

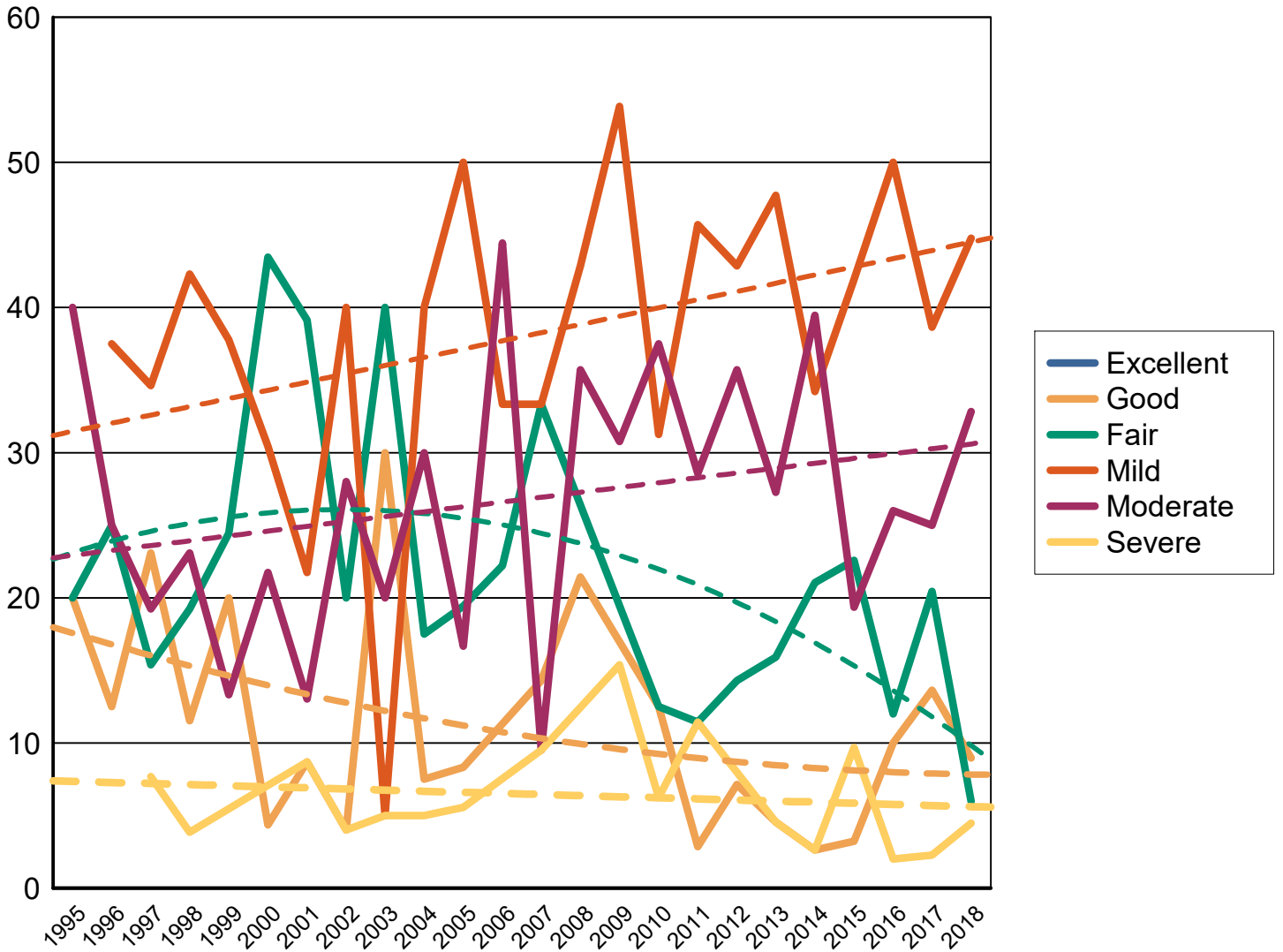
All data as of 12-31-2018

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

| | | <i>Normals</i> | | <i>Equival or Carrier</i> | | <i>Abnormal</i> | |
|---------------------------------|----------|----------------|---------|---------------------------|--------|-----------------|----------------------|
| Hips | 1 of 181 | 216 | 28.57% | 7 | 0.93% | 533 | 70.50% CHIC required |
| Elbow | 2 of 121 | 127 | 59.91% | 1 | 0.47% | 84 | 39.62% |
| Cardiac | | 285 | 100.00% | 0 | | 0 | |
| Thyroid | | 28 | 73.68% | 9 | 23.68% | 1 | 2.63% |
| Dentition Database | | 17 | 100.00% | 0 | | 0 | |
| Tracheal Hypoplasia | | 13 | 86.67% | 1 | 6.67% | 1 | 6.67% |
| Advanced Cardiac | | 16 | 100.00% | 0 | | 0 | |
| Shoulder | | 1 | 100.00% | 0 | | 0 | |
| Serum Bile Acid | | 2 | 100.00% | 0 | | 0 | |
| Spine | | 6 | 16.67% | 0 | | 30 | 83.33% |
| OFA EYE Registry | | 376 | 97.16% | 0 | | 11 | 2.84% CHIC required |
| Legg-Calve-Perthes | | 117 | 99.15% | 0 | | 1 | 0.85% |
| Necrotizing Meningoencephalitis | | 396 | 76.30% | 117 | 22.54% | 6 | 1.16% CHIC required |
| Degenerative Myelopathy | | 306 | 54.94% | 183 | 32.85% | 68 | 12.21% |
| Patella | | 852 | 94.56% | 0 | | 49 | 5.44% CHIC required |
| Pyruvate Kinase Deficiency | | 59 | 100.00% | 0 | | 0 | |
| Baer Hearing Test | | 1 | 100.00% | 0 | | 0 | |
| Primary Lens Luxation | | 4 | 80.00% | 1 | 20.00% | 0 | |

PUG

Hip percentages by rating with trendlines



Percent submitted to the open registry

Hips

| Report year | Cases | Excellent % | Good % | Fair % | Borderline % | Mild % | Moderate % | Severe % |
