Table S1: Overview of the breed, age, sex, cause of death, number of osteochondral lesions, site of lesions and severity of lesions in foals examined.

| Foal | Breed | Age in days | Sex   | Cause of Death                                      | Facet surface affected | Number of OC latens | Number of OC manifesta |
|------|-------|-------------|-------|-----------------------------------------------------|------------------------|---------------------|------------------------|
| 1    | RDSH  | 0           | Female| Intra Uterine Death (dam died due to typhlocolitis) | C5LCR T1RCA            | 1                   | 1                      |
| 2    | RDSH  | 0           | Female| Herpes Viral Hepatitis                               | C3RCA                  | 0                   | 1                      |
| 3    | RDSH  | 0           | Male  | Dystocia                                             | C3RCA C3RCA C4LCR C6LCR C7LCR C7LCA C7RCA | 2                   | 5                      |
| 4    | RDSH  | 0           | Male  | Dystocia                                             | C2RCA C4RCA C4LCA C5RCA C5LCA C6LCR C6RCA C6LCA | 7                   | 2                      |
|   | RDSH | 1 | Female | Herpes Viral pneumonia and hepatitis | C5LCR | C6RCR | C6LCR |   |   |
|---|------|---|--------|-----------------------------------|-------|-------|-------|---|---|
| 5 |      |   |        |                                   | 2     | 1     |       |   |   |
| 6 |      |   | Female | Herpes Viral Pneumonia            | C2LCA | C3RCR | C4RCA | C6LCR| C6RCR| C7RCR| C7LCA| 5 | 2 |
| 7 |      |   | Female | Actinobacillus equuli sepsis       |       |       |       |   |   |     |   |   |   |
| 8 |      |   | Male   | Perforative gastritis; Bronchopneumonia | C6RCR |       |       |   |   |     |   |   | 1 |
|   |      |   |        |                                   | C7LCA |       |       |   |   |     |   |   | 1 |
|    | Location | Age | Sex | Condition | Cranial Stigmata |
|----|----------|-----|-----|-----------|-----------------|
| 9  | RDSH     | 1   | Male| Subepiglottic cyst with resultant dyspnoea and dysphagia | C2LCA, C2RCA, C3LCR, C3RCR, C4RCR, C4LCA, C5LCR, C5RCR, C5LCA, C6LCA, C6LCA, C6RCA, C7LCR, C7RCR, C7LCA, C7RCA, T1LCA, T1RCA, T2LCR |
| 10 | Westphalian horse | 1 | Male | Neonatal Asphyxia Syndrome; Sepsis | – |
| 11 | RDSH     | 2   | Male| Euthanised due to Malformation Front | C6LCR |
| #  | Lab Code | Age | Sex  | Diagnosis                        | Genotype | Legs | Comments |
|----|----------|-----|------|----------------------------------|----------|------|----------|
| 12 | RDSH     | 3   | Male | Bronchointerstitial Pneumonia    |          | 6    |          |
|    |          |     |      |                                  | C3LCA    |      |          |
|    |          |     |      |                                  | C4RCR    |      |          |
|    |          |     |      |                                  | C5LCR    |      |          |
|    |          |     |      |                                  | C6RCA    |      |          |
|    |          |     |      |                                  | T1LCR    |      |          |
|    |          |     |      |                                  | T1LCA    |      |          |
|    |          |     |      |                                  | T2LCR    |      |          |
| 13 | RDSH     | 3   | Female | White Muscle Disease; Enteritis |          | 3    |          |
|    |          |     |      |                                  | C3RCR    |      |          |
|    |          |     |      |                                  | C3LCR    |      |          |
|    |          |     |      |                                  | C5LCR    |      |          |
|    |          |     |      |                                  | C5RCR    |      |          |
|    |          |     |      |                                  | C7RCR    |      |          |
|    |          |     |      |                                  | C7LCR    |      |          |
|    |          |     |      |                                  | T1LCR    |      |          |
