



REQUIREMENTS FOR SPINAL RADIOGRAPHY AND GRADING OF SPINAL CHANGES

Approved by the Finnish Kennel Club's Board on 7.2.2013, valid as of 1.6.2013. Updated by the Board on 15.8.2019, updates valid as of 1.1.2020.

These directives complement the Rules for Combating Hereditary Defects and Diseases (Council 30.11.2008) and the Directives for the Programme for Combating Hereditary Defects and Diseases (PEVISA directives, Board 28.8.2008).

This is a translation of the original version in Finnish, [Ohje selän muutosten röntgenkuvauksesta ja luokituksesta](#). In cases of doubt, the original version will prevail.

1 GENERAL GUIDELINES

Hereditary vertebral spine changes are examined by radiography, and the changes are graded in order to collect data for breeding purposes. The Finnish Kennel Club considers as official spinal evaluation certificates the ones that have been performed in accordance with these guidelines.

Radiographs are taken in accordance with instructions issued by the Finnish Kennel Club. The evaluation is performed by using grading scales confirmed by the Finnish Kennel Club.

The certificate must be issued in the dog owner's home country or in Finland. If the evaluation of spine radiographs is performed outside of Finland, the certificate must state the country of evaluation as well as the grading scale used, since grading scales vary from country to country and are therefore not directly comparable with each other.

These guidelines must be followed when taking radiographs for the Finnish Kennel Club's vertebral spine evaluation. Radiographs as well as an appropriate referral for radiographic evaluation must be sent to the Finnish Kennel Club, which issues an official evaluation of the images.

The dog owner must inform the veterinarian if the dog has undergone a surgery affecting the evaluation. This is recorded on the referral. The dog's medical report is attached. An operated dog is graded according to the most severe grade for the spinal change in question.

Radiographs are stored centrally, at a location set by the Finnish Kennel Club, for at least 10 years, after which the images can be destroyed. The Finnish Kennel Club however keeps radiographs from March each year for possible further research purposes.

2 EVALUATION PROCEDURE

The Board of the Finnish Kennel Club appoints the veterinarians authorised to issue radiographic evaluations.

An official scrutineer appointed by the Finnish Kennel Club is given the knowledge the breed, age, sex, and registration number of the dog.

A grade of the spine is issued only on radiographs that have been sent for evaluation accompanied by a referral for radiographic grading. The referral is filled in by the veterinarian who has taken the radiographs.

Evaluation can be performed only on radiographs of dogs that are identification marked as approved by the Finnish Kennel Club. The dog's identification marking must always be verified when taking the radiographs, and the verification must be recorded on the referral.

A fee is charged for an official certificate. The certificate is sent to the recipient recorded in the referral, and the result is registered in the Finnish Kennel Club's public database.

Information on relevant additional findings found in the radiographs can be recorded in the certificate.

The dog can re-radiographed at the earliest 6 months after the previous scan. It should however be performed as soon as possible if it is done for technical reasons. The scrutineer will get access to all previous radiographs of the dog. The grade of the dog may change according to the findings of the re-radiography.

Certificates comparable with the grading scale of the Finnish Kennel Club and for which radiographs have been taken in accordance with recommendations set by the Finnish Kennel Club, are approved for imported dogs, foreign stud dogs, and imported semen. The certificate must state that the dog has been identification marked and verified at the time of the examination.

If the intention is to use a foreign dog for breeding in Finland, but a certificate of radiographic vertebral spine evaluation cannot be obtained in the dog owner's home country, an identification marked dog can be examined in accordance with instructions issued by the Finnish Kennel Club and the images can be sent to the Finnish Kennel Club for a Finnish evaluation (reason for requesting a Finnish evaluation to a foreign dog must be attached). The same procedure can also be applied before purchasing a dog from abroad.

