**Supplementary Table 1. Clinical and laboratory data from 92 dogs with neuroangiostrongyliasis** **(2010-2020).**

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| --- | --- | --- | --- | --- | --- | --- | --- |
| Case | Age | Breed/Gender/Signs/Imaging/Date | CSF cell count  (cells/µL) | Eosinophils  (%) | Serology  (ELISA titre on CSF and/or serum) | PCR Result/  CT value  (200 µL CSF unless otherwise stated) | IDEXX Angio Detect™#\*\* |
| 1 | 12 years | Labrador Retriever  F  26/1/2010 | 5,168 | 95% | 6,400 | n/a | negative |
| 2 | n/a | n/a  12/12/2010 | n/a | n/a | <100 | positive  31.1  (< 50 µL) | n/a |
| 3 | 4 years | Kerry Blue terrier  FN  14/1/2011 | 14,690 | 85% | ≥12,800 | positive  29.1 | negative |
| 4 | 9 months | Golden Retriever  MN  3/05/2011 | 19,970 | 93% | ≥12,800 | positive  33.4 | n/a |
| 5 | 1 year | Staffordshire bull terrier  MN  13/5/2011 | 1,000 | 82% | 200 | positive  29.8 | n/a |
| 6 | 1 year | Staffordshire bull terrier  M  3/6/2011 | 146,150 | 92% | 6,400 | positive  27.0  (100 µL) | n/a |
| 7 | 3 years | Golden Retriever  M  30/6/2011 | 215 | 15% | 400 | negative | n/a |
| 8 | 4 months | Staffordshire bull terrier cross  M  28/03/12 | 3,630 | 64% | 100 or 200 | positive  23.4 | n/a |
| 9 | 2 years | Labrador retriever  MN  2/4/12 | 6,570 | 90% | 6,400 | positive  37.6 | n/a |
| 10 | 2 months | Bull terrier  M  30/4/2012 | 1,553  (cisternal)  8,340  (lumbar) | 80%  94% | 400 | positive  31.6 | n/a |
| 11 | 5 months | Poodle  MN  9/5/2012 | 3,140  (cisternal)  63,180  (lumbar) | 83%  83% | 200  (cisternal)  1,600  (lumbar) | positive  29.9 | n/a |
| 12 | 12 months | Poodle Cross  MN  22/06/12 | 16,530 | 95% | 1,600 | positive  25.8 | n/a |
| 13 | 11 months | Staffordshire bull terrier cross  M  5/7/2012 | 3,340 | 95% | 3,200 | negative | n/a |
| 14 | 4 months | Portuguese Water dog  FN  10/9/2012 | 4,470 | 86% | 400 | positive  35.5 | n/a |
| 15 | 1 year | Pomeranian cross  M  20/3/2013 | 10,080 | 88% | 800 | positive  35.1 | n/a |
| 16 | 4 months | Staffordshire bull terrier  M  18/6/2013 | 4,020 | 83% | ≥12,800 | positive  27.3 | n/a |
| 17 | 6 months | Labrador retriever  MN  30/7/2013 | 2,559 | 75% | 6,400 | positive  34.4 | n/a |
| 18 | 10 weeks | Airedale Terrier  M  24hr history of acute onset lethargy, shuffling gait and painful when touched. Mild pyrexia (39.3) and multiple joint/spinal pain on exam. Peripheral eosinophilia.  6/3/2014 | 2,550 | dominated by eosinophils | <100 | positive  26.0 | n/a |
| 19 | 6 years | Jack Russel terrier  FN  14/4/2014 | 5,550 | 90% | 3,200 | positive  31.7 | n/a |
| 20 | 5 months | Rottweiler  F  23/4/2014 | 4,130-12,195 | 70-78% | ≥12,800 | positive  38.1 | n/a |
| 21 | 7 months | German Shepherd  MN  30/4/2014 | 9,050 | 90% | ≥12,800 | positive  34.0  (100 µL) | n/a |
| 22 | 4 months | Cocker Spaniel  M  16/5/2014 | 2,600 | 82% | 100 or 200 | positive  33.1 | n/a |
| 23 | 8 months | Labrador retriever  F  22/4/2015 | 9,340 | 86% | 100 | positive  26.7 | n/a |
| 24 | 5 years | Tibetan Spaniel  FN  5/1/2015 | 1,143 | Low numbers of eosinophils | 3,200 | n/a | negative |
| 25 | 2 months | Golden Retriever  FN  15/05/2015 | 45 | 33% | <100 | positive  27.7 | n/a |
| 26 | 14 years | Poodle cross  MN  22/05/2015 | 573 | 84% | n/a | n/a | n/a |
| 27 | 2 months | German Shepherd  M  25/05/2015 | 8,490 | 90% | ≥12,800 | positive  33.8 | n/a |
