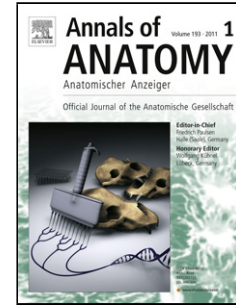


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Authors: Mehmet Erkut Kara, Figen Sevil-Kilimci, Ömer  
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## PROXIMAL AND DISTAL ALIGNMENT OF NORMAL CANINE FEMURS: A MORPHOMETRIC ANALYSIS

Mehmet Erkut Kara<sup>a</sup>, Figen Sevil-Kilimci,<sup>a\*</sup> Ömer Gürkan Dilek<sup>b</sup>, Vedat Onar<sup>c</sup>

**a.** Adnan Menderes University, Faculty of Veterinary Medicine, Department of Anatomy, Aydın, TURKEY

**b.** Mehmet Akif Ersoy University, Faculty of Veterinary Medicine, Department of Anatomy, Burdur, TURKEY

**c.** Istanbul University, Faculty of Veterinary Medicine, Department of Anatomy, Istanbul, TURKEY

### \*Corresponding author:

E-mail: fsevil@adu.edu.tr

Address: Adnan Menderes University, Faculty of Veterinary Medicine, Department of Anatomy, Isikli/Aydın, TURKEY

### Abstract

Many researchers are interested in femoral conformation because most orthopaedic problems of the long bones occur in the femur and its joints. The neck-shaft (NSA) and the anteversion (AVA) angles are good predictors for understanding the orientation of the proximal end of the femur. The varus (aLDFA) and procurvatum (CDFA) angles have also been used to understand the orientation of the distal end of the femur. The purposes of this study were to investigate the relationship between the proximal and distal angles of the femur and to compare the distal femoral angles in male and female dogs in order to investigate the sexual dimorphism. The measurements of normal CDFAs, which have not been previously reported, may also provide a database of canine distal femoral morphology.

A total of 75 cleaned healthy femora from different breeds or mixed breed of dogs were used. The three-dimensional images were reconstructed from computed tomographic images. The AVA, NSA, aLDFA and CDFAs were measured on the 3D images. The correlation coefficients were calculated among the measured angles. The distal femoral angles were also compared between male and female femora.

The 95% confidence intervals of the AVA and the NSA were calculated to be 24.22°–29.50° and 144.97°–147.50°, respectively. The 95% confidence intervals of the aLDFA and the

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