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…

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>81.87% of owners</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact you if we have further questions?</td>
<td>307</td>
<td>81.87% of owners</td>
</tr>
<tr>
<td>Include your dog’s information in the confidential IDASH Pedigree Analysis Database?</td>
<td>288</td>
<td>76.80%</td>
</tr>
</tbody>
</table>

**Owner Locations**

<table>
<thead>
<tr>
<th>Location</th>
<th>Owners</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>7</td>
<td>1.87%</td>
</tr>
<tr>
<td>Austria</td>
<td>1</td>
<td>0.27</td>
</tr>
<tr>
<td>Belgium</td>
<td>3</td>
<td>0.80</td>
</tr>
<tr>
<td>Canada</td>
<td>20</td>
<td>5.33</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>1</td>
<td>0.27</td>
</tr>
<tr>
<td>Denmark</td>
<td>2</td>
<td>0.53</td>
</tr>
<tr>
<td>Finland</td>
<td>9</td>
<td>2.40</td>
</tr>
<tr>
<td>France</td>
<td>5</td>
<td>1.33</td>
</tr>
<tr>
<td>Germany</td>
<td>21</td>
<td>5.60</td>
</tr>
<tr>
<td>Netherlands</td>
<td>28</td>
<td>7.47</td>
</tr>
<tr>
<td>Norway</td>
<td>16</td>
<td>4.27</td>
</tr>
<tr>
<td>Slovenia</td>
<td>4</td>
<td>1.07</td>
</tr>
<tr>
<td>South Africa</td>
<td>1</td>
<td>0.27</td>
</tr>
<tr>
<td>Sweden</td>
<td>1</td>
<td>0.27</td>
</tr>
<tr>
<td>Switzerland</td>
<td>3</td>
<td>0.80</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>11</td>
<td>2.93</td>
</tr>
<tr>
<td>United States</td>
<td>242</td>
<td>64.53</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Region</th>
<th>Owners</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>New England (CT, MA, ME, NH, RI)</td>
<td>11</td>
<td>4.55% of US</td>
</tr>
<tr>
<td>Mid-Atlantic (MD, NJ, NY, PA)</td>
<td>32</td>
<td>13.22</td>
</tr>
<tr>
<td>South (AL, AR, FL, GA, KY, LA, NC, SC, TN, TX, VA, WV)</td>
<td>59</td>
<td>24.38</td>
</tr>
<tr>
<td>Upper Midwest (IA, IL, IN, MI, MN, MO, NE, OH, WI)</td>
<td>43</td>
<td>17.77</td>
</tr>
<tr>
<td>Mountain West (AZ, CO, ID, MT, NM, NV, UT, WY)</td>
<td>29</td>
<td>11.98</td>
</tr>
<tr>
<td>Pacific (AK, CA, OR, WA)</td>
<td>68</td>
<td>28.10</td>
</tr>
</tbody>
</table>
Breakdown by US state:

<table>
<thead>
<tr>
<th>State</th>
<th>Count</th>
<th>Percentage of US</th>
</tr>
</thead>
<tbody>
<tr>
<td>AK</td>
<td>7</td>
<td>2.89%</td>
</tr>
<tr>
<td>AL</td>
<td>1</td>
<td>0.41</td>
</tr>
<tr>
<td>AR</td>
<td>1</td>
<td>0.41</td>
</tr>
<tr>
<td>AZ</td>
<td>7</td>
<td>2.89</td>
</tr>
<tr>
<td>CA</td>
<td>39</td>
<td>16.12</td>
</tr>
<tr>
<td>CO</td>
<td>5</td>
<td>2.07</td>
</tr>
<tr>
<td>CT</td>
<td>2</td>
<td>0.83</td>
</tr>
<tr>
<td>FL</td>
<td>9</td>
<td>3.72</td>
</tr>
<tr>
<td>GA</td>
<td>6</td>
<td>2.48</td>
</tr>
<tr>
<td>IA</td>
<td>1</td>
<td>0.41</td>
</tr>
<tr>
<td>ID</td>
<td>2</td>
<td>0.83</td>
</tr>
<tr>
<td>IL</td>
<td>5</td>
<td>2.07</td>
</tr>
<tr>
<td>IN</td>
<td>4</td>
<td>1.65</td>
</tr>
<tr>
<td>KY</td>
<td>3</td>
<td>1.24</td>
</tr>
<tr>
<td>LA</td>
<td>2</td>
<td>0.83</td>
</tr>
<tr>
<td>MA</td>
<td>4</td>
<td>1.65</td>
</tr>
<tr>
<td>MD</td>
<td>5</td>
<td>2.07</td>
</tr>
<tr>
<td>ME</td>
<td>1</td>
<td>0.41</td>
</tr>
<tr>
<td>MI</td>
<td>11</td>
<td>4.55</td>
</tr>
<tr>
<td>MN</td>
<td>7</td>
<td>2.89</td>
</tr>
<tr>
<td>MO</td>
<td>4</td>
<td>1.65</td>
</tr>
<tr>
<td>MT</td>
<td>4</td>
<td>1.65</td>
</tr>
<tr>
<td>NE</td>
<td>1</td>
<td>0.41</td>
</tr>
<tr>
<td>NH</td>
<td>3</td>
<td>1.24</td>
</tr>
<tr>
<td>NJ</td>
<td>2</td>
<td>0.83</td>
</tr>
<tr>
<td>NM</td>
<td>3</td>
<td>1.24</td>
</tr>
<tr>
<td>NC</td>
<td>9</td>
<td>3.72</td>
</tr>
<tr>
<td>NE</td>
<td>1</td>
<td>0.41</td>
</tr>
<tr>
<td>OH</td>
<td>7</td>
<td>2.89</td>
</tr>
<tr>
<td>OR</td>
<td>3</td>
<td>1.24</td>
</tr>
<tr>
<td>PA</td>
<td>11</td>
<td>4.55</td>
</tr>
<tr>
<td>RI</td>
<td>1</td>
<td>0.41</td>
</tr>
<tr>
<td>SC</td>
<td>3</td>
<td>1.24</td>
</tr>
<tr>
<td>SD</td>
<td>1</td>
<td>0.27</td>
</tr>
<tr>
<td>TN</td>
<td>4</td>
<td>1.65</td>
</tr>
<tr>
<td>TX</td>
<td>18</td>
<td>7.44</td>
</tr>
<tr>
<td>UT</td>
<td>4</td>
<td>1.65</td>
</tr>
<tr>
<td>VA</td>
<td>2</td>
<td>0.83</td>
</tr>
<tr>
<td>WA</td>
<td>19</td>
<td>7.85</td>
</tr>
<tr>
<td>WI</td>
<td>3</td>
<td>1.24</td>
</tr>
<tr>
<td>WV</td>
<td>1</td>
<td>0.41</td>
</tr>
<tr>
<td>WY</td>
<td>2</td>
<td>0.83</td>
</tr>
</tbody>
</table>

