

## Mastiff

All data as of Dec-31-2021

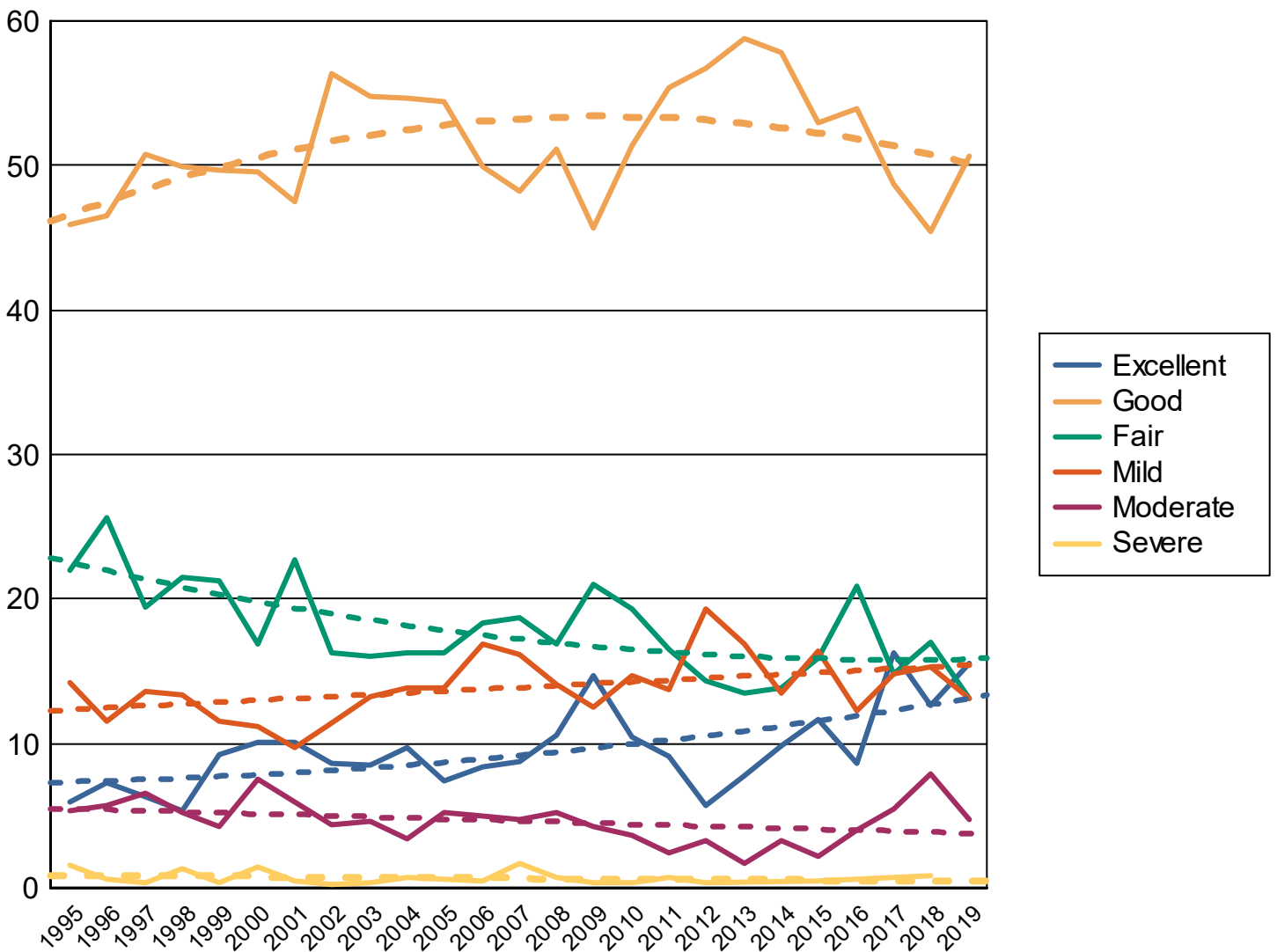
*Dysplastic rank, all  
breeds with more  
than 100 cases*

		<i>Normals</i>		<i>Equivocal or Carrier</i>		<i>Abnormal</i>	
Hips	<b>38 of 196</b>	10134	80.02%	49	0.39%	2481	19.59%
Elbow	<b>29 of 138</b>	6708	85.29%	25	0.32%	1132	14.39%
Congenital Cardiac		3756	99.21%	17	0.45%	13	0.34%
Thyroid		2073	87.62%	229	9.68%	64	2.70%
Dilated Cardiomyopathy		4	100.00%	0		0	
Von Willebrands Cornell Blood Assa		18	100.00%	0		0	
OFA EYE Registry		948	97.23%	0		27	2.77%
D Locus		1	100.00%	0		0	
Macrothrombocytopenia		15	100.00%	0		0	
Patella		3497	99.69%	0		11	0.31%
Von Willebrands		19	100.00%	0		0	
Hyperuricosuria		85	100.00%	0		0	
Basic Cardiac		153	98.08%	2	1.28%	1	0.64%
Dentition Database		19	100.00%	0		0	
Ovc Elbows		5	100.00%	0		0	
Shoulder		209	97.21%	0		6	2.79%
Progressive Retinal Atrophy		1918	99.38%	0		12	0.62%
Ovc Hips		7	100.00%	0		0	
Multiple Drug Resistance (Mdr1)		6	100.00%	0		0	
Degenerative Myelopathy		563	85.95%	84	12.82%	8	1.22%
Advanced Cardiac		184	96.34%	6	3.14%	1	0.52%
Canine Multifocal Retinopathy		743	78.21%	193	20.32%	14	1.47%
Congenital Hypothyroidism W/ Goiter		1	100.00%	0		0	
Kidney		1	100.00%	0		0	
Urine Nitroprusside (Cystinuria)		91	100.00%	0		0	

Mizzou Biomarker Study	5	83.33%	0	1	16.67%
Cystinuria	295	94.25%	16	2	0.64%
Legg-Calve-Perthes	5	100.00%	0	0	
Degenerative Encephalopathy	1	100.00%	0	0	

