

## Cavalier King Charles Spaniel MRI evaluation report

Pedigree name:

Registration number:

Gender: **Female**

Microchip number:

Colour: **Ruby**

Date of the MRI scan: **16-3-2018**

Date of birth: **15-12-2016**

Age at scanning: **1,25 years**

Owner:

According to the submission form there were no neurological signs.

Age category:

c

Based on the MRI scan send in the following grading is applicable:

**Dutch Kennelclub / CCN / BVA / Kennelclub grading: CM Grade 2c / SM Grade 0c**

### Explanation:

|            |   |            |  |
|------------|---|------------|--|
| CM grade 0 | No herniation cerebellum  | SM grade 0 | No dilatation of the central canal or syrinx visible                     |
| CM grade 1 | Herniation of the cerebellum but with minimal blockage of the CSF flow  | SM grade 1 | Dilatation of the central canal up to 2 mm                               |
| CM grade 2 | Herniation of the cerebellum and with complete blockage of the CSF flow | SM grade 2 | Dilatation of the central canal of 2 mm or more, or a syrinx is visible. |

Additional information on the ventricular system get grade 0. The middle ear on the left side showed 0 and the middle ear on the right side 0.

Concerning (microchip) artefacts the grading is 1,5. Any grading above 1 means that the quality of the scan is of such a quality that the final result could not be estimated and that the current grading could be an underestimate of the real situation.

### Explanation:

| Ventricular system                      | Artefacts?                 | Middle ear   |
|---|----------------------------|--|
| 0 = no abnormalities                    | 0 = none                   | 0 = not visible                                    |
| 1 = dilatation of the 4th ventricle     | 1 = not severe             | 1 = only a limited amount of material is visible   |
| 2 = mild dilatation                     | 2 = too severe to evaluate | 2 = there is material visible                      |
| 3 = severe dilatation of the ventricles |                            | 3 = the bullae are completely filled with material |

Signed by

**Dr. Paul Mandigers**

DVM, PhD, Diplomate ECVN  
Diplomate RNVA Internal Medicine  
European Specialist Veterinary Neurology EBVS

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Extra information concerning the MRI scan. This information is additional information and could be of use for breeding selection.

*Utrecht grading of the herniation is grade **2** and the shape of the cerebellum get grade **0***

| Chiari malformation grading   | Shape   |
|---|---|
| 0 = grade 0   | 0 = not abnormal                                  |
| 1 = grade 1 as the UK system  | 1 = the cerebellum is clover leaf shaped          |
| 2 = grade 2 as the UK system  | 2 = the cerebellum is flattened at the front side |
| 3 = grade 2 and added to this the herniation and indentation is clearly visible | 3 = the cerebellum is flattened at the hind side  |
| 4 = grade 2 and added to this the herniation and indentation is severe          | 4 = Subtentorial herniation is seen               |
|   | 5 = Abnormal shape not listed above               |

*Utrecht information concerning the spinal cord:*

The visibility of the central canal on the sagittal T2 weighted and transverse T1 weighted images gets grade **0**, whereas the sagittal T1 weighted images gets grade **0**. The shape of the dilatation or syrinx gets grade **0**. We could see the central canal according to grade **0**. The maximum internal diameter of the dilatation measures **0** mm.

| Visibility sagittal T2 & transversal T1 | Visibility sagittal T1         | Shape of the central canal or the syrinx | Visible from .... To ..... | Diameter in millimetres |
|---|--------------------------------|--|----------------------------|-------------------------|
| 0 = not visible                         | 0 = not visible on T1          | 0 = not or circular                      | 0 = not visible            |                         |
| 1 = visible sagittal T2                 | 1 = visible on the T1 sagittal | 1 = presyrinx                            | 1 = sagittal T1 from to    |                         |
| 2 = visible S-T2 en TV T1               |                                | 2 = CC open to dorsal                    | 2 = sagittal T2 from to    |                         |
| 3 = visible 1-2 mm TV T1                |                                | 3 = CK asymmetrical to aside             |                            |                         |
| 4 = visible 2-3 mm TV T1                |                                | 4 = separate syrinx                      |                            |                         |
| 5 = visible 3-4 mm TV T1                |                                |  |                            |                         |
| 6 = visible > 4 mm TV T1                |                                |  |                            |                         |

Perviously used UK classification: **C**

Concerning (microchip) artefacts the grading is **1,5**.

Signed by

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