|-------------|---------------|-------------|-------------|--------------|--------------|--------------|--------------|-------------|
| 1979 | | | | | | 1 50.00% | 1 50.00% | |
| 1986 | | | 1 33.33% | | | 1 33.33% | 1 33.33% | |
| 1987 | | | 1 16.67% | | | | 3 50.00% | 2 33.33% |
| 1988 | | | 3 50.00% | | | 2 33.33% | 1 16.67% | |
| 1990 | | | | 1 14.29% | | 2 28.57% | 2 28.57% | 2 28.57% |
| 1991 | | | | | | 2 100.00% | | |
| 1992 | | | | 1 14.29% | | 4 57.14% | 2 28.57% | |
| 1993 | | | 1 16.67% | 1 16.67% | | 1 16.67% | 3 50.00% | |
| 1994 | | | 1 33.33% | | | | 1 33.33% | 1 33.33% |
| 1995 | | | 1 20.00% | 1 20.00% | 1 20.00% | | 2 40.00% | |
| 1996 | | | 1 12.50% | 2 25.00% | | 3 37.50% | 2 25.00% | |
| 1997 | 7.69% | | 6 23.08% | 4 15.38% | | 9 34.62% | 5 19.23% | 2 7.69% |
| 1998 | 7.69% | | 3 11.54% | 5 19.23% | | 11 42.31% | 6 23.08% | 1 3.85% |
| 1999 | | | 9 20.00% | 11 24.44% | 1 2.22% | 17 37.78% | 6 13.33% | |
| 2000 | 8.70% | | 1 4.35% | 10 43.48% | | 7 30.43% | 5 21.74% | |
| 2001 | 43.48% | | 2 8.70% | 9 39.13% | 2 8.70% | 5 21.74% | 3 13.04% | 2 8.70% |
| 2002 | 40.00% | | 1 4.00% | 5 20.00% | 1 4.00% | 10 40.00% | 7 28.00% | 1 4.00% |
| 2003 | 40.00% | | 6 30.00% | 8 40.00% | | 1 5.00% | 4 20.00% | 1 5.00% |
| 2004 | 25.00% | | 3 7.50% | 7 17.50% | | 16 40.00% | 12 30.00% | 2 5.00% |
| 2005 | 41.67% | | 3 8.33% | 7 19.44% | | 18 50.00% | 6 16.67% | 2 5.56% |
| 2006 | 50.00% | | | 4 22.22% | | 6 33.33% | 8 44.44% | |
| 2007 | 52.38% | | 3 14.29% | 7 33.33% | | 7 33.33% | 2 9.52% | 2 9.52% |

