKC/BVA/ISDS recorded results (*NB: the survey was undertaken late 2025 - early 2026 so we would expect to see very few results in 2026*)



Grade - overall

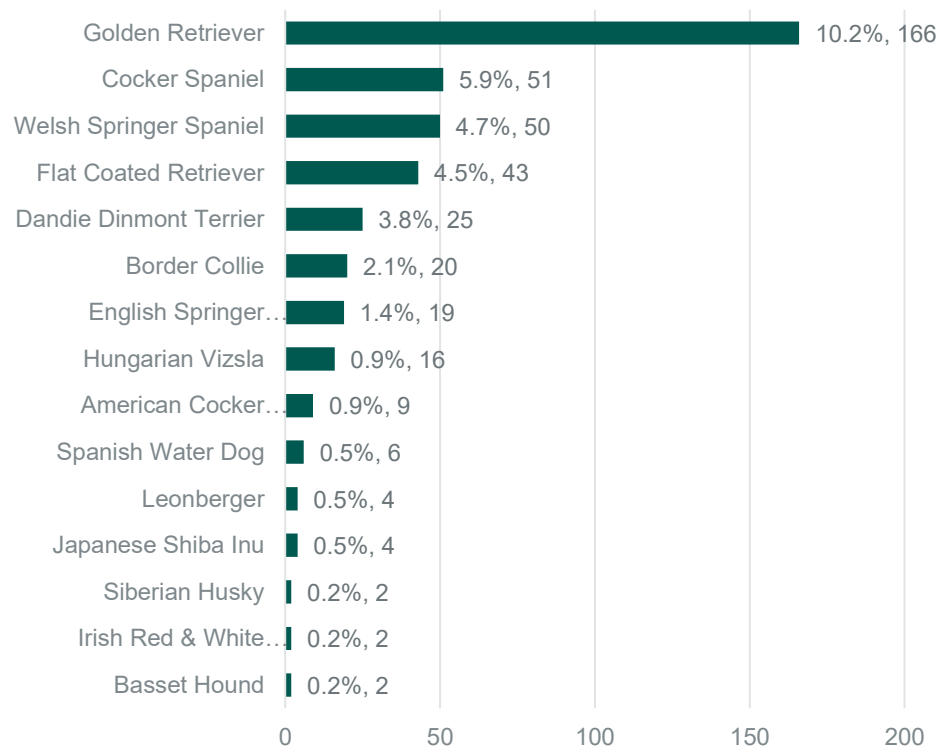
- Respondents were asked to inform us of their dog's most recent grade result
- Of 422 responses, the most common grade was grade 0



Breed

- The most commonly reported breed was the Golden Retriever, making up 10.2% of the total responses

Breakdown by breed



One dog of each of the following breeds was also included: Eurasier, Russian Toy, Weimeraner, Clumber Spaniel, Alaskan Malamute, Chinese Crested and a Spaniel/ Cocker crossbreed.



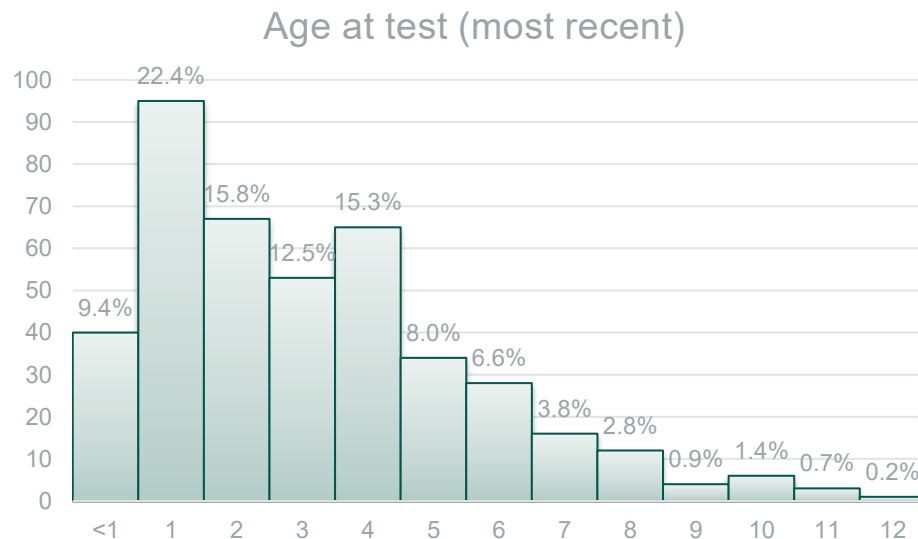
Grade – breakdown by breed

- *NB: consider breed total numbers when interpreting as some breeds had very few dogs assessed*

