CAVALIER HEALTH CENSUS
June 2nd to June 9th 2013

ANALYSIS OF RETURNS

FÉDÉRATION CYNOLOGIQUE INTERNATIONALE COUNTRIES

Issue 2

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Change History

Issue	Changes	Date
1	Initial Issue	1st August 2013
2	Formal Release	17th December 2013

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1. INTRODUCTION

It has been some years since the UK Cavalier Club first produced a series of booklets entitled "Looking at the Breed" and working with the agreement of all UK regional Cavalier Clubs a Health Census was carried out during the period of 2nd June to 9th June 2013.

Cavalier owners were asked to complete a Census return either on paper or via the Internet at various locations including the UK CKCS Club website, Facebook and other breed web sites.

Initially the Census was intended to be restricted to owners resident in the United Kingdom but due to the interest from owners all over the world, the Census was extended to include these owners.

This document contains the analysis of the returns relating countries that are either Full or Associate Members of The Fédération Cynologique Internationale (FCI). Additionally the single return from the United Arab Emirates (UAE) has been included in this analysis.

This document does not derive any conclusions nor make any recommendations from the data submitted.

2. CENSUS RETURNS

2.1. GENERAL

Owners of Cavaliers were asked to complete and return a Census form, see ANNEX A. This form was mirrored on the Internet, primarily the UK Cavalier Club website and Facebook.

The form was designed to be a "tick box" format to ensure that the observations and descriptions were consistent across all returns. Owners were asked for their names and the pet names of their dogs, but this was not mandatory, and these fields have been removed from all analysis files making all returns anonymous.

Worldwide details for a total of 5559 Cavaliers were submitted, 326 by paper and 5233 electronically via the Internet.

For the FCI countries, electronic returns for a total of 450 Cavaliers were submitted.

Returns were initially stored in a secure MySQL database and then transferred to a spreadsheet for analysis.

2.2. DATA PROTECTION

All data has been handled in accordance with the UK Data Protection Act 1998, Data Controller reference Z9120799 refers, and all references to the owner and the dog names have been removed from the analysis data. Therefore the identities of the owner or dog cannot be derived from the analysis provided in this report.

2.3. EDITING OF RETURNS

Editing of the returns prior to analysis was restricted to the following:

- Deletion of names of owners.
- Deletion of names of dogs.
- Adjusting the ages to a common format.
- Deletion of a dog that was declared as "deceased" and therefore was not in compliance with the instructions given on the Census Form.

- Amendments as requested by the owner.
- Addition of “Country of Residence” field.

No other changes were made to the source data.

3. DEMOGRAPHIC PROFILES

3.1. WORLDWIDE

	Total		Dogs		Bitches	
All Colours	5559	100%	2152	38.71%	3407	61.29%
Blenheim	2835	51.00%	1093	38.55%	1742	61.45%
Tricolour	1226	22.05%	480	39.15%	746	60.85%
Black and Tan	746	13.42%	286	38.34%	460	61.66%
Ruby	752	13.53%	293	38.96%	459	61.04%

Table 1 - Summary of Returns Worldwide.

3.2. FÉDÉRATION CYNOLOGIQUE INTERNATIONALE COUNTRIES

Returns were received from 32 countries that are either Full or Associate Members of the FCI. Additionally the single return from an owner resident in the United Arab Emirates (UAE) has been included with the FCI countries.

Table 2 provides a breakdown of the returns for each country.

Country	All	Dogs	Bitches
Belarus	1	0 (0%)	1 (100%)
Belgium	4	3 (75%)	1 (25%)
Croatia	11	3 (27.27%)	8 (72.72%)
Czech Republic	23	15 (65.22%)	8 (34.78%)
Denmark	10	4 (40%)	6 (60%)
Estonia	8	2 (25%)	6 (75%)
Finland	49	12 (24.49%)	37 (75.51%)
France	14	8 (57.14%)	6 (42.86%)
Germany	31	16 (51.61%)	15 (48.39%)
Greece	1	0 (0%)	1 (100%)
Hong Kong	2	1 (50%)	1 (50%)
Iceland	13	5 (38.46%)	8 (61.54%)

Country	All	Dogs	Bitches
Lithuania	1	0 (0%)	1 (100%)
Malaysia	1	0 (0%)	1 (100%)
Malta	2	1 (50%)	1 (50%)
Netherlands	6	0 (0%)	6 (100%)
Norway	54	18 (33.33%)	36 (66.67%)
Poland	9	6 (66.67%)	3 (33.33%)
Russia	29	8 (27.59%)	21 (72.41%)
S Africa	11	6 (54.55%)	5 (45.45%)
Singapore	1	0 (0%)	1 (100%)
Slovenia	10	2 (20%	8 (80%)
Spain	2	0 (0%)	2 (100%)
Sweden	37	12 (32.43%)	25 (67.57%)

Country	All	Dogs	Bitches
Ireland	73	35 (47.95%)	38 (50.05%)
Italy	17	5 (29.41%)	12 (70.59%)
Japan	1	0 (0%)	1 (100%)
Kazakhstan	4	2 (50%)	2 (50%)
Latvia	10	3 (30%)	7 (70%)

Country	All	Dogs	Bitches
Switzerland	1	0 (0%)	1 (100%)
Turkey	10	6 (60%)	4 (40%)
UAE	1	0 (0%)	1 (100%
Ukraine	3	2 (66.67%)	1 (33.33%)

Table 2 - Summary of Returns from FCI Countries.

Figure 1 illustrates the overall distribution for the returns from FCI countries by coat colour and sex.

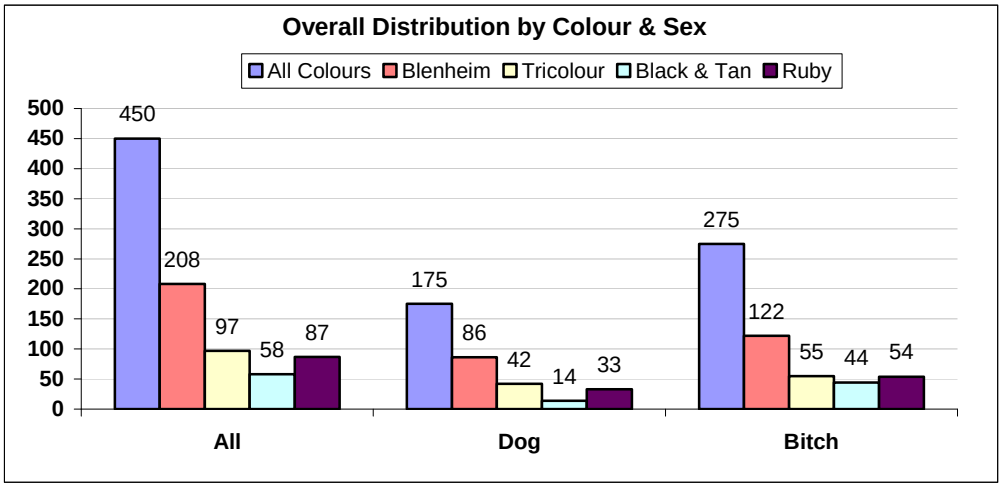

Figure 1 - FCI Countries – Overall Distribution by Colour and Sex.

4. CENSUS RESPONSES

4.1. GENERAL QUESTIONS

4.1.1. Ages

Ages identified on the returns were converted decimal years, rounded to two decimal places, to ensure consistency when carrying out the analysis. For example 3 years 5 months was converted to 3.42 years.

Figure 2 illustrates the age distribution for the returns from FCI countries. The youngest dog identified was declared as 3 month and the oldest as 15 years 3 months.

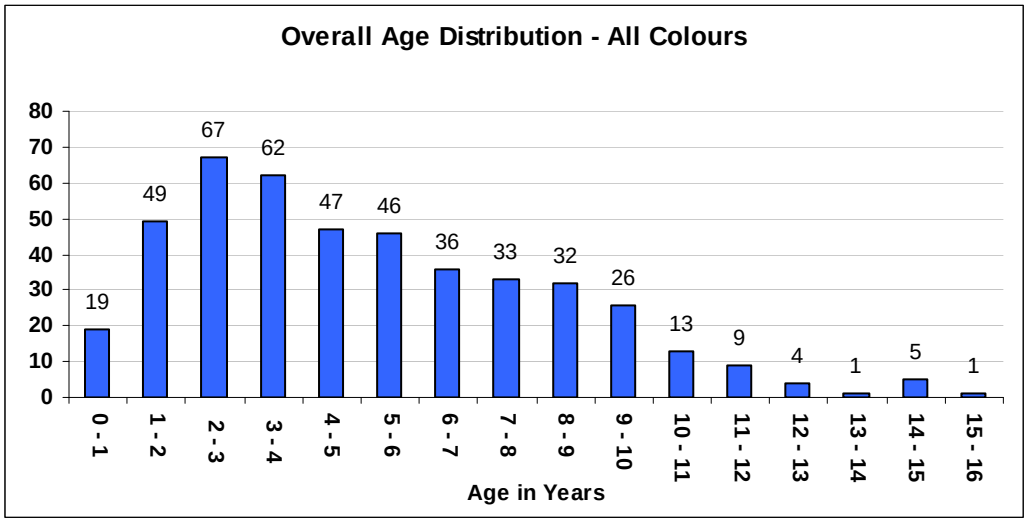

Figure 2 – FCI Countries - Age Distribution

For the reported conditions "Chiari Malformation", "Syringomyelia" and "Heart Condition", the declared ages have also been banded into those identified in the "UK BVA/KC Chiari Malformation / Syringomyelia Scheme" and the UK Cavalier Club "Heart Scheme". This gives three age bands 0 to 3 years, 3 to 5 years and over 5 years.

Table 3 gives the age distribution under the UK KC/BVA Screening Schemes for the Cavaliers resident in FCI countries as entered into the Census.

		0 to 3 Years	3 to 5 Years	Over 5 years
All Colours	**Total**	135	109	206
	Dog	60	37	78
	Bitch	75	72	128
Blenheim	**Total**	75	44	89
	Dog	37	14	35
	Bitch	38	30	54
Tricolour	**Total**	29	27	41
	Dog	16	10	16
	Bitch	13	17	25
Black & Tan	**Total**	15	11	32
	Dog	4	2	8
	Bitch	11	9	24
Ruby	**Total**	16	27	44
	Dog	3	11	19
	Bitch	13	16	25

Table 3 - FCI Countries - Overall Age Distribution under the UK KC/BVA Screening Schemes

4.1.2. Happy

435 (96.7%) owners considered that their Cavalier was **happy**.

8 (1.8%) owners considered that their Cavalier was **not happy**.

7 (1.6%) owners did not express an opinion or complete this box.

In general, those owners who considered that their Cavalier was **not happy** also identified that their dog was suffering from a diagnosed medical condition as identified in Table 4.

Condition	No of Reports	% of Not Happy	Condition	No of Reports	% of Not Happy
Chiari Malformatiom	2	6.9%	Allergy to Food	1	3.4%
Dental Issues	2	6.9%	BAOS	1	3.4%
Hearing Loss	2	6.9%	Cherry Eye	1	3.4%
Heart Condition	2	6.9%	Dry Eye / Curly Coat	1	3.4%
POSM	2	6.9%	Hip Dysplasia	1	3.4%
Syringomyelia	2	6.9%			

Table 4 - Recorded Health Conditions for dogs reported as "Not Happy"

4.2. OBSERVATIONS

Observations have been collated under related topics. Where there is an observed difference in the reported observation by age, sex or coat colour, then the analysis has been expanded to indicate these trends. Where percentages are given against the colours, these are for the total colour population.

4.2.1. Weight

377 (83.8%) owners considered that their Cavalier was at the **correct weight**.

50 (11.1%) owners considered that their Cavalier was **overweight**.

17 (3.8%) owners considered that their Cavalier was **underweight**.

There was no significant difference for the four colours.

4.2.2. Eating Habits

143 (31.8%) owners considered that their Cavalier was **greedy**. 20 (13.9%) owners who said that their Cavalier was overweight also considered that their Cavalier was greedy.

23 (5.1%) owners considered that their Cavalier was a **poor eater**. 6 (26.1%) owners who said that their Cavalier was underweight also considered that their Cavalier was a poor eater.

There was no significant difference for the four colours.

4.2.3. Friendly

420 (93.3%) owners considered that their Cavalier was **friendly**.

There was no significant difference for the four colours.

4.2.4. Sociable

306 (68.0%) owners considered that their Cavalier was **sociable**.

There was no significant difference for the four colours.

4.2.5. Obedience

214 (47.6%) owners considered that their Cavalier was **obedient**.

From the returns provided, the Rubies were shown to be the most obedient and the Tricolours the least.

