The Pug Dog Welfare Rescue Association Hemivertebrae Screening
Scheme Notes

These notes describe the PDWRA Hemivertebrae Screening and to provide helpful instruction to those Screening. They are due to be effective from 1 January 2013, and are subject to change.

Introduction
Hemivertebrae (HV) is a thought to be an inherited condition, but environmental factors may influence the development of the condition. Screening results do not therefore absolutely reflect the transmission of HV of an individual animal but should be regarded only as an indicator of risk of the condition.

1. Why Screen?
The main purposes of screening is the examination of radiographs of the spine for hemivertebrae and the issue of a report in respect of that examination. The examination is conducted by the evaluation of a radiograph for any anatomical and pathological changes indicative of HV and a report is created. Many clinically sound dogs may show signs of HV in their radiographs and should not therefore be used for breeding. The scheme does not cover any other hereditary or clinical defects which may need to be considered when choosing suitable breeding stock.

2. How to Submit a Radiograph to the Scheme
The owner should approach their veterinary surgeon and request that the dog be radiographed for this screening scheme. For this scheme, the dog should be at least 12 months old – there is no maximum age. The dog should also be permanently identified by ideally microchip, or tattoo. When arrangements with the veterinary surgeon for the dog’s spine to be radiographed have been made, the owner should have the Kennel Club (KC) registration number or certificate, if available. In addition, the owner must complete and sign the first section, Section A, of the certificate (the Owner’s declaration) to confirm the details relating to the dog being screened.

The following procedure should be observed:
- The minimum age of a dog for submission under the Scheme is 1 year. There is no upper age limit
- The dog must be permanently identified by either microchip or tattoo
- The Kennel Club (KC) Registration Certificate of the dog if it is registered with the KC

A lateral and Ventrodorsal/dorsolateral radiograph of the thoracolumbar spine segments is required for scoring. The veterinary surgeon should radiograph the dog’s spine as indicated below.

a. Safety
   The Guidance Notes for the Safe Use of Ionising Radiations in Veterinary Practice (1999) should be followed. Since the radiography of dogs for the purposes of this Scheme would not constitute exceptional circumstances:
   - It is necessary to employ general anaesthesia, narcosis or deep sedation to enable only mechanical (i.e. non-manual) restraint for the positioning of the animal.
   - Collimation of the primary beam should be clearly visible on the radiograph.

b. Positioning
   A standard position for radiography must be employed. Accordingly:
   - The dog should be placed in latero-lateral and ventro-dorsal view of the spine form T1 to L7 centred on T8-L1

   - In order to have a diagnostic radiographic study the dogs should be anesthetised or sedated

c. Confirming Identification
   To confirm the dog, both the Kennel Club registration number (if applicable), and the microchip or tattoo number should be radiographed onto the film or digital image. For dogs not Kennel Club registered, the breed club or veterinary practice identification should be used. In addition, the date of radiography and the marker(s) should be included.
d. Images
To assist in the best possible assessment of the radiograph, please ensure that the exposure and processing is checked before submission to the scheme. It may be useful to check the radiograph immediately after processing, in the event of incorrect positioning or problems with film quality. Digital images may be submitted, but should as DICOM files, one dog per disc. This must include the KC registration number, microchip/tattoo number and date of radiography as part of the original image.

4. How Results are Reported
The results of the screening scheme will be provided to the owner of the dog. The veterinary surgeon who has undertaken the radiograph should have confirmed the identification of the dog (including KC number, microchip/tattoo) and confirm this by signing the middle part (Section B) of the certificate. The veterinary surgeon assesses the radiograph, to determine presence/absence and if present, a description of the severity of the condition. A report will describe the presence, severity, and treatment recommendations, if applicable.

5. How Results Are Used
The results of the radiograph will be reported to the submitting veterinary surgeon within 1 month of the correct submission. The owner will receive a photocopy of the certificate, from the submitting surgeon, with the completed original retained by the veterinary surgeon. Relevant details of the report may be sent to a geneticist for statistical analysis as arranged by PDWRA. Should copies of the certificate be required, they will only be supplies to the owner originally identified on the HV certificate. This may incur an additional fee.