

## PREVALENCE OF RADIOGRAPHIC OSTEOARTHRITIS AND ASSOCIATED CLINICAL SIGNS IN YOUNG DOGS

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### Abstract

No comprehensive, prospective studies of the prevalence of canine osteoarthritis (OA) throughout the skeleton have been performed and current estimates of OA prevalence pertain to older dogs despite the fact that OA in dogs is primarily driven by developmental joint disease. The aim of this study was to determine the prevalence of OA and associated clinical signs in young dogs.

Owners (n=320) of dogs aged 8 months to 4 years old from a single practice (NCSU CVM Primary Care), were contacted to participate (regardless of dog's health status). Owners were contacted in random order within each of 4 age bands (8-18, 18.1-28, 28.1-38, 38.1-48months). Full clinical and orthopedic examinations were performed. Orthogonal radiographic projections of all joints and the spine were made under sedation. Owners completed OA questionnaires. Each joint was scored for radiographic OA severity on an 11-point scale by 2 investigators (ME, BDXL).

Owners of 123 dogs agreed to participate. Overall, 39.8% of dogs had radiographic OA (rOA) in at least one joint, and 23.6% of dogs had 'clinical OA' (cOA) as defined as overlap of radiographic OA and joint pain in the same joint. Owners of dogs with cOA observed signs of impairment in 51.7% of cases but only 13.3% of them were treated. Affected joints in descending order of frequency were elbow, hip, tarsus, and stifle. Prevalence of rOA was increased with age, bodyweight, and body condition score. Radiographically visible OA is very common in young dogs, and approximately 60% of dogs with rOA had cOA.

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*Note: this version contains minor numerical updates from the presented version*