	Total	Blenheim	Tricolour	Black & Tan	Ruby
Obedience	214 (47.6%)	104 (50.0%)	38 (39.2%)	25 (43.1%)	47 (54.0%)

Table 5 – Obedience Characteristic by Colour

4.2.6. Aggressive

6 (1.3%) owners considered that their Cavalier was **aggressive**.

There was no significant difference for the four colours.

4.2.7. Noisy

59 (13.1%) owners considered that their Cavalier was **noisy**.

There was no significant difference for the four colours.

	Total	Blenheim	Tricolour	Black & Tan	Ruby
Noisy	59 (13.1%)	27 (13.0%)	13 (13.4%)	8 (13.8%)	11 (12.6%)

Table 6 - Noise Characteristics by Colour

4.2.8. Excitable

164 (36.4%) owners considered that their Cavalier was **excitable**.

Of the four colours, the Tricolours were considered to be slightly more excitable than the other colours.

	Total	Blenheim	Tricolour	Black & Tan	Ruby
Excitable	164 (36.4%)	75 (36.1%)	39 (40.2%)	20 (34.5%)	30 (34.5%)

Table 7 - Excitable Characteristics by Colour

4.2.9. Nervous

30 (6.7%) owners considered that their Cavalier was **nervous**.

Of the four colours, the Rubies were considered to be slightly more nervous than the other colours.

	Total	Blenheim	Tricolour	Black & Tan	Ruby
Nervous	30 (6.7%)	12 (5.8%)	6 (6.2%)	4 (6.9%)	8 (9.2%)

Table 8 - Nervous Characteristics by Colour

Figure 3 illustrates the distribution by colour for the Noisy, Excitability and Nervous Characteristics.

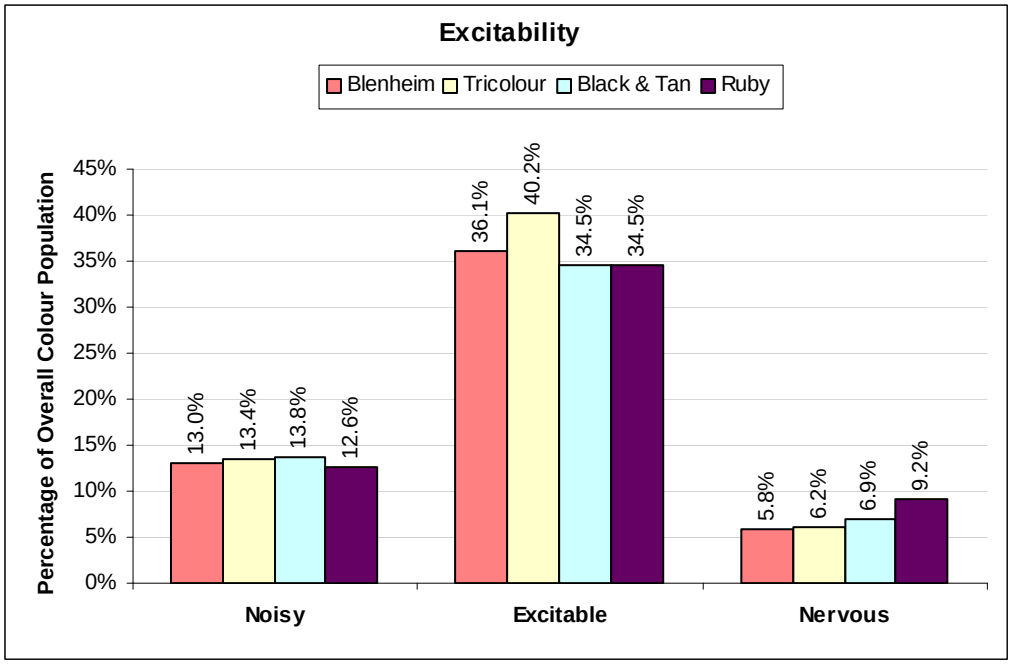

Figure 3 - Observed Noisy, Excitability and Nervous Characteristics

4.2.10. Spayed or Neutered

42 (24.0%) of Cavalier dogs were reported as **neutered**.

65 (23.6%) of Cavalier bitches were reported as **spayed**.

4.2.11. Lazy or Active

45 (10.0%) owners considered that their Cavalier was **lazy**.

290 (64.4%) owners considered that their Cavalier was **active**.

4.2.12. Exercise

324 (72.0%) owners reported that their Cavalier was **regularly exercised**.

56 (12.4%) owners reported that their Cavalier received **limited exercise**.

Of the top Veterinary Diagnosed Conditions, those owners who stated that their Cavalier received limited exercise:

- 17 (37.8%) also reported that their Cavalier also had a diagnosed Heart Condition.
- 2 (0.4%) also reported that their Cavalier had also been diagnosed with Chiari Malformation.
- 3 (0.7%) also reported that their Cavalier had also been diagnosed with Syringomyelia.
- 5 (1.1%) also reported that their Cavalier had also been diagnosed with Luxating Patella.
- 7 (1.6%) also reported that their Cavalier was suffering from Arthritis.

Of those owners who stated that their Cavalier received limited exercise, 11 (2.4%) owners also considered that their Cavalier was slightly or totally deaf.

There were no other reported common conditions associated with limited exercise.

4.2.13. Housing

383 (85.1%) owners reported that their Cavalier **lived in the house**.

9 (2.0%) owners reported that their Cavalier **lived partly in the house and partly in a kennel**.

9 (2.0%) owners reported that their Cavalier **lived in a kennel**.

4.2.14. Hearing

Some owners had reported in this section that their dog was slightly deaf or totally deaf but did not record this under “Health Conditions - Hearing Loss”. This could indicate that a Veterinary Practioner did not confirm the hearing loss.

353 (78.4%) owners considered that their Cavalier had **good hearing**.

54 (12.0%) owners considered that their Cavalier was **slightly deaf**.

13 (2.9%) owners considered that their Cavalier was **totally deaf**.

Figure 4 illustrates the ages, as a percentage of the number of dogs in any year age band, for the Cavaliers where owners considered that they had impaired hearing. These figures do not indicate the age of the onset of deafness.

The median value, which is that used in the UK 2004 KC/BVSA Health Survey, reported age for slight or total deafness is 8.50 years.

The average (mean value) reported age for slight or total deafness is 8.42 years.

The most occurring (mode value) reported age for slight or total deafness is 9 years.

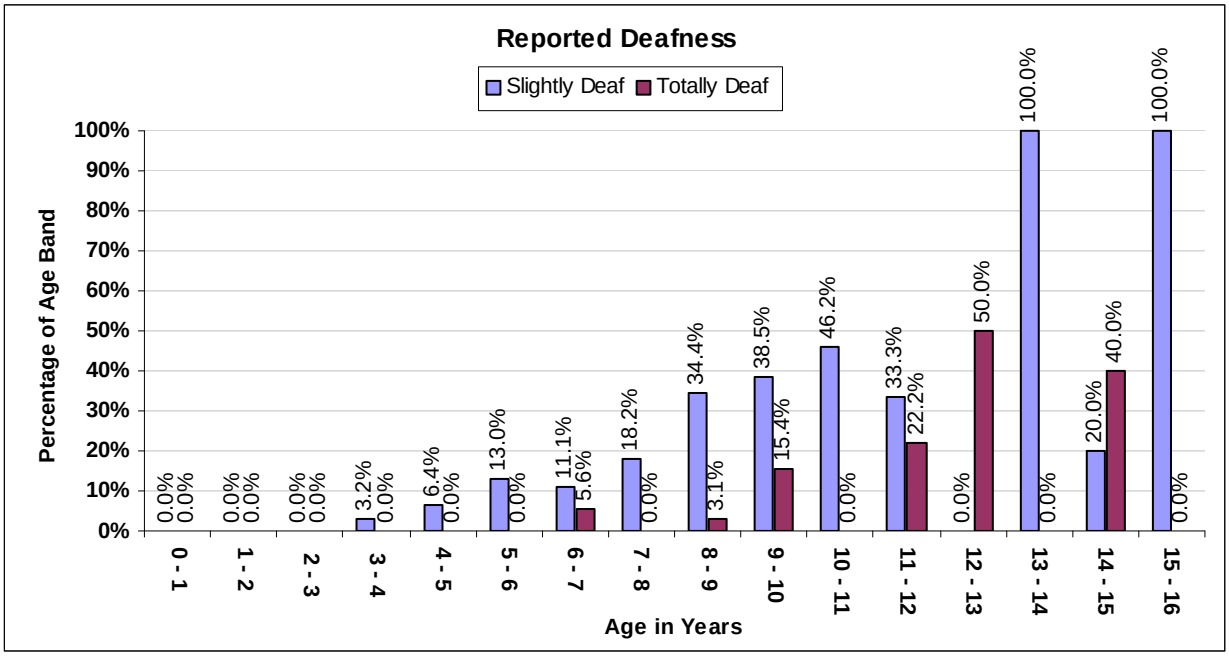

Figure 4 - Reported Considered Deafness by Age

4.3. HEALTH QUESTIONS

4.3.1. Introduction

Owners were asked to identify any health condition that had been diagnosed by a Veterinary Practitioner.

Reporting of Chiari Malformation, Syringomyelia, Dry Eye / Curly Coat and Episodic Falling conditions could be considered arbitrary, as owners may have reported on the results of diagnostic scanning and DNA tests even though a Veterinary Practioner may not have confirmed that the dog is clinically affected. No attempt has been made to adjust the analysis for this situation.

4.3.2. Summary of Returns

The following paragraphs are ordered in the same sequence as the Census Form. Analysis of the defined conditions does not include any related conditions reported on in the “Any other condition not listed” question, these are reported on separately in paragraph 4.3.41.

Detailed breakdowns are given for specific conditions that are either covered by UK Club Screening Schemes, UK BVA/KC Screening Schemes and DNA tests. Additionally the analysis of some conditions has been expanded to identify trends by age, sex or coat colour.

Where percentages are given against the colours, these are for the total colour population.

Figure 5 illustrates the reported conditions as percentages of the total number of returns received for the FCI countries.

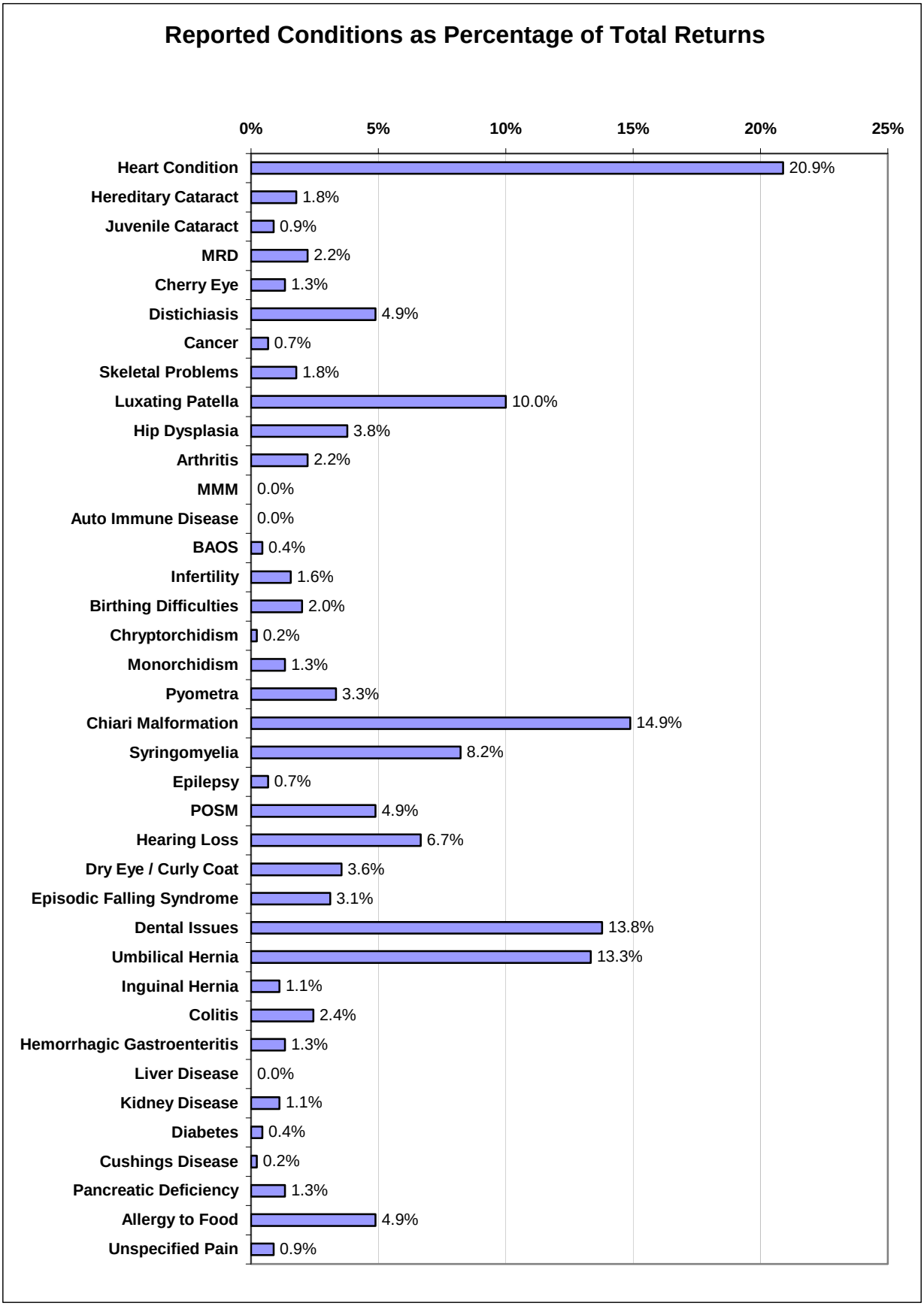

Figure 5 - Reported Veterinary Diagnosed Conditions

Table 9 is a summary of the returns against each identified condition along with the percentage of the total number of returns received from FCI countries.