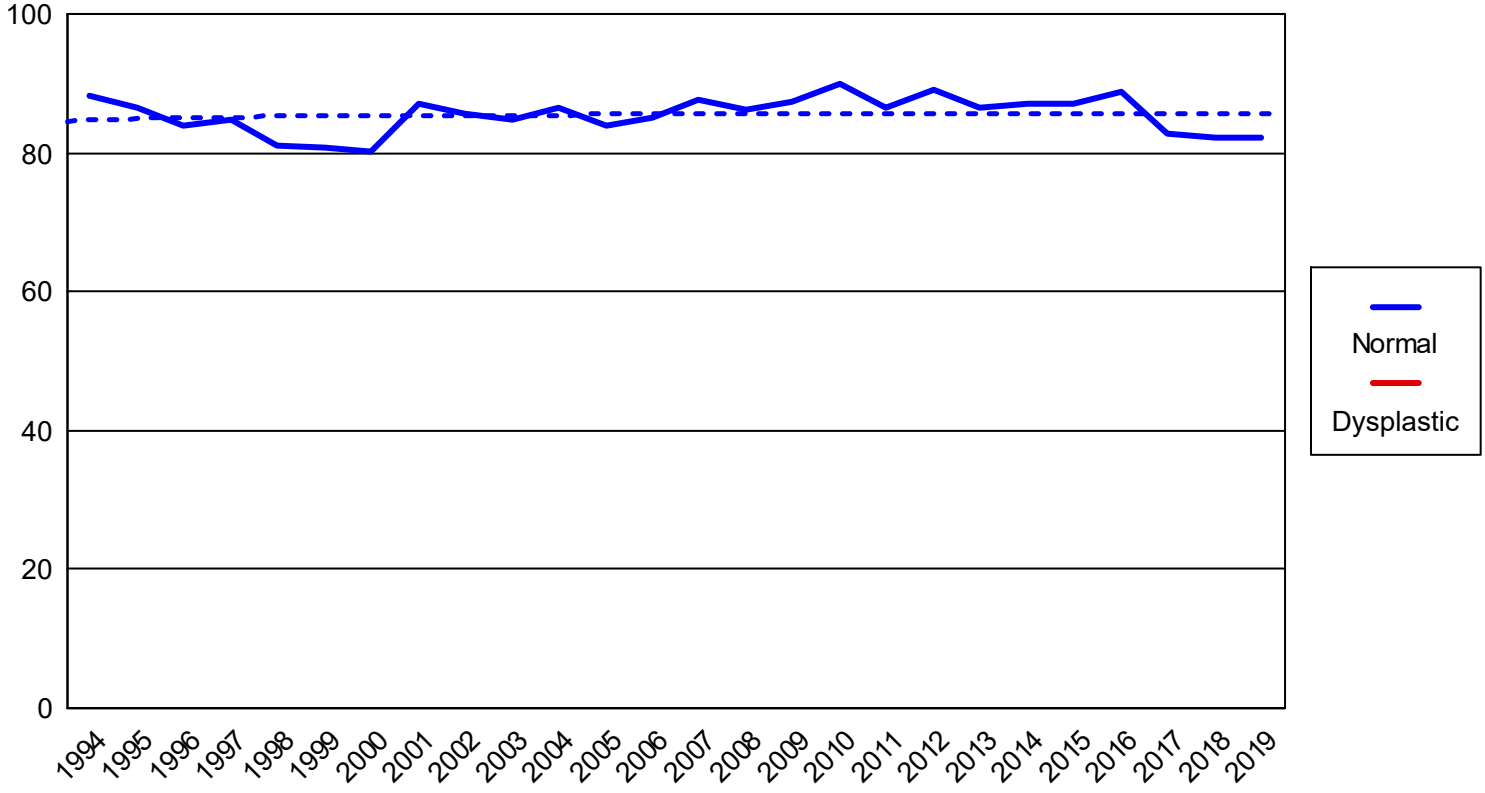
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Hip percentages by rating with trendlines



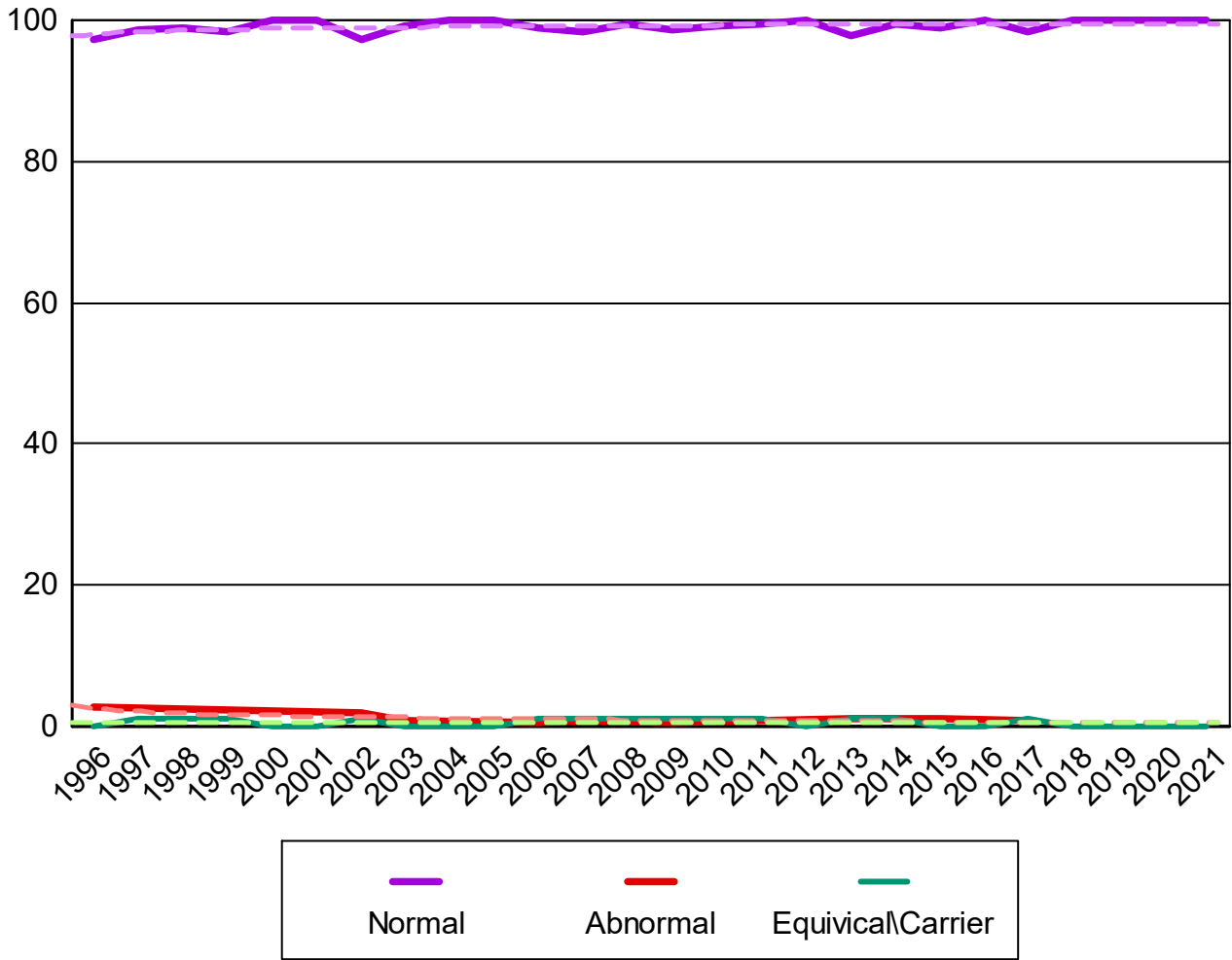
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## Elbow percentages by rating with trendlines



