# THE GONIOMETRIC VALUES OF PELVIC LIMB IN NORMAL POMERANIAN DOGS

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**Abstract**

This study aimed to report the normal goniometric values of pelvic limb in Pomeranians using radiography and computed tomography (CT). Four limbs in normal Pomeranians presented at the Small Animal Teaching Hospital, Faculty of Veterinary Science were examined and excluded co-existent orthopedic diseases. Three radiographs positioning images in craniocaudal (CrCd), caudocranial (CdCr) and mediolateral views was obtained under general anesthesia. CT-scan was performed in dorsal recumbency with the pelvic limb parallel to the table. In frontal plane, anatomical and mechanical lateral proximal femoral angles (aLPFA and mLPFA), anatomical and mechanical lateral distal femoral angles (aLDFA and mLDFA), inclination angle (ICA), mechanical proximal and distal tibial angles (mMPTA and mMDTA) were evaluated. In sagittal plane, precurvation angle (PA), anatomical caudal proximal and distal femoral angles (aCdPFA and aCdDFA) and mechanical cranial proximal tibial angle (mCrPTA) and caudal distal tibial angle (mCdDTA) were measured. In transverse plane, femoral and tibial torsion angles (FTA and TTA) were evaluated only by CT-scan. Mean ± SD of goniometric values were reported and compared in all measurements. There were significant differences of aLPFA and mLPFA between CrCd radiographs and CT images. The mMDTA from CdCr radiographs differed significantly from CT images. The significant differences of PA and aCdDFA were found between radiographs and CT images. The FTA and TTA values were 35.51±5.43 and 19.71±4.61, respectively (Table 1). This study reports the goniometric values of the pelvic limb in normal Pomeranians as well as the values in some angles show the limitation to evaluate by radiography. Therefore CT is recommended when deformity doubts in some cases.

*Keywords*: Pomeranian, goniometric values, pelvic limb, computed tomography, radiography