Breed	Grade				Total tested
	Grade 0	Grade 1	Grade 2	Grade 3	
American Cocker Spaniel	89%	11%	0%	0%	9
Basset Hound	50%	0%	50%	0%	2
Border Collie	85%	10%	5%	0%	20
Cocker Spaniel	75%	16%	8%	2%	51
Dandie Dinmont Terrier	56%	36%	8%	0%	25
English Springer Spaniel	79%	21%	0%	0%	19
Eurasier	0%	0%	0%	100%	1
Flat Coated Retriever	67%	23%	7%	2%	43
Golden Retriever	57%	31%	6%	5%	166
Hungarian Vizsla	63%	19%	13%	6%	16
Irish Red & White Setter	100%	0%	0%	0%	2
Japanese Shiba Inu	75%	25%	0%	0%	4
Leonberger	0%	75%	0%	25%	4
Other (Spaniel crossbreed)	0%	0%	0%	100%	1
Siberian Husky	100%	0%	0%	0%	2
Spanish Water Dog	17%	67%	0%	17%	6
Weimaraner	100%	0%	0%	0%	1
Welsh Springer Spaniel	66%	22%	8%	4%	50
Grade total	63.7%	25.6%	6.4%	4.3%	

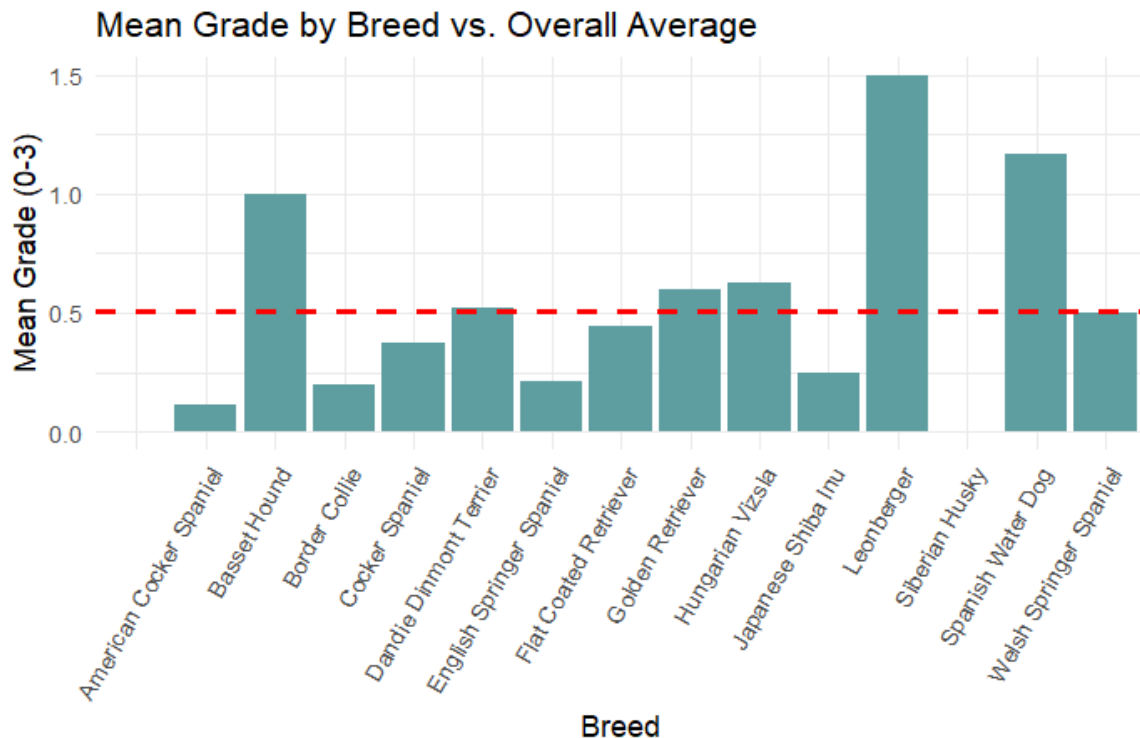
Age of dogs at test

- Respondents were asked to inform us of their dog's date of birth and date of most recent test
- Dogs that were reported as graded before July 2017 (when the grading system for the PLA scheme was introduced) were discarded from analysis, resulting in a total of 422 dogs
- The median age at most recent test was 3 years 2 months, ranging from 5 months to 12 years 9 months



Grade – mean by breed

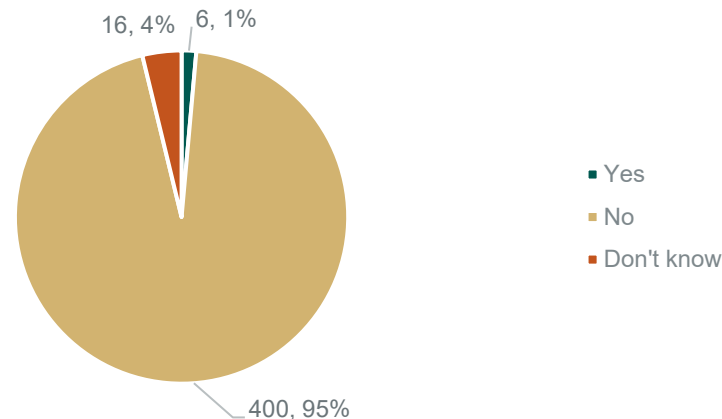
- Whilst some breeds were found to be more likely to receive a higher grade (Basset Hound, Leonberger, Spanish Water Dog), and some lower grades (Siberian Husky), **statistically significant differences between breeds in terms of their grade were not found in this dataset** (tested via Kruskal-Wallis and Dunn's Test with a Bonferroni correction)
- NB: non-KIOD glaucoma breeds were removed due to low numbers of dogs tested*



Clinical outcome – all dogs