CONGENITAL CARDIAC

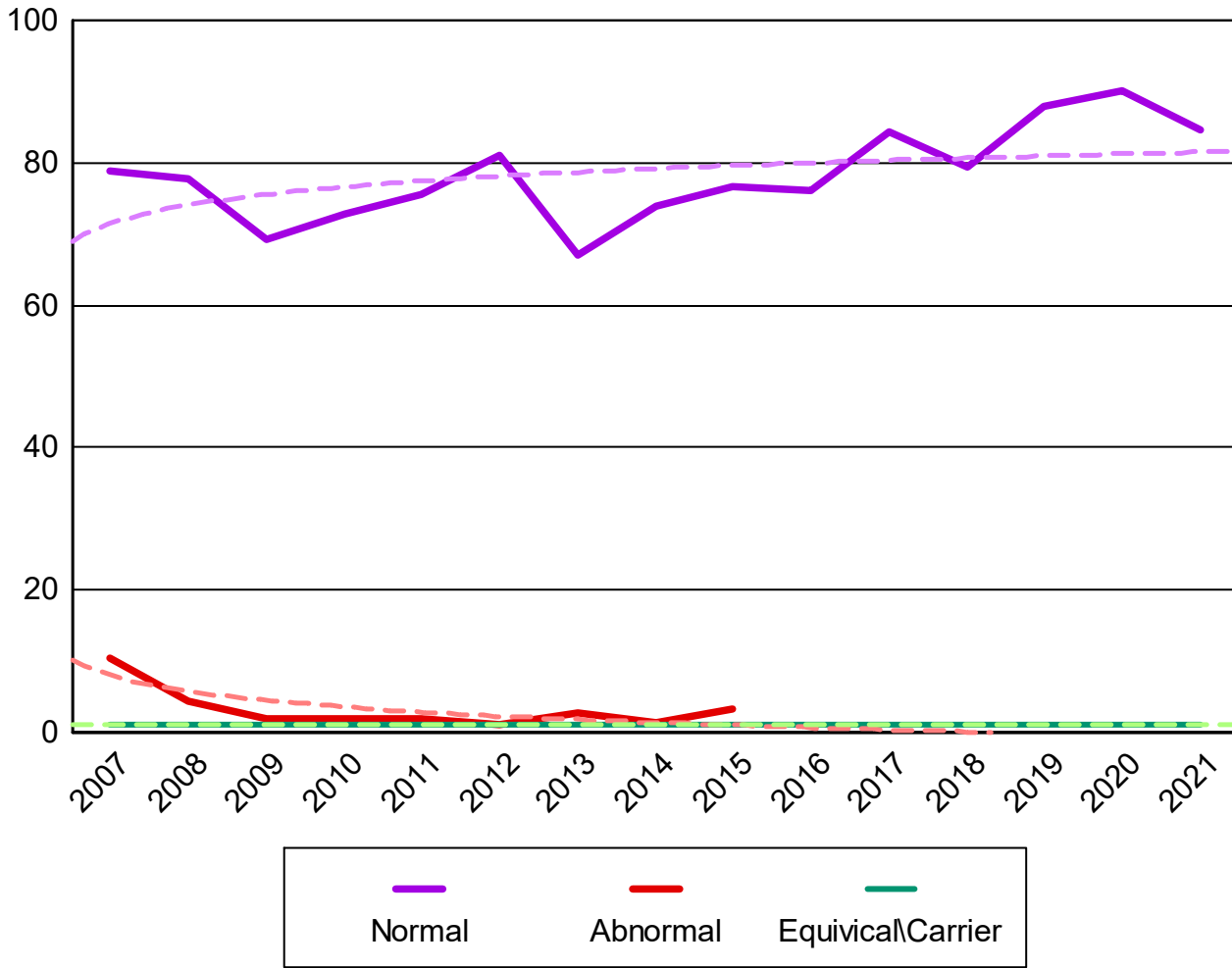
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CANINE MULTIFOCAL RETINOPATHY

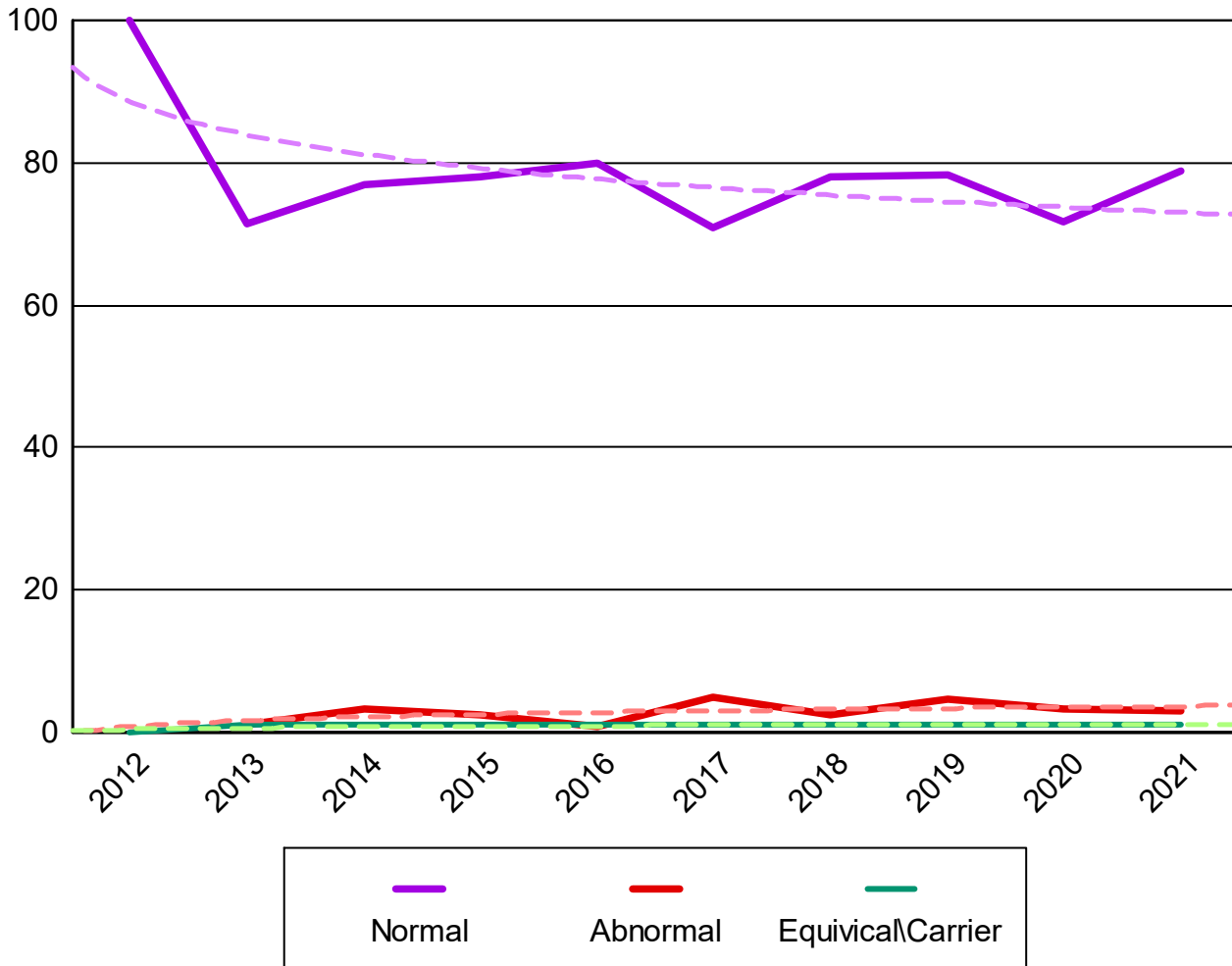
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EYES