Condition	No of Report	% of Total Reports	See Para
Heart Condition	94	20.9%	4.3.3
Hereditary Cataract	8	1.8%	4.3.4
Juvenile Cataract	4	0.9%	4.3.5
MRD	10	2.2%	4.3.6
Cherry Eye	6	1.3%	4.3.7
Distichiasis	22	4.9%	4.3.8
Cancer	3	0.7%	4.3.9
Skeletal Problems	8	1.8%	4.3.10
Luxating Patella	45	10.0%	4.3.11
Hip Dysplasia	17	3.8%	4.3.12
Arthritis	10	2.2%	4.3.13
MMM	0	0.0%	4.3.14
Auto Immune Disease	0	0.0%	4.3.15
BAOS	2	0.4%	4.3.16
Infertility	7	1.6%	4.3.17
Birthing Difficulties	9	2.0%	4.3.18
Chryptorchidism	1	0.2%	4.3.19
Monorchidism	6	1.3%	4.3.20
Pyometra	15	3.3%	4.3.21

Condition	No of Report	% of Total Reports	See Para
Chiari Malformation	67	14.9%	4.3.22
Syringomyelia	37	8.2%	4.3.23
Epilepsy	3	0.7%	4.3.24
POSM	22	4.9%	4.3.25
Hearing Loss	30	6.7%	4.3.26
Dry Eye / Curly Coat	16	3.6%	4.3.27
Episodic Falling Syndrome	14	3.1%	4.3.28
Dental Issues	62	13.8%	4.3.29
Umbilical Hernia	60	13.3%	4.3.30
Inguinal Hernia	5	1.1%	4.3.31
Colitis	11	2.4%	4.3.32
Hemorrhagic Gastroenteritis	6	1.3%	4.3.33
Liver Disease	0	0.0%	4.3.34
Kidney Disease	5	1.1%	4.3.35
Diabetes	2	0.4%	4.3.36
Cushings Disease	1	0.2%	4.3.37
Pancreatic Deficiency	6	1.3%	4.3.38
Allergy to Food	22	4.9%	4.3.39
Unspecified Pain	4	0.9%	4.3.40

Table 9 - Summary of Health Conditions

4.3.3. Heart Condition

On the paper returns, some responses to this question also included the grading of Heart Murmur tests; this information was not allowed on the electronic returns.

94 (20.9%) owners reported that their Cavalier had a diagnosed **Heart condition**.

The youngest reported age was 11 months and the oldest 15 years 3 months. These figures do not indicate the age of the onset of any heart condition.

This condition has been analysed using the two age bands “under 5” and “over 5” in line with the UK Cavalier Club’s Heart Screening scheme. Percentages given are for the occurrence by overall colour and sex population.

	Under 5 Years			Over 5 Years		
	All	**Dogs**	**Bitches**	**All**	**Dogs**	**Bitches**
All Colours	21 (4.67%)	12 (6.86%)	9 (3.27%)	73 (16.22%)	28 (16.00%)	45 (16.36%)
Blenheim	10 (4.81%)	4 (4.65%)	6 (4.92%)	28 (13.46%)	11 (12.79%)	17 (13.93%)
Tricolour	3 (3.09%)	2 (4.76%)	1 (1.82%)	13 (13.40%)	7 (16.67%)	6 (10.91%)
Black & Tan	4 (6.90%)	3 (21.43%)	1 (2.27%)	18 (31.03%)	5 (35.71%)	13 (29.55%)
Ruby	4 (4.60)	3 (9.09%)	1 (1.85%)	14 (16.09%)	5 (15.15%)	9 (16.67%)

Table 10 - Diagnosed Heart Condition Distribution by Colour, Sex and Age

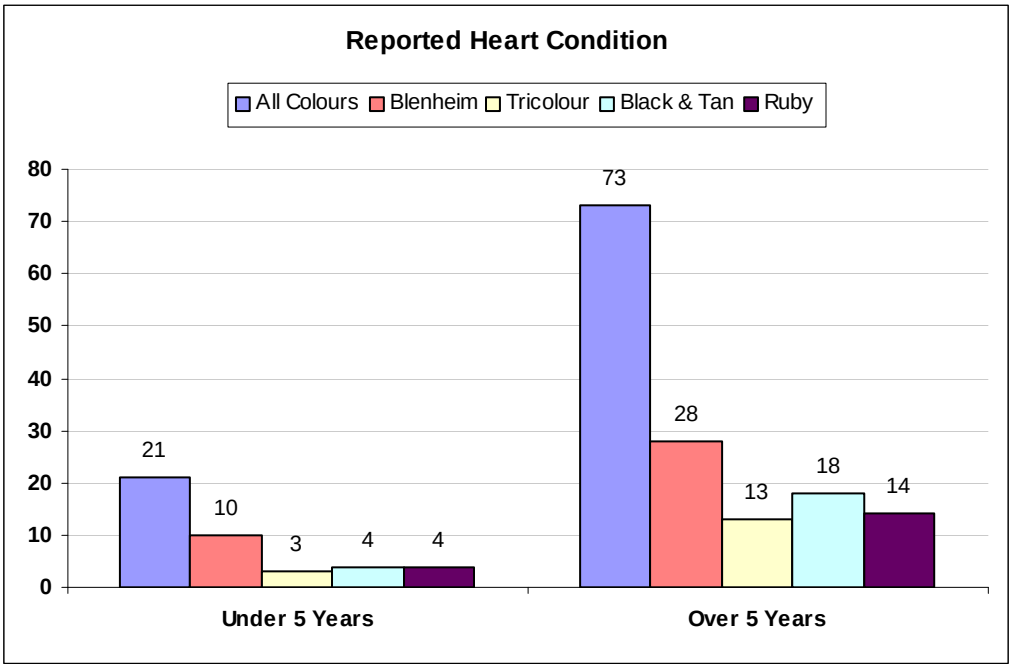

Figure 6 - Diagnosed Heart Condition Distribution by Colour and Age

4.3.4. Hereditary Cataract

8 (1.8%) owners reported that their Cavalier had been diagnosed with **Hereditary Cataract**.

There were 3 dogs and 5 bitches reported as affected.

Of those reported, there were 6 (2.88%) Blenheims, 1 (1.72%) Black and Tan and 1 (1.15%) Ruby.

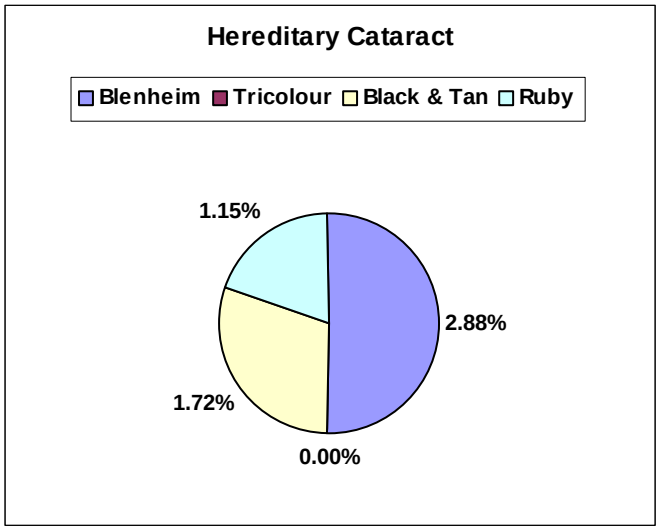

Figure 7 – Colour Distribution for Hereditary Cataract

The youngest reported age was 2 years 6 months and the oldest 14 years. These figures do not indicate the age of the onset of any Hereditary Cataract.

4.3.5. Juvenile Cataract

4 (0.9%) owners reported that their Cavalier had been diagnosed with **Juvenile Cataract**.

There were 3 dogs and 1 bitch reported as affected.

Of those reported, there were 2 (0.96%) Blenheims, 1 (1.03%) Tricolour and 1 (1.15%) Ruby.

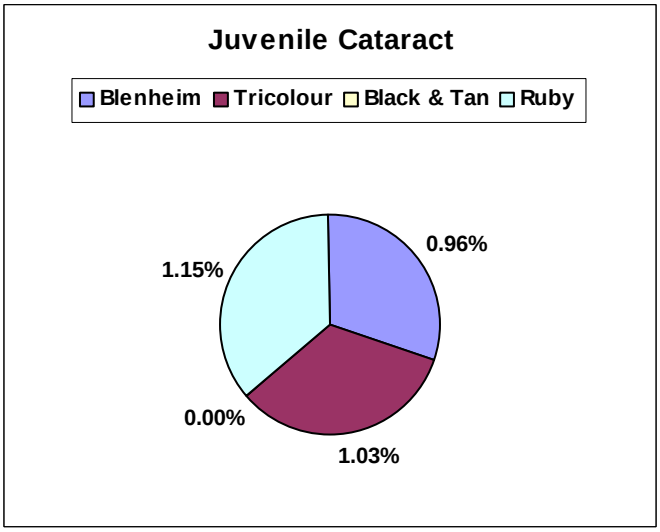

Figure 8 - Colour Distribution for Juvenile Cataract

The youngest reported age was 1 year 3 months and the oldest 9 years. These figures do not indicate the age of the onset of Juvenile Cataract.

4.3.6. Multi Retinal Dysplasia

10 (2.2%) owners reported that their Cavalier had been diagnosed with **Multi Retinal Dysplasia**.

There were 3 dogs and 7 bitches reported as affected.

Of those reported, there were 6 (2.88%) Blenheims, 1 (1.03%) Tricolours and 3 (5.17%) Black and Tans.

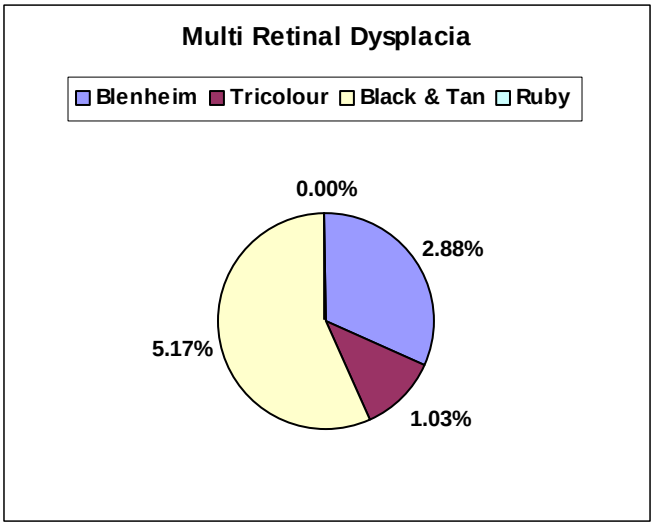

Figure 9 - Colour Distribution for Multi Retinal Dysplasia

The youngest reported age was 1 year 2 months and the oldest 14 years 6 months. These figures do not indicate the age of the onset of Multi Retinal Dysplasia.

4.3.7. Cherry Eye

6 (1.3%) owners reported that their Cavalier had been diagnosed with **Cherry Eye**.

There were 3 dogs and 3 bitches reported as affected.

Of those reported, there were 2 (0.96%) Blenheims, 2 (2.06%) Tricolours and 2 (2.30%) Rubies.