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)

<table>
<thead>
<tr>
<th>Activity</th>
<th>Currently active</th>
<th>Active in the past</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breeder</td>
<td>133 35.47%</td>
<td>34 9.07%</td>
</tr>
<tr>
<td>Conformation</td>
<td>154 41.07%</td>
<td>73 19.47%</td>
</tr>
<tr>
<td>Stock/Herding Trials</td>
<td>109 29.07%</td>
<td>45 12.00%</td>
</tr>
<tr>
<td>Obedience or Rally</td>
<td>189 50.40%</td>
<td>91 24.27%</td>
</tr>
<tr>
<td>Agility</td>
<td>209 55.73%</td>
<td>72 19.20%</td>
</tr>
<tr>
<td>Tracking</td>
<td>69 18.40%</td>
<td>34 9.07%</td>
</tr>
<tr>
<td>Commercial farm/ranch work</td>
<td>31  8.27%</td>
<td>8  2.13%</td>
</tr>
<tr>
<td>Search and Rescue</td>
<td>18   4.80%</td>
<td>14   3.73%</td>
</tr>
<tr>
<td>Companion/Pet</td>
<td>295  78.67%</td>
<td>11   2.95%</td>
</tr>
<tr>
<td>Therapy</td>
<td>53   14.13%</td>
<td>37   9.87%</td>
</tr>
<tr>
<td>Disc Dog/Frisbee</td>
<td>18   4.80%</td>
<td>8    2.13%</td>
</tr>
<tr>
<td>Flyball</td>
<td>19   5.07%</td>
<td>13   3.47%</td>
</tr>
<tr>
<td>Other (56 dogs)</td>
<td>50   13.33%</td>
<td>27   7.20%</td>
</tr>
</tbody>
</table>
If you marked “Other” please name the activity(ies) and indicate whether or not you are currently active.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Count</th>
<th>Percentage</th>
<th>N/A</th>
<th>Other Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assistance (Service) Dog</td>
<td>3</td>
<td>5.36%</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Dock diving/Water sports</td>
<td>8</td>
<td>14.29%</td>
<td>2</td>
<td>3.57% of other</td>
</tr>
<tr>
<td>Equestrian activities</td>
<td>5</td>
<td>3.57%</td>
<td>1</td>
<td>1.79</td>
</tr>
<tr>
<td>Field trials/training/gun dog</td>
<td>3</td>
<td>5.36%</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Freestyle/Dog dancing</td>
<td>9</td>
<td>16.07%</td>
<td>5</td>
<td>8.93</td>
</tr>
<tr>
<td>Hiking &amp; wild country activities</td>
<td>5</td>
<td>8.93%</td>
<td>1</td>
<td>1.79</td>
</tr>
<tr>
<td>Lure coursing</td>
<td>1</td>
<td>1.79%</td>
<td>2</td>
<td>3.57</td>
</tr>
<tr>
<td>Schutzhund/IPO</td>
<td>1</td>
<td>1.79%</td>
<td>2</td>
<td>3.57</td>
</tr>
<tr>
<td>Trick dog</td>
<td>3</td>
<td>5.36%</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Weight pull/carting</td>
<td>3</td>
<td>5.36%</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Winter sports</td>
<td>3</td>
<td>5.36%</td>
<td>1</td>
<td>1.79</td>
</tr>
<tr>
<td>Miscellaneous (3)</td>
<td>10</td>
<td>17.86%</td>
<td>2</td>
<td>3.57</td>
</tr>
</tbody>
</table>

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:

<table>
<thead>
<tr>
<th>Country</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>12</td>
<td>1.96%</td>
</tr>
<tr>
<td>Austria</td>
<td>1</td>
<td>0.16%</td>
</tr>
<tr>
<td>Belgium</td>
<td>12</td>
<td>1.96%</td>
</tr>
<tr>
<td>Canada</td>
<td>29</td>
<td>4.74%</td>
</tr>
<tr>
<td>Denmark</td>
<td>1</td>
<td>0.16%</td>
</tr>
<tr>
<td>Finland</td>
<td>13</td>
<td>2.12%</td>
</tr>
<tr>
<td>France</td>
<td>11</td>
<td>1.80%</td>
</tr>
<tr>
<td>Germany</td>
<td>25</td>
<td>4.08%</td>
</tr>
<tr>
<td>Italy</td>
<td>1</td>
<td>0.16%</td>
</tr>
<tr>
<td>Netherlands</td>
<td>28</td>
<td>4.58%</td>
</tr>
<tr>
<td>Norway</td>
<td>14</td>
<td>2.29%</td>
</tr>
<tr>
<td>Slovenia</td>
<td>1</td>
<td>0.16%</td>
</tr>
<tr>
<td>South Africa</td>
<td>1</td>
<td>0.16%</td>
</tr>
<tr>
<td>Sweden</td>
<td>5</td>
<td>0.82%</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>30</td>
<td>4.90%</td>
</tr>
<tr>
<td>United States</td>
<td>415</td>
<td>67.81%</td>
</tr>
<tr>
<td>Unknown</td>
<td>13</td>
<td>2.12%</td>
</tr>
</tbody>
</table>
Aussie now lives in what country (or lived there at time of death)?