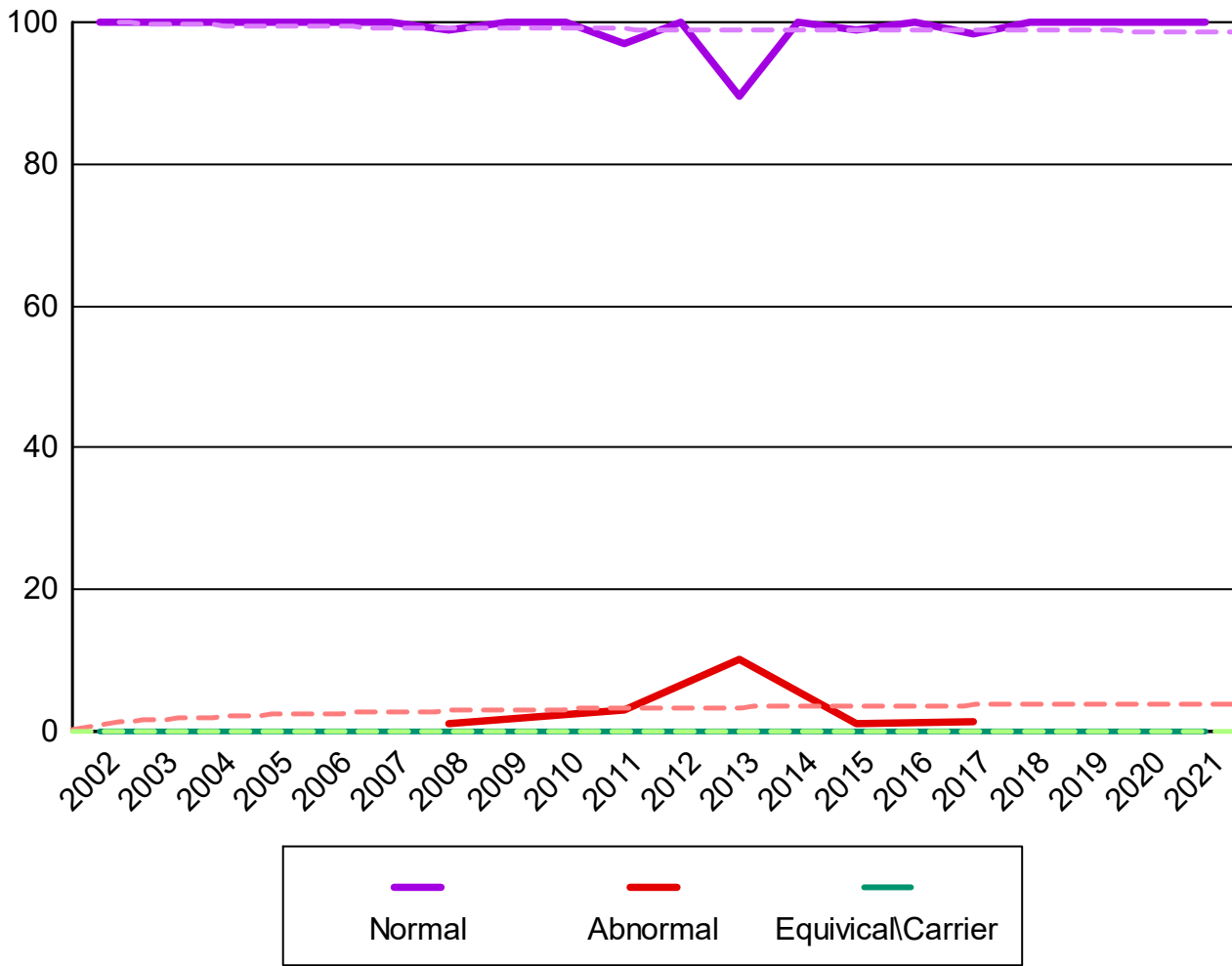
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PROGRESSIVE RETINAL ATROPHY

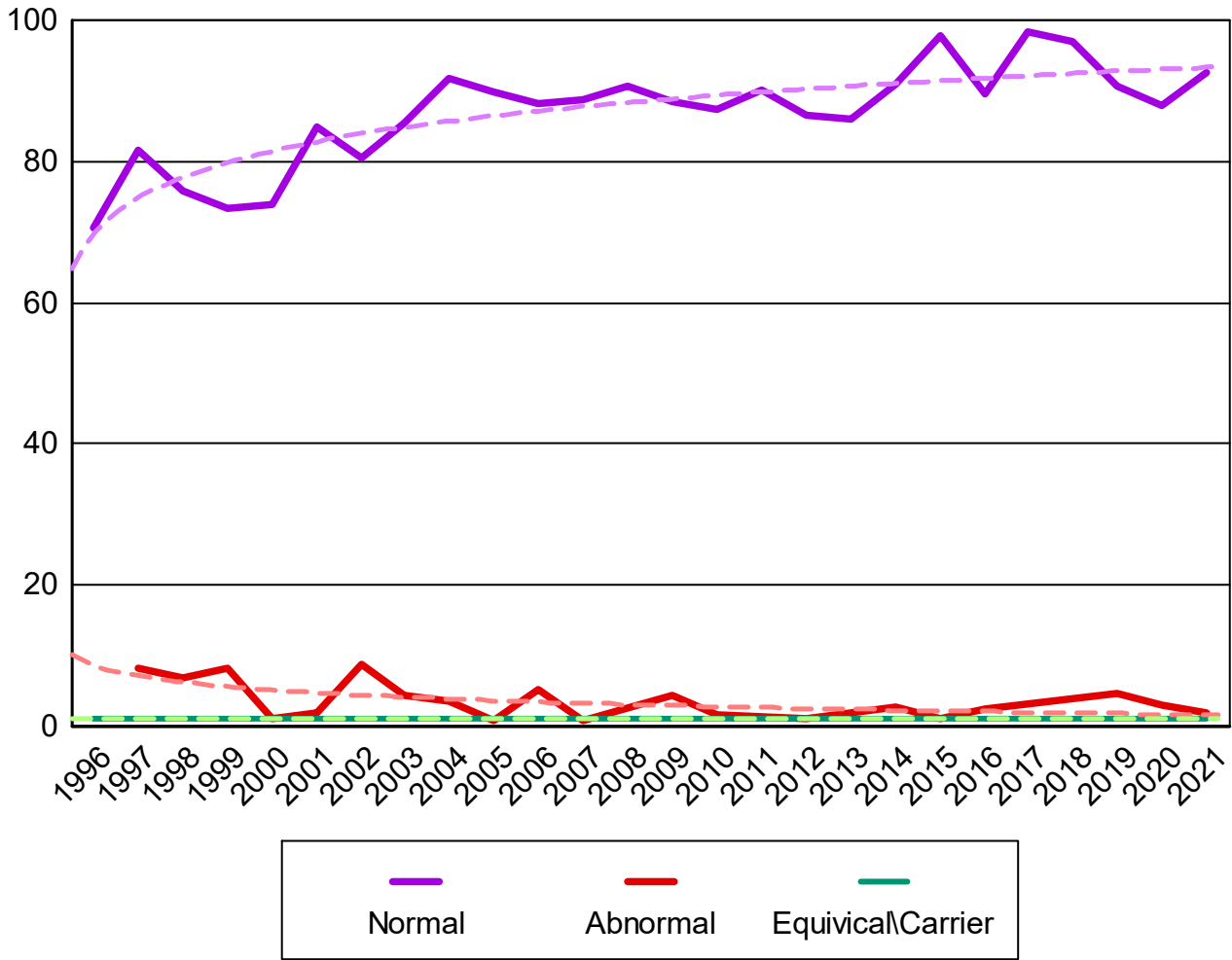
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MASTIFF

