

2018 Kennel Club Registration Statistics

(Breed Record Supplements AV1 – AV4)



Tibetan Spaniel

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Litter Summaries

37 Tibetan Spaniel litters were registered with the KC in 2018, consisting of 146 puppies, divided as indicated in *Table 1*.

Table 1. Tibetan Spaniel litters registered in 2018.

	Q1	Q2	Q3	Q4	Total
Litters	7	3	15	12	37
Puppies	25	8	67	46	146

The most popular colour for puppies from these litters was registered as 'Gold Sable' (27.4%). The puppy colour breakdown is shown in *Figure 1*.

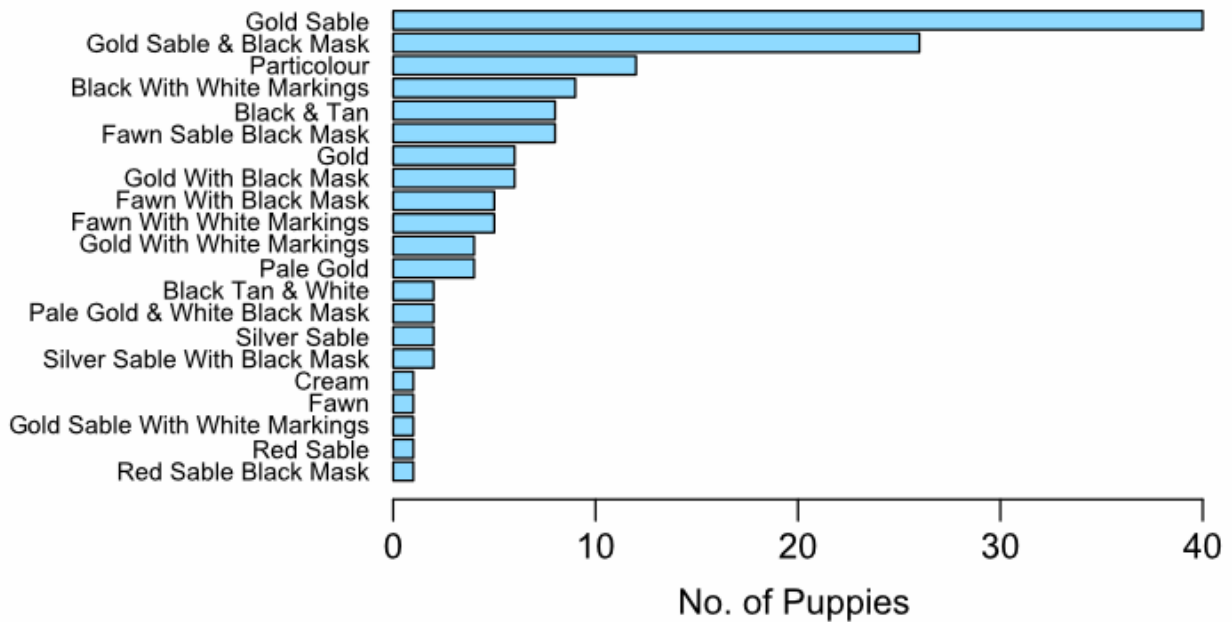


Figure 1. Colour of puppies registered in Tibetan Spaniel litters.

Litter Size

The mean number of puppies in Tibetan Spaniel litters was 3.9, whilst the median was 4. The distribution of puppy numbers per litter is shown in *Figure 2*.

