FEASIBILITY AND DIAGNOSTIC OUTCOMES OF STANDING EXTREMITY CONE BEAM COMPUTED TOMOGRAPHY IN THE HORSE.

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Introduction
Computed Tomography used in standing sedated horses for the orthopaedic examination of extremities distal to and including carpus and tarsus has not been described yet.

Materials and methods
Fifty nine Cone Beam Computed Tomography (CBCT) standing non-weightbearing examinations were reviewed for feasibility and diagnostic outcome. The study was ethically approved under number BE130/16.

Results
Fifty eight of 59 were completed successfully. A median of 3 acquisitions were performed per study in a median study time of 14 minutes. In 24 of 33 cases a suspected diagnosis was confirmed or definitively disproven, in 7 the suspected diagnosis was disproven without a new diagnosis and in 2 the suspected diagnosis could not be confirmed nor a new diagnosis made. In 5 of 9 cases without a suspected diagnosis, a diagnosis was made. In 16 cases with a prior diagnosis, the extent of lesion was examined or pre-operative planning performed. In 14 out of 18 cases in which contrast techniques were used additional information was gained.

Relevance to Australian clinical equine practice
This is the first description of results of standing non-weightbearing CBCT of the horses’ extremities. The technique is feasible and can consistently produce diagnostic information in a timely fashion.