THYROID

MASTIFF





**Percent submitted to the open registry**  
**Hips**

Report year	Cases	Excellent %	Good %	Fair %	Borderline %	Mild %	Moderate %	Severe %
1974	21	0	10 47.62%	5 23.81%	0	4 19.05%	2 9.52%	0
1975	12	2 16.67%	9 75.00%	0	0	0	1 8.33%	0
1976	23	1 4.35%	11 47.83%	7 30.43%	0	3 13.04%	1 4.35%	0
1977	24	2 8.33%	13 54.17%	8 33.33%	0	1 4.17%	0	0
1978	33	2 6.06%	19 57.58%	7 21.21%	0	3 9.09%	0	2 6.06%
1979	34	0	20 58.82%	6 17.65%	0	8 23.53%	0	0
1980	44	0	21 47.73%	16 36.36%	0	2 4.55%	5 11.36%	0
1981	37	0	13 35.14%	15 40.54%	1 2.70%	6 16.22%	2 5.41%	0
1982	43	0	21 48.84%	7 16.28%	1 2.33%	7 16.28%	6 13.95%	1 2.33%
1983	46	0	20 43.48%	15 32.61%	1 2.17%	7 15.22%	3 6.52%	0
1984	63	5 7.94%	31 49.21%	13 20.63%	0	6 9.52%	8 12.70%	0
1985	88	4 4.55%	40 45.45%	28 31.82%	1 1.14%	8 9.09%	7 7.95%	0
1986	102	4 3.88%	41 39.81%	30 29.13%	1 0.97%	15 14.56%	10 9.71%	1 0.97%
1987	132	8 6.06%	53 40.15%	39 29.55%	3 2.27%	16 12.12%	13 9.85%	0
1988	140	11 7.86%	63 45.00%	35 25.00%	1 0.71%	22 15.71%	8 5.71%	0
1989	167	7 4.12%	67 39.41%	42 24.71%	6 3.53%	29 17.06%	14 8.24%	2 1.18%
1990	157	10 6.29%	71 44.65%	35 22.01%	3 1.89%	18 11.32%	18 11.32%	2 1.26%
1991	175	3 1.69%	73 41.01%	51 28.65%	5 2.81%	27 15.17%	15 8.43%	1 0.56%
1992	237	16 6.72%	104 43.70%	58 24.37%	5 2.10%	30 12.61%	20 8.40%	4 1.68%
1993	280	18 6.41%	157 55.87%	61 21.71%	4 1.42%	24 8.54%	15 5.34%	1 0.36%
1994	328	21 6.31%	157 47.15%	73 21.92%	8 2.40%	41 12.31%	23 6.91%	5 1.50%
1995	444	27 5.99%	207 45.90%	99 21.95%	16 3.55%	64 14.19%	24 5.32%	7 1.55%

**Percent submitted to the open registry**

**Hips**

Report year	Cases	Excellent %	Good %	Fair %	Borderline %	Mild %	Moderate %	Severe %
1996	478	35 7.31%	223 46.56%	123 25.68%	12 2.51%	55 11.48%	27 5.64%	3 0.63%
1997	546	35 6.35%	280 50.82%	107 19.42%	11 2.00%	75 13.61%	36 6.53%	2 0.36%
1998	608	33 5.38%	306 49.92%	132 21.53%	15 2.45%	82 13.38%	32 5.22%	8 1.31%
1999	629	58 9.18%	314 49.68%	134 21.20%	21 3.32%	73 11.55%	27 4.27%	2 0.32%
2000	544	55 10.05%	271 49.54%	92 16.82%	16 2.93%	61 11.15%	41 7.50%	8 1.46%
2001	575	58 10.05%	274 47.49%	131 22.70%	19 3.29%	56 9.71%	34 5.89%	3 0.52%
2002	569	49 8.58%	322 56.39%	93 16.29%	14 2.45%	65 11.38%	25 4.38%	1 0.18%
2003	504	43 8.51%	277 54.85%	81 16.04%	11 2.18%	67 13.27%	23 4.55%	2 0.40%
2004	528	51 9.64%	289 54.63%	86 16.26%	7 1.32%	73 13.80%	18 3.40%	4 0.76%
2005	571	42 7.36%	311 54.47%	93 16.29%	13 2.28%	79 13.84%	30 5.25%	3 0.53%
2006	463	39 8.42%	231 49.89%	85 18.36%	5 1.08%	78 16.85%	23 4.97%	2 0.43%
2007	427	37 8.67%	206 48.24%	80 18.74%	8 1.87%	69 16.16%	20 4.68%	7 1.64%
2008	446	47 10.54%	228 51.12%	75 16.82%	7 1.57%	63 14.13%	23 5.16%	3 0.67%
2009	327	48 14.63%	150 45.73%	69 21.04%	4 1.22%	41 12.50%	14 4.27%	1 0.30%
2010	326	34 10.40%	168 51.38%	63 19.27%	0	48 14.68%	12 3.67%	1 0.31%
2011	285	26 9.12%	158 55.44%	47 16.49%	6 2.11%	39 13.68%	7 2.46%	2 0.70%
2012	280	16 5.71%	159 56.79%	40 14.29%	1 0.36%	54 19.29%	9 3.21%	1 0.36%
2013	231	18 7.79%	136 58.87%	31 13.42%	3 1.30%	39 16.88%	4 1.73%	0
2014	274	27 9.82%	159 57.82%	38 13.82%	4 1.45%	37 13.45%	9 3.27%	0
2015	232	27 11.64%	123 53.02%	37 15.95%	1 0.43%	38 16.38%	5 2.16%	1 0.43%
2016	254	22 8.66%	137 53.94%	53 20.87%	1 0.39%	31 12.20%	10 3.94%	0
2017	203	33 16.26%	99 48.77%	30 14.78%	0	30 14.78%	11 5.42%	0
2018	229	29 12.66%	104 45.41%	39 17.03%	2 0.87%	35 15.28%	18 7.86%	2 0.87%