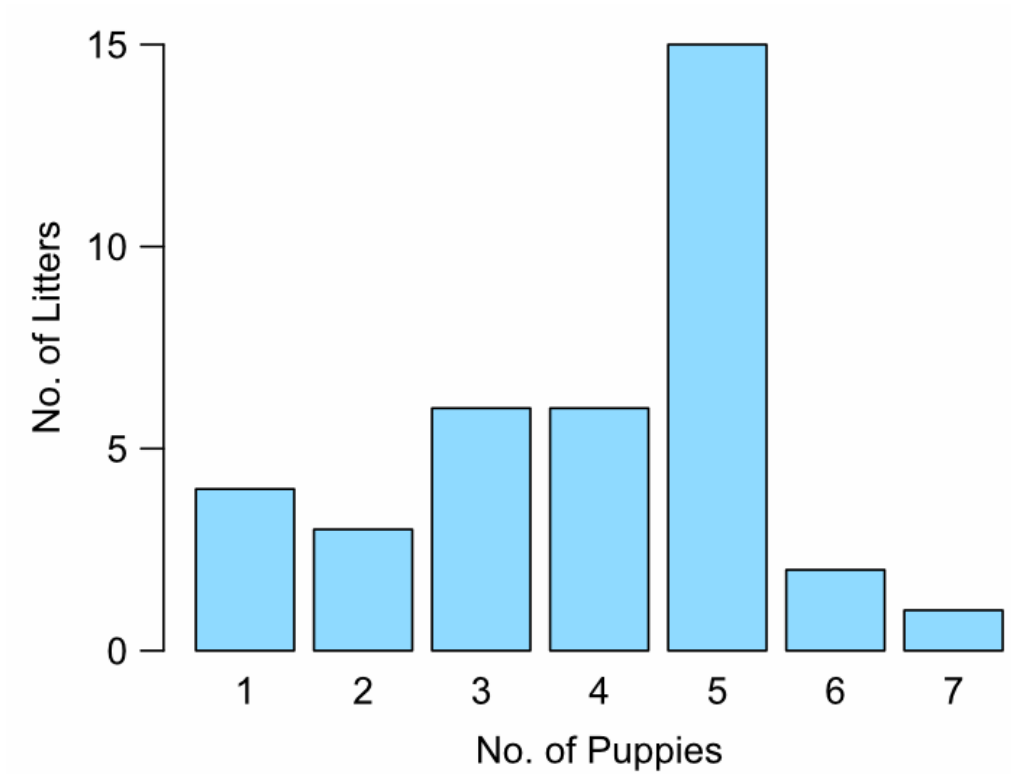


Figure 2. Number of registered puppies in Tibetan Spaniel litters.

Coefficient of Inbreeding (COI)

The litter coefficient of inbreeding (COI) is a measure of inbreeding, expressed as a percentage probability of the same variation being inherited from the sire and the dam. A lower percentage indicates a lower level of inbreeding. myKC calculates the COI for each dog using all available pedigree information. One consideration to be considered is that limited pedigree information affects results, as with imported dogs which only come with a three-generation pedigree, and the lack of pedigree information further in the past. The KC will not register litters produced by a father/daughter, mother/son or brother/sister mating.

Figure 3 shows the distribution of COI for the Tibetan Spaniel litters registered in 2018. The mean COI was 11.0% and the median COI was 11.9%. The median number of complete generations in this calculation was 5 (range 4 – 9), with at least part of the pedigree extending back a median of 17 generations (range 16 – 20).

The highest recorded COI was 24.8%, with no litters recorded with a COI over 25% (the equivalent of a parent/child or brother/sister mating). 11 (29.7%) litters have a calculated COI under 6.5%.

