

**Australian Shepherd Health & Genetics Institute, Inc.**  
**The Australian Shepherd Comprehensive Breed Health Survey**  
**August 2009-August 2010**

The Australian Shepherd Health & Genetics Institute, Inc. (ASHGI) conducted this survey from August 2009 through August 2010. ASHGI contracted with Elements Software Engineering, LLP (ESE) of Hurley, Wisconsin for technical support based. ESE programmed and hosted the web version of the survey and stored the data on its server while the survey was operational. ASHGI prepared electronic and paper versions of the survey form for those who did not wish or were unable to utilize the web-mounted version. Responses submitted by electronic copy or on paper were entered into the web-mounted database. The survey was advertised in both the *Aussie Times* and the *Australian Shepherd Journal* and heavily promoted on breed discussion lists and via ASHGI's international club contact list.

This survey was intended for purebred Australian Shepherds born from January 1, 1990, through December 31, 2005. Our overriding goal was to obtain data that would allow us to gauge the frequency of various health and genetic issues in the breed. We also sought more detailed information on each item which will help us in our educational efforts on behalf of the international Australian Shepherd breed community.

Some respondents did not complete all sections of this long and detailed survey, therefore the number of responses is indicated with each section heading and percentages within the section are based on that number unless otherwise noted.

For the purposes of this survey, the word "dog" referred to any Australian Shepherd regardless of gender. When gender is pertinent "male" or "female" were used.

**Survey Questions and responses**

May we....

Contact you if we have further questions? Yes 307 81.87% of owners  
 Include your dog's information in the confidential IDASH Pedigree Analysis Database? Yes 288 76.80%

Owner Locations 375 owners

Australia	7 ea.	1.87%	
Austria	1	0.27	
Belgium	3	0.80	
Canada	20	5.33	
Czech Republic	1	0.27	
Denmark	2	0.53	
Finland	9	2.40	
France	5	1.33	
Germany	21	5.60	
Netherlands	28	7.47	
Norway	16	4.27	
Slovenia	4	1.07	
South Africa	1	0.27	
Sweden	1	0.27	
Switzerland	3	0.80	
United Kingdom	11	2.93	
United States	242	64.53	
New England (CT, MA, ME, NH, RI)	11	4.55% of US	
Mid-Atlantic (MD, NJ, NY, PA)	32	13.22	
South (AL, AR, FL, GA, KY, LA, NC, SC, TN, TX, VA, WV)	59	24.38	
Upper Midwest (IA, IL, IN, MI, MN, MO, NE, OH, WI)	43	17.77	
Mountain West (AZ, CO, ID, MT, NM, NV, UT, WY)	29	11.98	
Pacific (AK, CA, OR, WA)	68	28.10	

Breakdown by US state:

AK	7	2.89% of US	LA	2	0.83	NY	14	5.79
AL	1	0.41	MA	4	1.65	OH	7	2.89
AR	1	0.41	MD	5	2.07	OR	3	1.24
AZ	7	2.89	ME	1	0.41	PA	11	4.55
CA	39	16.12	MI	11	4.55	RI	1	0.41
CO	5	2.07	MN	7	2.89	SC	3	1.24
CT	2	0.83	MO	4	1.65	TN	4	1.65
FL	9	3.72	MT	4	1.65	TX	18	7.44
GA	6	2.48	NC	9	3.72	UT	4	1.65
IA	1	0.41	NE	1	0.41	VA	2	0.83
ID	2	0.83	NH	3	1.24	WA	19	7.85
IL	5	2.07	NJ	2	0.83	WI	3	1.24
IN	4	1.65	NM	3	1.24	WV	1	0.41
KY	3	1.24	NV	2	0.83	WY	2	0.83

**I: General Information**

The following section is a general overview of you and your dog.

A. Owner Information 375 owners

1. How many years have you owned Aussies?

Less than 1 year	1	0.27%
1-5 yrs	49	13.07
6-10 yrs	131	34.93
11-20 yrs	135	36.00
more than 20 yrs	59	15.73

2. How many Aussies currently live with you?

None at this Time	14	3.73%
1-5	308	82.13
6-10	40	10.67
11-20	12	3.20
more than 20	1	0.27

3. How many other dogs currently live with you?

None at this Time	202	53.87%
1-5	160	42.67
6-10	8	2.13
11-20	1	0.27
more than 20	4	1.07

4. Activities – What areas of breed activity do you currently participate with your dogs?  
(Check all that apply)

<i>Activity</i>	<i>Currently active</i>		<i>Active in the past</i>	
Breeder	133	35.47%	34	9.07%
Conformation	154	41.07	73	19.47
Stock/Herding Trials	109	29.07	45	12.00
Obedience or Rally	189	50.40	91	24.27
Agility	209	55.73	72	19.20
Tracking	69	18.40	34	9.07
Commercial farm/ranch work	31	8.27	8	2.13
Search and Rescue	18	4.80	14	3.73
Companion/Pet	295	78.67	11	2.95
Therapy	53	14.13	37	9.87
Disc Dog/Frisbee	18	4.80	8	2.13
Flyball	19	5.07	13	3.47
Other (56 dogs)	50	13.33	27	7.20

If you marked "Other" please name the activity(ies) and indicate whether or not you are currently active.

Assistance (Service) Dog	3	5.36%	other	0
Dock diving/Water sports	8	14.29		2 3.57% of other
Equestrian activities	5	3.57		1 1.79
Field trials/training/gun dog	3	5.36		0
Freestyle/Dog dancing	9	16.07		5 8.93
Hiking & wild country activities	5	8.93		1 1.79
Lure coursing	1	1.79		2 3.57
Schutzhund/IPO	1	1.79		2 3.57
Trick dog	3	5.36		0
Weight pull/carting	3	5.36		0
Winter sports	3	5.36		1 1.79
Miscellaneous (3)	10	17.86		2 3.57

5. Have you ever bred Aussies? Yes 143 38.13%

a. Approximately how many litters have you bred?

less than 5	71	49.65%	of Aussie breeders
5 to 10	18	12.59	
11 to 20	8	5.59	
more than 20	2	1.40	
No response	44	30.77	

b. How many litters did you breed between January 1990 and December 2005?

less than 5	88	61.54%	of Aussie breeders
5 to 10	5	3.50	
11 to 20	3	2.10	
more than 20	1	0.70	
No response	46	32.17	

c. How many litters, on average, did you breed per year?

less than 1	75	52.45%	of Aussie breeders
1 or 2	23	16.08	
No response	45	31.47	

**B. Individual Aussie Information 612 dogs**

c. Registered with:

American Kennel Club	339 ea.	55.39%
Australian Shepherd Club of America	412	67.32
Minor US registries	36	5.88
Non-US registries	187	30.56
Non-Studbook registries	9	1.47
Dogs with multiple studbook registrations	362	59.15

Kennel Clubs (non US:) 187 dogs (2 with dual non-US reg)

Australia	12 ea.	6.42%	of non-US
Belgium	4	2.14	
Canada	37	19.79	
Czech Republic	3	1.60	
Denmark	3	1.60	
Finland	14	7.49	
France	11	5.88	
Germany	12	6.42	
Netherlands	36	19.25	
Norway	19	10.16	
Slovenia	5	2.67	
United Kingdom	27	14.44	
Other (Austria, Sweden, South Africa, & Switzerland)	4	2.14	

Minor US Registries:	36 dogs		
American Stock Dog		1	2.78% of minor US
Continental Kennel Club		2	5.56
National Stock Dog		4	11.11
United Kennel Club		29	80.56

Non-studbook registries:	9 dogs		
"Aussie Rescue"		2	22.22% of non-studbook registries
CHIC/ASCA DNA Bank		1	11.11
Dog Sports Registries		6	66.67

No studbook listing (includes dogs that were only ILP, PAL, LEP or rescue)	52 dogs	8.5%
out of registered parents	20	38.46% of no studbook
parents unknown or unregistered	32	61.54

#### Multiple registrations

AKC dogs	339		
AKC only		29	8.55%
AKC/ASCA		229	67.55
AKC/Minor US registry		2	0.59
AKC/Foreign		5	1.47
AKC/ASCA/Minor US		22	6.49
AKC/ASCA/Foreign		24	7.08
ILP or PAL/ASCA/Foreign		2	0.59
ILP or PAL/LEP/Minor US		2	0.59
ILP or PAL/LEP		13	3.83
ILP/full ASCA		6	1.77
ILP only		5	1.47

ASCA dogs	411 total		
ASCA only		60	14.60%
ASCA/AKC		229	55.72
ASCA/Minor US registry		3	0.73
ASCA/Foreign		44	10.71
ASCA/AKC/Minor US reg		22	5.35
ASCA/AKC/Foreign		24	5.84
ASCA/ILP or PAL/Foreign		2	0.49
LEP/ILP or PAL/Minor US		2	0.49
Full ASCA reg/ILP		8	1.95
LEP/ILP or PAL		13	3.16
LEP only		4	0.97

Dogs with no studbook registry of any kind: 44 7.19%

#### 1. Aussie's Country of Birth:

Australia	12 ea.	1.96%	Netherlands	28	4.58
Austria	1	0.16	Norway	14	2.29
Belgium	12	1.96	Slovenia	1	0.16
Canada	29	4.74	South Africa	1	0.16
Denmark	1	0.16	Sweden	5	0.82
Finland	13	2.12	United Kingdom	30	4.90
France	11	1.80	United States	415	67.81
Germany	25	4.08	Unknown	13	2.12
Italy	1	0.16			

Aussie now lives in what country (or lived there at time of death)?

Australia	13 ea.	2.12	Netherlands	38	6.21
Austria	1	0.16	Norway	20	3.27
Belgium	5	0.82	Slovenia	5	0.82
Canada	36	5.88	South Africa	1	0.16
Czech Republic	3	0.49	Sweden	1	0.16
Denmark	4	0.65	Switzerland	3	0.49
Finland	15	2.45	United Kingdom	27	4.41
France	6	0.98	United States	405	66.18
Germany	29	4.74			

US Regional Breakdown:

New England (CT, MA, ME, NH, RI)	19	4.69% of US
Mid-Atlantic (MD, NJ, NY, PA)	55	13.58
South (AL, AR, FL, GA, KY, LA, NC, SC, TN, TX, VA, WV)	92	22.72
Upper Midwest (IA, IL, IN, MI, MN, MO, NE, OH, WI)	83	20.49
Mountain West (AZ, CO, ID, MT, NM, NV, UT, WY)	46	11.36
Pacific (AK, CA, OR, WA)	110	27.16

US State Breakdown

AK	12	2.96% of US	LA	4	0.99	NY	19	4.69
AL	1	0.25	MA	5	1.23	OH	24	5.93
AR	1	0.25	MD	14	3.46	OR	6	1.48
AZ	10	2.47	ME	2	0.49	PA	17	4.20
CA	66	16.30	MI	18	4.44	RI	3	0.74
CO	12	2.96	MN	8	1.98	SC	9	2.22
CT	5	1.23	MO	6	1.48	TN	7	1.73
FL	16	3.95	MT	7	1.73	TX	23	5.68
GA	8	1.98	NC	16	3.95	UT	4	0.99
IA	2	0.49	NE	1	0.25	VA	1	0.25
ID	2	0.49	NH	4	0.99	WA	26	6.42
IL	9	2.22	NJ	5	1.23	WI	7	1.73
IN	8	1.98	NM	5	1.23	WV	1	0.25
KY	5	1.23	NV	3	0.74	WY	3	0.74

Dogs which moved away from their birth country: 62 10.08%

US to Canada	9	14.52%
US to other	14	22.58
Canada to US	4	6.45
Canada to other	1	1.61
Other to US	4	6.45
Other to other	30	48.39

Other country with most net exports:	Belgium	9	14.52%
Imports:	Netherlands	12	19.35%

3. Sex:

Male	301	49.18%
Female	311	50.82

4. Altered? Yes 376 61.44

Reason:	Acquired altered or NFB	40	10.64%
	Behavioral issues	28	7.45
	Companion dog	24	6.38
	Medical/health issues	80	21.28
	Not breeding quality	36	9.57
	Performance/competition dog	16	4.26
	Personal preference	99	26.33
	Retired from breeding	37	9.84
	Working service dog	1	0.27
	Unknown	15	3.99

Dog's Height	590 responses	
	Inches	centimeters
High	30.00	76.2
Low	15.75	40.0
Mean	20.60	52.6
Median	20.75	52.7

Dog's Weight	597 responses	
	Pounds	kilograms
High	155.00	70.2
Low	25.00	11.3
Mean	48.23	21.6
Median	49.00	22.2

## 7. Tail length

a. Tail length at birth			
full	322	52.61%	
3/4	14	2.29	11.48% of 122 NBTs
1/2	20	3.27	16.39
1/4	23	3.76	18.85
Very short	46	7.52	37.70
Absent	19	3.10	15.57
Don't know	168	27.45	

Note: 27.48% of dogs with known tail length were NBT.

b. Is/was the tail kinked?		
Yes	14	2.29%
No	382	62.42
Don't know	216	35.29

Notes: 3.15% of the dogs with known status had kinked tails.

Of the 13 dogs with kinked tails whose tail length was known, 12 (92.31%) were also NBT.

c. Was the tail docked?	No 166	27.12% overall	80.19% of dogs outside US
		19.28% NBTs too short to dock	

d. Shape:			
Straight	26	15.66% of undocked	26% of responding
Slightly curved	59	35.54	59
Strongly curved	4	2.41	4
Curled	11	6.63	11
No response	66	39.76	

e. Typical carriage when relaxed:			
Low	22	13.25% of docked	21.36% of responding
Slightly below topline	34	20.48	33.01
Level with topline	13	7.83	12.62
Above topline	23	13.86	22.33
Over the back	11	6.63	10.68
No response	63	37.95	

f. Feathering:			
None	2	1.20% if rocked	2.02% of responding
More profuse at base, shortening toward tip	61	36.75	61.62
Equally profuse from base to tip	36	21.69	36.36
No response	67	40.36	

8. Where did you obtain this Aussie?

Bred it myself	84	13.73%
Breeder	452	73.86
Shelter or Rescue	39	6.37
Pet store	4	0.65
Given by friend/family	10	1.63
Newspaper ad	16	2.61
Other	7	1.14

9. How old was the Aussie when it came to live with you?

under 8 weeks	188	30.72%
8 wks to 6 months	327	53.43
6 to 12 months	26	4.25
1 to 4 years	53	8.66
4 to 7 years	17	2.78
more than 7 yrs	1	0.16

10. Rate your dog's General Health:

Excellent	374	61.11%
Very good	112	18.30
Good	51	8.33
Fair	49	8.01
Poor	26	4.25

If fair or poor (75 dogs,) at what age did health begin to decline?