**Percent submitted to the open registry**

**Hips**

<i>Report year</i>	<i>Cases</i>	<i>Excellent</i> %	<i>Good</i> %	<i>Fair</i> %	<i>Borderline</i> %	<i>Mild</i> %	<i>Moderate</i> %	<i>Severe</i> %
2019	213	33	108	28	6	28	10	0
	<b>22.07%</b>	15.49%	50.70%	13.15%	2.82%	13.15%	4.69%	
2020	257	39	139	33	3	33	10	0
	<b>16.73%</b>	15.18%	54.09%	12.84%	1.17%	12.84%	3.89%	
2021	232	41	120	34	1	29	6	1
	<b>26.72%</b>	17.67%	51.72%	14.66%	0.43%	12.50%	2.59%	0.43%
<b>Totals</b>	<b>12,861</b>	<b>1,116</b>	<b>6,513</b>	<b>2,504</b>	<b>247</b>	<b>1,719</b>	<b>679</b>	<b>83</b>
		<b>8.64%</b>	<b>50.45%</b>	<b>19.40%</b>	<b>1.91%</b>	<b>13.32%</b>	<b>5.26%</b>	<b>0.64%</b>

**Elbow**

<i>Report Year</i>	<i>Cases</i>	<i>Normal %</i>	<i>Grade 1 %</i>	<i>Grade 2 %</i>	<i>Grade 3 %</i>	<i>Borderline %</i>
1990	8	8 100.00%				
1991	12	11 91.67%	1 8.33%			
1992	24	17 70.83%	5 20.83%	2 8.33%		
1993	73	58 79.45%	11 15.07%	4 5.48%		
1994	104	92 88.46%	7 6.73%	1 0.96%	4 3.85%	
1995	158	137 86.71%	9 5.70%	7 4.43%	5 3.16%	
1996	225	189 84.00%	14 6.22%	11 4.89%	7 3.11%	4 1.78%
1997	316	268 84.81%	31 9.81%	9 2.85%	7 2.22%	1 0.32%
1998	360	292 81.11%	41 11.39%	16 4.44%	8 2.22%	3 0.83%
1999	398	322 80.90%	39 9.80%	22 5.53%	11 2.76%	4 1.01%
2000	326	262 80.37%	41 12.58%	17 5.21%	3 0.92%	3 0.92%
2001	351	306 87.18%	33 9.40%	10 2.85%	2 0.57%	
2002	375	321 85.60%	35 9.33%	14 3.73%	4 1.07%	1 0.27%
2003	319	271 84.95%	33 10.34%	8 2.51%	6 1.88%	1 0.31%
2004	390	338 86.67%	33 8.46%	11 2.82%	8 2.05%	
2005	414	348 84.06%	40 9.66%	21 5.07%	5 1.21%	
2006	362	308 85.08%	38 10.50%	10 2.76%	6 1.66%	
2007	317	278 87.70%	30 9.46%	5 1.58%	3 0.95%	1 0.32%
2008	346	299 86.42%	32 9.25%	11 3.18%	4 1.16%	
2009	271	237 87.45%	29 10.70%	5 1.85%		
2010	280	252 90.00%	17 6.07%	9 3.21%	2 0.71%	

**Elbow**

<i>Report Year</i>	<i>Cases</i>	<i>Normal</i> <i>%</i>	<i>Grade 1</i> <i>%</i>	<i>Grade 2</i> <i>%</i>	<i>Grade 3</i> <i>%</i>	<i>Borderline</i> <i>%</i>
2011	245	212 86.53%	15 6.12%	10 4.08%	5 2.04%	3 1.22%
2012	240	214 89.17%	19 7.92%	5 2.08%	1 0.42%	1 0.42%
2013	210	182 86.67%	17 8.10%	6 2.86%	4 1.90%	1 0.48%
2014	242	211 87.19%	26 10.74%	4 1.65%		1 0.41%
2015	204	178 87.25%	18 8.82%	6 2.94%	2 0.98%	
2016	235	209 88.94%	20 8.51%	4 1.70%	2 0.85%	
2017	187	155 82.89%	25 13.37%	5 2.67%	2 1.07%	
2018	210	173 82.38%	29 13.81%	6 2.86%	2 0.95%	
2019	197	162 82.23%	23 11.68%	8 4.06%	3 1.52%	1 0.51%
2020	242	204 84.30%	24 9.92%	10 4.13%	4 1.65%	
2021	224	194 86.61%	21 9.38%	6 2.68%	3 1.34%	
<b>Totals</b>	<b>7,865</b>	<b>6,708</b> <b>85.29%</b>	<b>756</b> <b>9.61%</b>	<b>263</b> <b>3.34%</b>	<b>113</b> <b>1.44%</b>	<b>25</b> <b>0.32%</b>

### Advanced Cardiac

<i>Report year</i>	<i>Cases</i>	<i>Normal</i>	<i>% Normal</i>	<i>Abnormal</i>	<i>% Abnormal</i>	<i>Equivocal</i>	<i>% Equivocal</i>
<b>Mastiff</b>							
2016	27	27	100.0				
2017	45	44	97.8			1	2.2
2018	42	40	95.2	1	2.4	1	2.4
2019	27	26	96.3			1	3.7
2020	19	18	94.7			1	5.3
2021	29	28	96.6			1	3.5
<b>Totals</b>	<b>189</b>	<b>183</b>	<b>96.8</b>	<b>1</b>	<b>0.5</b>	<b>5</b>	<b>2.7</b>

### Canine Multifocal Retinopathy

<i>Report year</i>	<i>Cases</i>	<i>Normal</i>	<i>% Normal</i>	<i>Abnormal</i>	<i>% Abnormal</i>	<i>Carrier</i>	<i>% Carrier</i>
<b>Mastiff</b>							
2007	19	15	79.0	2	10.5	2	10.5
2008	45	35	77.8	2	4.4	8	17.8
2009	52	36	69.2	1	1.9	15	28.9
2010	48	35	72.9			13	27.1
2011	49	37	75.5	1	2.0	11	22.5
2012	84	68	81.0	1	1.2	15	17.9
2013	70	47	67.1	2	2.9	21	30.0
2014	73	54	74.0	1	1.4	18	24.7
2015	120	92	76.7	4	3.3	24	20.0
2016	88	67	76.1			21	23.9
2017	64	54	84.4			10	15.6
2018	68	54	79.4			14	20.6
2019	50	44	88.0			6	12.0
2020	61	55	90.2			6	9.8
2021	59	50	84.8			9	15.3
<b>Totals</b>	<b>950</b>	<b>743</b>	<b>78.2</b>	<b>14</b>	<b>1.5</b>	<b>193</b>	<b>20.3</b>

### Congenital Cardiac

<i>Report year</i>	<i>Cases</i>	<i>Normal</i>	<i>% Normal</i>	<i>Abnormal</i>	<i>% Abnormal</i>	<i>Equivocal</i>	<i>% Equivocal</i>
<b>Mastiff</b>							
1996	37	36	97.3	1	2.7		
1997	70	69	98.6			1	1.4
1998	96	95	99.0			1	1.0
1999	66	65	98.5			1	1.5
2000	91	91	100.0				
2001	149	149	100.0				
2002	110	107	97.3	2	1.8	1	0.9
2003	125	124	99.2	1	0.8		
2004	184	184	100.0				
2005	191	191	100.0				
2006	209	207	99.0	1	0.5	1	0.5
2007	260	256	98.5	2	0.8	2	0.8
2008	222	221	99.6			1	0.5
2009	232	229	98.7	1	0.4	2	0.9
2010	217	215	99.1			2	0.9