<table>
<thead>
<tr>
<th>Country</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>13 ea.</td>
<td>2.12</td>
</tr>
<tr>
<td>Austria</td>
<td>1</td>
<td>0.16</td>
</tr>
<tr>
<td>Belgium</td>
<td>5</td>
<td>0.82</td>
</tr>
<tr>
<td>Canada</td>
<td>36</td>
<td>5.88</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>3</td>
<td>0.49</td>
</tr>
<tr>
<td>Denmark</td>
<td>4</td>
<td>0.65</td>
</tr>
<tr>
<td>Finland</td>
<td>15</td>
<td>2.45</td>
</tr>
<tr>
<td>France</td>
<td>6</td>
<td>0.98</td>
</tr>
<tr>
<td>Germany</td>
<td>29</td>
<td>4.74</td>
</tr>
<tr>
<td>Austria</td>
<td>1</td>
<td>0.16</td>
</tr>
<tr>
<td>Belgium</td>
<td>5</td>
<td>0.82</td>
</tr>
<tr>
<td>Canada</td>
<td>36</td>
<td>5.88</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>3</td>
<td>0.49</td>
</tr>
<tr>
<td>Denmark</td>
<td>4</td>
<td>0.65</td>
</tr>
<tr>
<td>Finland</td>
<td>15</td>
<td>2.45</td>
</tr>
<tr>
<td>France</td>
<td>6</td>
<td>0.98</td>
</tr>
<tr>
<td>Germany</td>
<td>29</td>
<td>4.74</td>
</tr>
<tr>
<td>Netherlands</td>
<td>38</td>
<td>6.21</td>
</tr>
<tr>
<td>Norway</td>
<td>20</td>
<td>3.27</td>
</tr>
<tr>
<td>Slovenia</td>
<td>5</td>
<td>0.82</td>
</tr>
<tr>
<td>South Africa</td>
<td>1</td>
<td>0.16</td>
</tr>
<tr>
<td>Switzerland</td>
<td>3</td>
<td>0.49</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>27</td>
<td>4.41</td>
</tr>
<tr>
<td>United States</td>
<td>405</td>
<td>66.18</td>
</tr>
</tbody>
</table>

**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**

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

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:

<table>
<thead>
<tr>
<th>Sex</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>301</td>
<td>49.18%</td>
</tr>
<tr>
<td>Female</td>
<td>311</td>
<td>50.82</td>
</tr>
</tbody>
</table>

4. Altered? Yes 376 61.44

<table>
<thead>
<tr>
<th>Reason</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acquired altered or NFB</td>
<td>40</td>
<td>10.64%</td>
</tr>
<tr>
<td>Behavioral issues</td>
<td>28</td>
<td>7.45</td>
</tr>
<tr>
<td>Companion dog</td>
<td>24</td>
<td>6.38</td>
</tr>
<tr>
<td>Medical/health issues</td>
<td>80</td>
<td>21.28</td>
</tr>
<tr>
<td>Not breeding quality</td>
<td>36</td>
<td>9.57</td>
</tr>
<tr>
<td>Performance/competition dog</td>
<td>16</td>
<td>4.26</td>
</tr>
<tr>
<td>Personal preference</td>
<td>99</td>
<td>26.33</td>
</tr>
<tr>
<td>Retired from breeding</td>
<td>37</td>
<td>9.84</td>
</tr>
<tr>
<td>Working service dog</td>
<td>1</td>
<td>0.27</td>
</tr>
<tr>
<td>Unknown</td>
<td>15</td>
<td>3.99</td>
</tr>
</tbody>
</table>
Dog's Height  590 responses

<table>
<thead>
<tr>
<th></th>
<th>Inches</th>
<th>centimeters</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>30.00</td>
<td>76.2</td>
</tr>
<tr>
<td>Low</td>
<td>15.75</td>
<td>40.0</td>
</tr>
<tr>
<td>Mean</td>
<td>20.60</td>
<td>52.6</td>
</tr>
<tr>
<td>Median</td>
<td>20.75</td>
<td>52.7</td>
</tr>
</tbody>
</table>

Dog's Weight  597 responses

<table>
<thead>
<tr>
<th></th>
<th>Pounds</th>
<th>kilograms</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>155.00</td>
<td>70.2</td>
</tr>
<tr>
<td>Low</td>
<td>25.00</td>
<td>11.3</td>
</tr>
<tr>
<td>Mean</td>
<td>48.23</td>
<td>21.6</td>
</tr>
<tr>
<td>Median</td>
<td>49.00</td>
<td>22.2</td>
</tr>
</tbody>
</table>

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

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

   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

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

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
<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Total</th>
<th>Percentage</th>
<th>Frequency Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distemper</td>
<td>534</td>
<td>88.41%</td>
<td>Every six months 1 0.19% of those responding</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Yearly 248 46.44</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Two years 5 0.94</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Three years 204 38.20</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>More than three years 69 12.92</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>No answer 7 1.31</td>
</tr>
<tr>
<td>Parvovirus</td>
<td>541</td>
<td>89.57%</td>
<td>Every six months 2 0.37% of those responding</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Yearly 274 50.65</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Two years 5 0.92</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Three years 184 34.01</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>More than three years 68 12.57</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>No Response 8 1.48</td>
</tr>
<tr>
<td>Leptospirosis</td>
<td>378</td>
<td>62.58%</td>
<td>Every six months 5 1.32% of those responding</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Yearly 227 60.05</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Two years 2 0.53</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Three years 84 22.22</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>More than three years 52 13.76</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>As needed 2 0.53</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Did not indicate 6 1.59</td>
</tr>
<tr>
<td>Hepatitis</td>
<td>329</td>
<td>54.47%</td>
<td>Yearly 155 47.11% of those responding</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Two years 5 1.52</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Three years 121 36.78</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>More than three years 46 13.98</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Did not indicate 2 0.61</td>
</tr>
<tr>
<td>Coronavirus</td>
<td>224</td>
<td>37.09%</td>
<td>Yearly 98 43.75% of those responding</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Three years 70 31.25</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>More than three years 53 23.66</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Did not indicate 3 1.34</td>
</tr>
<tr>
<td>Lyme's Disease</td>
<td>108</td>
<td>17.88%</td>
<td>Only once 1 0.93% of those responding</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Yearly 57 52.78</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Two years 1 0.93</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Three years 19 17.59</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>More than three years 26 24.07</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>As needed 1 0.93</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Did not indicate 3 2.78</td>
</tr>
<tr>
<td>Parainfluenza</td>
<td>314</td>
<td>51.73%</td>
<td>Every six months</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Yearly 153 48.73% of those responding</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Two years 5 1.59</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Three years 119 37.90</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>More than three years 36 11.46</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Did not indicate 1 0.32</td>
</tr>
<tr>
<td>Other vaccines</td>
<td>20</td>
<td>3.31%</td>
<td>Canine flu 4 20% of other</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Pneumodog 2 10</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Rattlesnake 5 25</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Tetanus 3 15</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Misc 6 30</td>
</tr>
</tbody>
</table>
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 Titors? 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
- Reiki 27 12.74
- Homeopathy 95 44.81
- Flower Essences 70 32.02
- Massage Therapy 118 55.66