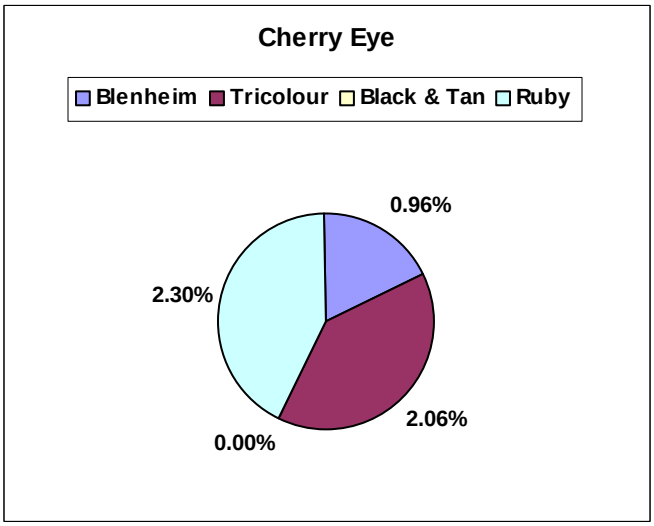

Figure 10 - Colour Distribution for Cherry Eye

The youngest reported age was 1 year 10 months and the oldest 7 years. These figures do not indicate the age of the onset of Cherry Eye.

4.3.8. Distichiasis (extra eyelashes)

22 (4.9%) owners reported that their Cavalier had been diagnosed with **Distichiasis**.

There were 8 dogs and 14 bitches reported as affected.

Of those reported, there were 13 (6.25%) Blenheims, 3 (3.09%) Tricolours, 1 (1.72%) Black and Tan and 5 (5.75%) Rubies.

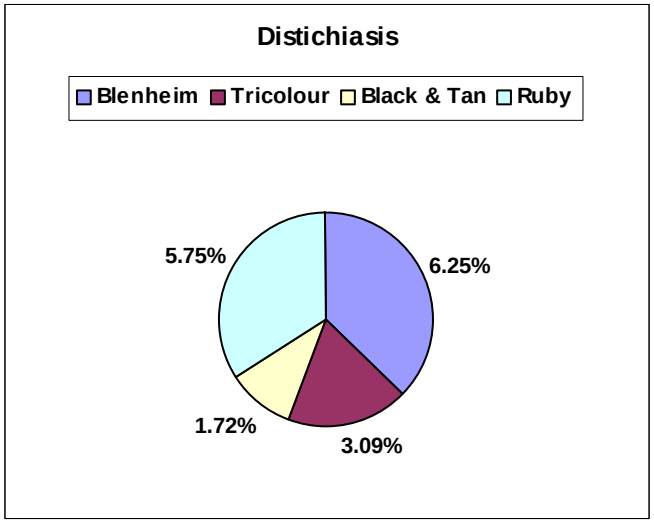

Figure 11 - Colour Distribution for Distichiasis

The youngest reported age was 1 year 3 months and the oldest 10 years 6 months. These figures do not indicate the age of the onset of Distichiasis.

4.3.9. Cancer

3 (0.7%) owners reported that their Cavalier had been diagnosed with **Cancer**.

There were 3 bitches reported as affected.

Of those reported, there were 2 (0.96%) Blenheims and 1 (1.03%) Tricolour.

The youngest reported age was 5 years and the oldest 9 years. These figures do not indicate the age of the onset of Cancer.

4.3.10. Skeletal Problems

8 (1.8%) owners reported that their Cavalier had been diagnosed with **Skeletal Problems**.

There were 7 dogs and 1 bitches reported as affected.

Of those reported, there were 3 (1.44%) Blenheims, 2 (2.06%) Tricolours, 1 (1.72%) Black and Tans and 2 (2.30%) Rubies.

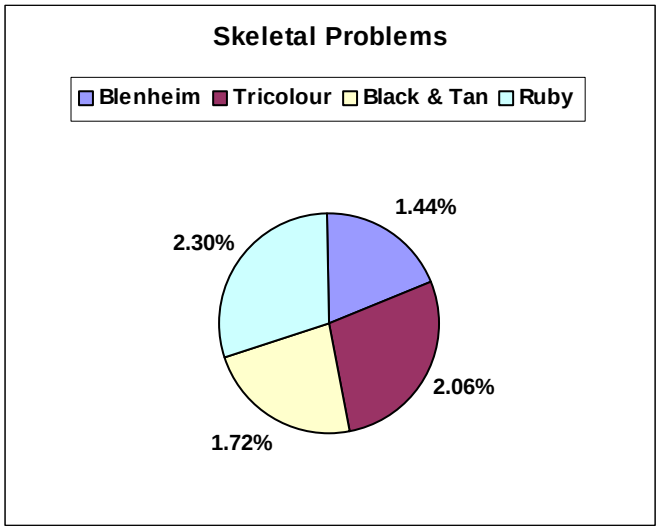

Figure 12 - Colour Distribution for Skeletal Problems

The youngest reported age was 4 years 7 months and the oldest 11 years. These figures do not indicate the age of the onset of Skeletal Problems.

4.3.11. Luxating Patella (Slipping Patella)

45 (10.0%) owners reported that their Cavalier had been diagnosed with **Luxating Patella**.

There were 14 dogs and 31 bitches reported as affected.

Of those reported, there were 21 (10.10%) Blenheims, 7 (7.22%) Tricolours, 13 (22.41%) Black and Tans and 4 (4.60%) Rubies.

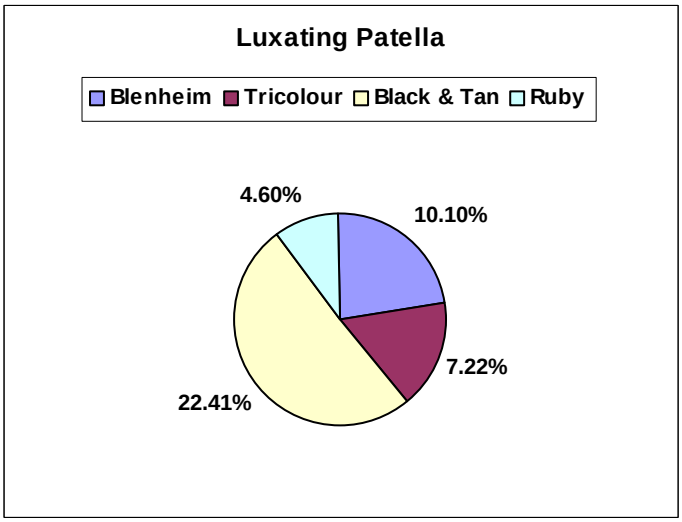

Figure 13 - Colour Distribution for Luxating Patella

The youngest reported age was 2 years and the oldest 13 years. These figures do not indicate the age of the onset of Luxating Patella.

4.3.12. Hip Dysplasia

17 (3.8%) owners reported that their Cavalier had been diagnosed with **Hip Dysplasia**.

There were 9 dogs and 8 bitches reported as affected.

Of those reported, there were 6 (2.88%) Blenheims, 9 (9.28%) Tricolours, 1 (1.72%) Black and Tan and 1 (1.15%) Ruby.

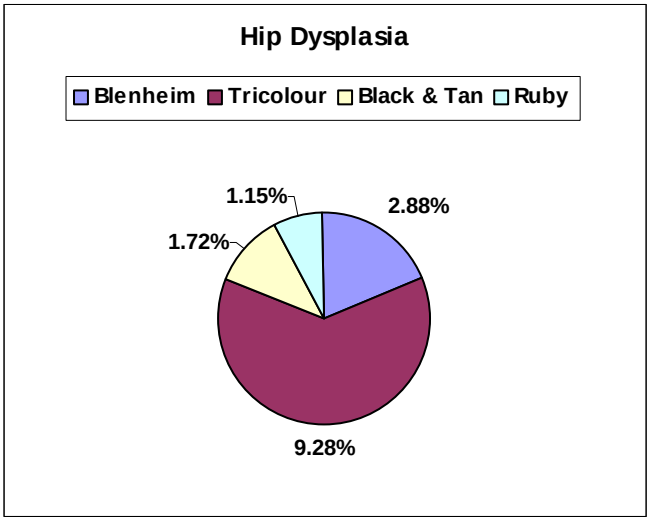

Figure 14 - Colour Distribution for Hip Dysplasia

The youngest reported age was 3 years and the oldest 14 years 8 months. These figures do not indicate the age of the onset of Hip Dysplasia.

4.3.13. Arthritis

10 (2.2%) owners reported that their Cavalier had a diagnosed **Arthritis** condition.

There were 7 dogs and 3 bitches reported as affected.

Of those reported, there were 3 (1.44%) Blenheims, 4 (4.12%) Tricolours, 1 (1.72%) Black and Tan and 2 (2.30%) Rubies.

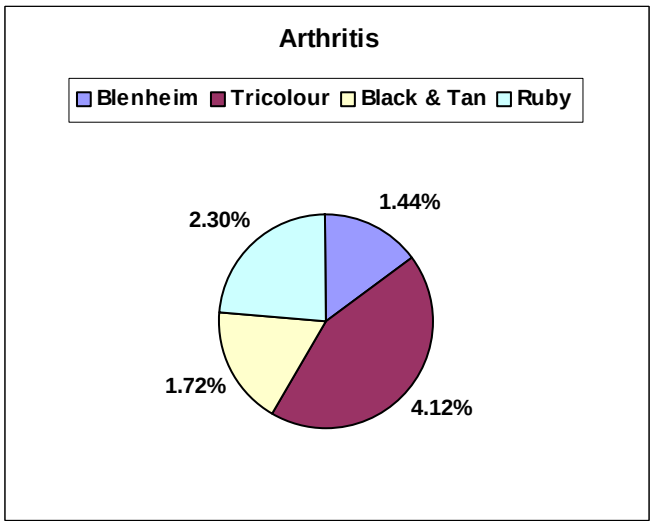

Figure 15 - Colour Distribution for Arthritis

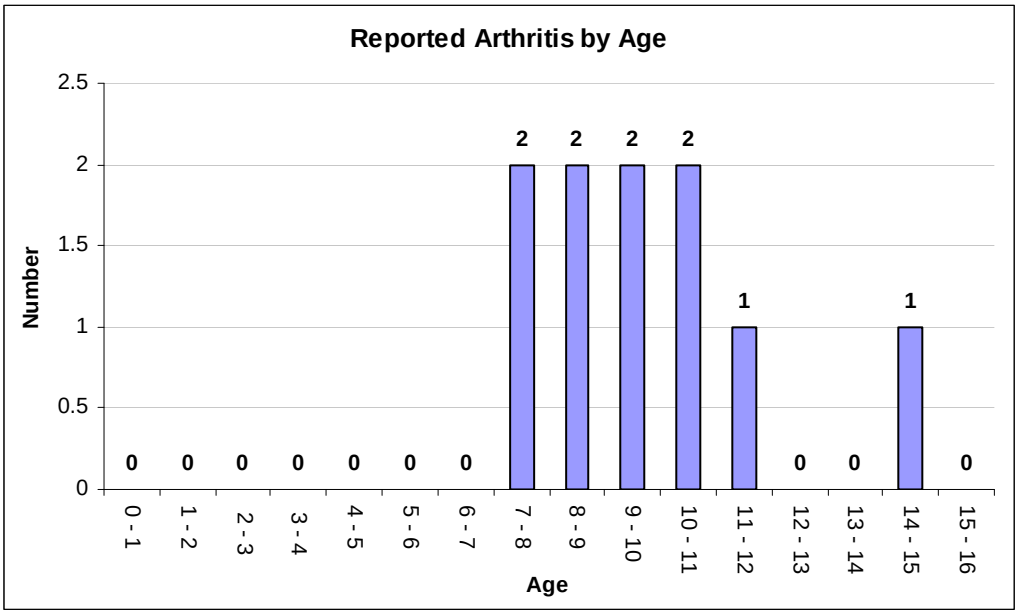

Figure 16 – Reported Occurrences of Diagnosed Arthritis By Age

The youngest reported age was 7 years and the oldest 14 years. These figures do not indicate the age of the onset of Arthritis.

4.3.14. MMM (Masticatory Muscle Myositis)

No owners reported that their Cavalier had been diagnosed with **Masticatory Muscle Myositis**.

4.3.15. Auto-immune Disease

No owners reported that their Cavalier had been diagnosed with **Auto-immune Disease**.

4.3.16. BAOS (Brachycephalic Airways Obstruction)

2 (0.4%) owners reported that their Cavalier had been diagnosed with **Brachycephalic Airways Obstruction**.

Of those reported, both were Tricolours (2.06%), a dog aged 7 years and the other a bitch aged 3 years. These figures do not indicate the age of the onset of Brachycephalic Airways Obstruction.

4.3.17. Infertility

7 (1.6%) owners reported that their Cavalier had been diagnosed with **Infertility** problems.