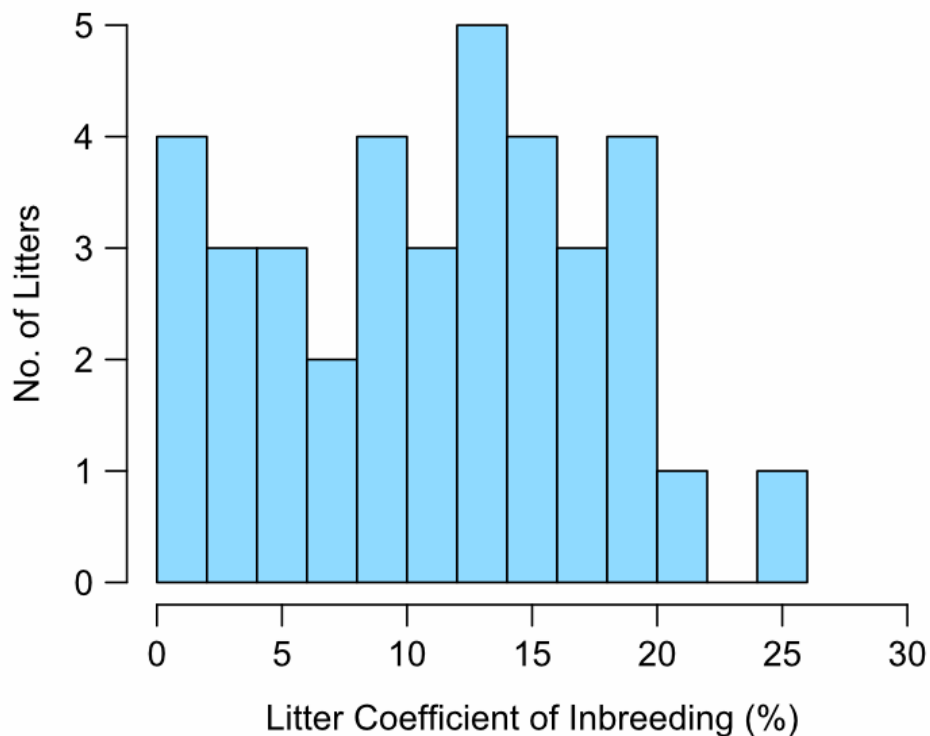


Figure 3. Histogram of the coefficient of inbreeding of Tibetan Spaniel litters.

Caesarean Sections (C-Sections)

5.4% of registered Tibetan Spaniel litters were delivered by a reported Caesarean section (**Figure 4**). No elective C-sections were reported, so of those litters where natural birth is presumed to have been attempted, 5.4% of litters were also reported to be delivered by emergency C-Section.

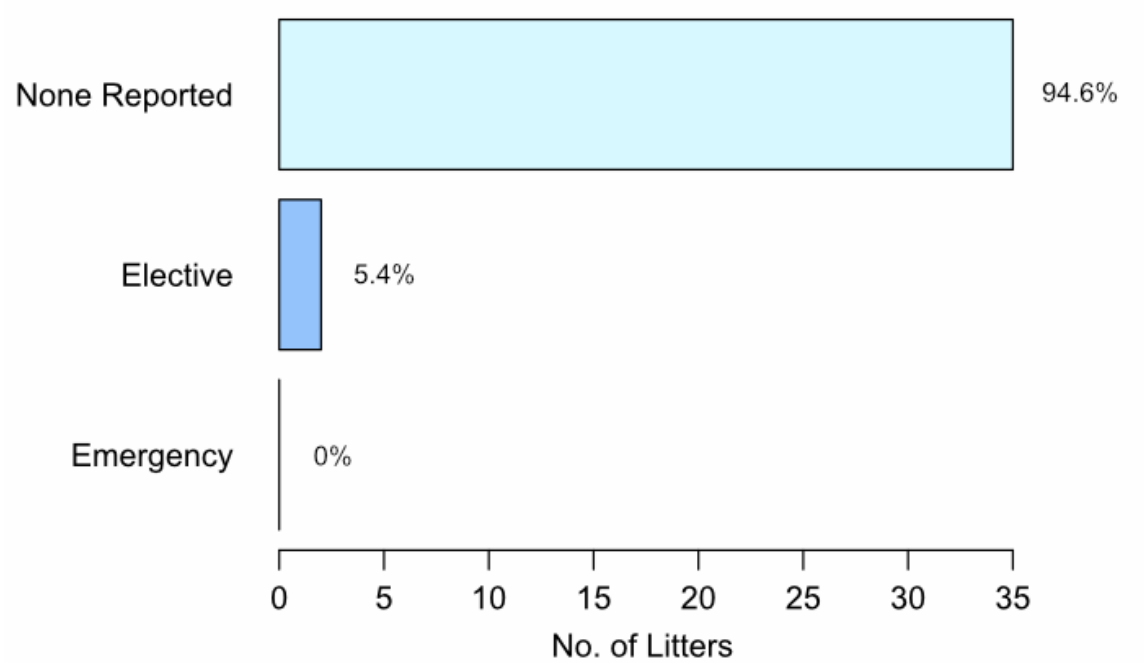


Figure 4. Reported C-section information for Tibetan Spaniel litters.