Birth to 3 months	1	1.33%
3 to 6 months	0	
6 to 12 months	1	1.33
1 to 3 years	7	9.33
3 to 6 years	19	25.33
6 to 8 years	19	25.33
8 to 10 years	7	9.33
10 to 14 years	18	24.00
Over 14 years	3	4.00

## II. Environmental Background (lifestyle).

### A. Diet 607 dogs

1. This dog's primary diet. *Check all that apply.*

Bones	9	1.48%
Commercial Dry	528	86.99
Commercial Canned	49	8.07
Commercial Raw	67	11.04
Fish	7	1.15
Home prepared Raw	101	16.64
Home prepared Natural	30	4.94
Table Food (scraps)	75	12.36
Treats	215	35.42
Yoghurt	19	3.13
Other	20	3.29

2. Supplements

a. Do you give this dog supplements regularly? Yes 307 50.58%

*Check all that apply*

Fish Oils (any type)	84	27.36% of supplemented dogs
Herbals	67	21.82
Joint Supplements	196	63.84
Nutraceuticals	15	4.89
Omega 3s	9	2.93
Other oils	10	3.26
Pre/probiotics	44	14.33
Skin/coat supplements	10	3.26
Vitamins/Minerals	152	49.51
Other	19	6.19

B. Housing 607 dogs

1. Where does/did this Aussie primarily live? (*More than 50% of a typical day*)

House dog	550	90.61%
Kennel dog	22	3.62
Outside dog	24	3.95
House/outside combo	8	1.32
House/kennel combo	3	0.49

Note: 92.46% spent a substantial part of their time as house dogs.

2. What was household's dog population for most of this dog's life?

Only dog	62	10.21%
Multi-dog, up to 4	390	64.25
Multi-dog, 5 or more	155	25.54

C. Training 607 dogs

1. Aussie attended puppy (up to 1 year) training class? Yes 456 75.12%

2. Aussie has training in performance areas? Yes 518 85.34%

*If yes, mark all that apply:*

Agility	391	75.48% of performance dogs
Assistance/Therapy	75	14.48
Commercial farm/ranch work	46	8.88
Disc dog/Frisbee	24	4.63
Flyball	33	6.37
Freestyle/Dog dance	13	2.51
Obedience/Rally	417	80.50
Search and Rescue	33	6.37
Stockdog/Herding Trials	186	35.91
Tracking	103	19.88
Other	24	4.63
Animal actor/model	2	8.33% of other
Equestrian activities	2	8.33
Lure coursing	2	8.33
Schutzhund	2	8.33
Tricks	4	16.67
Weight Pull	2	8.33
Misc.	10	41.67

3. Aussie is trained for the conformation ring? Yes 307 50.58%



D. Health Maintenance

604 responding

1. Vaccinations

a. Was this dog vaccinated as a puppy?

Yes	519	85.93%
No	7	1.16
Don't Know	78	12.91

b. Was this dog vaccinated as an adult?

Yes	570	94.37%
No	18	2.98
Don't Know	16	2.65

c. Have you changed your vaccination protocols/schedule for this Aussie since you've owned it?

587 responding

Yes, I vaccinate MORE often now.	5	0.83%
Yes, I vaccinate LESS often now.	233	38.58
Yes, I vaccinate for fewer diseases now.	27	4.47
Yes, I have varied the schedule several times	29	4.80
No, I still use the same schedule	126	20.86
I no longer vaccinate this dog	63	10.43
I follow my veterinarian's advice	102	16.89
No response	19	3.15

d. Do you stop vaccinating at a certain age? Yes 198 32.78%

If yes, at what age?

Under 1 yr	4	2.02%
1-3 yrs	18	9.09
4-9 yrs	87	43.94
10-12 yrs	84	42.42
> 12 yrs	5	2.53

d. Please indicate which of the listed vaccinations this Aussie received in its life and, on average, how often it has received them as an adult.

Rabies - 539 89.24%

Every Year	86	15.96%
Two Years	48	8.91
Three Years	396	73.47
No response	9	1.67

Based on law?

Yes	380	62.91%
No	160	26.49
No response	64	10.60

Rabies use compared to legal requirements

Rabies mandatory	0.26% did not comply
Rabies not mandatory	71.43% gave vaccine anyway

Bordetella (Kennel Cough) – 403 66.72%

Every six months	45	11.17% of those responding
Yearly	246	61.04
Two years	2	0.50
Three years	45	11.17
More than three years	65	16.13

Distemper –	534	88.41%	
Every six months	1		0.19% of those responding
Yearly	248	46.44	
Two years	5	0.94	
Three years	204	38.20	
More than three years	69	12.92	
No answer	7	1.31	
Parvovirus –	541	89.57%	
Every six months	2		0.37% of those responding
Yearly	274	50.65	
Two years	5	0.92	
Three years	184	34.01	
More than three years	68	12.57	
No Response	8	1.48	
Leptospirosis –	378	62.58%	
Every six months	5		1.32% of those responding
Yearly	227	60.05	
Two years	2	0.53	
Three years	84	22.22	
More than three years	52	13.76	
As needed	2	0.53	
Did not indicate	6	1.59	
Hepatitis –	329	54.47%	
Yearly	155		47.11% of those responding
Two years	5	1.52	
Three years	121	36.78	
More than three years	46	13.98	
Did not indicate	2	0.61	
Coronavirus –	224	37.09%	
Yearly	98		43.75% of those responding
Three years	70	31.25	
More than three years	53	23.66	
Did not indicate	3	1.34	
Lyme's Disease –	108	17.88%	
Only once	1		0.93% of those responding
Yearly	57	52.78	
Two years	1	0.93	
Three years	19	17.59	
More than three years	26	24.07	
As needed	1	0.93	
Did not indicate	3	2.78	
Parainfluenza –	314	51.73%	
Every six months			
Yearly	153		48.73% of those responding
Two years	5	1.59	
Three years	119	37.90	
More than three years	36	11.46	
Did not indicate	1	0.32	
Other vaccines	20	3.31%	
Canine flu	4		20% of other
Pneumodog	2	10	
Rattlesnake	5	25	
Tetanus	3	15	
Misc	6	30	

f. Have you changed your vaccine protocol for this dog in the past year?

Yes	79	13.08%
No	373	61.75
N/A, dog deceased	119	19.70
No response	33	5.46

If yes, describe change (more than one answer possible):

Increased due to risk	1	1.27% of yes
Increased some	3	3.80
Reduced some or all	28	35.44
Reduced/stopped due to age/health	13	16.46
Stopped some or all	30	37.97
No response	4	5.06

g. Do you use Titers? Yes 118 19.54%

If yes, how often?

Every year	18	15.25% of titer users
Every two years	19	16.10
Every 3-5 years	31	26.27
Once in a lifetime	46	38.98
Per vet	1	0.85
No response	3	2.54

h. Do you use Nosodes (homeopathic vaccines) Yes 26 4.30%

i. Has this Aussie had one or more vaccine reactions diagnosed as such by a veterinarian?

Yes 32 5.30%

If yes:

Which vaccine(s)?

Bordatella	4	12.50% of reactive dogs
DHPP/DLHPP	4	12.50
Lepto	5	15.63
Lyme	4	12.50
Pneumodog	2	6.25
Rabies	14	43.75
Other	4	12.50

Describe reaction:

Abscess at injection site	3	9.38% of dogs that reacted
Behavioral	2	6.25
Demodex mange	2	6.25
Lethargy	2	6.25
Neuromuscular	2	6.25
Pain	2	6.25
Swelling	21	65.63
Other	7	21.88

Describe the veterinarian's treatment:

Antihistamine	10	31.25%
Diet change	2	6.25
None	13	40.63
Other Medications	4	12.50
Unspecified medication	3	9.38
Other treatments	4	12.50

2. Do you use Alternative/Holistic Medicine for this Aussie? Yes 212 35.10%

If yes, mark all that apply

Western Herbs	36	16.98%	of dogs receiving holistic medicine
Chinese Herbs	32	15.09	
Chiropractic	139	65.57	
Acupuncture	68	32.08	
Essential Oils	30	14.15	
Reikei	27	12.74	
Homeopathy	95	44.81	
Flower Essences	70	32.02	
Massage Therapy	118	55.66	

E. Potential Toxic Exposures 604

Are any of the following chemicals regularly used in the living environment of this dog?

	Weekly		Monthly		Seasonally		Annually		Not Used	
Ag chemicals	2	0.33%	2	0.33%	0		0		600	99.34%
Household cleaning chemicals	220	36.42	131	21.69	34	5.63%	5	0.83%	214	35.43
Lawn and yard chemicals	5	0.83	5	0.83	244	40.40	101	16.72	249	41.23
Pesticides, indoor	2	0.33	10	1.66	56	9.27	28	4.64	508	84.11
Pesticides, outdoor	0		18	2.98	80	13.25	29	4.80	477	78.97
Pool chemicals	12	1.99	2	0.33	21	3.48	4	0.66	565	93.54
Rodenticide	0		1	0.17	10	1.66	6	0.99	587	97.19
Other										

F. Breeding History 596 – 294M, 302F

1. Has this Aussie ever been bred? Yes 321 - 53.86% 86 M -29.25% 235F - 77.61%

2. Brucellosis Testing

a. Has this dog been tested for Brucellosis? Yes 117 - 19.63%  
37M - 12.59% 80F - 26.49%

b. Was it tested each time it was bred?

Yes 77 – 23.99% of those bred 17M - 19.77% 60F - 25.53%

c. Were the dogs to whom this dog was bred also tested for Brucellosis prior to breeding to this dog? Yes 108 - 43.20% of those bred 31M - 36.05% 77F - 52.38%

3. Females only: 302 total, 235 bred

a. Has this Aussie ever been on birth control medications? Yes 5 1.66% of females

b. Whelping History - list only litters born through December 31, 2008.

*For the purposes of this survey litter = at least 1 pup whelped, live or stillborn*

Litters 200 total

1. Was this breeding (check one)

natural	171	85.50%	of litters
artificial, fresh semen	14	7.00	
artificial, chilled semen	7	3.50	
artificial, frozen semen	5	2.50	
surgical, frozen semen	3	1.50	

2. Birth was:

natural	172	86.00%
c-section	22	11.00
No response	6	3.00

16 individual bitches required c-section, 10.88% of breeding bitches  
Maximum # c-sections for one bitch: 3

3. Number live births:  
Minimum 1  
Maximum 15  
Mean 6.22  
Median 7

4. Number stillborn:  
Minimum 0  
Maximum 8  
Mean 0.51  
Median >1

5. Number puppies weaned:  
Minimum 0  
Maximum 12  
Mean 5.88  
Median 7

4. Stud dogs only: 86 total

a. Has this stud been used for natural breedings Yes 76 88.37%

1. How many females has this dog bred naturally?  
Only 1 26 34.21% of those bred naturally  
3-5 41 53.95  
6-10 7 9.21  
> 10 1 1.32  
Unknown 1 1.32

2. How many litters resulted from natural breedings?  
217 litters from 225 bitches naturally bred: 3.56% failure rate

3. On average, how often did the dog cover each female?  
Once 13 17.11%  
Twice 34 44.74  
3 times 17 22.37  
> 3 8 10.53  
Unknown 3 3.95  
No Response 1 1.32

4. Largest naturally bred litter reported: 12  
Smallest: 5  
Average: 7.62

5. Total number of live puppies whelped in all naturally bred litters combined: 1449, av. 6.56 per  
Total still born: 235, av. 1.06 per

d. Has this stud been used for artificial insemination breedings? Yes 20 23.26% of those bred

1. Which forms of artificial breeding have been used with this stud's semen?  
(check all that apply)

artificial, fresh semen	13	65.00%
artificial, chilled semen	5	25.00
artificial, frozen semen	7	35.00
surgical, frozen semen	1	5.00

2. How many times have females been artificially inseminated with this dog's semen?

1	12	60.00%
2	2	10.00
3	5	25.00
4	1	5.00

3. How many litters resulted from artificial breedings?

22 litters resulted from 35 breedings: 37.14% failure rate

4. Largest reported artificially bred litter: 10

Smallest: 1

Average: 7.86

5. Total number of live puppies whelped in all artificially bred litters: 149, av. 6.77 per litter

Still born: 24, av. 1.09 per litter

5. Conditions present at birth. 321 breeding dogs (both sexes)

a. Has this dog produced color faults? Yes 80 24.92%

Excess white (no double merles)	43	53.75% of color faults
Yellow/gold	6	7.50
Full dilute	10	12.50
Dilution spots (merles only)	43	53.75
Running Copper	4	5.00
Brindle	3	3.75
Other	1	1.25

b. Has this dog produced skeletal defects? Yes 13 5.20%

Cleft lip/palate	7	53.85% of defects
No description given	2	15.38
Other	4	30.77

b. Has this dog produced closure failures? (Abnormal openings in the body where the skin has not closed.) Yes 8 3.20%

Abdominal opening	2	25.00%
Umbilical hernia	5	62.50
Other	2	25.00

d. Please indicate any other issues found in this dog's puppies

Failure to thrive	11	4.40% of breeding dogs
Fading	9	3.60
Birth Trauma	5	2.00
Death/unknown cause	27	10.80
Neurological problems	2	0.80
Gastrointestinal problems	2	0.80
No Response	1	0.40
Other	10	4.00

G. Mortality 604 dogs

1. Is this Aussie alive today? No 153 25.33%

Age at time of death

Youngest	1 yr	9 mos
Oldest	18	7
Mean	10	10
Median	14	3

a. Was this dog euthanized (life intentionally terminated)?