Of those reported 5 were bitches, 1 (0.82%) Blenheim, 1 (1.82%) Tricolour and 3 (6.82%) Black and Tans. Of those reported 2 were dogs, 1 (0.16%) Blenheim and 1 (2.38%) Tricolour.

The youngest reported age was 5 years and the oldest 15 years 3 months. These figures do not indicate the age of the onset of Infertility.

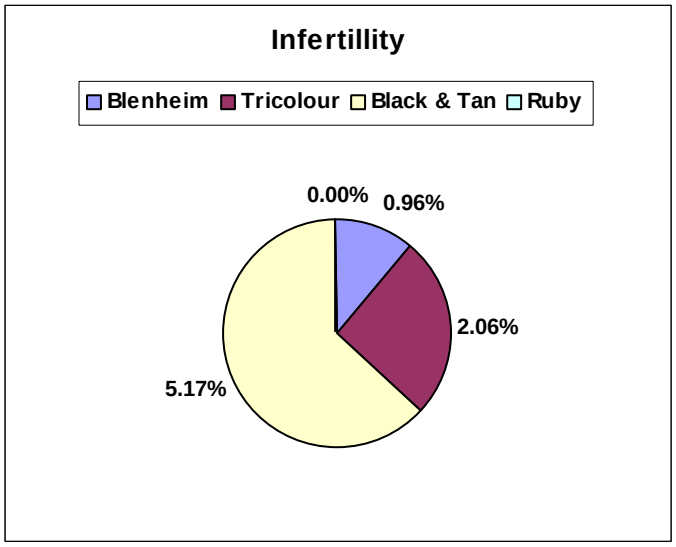

Figure 17 - Colour Distribution for Infertility

4.3.18. Birthing Difficulties, i.e. required caesarean section

9 (2.0%) owners reported that their Cavalier had been diagnosed with **Birthing difficulties**.

Of those reported, there were 4 (1.92%) Blenheims, 2 (2.06%) Tricolours, 1 (1.72%) Black and Tans and 2 (2.30%) Rubies.

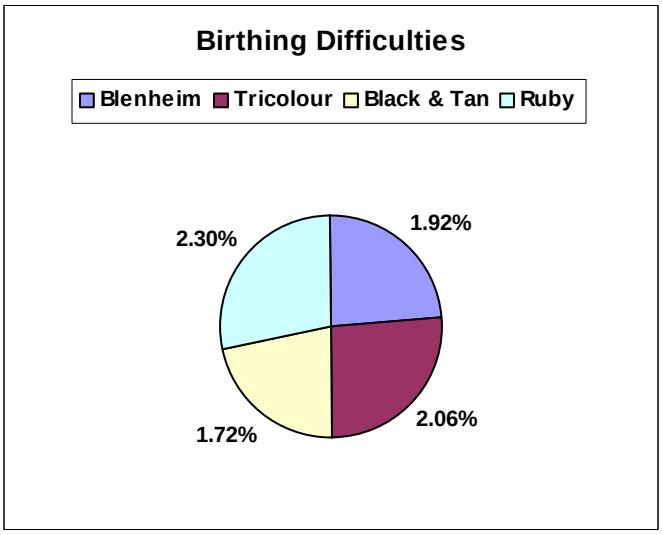

Figure 18 - Colour Distribution for Birthing Difficulties

The youngest reported age was 3 years and the oldest 11 years 9 months. These figures do not indicate the age of the onset of Birthing difficulties.

4.3.19. Chryptorchidism (no testicles descended in the scrotum)

1 (0.2%) owner reported that their Cavalier had been diagnosed with **Chryptorchidism**.

Of those reported, there was only 1 (3.03%) Ruby.

4.3.20. Monorchidism (one testicle)

6 (1.3%) owners reported that their Cavalier had been diagnosed as a **Monorchid.**

Of those reported, there were 2 (0.96%) Blenheims, 3 (3.09%) Tricolours and 1 (1.72%) Black and Tan.

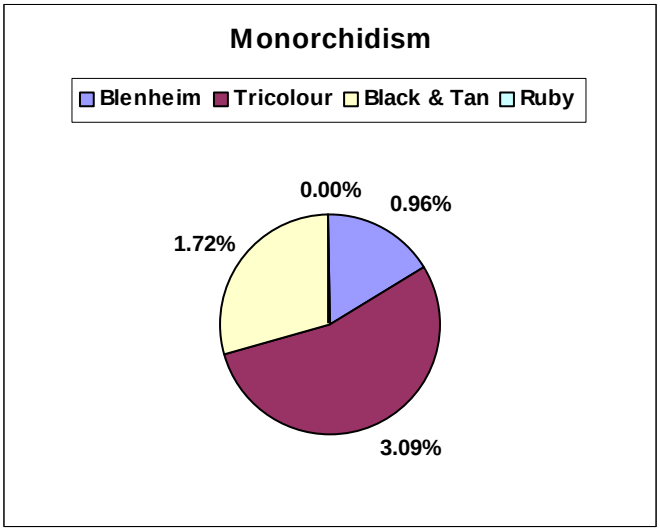

Figure 19 - Colour Distribution for Monorchidism

4.3.21. Pyometra

15 (3.3%) owners reported that their Cavalier had been diagnosed with **Pyometra**.

Of those reported, there were 6 (2.88%) Blenheims, 4 (4.12%) Tricolours, 2 (3.45%) Black and Tans and 3 (3.45%) Rubies.

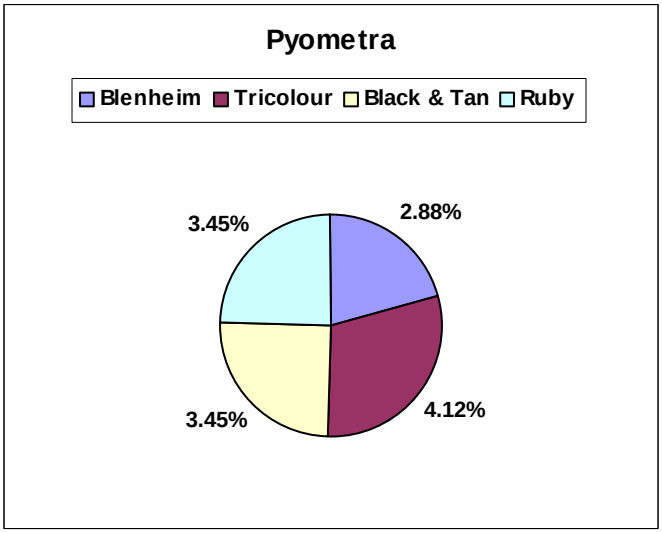

Figure 20 - Colour Distribution for Pyometra

The youngest reported age was 2 years 6 months and the oldest 15 years 3 months. These figures do not indicate the age of the initial occurrence of Pyometra.

4.3.22. Chiari Malformation

Owners were asked in the Census for the occurrence of Chiari Malformation as diagnosed by a Veterinary Practitioner. Owners were not asked for the Grade or whether the Cavalier was Symptomatic or Asymptomatic. No conclusions should therefore be made on these points from the returns received.

This condition has been analysed using the three age bands “0 to 3”, “3 to 5” and “over 5” in line with the “UK BVA/KC Chiari Malformation / Syringomyelia Scheme”. Percentages given are for the occurrence by overall colour and sex population.

67 (14.9%) owners reported that their Cavalier had been diagnosed with **Chiari Malformation**.

	0 to 3 Years			3 to 5 Years			Over 5 Years		
	All	**Dog**	**Bitch**	**All**	**Dog**	**Bitch**	**All**	**Dog**	**Bitch**
All Colours	8 (1.78%)	2 (1.14%)	6 (2.18%)	15 (3.33%)	3 (1.17%)	12 (4.36%)	44 (9.78%)	16 (9.14%)	28 (10.18%)
Blenheim	4 (1.92%)	0	4 (3.28%)	6 (2.88%)	1 (1.16%)	5 (4.10%)	14 (6.73%)	5 (5.81%)	9 (7.38%)
Tricolour	3 (3.09%	2 (4.76%)	1 (1.82%)	6 (6.19%)	2 (4.76%)	4 (7.27%)	9 (9.28%)	4 (9.52%)	5 (9.09%)
Black & Tan	1 (1.72%)	0	1 (2.27%	0	0	0	9 (15.52%)	1 (7.14%)	8 (18.18%)
Ruby	0	0	0	3 (3.45%)	0	3 (5.56%)	12 (13.79%)	6 (18.18%)	6 (11.11%)

Table 11 - Distribution of Chiari Malformation by Colour and Age

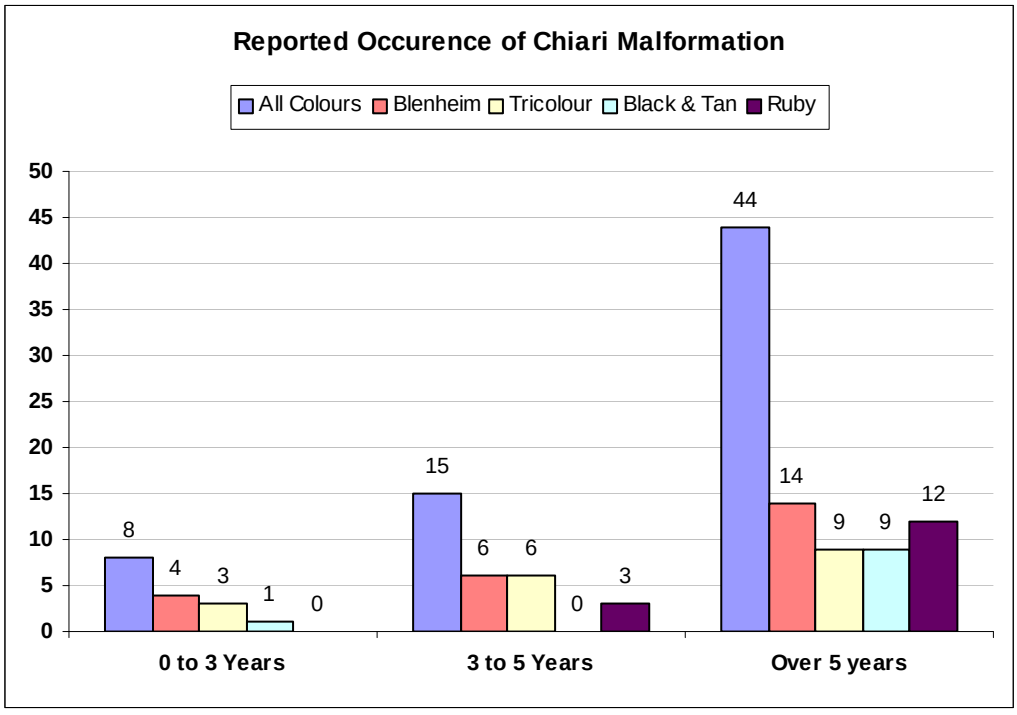

Figure 21 - Reported Occurrences of Diagnosed Chiari Malformation

The youngest reported age was 1 year 6 months and the oldest 10 years. These figures do not indicate the age of initial onset of Chiari Malformation.

4.3.23. Syringomyelia

Owners were asked in the Census for the occurrence of Syringomyelia as diagnosed by a Veterinary Practitioner. Owners were not asked for the Grade or whether the Cavalier was Symptomatic or Asymptomatic. No conclusions should therefore be made on these points from the returns received.

This condition has been analysed using the three age bands “0 to 3”, “3 to 5” and “over 5” in line with the “UK BVA/KC Chiari Malformation / Syringomyelia Scheme”. Percentages given are for the occurrence by overall colour and sex population.

37 (8.2%) owners reported that their Cavalier had been diagnosed with **Syringomyelia**.