- Respondents were then asked to inform us as to whether their dog developed clinical glaucoma, of which six reported “yes”, equal to 1.4% of the reported population
- These six dogs were from the following breeds: Dandie Dinmont Terrier, Golden Retriever, Eurasier, Flat Coated Retriever, Cocker x ESS crossbreed, and a Welsh Springer Spaniel
- When looking at the breakdown in affected dogs and grade, five of six had been graded either a grade 2 or 3 at their most recent assessment, with one wildcard that was indicated as being a grade 1 (although not recorded on the RKC system so cannot be verified) – marked with an asterisk in the table
- Running statistical analysis of grouped grades (grade 0-1, lower risk, and grade 2-3, higher risk), we found a statistically significant association between grade and outcome, but did not have enough clinically affected dogs to look at individual grades and clinical outcome

Clinical disease in reported dogs



Grade	Yes	No	Don't know	Total
Grade 0	0 (0.0%)	265 (62.8%)	4 (0.9%)	269 (63.7%)
Grade 1	1* (0.2%)	100 (23.7%)	7 (1.7%)	108 (25.6%)
Grade 2	1 (0.2%)	23 (5.5%)	3 (0.7%)	27 (6.4%)
Grade 3	4 (0.9%)	12 (2.8%)	2 (0.5%)	18 (4.3%)
Total	6 (1.4%)	400 (94.8%)	16 (3.8%)	422

Clinical outcome – glaucoma **affected**



Four of the six affected dogs had been diagnosed as having primary glaucoma (the other two owners reported they didn't know)



All six dogs had been seen by a referral ophthalmologist



Of the six affected dogs, three went on to develop glaucoma in the other eye, two didn't, and one owner was unsure



Five dogs underwent enucleation (removal of eye), two dogs eye drops, and one dog was euthanised due to her condition