Yes	111	72.55% of deceased
No	42	27.45

b. Date of death

c. Cause of death (if euthanized, check reason):

Old Age	22	14.38%
Accident / trauma	10	6.54
Illness	116	75.82
Unknown	1	0.65
Other	4	2.61

If accident, type:

Collisions (cars, etc.)	3	30%
Injured by animal	2	20%
Spinal injury	3	30%
Other	2	20%

If illness, type:

Arthritis, severe	3	2.59%
Cancer	67	57.76
Hemangiosarcoma –	20	29.85% of cancer
Lymphoma -	9	13.43
Drug reaction	2	1.72
Epilepsy	5	4.31
Heart disease	5	4.31
Kidney disease	4	3.45
Liver disease	2	1.72
Neuromuscular disease	3	2.59
Respiratory disease	3	2.59
Seizures, unspecified	3	2.59
Tumors, other	9	7.76
Other	7	6.03
Unknown	3	2.59
Veterinary confirmed? Yes	104	89.66%

2. Was an autopsy/necropsy performed? Yes 19 12.42%

3. If this Aussie died of cancer, were biopsies or a necropsy done to confirm the diagnosis? Yes 42 62.69%

**III. In Depth Health Questions**

*The following questions will deal with specific areas of your dog's health. Please answer questions to the best of your knowledge and if the condition was diagnosed by a veterinarian. Select all conditions your Aussie may have encountered.*

A. Medication Reactions 598 dogs

1. Multi-Drug Reactivity 1 (MDR1)

a. Has your dog been tested for the MDR1 mutation? Yes 213 35.62%

b. If yes, what was the result:

Two normal copies 127 59.62%

One copy of mutation 73 34.27

Two copies of mutation 13 6.10

c. If no, has your dog been cleared by parentage (both parents tested Normal/Normal)? Yes 13 2.17%

d. If no, has your dog been diagnosed as having the mutation based on reaction to one or more of the listed drugs? Yes 8 1.34%

If yes, what drug(s) did your dog react to?

Acepromazine 3 33.33% of those that reacted

Butorphenol 1 11.11

Immodium 1 11.11

Ivermectin product 4 44.44

2. Has this dog reacted to anesthesia or sedation medications *not* related to its MDR1 status? Yes 20 3.34%

a. Reacted to:

Single drug 5 25.00% of those that reacted

Drug combo 4 20.00

Unknown 8 40.00

b. Please describe the reaction(s)

Behavioral 2 10.00% of those that reacted

Cardiovascular 3 15.00

Neurological 3 15.00

Prolonged recovery 9 45.00

Other 2 10.00

3. Has this dog reacted to other types of medication *not* related to its MDR1 status? Yes 23 3.85%

a. What drug(s)

Antibiotics 6 26.09% of those that reacted

Antiparasitic 8 34.78

Painkiller 3 13.04

Steroid 2 8.70

Decline to state 1 4.35

Other 3 13.04

b. Please describe the reaction(s)

Abnormal blood counts 2 8.70% of those that reacted

Allergic 8 34.78

Gastrointestinal 10 43.48

Lethargy 2 8.70

Neurologic 2 8.70

Polydypsia 2 8.70

Other 4 17.39

B. Skeletal Structure 598 dogs

1. Hips

a. Were the dog's hips ever x-rayed for evaluation?: Yes 422 70.57%



b. Was the dog evaluated by OFA? Yes 244 57.82% of those evaluated

1. Did the dog receive and OFA preliminary evaluation? Yes 29 11.89% of OFA

a. Age (in months)

6-9	1	3.45% of prelims
10-12	6	20.69
13-18	11	37.93
19-24	3	10.34
No response	8	27.59

b. Result:

Excellent	9	32.26% of prelims
Good	14	48.39
Fair	1	3.23
Borderline	2	6.45
Mild	3	9.68

c. If the dog was found to be dysplastic (ratings of Mild, Moderate or Severe,) was the condition unilateral? Yes 4 100% of dysplastic on prelim

If yes, which hip was affected?

Right	2	50%
Left	2	50%

2. Did the dog receive an adult (24 months or older) OFA evaluation? Yes 230 93.50% of OFA

a. Age

2 years	165	71.74% of OFA
3	27	11.74
4	11	4.78
5	1	0.43
6	4	1.74
No response	22	9.57

b. Result:

Excellent	46	20.00% of OFA
Good	147	63.91
Fair	18	7.83
Mild	7	3.04
Moderate	2	0.87
No response	10	4.35

c. If the dog was found to be dysplastic (ratings of Mild, Moderate or Severe,) was the condition unilateral? Yes 7 17.78% of dysplastic

If yes, which hip was affected?

Right	2	28.57% of uni
Left	4	57.14
Declined to state	1	14.29

c. Was the dog evaluated by PennHip Yes 20 3.33%

1. Age at evaluation

< 2 years	7	35.00% of PennHip
2	10	50.00
3	1	5.00
4	2	10.00

2. Distraction Index (D/I):

Left: High	90	Low	19	Mean	45
Right: High	90	Low	28	Mean	44

d. Was your dog evaluated by a registry other than OFA or PennHip? Yes 132 40.07%

1. If yes, Other Registry's Name

BVA (UK, Australia)	30	22.73% of other hip registry
FCI	101	76.52
Other	1	0.76

2. Age at evaluation

< 12 months	1	0.76% of other hip registry
12-18 months	39	29.55
18-24 months	31	23.48
2 years	36	27.27
3 years	5	3.79
4 years	1	0.76
5 years	2	1.52
No response	17	12.88

3. Results

4.

BVA 30 22.73% of other reg

Left:	High 31	Low 0	Mean 5
Right	High 37	Low 0	Mean 4
Total	High 68	Low 0	Mean 6
Norberg Angle	High 40	Low 1	Mean 30

International FCI norm 101 dogs

HD A	66	65.35%
HD B	27	26.73
HD C	3	2.97
HD D	3	2.97
HD E	2	1.98

Netherlands: 38 dogs

Botafwijking:

0	18	47.37% of Dutch dogs
1	1	2.63
3	1	2.63
No response	18	47.37

Aansluiting:

Onvoldoende (insufficient)	19	50.00%
Slechte (poor)	1	2.63

e. Did your dog receive veterinary evaluation only? Yes 61 14.45%

1. Age at evaluation

< 1 year	9	14.75%
1	15	24.59
2	18	29.51
3	4	6.56
4	5	8.20
5 -10	6	9.84
>10	2	3.28
Declined to state	2	3.28

2. Results

Normal	52	85.25%
Dysplastic	9	14.75
Mild	2	22.22% of dysplastic
Moderate	1	11.11
Severe	1	11.11
No grade	5	55.56

3. This veterinarian was		
Board Certified Orthopedist/Radiologist	18	29.51%
Small Animal Clinician	41	67.21
Other	1	1.64
No response	1	1.64

- f. If your dog is dysplastic: 26 dogs
- Does it have Degenerative Joint Disease (DJD)? Yes 8 30.77% of other reg dysplastic

5. Has it had corrective surgery? Yes 1 3.85%
- If yes, which procedure: resection of femoral head

## 2. Elbows

- a. Were the dog's elbows ever x-rayed for evaluation?: Yes 194 32.28%

- b. Was your dog evaluated by OFA? Yes 98 50.52% of ED evaluations

### 1. Dog's age at exam

< 1 year	2	2.04% of OFA
1	5	5.10
2	72	73.47
3	10	10.20
4	3	3.06
5+	4	4.08
No response	2	2.04

### 2. Results

Normal	95	96.94%
Indeterminate	1	1.02
Degenerative Joint Disease Grade I	1	1.02
FCP/DJD Grade III	1	1.02

3. If elbow dysplasia was present, was it unilateral? Yes 2 100% of OFA ED dogs

If yes, which elbow? Right – 2 100% of OFA ED dogs

- c. Was your dog evaluated under the FCI system? Yes 55 9.15%

### 1. Dog's age at exam

1	35	63.64 % of FCI
2	13	23.64
3	4	7.27
4	1	1.82
5+	2	3.64

### 2. Result

Normal	54	98.18%
Grade 2	1	1.82

3. If elbow dysplasia was present, was it unilateral? No

- d. Was your dog evaluated by a registry other than OFA or FCI? Yes 20 10.31% of ED exams

1. Name of Registry - 100% BVA

### 2. Age at evaluation

1 year	16	80.00% of BVA
2	3	15.00
5+	1	5.00

3. Results

Left		
0	17	85.00% of BVA
1	3	15.00
Right		
0	17	85.00%
1	3	15.00

e. Did your dog receive veterinary evaluation only? Yes 24 12.37% of ED exams

1. Age at evaluation

> 1 year	2	8.33% of vet only
1	4	16.67
2	8	33.33
3	1	4.17
4	2	8.33
5-10	4	16.67
10+	3	12.50

2. Results

Normal	22	91.67%
Arthritis, unilateral L	1	4.17
No response	1	4.17

3. This veterinarian was

Board Certified Orthopedist/Radiologist	6	25.00%
Small Animal Clinician	18	75.00

f. If your dog has elbow dysplasia 3 dogs

1. What defect(s) does it have:

a. Right Elbow

Degenerative Joint Disease (DJD/Arthritis)	2	50%
Fragmented medial Coronoid Process (FCP/LPC)	1	25
No response	1	25

b. Left Elbow

Degenerative Joint Disease (DJD)	1	25%
Ununited Aconceal Process (UAP/LPA)	1	25
No response	2	50

2. Did it require surgery? Yes 1 25% of affected

If yes, which procedure: unknown

3. Skeletal anomalies

Does this dog have any of the following:

Transitional vertebrae 9 1.5% only 1 dog was NBT, but tail status unknown on 4 others

3. Dental Structure and Teeth 596 dogs

a. Select the one that best describes this dog's bite:

Scissors	562	94.30%
Level/even	18	3.02
Undershot	8	1.34
Overshot	4	0.67
Wry bite	2	0.33
Anterior Cross-bite	2	0.33
Dropped incisors	29	4.87%

b. Does this dog have missing teeth? Yes 51 8.56%

c.

One	31	60.78% of affected
Multiple	20	39.22

2 teeth	11	55% of multiple missing
3	1	5
4	7	35
6	1	5

If yes, please indicate which are missing:

Incisors – 7 13.73% of affected, none missing multiple

UR1	0	UR2	1	UR3	0	
UL1	1	UL2	0	UL3	0	
LR1	0	LR2	0	LR3	0	
LL1	4	LL2	1	LL3	0	
Total	I1	5	I2	2	I3	0

Canines – None

Premolars – 43 84.34% of affected

UR1	8	UR2	3	UR3	4	UR4	0	
UL1	5	UL2	6	UL3	4	UL4	0	
LR1	10	LR2	12	LR3	7	LR4	2	
LL1	10	LL2	10	LL3	4	LL4	3	
Total	P1	33	P2	31	P3	19	P4	5

Molars – 1 1.96% of affected

UR1	0	UR2	0			
UL1	0	UL2	0			
LR1	1	LR2	0	LR3	0	
LL1	1	LL2	0	LL3	0	
Total:	M1	2	M2	0	M3	0

d. Does this dog have extra teeth? Yes 9 1.50%

If yes, please indicate which type:

Incisors	2	22.22% of affected
Premolars	6	66.67
Molars	1	11.11

NOTE: All dogs had only one extra.

### C. Skeletal Diseases (Orthopedic) 596 dogs

1. Does this dog have arthritis? Yes 89 14.93%

a. Age at diagnosis:

< 2 years	1	1.12% of affected
2-4	8	8.99
5-7	22	24.72
8-10	15	16.85
10+	42	47.19
No Responxse	1	1.12

b. Which joint(s)?