	0 to 3 Years			3 to 5 Years			Over 5 Years		
	All	**Dog**	**Bitch**	**All**	**Dog**	**Bitch**	**All**	**Dog**	**Bitch**
All Colours	5 (1.11%)	1 (0.22%)	4 (0.89%)	8 (1.78%)	3 (0.67%)	5 (1.11%)	24 (5.33%)	10 (2.22%)	14 (3.11%)
Blenheim	2 (0.96%)	0	2 (0.96%)	3 (1.44%)	1 (0.48%)	2 (0.96%)	10 (4.814%)	4 (1.92%)	6 (2.88%)
Tricolour	2 (2.06%)	1 (1.03%)	1 (1.03%)	4 (4.12%)	2 (2.06%)	2 (2.06%)	6 (6.19%)	2 (2.06%)	4 (4.12%)
Black & Tan	1 (1.72%)	0	1 (1.72%	1 (1.72%)	0	1 (1.72%)	3 (5.17%)	0	3 (5.17%)
Ruby	0	0	0	0	0	0	5 (5.75%)	4 (4.60%)	1 (1.15%)

Table 12 - Distribution of Syringomyelia by Colour and Age

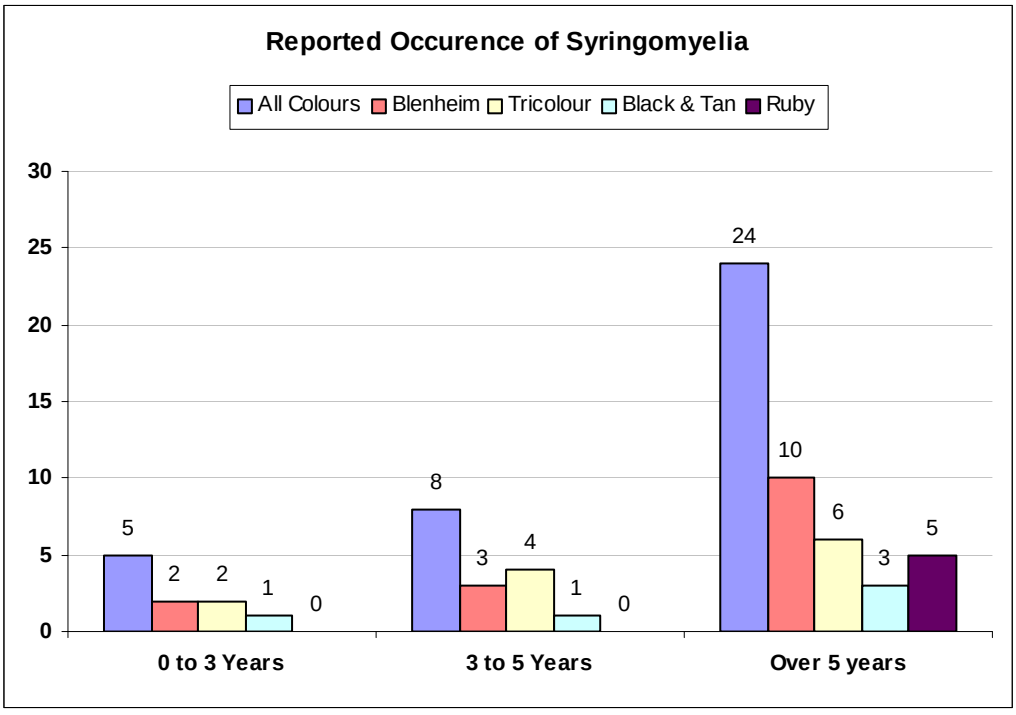

Figure 22 - Reported Occurrences of Diagnosed Syringomyelia

The youngest reported age was 1 year 6 months and the oldest 12 years. These figures do not indicate the age of initial onset of Syringomyelia.

4.3.24. Epilepsy

3 (0.7%) owners reported that their Cavalier had been diagnosed with **Epilepsy.**

Of those reported, there was 1 (1.16%) Blenheim dog aged 8 yeras 10 months, 1 (2.38%) Tricolour dog aged 9 years and 1 (1.82%) Tricolour bitch aged 7 years. These figures do not indicate the age of initial onset of Epilepsy.

4.3.25. PSOM (Primary Secretory Otitis Media) Also known as “glue ear”)

22 (4.9%) owners reported that their Cavalier had been diagnosed with **Primary Secretory Otitis Media.**

There were 6 dogs and 16 bitches reported as affected.

Of those reported, there were 10 (4.81%) Blenheims, 9 (9.28%) Tricolours and 3 (5.17%) Black and Tans.

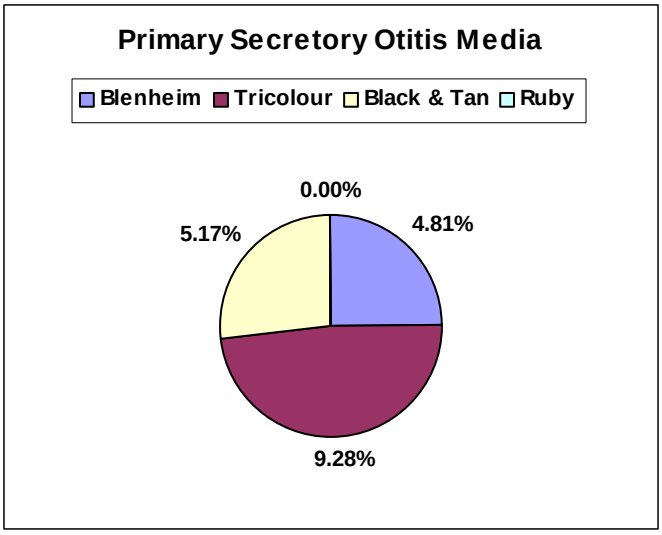

Figure 23 - Colour Distribution for Primary Secretory Otitis Media

The youngest reported age was 2 years and the oldest 9 years. These figures do not indicate the age of initial onset of Primary Secretory Otitis Media.

4.3.26. Hearing Loss

Some owners had reported under “Observations” that their dog was slightly deaf or totally deaf but did not record this under “Health Conditions - Hearing Loss”. This could indicate that a Veterinary Practioner did not confirm the hearing loss. These observations have not been included in the analysis of this condition.

30 (6.7%) owners reported that their Cavalier had been diagnosed with **Hearing Loss.**

There were 16 dogs and 14 bitches reported as affected.

Of those reported, there were 14 (6.73%) Blenheims, 6 (6.19%) Tricolours, 7 (12.07%) Black and Tans and 3 (3.45%) Rubies.

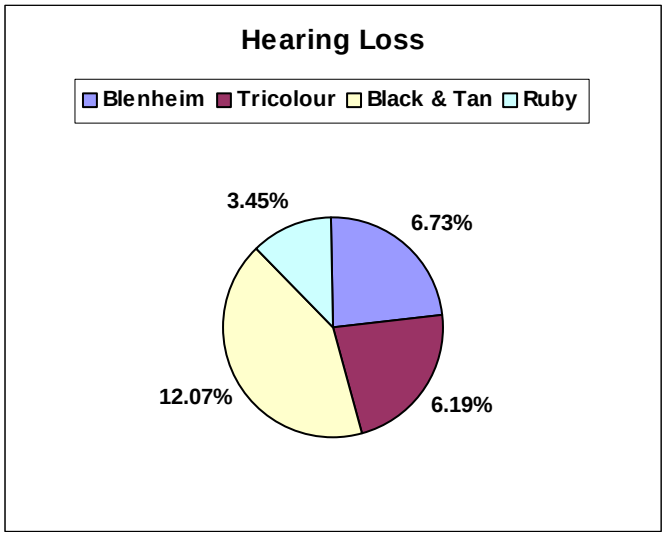

Figure 24 - Colour Distribution for Diagnosed Hearing Loss

The youngest reported age was 2 years and the oldest 15 years 3 months. These figures do not indicate the age of the initial loss of hearing.

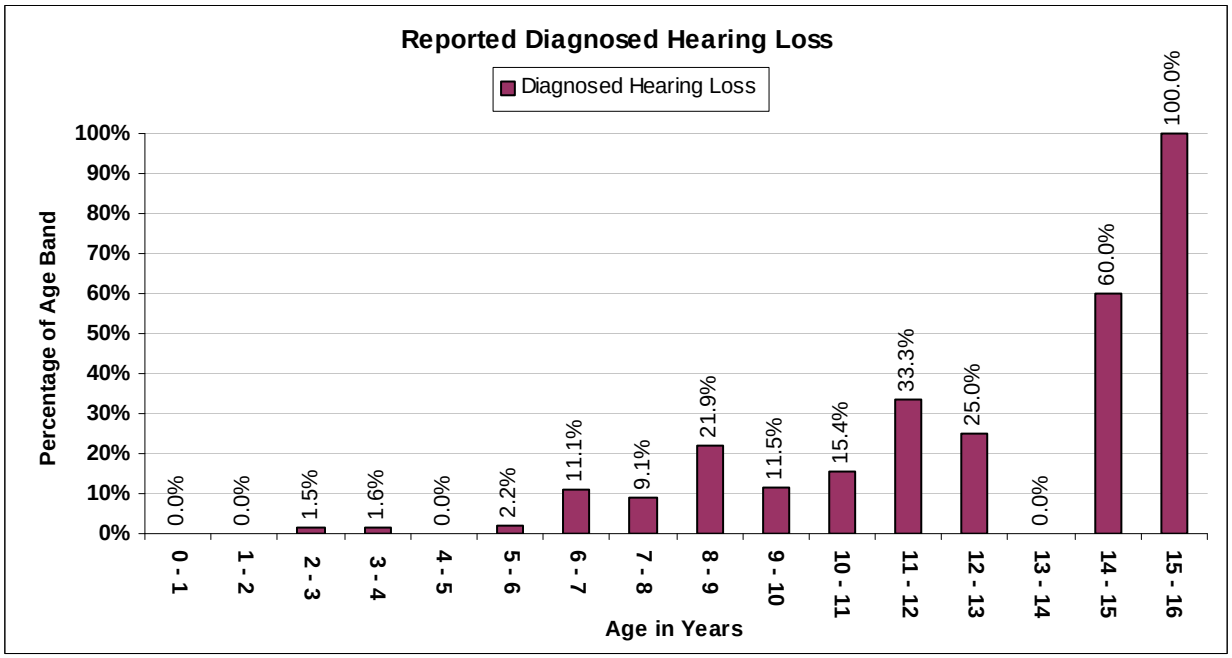

Figure 25 - Diagnosed Hearing Loss as a Percentage of Age Band

4.3.27. Dry Eye/Curly Coat

Owners were asked in the Census for the occurrence of Dry Eye / Curly Coat as diagnosed by a Veterinary Practitioner. Owners were not asked for the results of any DNA test or whether the Cavalier was Symptomatic or Asymptomatic. No conclusions should therefore be made on these points from the returns received.

16 (3.6%) owners reported that their Cavalier had been diagnosed with **Dry Eye / Curly Coat**.

There were 10 dogs and 6 bitches reported as affected.

Of those reported, there were 8 (3.85%) Blenheims, 5 (5.15%) Tricolours, 2 (3.45%) Black and Tans and 1 (1.15%) Ruby.

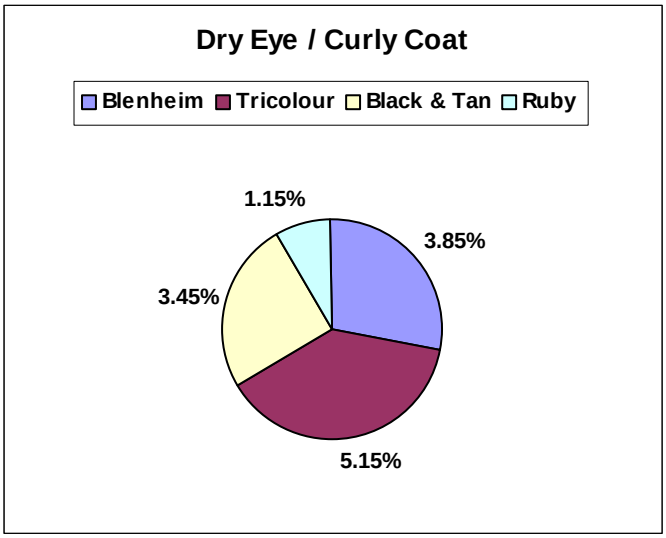

Figure 26 - Colour Distribution for Dry Eye / Curly Coat

The youngest reported age was 11 months and the oldest 10 years. These figures do not indicate the age of the initial onset of Dry Eye / Curly Coat.

4.3.28. Episodic Falling Syndrome

Owners were asked in the Census for the occurrence of Episodic Falling Syndrome as diagnosed by a Veterinary Practitioner. Owners were not asked for the results of any DNA test or whether the Cavalier was Symptomatic or Asymptomatic. No conclusions should therefore be made on these points from the returns received.

14 (3.1%) owners reported that their Cavalier had been diagnosed with **Episodic Falling Syndrome**.

There were 9 dogs and 5 bitches reported as affected.

Of those reported, there were 7 (3.37%) Blenheims, 3 (3.09%) Tricolours, 2 (3.45%) Black and Tans and 2 (2.30%) Rubies.