E. Potential Toxic Exposures

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

<table>
<thead>
<tr>
<th>Chemicals</th>
<th>Weekly</th>
<th>Monthly</th>
<th>Seasonally</th>
<th>Annually</th>
<th>Not Used</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ag chemicals</td>
<td>2</td>
<td>0.33%</td>
<td>2 0.33%</td>
<td>0</td>
<td>600 99.34%</td>
</tr>
</tbody>
</table>
| Household cleaning chemicals     | 220    | 36.42%  | 131 21.69% | 34 5.63% | 5 0.83%  
| 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

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)

<table>
<thead>
<tr>
<th>Dog’s age at exam</th>
<th>Result</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 1 year</td>
<td>Normal</td>
<td>95</td>
<td>96.94%</td>
</tr>
<tr>
<td>1</td>
<td>Indeterminate</td>
<td>1</td>
<td>1.02%</td>
</tr>
<tr>
<td>2</td>
<td>Degenerative Joint Disease Grade I</td>
<td>1</td>
<td>1.02%</td>
</tr>
<tr>
<td>3</td>
<td>FCP/DJD Grade III</td>
<td>1</td>
<td>1.02%</td>
</tr>
</tbody>
</table>

2. Results
   - Normal: 54 (98.18%)
   - Grade 2: 1 (1.82%)

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%)

<table>
<thead>
<tr>
<th>Dog’s age at exam</th>
<th>Result</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Normal</td>
<td>35</td>
<td>63.64%</td>
</tr>
<tr>
<td>2</td>
<td>Grade 2</td>
<td>13</td>
<td>23.64%</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>4</td>
<td>7.27%</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>1</td>
<td>1.82%</td>
</tr>
<tr>
<td>5+</td>
<td></td>
<td>2</td>
<td>3.64%</td>
</tr>
</tbody>
</table>

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)

<table>
<thead>
<tr>
<th>Name of Registry</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>BVA</td>
<td>20</td>
<td>100%</td>
</tr>
</tbody>
</table>

2. Age at evaluation
   - 1 year: 16 (80.00% of BVA)
   - 2 year: 3 (15.00%)
   - 5+ year: 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
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  66.67staff
   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 Response  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%
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

### 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%
   
   **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

### 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 affected
   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
  Bilaeral  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:
   
<table>
<thead>
<tr>
<th>Age</th>
<th>Count</th>
<th>Percentage of affected</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 2</td>
<td>8</td>
<td>14.04%</td>
</tr>
<tr>
<td>2-3</td>
<td>11</td>
<td>19.30</td>
</tr>
<tr>
<td>4-5</td>
<td>8</td>
<td>14.04</td>
</tr>
<tr>
<td>6-9</td>
<td>26</td>
<td>45.61</td>
</tr>
<tr>
<td>&gt;10</td>
<td>4</td>
<td>7.02</td>
</tr>
</tbody>
</table>

   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:
   
<table>
<thead>
<tr>
<th>Age</th>
<th>Count</th>
<th>Percentage of affected</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 yrs</td>
<td>1</td>
<td>33.33%</td>
</tr>
<tr>
<td>9+</td>
<td>2</td>
<td>66.67</td>
</tr>
</tbody>
</table>

   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 B12) 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 4 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
      Endocardioisis 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

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

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

<table>
<thead>
<tr>
<th>Severity</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mild</td>
<td>39</td>
<td>50.00%</td>
</tr>
<tr>
<td>Moderate</td>
<td>24</td>
<td>30.77</td>
</tr>
<tr>
<td>Severe</td>
<td>7</td>
<td>8.97</td>
</tr>
<tr>
<td>No response</td>
<td>8</td>
<td>10.26</td>
</tr>
</tbody>
</table>

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

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

<table>
<thead>
<tr>
<th>Frequency</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seasonally only at particular times of year</td>
<td>48</td>
<td>61.54% of affected</td>
</tr>
<tr>
<td>Occasionally</td>
<td>8</td>
<td>10.26</td>
</tr>
<tr>
<td>Monthly</td>
<td>1</td>
<td>1.28</td>
</tr>
<tr>
<td>Almost constantly</td>
<td>5</td>
<td>6.41</td>
</tr>
<tr>
<td>No response</td>
<td>16</td>
<td>20.51</td>
</tr>
</tbody>
</table>

g. What type of reaction does the dog have?

<table>
<thead>
<tr>
<th>Reaction</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diarrhea</td>
<td>2</td>
<td>2.56%</td>
</tr>
<tr>
<td>Eye irritation</td>
<td>4</td>
<td>5.13</td>
</tr>
<tr>
<td>Foot irritation</td>
<td>3</td>
<td>3.85</td>
</tr>
<tr>
<td>Respiratory</td>
<td>8</td>
<td>10.26</td>
</tr>
<tr>
<td>Skin, no hotspots</td>
<td>26</td>
<td>33.33</td>
</tr>
<tr>
<td>Skin, with hotspots</td>
<td>19</td>
<td>24.36</td>
</tr>
<tr>
<td>Swelling</td>
<td>3</td>
<td>3.85</td>
</tr>
<tr>
<td>Systemic</td>
<td>4</td>
<td>5.13</td>
</tr>
<tr>
<td>Other</td>
<td>4</td>
<td>16.67</td>
</tr>
<tr>
<td>No response</td>
<td>8</td>
<td>10.26</td>
</tr>
</tbody>
</table>

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?
<table>
<thead>
<tr>
<th>Reaction</th>
<th>No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bee Sting</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Vaccine</td>
<td>5</td>
<td>(1 rabies, 2 lepto, 1 durammune, 1 no resp)</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

Note: Only two of the above were vet diagnosed.

3. How long before the reaction was the vaccine administered?
<table>
<thead>
<tr>
<th>Time</th>
<th>No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under one hour</td>
<td>1</td>
</tr>
<tr>
<td>1 – 6 hours</td>
<td>4</td>
</tr>
</tbody>
</table>

36
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%)
- 2-4 years: 15 (22.39%)
- 5-7 years: 23 (34.33%)
- 8-10 years: 19 (28.36%)
- 10+ years: 6 (8.96%)
- No response: 2 (2.99%)

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 years: 15 (22.39%)
- 5-7 years: 23 (34.33%)
- 8-10 years: 19 (28.36%)
- 10+ years: 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%)

b. Diagnosed by a veterinarian? Yes 58 (86.57% of affected)

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
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?