Parents

The Tibetan Spaniel litters were produced by 24 different sires and 36 different dams. Five of the sires and five of the dams are imports from other countries. These countries consist of Finland, Germany, Ireland, the Netherlands, Slovakia and Slovenia.

Age of Sires

Figure 5 shows the distribution of the age of sires at birth of the litters. The mean age of sires at the birth of the litter is 4.88 years, whilst the median age is 4.74 years. The maximum age of sire at birth of a litter is 11.59 years, whilst the minimum is 1.14 years.

Assuming a gestation time of approximately 60 days (or 0.17 years), the predicted mean age of sires at conception of the litter is 4.71 years, whilst the median age is 4.57 years. Under the same assumption, 5 litters (13.5%) are predicted to have been conceived when the sire was under 2 years of age.

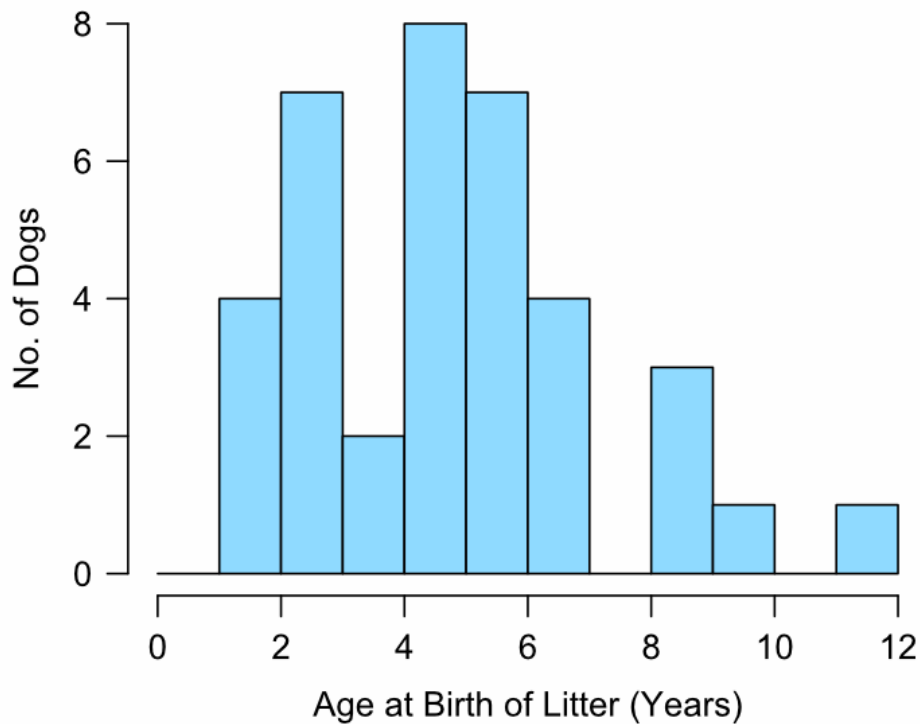


Figure 5. Age of sires at birth of Tibetan Spaniel litters.

Age of Dams

Figure 6 shows the distribution of the age of dams at birth of the litters. The mean age of dams at the birth of the litter is 3.87 years, whilst the median age is 3.53 years. The maximum age of a dam at birth of a litter is 7.03 years, whilst the minimum is 1.63 years.

Assuming a gestation time of approximately 60 days (or 0.17 years), the predicted mean age of dams at conception of the litter is 3.70 years, whilst the median age is 3.36 years. Under the same assumption, 4 litters (10.8%) are predicted to have been conceived when the dam was under 2 years of age.