Carpals/Pastern	8	8.99% of affected
Elbows	10	11.24
Feet/toes	5	5.62
General	2	2.25
Hips	39	43.82
Hock	2	2.25
Leg	5	5.62
Neck	2	2.25
Shoulder	9	10.11
Spine	23	25.84
Stifles	8	8.99

- c. Diagnosed by veterinarian? Yes 71 79.78% of affected
- d. Lab/x-ray done to confirm? Yes 46 64.79% of vet diagnosed  
If yes, type of test(s)
- |             |    |                  |
|-------------|----|------------------|
| X-ray       | 34 | 73.91% of tested |
| MRI         | 1  | 2.17             |
| No response | 12 | 27.91            |
- e. Cause(s) of arthritis, if known
- |                |    |                    |
|----------------|----|--------------------|
| Age            | 22 | 24.72% of affected |
| Hip dysplasia  | 11 | 12.36              |
| Injury         | 10 | 11.24              |
| Past activity  | 4  | 4.49               |
| Spinal disease | 2  | 2.25               |
| Sports injury  | 8  | 8.99               |
| Unknown        | 3  | 3.37               |
| Other          | 6  | 6.74               |

2. Does this dog have cruciate ligament problems? Yes 15 2.52%

- a. Age at diagnosis
- |           |   |                   |
|-----------|---|-------------------|
| < 2 years | 1 | 6.67% of affected |
| 2-4       | 2 | 13.33             |
| 5-7       | 8 | 53.33             |
| 8-10      | 3 | 20.00             |
| 10+       | 1 | 6.67              |
- b. Stifle joint(s) affected
- |       |   |        |
|-------|---|--------|
| Left  | 5 | 33.33% |
| Right | 9 | 60.00  |
| Both  | 1 | 6.67   |
- c. Diagnosed by veterinarian? Yes 15 100%
- d. Lab/x-ray done to confirm? Yes 7 46.67%  
If yes, type of test(s)
- |                    |   |                  |
|--------------------|---|------------------|
| Joint manipulation | 2 | 28.57% of tested |
| X-rays             | 1 | 14.29            |
| Don't know         | 1 | 14.29            |
| No response        | 1 | 14.29            |
- e. Did the condition require surgery? Yes 4 26.67%

3. Does this dog have osteochondritis desicans (OCD)? Yes 4 0.67%

- a. Age at diagnosis
- |           |   |     |
|-----------|---|-----|
| < 1 year  | 3 | 75% |
| >10 years | 1 | 25% |
- b. Joint(s) affected
- |             |   |        |
|-------------|---|--------|
| Shoulder    | 3 | 75.00% |
| Left        | 2 | 66.67% |
| Right       | 1 | 33.33  |
| No response | 1 | 25.00  |
- c. Diagnosed by veterinarian? Yes 3 75%
- d. Lab/x-ray done to confirm? Yes 3 100% of vet diagnosed

If yes, type of test: X-rays 100%

- e. Did the condition require surgery? Yes 2 50% of affected
4. Does this dog have patellar luxation (slipped patellas)? Yes 2 0.34%
- a. Age at diagnosis
- |        |   |                 |
|--------|---|-----------------|
| 1 year | 1 | 50% of affected |
| 2      | 1 | 50              |
- b. Joint(s) affected: 100% both
- c. Diagnosed by veterinarian? Yes 100%
- d. Lab/x-ray done to confirm? Yes 1 50% of affected
- If yes, type of test: X-ray
- e. Did the condition require surgery? Yes 1 50% of affected
5. Does this dog have spondylosis? Yes 21 3.51%
- a. Age at diagnosis
- |          |    |                   |
|----------|----|-------------------|
| < 1 year | 1  | 4.76% of affected |
| 2-4      | 4  | 19.05             |
| 5-7      | 11 | 52.38             |
| 8-10     | 1  | 4.76              |
| 10+      | 4  | 19.05             |
- b. Diagnosed by veterinarian? Yes 17 80.85% of affected
- c. Lab/x-ray done to confirm? Yes 100% of vet examined dogs
- If yes, type of test(s):
- |             |    |                        |
|-------------|----|------------------------|
| X-ray       | 14 | 82.35% of vet examined |
| MRI         | 1  | 5.88                   |
| No response | 4  | 23.53                  |
6. Does the dog have any other skeletal diseases? Yes 23 3.84%
- Type of disease:
- |                             |    |                    |
|-----------------------------|----|--------------------|
| Intervertebral disc disease | 10 | 43.48% of affected |
| Age at diagnosis:           |    |                    |
| 3 -5 years                  | 3  |                    |
| 7-9                         | 3  |                    |
| 10+                         | 4  |                    |
| Cancer                      | 2  | 8.70               |
| Leg joints                  | 3  | 13.04              |
| Other spinal                | 4  | 17.39              |
| Other                       | 2  | 8.70               |
| No response                 | 2  | 8.70               |
- b. Diagnosed by veterinarian? Yes 19 82.61% of affected
- c. Lab/x-ray done to confirm? Yes 17 89.47%
- Type of test(s)
- |       |    |                         |
|-------|----|-------------------------|
| MRI   | 5  | 29.41% of vet diagnosed |
| X-ray | 12 | 70.59                   |
| Other | 1  | 5.88                    |

D. Ear Function and Health 596 dogs

1. Is dog deaf? Yes 23 3.86%
  - a. Age at diagnosis

< 1 year	1	4.35% of affected
1-5 years	1	4.35
5-10	4	17.39
10+	13	56.52
No response	4	17.39
  - b. Which ear?

Left	2	8.70% of affected
Right	1	4.35
Both	19	82.61
No response	1	4.35
  - c. Has a BAER test been done to confirm? Yes 22 95.65% of affected
  - d. What is the cause of deafness?

Homozygous (double) merle	2	8.70% of affected
Injury	2	8.70
Chronic infection	2	8.70
Old age	10	43.48
Unknown	7	30.43
  - e. Was the cause of deafness diagnosed by a veterinarian? Yes 10 43.48% of affected
2. Does this dog have chronic ear infections? Yes 15 2.52%

Of these number also reported as deaf: 3 20% of those with chronic ear infections

  - b. Age at diagnosis

< 1 year	3	20.00% of affected
1-3 years	6	40.00
>12	4	26.67 Note: The deaf dogs fell in this category.
No response	2	13.33
  - c. Due to:

Allergies	5	33.33% of affected
Yeast infection	2	13.33
Unknown	7	46.67
Other:	1	6.67
  - c. Diagnosed by veterinarian? Yes 13 86.67% of affected

E. Eye Diseases 593 dogs

1. Has this dog ever had distichiasis (abnormal eyelashes)? Yes 15 2.53%
  - a. Age at diagnosis

< 1 year	2	13.33% of affected
1	7	46.67
2	1	6.67
3	1	6.67
8	1	6.67
No response	3	20.00
  - b. Diagnosed by

Veterinary ophthalmologist	13	86.67% of affected
Small Animal Clinician	2	13.33



c. Eye(s) affected:

Left	3	20.00% of affected
Right	6	60.00
Both	3	20.00

d. Number of lashes involved?

1 lash	6	40.00% of affected
2+	3	20.00
Unknown	4	26.67
No response	2	13.33

e. Did corneal injury result (the cornea is the clear outer surface of the eye)? Yes 3 20.00% of aff  
Damage was temporary in all cases.

f. Has the dog had abnormal lashes removes surgically? Yes 2 13.33% of affected

g. Has the dog had multiple incidents of distichiasis? Yes 1 6.67%  
If yes, age(s) at other occurrences: 5yr and 6yr

2. Collie Eye Anomaly (CEA)

a. Has this dog had the DNA test for CEA/CH? Yes 47 7.93%

If yes, what was the result:

Normal/Normal	39	82.98% of those tested
Normal/Mutant	7	14.89
Mutant/Mutant	1	2.13

b. Has this dog been diagnosed with CEA via an eye exam? Yes 5 0.84%

c. Age at diagnosis:

<4 month	2	40% of affected
1 year	2	40
3	1	10
4	1	10

d. Diagnosed by veterinary ophthalmologist – 100%

e. Type of lesion(s) (defects) found by examiner:

Choroidal hypoplasia	1	10%
Don't know	2	40
No response	2	40

f. Eye(s) affected:

Left	1	10%
Both	1	10
No response	3	30

g. Is the dog blind due to CEA? No 100%

3. Progressive Retinal Atrophy (PRA)

a. Has this dog had the DNA test for prcd/PRA? Yes 23 3.88%

If yes, what was the result:

Normal/Normal	22	95.65% of affected
Mutant/Mutant	1	4.35

b. Has this dog been diagnosed with PRA via an eye exam Yes 5 0.84%

c. Age at diagnosis:

<3 years	1	20% of examined affected
5	2	40
8	1	20
9	1	20

d. Diagnosed by veterinary ophthalmologist – 100% of examined affected

e. Is the dog blind due to PRA?

Yes	3	60%
No	1	20
No response	1	20

If so, which eye(s)?

Left	1	33.33% of blind
Both	2	66.67

4. Cataracts

a. Has this dog had the DNA test for the HSF4 cataract? Yes 111 18.72%

If yes, what was the result:

Normal/Normal	94	84.68% of tested
Normal/Mutant	1	0.90
No response	16	14.41

b. Has this dog been diagnosed with cataract by exam? Yes 54 9.11%

c. Age at diagnosis:

<2 years	3	5.56% of affected
2-4	12	22.22
5-7	8	14.81
8-10	13	24.07
11+	11	20.37
No response	7	12.96

d. Diagnosed by

Veterinary ophthalmologist	40	74.07% of affected
Small Animal Clinician	11	20.37
No response	3	5.56

f. Type of cataract(s) found by examiner: (bilateral unless noted otherwise)

Anterior cortex: 11 20.37% of affected

Punctate, bilateral	3	27.27% of anterior cortex
unilateral	4	36.36
Intermediate	1	9.09
Diffuse	1	9.09
Other	2	18.18 (non-certified examiner)

Capsular: 2 3.70%

Punctate	1
Not sure, unilateral	1

Equatorial cortex: 7 12.96%

Punctate - Bilateral	1	14.29% of eq cortex
Unilateral	3	42.86
Intermediate - Unilateral	2	28.57
Other	1	14.29

Generalized (entire lens involved) 7 12.96%

Nuclear: 8 14.81%

Punctate, unilateral 1 12.50% of nuclear  
Diffuse 2 25.00  
Sclerosis 5 62.50

Posterior cortex: 8 15.09%

Punctate - Unilateral 1  
Bilateral 1  
Intermediate - Unilateral 1  
Bilateral 4  
Intermediate R/diffuse L 1

Posterior sutures: 5 9.43%

Punctate 2  
Intermediate 1  
Diffuse 1  
Other, unilateral 1

f. Is the dog blind due to cataracts? Yes 13 24.53% of affected

If yes, which eye(s):

Left 1 7.69%  
Right 2 15.38  
Both 10 76.92

g. What is the presumed cause of the cataracts?

Hereditary 23 43.40%  
Old age 15 28.30  
Trauma 4 7.55  
Unknown 10 18.87  
Other 1 1.89

h. Has the dog had corrective surgery for its cataracts? Yes 3 5.66%

If yes: Age at surgery

4 years 1  
10+ 2

Do you consider the surgery to have been successful?

Yes 2  
No 1

5. Iris Coloboma Yes 2 0.34%

a. Age at diagnosis: 2 months for both

b. Both diagnosed by veterinary ophthalmologist

c. Which eye(s)?

Right 1  
No response 1

6. Persistent Pupillary Membrane (PPM or MPP) Yes 15 2.53%

a. Age at diagnosis:

<2 months 8 53.33% of affected  
3-5 months 2 13.33  
1 year 2 13.33  
2 years 3 20.00

b. Diagnosed by

Veterinary ophthalmologist	14	93.33
No response	1	6.67

c. What type(s) of PPM/MPP did the dog have?

Iris-to-iris	8	53.33%
Unknown	7	46.67
Bilateral	10	66.67%
Unilateral	5	33.33

d. Did the PPM/MPP cause opacities (white areas) of the cornea or lens? No 100%

7. Has this dog ever had hyaloid arteries (fetal arteries that remain in the eyes)? Yes 5 0.84%

a. Age at diagnosis:

<6 months	1	20% of affected
6-12	1	20
1 year	1	20
2	2	40

b. Diagnosed by

Veterinary ophthalmologist	4	80% of affected
Small Animal Clinician	1	20

c. Eye(s) affected:

Left	3	60% of affected
Both	2	40

d. Did the hyaloid artery cause a plaque, cataract or other opacity on the lens? Yes 1 20% of affected

e. Is the dog blind in one or both eyes due to hyaloid artery? No

8. Has this dog had any other eye disease or defect? Yes 30 5.06%

a. What disease or defect did the dog have? 28 different conditions

b. Age at diagnosis?

<3 months	4	13.33% of other
3-6	2	6.67
1-3 years	7	23.33
4-7	8	26.67
8-10	2	6.67
10+	3	10.00
No response	4	13.33

c. Diagnosed by

Veterinary ophthalmologist	18	60.00% of other
Small Animal Clinician	6	20.00
Yourself, breeder or prior owner	1	3.33
No response	5	16.67

c. Eye(s) affected:

Left	6	20.00% of other
Right	5	16.67
Both	14	46.67
Unspecified uni	1	3.33
No response	4	13.33

d. Is the dog blind due to this condition? Yes 3 10%

**F. Endocrine Diseases**      **589 dogs**

1. Does this dog have thyroid disease Yes 57 9.68%

a. Age at diagnosis:

< 2	8	14.04% of affected
2-3	11	19.30
4-5	8	14.04
6-9	26	45.61
>10	4	7.02

b. Diagnosed by a veterinarian? Yes 57 100%

c. What was the specific diagnosis?