| 28 | 3 months | Staffordshire bull terrier  M  9/7/2015 | 3,860  (cisternal)  11,430  (lumbar) | 70%  80% | 400 | positive  29.4 | n/a |
| 29 | 10 years | ‘Bull Arab’  MRI showed intramedullary changes T10-T13 with streaky contrast enhancement post-gadolinium  FN  9/9/2015 | n/a | 44% | n/a | n/a | n/a |
| 30 | 3 months | Miniature Schnauzer  M  16/09/2015 | 5,960-5,040 | 67-84% | 100 or 200 | positive  30.2 | n/a |
| 31 | 3 months | Miniature Schnauzer  M  13/2/2016 | 5,940 | 80% | 100 | positive  25.7 | n/a |
| 32 | 4 months | Miniature Schnauzer  Presented with marked cervical pain and some back pain. MRI showed myelitis and meningitis.  M  19/02/16 | 8,280 | 83% | <100 | positive  31.1 | n/a |
| 33 | 4 months | Labrador retriever  M  24/03/2016 | 640 | 83% | ≥12,800 | positive  33.9 | n/a |
| 34 | 4 years | Maltese  FN  22/04/16 | 7,020 | 93% | ≥12,800 | positive  28.3 | n/a |
| 35 | 2 months | Labrador retriever  M  29/4/2016 | 33,850 | 88% | 100 | positive  30.9 | n/a |
| 36 | 3 months | Labrador retriever  F  9/5/2016 | 5,280 | 89% | <100 | positive  30.8 | n/a |
| 37 | 11 years | Border Terrier  Presented with urinary incontinence and hindlimb long tract signs; MRI showed swelling of the lumbar cord with no changes in the brain.  MN  12/5/2016 | 394 | 94% | ≥12,800 (CSF)  400 (serum) | n/a | negative |
| 38 | 8 months | Jack Russel terrier  FN  17/5/2016 | 2,160 | 93% | ≥12,800 | positive  27.5  (50 µL) | n/a |
| 39 | 4 months | Golden retriever Poodle cross (Groodle)  F  23/6/2016 | 5,130 | 92% | 100 | positive  31.1 | n/a |
| 40 | 5 months | French bulldog  M  26/7/2016 | 464 | 90% | <100 | negative  (20 µL) | n/a |
| 41 | 5 months | Spaniel Poodle cross (Spoodle)  F  16/3/2017 | 3,110 | 80% | ≥12,800 | negative | n/a |
| 42 | 3 years | Labrador Retriever  MN  24/3/2017 | 2,700 | 81% | n/a | n/a  positive  with Vetnostics PCR | n/a |
| 43 | 5 months | Boston terrier  Presented with posterior ataxia & weakness neck pain and strabismus. MRI identified multifocal lesions of the brain and left cervical region.  MN  5/4/2017 | 196 | Dominated by eosinophils | Positive  (actual result n/a) | n/a | n/a |
| 44 | 15 months | Boston terrier  MN  10/4/2017 | 5,220 | 87% | n/a | n/a | n/a |
| 45 | 9 years | Kelpie  Presented with non-specific pain - query spinal pain.  FN  20/4/2017 | 1,919 | 84% | n/a | n/a | n/a |
| 46 | 11 weeks | Rottweiler  MN  23/5/2017 | 311 | Dominated by eosinophils | n/a | n/a  positive\*  with Vetnostics PCR | n/a |
| 47 | 7 weeks | Australian Bulldog  Presented with neck and lumbosacral pain.  M  31/5/2017 | 10,935 | Dominated by eosinophils | n/a | n/a  positive  29.6  with Vetnostics PCR | n/a |
| 48 | 5 years | French Bulldog  FN  Presented for head tremors (included in error).  MRI unremarkable  20/6/2017 | 2.2  (cisternal) | 0% | <100 | positive  23.8 | n/a |
| 49 | 3 months | Cavalier King Charles spaniel poodle cross (Cavoodle)  M  27/7/2017 | 12,970 | 63% | <100 | positive  27.7 | n/a |
| 50 | 10 months | Great Dane  FN  1/8/2017 | 197 | 90% | ≥12,800 | negative | n/a |
| 51 | 14 months | French Bulldog  Presented with lethargy and poor appetite.  Meningo-encephalitis on MRI.  M  24/4/2018 | 2,943 | 80% | 3,200 (CSF)  800 (serum) | n/a  negative  with Vetnostics PCR | n/a |
| 52 | 4 months | Australian Bulldog  M  26/4/2018 | 1,026  (lumbar) | 83% | ≥12,800 | n/a  positive  31.1  with Vetnostics PCR | n/a |
| 53 | 2 months | St. Groodle  Presented with soft signs for ~ 1-2 days then acute severe hind limb paresis.  F  5/5/2018 | 5,265 | 73% | n/a | n/a  negative  with Vetnostics PCR | n/a |