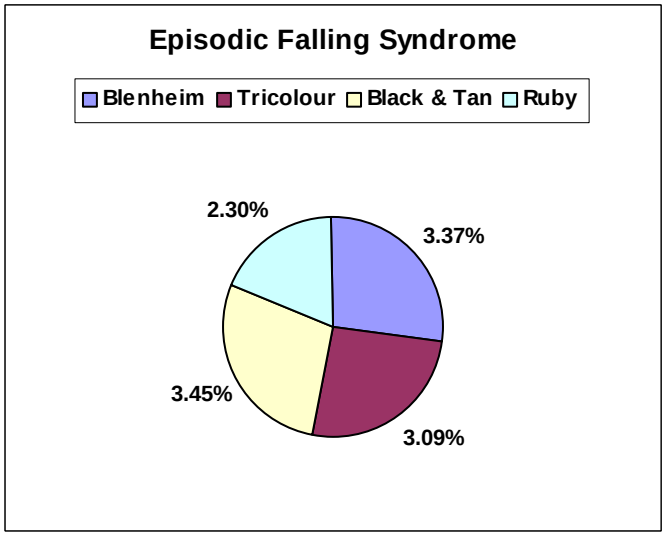

Figure 27 - Colour Distribution for Episodic Falling Syndrome

The youngest reported age was 11 months and the oldest 14 years 8 months. These figures do not indicate the age of the initial onset of Episodic Falling Syndrome.

4.3.29. Dental Issues

62 (13.8%) owners reported that their Cavalier had been diagnosed with **Dental Issues**.

There were 31 dogs and 31 bitches reported as affected.

Of those reported, there were 28 (13.46%) Blenheims, 17 (17.53%) Tricolours, 9 (15.52%) Black and Tans and 8 (9.20%) Rubies.

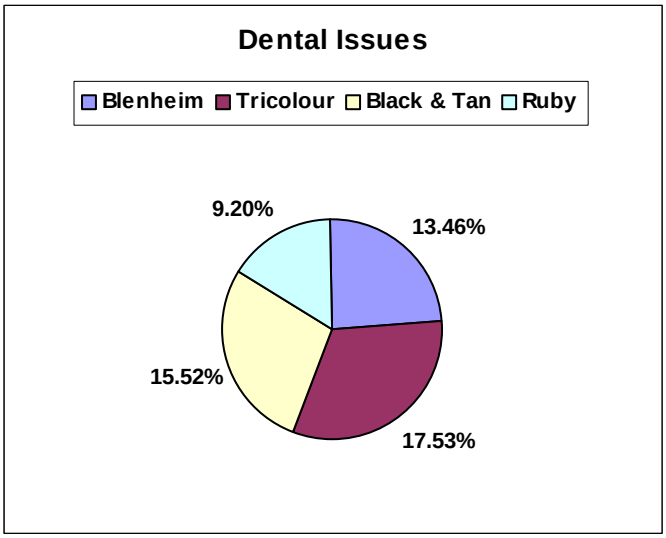

Figure 28 - Colour Distribution for Dental Issues

The youngest reported age was 1 years and the oldest 15 years 3 months. These figures do not indicate the age of the initial onset of Dental Issues.

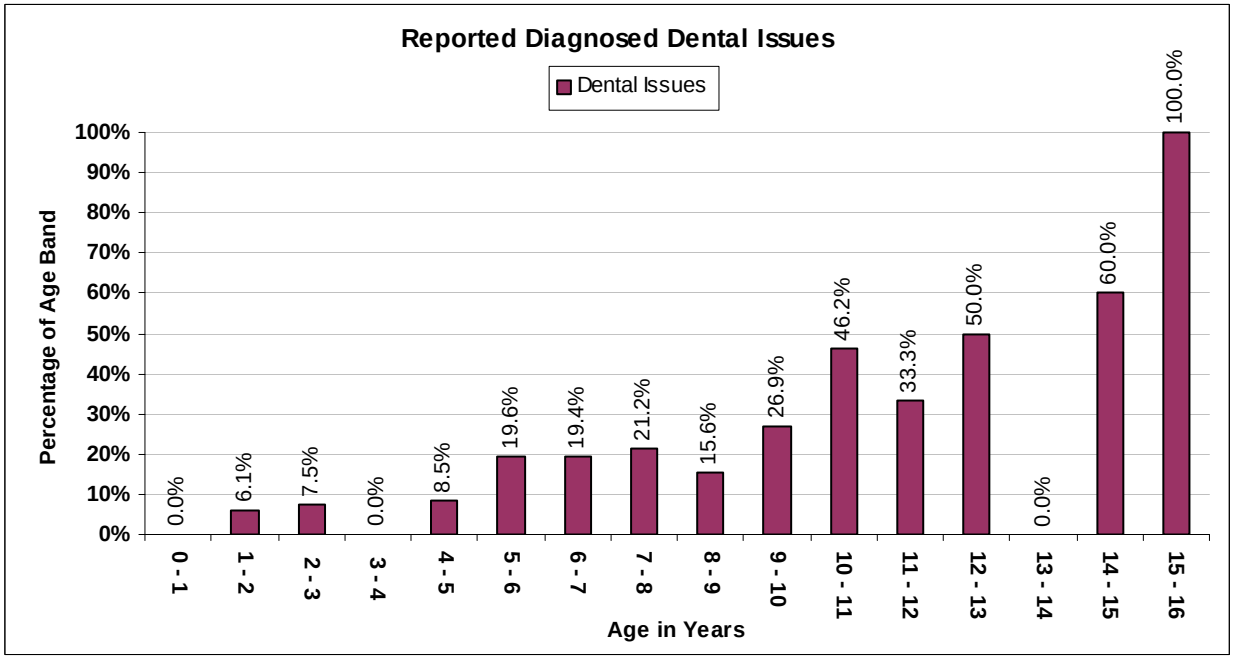

Figure 29 - Diagnosed Dental Issues as a Percentage of Age Band

4.3.30. Umbilical Hernia

60 (13.3%) owners reported that their Cavalier had been diagnosed with an **Umbilical Hernia**.

There were 12 dogs and 48 bitches reported as affected.

Of those reported, there were 20 (9.62%) Blenheims, 11 (11.34%) Tricolours, 10 (17.24%) Black and Tans and 19 (21.84%) Rubies.

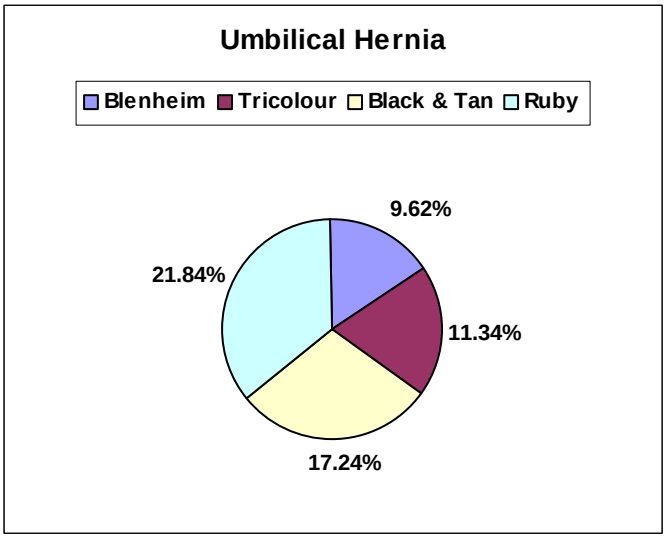

Figure 30 - Colour Distribution for Umbilical Hernia

The youngest reported age was 4 months and the oldest 12 years 6 months. These figures do not indicate the age of the initial onset of Umbilical Hernia.

4.3.31. Inguinal Hernia

5 (1.1%) owners reported that their Cavalier had been diagnosed with an **Inguinal Hernia**.

There were 3 dogs and 2 bitches reported as affected.

Of those reported, there were 2 (0.96%) Blenheims, 1 (1.03%) Tricolours, 1 (1.72%) Black and Tans and 1 (1.15%) Ruby.

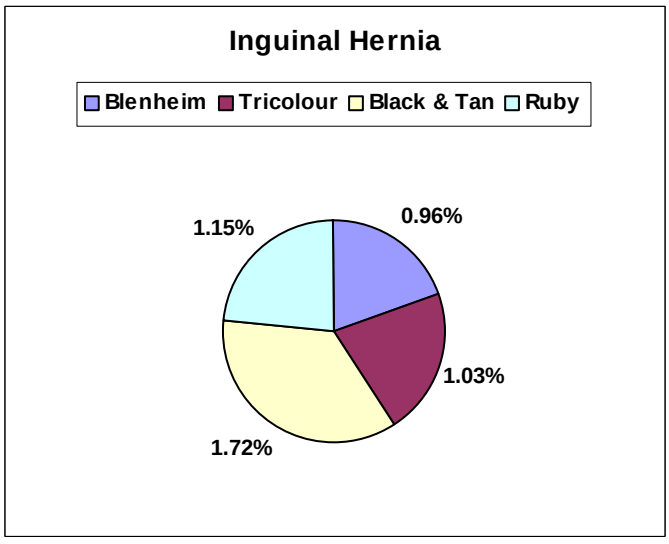

Figure 31 - Colour Distribution for Inguinal Hernia

The youngest reported age was 3 years and the oldest 9 years. These figures do not indicate the age of the initial onset of Inguinal Hernia.

4.3.32. Colitis

11 (2.4%) owners reported that their Cavalier had been diagnosed with **Colitis**.

There were 9 dogs and 2 bitches reported as affected.

Of those reported, there were 6 (2.88%) Blenheims, 3 (3.09%) Tricolours, 1 (1.72%) Black and Tans and 1 (1.15%) Rubies.

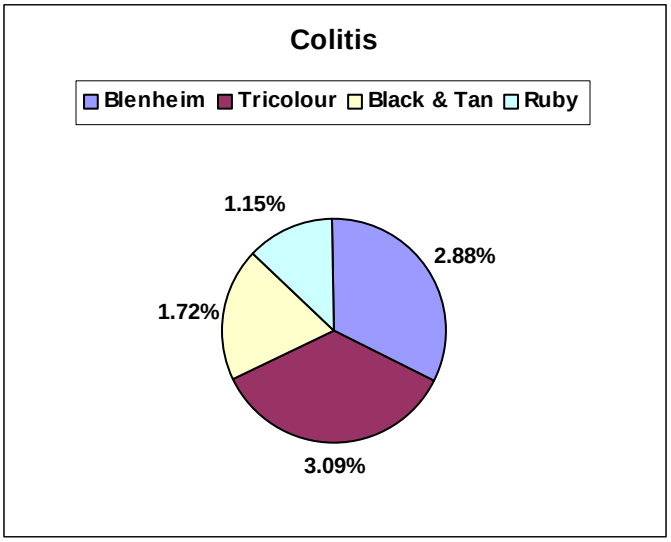

Figure 32 - Colour Distribution for Colitis

The youngest reported age was 1 year 3 months and the oldest 9 years. These figures do not indicate the age of the initial onset of Colitis.

4.3.33. Hemorrhagic Gastroenteritis

6 (1.3%) owners reported that their Cavalier had been diagnosed with **Hemorrhagic Gastroenteritis**.

There were 2 dogs and 4 bitches reported as affected.

Of those reported, there were 2 (0.96%) Blenheims, 2 (2.06%) Tricolours, 1 (1.72%) Black and Tan and 1 (1.15%) Ruby.

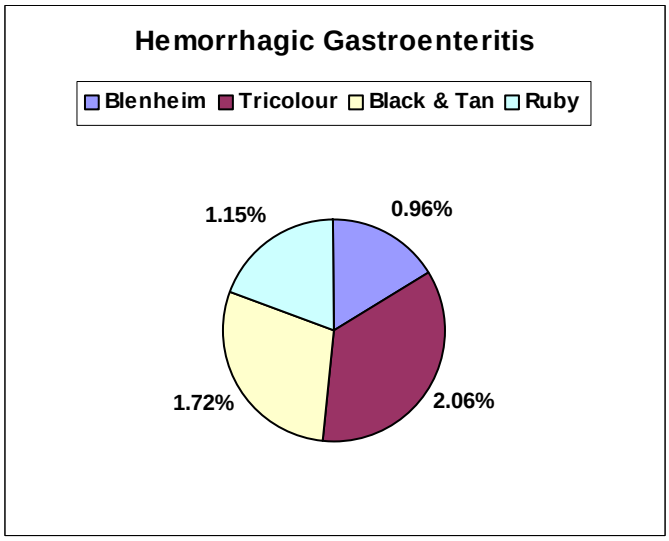

Figure 33 - Colour Distribution for Hemorrhagic Gastroenteritis

The youngest reported age was 3 year 6 month and the oldest 10 years. These figures do not indicate the age of the initial onset of Hemorrhagic Gastroenteritis.

4.3.34. Liver Disease

No owners reported that their Cavalier had been diagnosed with **Liver Disease**.

4.3.35. Kidney Disease

5 (1.1%) owners reported that their Cavalier had been diagnosed with **Kidney Disease**.

There were 2 dogs and 3 bitches reported as affected.

Of those reported, there were 2 (0.96%) Blenheims and 3 (3.09%) Tricolours.