Autoimmune thyroiditis	14	24.56% of affected
Hypothyroid	36	63.16
Hyperthyroid	7	12.28

d. Were lab tests done to confirm the diagnosis? Yes 57 100%

If yes, what test(s) 25 responses

Panel	12	48% of those responding
T4 only	3	12
T3 & T4	1	4
Unknown	9	36

2. Does this dog have Addison's Disease? Yes 3 0.51%

a. Age at diagnosis:

4 yrs	1	33.33% of affected
9+	2	66.67

b. Diagnosed by a veterinarian? Yes 2 66.67% of affected

c. Were lab tests done to confirm the diagnosis? Yes 2 66.67% of affected

If yes, what test(s)

ATCH stim test, repeated electrolytes	1
No response	1

3. Does this dog have Cushing's Disease? Yes 2 0.34%

a. Age at diagnosis: both 12 or over

b. Diagnosed by a veterinarian? Yes 100%

c. Were lab tests done to confirm the diagnosis? Yes 100%

If yes, what test(s)

Cortisol levels	2	100%
Chem 25 & urinalysis	1	50

4. Does this dog have diabetes? No 100%

5. Other Endocrine Disease Yes 3 0.51%

a. Name of disease:

hypoparathyroid	1
Sheehan's Syndrome	1
No response	1

- b. Age at diagnosis: all between 5 and 9 years
- b. Diagnosed by a veterinarian? Yes 100%
- c. Were lab tests done to confirm the diagnosis? Yes 2 66.67%  
If yes, what test(s)  
Blood tests 1  
PTH 1

G. Gastro-intestinal Disorders 589 dogs

- 1. Does or did this dog have a hernia? Yes 33 5.60%

Age at diagnosis:

At birth	5	15.15% of affected
<2 months	7	21.21
2-4 months	12	36.36
5-6 months	1	3.03
1.5 years	2	6.06
8 years	1	3.03
No response	5	15.15

- b. Diagnosed by a veterinarian? Yes 22 66.67%
- c. Was the hernia  
Umbilical (belly button) 31 93.93% of affected  
Perianal (near the anus) 1 3.03  
No response 1 3.03
- d. What was the cause of the hernia?  
Congenital (present at birth) 19 57.58% of affected  
Trauma 1 3.03  
Unknown 12 36.36  
Other (enlarged prostate) 1 3.03
- e. Did this hernia resolve (go away)? Yes 5 15.15% of affected
- f. Did this hernia require surgical correction? Yes 14 42.42%

- 2. Does the dog have Inflammatory Bowel Disease? Yes 3 0.51%

a. Age at diagnosis:

2 years	1
4	1
8	1

- b. Diagnosed by a veterinarian? Yes 100%
- c. Were tests done to confirm the diagnosis? Yes 1 33.33%  
If yes, what test(s): Biopsy, MRI

- 3. Does the dog have megaesophagus? Yes 1 0.17%

- a. Age at diagnosis: 12 weeks
- b. Diagnosed by a veterinarian? Yes
- c. Were lab tests done to confirm the diagnosis? No

d. What was the cause? Birth defect

4. Does the dog have food intolerance? Yes 37 6.28%

a. Age at diagnosis:

<6 months	4	10.81% of affected
6-12	3	8.11
1 year	6	16.22
2-4	15	40.54
7-9	3	8.11
10+	1	2.70
Unknown	1	2.70
No response	4	10.81

b. Diagnosed by a veterinarian? Yes 19 51.35% of affected

c. Were lab tests done to confirm the diagnosis? Yes 7 36.84% of those seen by vet

If yes, what test(s)

Allergy testing	2	28.57% of those tested
Blood work	3	42.86
Other	1	14.29
No response	5	14.29

d. Is intolerance due to an allergy, per veterinary diagnosis? Yes 16 84.21% of those seen by vet

e. What food items did the dog react to? (check all that apply)

Beef	5	13.51% of affected
Dairy products	3	
Chicken	7	18.92
Wheat	10	27.03
Eggs	2	5.41
Corn	14	37.84
Soy	5	13.51
No response	24	
Other(s)	12	
Fish/shellfish	2	16.67% of other
Kibble	3	25.00
Lamb	3	25.00
Other poultry	2	16.67
Misc.	4	33.33

f. How did the dog react? (check all that apply)

Vomiting	10	27.03% of affected
Diarrhea	19	51.35
Itching	18	48.65
Hair loss	6	16.22
Hot spots	10	27.03
Other	5	13.51
Foot licking/chewing	2	40% of other
Misc.	3	60

5. Does the dog have cobalamin (Vitamin B<sup>12</sup>) malabsorption? No 100%

6. Does this dog have chronic diarrhea due to causes other than any of the above? Yes 7 1.19%

a. Age at diagnosis:

<6 months	1	14.29% of affected
2-4 years	3	42.86
6	2	28.57
10	1	14.29

b. Specific cause			
Stress	2		28.57% of affected
Unknown	1		14.29
Other	4		57.14

c. Was this diagnosed by a veterinarian? Yes 5 71.43% of affected

d. Were lab tests done to confirm the diagnosis? Yes 4 80% of seen by vet

If yes, what test(s): various

7. Does this dog have recurrent vomiting due to causes other than any of the above?

Yes 11 1.87%

a. Age at diagnosis:

<2 yr	6		54.55% of affected
6-9	3		27.27
10+	2		18.18

b. Specific cause

Liver cancer, vet diag., 7 & 12 yo	2		18.18% of affected
Empty stomach, 1 vet diag., 2 <6mo & 6yr	3		27.27
Infection, vet diag., 3 & 12 mo	2		18.18
Other, vet diag., 3 & 4 mo	2		18.18
Unknown	2		18.18

c. Was this diagnosed by a veterinarian? Yes 8 72.73% of affected

d. Were lab tests done to confirm the diagnosis? Yes 3 37.50% of vet examined

If yes, what test(s): various, 1 no response

8. Does this dog have any other gastrointestinal disease? Yes 5 0.85%

a. Name of disease: various

b. Age at diagnosis:

18 months	1		
6-8 years	3		
10 years	1		

c. Diagnosed by a veterinarian? Yes 100%

d. Were lab tests done to confirm the diagnosis? Yes 4 80%

If yes, what test(s): various, 1 no response

#### H. Blood & Lymph System Diseases (other than cancer) 589 dogs

1. Does this dog have hemophilia? No 100%

2. von Willebrand's Disease No 100%

3. Pelger- Huët Anomaly Positive Yes 7 1.19%

a. Age at testing:

<2 years	1		14.29% of affected
3-6	5		71.43
No response	1		14.29



- b. Who screened the sample?
- |                           |   |                    |
|---------------------------|---|--------------------|
| Small animal veterinarian | 2 | 28.57% of affected |
| Pathology laboratory      | 4 | 57.14              |
| Not tested                | 1 | 14.29              |
4. Immune-mediated Hemolytic Anemia No 100%
5. Idiopathic Thrombocytopenic Purpura (ITP)/Thrombocytopenia No 100%
6. Other Blood or Lymph System Disease Yes 2 0.34%
- a. Age at diagnosis: 5 & 9 yo
- b. Diagnosed by a veterinarian? Yes 2 100% of affected
- c. Were lab tests done to confirm the diagnosis? Yes 2 100% of vet checked
- If yes, what test(s): 1 biopsy, 1 "don't know"

I. Heart Defects and Vascular Diseases 589 dogs

1. Did this dog have any congenital (present at birth) heart vessel defects No 100%
2. Mitral Valve Disease Yes 3 0.51%
- a. Age at diagnosis: 9, 11 & 12 yrs.
- b. Was this diagnosed by a veterinarian? Yes 100%
- c. Were tests done to confirm the diagnosis? Yes 100%
- If yes, what test(s)
- |                    |   |         |
|--------------------|---|---------|
| Echo cardiogram    | 3 | 100.00% |
| Electro cardiogram | 1 | 33.33   |
| X-ray              | 1 | 33.33   |
3. Sub-aortic Stenosis No 100%
4. Heart Murmur (due to causes other than any of the above) Yes 16 2.72%
- a. Age at diagnosis:
- |              |   |                    |
|--------------|---|--------------------|
| 6 mo or less | 2 | 12.50% of affected |
| 2-3 years    | 2 | 12.50              |
| 5-7          | 5 | 31.25              |
| 8-10         | 3 | 18.75              |
| >10          | 4 | 25.00              |
- b. Was this diagnosed by a veterinarian? Yes 100% of affected
- c. Was the cause of the murmur determined? Yes 3 18.75% of affected
- If yes, what was it?
- |                      |   |
|----------------------|---|
| Mitral valve problem | 2 |
| Endocardiosis        | 1 |
| "Old age"            | 1 |
- d. Were tests done to confirm the diagnosis? Yes 5 31.25% of affected

If yes, what test(s)		
Echo cardiogram		3
Electrocardiogram		1
Don't know		1

5. Other Heart or Vascular Disease Yes 7 1.19%

a. Name of disease:

Congestive heart failure, 12 yr		1
Dilated cardiomyopathy, 9 & 12 yr		2
Heartworm, 2 & 5 yr		2
Tumor, 16.5 yr		1
Unknown		1

b. Diagnosed by a veterinarian? Yes 100% of other

c. Were tests done to confirm the diagnosis? Yes 100% of other

If yes, what test(s)		
FNA/smear of heart fluid		1
Heartworm test		1
Necropsy		1
Radio and heart echography		2
Ultrasound		1
X-ray		2
Don't remember		1

J. Liver-Pancreas Diseases 589 dogs

1. Porto-systemic (liver) Shunt No 100%

2. Has your dog had any other type of liver disease? Yes 5 0.85%

a. What was the disease?

Cancer; 7, 10 & 12 yr		3
Cirrhosis, 9 yr		1
Elevated transaminases, 11 yr		1

b. Diagnosed by a veterinarian? Yes 100% of other

c. Were lab tests done to confirm the diagnosis? Yes 100% of other

If yes, what test(s)

Biopsy		2
Ultrasound		2
Other		5

3. Has your dog had any other type of pancreatic disease? Yes 3 0.51%

a. What was the disease? 100% Pancreatitis

b. Age at diagnosis:

4 yr	2	66.67% of affected
7	1	33.33

c. Diagnosed by a veterinarian? Yes 100%

d. Were lab tests done to confirm the diagnosis? Yes 1 33.33% of affected

4. If yes, what test(s): bloodwork 100%

## K. Urinary and Kidney Diseases

589 dogs

1. Has your Aussie ever had a urinary or kidney disease? Yes 37 6.28%

2. What was the diagnosis?

Bladder, structural	2	5.41% of urinary tract disease
Crystals	8	21.62
Incontinence	3	8.11
Infection	13	35.14
Kidney disease	5	13.51
Kidney failure	3	8.11
Other	2	5.41
No response	1	2.70

3. Dog's age at diagnosis?

<2 yr	7	18.95% of UT disease mostly infections or crystals
2-3	6	16.22 mostly crystals
4-5	5	13.51 various
6-9	10	27.03 mostly infections or kidney disease
10+	7	18.95 mostly kidney disease
No response	2	5.41

4. Was the diagnosis made by a veterinarian? Yes 36 - 100% of responding

5. Were lab tests done to confirm the diagnosis? Yes 31 83.78% of affected

If yes, what test(s):

Bloodwork	9	29.03% of tested
Urine tests	19	61.29
Other	5	16.13

## L. Immune Mediated Diseases 590 dogs

*NOTE: Diseases in this section are either clearly immune mediated or can affect multiple body systems.*

*Diseases specific to particular body systems will be listed under those headings. Examples: Inflammatory Bowel Disease under Gastrointestinal Disorders and Demodectic Mange under Skin Diseases.*

1. Does this dog have allergies? Yes 78 13.22%

a. Age at diagnosis:

<2 years	11	14.10% of affected
2-4	37	47.44
5-7	8	10.26
8-10	6	7.69
10+	1	1.28
No response	15	19.23

b. Diagnosed by a veterinarian? Yes 56 71.79% of affected

c. Were lab tests done to confirm the diagnosis? Yes 12 21.43% of vet examined

If yes, what test(s)

Allergy testing	3	25.00%
Blood work, unspecified	6	50.00
Other	3	25.00
Unknown	1	8.33

d. Do you know what specific things your dog is allergic to? Yes 45 57.69% of affected

Item(s)			Vet diagnosed?		
			Yes	No	No resp
Dairy	2	4.44%	Yes 1	No 3	No resp 1
Insect/mites/fleas	23	51.11	Yes 19	No 3	No resp. 1
Medications	3	6.67	Yes 2	No 1	
Grains (food)	10	22.22	Yes 3	No 6	No resp 1
Plants	23	51.11	Yes 10	No 12	No resp. 1
Meats (food)	3	6.67	Yes 2	No 1	No resp 1
Poultry (food)	3	6.67	Yes 3		
Other foods	5	11.11	Yes 4		No resp 1
Other	7	15.56	Yes 7	No 2	

e. How would you characterize your dog's allergies?

Mild	39	50.00%	of affected
Moderate	24	30.77	
Severe	7	8.97	
No response	8	10.26	

44.29% of those who noted level of severity were either moderate or severe.

f. Approximately how frequently does your dog have allergy attacks?

Seasonally (only at particular times of year)	48	61.54%	of affected
Occasionally	8	10.26	
Monthly	1	1.28	
Almost constantly	5	6.41	
No response	16	20.51	

g. What type of reaction does the dog have?

Diarrhea	2	2.56 %	of affected
Eye irritation	4	5.13	
Foot irritation	3	3.85	
Respiratory	8	10.26	
Skin, no hotspots	26	33.33	
Skin, with hotspots	19	24.36	
Swelling	3	3.85	
Systemic	4	5.13	
Other	4	16.67	
No response	8	10.26	

h. Has your dog ever had an anaphylactic (sudden, severe and life-threatening) allergic reaction?

Yes 10 12.82% of affected

1. How many times has this happened?

Once	8
No response	2

2. What caused the reaction?

Bee Sting	4
Vaccine	5 (1 rabies, 2 leptos, 1 durammune, 1 no resp)
Other	1

Note: Only two of the above were vet diagnosed.

3. How long before the reaction was the vaccine administered?

Under one hour	1
1 – 6 hours	4

2. Does this dog have lupus? Yes 3 0.51%
- a. Age at diagnosis: 4-5 years 100% of affected
  - b. Diagnosed by a veterinarian? Yes 100% of affected
  - c. Were lab tests done to confirm the diagnosis? Yes 2 66.67% of affected  
If yes, what test(s): various
  - d. What type of lupus was your dog diagnosed with?
 

Discoid (skin)	2
Erythematosus (systemic)	1
3. Does this dog have uveodermatological (Vogt-Koyanagi-Harada-like/VKH) syndrome? No 100%
4. Has your dog had any other type of immune mediated disease? Yes 1 0.17%
- a. What was the disease? Scleritis
  - b. Age at diagnosis: 8 yr
  - c. Diagnosed by a veterinarian? Yes
  - d. Were lab tests done to confirm the diagnosis? No

M. Skin Diseases 590 dogs

1. Has this dog ever had an anal gland infection? Yes 10 1.69%
- a. Age at first diagnosis:
 

< 1 year	1	10% of affected
2-4	4	40
5-8	5	50

  
 If the dog has had this multiple times, how many?
 