<table>
<thead>
<tr>
<th>Age</th>
<th>Right</th>
<th>Left</th>
<th># Dogs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 12 weeks old</td>
<td>6</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>12 weeks to 4 months</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>4 – 6 months</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Older than 6 months</td>
<td>3</td>
<td>2</td>
<td>5</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Age</th>
<th>Right</th>
<th>Left</th>
<th># Dogs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less then 10 weeks</td>
<td>3</td>
<td>0</td>
<td>0*</td>
</tr>
<tr>
<td>10 weeks to 6 months</td>
<td>2</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Older than 6 months</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Never descended</td>
<td>2</td>
<td>8</td>
<td>9</td>
</tr>
</tbody>
</table>

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?

<table>
<thead>
<tr>
<th></th>
<th>Right</th>
<th>Left</th>
<th># Dogs</th>
</tr>
</thead>
<tbody>
<tr>
<td>In the abdomen</td>
<td>6</td>
<td>60%</td>
<td></td>
</tr>
<tr>
<td>In the flank</td>
<td>1</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Don’t know</td>
<td>3</td>
<td>30</td>
<td></td>
</tr>
</tbody>
</table>

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

1. Number of females he was bred to?

<table>
<thead>
<tr>
<th>Level</th>
<th># Dogs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>1</td>
</tr>
<tr>
<td>High</td>
<td>8</td>
</tr>
<tr>
<td>Mean</td>
<td>2.61</td>
</tr>
<tr>
<td>Median</td>
<td>2</td>
</tr>
</tbody>
</table>

2. How many litters did he sire?

<table>
<thead>
<tr>
<th>Level</th>
<th># Dogs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>0</td>
</tr>
<tr>
<td>High</td>
<td>10</td>
</tr>
<tr>
<td>Mean</td>
<td>2.83</td>
</tr>
<tr>
<td>Median</td>
<td>2</td>
</tr>
</tbody>
</table>

3. How many puppies, total?

<table>
<thead>
<tr>
<th>Level</th>
<th># Dogs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>0</td>
</tr>
<tr>
<td>High</td>
<td>99</td>
</tr>
<tr>
<td>Mean</td>
<td>18.96</td>
</tr>
<tr>
<td>Median</td>
<td>32</td>
</tr>
</tbody>
</table>

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

i. Type of behavior:

<table>
<thead>
<tr>
<th>Behavior</th>
<th># Dogs</th>
<th>% of affected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impotence (no interest)</td>
<td>1</td>
<td>7.69%</td>
</tr>
<tr>
<td>Unwilling to breed</td>
<td>11</td>
<td>84.62</td>
</tr>
<tr>
<td>Unable to breed</td>
<td>1</td>
<td>7.69%</td>
</tr>
</tbody>
</table>

ii. Once the behavior began, was it

<table>
<thead>
<tr>
<th>Response</th>
<th># Dogs</th>
<th>% of affected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Once only</td>
<td>10</td>
<td>76.92%</td>
</tr>
<tr>
<td>No response</td>
<td>3</td>
<td>23.08</td>
</tr>
</tbody>
</table>

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?

<table>
<thead>
<tr>
<th>Interval</th>
<th>Count</th>
<th>% Known</th>
<th>% Low 7.16</th>
<th>Mean</th>
<th>Median</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;6 months</td>
<td>23</td>
<td>7.64%</td>
<td>12.64%</td>
<td>6</td>
<td>7.64%</td>
</tr>
<tr>
<td>6</td>
<td>70</td>
<td>23.26%</td>
<td>38.46</td>
<td>7.16</td>
<td>7.16</td>
</tr>
<tr>
<td>7-8</td>
<td>56</td>
<td>18.60%</td>
<td>30.77</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>9-11</td>
<td>21</td>
<td>6.98%</td>
<td>11.54</td>
<td>6.5</td>
<td>6.5</td>
</tr>
<tr>
<td>12-17</td>
<td>11</td>
<td>3.65%</td>
<td>6.04</td>
<td>11.44</td>
<td>12.56</td>
</tr>
<tr>
<td>18+</td>
<td>1</td>
<td>0.33%</td>
<td>0.55</td>
<td>7.16</td>
<td>7.16</td>
</tr>
<tr>
<td>Spayed</td>
<td>54</td>
<td>17.94%</td>
<td></td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Unknown</td>
<td>49</td>
<td>16.28%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No response</td>
<td>16</td>
<td>5.32%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: 90.74% of spayed bitches altered before first heat

<table>
<thead>
<tr>
<th>Interval</th>
<th>Count</th>
<th>% Low 7.16</th>
<th>Mean</th>
<th>Median</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>4</td>
<td>4 months</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>24</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>7.16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Median</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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, how many litters?

<table>
<thead>
<tr>
<th>Litters</th>
<th>Count</th>
<th>40.40% of bred</th>
<th>49.59% of bitches that had litters</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>61</td>
<td>25.83</td>
<td>31.71</td>
</tr>
<tr>
<td>2</td>
<td>39</td>
<td>10.60</td>
<td>13.01</td>
</tr>
<tr>
<td>3</td>
<td>16</td>
<td>2.65</td>
<td>3.25</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>1.99</td>
<td>2.44</td>
</tr>
<tr>
<td>5</td>
<td>3</td>
<td>1.32</td>
<td></td>
</tr>
<tr>
<td>Unknown</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No response</td>
<td>22</td>
<td>14.57</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Low</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>5</td>
</tr>
<tr>
<td>Mean</td>
<td>1.66</td>
</tr>
<tr>
<td>Median</td>
<td>1</td>
</tr>
</tbody>
</table>

3. Please indicate number of puppies delivered:

<table>
<thead>
<tr>
<th>Puppies</th>
<th>Count</th>
<th>40.40% of bred</th>
<th>49.59% of bitches that had litters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>17</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>6.62</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Median</td>
<td>8</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total puppies born 1483

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

Total still born from female:

<table>
<thead>
<tr>
<th>Range</th>
<th>Count</th>
<th>18.99% of stillborn</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>2-3</td>
<td>14</td>
<td>39.24</td>
</tr>
<tr>
<td>4-5</td>
<td>4</td>
<td>24.05</td>
</tr>
<tr>
<td>6+</td>
<td>2</td>
<td>17.72</td>
</tr>
</tbody>
</table>

| 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

<table>
<thead>
<tr>
<th>Least per female</th>
<th>Most</th>
<th>Mean</th>
<th>Median</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>42</td>
<td>10.95</td>
<td>15</td>
</tr>
</tbody>
</table>