### Congenital Cardiac

<i>Report year</i>	<i>Cases</i>	<i>Normal</i>	<i>% Normal</i>	<i>Abnormal</i>	<i>% Abnormal</i>	<i>Equivocal</i>	<i>% Equivocal</i>
2011	190	189	99.5			1	0.5
2012	179	179	100.0				
2013	185	181	97.8	2	1.1	2	1.1
2014	194	193	99.5			1	0.5
2015	182	180	98.9	2	1.1		
2016	152	152	100.0				
2017	119	117	98.3	1	0.8	1	0.8
2018	116	116	100.0				
2019	99	99	100.0				
2020	104	104	100.0				
2021	4	4	100.0				
<b>Totals</b>	<b>3783</b>	<b>3753</b>	<b>99.2</b>	<b>13</b>	<b>0.3</b>	<b>17</b>	<b>0.5</b>

### Congenital Hypothyroidism W/ Goiter

<i>Report year</i>	<i>Cases</i>	<i>Normal</i>	<i>% Normal</i>	<i>Abnormal</i>	<i>% Abnormal</i>	<i>Carrier</i>	<i>% Carrier</i>
<b>Mastiff</b>							
2021	1	1	100.0				
<b>Totals</b>	<b>1</b>	<b>1</b>	<b>100.0</b>				

### Cystinuria

<i>Report year</i>	<i>Cases</i>	<i>Normal</i>	<i>% Normal</i>	<i>Abnormal</i>	<i>% Abnormal</i>	<i>Carrier</i>	<i>% Carrier</i>
<b>Mastiff</b>							
2009	1	1	100.0				
2013	10	10	100.0				
2014	14	14	100.0				
2015	39	38	97.4			1	2.6
2016	43	41	95.4	1	2.3	1	2.3
2017	35	34	97.1			1	2.9
2018	47	46	97.9			1	2.1
2019	34	31	91.2			3	8.8
2020	47	41	87.2			6	12.8
2021	42	39	92.9			3	7.1
<b>Totals</b>	<b>312</b>	<b>295</b>	<b>94.6</b>	<b>1</b>	<b>0.3</b>	<b>16</b>	<b>5.1</b>

### D Locus

<i>Report year</i>	<i>Cases</i>	<i>Normal</i>	<i>% Normal</i>	<i>Abnormal</i>	<i>% Abnormal</i>
<b>Mastiff</b>					
2021	1	1	100.0		
<b>Totals</b>	<b>1</b>	<b>1</b>	<b>100.0</b>		

### Degenerative Encephalopathy

<i>Report year</i>	<i>Cases</i>	<i>Normal</i>	<i>% Normal</i>	<i>Abnormal</i>	<i>% Abnormal</i>	<i>Carrier</i>	<i>% Carrier</i>
<b>Mastiff</b>							
2021	1	1	100.0				
<b>Totals</b>	<b>1</b>	<b>1</b>	<b>100.0</b>				

### Degenerative Myelopathy

<i>Report year</i>	<i>Cases</i>	<i>Normal</i>	<i>% Normal</i>	<i>Abnormal</i>	<i>% Abnormal</i>	<i>Carrier</i>	<i>% Carrier</i>
<b>Mastiff</b>							
2008	1					1	100.0
2010	5	5	100.0				
2011	20	18	90.0	1	5.0	1	5.0
2012	25	16	64.0			9	36.0
2013	19	15	79.0			4	21.1
2014	49	37	75.5			12	24.5
2015	85	68	80.0	1	1.2	16	18.8
2016	82	72	87.8			10	12.2
2017	72	65	90.3	1	1.4	6	8.3
2018	115	105	91.3	1	0.9	9	7.8
2019	54	48	88.9	2	3.7	4	7.4
2020	67	61	91.0	1	1.5	5	7.5
2021	61	53	86.9	1	1.6	7	11.5
<b>Totals</b>	<b>655</b>	<b>563</b>	<b>86.0</b>	<b>8</b>	<b>1.2</b>	<b>84</b>	<b>12.8</b>

### Dentition Database

<i>Report year</i>	<i>Cases</i>	<i>Normal</i>	<i>% Normal</i>	<i>Abnormal</i>	<i>% Abnormal</i>	<i>Carrier</i>	<i>% Carrier</i>
<b>Mastiff</b>							
2013	1	1	100.0				
2015	4	4	100.0				
2016	4	4	100.0				
2017	2	2	100.0				
2018	1	1	100.0				
2019	2	2	100.0				
2020	3	3	100.0				
2021	2	2	100.0				
<b>Totals</b>	<b>19</b>	<b>19</b>	<b>100.0</b>				

### Dilated Cardiomyopathy

<i>Report year</i>	<i>Cases</i>	<i>Normal</i>	<i>% Normal</i>	<i>Abnormal</i>	<i>% Abnormal</i>	<i>Carrier</i>	<i>% Carrier</i>
<b>Mastiff</b>							
2018	2	2	100.0				
2021	2	2	100.0				
<b>Totals</b>	<b>4</b>	<b>4</b>	<b>100.0</b>				



### Eyes

<i>Report year</i>	<i>Cases</i>	<i>Normal</i>	<i>% Normal</i>	<i>Abnormal</i>	<i>% Abnormal</i>	<i>Breeder opt.</i>	<i>% Breeder opt.</i>
<b>Mastiff</b>							
2012	5	5	100.0				
2013	98	70	71.4	1	1.0	27	27.6
2014	117	90	76.9	4	3.4	23	19.7
2015	155	121	78.1	4	2.6	30	19.4
2016	130	104	80.0	1	0.8	25	19.2
2017	100	71	71.0	5	5.0	24	24.0
2018	123	96	78.1	3	2.4	24	19.5
2019	88	69	78.4	4	4.6	15	17.1
2020	60	43	71.7	2	3.3	15	25.0
2021	99	78	78.8	3	3.0	18	18.2
<b>Totals</b>	<b>975</b>	<b>747</b>	<b>76.6</b>	<b>27</b>	<b>2.8</b>	<b>201</b>	<b>20.6</b>

### Hyperuricosuria

<i>Report year</i>	<i>Cases</i>	<i>Normal</i>	<i>% Normal</i>	<i>Abnormal</i>	<i>% Abnormal</i>	<i>Carrier</i>	<i>% Carrier</i>
<b>Mastiff</b>							
2016	1	1	100.0				
2017	2	2	100.0				
2018	18	18	100.0				
2019	3	3	100.0				
2020	26	26	100.0				
2021	35	35	100.0				
<b>Totals</b>	<b>85</b>	<b>85</b>	<b>100.0</b>				

### Kidney

<i>Report year</i>	<i>Cases</i>	<i>Normal</i>	<i>% Normal</i>	<i>Abnormal</i>	<i>% Abnormal</i>	<i>Carrier</i>	<i>% Carrier</i>
<b>Mastiff</b>							
2003	1	1	100.0				
<b>Totals</b>	<b>1</b>	<b>1</b>	<b>100.0</b>				