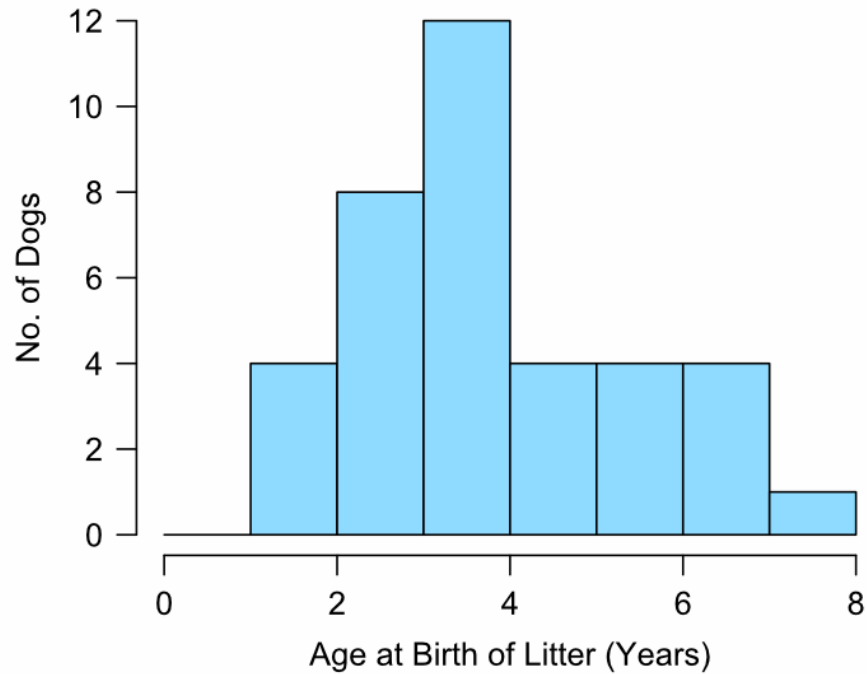


Figure 6. Age of dams at birth of Tibetan Spaniel litters.

Popular Sires

24 dogs sired a Tibetan Spaniel litter registered in 2018, with eight dogs producing more than one registered litter (*Table 2*).

Table 2. Sires with more than one registered Tibetan Spaniel litters in 2018.

Name	Date of Birth	No. Registered Litters 2018	Total Registered Litters (End 2018)
<i>Oldcharm Love Me Again</i>	28/08/13	5	12
<i>Deanford Zoltany</i>	23/11/11	3	10
<i>Kernow Mymate Marmite</i>	17/11/15	3	4
<i>Alfie Beau At Saxtead</i>	17/07/12	2	2
<i>Balgay Ja Rmang lam Av Tuyet</i>	21/06/13	2	6
<i>Kiiramanna Royal Salute (IMP FIN)</i>	24/11/12	2	10
<i>Souska I Need Your Love</i>	03/11/16	2	2
<i>Ziestan Probert (IMP FIN)</i>	14/07/11	2	7

Health Testing

The Kennel Club recommends breeders should use the following health testing schemes:

- DNA testing
 - PRA3 (Progressive Retinal Atrophy 3)
- Eye Testing

Eye testing is mandatory for Kennel Club Assured Breeders. 6 (16%) of litters were produced by Kennel Club Assured Breeders.

PRA3 (Progressive Retinal Atrophy 3) DNA Testing

Progressive Retinal Atrophy 3 (PRA3) is a disease affecting the retina of the eye, causing progressive degeneration and vision loss. There are several types of PRA.

PRA3 in Tibetan Spaniels is recessively inherited, meaning if at least one parent has tested clear or is hereditary clear for the PRA3 mutation all puppies from that litter are safe.

34 (91.9%) Tibetan Spaniel litters had at least one parent either tested clear or hereditary clear for PRA3, meaning all puppies were non-affected. No litters were produced from two confirmed carrier parents, and there were no litters for which PRA3 testing results were only available for one carrier/affected parent. Three litters were potentially at risk for PRA3, according to KC recorded DNA results.

Eye Testing

Tibetan Spaniels are recommended to undergo eye testing, under the KC/BVA/ISDS Eye Scheme or the ECVO Scheme.