The youngest reported age was 4 years and the oldest 7 years. These figures do not indicate the age of the initial onset of Kidney Disease.

4.3.36. Diabetes

2 (0.4%) owners reported that their Cavalier had been diagnosed with **Diabetes**.

There were 1 dogs and 1 bitches reported as affected.

Of those reported, both (3.45%) were Black and Tans.

The youngest reported age was 1 year and the oldest 9 years. These figures do not indicate the age of the initial onset of Diabetes.

4.3.37. Cushing's Disease

1 (0.2%) owner reported that their 14 year old Black and Tan Cavalier dog had been diagnosed with **Cushing's Disease**. These figures do not indicate the age of the initial onset of Cushing's Disease.

4.3.38. Pancreatic Deficiency

6 (1.3%) owners reported that their Cavalier had been diagnosed with **Pancreatic Deficiency**.

There were 4 dogs and 2 bitches reported as affected.

Of those reported, there was 1 (0.48%) Blenheim, 3 (3.09%) Tricolours, 1 (1.72%) Black and Tan and 1 (1.15%) Ruby.

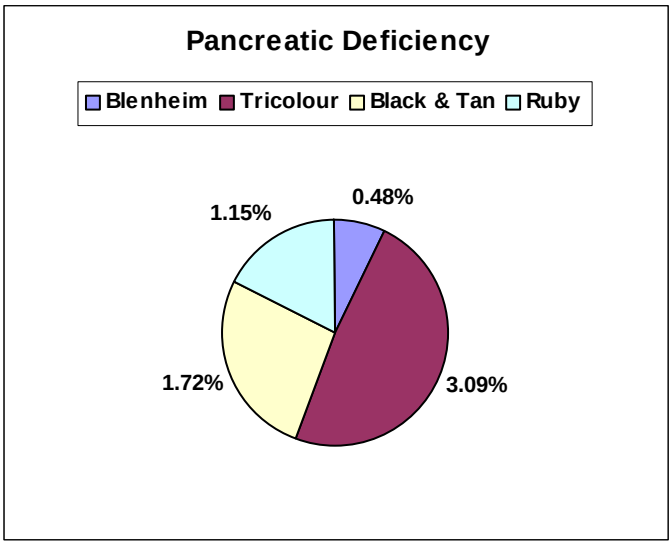

Figure 34 - Colour Distribution for Pancreatic Deficiency

The youngest reported age was 1 year and the oldest 7 years. These figures do not indicate the age of the initial onset of Pancreatic Deficiency.

4.3.39. Allergy to Food

22 (4.9%) owners reported that their Cavalier had been diagnosed with an **Allergy to Food**.

There were 10 dogs and 22 bitches reported as affected.

Of those reported, there were 8 (3.85%) Blenheims, 11 (11.34%) Tricolours, 2 (3.45%) Black and Tans and 1 (1.15%) Ruby.

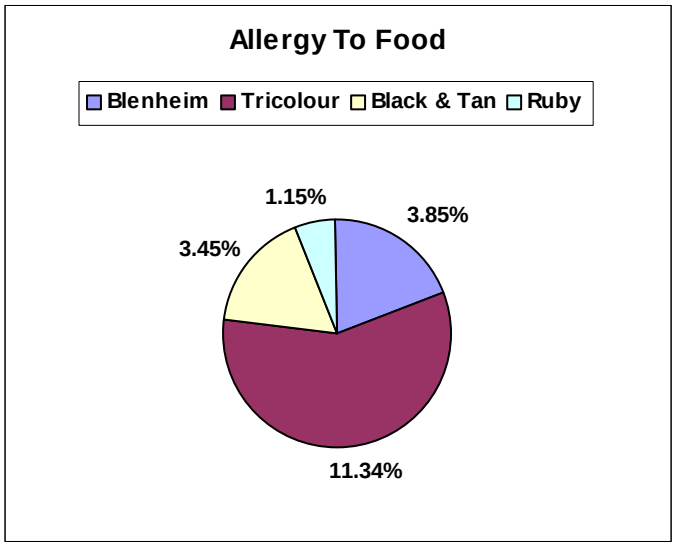

Figure 35 - Colour Distribution for Allergy To Food

The youngest reported age was 1 year 6 months and the oldest 10 years 8 months. These figures do not indicate the age of the initial onset of Allergy to Food.

4.3.40. Unspecified pain

4 (0.9%) owners reported that their Cavalier had been diagnosed with an **Unspecified Pain**.

There were 3 dogs and 1 bitch reported as affected.

Of those reported, there was 1 (0.48%) Blenheim, 2 (2.06%) Tricolours and 1 (1.15%) Ruby.

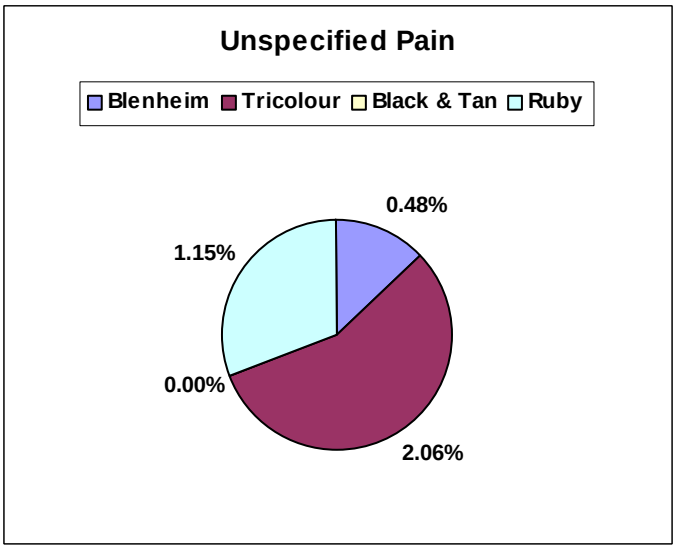

Figure 36 - Colour Distribution for Unspecified Pain

The youngest reported age was 5 years and the oldest 9 years. These figures do not indicate the age of the initial onset of Unspecified Pain.

4.3.41. Any other condition not listed

Owners were given the option of identifying any other condition not specifically listed on the form. 59 owners responded with additional conditions or expansion of the listed conditions. Some owners used this section to identify the grades resulting from DNA and screening tests. The 59 unedited responses are listed in ANNEX B.

Analysis of this item is subjective and as such they have been categorised by the most identifiable condition.

Category	No of Reports	Annex B
Allergy	6	B.1
Anal Gland	4	B.2
Cysts	1	B.3
Dental	1	B.4
Ears	1	B.5
Eyes	8	B.6
Fertility	2	B.7
General	3	B.8
Heart	4	B.9
Hernia	3	B.10
Hydrocephalus	1	B.11

Category	No of Reports	Annex B
Nerves	1	B.12
Neurological	1	B.13
Prostrate	3	B.14
Pyometra	1	B.15
Skeletal	3	B.15
Syringomyelia	1	B.17
Test Results	11	B.18
Tumour	1	B.19
Urinary	2	B.20
Vitamin Deficiency	1	B.21

ANNEX A. CENSUS FORM

GENERAL QUESTIONS - Those marked with an asterisk are mandatory

NAME OF OWNER		
PET NAME/CALL NAME OF DOG		
AGE *	COLOUR *	SEX *

Do you consider this Cavalier is happy?	Yes		No	

OBSERVATIONS – for you to tell us about this Cavalier – please tick ANY that apply:

Correct Weight		Overweight		Underweight		Greedy		Poor eater	
Friendly		Sociable		Obedient		Aggressive		Noisy	
Excitable		Nervous		Lazy		Active		Spayed /Neutered	
Regularly Exercised		Exercise Limited		Lives in the house		Lives in a kennel		Lives part house/part kennel	
Good hearing		Slightly deaf		Totally deaf					

HEALTH QUESTIONS
Has this Cavalier ever been **DIAGNOSED BY A VET** to have any of these conditions? Please tick any that apply.

Heart Condition		Chiari Malformation	
Hereditary Cataract		Syringomyelia	
Juvenile Cataract		Epilepsy	
Multi Retinal Dysplasia		PSOM (Primary Secretory Otitis Media) Also known as “glue ear)	
Cherry Eye		Hearing Loss	
Distichiasis (extra eyelashes)		Dry Eye/Curly Coat	
Cancer		Episodic Falling Syndrome	
Skeletal problems		Dental Issues	
Luxating Patella (Slipping Patella)		Umbilical Hernia	
Hip Dysplasia		Inguinal Hernia	
Arthritis		Colitis	
MMM (Masticatory Muscle Myositis)		Hemorrhagic Gastroenteritis	
Auto-immune disease		Liver Disease	
BAOS (Brachycephalic Airways Obstruction)		Kidney Disease	
Infertility		Diabetes	
Birthing difficulties, i.e. required caesarean section		Cushing’s Disease	
Chryptorchidism (no testicles descended in the scrotum)		Pancreatic Deficiency	
Monorchidism (one testicle)		Allergy to Food	
Pyometra		Unspecified pain	
Any other condition not listed – please specify			

ANNEX B. OTHER CONDITIONS - RESPONSES

Owners were given the option of identifying any other condition not specifically listed on the form. The 59 unedited responses are listed below. Analysis of these responses is subjective and as such they have been categorised by the most identifiable condition. Some owners used this section to identify the grades resulting from DNA and screening tests.

B.1. Allergy

- Alergy to vaccines
- Allergy to Dirt
- Allergy to flea bite and tick bite
- Allergy to grass
- Highly allergic to food, plants, pollen and thus problems with skin, eyes, ears, stomach and intestines. Drye eyes.
- House dust mites allergy

B.2. Anal Gland

- Anal Gland abcess
- Anal glands removed through surgery due to infections.
- Anal sac impaction and abscesses, retinal dysplasia geographic, dry eye syndrome,one epileptic seizure
- One infection in the anal glands and one eye infection.

B.3. Cysts

- Ovarian cysts

B.4. Dental

- Overbite that does not need to be adjusted

B.5. Ears

- Not sure what it called, but have had an ear infection on the right side.
- Officially heart clear past 7 years, a bit of hearing loss after 10 years

B.6. Eyes

- 6 months ago started to notice the development of cataracts
- Conjunctivitis and corneitis
- Cornea dystrophi (eyes condition quite common in cavaliers)
- Glacoma blind in one eye
- GRD, Urethritis.
- Inverted sneezes, eye ulcers
- Treated for large corneal ulcer which has now cleared up (Johannesburg Animal Eye Hospital). Unknown cause, but suspect he put his toenail in it.
- White small spots on retina

B.7. Fertility

- After her first litter problem to get pregnant
- Rescue dog sold by puppy farmer as could not get her in pup, so seems to have been infertile.

B.8. General

- Dairea once or 3 times
- My dog ate two coins and had a surgery
- She got castrate.

B.9. Heart

- PDA (patent ductus arterious) she was operated but they couldn't find the ductus as she has too many vessels
- Slight heart murmur
- Very slight heart murmur

B.10. Hernia

- Bellybutton (hernia)
- Otite, petite hernie discale
- Umbilical hernia

B.11. Hydrocephalus

- Hydrocephalus.

B.12. Nerves

- Nervous scraping

B.13. Neurological

- She has larangeal (SP) paralysis and as a result has lost her bark and her eye blink. Always in good form. presently on prednisilone as slight limp - vet thinks may have something going on neurologically connected to the larangeal paralysis. No insurance so no mri done

B.14. Prostrate

- Prolasso mitralico Ia
- Prostate problems
- Prostatitis

B.15. Pyometra

- Charly had an infection in her womb not sure what name is but her womb was removed at ten months

B.16. Skeletal

- Pain in hindquarters/lower back, cause not clearly understood
- Ruptured Cruciate Ligament (Left Hind Quarter) at 8 y.o., healed with TTA Surgery
- Slight undershot jaw

B.17. Syringomyelia

- He has been scanned for Syringomyelia and is slightly attacked without any symptoms.

B.18. Test Results

- Carrier of Dry Eye/Curly Coat
- Carrier of EPS
- Dry Eye(partial - oftamol.) ; EF, CC&DE clear (tested)
- EF clear, CC&DE carrier (tested)
- EF, CC&DE clear (parents tested)
- EF, CC&DE clear (tested)
- EF, CC&DE clear (tested)
- EF, CC/DE clear (clear parents)
- Episodic Falling - Carrier
- Syringomyelia A
- Syringomyelia D

B.19. Tumour

- Mammary tumors (operated), benign

B.20. Urinary

- Urethritis
- Urinary infection and clogging of the anal glands at the age of 6 months. Otherwise very healthy dog!

B.21. Vitamin Deficiency

- B12 deficiency

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