Percent submitted to the open registry

Hips

| Report year | Cases | Excellent % | Good % | Fair % | Borderline % | Mild % | Moderate % | Severe % |
|---------------|---------------|--------------------|----------------------|-----------------------|--------------------|-----------------------|-----------------------|---------------------|
| 2008 | | | 3 21.43% | | | 6 42.86% | 5 35.71% | |
| | 50.00% | | | | | | | |
| 2009 | | | | | | 7 53.85% | 4 30.77% | 2 15.38% |
| | 69.23% | | | | | | | |
| 2010 | | | 2 12.50% | 2 12.50% | | 5 31.25% | 6 37.50% | 1 6.25% |
| | 43.75% | | | | | | | |
| 2011 | | | 1 2.86% | 4 11.43% | | 16 45.71% | 10 28.57% | 4 11.43% |
| | 71.43% | | | | | | | |
| 2012 | | | 3 7.14% | 6 14.29% | | 18 42.86% | 15 35.71% | |
| | 78.57% | | | | | | | |
| 2013 | | | 2 4.55% | 7 15.91% | | 21 47.73% | 12 27.27% | 2 4.55% |
| | 70.45% | | | | | | | |
| 2014 | | | 1 2.63% | 8 21.05% | | 13 34.21% | 15 39.47% | 1 2.63% |
| | 60.53% | | | | | | | |
| 2015 | | | 1 3.23% | 7 22.58% | 1 3.23% | 13 41.94% | 6 19.35% | 3 9.68% |
| | 74.19% | | | | | | | |
| 2016 | | | 5 10.00% | 6 12.00% | | 25 50.00% | 13 26.00% | 1 2.00% |
| | 54.00% | | | | | | | |
| 2017 | | | 6 13.64% | 9 20.45% | | 17 38.64% | 11 25.00% | 1 2.27% |
| | 56.82% | | | | | | | |
| 2018 | 67 | 1 1.49% | 6 8.96% | 4 5.97% | 1 1.49% | 30 44.78% | 22 32.84% | 3 4.48% |
| | 56.72% | | | | | | | |
| Totals | 756 | 1 0.13% | 78 10.30% | 137 18.10% | 7 0.92% | 295 38.97% | 201 26.55% | 37 4.89% |

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> |
|--------------------|--------------|-----------------|------------------|------------------|------------------|---------------------|
| 1994 | 1 | | | | 1 100.00% | |
| 1995 | 1 | | | 1 100.00% | | |
| 1997 | 1 | 1 100.00% | | | | |
| 1998 | 4 | 2 50.00% | 2 50.00% | | | |
| 1999 | 5 | | 3 60.00% | | 1 20.00% | 1 20.00% |
| 2000 | 6 | 4 66.67% | 1 16.67% | 1 16.67% | | |
| 2001 | 9 | 3 33.33% | 3 33.33% | 3 33.33% | | |
| 2002 | 4 | 2 50.00% | 2 50.00% | | | |
| 2003 | 4 | 3 75.00% | 1 25.00% | | | |
| 2004 | 17 | 5 29.41% | 6 35.29% | 6 35.29% | | |
| 2005 | 13 | 4 30.77% | 4 30.77% | 5 38.46% | | |
| 2006 | 8 | 3 37.50% | 1 12.50% | 3 37.50% | 1 12.50% | |
| 2007 | 10 | 4 40.00% | 4 40.00% | 2 20.00% | | |
| 2008 | 8 | 4 50.00% | 3 37.50% | 1 12.50% | | |
| 2009 | 4 | 3 75.00% | 1 25.00% | | | |
| 2010 | 10 | 10 100.00% | | | | |
| 2011 | 6 | 6 100.00% | | | | |
| 2012 | 15 | 13 86.67% | 1 6.67% | 1 6.67% | | |
| 2013 | 12 | 9 75.00% | 2 16.67% | 1 8.33% | | |
| 2014 | 14 | 7 50.00% | 6 42.86% | 1 7.14% | | |
| 2015 | 5 | 4 80.00% | 1 20.00% | | | |