Under the KC/BVA/ISDS Eye Scheme, Tibetan Spaniels have a single schedule A (known to be inherited) eye conditions – PRA (progressive retinal atrophy). This is partially covered by the PRA3 DNA test, but regular eye testing is still recommended as other forms of the condition likely exists in the Tibetan Spaniel breed.

EVCO Scheme examinations cover 14 inherited eye conditions as well as a general examination of the eye, potentially revealing other eye diseases.

Affected/unaffected status is only recorded on the myKC sire for schedule A conditions. Therefore, where eye tests have been carried out, it is unknown from examining the myKC site which eye abnormalities/conditions may have been identified, apart from PRA.

29 (78.4%) Tibetan Spaniel litters were produced from two parents who had at least one KC recorded eye test before the date of birth of the litter. Seven Tibetan Spaniel litters were produced from one eye tested parent and one from two parents who had neither been eye tested. All eye test results were unaffected.

Figure 7 shows the age of each eye tested sire at the time of the litter versus the age of the same dog at its last eye test. Points far below the line represent sires that may not have been eye tested in some time. Sires with multiple litters will appear multiple times on this plot.

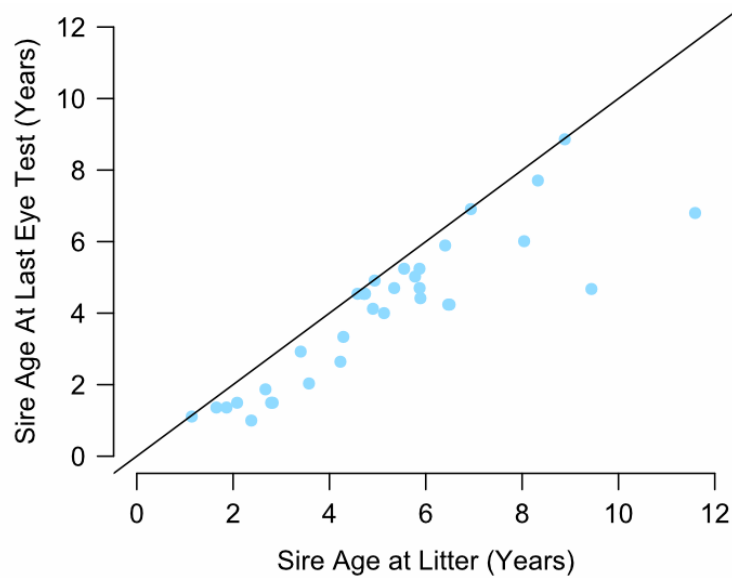


Figure 7. Comparing the age of the sire at the birth of each litter to the age of the sire at the latest recorded eye test.

Figure 8 shows the age of each eye tested dam at the time of the litter versus the age of the same dog at its last eye test. Points far below the line represent dams that may not have been eye tested in some time. Dams with multiple litters will appear multiple times on this plot.

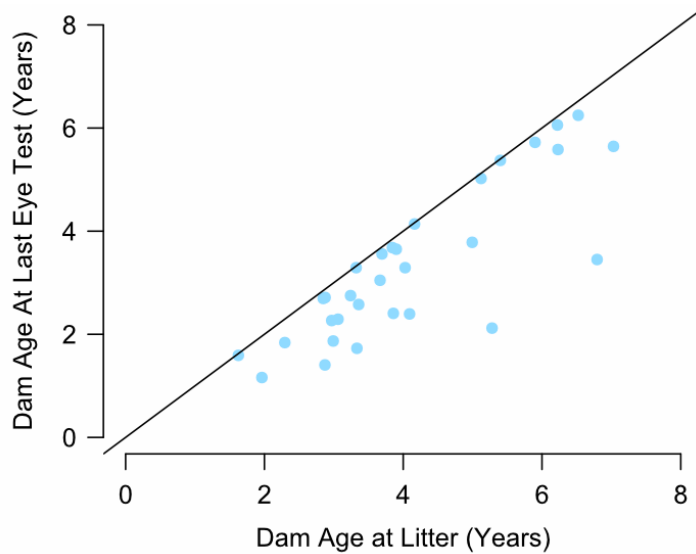


Figure 8. Comparing the age of the dam at the birth of each litter to the age of the dam at the latest recorded eye test.

