Osteochondrosis and OCD, which is a consequence of osteochondrosis, are caused by disturbances in enchondral ossification. Once the cartilage exceeds a certain thickness, deeper layers of cartilage can no longer be nourished. This leads to degeneration of the chondrocytes and the development of necrotic cartilage areas. Mechanical stress can cause fissures that extend from the cartilaginous surface to the necrotic areas, which may lead to loose cartilage or bone fragments. However, the cause of OCD remains unclear. Possible factors involved in the development of OCD include genetics, nutrition, hormonal imbalances, a deficient vascular supply, and trauma. The disease typically affects young large- and giant-breed dogs between 3 and 12 months of age. In the tarsal joint, 74% of affected dogs develop OCD at the medial trochlear ridge of the talus, and 26% develop OCD at the lateral trochlear ridge. In contrast to results for the shoulder, elbow, and stifle joints, where osteochondrosis or OCD is uniformly more common in male dogs, the sex-related data for the tarsal joint differ. Data in the literature range from a predisposition for OCD in female dogs to approximately equal numbers of male and female dogs that develop OCD to a predisposition for OCD in male dogs. In contrast to findings in other joints predisposed to OCD in dogs, OCD fragments in the talus are often described as large fragments. This may be attributable to genetic factors, hormonal imbalances, and nutritional deficiencies.
to avulsion fractures at the talus in immature as well as mature dogs that may lead to large fragments in the talocrural joint, which results in an osteochondral defect that could be mistaken for OCD.27

To our knowledge, there are no data about cartilage thickness at the talus and the corresponding articular surface of the tibia. The purpose of the study reported here was to determine the cartilage thickness at the proximal trochlea of the talus and the cochlea tibiae in tarsocrural joints of juvenile and adult dogs not affected with OCD and to ascertain whether the OCD-predisposed areas at the trochlear ridges corresponded to the areas with the thickest cartilage.

Materials and Methods

Sample—Cartilage thickness of the proximal trochlea of the talus and the corresponding cochlea tibiae was determined in both tarsocrural joints of 34 cadavers of juvenile Beagles. Mean age was 96 days (range, 88 to 105 days), and body weight ranged from 2 to 5 kg. Eighteen dogs were male, and 16 were female. Inclusion criteria for the cartilage thickness study were that dogs were of the same breed and approximately the same age. Lack of lameness and lack of macroscopic injuries to the cartilage of the talus or cochlea tibiae were additional inclusion criteria.

These juvenile dogs had participated in an unpublished nematocide efficacy study unrelated to the cartilage thickness study. In the nematocide efficacy study, the dogs were inoculated with nematodes; half the dogs then received an investigational anthelmintic, and the other half received a placebo. During that study, the dogs were housed in tile-covered concrete rooms in groups of 8. The dogs were exposed to a cycle of 12 hours of light and 12 hours of darkness, and temperature and relative humidity were controlled throughout the study. The dogs were fed a commercial diet at the recommended rates, and tap water was provided ad libitum. Dogs had toys for amusement as well as daily grooming time with animal attendants. Study duration was 6 weeks. Dogs were euthanized by pentobarbital (IV) at the end of the nematocide efficacy study.

Data for the juvenile dogs were compared with data obtained for both tarsocrural joints of cadavers of adult dogs of breeds typically predisposed to development of OCD. Cadavers of 10 client-owned dogs (9 Labrador Retrievers and 1 Rottweiler; 5 males and 5 females) were used for examination of cartilage thickness. Mean age was 10 years (range, 7 to 15 years), and mean body weight was 35 kg.

The 10 adult client-owned dogs had been euthanized by veterinary practitioners for clinical reasons unrelated to the study reported here. Owners provided permission to donate the cadavers to the Department of Anatomy of the University of Veterinary Medicine Hannover for use as dissection materials. Because the dogs were client-owned animals and there was a lack of husbandry details for the adult dogs, inclusion criteria for this group were that the dogs were of breeds typically affected by OCD of the tarsocrural joint and had a lack of macroscopic evidence of cartilage damage at the tarsocrural joints.

Procedures—The tarsocrural joints in both groups of dogs were removed from the hind limbs. The tibia was transected 2 to 5 cm proximal to the tarsocrural joint, and the metatarsal bones were transected 2 to 5 cm distal to the tarsocrural joint. The tarsocrural joint was disarticulated, and the talus and the cochlea tibiae were used for the study. Each tarsocrural joint was examined for macroscopic evidence of cartilage damage.