| 54 | 5 months | Labrador retriever  Presented with hind limb weakness, fever, flaccid tail and peripheral eosinophilia.  F  15/5/2018 | 4,120 | 77% | 400 (CSF)  400 (serum) | n/a  negative  with Vetnostics PCR | n/a |
| 55 | 17 months | Boston terrier  Presented with acute non-ambulatory tetraparesis over 24 hours.  MN  15/5/2018 | 41,000 | 65% | 3,200 (CSF)  800 (serum) | n/a  negative  with Vetnostics PCR | n/a |
| 56 | 4 months | Kelpie cross  Presented with thoracolumbar and neck pain, hindleg paresis and conscious proprioceptive deficits.  M  14/6/2018 | 6,480 | 79% | ≥12,800 (CSF)  ≥12,800 (serum) | n/a  positive  35.2  with Vetnostics PCR | n/a |
| 57 | 4 months | Labrador retriever  F  17/7/2018 | 1,000 | 89% | ≥12,800 | positive  30.1 | n/a |
| 58 | 1 year | Jack Russel Terrier cross  Presented with a swollen eye, neck pain, peripheral eosinophilia, then 4 weeks later cortical blindness, tetraparesis and ataxia and eventually seen at SUVTH where MRI showed extensive cortical changes.  MN  28/3/2019 | 193 | 89% | 800 | n/a | n/a |
| 59 | 1 year | Labrador retriever  Presented with acute onset neck pain; good response to dexamethasone given 1 week ago, then recurred.  FN  1/4/2019 | 3,420 | 81% | ≥12,800 | negative | n/a |
| 60 | 5 months | Logotto  M  2/4/2019 | 14,400 | 89% | ≥12,800 | positive  32.1  negative with Vetnostics PCR | n/a |
| 61 | 4 months | American Staffordshire Bull terrier  Presented with neck pain, inappetence, fever.  F  8/4/2019 | 2,900 | 85% | 400 | positive  28.3  positive  34.2  with Vetnostics PCR | n/a |
| 62 | 6 months | French bulldog  Presented with lethargy, dullness, uncomfortable.  FN  15/4/2019 | 69 | 39% | <100 | negative  negative with Vetnostics PCR | n/a |
| 63 | 4 years | Maltese cross  MN  24/4/2019 | 1 | 1% | <100 | positive  27.7  negative with Vetnostics PCR |  |
| 64 | 3 months | Border Collie  Presented with acute hindlimb ataxia, thoracolumbar pain, eosinophilia.  M  17/4/2019 | 4,320  (lumbar) | 82% | 200 | positive  34.0  negative with Vetnostics PCR | n/a |
| 65 | 4 months | Border Collie  Presented with neck pain and lethargy.  M  20/4/2019 | 1,800  (lumbar) | 83% | 1,600 | positive  37.7  negative with Vetnostics PCR | n/a |
| 66 | Various ages;  2 months | Multiple Labrador retriever pups  Presented with spinal pain, fever, hindlimb paraparesis and ataxia, lethargy.  24/4/2019 | 3,780 | 89% | 100 | positive  27.3  negative with Vetnostics PCR | n/a |
| 67 | 3 months | Golden Retriever  Presented with hindlimb weakness over 3 days.  M  26/4/2019 | 5,040 | 78% | 200 | positive  30.0  negative with Vetnostics PCR | n/a |
| 68 | 3 months | Staffordshire Bull terrier  Presented with 10-day history of pain when picked up, paraparesis and ataxia.  M  29/4/2019 | 3,200 | 98% | <100 | negative | n/a |
| 69 | 4 months | French bulldog  Presented with quadriparesis, hindlimb proprioceptive ataxia, no spinal pain, increased myotatic reflexes in hindlimbs.  M  3/5/2019 | 15,705 | 90% | ≥12,800 | positive  31.6  negative with Vetnostics PCR | n/a |
| 70 | 4 months | Groodle  Presented with ataxia and back pain.  M  17/5/2019 | 38,200 | 82% | 3,200 | positive  31.5  negative with Vetnostics PCR | n/a |
| 71 | 5 months | Miniature Schnauzer  F  Neck pain and lethargy.  12/6/2019 | 4,600 | 80% | <100 | positive  36  negative with Vetnostics PCR |  |
