Os clitoridis presence on radiographs submitted for coxofemoral dysplasia evaluations
Michelle Kutzler, a G. Gregory Keller, b Fran Smith b,c
 aDepartment of Animal Science, Oregon State University, Corvallis, OR; bOrthopedic Foundation for Animals, Columbia, MO; cSmith Veterinary Hospital, Burnsville, MN

Introduction
The os clitoridis can occasionally be found radiographically in bitches.1 However, some authors have associated the presence of an os clitoridis in bitches with an intersex or masculinized condition.1,2 Therefore, the objective of this study was to determine the incidence of an os clitoridis in bitches. The hypothesis was that an os clitoridis is present in normal bitches, albeit at a low incidence.

Methods
Ventrodorsal radiographs submitted to the Orthopedic Foundation for Animals for coxofemoral dysplasia evaluations and determined to have “normal” hips were used for this study. Because of the potential difficulty in confirming the presence (or absence) of an os clitoridis in dogs with tails obscuring the perineal area on the ventrodorsal view, only dogs with docked tails were used (American Cocker Spaniels (n=200) and German Short-hair Pointers (n=200)). If an os clitoridis was visualized radiographically, its shape and degree of radio-opacity were recorded.

Results
In 3% (6/200) American Cocker Spaniels and 2% (4/200) German Shorthair Pointers, the presence of an os clitoridis in the tip of the vulva could be confirmed on a single ventrodorsal radiograph. In one bitch, two mineralized opacities were present within the vulva, one at the tip and another slightly more cranial (arrows on figure below). The shape of the os clitoridis ranged from circular to oblong and the degree of opacity was always slightly less than that of the cortical coccygeal bone.

Discussion
This study has shown that an os clitoridis can be present in bitches assumed to be reproductively normal. An os clitoridis has been reported in other mammals, including fossa (Cryptoprocta ferox),3 ring-tailed lemur (Lemur catta)4 and some strains of mice. An os clitoridis has also been reported in members of all three pinniped families, but its appearance, even within a single species, is irregular.5

References