Cartilage thickness was measured at 13 locations in each joint: proximal, proximodorsal, dorsal, and distal aspect of the lateral trochlear ridge; proximal, proximodorsal, dorsal, and distal aspect of the medial trochlear ridge; proximodorsal, dorsal, and distal aspect of the trochlear sulcus between the ridges; and cranio-lateral and caudomedial aspects of the cochlea tibiae (Figure 1). Therefore, the talus was sectioned longitudinally at the highest point of the 2 trochlear ridges and at the deepest point of the groove between the ridges (ie, the trochlear sulcus). The cochlea tibiae also were sectioned longitudinally (1 section was through the deepest point of each of the 2 cochlear grooves). Via a stereophotography microscopic system,9 digital images of the section planes and a ruler marked in millimeters were recorded with a digital camera.9 Thickness of the cartilage was measured (Figure 2). Imaging software was used to convert cartilage thickness measured as the number of pixels to cartilage thickness in millimeters.

Statistical analysis—Statistical analysis was performed with computerized software.4 The Wilcoxon test was used for comparison of cartilage thickness at various measurement locations. Differences between male and female dogs were evaluated with the Mann-Whitney U test. Values of P < 0.05 were considered significant.

Results

Juvenile dogs—In the juvenile dogs, the mean cartilage thickness decreased from proximal to distal (Table 1). Mean ± SD cartilage thickness was 1.52 ± 0.53 mm (median, 1.42 mm) at the proximal aspect to 0.90 ± 0.19 mm (median, 0.91 mm) at the proximodorsal aspect, 0.47 ± 0.10 mm (median, 0.46 mm) at the dorsal aspect, and 0.41 ± 0.12 mm (median, 0.39 mm) at the distal aspect of the lateral trochlear ridge. There was a significant (P = 0.01) reduction in cartilage thickness between adjacent locations from proximal to distal, with a more marked decrease between the proximal, proximodorsal, and dorsal aspects of the lateral trochlear ridge than between the dorsal and distal aspects of the lateral trochlear ridge.

Mean ± SD cartilage thickness decreased from 1.10 ± 0.34 mm (median, 1.09 mm) at the proximal aspect to 0.88 ± 0.20 mm (median, 0.90 mm) at the proximodorsal aspect, 0.48 ± 0.09 mm (median, 0.48 mm) at the dorsal aspect, and 0.40 ± 0.05 mm (median, 0.41 mm) at the distal aspect of the medial trochlear ridge. There was a significant (P = 0.01) decrease from proximal to distal. The reduction from the proximal to proximodorsal aspect and dorsal aspect of the medial trochlear ridge was more distinct than between the dorsal and distal aspects of the medial trochlear ridge.

Results for the trochlear sulcus were similar. Mean ± SD cartilage thickness decreased from 0.53 ± 0.09 mm...
(median, 0.54 mm) at the proximodorsal aspect to 0.34 ± 0.05 mm (median, 0.34 mm) at the dorsal and 0.27 ± 0.06 mm (median, 0.28 mm) at the distal aspects of the sulcus. There was a significant (P = 0.01) decrease from proximal to distal. The decrease between the proximodorsal and dorsal aspects of the sulcus was more distinct than between the dorsal and distal aspects of the sulcus.

Mean ± SD cartilage thickness of 0.45 ± 0.07 mm (median, 0.43 mm) for the lateral cochlea tibiae was similar to the values measured for the medial cochlea tibiae (mean ± SD, 0.46 ± 0.08 mm; median, 0.45 mm; Table 1). Significant differences were not detected.

Comparison among similar measurement locations in juvenile dogs—Cartilage at the proximal aspect of the lateral trochlear ridge was significantly (P = 0.01) thicker than at the proximal aspect of the medial trochlear ridge. Cartilage thickness did not differ significantly among locations (ie, proximodorsal aspect of the lateral trochlear ridge vs proximodorsal aspect of the medial trochlear ridge, dorsal aspect of the lateral trochlear ridge vs dorsal aspect of the medial trochlear ridge, and distal aspect of the lateral trochlear ridge vs distal aspect of the medial trochlear ridge) between the lateral and medial ridge. Cartilage thickness was significantly (P = 0.01) thinner in the proximodorsal, dorsal, and distal aspects of the trochlear sulcus than at the corresponding locations on the trochlear ridges.