Of those litters where the sire had been eye tested at least once before the birth of the litter, 21 (57%) had been tested within a year prior to the birth of the litter (**Figure 9**). (A better measure would be time before conception of the litter, but the precise dates are not available). Sires with multiple litters will appear multiple times on this plot.

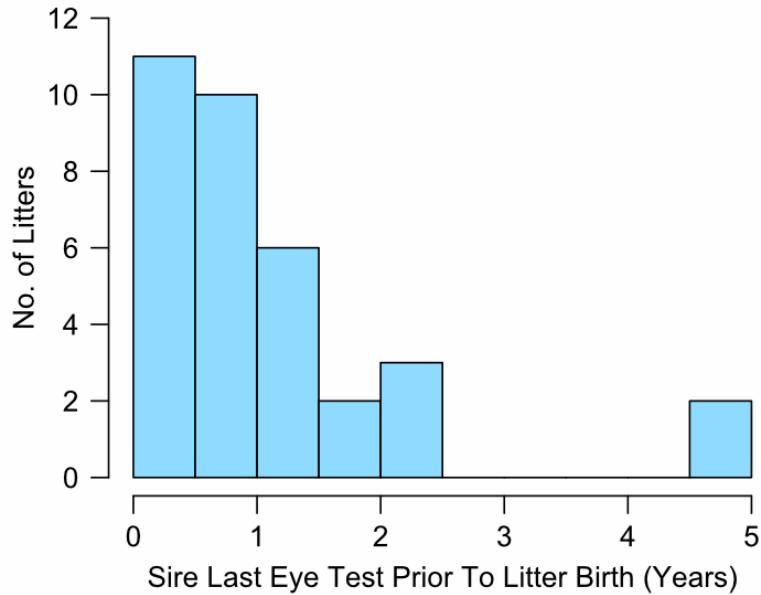


Figure 9. Number of years prior to the birth of the litter that the sire had been eye tested.

Of those litters where the dam had been eye tested at least once before the birth of the litter, 22 (59%) had been tested within a year prior to the birth of the litter (**Figure 10**). Dams with multiple litters will appear multiple times on this plot.

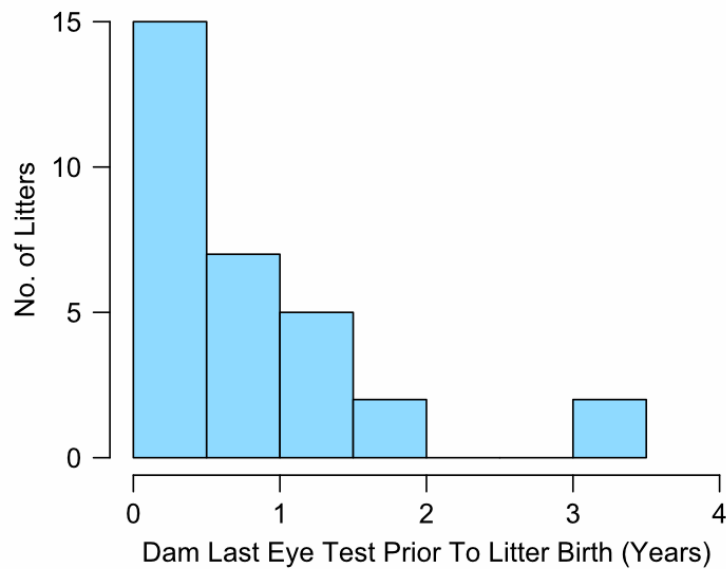


Figure 10. Number of years prior to the birth of the litter that the dam had been eye tested.

52% of eye tested sires of Tibetan Spaniel litters in 2018 have been tested multiple times throughout their life. As would be expected, on average, the older the dog, the larger the number of reported eye test results (**Figure 11**; $r = 0.49$, $p = 0.02$).