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> |
|--------------------|--------------|-----------------|------------------|------------------|------------------|---------------------|
| 2016 | 18 | 13 72.22% | 4 22.22% | 1 5.56% | | |
| 2017 | 12 | 11 91.67% | 1 8.33% | | | |
| 2018 | 25 | 16 64.00% | 8 32.00% | 1 4.00% | | |
| Totals | 212 | 127 | 54 | 27 | 3 | 1 |
| | 212 | 59.91% | 25.47% | 12.74% | 1.42% | 0.47% |

Baer Hearing Test

| <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> |
|--------------------|--------------|---------------|-----------------|-----------------|-------------------|------------------|--------------------|
| Pug | | | | | | | |
| 2009 | 1 | 1 | 100.0 | | | | |
| Totals | 1 | 1 | 100.0 | | | | |

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> |
|--------------------|--------------|---------------|-----------------|-----------------|-------------------|------------------|--------------------|
| Pug | | | | | | | |
| 1999 | 1 | 1 | 100.0 | | | | |
| 2003 | 2 | 2 | 100.0 | | | | |
| 2004 | 5 | 5 | 100.0 | | | | |
| 2005 | 4 | 4 | 100.0 | | | | |
| 2006 | 4 | 4 | 100.0 | | | | |
| 2007 | 4 | 4 | 100.0 | | | | |
| 2008 | 9 | 9 | 100.0 | | | | |
| 2009 | 12 | 12 | 100.0 | | | | |
| 2010 | 18 | 18 | 100.0 | | | | |
| 2011 | 27 | 27 | 100.0 | | | | |
| 2012 | 12 | 12 | 100.0 | | | | |
| 2013 | 30 | 30 | 100.0 | | | | |
| 2014 | 23 | 23 | 100.0 | | | | |
| 2015 | 17 | 17 | 100.0 | | | | |
| 2016 | 32 | 32 | 100.0 | | | | |
| 2017 | 44 | 44 | 100.0 | | | | |
| 2018 | 41 | 41 | 100.0 | | | | |
| Totals | 285 | 285 | 100.0 | | | | |

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> |
|--------------------|--------------|---------------|-----------------|-----------------|-------------------|----------------|------------------|
| Pug | | | | | | | |
| 2009 | 5 | 3 | 60.0 | | | 2 | 40.0 |
| 2010 | 20 | 13 | 65.0 | 1 | 5.0 | 6 | 30.0 |
| 2011 | 45 | 29 | 64.4 | 3 | 6.7 | 13 | 28.9 |
| 2012 | 61 | 39 | 63.9 | 6 | 9.8 | 16 | 26.2 |
| 2013 | 44 | 23 | 52.3 | 6 | 13.6 | 15 | 34.1 |
| 2014 | 64 | 37 | 57.8 | 9 | 14.1 | 18 | 28.1 |
| 2015 | 74 | 40 | 54.1 | 9 | 12.2 | 25 | 33.8 |
| 2016 | 94 | 47 | 50.0 | 15 | 16.0 | 32 | 34.0 |
| 2017 | 81 | 39 | 48.2 | 8 | 9.9 | 34 | 42.0 |
| 2018 | 69 | 36 | 52.2 | 11 | 15.9 | 22 | 31.9 |
| Totals | 557 | 306 | 54.9 | 68 | 12.2 | 183 | 32.9 |

Dentition Database

| <i>Report year</i> | <i>Cases</i> | <i>Normal</i> | <i>% Normal</i> | <i>Abnormal</i> | <i>% Abnormal</i> |
|--------------------|--------------|---------------|-----------------|-----------------|-------------------|
| Pug | | | | | |

Dentition Database

| <i>Report year</i> | <i>Cases</i> | <i>Normal</i> | <i>% Normal</i> | <i>Abnormal</i> | <i>% Abnormal</i> |
|--------------------|--------------|---------------|-----------------|-----------------|-------------------|
| 2016 | 11 | 11 | 100.0 | | |
| 2018 | 6 | 6 | 100.0 | | |
| Totals | 17 | 17 | 100.0 | | |