1-2 times	3	30% of affected
5-8	3	30
Multiple	1	10
No response	1	10
  - b. Diagnosed by a veterinarian? Yes 100% of affected
  - c. Were lab tests done to confirm the diagnosis? Yes 3  
If yes, what test(s): Swabs 1 (only response)
  - d. Did the dog develop a perianal fistula (abscess opening to the outside)? Yes 4 40% of affected
2. has this dog ever had dermatomyositis? Yes 2 0.34%
- a. Age at diagnosis: 4 & 7 yrs
  - b. Diagnosed by a veterinarian? Yes 100% affected
  - c. Were lab tests done to confirm the diagnosis? No 100%
3. Does this dog have demodex mange? Yes 20 3.39%

a. Age at diagnosis:

<6 months	7	35% of affected
6-12 months	5	25
1-2 years	3	15
5	2	10
7	2	10
10+	1	5

b. Diagnosed by a veterinarian? Yes 100% of affected

c. Were lab tests done to confirm the diagnosis? Yes 17 65% of affected

If yes, what test(s)

Skin scraping	14	82.35% of tested
Unknown	2	11.76
No response	1	5.88

4. Pemphigus Yes 2 0.34%

a. Age at diagnosis: 2 & 6 yrs

b. Diagnosed by a veterinarian? Yes 100% of affected

b. Were lab tests done to confirm the diagnosis? Yes 1

If yes, what test: biopsy

5. Sebaceous tumors/cysts (small wart-like skin growths) Yes 67 11.36%

a. Age at diagnosis:

<2 years	2	2.99% of affected
2-4	15	22.39
5-7	23	34.33
8-10	19	28.36
10+	6	8.96
No response	2	2.99

b. Type

Sebaceous Hyperplasia	5	7.46% of affected
Sebaceous Epithelioma	2	2.99
Sebaceous Adenoma	2	2.99
Sebaceous Carcinoma	2	2.99
Sebaceous, unspecified	2	2.99
Don't know	54	80.60

c. Diagnosed by a veterinarian? Yes 58 86.57% of affected

d. Were lab tests done to confirm the diagnosis? Yes 30 51.72% of vet examined

If yes, what test(s)

Aspiration	9	30.00% of tested
Biopsy	11	36.67
Pathology/cytology	3	10.00
Slide smears	2	6.67
Unknown	3	10.00
No response	10	33.33

6. Has your dog had any other type of skin disease? Yes 16 2.71%

- a. What was the disease?
- |   |   |                 |
|---|---|-----------------|
| Lypoma (fatty tumor); 4, 8 & 10 yr, 3 vet diag. | 4 | 25.00% of other |
| Sarcoptic mange, 9 yrs, both vet diag.          | 2 | 12.50           |
| Other   | 9 | 56.25           |
| No response                                     | 1 | 6.25            |
- d. Were lab tests done to confirm the diagnosis? Yes
- If yes, what test(s)
- Lypoma, 1 biopsy, 1 aspirated
  - Sarcoptic mange, 1 dog, skin scraping

N. Neurological Diseases      590 dogs

1. Does this dog have epilepsy Yes 23 3.90%

**Chart?**

- a. Age at diagnosis:
- |        |   |                    |
|--------|---|--------------------|
| 1 year | 3 | 13.04% of affected |
| 2      | 3 | 13.04              |
| 3      | 3 | 13.04              |
| 4      | 2 | 8.70               |
| 5      | 7 | 30.43              |
| 6      | 3 | 13.04              |
| 7-9    | 1 | 4.35               |
| 10+    | 1 | 4.35               |

- c. Epilepsy diagnosed by a veterinarian? Yes 100% of affected

If yes, was the veterinarian a neurologist? Yes 4 17.39% of affected

- c. Were lab tests done to rule out other possible causes of the seizures? Yes 20 86.96% of affected

If yes, what test(s)

Blood panel	14	70% of tested
Kidney & liver function	2	10
Tick-borne diseases	3	15
Urinalysis	3	15
Other	5	25
Other, unspecified	2	10

2. Does this dog have hindquarter tremor? Yes 45 7.63%

- a. At what age did you first notice the tremor?

<1 year	7	15.56% of affected
1-2	15	33.33
3-5	8	17.78
6-9	6	13.33
10+	6	13.33
Unknown	2	4.44
No response	1	2.22

- b. Does the dog also exhibit tremors in the forequarters? Yes 8 17.78% of affected

- c. Was the dog checked by a veterinarian to rule out possible causes for the tremors? Yes 18 40.00%

If yes, what test(s) were done?

Blood work	2
Neurological screening	1
X-rays	4
Unspecified	1
Unknown	1
No response	31

Results?		
Arthritis		2
Common and harmless		1
Excitement		1
Fatigue		1
Incomplete myelination of nerve sheaths		1
Neurological		1
No findings		7

3. Does this dog have muscular dystrophy? Yes 2 0.34%

a. Age at diagnosis: 8 & 10 yr

c. Diagnosed by a veterinarian? Yes 100% of affected

d. Were tests done to confirm the diagnosis? Yes 1

If yes, what test(s): Bloodwork, negative

4. Does this dog have myasthenia gravis? No 100%

5. Neuronal (canine) ceroid lipofuscinosis (NCL/CCL) No 100%

6. Has your dog had any other type of neurological disease? Yes 16 2.70%

a. What was the disease?

Degenerative myositis, 10 & 12 yr	2	12.50% of other
Tumor, 10 & 13 yr	3	18.75
Vestibular disease, 6 & 13 yr	2	12.50
Other	9	56.25

b. Diagnosed by a veterinarian? Yes 15 93.75% of other

c. Were lab tests done to confirm the diagnosis? Yes 8 53.33% of vet examined

If yes, what test(s)

MRI	2	25% of tested
X-ray	4	50
Other	2	25

#### O. Respiratory Problems 590 dogs

1. Abnormal Bark Yes 13 2.20%

a. At what age did you first notice the abnormal bark?

1 yr	1	7.69% of affected
9	1	7.69
10	8	61.54
13+	3	23.08

b. Was the dog checked by a veterinarian to determine a cause? Yes 11 84.62% of affected

c. Were lab tests done to confirm the diagnosis? Yes 3 27.27% of vet examined

If yes, what test(s): various

Results?

Laryngeal damage, surgical intubation	2	18.18% of affected
Other	4	36.36
No response	5	45.45



2. Laryngeal Paralysis Yes 9 1.53%

a.. Age at diagnosis:

10 yr	1	11.11% of affected
11	1	11.11
12	6	66.67
13	1	11.11

b. Diagnosed by a veterinarian? Yes 9 100% of affected

d. Were tests done to confirm the diagnosis? Yes 3 33.33%

If yes, what test(s)

Endoscopy	3	100.00% of tested
X-ray	1	33.33

e. Has your dog had tie-back surgery? Yes 2 22.22% of vet examined

f.

If yes, was it successful? Yes 2 100% of surgeries

3. Has your dog had any other type of respiratory disease? Yes 20 3.39%

a. What was the disease?

Collapsed trachea; 9 & 14 yr; all vet examined	2	10% of affected
Cough, 3, 8 & 9 yr; all but one vet examined	3	15
Infectious disease; 4, 5 & 7 yr; all vet examined	3	15
Kennel cough; 6 mo & 1, 4, 5, 8, & 9 yr; all vet exam'd	6	30
Other	6	30

d. Were lab tests done to confirm the diagnosis? Yes 7 38.89% of vet examined

If yes, what test(s)

Blood work	3	42.86% of tested
X-ray	2	28.57
Other	2	28.57
No response	1	14.29

## P. Reproductive Problems 588 dogs

1. Males Only - 287 total

a. Sterility Problems: 36 12.54%

b.

Cause

Unknown	33	91.67%
Other	3	8.33

c. Testicles

1. Were both testicles palpable when a young puppy? Yes 278 96.86%

If yes, by whom:

Yourself	166	57.44%
Veterinarian	72	24.91
Dog's breeder	46	15.92
Don't know	4	1.38
Other	1	0.35

2. Did both testicles stay descended? No 14 4.84% of previously palpable

If not, when was the missing testicle noticed for the last time?

	Right	Left	# Dogs	
Under 12 weeks old	6	4	6	42.86%
12 weeks to 4 months		1	1	7.14
4 – 6 months	1		1	7.14
Older than 6 months	3	2	5	35.71

3. If testicles were not palpable as a young puppy (12 dogs,) when did they descend?

Age	Right	Left	# Dogs	
Less than 10 weeks	3	0	0*	
10 weeks to 6 months	2	2	3	25%
Older than 6 months	0	0	0	
Never descended	2	8	9	75%

\* by last to descend

NOTE: Total cryptorchid: 12 4.18% of males

4. Were retained testicles removed surgically? Yes 10 83.33% of cryptorchid

If yes, where were they found?

In the abdomen	6	60% of surgeries
In the flank	1	10
Don't know	3	30

c. Was this dog ever bred? Yes 86 29.97%

1. Number of females he was bred to?

Low	1
High	8
Mean	2.61
Median	2

2. How many litters did he sire?

Low	0
High	10
Mean	2.83
Median	2

3. How many puppies, total?

Low	0
High	99
Mean	18.96
Median	32

4. Did this dog ever exhibit any abnormal breeding behaviors? Yes 13 15.12% of breeders

i. Type of behavior:

Impotence (no interest)	1	7.69% of affected
Unwilling to breed	11	84.62
Unable to breed	1	7.69

ii. Once the behavior began, was it

Once only	10	76.92% of affected
No response	3	23.08

d. Does this dog have prostate disease? Yes 6 2.09%

1. Age at diagnosis?
 

<7 years	1	16.67% of affected
7 years	3	50.00
9 years	2	33.33
2. Did it result in sterility? No 100%
3. Diagnosed by a veterinarian? Yes 100%
4. Were test(s) done to confirm diagnosis? Yes 3 50% of affected
 

If yes, what test(s)?

Ultrasound	2
Bloodwork	1

e. Does this dog have testicular atrophy? Yes 2 0.70%

1. Age at diagnosis? 11 yr (1 dog, other no response)
2. Reason: 100% old age
3. Diagnosed by a veterinarian? No 100%

f. Does this dog have any other male-specific reproductive disease or genital defect? Yes 2 0.69%

1. Age at diagnosis? 6 & 10 yr
2. Did it result in sterility? Yes 1 50% of other
3. Diagnosed by a veterinarian? Yes 2 100%
4. Were test(s) done to confirm diagnosis? Yes 2 100%

If yes, what test(s)?

Blood work	1
Semen analysis	2
Ultrasound	1

2. Females Only 301 total

a. Age at first heat?

6-8 months	40	13.29%	20.20% of known initial heats
9-11	54	17.94	27.27
12-17	76	25.25	38.38
18-23	26	8.64	13.13
24+	2	0.66	1.01
Spayed prior	49	16.28	
Unknown	49	16.28	
No response	5	1.66	
Earliest heat	6		
Latest	30		
Mean	12.3		
Median	13		

b. Number of months between cycles?

<6 months	23	7.64%	12.64% of known intervals
6	70	23.26	38.46
7-8	56	18.60	30.77
9-11	21	6.98	11.54
12-17	11	3.65	6.04
18+	1	0.33	0.55
Spayed	54	17.94	
Unknown	49	16.28	
No response	16	5.32	

Note: 90.74% of spayed bitches altered before first heat

Low interval	4 months
High	24
Mean	7.16
Median	7

c. Was this female ever bred? Yes 151 49.35%

1. if yes, did she fail to produce any litters? 4 2.65% of bred bitches

2. If yes, now many litters?

1 litter	61	40.40% of bred	49.59% of bitches that had litters
2	39	25.83	31.71
3	16	10.60	13.01
4	4	2.65	3.25
5	3	1.99	2.44
Unknown	2	1.32	
None	4	2.65	
No response	22	14.57	

Low	0
High	5
Mean	1.66
Median	1

3. Please indicate number of puppies delivered:

Low	0
High	17
Mean	6.62
Median	8

Total puppies born 1483

2. How many puppies were stillborn? 79 5.33% of births

Total still born from female:

1	15	18.99% of stillborn
2-3	14	39.24
4-5	4	24.05
6+	2	17.72

Least	0
Most	8
Mean	0.67
Median	3

Total live births 1404 94.67%

3. Of all live births, how many survived to weaning? 1325 89.35% 94.37% of live births

Least per female	0
Most	42
Mean	10.95
Median	15

Of the pups alive which did not survive to weaning (79 – 5.33% of puppies whelped) how many were:

Runts	5	6.33% of those that didn't survive
Cleft Palate	5	6.33
Fading Puppy	9	11.39
Damaged by dam	10	12.66
Unknown	41	51.90
Euthanized for other	2	2.53
No response	7	8.86

4. Did this female ever require Caesarian Section to deliver a litter?

Yes 21 16.54% of bitches that delivered litters

If yes, reason?

Small birth canal	1
No response	20

How many litters were delivered via C-section? 27 10.93%

1 litter	18 females	66.67% of C-section litters
2	1	7.41
3	1	11.11
4	1	14.81

5. Has this female had any reproductive defects or failures? Yes 35 11.44% of all bitches

Irregular heats	7	20.00% of affected
Failure to conceive	9	25.71
Abortion	1	2.86
Reabsorbtion of fetuses	2	5.71
Difficulty whelping	13	37.14
Inadequate/no milk production	3	8.57
False pregnancy	3	8.57
Other	4	11.43

Number of bitches with multiple defects/failures: 4 11.43% of affected

6. Has this female had any of the following reproductive/genital diseases?

Yes 24 7.84% of all bitches

Vaginal infection	6	25.00% of diseased
Pyometria	9	37.50
Mastitis	4	16.67
Metritis (uterine infection)	3	12.50
Other	2	8.33

3. General (males and females) 588 dogs

a. Is this dog altered? Yes 326 55.44%

If yes, reason for altering:

Not breeding quality	50	15.34% of altered
Did not want an intact animal	99	30.37
Medical reason	60	18.40
Behavioral reason	23	7.06
Unknown	25	7.67
Other	55	16.87
No response	14	4.29

Medical/health reasons detail 60 dogs 18.40% of altered 43.48% of reasons given

Age	5	8.33% of health
C-section complications	2	3.33
Cataract	5	8.33
Cryptorchid	6	10.00
Epilepsy	4	6.67
Health issues in relatives	9	15.00
Hip dysplasia	5	8.33
Perianal hernia	2	3.33
Reproductive problems	14	23.33
Other	8	13.33

Behavioral reasons detail 23 dogs 7.06% of altered 16.67% of reasons given

Aggression	11	47.83% of behavioral
Hypersexuality	3	13.04
Other	7	30.43
No response	2	8.70

Other reasons detail 55 dogs 16.87% of altered 39.86% of reasons given

Acquired altered or NFB	15	27.27% of other
Age	5	9.09
Retired from breeding	26	47.27
Misc.	6	10.91
No response	3	5.45

No reason given 188 57.67% of altered

b. Is this dog a hermaphrodite? Yes 1 0.35%

1. At what age did you notice the abnormal genitalia? No response
2. Was the condition diagnosed by a veterinarian? No

c. Does this dog have any other non-gender-specific reproductive abnormality or disease?