We detected significant sex-dependent differences in cartilage thickness at several measurement locations (Table 1). At the proximal aspect of the lateral trochlear ridge, mean cartilage thickness in juvenile males (1.74 mm) was significantly greater than in juvenile females (1.24 mm). Mean cartilage thickness was significantly greater in juvenile males than in juvenile females (1.24 mm). Mean cartilage thickness was significantly greater in juvenile males than in juvenile females at the proximal (1.24 vs 0.94 mm, respectively), proximodorsal (0.97 vs 0.78 mm, respectively), dorsal (0.51 vs 0.44 mm, respectively), and distal (0.42 vs 0.38 mm, respectively) aspects of the medial trochlear ridge. Similarly, mean cartilage thickness was significantly (P = 0.01) greater in juvenile males than in juvenile females at the proximal (1.24 vs 0.94 mm, respectively), proximodorsal (0.97 vs 0.78 mm, respectively), dorsal (0.51 vs 0.44 mm, respectively), and distal (0.42 vs 0.38 mm, respectively) aspects of the lateral trochlear ridge.

In the trochlear sulcus, a significant sex-dependent difference in mean cartilage thickness was detected only at the proximodorsal aspect of the sulcus (males, 0.57 mm; females, 0.48 mm). No significant sex-dependent differences were detected for the dorsal and distal aspects of the sulcus.

Mean cartilage thickness of the cochlea tibiae was evaluated. Sex-dependent differences in cartilage thickness were not detected for the cochlea tibiae.

**Adult dogs**—Mean ± SD cartilage thickness was 0.41 ± 0.19 mm (median, 0.34 mm) at the proximal aspect, 0.34 ± 0.15 mm (median, 0.31 mm) at the proximodorsal aspect, 0.27 ± 0.08 mm (median, 0.24 mm) at the dorsal aspect, and 0.25 ± 0.10 mm (median, 0.23 mm) at the distal aspect of the lateral trochlear ridge (Table 2). There was a significant (P = 0.01) decrease in cartilage thickness from proximal to dorsal. There were no significant differences in cartilage thickness between the dorsal and distal aspects of the lateral trochlear ridge.

Mean ± SD cartilage thickness decreased from 0.33 ± 0.15 mm (median, 0.31 mm) at the proximal aspect of the medial trochlear ridge to 0.32 ± 0.09 mm (median, 0.30 mm) at the proximodorsal aspect and 0.23 ± 0.08 mm (median, 0.21 mm) at the dorsal aspect of the medial trochlear ridge and increased to 0.27 ± 0.09 mm (median, 0.24 mm) at the distal aspect of the medial trochlear ridge. Although in general the cartilage decreased in thickness from proximal to distal, values differed significantly (P = 0.01) between only the proximodorsal and dorsal aspects of the medial trochlear ridge.

### Table 1—Cartilage thickness measured at various locations in the talus and cochlea tibiae in both tarsocrural joints of cadavers of 34 juvenile (approx 3 months old) dogs (18 males and 16 females).

