Early radiographic indicators of lumbosacral computed tomographic lesions in military working dogs

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An improved understanding of early radiographic indicators of computed tomographic (CT) lesions previously found by our lab to be associated in dogs with lower back (lumbosacral, LS) pain would be helpful for the military's selection and breeding programs. Dogs included in this study were German Shephard military working dogs with at least one of these CT lesions and available LS or hip radiographs acquired at ≤ 3 years of age. A veterinary radiologist (JJ) re-interpreted the radiographs (Horos v2.4.0 freeware). An undergraduate research student (AN) recorded the interpretations and performed descriptive analyses (Excel version 16.19). A total of 26 dogs were sampled, with 25 radiographic studies including a ventrodorsal view. The CT lesions detected with the highest frequency in this view were sacroiliac degenerative joint disease (9 dogs, 34.6%) and articular process dysplasia (9 dogs, 34.6%). For the 2 radiographic studies that included a lateral view, the CT lesion detected with the highest frequency was vertebral canal narrowing (stenosis, 2 dogs, 100%). Findings indicated that some LS CT lesions can be predicted from early LS or hip radiographs in military working dogs.