### Legg-Calve-Perthes

<i>Report year</i>	<i>Cases</i>	<i>Normal</i>	<i>% Normal</i>	<i>Abnormal</i>	<i>% Abnormal</i>	<i>Carrier</i>	<i>% Carrier</i>
<b>Mastiff</b>							
2009	1	1	100.0				
2017	4	4	100.0				
<b>Totals</b>	<b>5</b>	<b>5</b>	<b>100.0</b>				

### Macrothrombocytopenia

<i>Report year</i>	<i>Cases</i>	<i>Normal</i>	<i>% Normal</i>	<i>Abnormal</i>	<i>% Abnormal</i>	<i>Carrier</i>	<i>% Carrier</i>
<b>Mastiff</b>							
2017	4	4	100.0				

### Macrothrombocytopenia

Report year	Cases	Normal	% Normal	Abnormal	% Abnormal	Carrier	% Carrier
2018	7	7	100.0				
2020	3	3	100.0				
2021	1	1	100.0				
<b>Totals</b>	<b>15</b>	<b>15</b>	<b>100.0</b>				

### Multiple Drug Resistance (Mdr1)

Report year	Cases	Normal	% Normal	Abnormal	% Abnormal	Carrier	% Carrier
<b>Mastiff</b>							
2020	3	3	100.0				
2021	3	3	100.0				
<b>Totals</b>	<b>6</b>	<b>6</b>	<b>100.0</b>				

### Patella

Report year	Cases	Normal	% Normal	Abnormal	% Abnormal	Equivocal	% Equivocal
<b>Mastiff</b>							
1994	6	6	100.0				
1995	29	29	100.0				
1996	42	42	100.0				
1997	72	72	100.0				
1998	117	116	99.2	1	0.9		
1999	94	93	98.9	1	1.1		
2000	108	108	100.0				
2001	151	151	100.0				
2002	123	123	100.0				
2003	125	125	100.0				
2004	169	169	100.0				
2005	180	179	99.4	1	0.6		
2006	183	183	100.0				
2007	195	195	100.0				
2008	195	193	99.0	2	1.0		
2009	165	164	99.4	1	0.6		
2010	198	197	99.5	1	0.5		
2011	137	137	100.0				
2012	128	127	99.2	1	0.8		
2013	134	134	100.0				
2014	142	142	100.0				
2015	128	128	100.0				
2016	152	151	99.3	1	0.7		
2017	103	103	100.0				
2018	108	106	98.2	2	1.9		
2019	93	93	100.0				
2020	130	130	100.0				
2021	96	96	100.0				
<b>Totals</b>	<b>3503</b>	<b>3492</b>	<b>99.7</b>	<b>11</b>	<b>0.3</b>		

## Progressive Retinal Atrophy

<i>Report year</i>	<i>Cases</i>	<i>Normal</i>	<i>% Normal</i>	<i>Abnormal</i>	<i>% Abnormal</i>	<i>Carrier</i>	<i>% Carrier</i>
<b>Mastiff</b>							
2002	1	1	100.0				
2003	2	2	100.0				
2004	9	9	100.0				
2005	12	12	100.0				
2006	13	13	100.0				
2007	916	916	100.0				
2008	94	93	98.9	1	1.1		
2009	63	63	100.0				
2010	67	67	100.0				
2011	67	65	97.0	2	3.0		
2012	74	74	100.0				
2013	68	61	89.7	7	10.3		
2014	64	64	100.0				
2015	101	100	99.0	1	1.0		
2016	86	86	100.0				
2017	67	66	98.5	1	1.5		
2018	68	68	100.0				
2019	46	46	100.0				
2020	60	60	100.0				
2021	51	51	100.0				
<b>Totals</b>	<b>1929</b>	<b>1917</b>	<b>99.4</b>	<b>12</b>	<b>0.6</b>		

## Shoulder

<i>Report year</i>	<i>Cases</i>	<i>Normal</i>	<i>% Normal</i>	<i>Abnormal</i>	<i>% Abnormal</i>
<b>Mastiff</b>					
1990	1	1	100.0		
1993	1	1	100.0		
1996	1			1	100.0
1998	2			2	100.0
2005	8	8	100.0		
2006	2	2	100.0		
2007	4	4	100.0		
2008	13	13	100.0		
2009	11	10	90.9	1	9.1
2010	21	21	100.0		
2011	15	14	93.3	1	6.7
2012	13	13	100.0		
2013	15	15	100.0		
2014	10	10	100.0		
2015	17	17	100.0		
2016	21	20	95.2	1	4.8
2017	13	13	100.0		
2018	13	13	100.0		
2019	11	11	100.0		
2020	11	11	100.0		
2021	12	12	100.0		
<b>Totals</b>	<b>215</b>	<b>209</b>	<b>97.2</b>	<b>6</b>	<b>2.8</b>

### Thyroid

<i>Report year</i>	<i>Cases</i>	<i>Normal</i>	<i>% Normal</i>	<i>Abnormal</i>	<i>% Abnormal</i>	<i>Equivocal</i>	<i>% Equivocal</i>
<b>Mastiff</b>							
1996	17	12	70.6			5	29.4
1997	49	40	81.6	4	8.2	5	10.2
1998	58	44	75.9	4	6.9	10	17.2
1999	60	44	73.3	5	8.3	11	18.3
2000	103	76	73.8	1	1.0	26	25.2
2001	99	84	84.9	2	2.0	13	13.1
2002	102	82	80.4	9	8.8	11	10.8
2003	90	77	85.6	4	4.4	9	10.0
2004	111	102	91.9	4	3.6	5	4.5
2005	128	115	89.8	1	0.8	12	9.4
2006	118	104	88.1	6	5.1	8	6.8
2007	132	117	88.6	1	0.8	14	10.6
2008	141	128	90.8			13	9.2
2009	138	122	88.4	6	4.4	10	7.3
2010	118	103	87.3	2	1.7	13	11.0
2011	82	74	90.2			8	9.8
2012	104	90	86.5	1	1.0	13	12.5
2013	108	93	86.1	2	1.9	13	12.0
2014	111	101	91.0	3	2.7	7	6.3
2015	89	87	97.8	1	1.1	1	1.1
2016	86	77	89.5	2	2.3	7	8.1
2017	62	61	98.4			1	1.6
2018	67	65	97.0			2	3.0
2019	64	58	90.6	3	4.7	3	4.7
2020	67	59	88.1	2	3.0	6	9.0
2021	54	50	92.6	1	1.9	3	5.6
<b>Totals</b>	<b>2358</b>	<b>2065</b>	<b>87.6</b>	<b>64</b>	<b>2.7</b>	<b>229</b>	<b>9.7</b>

### Von Willebrands

<i>Report year</i>	<i>Cases</i>	<i>Normal</i>	<i>% Normal</i>	<i>Abnormal</i>	<i>% Abnormal</i>	<i>Carrier</i>	<i>% Carrier</i>
<b>Mastiff</b>							
2015	2	2	100.0				
2018	1	1	100.0				
2019	3	3	100.0				
2020	2	2	100.0				
2021	11	11	100.0				
<b>Totals</b>	<b>19</b>	<b>19</b>	<b>100.0</b>				