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%

<table>
<thead>
<tr>
<th>1 litter</th>
<th>2 litters</th>
<th>3 litters</th>
<th>4 litters</th>
</tr>
</thead>
<tbody>
<tr>
<td>18 females</td>
<td>1</td>
<td>11.11</td>
<td>14.81</td>
</tr>
</tbody>
</table>

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 1 (0.71%)
   1. What is the name of the condition? Ovarian cyst

Q. Cancer

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:

<table>
<thead>
<tr>
<th></th>
<th>81</th>
<th>13.71%</th>
<th>47.65% of biters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Humans</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 bite</td>
<td>39</td>
<td>48.15%</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>22</td>
<td>27.16</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>9</td>
<td>11.11</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>6.17</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>1</td>
<td>1.23</td>
<td></td>
</tr>
<tr>
<td>&gt;5</td>
<td>5</td>
<td>6.17</td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th></th>
<th>42</th>
<th>38.89% of bites on humans</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>26</td>
<td>24.07</td>
</tr>
<tr>
<td>1</td>
<td>9</td>
<td>25.00</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>8.33</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>3.70</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th></th>
<th>4</th>
<th>4.82% of bite incidents</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2</td>
<td>11</td>
<td>23.40</td>
</tr>
<tr>
<td>5+</td>
<td>5</td>
<td>14.29</td>
</tr>
</tbody>
</table>

Other dogs? 134 22.67% 78.82% of biting dogs

<table>
<thead>
<tr>
<th></th>
<th>36</th>
<th>26.87% of dogs biting dogs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>35</td>
<td>26.12</td>
</tr>
<tr>
<td>2</td>
<td>21</td>
<td>15.67</td>
</tr>
<tr>
<td>3</td>
<td>6</td>
<td>2.24</td>
</tr>
<tr>
<td>5+</td>
<td>8</td>
<td>5.97</td>
</tr>
</tbody>
</table>

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.)

<table>
<thead>
<tr>
<th></th>
<th>31</th>
<th>11.88%</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>47</td>
<td>18.01</td>
</tr>
<tr>
<td>2</td>
<td>21</td>
<td>16.09</td>
</tr>
<tr>
<td>3</td>
<td>19</td>
<td>21.84</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>7.66</td>
</tr>
<tr>
<td>5</td>
<td>2</td>
<td>3.83</td>
</tr>
<tr>
<td>&gt;5</td>
<td>9</td>
<td>20.69</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th></th>
<th>4</th>
<th>3.77% of bite incidents</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2</td>
<td>11</td>
<td>12.64</td>
</tr>
<tr>
<td>5+</td>
<td>27</td>
<td>12.98</td>
</tr>
</tbody>
</table>

Of those dogs that bit:

<table>
<thead>
<tr>
<th></th>
<th>36</th>
<th>21.18% of biting dogs</th>
</tr>
</thead>
<tbody>
<tr>
<td>People only</td>
<td>89</td>
<td>52.35</td>
</tr>
<tr>
<td>Dogs only</td>
<td>45</td>
<td>26.47</td>
</tr>
</tbody>
</table>

Of dogs that bit both humans and other dogs:

<table>
<thead>
<tr>
<th></th>
<th>18</th>
<th>52.94%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2 humans bitten (34 dogs)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-2 dog</td>
<td>6</td>
<td>17.65</td>
</tr>
<tr>
<td>5+</td>
<td>10</td>
<td>29.41</td>
</tr>
</tbody>
</table>

3-4 (7)

<table>
<thead>
<tr>
<th></th>
<th>3</th>
<th>42.86</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2</td>
<td>2</td>
<td>28.57</td>
</tr>
<tr>
<td>5+</td>
<td>2</td>
<td>28.57</td>
</tr>
</tbody>
</table>

5+ (4)
<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2</td>
<td>1</td>
<td>25.00</td>
</tr>
<tr>
<td>5+</td>
<td>3</td>
<td>75.00</td>
</tr>
</tbody>
</table>

1-2 dogs bitten (22 dogs)

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2 human</td>
<td>19</td>
<td>86.36%</td>
</tr>
<tr>
<td>3-4</td>
<td>2</td>
<td>9.09</td>
</tr>
<tr>
<td>5+</td>
<td>1</td>
<td>4.55</td>
</tr>
</tbody>
</table>

3-4 (8 dogs)

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2</td>
<td>6</td>
<td>75.00</td>
</tr>
<tr>
<td>3-4</td>
<td>2</td>
<td>25.00</td>
</tr>
</tbody>
</table>

5+ (15)

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2</td>
<td>10</td>
<td>66.67</td>
</tr>
<tr>
<td>3-4</td>
<td>2</td>
<td>13.33</td>
</tr>
<tr>
<td>5+</td>
<td>3</td>
<td>20.00</td>
</tr>
</tbody>
</table>

Of dogs whose bites broke the skin (122 dogs)

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Humans only</td>
<td>19</td>
<td>15.57%</td>
</tr>
<tr>
<td>Dogs only</td>
<td>83</td>
<td>68.03</td>
</tr>
<tr>
<td>Humans and dogs</td>
<td>20</td>
<td>16.39</td>
</tr>
</tbody>
</table>

Broke skin on humans

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2 humans (17)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-2 dogs</td>
<td>9</td>
<td>52.94%</td>
</tr>
<tr>
<td>3-4</td>
<td>6</td>
<td>35.29</td>
</tr>
<tr>
<td>5+</td>
<td>2</td>
<td>11.76</td>
</tr>
<tr>
<td>3-4 (3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-2</td>
<td>1</td>
<td>33.33</td>
</tr>
<tr>
<td>5+</td>
<td>2</td>
<td>66.67</td>
</tr>
</tbody>
</table>

Broke skin on dogs

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2 dogs (9)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-2 humans</td>
<td>8</td>
<td>88.89%</td>
</tr>
<tr>
<td>3-4</td>
<td>1</td>
<td>11.11</td>
</tr>
<tr>
<td>3-4 (6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>100% on 1-2 humans</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5+ (4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-2</td>
<td>2</td>
<td>50.00</td>
</tr>
<tr>
<td>3-4</td>
<td>2</td>
<td>50.00</td>
</tr>
</tbody>
</table>