Yes 10.71%

1. What is the name of the condition? Ovarian cyst

Q. Cancer 588 dogs

1. Has your dog ever had cancer? Yes 95 16.16%

2. Indicate what type of cancer:
- |                       |    |                    |
|-----------------------|----|--------------------|
| Hemangiosarcoma       | 27 | 28.42% of affected |
| Lymphoma              | 11 | 11.58              |
| Mammary               | 10 | 10.53              |
| Fibrosarcoma          | 2  | 2.11               |
| Osteosarcoma          | 2  | 2.11               |
| Soft Tissue Carcinoma | 4  | 4.21               |
| Adenocarcinoma        | 2  | 2.11               |
| Histiocytic sarcoma   | 2  | 2.11               |
| Lung, primary         | 2  | 2.11               |
| Unknown               | 18 | 18.95              |
| Other                 | 15 | 15.79              |
3. Did you enter this dog in the 2006-7 ASHGI Breed Cancer Survey? Yes 18 18.95%
4. Was the dog's cancer diagnosed by a veterinarian? Yes 83 87.37% of affected
5. Tested? Yes 73 87.95% of vet examined
- a. What test(s) were used?
- |            |    |        |
|------------|----|--------|
| Biopsy     | 41 | 56.16% |
| Bloodwork  | 10 | 13.70  |
| Echography | 2  | 2.74   |
| Endoscopy  | 3  | 4.11   |
| FNA        | 2  | 2.74   |
| MRI        | 4  | 5.48   |
| Necropsy   | 6  | 8.22   |
| Ultrasound | 10 | 13.70  |
| X-ray      | 21 | 28.77  |
| Unknown    | 3  | 4.11   |
| Other`     | 4  | 5.48   |
- b. Did the dog receive chemotherapy? Yes 16 16.84% of affected
- If yes, did the dog respond positively to chemotherapy? Yes 7 43.75% of chemo dogs

#### R. Behavior and Temperament 588 dogs

Dogs with some kind of behavioral issue: 379 64.46%

Dogs with multiple behavioral issues 187 49.34%

2 issues	127	67.91% of multiple issue dogs
3	40	21.39
4	14	7.49
5	6	3.21

Some behavioral issue combinations were significantly more common than others

Bite and noise	33	17.65% of multiple issue dogs
Bite, noise & shyness	10	5.35
Bite and stereotypical behavior	15	8.02
Bite and shyness issues	14	7.49
Noise and stereotypical behavior	22	11.76
Noise and shyness	15	8.02

1. Has this dog bitten people or other dogs? Yes 170 45% of behavioral

If yes, how many total bites inflicted on:

Humans:	81	13.71%	47.65% of biters
1 bite	39		48.15% of human biters
2	22		27.16
3	9		11.11
4	5		6.17
5	1		1.23
>5	5		6.17

How many of these broke the skin: (Total bites on humans: 108)

0	42	38.89% of bites on humans
1	26	24.07
2	9	25.00
3	3	8.33
4	1	3.70

Comparison of bite-on-human frequency with number of broken skin bites

1-2 bites per dog	4	4.82% of bite incidents
3-4	11	23.40
5+	5	14.29

Other dogs?	134	22.67%	78.82% of biting dogs
1 bites	36		26.87% of dogs biting dogs
2	35		26.12
3	21		15.67
4	6		2.24
5	8		5.97
>5	28		20.90

How many of these broke the skin? (Total bites on dogs: 261+)

NOTE: Exact bite number can't be calculated due to entries in the <5 category.)

0	31	11.88%
1	47	18.01
2	21	16.09
3	19	21.84
4	5	7.66
5	2	3.83
>5	9	20.69

Comparison of bite-on-dog frequency with number of broken skin bites

1-2 bites per dog	4	3.77% of bite incidents
3-4	11	12.64
5+	27	12.98

Of those dogs that bit:

People only	36	21.18% of biting dogs
Dogs only	89	52.35
Both people and dogs	45	26.47

Of dogs that bit both humans and other dogs:

1-2 humans bitten (34 dogs)			
	1-2 dog	18	52.94%
	3-4	6	17.65
	5+	10	29.41
3-4 (7)			
	1-2	3	42.86
	3-4	2	28.57
	5+	2	28.57
5+ (4)			



1-2	1	25.00	
5+	3	75.00	
1-2 dogs bitten (22 dogs)			
1-2 human	19	86.36%	
3-4	2	9.09	
5+	1	4.55	
3-4 (8 dogs)			
1-2	6	75.00	
3-4	2	25.00	
5+ (15)			
1-2	10	66.67	
3-4	2	13.33	
5+	3	20.00	
Of dogs whose bites broke the skin (122 dogs)			
Humans only	19	15.57%	
Dogs only	83	68.03	
Humans and dogs	20	16.39	
Broke skin on humans			
1-2 humans (17)			
1-2 dogs	9	52.94%	
3-4	6	35.29	
5+	2	11.76	
3-4 (3)			
1-2	1	33.33	
5+	2	66.67	
Broke skin on dogs			
1-2 dogs (9)			
1-2 humans	8	88.89%	
3-4	1	11.11	
3-4 (6) 100% on 1-2 humans			
5+ (4)			
1-2	2	50.00	
3-4	2	50.00	

6. Does this dog have separation anxiety (destructive behavior or inappropriate elimination or vocalizations when owner not accessible to the dog or absent) Yes 38 6.43%

7. Does this dog exhibit noise phobia Yes 204 34.86%

a. Indicate the types of events to which the dog reacts (check all that apply):

Thunderstorms	147	72.06% of phobic
Fireworks	161	78.92
Gunfire	110	53.92
Air compressor	3	1.47
Beepers, buzzers & bells	13	6.37
Caps & other popping noises	3	1.47
Loudspeakers & loud voices	4	1.99
Toaster	2	0.98
Vacuum cleaner	3	1.47
Vehicle engines	4	1.99
Yard equipment	3	1.47
Any loud noise	10	4.90
Many sounds	3	1.47
Other	12	5.88

b. Does your dog exhibit phobic behavior to situations other than sounds? Yes 25 6.60%

What situation(s):

Confinement/restraint	8	32% of phobic other than noise
Excited/active dogs	2	8
Unfamiliar dogs	3	12
Unfamiliar people	8	32
Other	8	32

4. Does this dog exhibit any stereotypic or ritualistic behavior? Yes 106 27.97%

a. Check all behaviors exhibited by this dog:

Excessive grooming	51	48.11% of ritualistic
incl chewing, biting, licking, plucking, barbering, sucking.		
Hallucinatory behavior	5	4.72
incl staring, tracking, or attacking Invisible prey		
Consumptive	22	20.75
incl eating rocks, dirt or other objects, chewing/sucking fabric, excessive licking or gulping air.		
Locomotor	9	8.49
incl circling, tail-chasing, freezing, scratching		
Vocalization	33	31.13
incl rhythmic/excessive barking, excessive howling, inappropriate growling		
Coprophagia	2	1.89
Masturbatory	3	2.83
Other	5	4.72

b. Can you stop these behavior by calling the dog or using physical restraint?

Yes 87 82.08% of ritualistic

5. Does this dog exhibit shyness or fearfulness? Yes 101 26.65%

Please indicate who the dog reacts this way too. (Mark all that apply.)

Men	36	35.64% of shy
Women	15	14.85
Adolescents	19	18.81
Children	36	35.64
People doing specific things	4	3.96
Strangers	56	55.45
Specific individuals	2	1.98
Strange dogs	42	41.58
Novel situations	3	2.97
Other	2	1.98

6. Have any of the dog's relatives exhibited the same or similar behaviors? Yes 74 19.53% of affected

S. Other Health Issues 6 dogs

Do you want to report any additional health conditions? Yes 4 100% of "other"

1. Name of condition: various, ages 5-10 yrs, 75% vet diagnosed

**IV. Breeding History 241 dogs**

**A. Has this dog ever produced a litter?** Yes 241 95.26% of total breeding dogs in survey

**B. Has this dog produced one or more offspring with skeletal diseases or defects?**

Yes	52	21.58%
No	174	72.20
Don't know	15	6.22

If yes, click any of the conditions below which the dog has produced:

Hip dysplasia Yes 18 7.47

1. How many offspring? Total HD offspring: 35
- |   |   |              |                    |
|---|---|--------------|--------------------|
| 1 | 9 | 50.00% of HD | 17.31% of skeletal |
| 2 | 5 | 27.78        | 9.62               |
| 3 | 2 | 11.11        | 3.85               |
| 5 | 2 | 11.11        | 3.85               |
2. From how many different mates if more than one produced?
- |           |   |        |
|-----------|---|--------|
| 1-1 HD    | 9 | 50.00% |
| 1-mult HD | 4 | 22.22  |
| 2         | 5 | 27.78  |

Elbow dysplasia Yes 6 11.54%

1. How many offspring? 1 100% of ED Total ED offspring: 6

Osteochondritis Desicans (OCD) in a joint other than the elbow Yes 6 11.54%

How many offspring? 1 100% of OCDq Total OCD offspring: 6

Transitional Vertebrae Yes 5 9.62%

1. How many offspring? Total transitional vertebrae offspring: 7
- |   |   |                |                   |
|---|---|----------------|-------------------|
| 1 | 3 | 60% trans vert | 5.77% of skeletal |
| 2 | 2 | 40             | 3.85              |
2. From how many different mates? 1 100%

Cruciate ligament problems Yes 1 1.92%

1. How many offspring? 1

Patellar luxation Yes 1 1.92%

1. How many offspring? 1

Kinked tails Yes 16 30.77% of skeletal

1. How many offspring? Total kinked tail offspring: 31
- |   |    |                  |                    |
|---|----|------------------|--------------------|
| 1 | 10 | 62.50% of kinked | 19.23% of skeletal |
| 2 | 2  | 12.50            | 3.85               |
| 4 | 3  | 18.75            | 5.77               |
| 5 | 1  | 6.25             | 1.92               |
2. From how many different mates?
- |               |    |        |
|---------------|----|--------|
| 1-1 kinked    | 10 | 62.50% |
| 1-mult kinked | 3  | 18.75  |
| 2             | 3  | 18.75  |

**C. Has this dog produced one or more offspring with dental faults?**

Yes	58	24.07%
No	157	65.15
Don't know	26	10.79

If yes, click any of the conditions below which the dog has produced:

Missing teeth Yes 38 65.52% of dental

1. How many offspring?	Total MT offspring:	at least 53
1	17	44.74% of MT 29.31% of dental
2	2	5.26 3.45
3	3	7.89 5.17
4	3	7.89 5.17
5	2	5.26 3.45
No response	1	2.63 1.72

2. From how many different	mates?
1-1MT	17 44.74% of MT
1-mult MT	9 23.68
2	5 13.16
3	2 5.26
No response	5 13.16

Extra teeth Yes 6 10.34%

1. How many offspring? 6

Overbite Yes 9 15.52%

1. How many offspring?	Total overbite:	13
1	5	55.56% of overbite 8.62% of dental
2	4	44.44 6.90

2. From how many different	mates?
1-1 over	5 55.56% overbite
1-multi over	2 22.22
2	1 11.11
No response	1 11.11

Underbite Yes 11 18.97% of dental

1. How many offspring?	Total underbite:	at least 11
1	10	90.91% of dental 17.24% of dental
No response	1	9.09 1.72

Wry bite Yes 3 5.17% of dental

1. How many offspring? 3 total

**D. Has this dog produced one or more offspring that were deaf?**

Yes	5	2.07%
No	222	92.12
Don't know	14	5.81

1. If yes, were some or all homozygous (double) merles? Yes 3 60% of deaf

2. If any were not homozygous merle, was cause of deafness determined?  
Yes 2 100% of non-MM deaf

What was the cause? /White ear, unilateral deafness

3. How many offspring were deaf?	Total deaf offspring:	6
1	4	80% of deaf producers
2	1	20

4. From how many different mates? 1 100%

E. Has this dog produced one or more offspring with eye problems?

Yes	53	21.99%
No	165	68.46
Don't know	23	9.54

Distichiasis                      Yes 7 13.21% of eye prob 2.9% of all

1. How many offspring? Total dist offspring: 11

1	4	57.14% of Dist
2	2	28.57
3	1	14.29

2. From how many different mates?

1	4	57.14%
2	1	14.29
No response	2	28.57

Iris coloboma                      Yes 11 20.75% of eyes

1. How many offspring? Total IC offspring: at least 13

1	8	72.73% of IC
2	2	18.18
No Response	1	9.09

2. From how many different mates?

1	10	90.91%
No response	1	9.09

Persistent pupillary membrane    Yes 14 26.42% of eyes

1. How many offspring? Total PPM offspring: at least 17

1	11	78.57% of PPM
2	1	7.14
3	1	7.14
No response	1	7.14

2. From how many different mates?

1-1 PPM	11	78.57% of PPM
1-multi PPM	2	14.29
No response	1	7.14

Cataract                              Yes 17 7.05% 29.31% of eye problems

1. How many offspring? Total cataract offspring: at least 21

1	14	82.35% of cat
5	1	5.88
No response	2	11.76

2. From how many different mates?

1	14	82.35% of cat
2	1	5.88
No response	2	11.76

3. Was genetic (DNA test) status determined on any offspring?

Yes	10	58.82% of cat
No	6	35.29
Don't Know	1	5.88

4. If yes (10 offspring,) how many were had
- a. one copy 4
  - b. Two copies 0
  - c. None 6

Collie eye anomaly Yes 4 1.66% 6.90% of eye problems

1. How many offspring?
- 1 1
  - No response 3

3. Was genetic (DNA test) status determined on any offspring? Yes 100% of CEA prod

If yes, how many were

- Mutant/Mutant? 3
- Mutant/Normal? 0
- Normal/Normal? 1

Progressive retinal atrophy Yes 2 0.83% 3.45% of eye producers

1. How many offspring? No response (at least 2)

3. Was genetic (DNA test) status determined on any offspring? 2 100% of PRA, all normal/normal

**F. Has this dog produced one or more offspring with endocrine (glandular) disease, not including diseases of the sex glands?**