| 72 | 4 months | Labrador Retriever  Fever, thoracolumbar back pain, pelvic limb paresis and conscious proprioceptive deficits.  F  25/6/19 | 2,790 | 75% | 400 | positive  31.0  negative with Vetnostics PCR | n/a |
| 73 | 9 weeks | Labrador retriever  Presented with hindlimb paresis and ataxia, non-ambulatory, diffuse spinal hyperaesthesia, urinary incontinence (LMN in type), MRI normal.  M  17/5/2019 | 2,420 | >35%  (some cells condensed) | <100 (CSF)  200 (serum) | n/a | n/a |
| 74 | 4 months | Golden cross Labrador retriever  Ate a slug on 22nd or 23rd June and developed signs on 1st July consisting of spinal hyperesthesia, paresis (non-ambulatory), urinary incontinence, loss of tail tone; mild peripheral eosinophilia.  F  1/7/2019 | 24,840 | 86% | 1,600 (CSF)  400 (serum) | positive  26.3  positive  32.4  using Vetnostics PCR | n/a |
| 75 | 11 weeks | Ridgeback  M  3/7/2019 | 7,920 | 90% | 200 | positive  24.0  positive  30.9  using Vetnostics PCR | n/a |
| 76 | 3 months | Jack Russel terrier cross  Presented with clinical signs consisting of spinal hyperesthesia, paresis (ambulatory), ataxia, urinary incontinence.  F  3/7/2019 | 1,238 | 79% | n/a | n/a | n/a |
| 77 | 3 months | American Staffordshire Bull terrier  F  17/7/2019 | 8,640 | 69% | n/a | n/a | n/a |
| 78 | 11 months | Labrador Retriever  MN  Acute onset neck pain.  12/8/2019 | 8,460 | 80% | 200 | positive  36.0 | n/a |
| 79 | 9 months | Mastiff  FN  Uncomfortable, painful at multiple sites along the back, proprioceptive deficits left hind leg, generally hyperaesthetic.  CT largely unremarkable.  26/2/2020 | 1,680  (lumbar) | 90% | n/a | positive  39.5 (CSF)  Negative for blood and urine  Vetnostics PCR negative | n/a |
| 80 | 5 months | Border Collie  M  4/03/2020 | 3,940 | 86% | n/a | positive  36.8  Vetnostics PCR negative | n/a |
| 81 | 7 months | Dalmatian  Hind limb incoordination worse on the right, lumbosacral and tail pain  CT normal; MRI showed focal ill-defined L2- 3 T2 hyperintensity, no compressive lesions  M  3/3/2020 | 14,411 | 92% | n/a | positive  32.2 (CSF)  Negative for blood and urine | n/a |
| 82 | 9 weeks | Labrador Retriever  F  4/3/2020 | 11,580  (lumbar) | 84% | n/a | positive  28.4 | n/a |
| 83 | 3 months | Poodle Cross  MN  Back pain, pyrexia, possibly snail ingestion.  16/3/2020 | 14,130 | 86% | n/a | n/a | n/a |
| 84 | 3 months | American Bulldog  F  Acute onset of pelvic limb weakness.  19/3/2020 | 13,365 | 84% | n/a | n/a | n/a |
| 85 | 6 months | English Bull terrier  M  Back pain not responsive to codeine, then thoracolumbar pain and hind limb ataxia with conscious proprioceptive deficits in the hind limbs.  31/3/2020 | 1,320 | 91% | n/a | n/a | n/a |
| 86 | 3 months | German Shorthaired pointer  F  4/4/2020 | 4,530 | 82% | n/a | n/a | n/a |
| 87 | 9 years | Staffordshire bull terrier  MN | n/a | n/a | 6,400 | n/a | n/a |
| 88 | 8 years | Cross-bred  FN | n/a | n/a | 3,200 | n/a | n/a |
| 89 | 7 years | Staffordshire bull terrier  MN | n/a | n/a | 3,200 | n/a | n/a |
| 90 | 9 years | Staffordshire bull terrier  MN | n/a | n/a | 3,200 | n/a | n/a |
| 91 | 8 years | Pug  M | n/a | n/a | 6,400 | n/a | negative |
| 92 | ? | Rottweiler  ?? | n/a | n/a | 3,200 | n/a | negative |

\*Negative PCR on blood 10 days later

# Antigen testing using the IDEXX point-of-care immunochromatography test designed for *A vasorum* (Angio Detect™)

MN Male neutered; FN Female neutered; M entire male; F entire female