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):

<table>
<thead>
<tr>
<th>Event</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thunderstorms</td>
<td>147</td>
<td>72.06% of phobic</td>
</tr>
<tr>
<td>Fireworks</td>
<td>161</td>
<td>78.92</td>
</tr>
<tr>
<td>Gunfire</td>
<td>110</td>
<td>53.92</td>
</tr>
<tr>
<td>Air compressor</td>
<td>3</td>
<td>1.47</td>
</tr>
<tr>
<td>Beepers, buzzers &amp; bells</td>
<td>13</td>
<td>6.37</td>
</tr>
<tr>
<td>Caps &amp; other popping noises</td>
<td>3</td>
<td>1.47</td>
</tr>
<tr>
<td>Loudspeakers &amp; loud voices</td>
<td>4</td>
<td>1.99</td>
</tr>
<tr>
<td>Toaster</td>
<td>2</td>
<td>0.98</td>
</tr>
<tr>
<td>Vacuum cleaner</td>
<td>3</td>
<td>1.47</td>
</tr>
<tr>
<td>Vehicle engines</td>
<td>4</td>
<td>1.99</td>
</tr>
<tr>
<td>Yard equipment</td>
<td>3</td>
<td>1.47</td>
</tr>
<tr>
<td>Any loud noise</td>
<td>10</td>
<td>4.90</td>
</tr>
<tr>
<td>Many sounds</td>
<td>3</td>
<td>1.47</td>
</tr>
<tr>
<td>Other</td>
<td>12</td>
<td>5.88</td>
</tr>
</tbody>
</table>

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.
      - Locomotory 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: 3 (7.89)
   - 4: 3 (7.89)
   - 5: 2 (5.26)
   - No response: 1 (2.63)

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)

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?

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
<th>Don’t know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>53</td>
<td>165</td>
<td>23</td>
</tr>
<tr>
<td>Percentage</td>
<td>21.99</td>
<td>68.46</td>
<td>9.54</td>
</tr>
</tbody>
</table>

**Distichiasis**

1. **How many offspring?**
   - Total dist offspring: 11
   - 1 offspring: 4 (57.14% of Dist)
   - 2 offspring: 2
   - 3 offspring: 1
2. **From how many different mates?**
   - 1 mate: 4 (57.14%)
   - 2 mates: 1 (14.29)
   - No response: 2 (28.57)

**Iris coloboma**

1. **How many offspring?**
   - Total IC offspring: at least 13
   - 1 offspring: 8 (72.73% of IC)
   - 2 offspring: 2 (18.18)
   - No Response: 1 (9.09)
2. **From how many different mates?**
   - 1 mate: 10 (90.91%)
   - No response: 1 (9.09)

**Persistent pupilary membrane**

1. **How many offspring?**
   - Total PPM offspring: at least 17
   - 1 offspring: 11 (78.57% of PPM)
   - 2 offspring: 1
   - 3 offspring: 1
   - 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**

1. **How many offspring?**
   - Total cataract offspring: at least 21
   - 1 offspring: 14 (82.35% of cat)
   - 5 offspring: 1 (5.88)
   - No response: 2 (11.76)
2. **From how many different mates?**
   - 1 mate: 14 (82.35% of cat)
   - 2 mates: 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?

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
<th>Don’t know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>3</td>
<td>219</td>
<td>19</td>
</tr>
<tr>
<td>No</td>
<td></td>
<td></td>
<td>90.87</td>
</tr>
<tr>
<td>Don’t know</td>
<td></td>
<td></td>
<td>7.88</td>
</tr>
</tbody>
</table>

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?

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
<th>Don’t Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>25</td>
<td>197</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td></td>
<td></td>
<td>81.74</td>
</tr>
<tr>
<td>Don’t Know</td>
<td>19</td>
<td></td>
<td>7.88</td>
</tr>
</tbody>
</table>

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<sub>12</sub>) 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
<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>8</th>
<th>80%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. How many offspring?</strong></td>
<td>9 total</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>7</td>
<td>87.50% of murmur</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>12.50</td>
<td></td>
</tr>
<tr>
<td><strong>2. From how many different mates?</strong></td>
<td>1 100%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>J. Has this dog produced one or more offspring with portosystemic (liver) shunt?</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>No</td>
</tr>
<tr>
<td>Don't Know</td>
</tr>
<tr>
<td>% of shunt</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>K. Has this dog produced one or more offspring with skin problems?</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Demodex mange</td>
</tr>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>% of skin</td>
</tr>
<tr>
<td><strong>1. How many offspring?</strong></td>
</tr>
<tr>
<td>Sebaceous tumors/cysts</td>
</tr>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>% of skin</td>
</tr>
<tr>
<td><strong>1. How many offspring?</strong></td>
</tr>
<tr>
<td><strong>2. From how many different mates?</strong> No response (at least 1)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>L. Has this dog produced one or more offspring with neurological disease?</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Epilepsy</td>
</tr>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>% of neuro</td>
</tr>
<tr>
<td><strong>1. How many offspring?</strong></td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>% of epilepsy</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>% of tremor</td>
</tr>
<tr>
<td><strong>2. From how many different mates?</strong></td>
</tr>
<tr>
<td>Rear end tremor</td>
</tr>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>% of neuro</td>
</tr>
<tr>
<td><strong>1. How many offspring?</strong></td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>% of tremor</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>% of tremor</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>% of tremor</td>
</tr>
<tr>
<td>7</td>
</tr>
<tr>
<td>% of tremor</td>
</tr>
<tr>
<td><strong>2. From how many different mates?</strong></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
M. Has this dog produced one or more offspring with respiratory disease? 241 dogs

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
<th>Don't Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Count</td>
<td>6</td>
<td>218</td>
<td>17</td>
</tr>
<tr>
<td>Percentage</td>
<td>2.49%</td>
<td>90.46%</td>
<td>7.05%</td>
</tr>
</tbody>
</table>

Abnormal bark

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
<th>Don't Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Count</td>
<td>2</td>
<td>216</td>
<td>15</td>
</tr>
<tr>
<td>Percentage</td>
<td>0.83%</td>
<td>95.93%</td>
<td>6.25%</td>
</tr>
</tbody>
</table>