Clinical outcome – glaucoma **unaffected**



However, interestingly 12 dogs graded 3 have not, or did not, go on to develop clinical disease. Three of these dogs at the time of writing this report were announced deceased, (ages 2, 10 and one not specified) with the remaining live dogs ranging from 3 years to 12 years of age



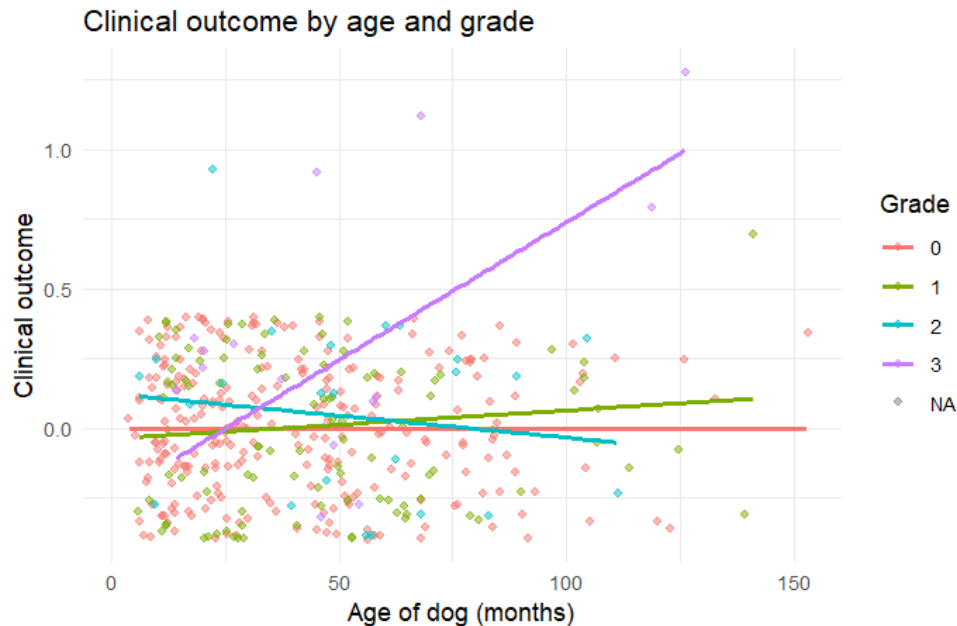
Similarly, 23 dogs graded 2 (all of which apart from one were still alive at the time of survey) have not been reported to show signs of clinical disease (ranging from 2 to 15 years of age)



It would be useful to follow up on these dogs to see if their condition progresses overtime

Does the grading system accurately determine clinical outcome?

- Looking at the 406 dogs for which we had a clinical outcome:
 - 400 unaffected by glaucoma
 - six affected (all claimed to be seen by a referral ophthalmologist)
- We found a **statistically significant**, albeit weak, **positive association between grade and clinical outcome** i.e., dogs with a higher grade (grade 2-3) were more likely to be affected ($\rho = 0.22$, $p < 0.05$)
- We also looked at age effect, which was statistically significant, indicating that **dogs of different ages are likely to have different outcomes**, which ties in with what we know about glaucoma being a progressive disease
- There may also be a breed effect influencing outcome, but we did not have enough data to assess this



Key take home messages

- We didn't have a huge amount of data in this survey, and were unable to definitively conclude whether there is a breed bias
- **BUT** we do have an engaged audience and dogs that we can follow up over time, particularly those that were young at the time of the survey
- There is a weak but still **statistically significant association between higher grade and clinical outcome. We need to follow up** on our high scoring dogs that are not clinically affected to see if this changes, as although disease prevalence increased with higher grades, not all grade 3 dogs developed clinical disease during the observation period (this may reflect incomplete follow-up or limitations in the predictive performance of the grading system)
- **Older dogs were more likely to have a higher score**
- We have affected dogs **from new breeds** included in the survey, it would be worth exploring expanding gonioscopy recording to these breeds to help support owners, and bring better data and understanding to the scheme



Thank you to all of our owners
for taking the time to complete
the survey, and our breed
communities for helping us get
the word out.





Royal Kennel Club