

# Guidelines for radiographic screening and grading of elbow joint incongruity in short-limbed and chondrodystrophic breeds (Elbow Incongruity Guidelines)



Approved by the Board of the Finnish Kennel Club on 6 October 2016.

Amendments by the Board on 21 November 2020. Valid as of 1 January 2021.

*This document is a translation. In cases of doubt, the Finnish version will prevail.*

These guidelines complement the Rules for Combating Hereditary Defects and Diseases (Council 30 November 2008) and the Directives for the Programme for Combating Hereditary Defects and Diseases (PEVISA Guidelines, Board 16 August 2018).

## 1 General provisions

Hereditary elbow incongruity in chondrodystrophic and other short-limbed and certain small breeds is subject to radiographic screening, and elbow joints are graded to collect data for breeding purposes. The Finnish Kennel Club decides which breeds are subject to these guidelines, and keeps a [list](#) of the breeds concerned.

The Finnish Kennel Club accepts certificates issued in accordance with these guidelines. The certificate must be issued in the dog owner's home country or in Finland.

These guidelines must be followed when radiographs are taken of a dog for the purpose of having the images graded by the Finnish Kennel Club. The images and an appropriate referral to radiographic screening are sent to the Finnish Kennel Club, which then issues an official certificate. The official elbow status of the dog is determined by the inferior elbow joint.

The dog owner must inform the veterinarian if the dog has been subject to elbow joint surgery.

Information about surgery is recorded on the referral to radiographic screening. Medical records regarding the surgery are attached.

Radiographs are stored centrally, at a location set by the Finnish Kennel Club, for at least ten years, after which they can be destroyed. However, the Finnish Kennel Club keeps radiographs from the first two weeks of March each year for possible further research purposes.

## 2 Evaluation procedure

The Board of the Finnish Kennel Club appoints the veterinarians authorized to grade radiographs. A scrutineer appointed by the Finnish Kennel Club will learn the dog's breed, age, sex, and registration number.

Only radiographs accompanied by the Finnish Kennel Club's referral, filled out by the veterinarian who has taken the images, can be subject to grading.

Only radiographs taken of a dog that is identified with an ID number approved by the Finnish Kennel Club can be subject to grading. A dog's ID number must always be verified when radiographs are taken.

A fee is charged for an official certificate. The certificate is sent to the recipient recorded on the referral form. The grading result and the name of the scrutineer are recorded in the Finnish Kennel Club's database.

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

A dog can be radiographed again no earlier than 12 months after the previous imaging. However, if new

radiographs are taken for technical reasons, they should be taken as soon as possible. The scrutineer will get access to all previous images of the dog. The grading may change when new images are taken.

If a certificate issued in accordance with these guidelines is needed for a foreign dog, a dog with an ID number can be radiographed in accordance with these guidelines and radiographs can be submitted to the Finnish Kennel Club for grading (an explanation why a certificate issued in Finland is requested for a foreign dog must be attached).

### **3 Grading scale**

- INC0 (normal): Joint space is narrow and even, no step between the radius and ulna. No signs of osteoarthritis.
- INC1 (mild): Joint space is not completely narrow and even: a small step between the radius and ulna, or the humeroulnar joint space is no more than 2 mm wide. No signs of osteoarthritis.
- INC2 (moderate): Joint space is not narrow and even: a step between the radius and ulna, or the humeroulnar joint space (incisura trochlearis) is 2—3 mm wide.
- INC3 (severe): Humeroulnar joint space is at least 3 mm wide, or a step between the radius and ulna, or a joint that is in some other way clearly abnormal.

### **4 Radiographic procedure**

A dog must be at least 12 months of age when radiographed.

Radiographs are sent to the Finnish Kennel Club via a submission portal. Radiographs are submitted digitally in DICOM format.

Radiographs must be marked in a way that cannot be altered afterwards (radiographic lead). This also applies to digital radiographs. Mandatory information that must be included in radiographs:

- date
- registration number of the dog (or ID number)
- side marker (internationally recognizable, for instance sin, dex, R, L).

The dog must be under sedation when images are taken, and details of sedative preparations used are recorded on the referral to radiographic screening. Both elbow joints are radiographed on the same occasion. Images must be cropped well, and their quality must allow the details to be clearly visible. Over and underexposure as well as graininess may prevent the grading of images.

Front limbs are radiographed in mediolateral projection, with the elbow joint in a neutral position (angle of at least 90°). Humeral condyles must be placed upon each other as well as possible to make the joint space visible. The entire elbow joint and forearm must be seen in the projection. Depending on the breed, other projections may also be required.

If the images are open for interpretation, additional images in different positions may be requested and, after a certain amount of time, also new images.

### **5 Appeal procedure**

Appeals are processed by an expert panel appointed by the Finnish Kennel Club. An appeal is to be made by the dog owner in writing.

Appeals must be submitted within 90 days from the date of posting the certificate/delivering it to Omakoira member service. The appeal fee is twice the amount of the grading fee. The appeal fee is refunded if the appeal is found justified.

The decision of the panel is final and replaces the previous grading.

## **6 Exceptions**

In individual cases and for compelling reasons, the Board of the Finnish Kennel Club may issue an exemption from the provisions in these guidelines.