|    |          |     |      |                                  | T1RCR    |      |          |
|    |          |     |      |                                  | T1RCA    |      |          |
|    |          |     |      |                                  | T1LCA    |      |          |
| 14 | RDSH     | 4   | Male | Interstitial Pneumonia          |          | 3    |          |
|    |          |     |      |                                  | C3RCR    |      |          |
|    |          |     |      |                                  | C5LCR    |      |          |
|    |          |     |      |                                  | C7LCA    |      |          |
|    |          |     |      |                                  | T2LCR    |      |          |
| 15 | RDSH     | 5   | Male | Enteritis                        |          | 5    |          |
|    |          |     |      |                                  | C3LCR    |      |          |
|    |          |     |      |                                  | C5RCR    |      |          |
|   | RDSH | 6 | Female | Interstitial Pneumonia | C2RCA  | C3LCA  | 1  | 3  |
|---|------|---|--------|-----------------------|--------|--------|----|----|
| 16|      |   |        |                       |        |        |    |    |
|   | RDSH | 7 | Female | Enteritis             | C3RCA  | C3LCA  | 4  | 3  |
| 17|      |   |        |                       |        |        |    |    |
|   | RDSH | 8 | Male   | Herpes Viral Pneumonia| C3LCA  |        | 1  | 0  |
| 18|      |   |        |                       |        |        |    |    |
|   | RDSH | 13| Male   | Herpes Viral Pneumonia| C3RCA  | C3LCA  | 1  | 3  |
| 19|      |   |        |                       |        |        |    |    |
|   | RDSH | 18| Female | Euthanised due to Malformation Front Legs | C6LCA  | C7RCA  | 1  | 4  |
| 20|      |   |        |                       |        |        |    |    |
| ID | Facility | Age | Sex  | Condition      | C4   | C6   | C7   | C8   | T1   |
|----|----------|-----|------|----------------|------|------|------|------|------|
| 21 | RDSH     | 18  | Female | Bladder Rupture | C3RCR | C6RCR | C6LCR | C7LCA |      |
| 22 | RDSH     | 28  | Male  | Omphalitis     | C3RCR | C3LCR | C5RCR | C5LCA | C6LCR |
| 23 | Zangersheide Horse | 47  | Male  | Hydrocephalus  | C3RCR | C5RCR | C5LCA | C7LCR | T1LCA |
| 24 | RDSH     | 48  | Male  | Interstitial Pneumonia | C2RCA | C3RCR | C6LCA | C7RCR | C7LCA |
|   | RDSH |   | Male  | Diagnosis                      | C7RCA |   |   |
|---|------|---|-------|--------------------------------|-------|---|---|
| 25| RDSH | 53| Male  | Myocarditis                    | C3LCA|   |   |
|   |      |   |       |                                | C4LCR|   |   |
|   |      |   |       |                                | C4RCR|   |   |
|   |      |   |       |                                | C6LCA|   |   |
|   |      |   |       |                                | T1RCA|   |   |
| 26| RDSH | 54| Male  | Rhodococcal Pneumonia          | C3LCR|   |   |
|   |      |   |       |                                | C6RCR|   |   |
| 27| RDSH | 83| Male  | Typhlocolitis                   | C7RCR|   |   |
| 28| RDSH | 134| Male  | Bladder Rupture                 | C5LCA|   |   |
|   |      |   |       |                                | C5RCA|   |   |
|   |      |   |       |                                | C6LCR|   |   |
|   |      |   |       |                                | C7LCR|   |   |
| 29| RDSH | 149| Female| Euthanised due to a Club Foot   | None  |   |   |
| 30| RDSH | 157| Male  | Stomach Rupture                 | C3LCA|   |   |
|   |      |   |       |                                | C5LCA|   |   |
|   |      |   |       |                                | C6RCR|   |   |
|   |      |   |       |                                | C7LCR|   |   |
|   |      |   |       |                                | T1RCA|   |   |
| 31| RDSH | 365| Male  | Trauma                         | T1RCR|   |   |

RDSH = Royal Dutch Sport Horse Netherlands; OC = osteochondrosis;
C = cervical vertebra; T = thoracic vertebra; L = left; R = right; CR = cranial; CA = caudal