Yes	3	1.24%
No	219	90.87
Don't know	19	7.88

Thyroid disease Yes 1

- 1 How many offspring? 2
- 2. From how many different mates? 1

Cushing's Disease 2 66.67% of endocrine

- 1. How many offspring? 4 total
  - 1 1
  - 3 1
- 2. From how many different mates?
  - 1 1
  - 2 1

Diabetes Yes 1 0.41%

How many offspring? 1

**G. Has this dog produced one or more offspring with gastrointestinal diseases or defects?**

Yes	25	10.37%
No	197	81.74
Don't Know	19	7.88

Hernia Yes 15 60% of gastro

1. How many offspring?	At least 29		
1	6	40.00%	
2	6	40.00	
4	1	6.67	
6	1	6.67	
No response	1	6.67	
2. From how many different mates?			
1-1 hernia	6	40.00	
1-multi hernia	7	46.67	
2	1	6.67	
No response	1	6.67	
Inflammatory bowel disease	1	0.40%	of gastro
1 How many offspring?	1		
Megaesophagus	Yes 1	0.40%	of gastro
1 How many offspring?	1		
Food intolerance	Yes 6	24%	of gastro
1 How many offspring?	7 total		
1	5	83.33%	of intolerance
2	1	16.67	
2. From how many different mates?	1	100%	
Chronic Diarrhea	Yes 3	12%	
1 How many offspring?	3 total		
Recurrent vomiting	Yes 2	8%	of gastro
1 How many offspring?	2		
Cobalamin (Vit. B <sup>12</sup> ) malabsorbtion	No	100%	
1. Was genetic (DNA test) status determined on any offspring?			
Yes	1	normal/normal	

**H. Has this dog produced one or more offspring with blood disorders?**

1. Yes	0	
2. No	224	92.95%
3. Don't Know	17	7.05

**I. Has this dog produced one or more offspring with heart disease or defects?**

Yes	10	4.15%
No	211	87.55
Don't Know	20	8.30

Patent ductus arteriosus Yes 1 10% of heart

1 How many offspring? 1 total

Heart murmur            Yes    8       80%

1 How many offspring? 9 total  
1       7       87.50% of murmur  
2       1       12.50

2. From how many different mates? 1 100%

**J. Has this dog produced one or more offspring with portosystemic (liver) shunt?**

Yes                    0  
No                    224    92.95% of shunt  
Don't Know        17       7.05

Were any of the affected tested for cobalamin (Vitamin B12) malabsorbtion?    Don't Know    3

**K. Has this dog produced one or more offspring with skin problems?**

Yes                    8       3.32%  
No                    214    88.80  
Don't Know        19       7.88

Demodex mange    Yes    5       62.50% of skin

1 How many offspring? 5 total

Sebaceous tumors/cysts    Yes    1       12.50% of skin

1 How many offspring? 3 total

2. From how many different mates? No response (at least 1)

**L. Has this dog produced one or more offspring with neurological disease?**

Yes                    18       7.47%  
No                    204    84.65  
Don't Know        19       7.88

Epilepsy              Yes    13       72.22% of neuro

1 How many offspring? 15 total  
1       11       84.62% of epilepsy  
2       2       15.38

2. From how many different mates? 1 100%

Rear end tremor    Yes    6       33.33% of neuro

1. How many offspring? 15 total  
1       3       50.00% of tremor  
2       1       16.67  
3       1       16.67  
7       1       16.67

2. From how many different mates?  
1       4       66.67% of tremor  
2       2       33.33



**M. Has this dog produced one or more offspring with respiratory disease? 241 dogs**

Yes	6	2.49%
No	218	90.46
Don't Know	17	7.05

Abnormal bark                      Yes    2    0.83%    33.33% of respiratory

1. How many offspring? 5 total  
1            1  
4            1

2. From how many different mates?  
1            1  
2            1

Laryngeal paralysis                      Yes    2    0.83%    33.33% of respiratory

1. How many offspring? 2 total LP offspring

**N. Has this dog produced one or more offspring with reproductive problems? 241 dogs**

Yes	34	14.11%
No	180	74.69
Don't Know	27	11.20

**Male offspring:**

Retained Testicles                      Yes    10    29.41% of repro prob

1. How many offspring? 13 total  
1            7  
2            3

2. From how many different mates?  
1            9  
2            1

Testicular Atrophy                      Yes    1    2.94% of repro prob

1. How many offspring? 2 total testicular atrophy offspring  
2. From how many different mates? 1

**Female offspring:**

Abnormal breeding behavior                      Yes    1    2.94% of repro prob

How many offspring? 1 abnormal behavior offspring

Abnormal heat cycles                      Yes    3    8.82% of repro prob

How many offspring? 3 total abnormal heat offspring

Caesarian Section required                      Yes    3    8.82% of repro prob

How many offspring? 3 total c-section offspring

Failed to conceive                      Yes    1    2.94% of repro prob

How many offspring? 1 total failure to conceive offspring

Had litters of 4 or fewer puppies Yes 1 2.94% of repro prob

How many offspring? 1 total small litter offspring

Heat cycles started after 1 year of age Yes 18 47.06% of repro

1. How many offspring? 35 total

1	7	20.00% of late heat offspring
2	3	17.14
3	4	34.29
4	1	11.43
6	1	17.14

2. From how many different mates?

1-1 late heat off	7	38.89% of late heat prod
1-multiple	6	33.33
2	1	5.56
No response	4	22.22

Pyometria Yes 2 5.88% of repro prob

How many offspring? 2 total pyometria offspring

Vaginal infection Yes 1 2.94% of repro prob

How many offspring? 1 total vag infection offspring

O. Has this dog produced one or more offspring with cancer? 241 total dogs

Yes	28	11.62%
No	187	77.59
Don't Know	26	10.79

Hemangiosarcoma Yes 9 32.14% of cancer prod

1. How many offspring? 15 total

1	5	33.33% of HSA offspring
2	2	26.67
3	2	40.00

2. With how many mates?

1-1 HSA offsp	7	77.78%
2-multi HSA	1	11.11
No response	1	11.11

Lymphoma Yes 7 25.00% of cancer prod

1. How many offspring? 9 total

1	6	85.71% of lymphoma prod
3	1	14.29

2. With how many mates?

1	6	85.71% of lymphoma prod
No response	1	14.29

Mammary Yes 2 7.14% of cancer prod

1. How many offspring? 3 total

1	1	33.33% of mammary cancer offspring
1	2	66.67

2. With how many mates? 1 100% of mammary cancer prod

Mast Cell Yes 3 1.24% of cancer prod

1. How many offspring? 4 total  
 1 2 50% of mammary cancer offspring  
 2 1 50

2. With how many mates? 1 100% of mammary cancer prod

Soft Tissue Carcinoma Yes 1 3.57% of cancer prod

1. How many offspring? 1 total soft tissue carcinoma offspring

Squamous Cell Carcinoma Yes 1 3.57% of cancer prod

1. How many offspring? 1 total squamous cell carcinoma offspring

Generalized cancer Yes 1 3.57% of cancer prod

1. How many offspring? 1 total beneralized cancer offspring

Cancer, type not known Yes 8 28.57% of cancer prod

1. How many offspring? 15 total  
 1 3 20% of unk cancer offspring  
 2 3 40  
 3 2 40

2. With how many mates?  
 1 5 62.50% of unk cancer prod  
 2 3 37.50

Other cancers produced: Yes 12 42.86% of cancer prod  
 Brain tumor 2 16.67% of other cancer prod  
 Osteosarcoma 2 16.67  
 No response 1 8.33  
 Misc. 7 58.33

**P. Has this dog produced one or more offspring with immune mediated diseases not previously listed? 241 dogs**

Yes 6 2.49%  
 No 213 88.38  
 Don't Know 22 9.13

1. If yes, what disease(s)  
 Allergy 4 66.67% of immune mediated prod  
 Other 1 16.67  
 No response 1 16.67
2. How many offspring?  
 Allergy (at least 7 allergy offspring total)  
 1 2 28.57% of allergy offspring  
 2 2 57.14  
 No response 1 14.29  
 Other: 1 other offspring

3. From how many different mates?

Allergy - 1mate 2  
                   2     1  
 Other: 1 mate 1

**Q. Has this dog produced one or more offspring with significant behavioral or temperament problems? 241 dogs**

Yes           45     18.67%  
 No            175    72.61  
 Don't Know   21     8.71

Biting people or other dogs     Yes 14 31.11% of behavior prod

1. How many offspring? 24 total

1     6     25.00% of biting offspring  
 2     6     50.00  
 3     2     25.00

2. From how many different mates?

1-single aff offspring     6     42.86% of biting prod  
 1-multi aaff offspring    6     42.86  
 2                             1     7.14  
 No response               1     7.14

Separation anxiety               Yes 3 6.67% of behavior prod

1. How many offspring? 3 total sep anxiety offspring

Noise phobia                      Yes 13 28.89% of behavior prod

1. How many offspring? 21 total

1     6     28.57%  
 2     6     57.14  
 3     1     14.29

2. From how many different mates?

1-1 aff offspring           6     46.15% of noise phobic prod  
 1-multi aff offspring     5     38.46  
 2                             1     7.69  
 No response               1     7.69

Shyness or fearfulness toward people or other dogs     Yes 20 44.44% of behavior prod

1. How many offspring? At least 26

1                   14     53.85% of fearful offspring  
 2                   4     30.77  
 3                   1     11.54  
 No response       1     3.85

2. From how many different mates?

1-1 fearfull offspring     14     70% of fearful prod  
 1-mult fearful offspring   4     20  
 2                             1     5  
 No response               1     5

Steriotypic or ritualistic behavior     Yes 7 2.90%

1. How many offspring? 10 total

1     4     40% of ritualistic offspring  
 2     3     60

2. From how many different mates? 1 mate 100%

**R. Has this dog produced one or more offspring that did not have full length tails? 241 dogs**

Yes	94	39.00% of tail prod
No	133	55.19
Don't Know	13	5.39
No response	1	0.41

1. If yes, of those how many how many had

¾ length	at least 84	17.76% of NBT offspring
½ length	at least 145	30.66
¼ length	124	26.22
Very short	93	19.66
Absent	27	5.71

Total NBT offspring: at least 473

2. With how many mates did it produce puppies with tails that were not full length?

1	61	64.89% of NBT prod
2	21	22.34
3	1	1.06
4	2	2.13
5	2	2.13
6	1	1.06
7	1	1.06
13	1	1.06
No response	4	4.26

3. How many of those mates do you know had less than full length tails?

None	25	26.60% of NBT prod
1	29	30.85
2	8	8.51
6	1	1.06
Unknown	28	29.79
No response	3	3.19

4. How many of the offspring with less than full length tails required euthanasia due to severe birth defects?

None	74	78.72% of NBT offsp	94.87% of responding NBT producers
1	3	3.19	3.85
5	1	1.06	1.28
No response	16	17.02	n/a

**S. Has your dog produced one or more offspring which had long tails that were left undocked? 241 dogs**

Yes	82	34.02%
No	150	62.24
Don't Know	9	3.73

1. If yes, indicate offsprings' typical tail carriage(s) when relaxed (check all that apply)

Low	16	19.51% of undocked full tail prod
Slightly below topline	33	40.24
Level with topline	31	37.80
Above topline	38	46.34
Over the back	18	21.95
No response	4	4.88

2. Indicate offspring's tail type(s) (check all that apply)

Straight	13	15.85% of undocked full tail prod
Slightly curved	70	85.37
Strongly curved	7	8.54
Curled	13	15.85
No response	5	6.10

3. Indicate offspring's tail feathering type(s) (check all that apply)

None	5	6.10% of undocked long tail prod
More profuse at base, shortnng to tip	54	65.85
Equally profuse from base to tip	21	25.61
No response	7	8.54

**T. Has your dog produced one or more offspring with other health conditions which you would like to report? 240**

Yes	14	5.81%
No	19	7.88
Don't Know	207	85.89
No response	1	0.41

If yes, indicate what condition (s) and how many offspring:

Behavior	1	0.41%
Dental	1	0.40
Eyes	5	2.07
Immune mediated	1	0.41
Neurological	1	0.41
Reproductive	2	0.83
Skeletal	3	1.24

**V. Research Participation (optional) 585 dogs**

If your dog has had health problems or had near relatives with health issues, have you submitted samples and/or data to research? Yes 79 13.50%

If yes, which studies (list all)

AHT Cataract	12	15.19% of research participants
Behavior	8	10.13
Cancer	5	6.33
DNA banking	10	12.66
Coat color	1	1.27
Epilepsy	45	56.96
MDR1/Epilepsy	1	1.27
No response	6	7.59

**VI. Additional Comments (optional)**

If there is anything else you'd like to mention that was not in the Health Survey, please o so here:

127 people, 33.96% of the 374 who participated took the time to offer some kind of additional comment. Comments varied considerably and included thanks to ASHGI for doing the survey, specific data for IDASH, additional explanation/information regarding survey entries, family health history, information not covered elsewhere in the survey, and special things about their Aussies that they wanted to share.