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> |
|--------------------|--------------|---------------|-----------------|-----------------|-------------------|---------------------|-----------------------|
| Pug | | | | | | | |
| 2012 | 1 | 1 | 100.0 | | | | |
| 2013 | 28 | 10 | 35.7 | 3 | 10.7 | 15 | 53.6 |
| 2014 | 29 | 15 | 51.7 | 2 | 6.9 | 12 | 41.4 |
| 2015 | 27 | 15 | 55.6 | 2 | 7.4 | 10 | 37.0 |
| 2016 | 41 | 26 | 63.4 | 1 | 2.4 | 14 | 34.2 |
| 2017 | 36 | 24 | 66.7 | | | 12 | 33.3 |
| 2018 | 60 | 13 | 21.7 | 3 | 5.0 | 44 | 73.3 |
| Totals | 222 | 104 | 46.9 | 11 | 5.0 | 107 | 48.2 |

Legg-Calve-Perthes

| <i>Report year</i> | <i>Cases</i> | <i>Normal</i> | <i>% Normal</i> | <i>Abnormal</i> | <i>% Abnormal</i> |
|--------------------|--------------|---------------|-----------------|-----------------|-------------------|
| Pug | | | | | |
| 2003 | 1 | 1 | 100.0 | | |
| 2004 | 1 | 1 | 100.0 | | |
| 2005 | 35 | 35 | 100.0 | | |
| 2006 | 1 | 1 | 100.0 | | |
| 2008 | 1 | 1 | 100.0 | | |
| 2009 | 3 | 3 | 100.0 | | |
| 2010 | 4 | 4 | 100.0 | | |
| 2011 | 1 | | | 1 | 100.0 |
| 2012 | 2 | 2 | 100.0 | | |
| 2013 | 3 | 3 | 100.0 | | |
| 2014 | 12 | 12 | 100.0 | | |
| 2015 | 5 | 5 | 100.0 | | |
| 2016 | 11 | 11 | 100.0 | | |
| 2017 | 13 | 13 | 100.0 | | |
| 2018 | 25 | 25 | 100.0 | | |
| Totals | 118 | 117 | 99.2 | 1 | 0.9 |

Necrotizing Meningoencephalitis

| <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> |
|--------------------|--------------|---------------|-----------------|-----------------|-------------------|----------------|------------------|
| Pug | | | | | | | |
| 2010 | 1 | | | | | 1 | 100.0 |
| 2011 | 174 | 137 | 78.7 | 2 | 1.2 | 35 | 20.1 |
| 2012 | 44 | 31 | 70.5 | 3 | 6.8 | 10 | 22.7 |
| 2013 | 56 | 43 | 76.8 | 1 | 1.8 | 12 | 21.4 |
| 2014 | 35 | 26 | 74.3 | | | 9 | 25.7 |

Necrotizing Meningoencephalitis

| <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> |
|--------------------|--------------|---------------|-----------------|-----------------|-------------------|----------------|------------------|
| 2015 | 64 | 46 | 71.9 | | | 18 | 28.1 |
| 2016 | 46 | 31 | 67.4 | | | 15 | 32.6 |
| 2017 | 40 | 35 | 87.5 | | | 5 | 12.5 |
| 2018 | 59 | 47 | 79.7 | | | 12 | 20.3 |
| Totals | 519 | 396 | 76.3 | 6 | 1.2 | 117 | 22.5 |

Patella

| <i>Report year</i> | <i>Cases</i> | <i>Normal</i> | <i>% Normal</i> | <i>Abnormal</i> | <i>% Abnormal</i> |
|--------------------|--------------|---------------|-----------------|-----------------|-------------------|
| Pug | | | | | |
| 1994 | 1 | 1 | 100.0 | | |
| 1995 | 2 | 2 | 100.0 | | |
| 1996 | 7 | 5 | 71.4 | 2 | 28.6 |
| 1997 | 16 | 13 | 81.3 | 3 | 18.8 |
| 1998 | 22 | 21 | 95.5 | 1 | 4.6 |
| 1999 | 11 | 11 | 100.0 | | |
| 2000 | 26 | 25 | 96.2 | 1 | 3.9 |
| 2001 | 19 | 18 | 94.7 | 1 | 5.3 |
| 2002 | 32 | 32 | 100.0 | | |
| 2003 | 21 | 19 | 90.5 | 2 | 9.5 |
| 2004 | 56 | 49 | 87.5 | 7 | 12.5 |
| 2005 | 37 | 35 | 94.6 | 2 | 5.4 |
| 2006 | 23 | 19 | 82.6 | 4 | 17.4 |
| 2007 | 18 | 17 | 94.4 | 1 | 5.6 |
| 2008 | 18 | 18 | 100.0 | | |
| 2009 | 22 | 22 | 100.0 | | |
| 2010 | 34 | 33 | 97.1 | 1 | 2.9 |
| 2011 | 46 | 45 | 97.8 | 1 | 2.2 |
| 2012 | 48 | 47 | 97.9 | 1 | 2.1 |
| 2013 | 73 | 70 | 95.9 | 3 | 4.1 |
| 2014 | 63 | 60 | 95.2 | 3 | 4.8 |
| 2015 | 53 | 51 | 96.2 | 2 | 3.8 |
| 2016 | 78 | 73 | 93.6 | 5 | 6.4 |
| 2017 | 92 | 91 | 98.9 | 1 | 1.1 |
| 2018 | 83 | 75 | 90.4 | 8 | 9.6 |
| Totals | 901 | 852 | 94.6 | 49 | 5.4 |