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

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

Laryngeal paralysis

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
<th>Don't Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Count</td>
<td>2</td>
<td>219</td>
<td>16</td>
</tr>
<tr>
<td>Percentage</td>
<td>0.83%</td>
<td>95.77%</td>
<td>6.53%</td>
</tr>
</tbody>
</table>

1. How many offspring? 2 total LP offspring

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

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
<th>Don't Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Count</td>
<td>34</td>
<td>180</td>
<td>27</td>
</tr>
<tr>
<td>Percentage</td>
<td>14.11%</td>
<td>74.69%</td>
<td>11.20%</td>
</tr>
</tbody>
</table>

Male offspring:
Retained Testicles

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
<th>Don't Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Count</td>
<td>10</td>
<td>130</td>
<td>31</td>
</tr>
<tr>
<td>Percentage</td>
<td>29.41%</td>
<td>79.10%</td>
<td>12.86%</td>
</tr>
</tbody>
</table>

1. How many offspring? 13 total
   - 1
   - 2

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

Testicular Atrophy

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
<th>Don't Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Count</td>
<td>1</td>
<td>240</td>
<td>27</td>
</tr>
<tr>
<td>Percentage</td>
<td>2.94%</td>
<td>99.69%</td>
<td>11.20%</td>
</tr>
</tbody>
</table>

1. How many offspring? 2 total testicular atrophy offspring

2. From how many different mates? 1

Female offspring:
Abnormal breeding behavior

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
<th>Don't Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Count</td>
<td>1</td>
<td>240</td>
<td>27</td>
</tr>
<tr>
<td>Percentage</td>
<td>2.94%</td>
<td>99.69%</td>
<td>11.20%</td>
</tr>
</tbody>
</table>

How many offspring? 1 abnormal behavior offspring

Abnormal heat cycles

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
<th>Don't Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Count</td>
<td>3</td>
<td>238</td>
<td>28</td>
</tr>
<tr>
<td>Percentage</td>
<td>8.82%</td>
<td>91.18%</td>
<td>11.88%</td>
</tr>
</tbody>
</table>

How many offspring? 3 total abnormal heat offspring

Caesarian Section required

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
<th>Don't Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Count</td>
<td>3</td>
<td>238</td>
<td>28</td>
</tr>
<tr>
<td>Percentage</td>
<td>8.82%</td>
<td>91.18%</td>
<td>11.88%</td>
</tr>
</tbody>
</table>

How many offspring? 3 total c-section offspring

Failed to conceive

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
<th>Don't Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Count</td>
<td>1</td>
<td>240</td>
<td>27</td>
</tr>
<tr>
<td>Percentage</td>
<td>2.94%</td>
<td>99.69%</td>
<td>11.20%</td>
</tr>
</tbody>
</table>

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 generalized 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**

<table>
<thead>
<tr>
<th></th>
<th>Yes 6</th>
<th>2.49%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No 213</td>
<td>88.38</td>
</tr>
<tr>
<td></td>
<td>Don’t Know 22</td>
<td>9.13</td>
</tr>
</tbody>
</table>

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 - 1 mate 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 prob 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

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>94</td>
<td>39.00% of tail prod</td>
</tr>
<tr>
<td>No</td>
<td>133</td>
<td>55.19</td>
</tr>
<tr>
<td>Don’t Know</td>
<td>13</td>
<td>5.39</td>
</tr>
<tr>
<td>No response</td>
<td>1</td>
<td>0.41</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Length</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>¾ length</td>
<td>at least 84</td>
<td>17.76% of NBT offspring</td>
</tr>
<tr>
<td>½ length</td>
<td>at least 145</td>
<td>30.66</td>
</tr>
<tr>
<td>¼ length</td>
<td>124</td>
<td>26.22</td>
</tr>
<tr>
<td>Very short</td>
<td>93</td>
<td>19.66</td>
</tr>
<tr>
<td>Absent</td>
<td>27</td>
<td>5.71</td>
</tr>
</tbody>
</table>

Total NBT offspring: at least 473

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

<table>
<thead>
<tr>
<th>Mates</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>61</td>
<td>64.89% of NBT prod</td>
</tr>
<tr>
<td>2</td>
<td>21</td>
<td>22.34</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>1.06</td>
</tr>
<tr>
<td>4</td>
<td>2</td>
<td>2.13</td>
</tr>
<tr>
<td>5</td>
<td>2</td>
<td>2.13</td>
</tr>
<tr>
<td>6</td>
<td>1</td>
<td>1.06</td>
</tr>
<tr>
<td>7</td>
<td>1</td>
<td>1.06</td>
</tr>
<tr>
<td>13</td>
<td>1</td>
<td>1.06</td>
</tr>
<tr>
<td>No response</td>
<td>4</td>
<td>4.26</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Length</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>25</td>
<td>26.60% of NBT prod</td>
</tr>
<tr>
<td>1</td>
<td>29</td>
<td>30.85</td>
</tr>
<tr>
<td>2</td>
<td>8</td>
<td>8.51</td>
</tr>
<tr>
<td>6</td>
<td>1</td>
<td>1.06</td>
</tr>
<tr>
<td>Unknown</td>
<td>28</td>
<td>29.79</td>
</tr>
<tr>
<td>No response</td>
<td>3</td>
<td>3.19</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Length</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>74</td>
<td>78.72% of NBT offspring</td>
</tr>
<tr>
<td>1</td>
<td>3</td>
<td>3.19</td>
</tr>
<tr>
<td>5</td>
<td>1</td>
<td>1.06</td>
</tr>
<tr>
<td>No response</td>
<td>16</td>
<td>17.02</td>
</tr>
</tbody>
</table>

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

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>82</td>
<td>34.02%</td>
</tr>
<tr>
<td>No</td>
<td>150</td>
<td>62.24</td>
</tr>
<tr>
<td>Don’t Know</td>
<td>9</td>
<td>3.73</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Carriage</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>16</td>
<td>19.51% of undocked full tail prod</td>
</tr>
<tr>
<td>Slightly below topline</td>
<td>33</td>
<td>40.24</td>
</tr>
<tr>
<td>Level with topline</td>
<td>31</td>
<td>37.80</td>
</tr>
<tr>
<td>Above topline</td>
<td>38</td>
<td>46.34</td>
</tr>
<tr>
<td>Over the back</td>
<td>18</td>
<td>21.95</td>
</tr>
<tr>
<td>No response</td>
<td>4</td>
<td>4.88</td>
</tr>
</tbody>
</table>
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, shortening 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 do 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.