3 GRADING

3.1 Spondylosis Deformans (SP)

Grading	Description
SP0 Free	No abnormal findings
SP1 Mild	< 3 mm spurs in ≤ 4 intervertebral spaces or > 3 mm spurs in ≤ 3 intervertebral spaces or a bone island in ≤ 2 intervertebral spaces.
SP2 Evident	Bone bridges (complete or incomplete) between ≤ 2 intervertebral spaces and/or large bone islands in ≤ 2 intervertebral spaces.
SP3 Moderate	Bone bridges (complete or incomplete) and/or large bone islands between 3–7 intervertebral spaces.
SP4 Severe	More severe changes than above.

All thoracic (1–13) and lumbar vertebrae (1–7) and the sacrum are evaluated.

This grading scale applies until the dog is 5 years of age. After that, the age of the dog is considered as follows: one bridge is omitted when grading a dog aged 5 to 7 years, and two bridges are omitted when grading a dog aged 8 years or more. However, not even an old dog can obtain the grading SPO if the dog in question has bridging.

3.2 Intervertebral Disc Disease (IDD)

Grading	Description
IDD0 Free	No abnormal findings
IDD1 Mild	1–2 partially or completely calcified intervertebral discs
IDD2 Moderate	3–4 partially or completely calcified intervertebral discs
IDD3 Severe	5 or more partially or completely calcified intervertebral discs

A grading for intervertebral disc disease can be obtained only once.

3.3 Vertebral Anomaly (VA)

Grading	Description
VA0 Normal	No abnormal findings
VA1 Mild	1–2 malformed vertebrae
VA2 Evident	3–4 malformed vertebrae
VA3 Moderate	5–9 malformed vertebrae
VA4 Severe	10 or more malformed vertebrae

Coccygeal vertebrae are not taken into account when grading.

A grading for vertebral anomalies can be obtained only once.

3.4 Lumbosacral Transitional Vertebra (LTV)

Grading	Scale
LTV0	No abnormal findings
LTV1	Divided sacral crest (S1–S3) or some other mild abnormal structure (definition as of 1.1.2015).
LTV2	Symmetrical lumbosacral vertebra.
LTV3	Asymmetrical lumbosacral vertebra.
LTV4	6 or 8 lumbar vertebrae.

A grading for lumbosacral transitional vertebra can be obtained only once.

4 RADIOGRAPHIC PROCEDURE

Breeds are divided into three different groups: Breeds are divided into three different groups: [List 1](#) (chondrodystrophic breeds and other listed breeds), [List 2](#) (so called screw-tailed breeds), and all other breeds as the third group.

Grading for congenital vertebral spinal abnormalities (vertebral anomalies and lumbosacral transitional vertebra) can be made when the dog is at least 12 months old at the time of the examination. A dog also obtains grading for spondylosis if is at least 24 months old at the time of the examination. Only breeds specified on List 1 can obtain a grade for intervertebral disc disease, the minimum age for this is 24 months.

The examination must be done in sedation or under general anaesthesia, so that the dog is relaxed enough for good quality radiographs. Names and dosages of sedatives and anaesthetics used must be recorded in the form.

Only digital images in DICOM format are accepted.

Radiographs must be marked in a way that cannot be altered afterwards (radiographic lead). Obligatory information on radiographs include the date of the examination and the registration number (or ID number) of the dog.

Examination is performed according to the instructions for radiography of the vertebral spine, approved by the Finnish Kennel Club. Lists 1 and 2 are enclosed to the instructions.

Radiographs are, except for severe cases, left unevaluated in order to avoid errors if the examination of the dog has not been performed according to instructions or the quality of images is insufficient.

5 APPEAL PROCEDURE

Appeals are handled by an expert group appointed by the Finnish Kennel Club. An appeal is to be made by the dog owner in writing. A decision made by the working group replaces the previous assessment.

Appeals must be submitted within 90 days from the day when the certificate was posted. The appeal fee is twice the amount of the evaluation fee. The appeal fee is refunded if the appeal is found to be justified.

5 EXCEPTIONS

The Finnish Kennel Club's Scientific Committee has the right, for compelling reasons, to make exceptions to provisions in these directives.