Primary Lens Luxation

| <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> |
|--------------------|--------------|---------------|-----------------|-----------------|-------------------|----------------|------------------|
| Pug | | | | | | | |
| 2013 | 1 | | | | | 1 | 100.0 |
| 2018 | 4 | 4 | 100.0 | | | | |
| Totals | 5 | 4 | 80.0 | | | 1 | 20.0 |

Pyruvate Kinase Deficiency

| <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> |
|--------------------|--------------|---------------|-----------------|-----------------|-------------------|----------------|------------------|
| Pug | | | | | | | |
| 2014 | 6 | 6 | 100.0 | | | | |
| 2015 | 8 | 8 | 100.0 | | | | |
| 2016 | 5 | 5 | 100.0 | | | | |
| 2017 | 15 | 15 | 100.0 | | | | |
| 2018 | 25 | 25 | 100.0 | | | | |
| Totals | 59 | 59 | 100.0 | | | | |

Shoulder

| <i>Report year</i> | <i>Cases</i> | <i>Normal</i> | <i>% Normal</i> | <i>Abnormal</i> | <i>% Abnormal</i> |
|--------------------|--------------|---------------|-----------------|-----------------|-------------------|
| Pug | | | | | |
| 2016 | 1 | 1 | 100.0 | | |
| Totals | 1 | 1 | 100.0 | | |

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> |
|--------------------|--------------|---------------|-----------------|-----------------|-------------------|------------------|--------------------|
| Pug | | | | | | | |
| 1998 | 1 | | | | | 1 | 100.0 |
| 2001 | 2 | 1 | 50.0 | | | 1 | 50.0 |
| 2002 | 2 | 1 | 50.0 | | | 1 | 50.0 |
| 2003 | 2 | 2 | 100.0 | | | | |
| 2004 | 4 | 3 | 75.0 | | | 1 | 25.0 |
| 2005 | 2 | 2 | 100.0 | | | | |
| 2006 | 5 | 5 | 100.0 | | | | |
| 2008 | 2 | 2 | 100.0 | | | | |
| 2011 | 4 | 3 | 75.0 | | | 1 | 25.0 |
| 2012 | 2 | 2 | 100.0 | | | | |
| 2013 | 2 | 1 | 50.0 | | | 1 | 50.0 |
| 2015 | 2 | 2 | 100.0 | | | | |
| 2016 | 1 | 1 | 100.0 | | | | |
| 2017 | 4 | 2 | 50.0 | 1 | 25.0 | 1 | 25.0 |
| 2018 | 3 | 1 | 33.3 | | | 2 | 66.7 |
| Totals | 38 | 28 | 73.7 | 1 | 2.6 | 9 | 23.7 |

Tracheal Hypoplasia

| <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> |
|--------------------|--------------|---------------|-----------------|-----------------|-------------------|------------------|--------------------|
| Pug | | | | | | | |
| 2012 | 1 | 1 | 100.0 | | | | |
| 2016 | 3 | 3 | 100.0 | | | | |
| 2017 | 1 | 1 | 100.0 | | | | |
| 2018 | 10 | 8 | 80.0 | 2 | 20.0 | | |
| Totals | 15 | 13 | 86.7 | 2 | 13.3 | | |