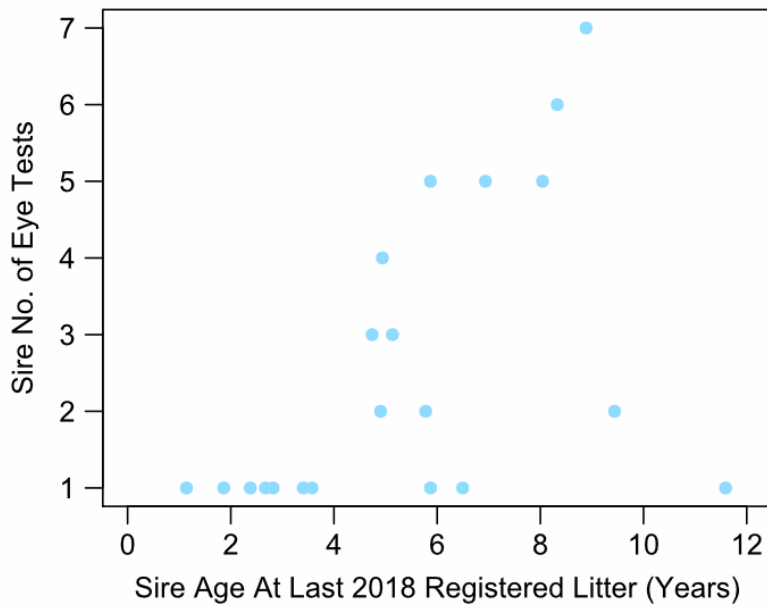


Figure 11. Number of eye tests versus age of the sire at the birth of their latest 2018 registered litter, for each sire with a 2018 registered litter. Each sire is only included once in this plot.

40% of eye tested dams of Tibetan Spaniel litters in 2018 have been tested multiple times throughout their life. On average, the older the dog, the larger the number of reported eye test results (**Figure 12**; $r = 0.47$, $p = 0.009$).

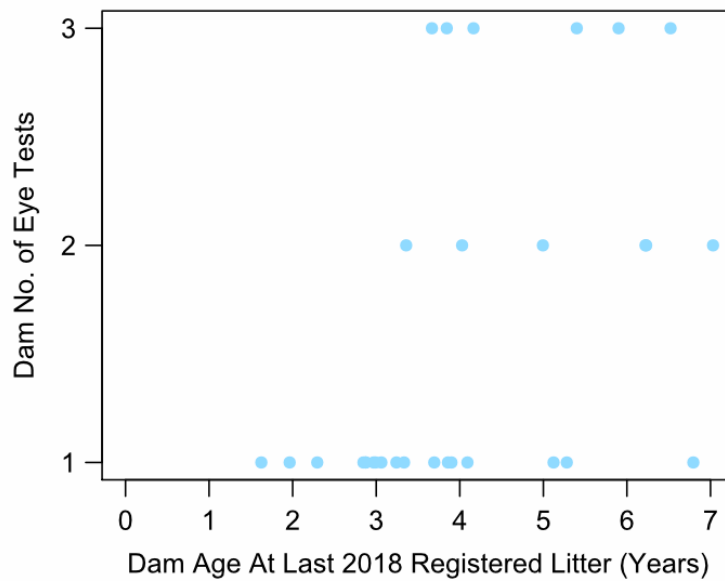


Figure 12. Number of eye tests versus age of the dam at the birth of their latest 2018 registered litter, for each dam with a 2018 registered litter. Each dam is only included once in this plot.

Method

Information on Tibetan Spaniel litters registered by the Kennel Club in 2018 was retrieved from the utility group breed record supplements AV1 – AV4. This included information on the sire and dam of the litter, the date of birth of the litter, the number and colour of the registered puppies and any Caesarean section information (elective or emergency).

Further information was gathered from the myKC website, including: the date of birth of the sire and dam, country of origin of the parents, the coefficient of inbreeding for the litter and DNA testing & eye testing results for the parents.

Data summarisation was carried out using Microsoft Excel and RStudio.