<table>
<thead>
<tr>
<th>Location*</th>
<th>Males Mean ± SD (mm)</th>
<th>Males Median (mm)</th>
<th>Females Mean ± SD (mm)</th>
<th>Females Median (mm)</th>
<th>Total Mean ± SD (mm)</th>
<th>Total Median (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LT1T</td>
<td>0.97 ± 0.19</td>
<td>0.99</td>
<td>0.83 ± 0.18</td>
<td>0.80</td>
<td>0.90 ± 0.19</td>
<td>0.91</td>
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<tr>
<td>LT2T</td>
<td>0.51 ± 0.09</td>
<td>0.49</td>
<td>0.41 ± 0.09</td>
<td>0.40</td>
<td>0.47 ± 0.10</td>
<td>0.46</td>
</tr>
<tr>
<td>LT3T</td>
<td>0.46 ± 0.14</td>
<td>0.42</td>
<td>0.35 ± 0.06</td>
<td>0.34</td>
<td>0.41 ± 0.12</td>
<td>0.39</td>
</tr>
<tr>
<td>LTpT</td>
<td>1.74 ± 0.49</td>
<td>1.66</td>
<td>1.24 ± 0.45</td>
<td>1.22</td>
<td>1.52 ± 0.53</td>
<td>1.42</td>
</tr>
<tr>
<td>MT1T</td>
<td>0.97 ± 0.18</td>
<td>0.96</td>
<td>0.78 ± 0.18</td>
<td>0.79</td>
<td>0.88 ± 0.20</td>
<td>0.90</td>
</tr>
<tr>
<td>MT2T</td>
<td>0.51 ± 0.09</td>
<td>0.50</td>
<td>0.44 ± 0.08</td>
<td>0.45</td>
<td>0.48 ± 0.09</td>
<td>0.48</td>
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<tr>
<td>MT3T</td>
<td>0.42 ± 0.05</td>
<td>0.41</td>
<td>0.38 ± 0.05</td>
<td>0.38</td>
<td>0.40 ± 0.05</td>
<td>0.41</td>
</tr>
<tr>
<td>MTpT</td>
<td>1.24 ± 0.33</td>
<td>1.21</td>
<td>0.94 ± 0.23</td>
<td>0.99</td>
<td>1.10 ± 0.34</td>
<td>1.09</td>
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<tr>
<td>ST1T</td>
<td>0.57 ± 0.08</td>
<td>0.56</td>
<td>0.48 ± 0.07</td>
<td>0.50</td>
<td>0.53 ± 0.09</td>
<td>0.54</td>
</tr>
<tr>
<td>ST2T</td>
<td>0.35 ± 0.06</td>
<td>0.35</td>
<td>0.33 ± 0.04</td>
<td>0.33</td>
<td>0.34 ± 0.05</td>
<td>0.34</td>
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<tr>
<td>ST3T</td>
<td>0.29 ± 0.07</td>
<td>0.28</td>
<td>0.26 ± 0.05</td>
<td>0.26</td>
<td>0.27 ± 0.06</td>
<td>0.28</td>
</tr>
<tr>
<td>TL</td>
<td>0.47 ± 0.08</td>
<td>0.44</td>
<td>0.42 ± 0.05</td>
<td>0.40</td>
<td>0.45 ± 0.07</td>
<td>0.44</td>
</tr>
<tr>
<td>TM</td>
<td>0.47 ± 0.08</td>
<td>0.47</td>
<td>0.44 ± 0.07</td>
<td>0.43</td>
<td>0.46 ± 0.08</td>
<td>0.43</td>
</tr>
</tbody>
</table>

*For the lateral trochlear ridge, medial trochlear ridge, and trochlear sulcus, values differ significantly (P = 0.01) from proximal to distal. Values differ significantly (P < 0.05) between males and females. Values differ significantly (P < 0.05) at proximal, proximodorsal, dorsal, and distal measurement sites.

LT1 = Proximodorsal aspect of the lateral trochlear ridge. LT2 = Dorsal aspect of the lateral trochlear ridge. LT3 = Distal aspect of the lateral trochlear ridge. MT1 = Proximodorsal aspect of the medial trochlear ridge. MT2 = Proximodorsal aspect of the medial trochlear ridge. MTp = Proximodorsal aspect of the medial trochlear ridge. MT3 = Distal aspect of the medial trochlear ridge. ST1 = Proximodorsal aspect of the trochlear sulcus. ST2 = Dorsal aspect of the trochlear sulcus. ST3 = Distal aspect of the trochlear sulcus. TL = Lateral cochlea tibiae. TM = Medial cochlea tibiae.
Mean ± SD cartilage thickness was 0.31 ± 0.11 mm (median, 0.29 mm) at the proximodorsal aspect, 0.23 ± 0.08 mm (median, 0.21 mm) at the dorsal aspect, and 0.25 ± 0.13 mm (median, 0.22 mm) at the distal aspect of the trochlear sulcus. This was a significant (P = 0.01) decrease in cartilage thickness between the proximodorsal and dorsal aspects of the sulcus.

Cartilage thickness was evaluated in the cochlea tibiae. No significant differences were detected (mean thickness was 0.46 mm in both the lateral and medial cochlea tibiae).

Comparison among similar locations in adult dogs—Comparison of cartilage thickness at the same location between the trochlear ridges revealed results similar to those for the juvenile dogs. Comparison of the proximal aspect of the lateral and medial trochlear ridges and of the dorsal aspect of the lateral and medial trochlear ridges revealed that the cartilage of the lateral trochlear ridge was significantly (P = 0.01) thicker than that of the medial trochlear ridge. Comparison of the proximodorsal aspect of the lateral and medial trochlear ridges and the distal aspects of the lateral trochlear ridges did not reveal significant differences.

Similar to results for the juvenile dogs, adult dogs had significant sex-dependent differences in cartilage thickness. Cartilage thickness was thicker in adult males than in adult females at the proximal (0.51 vs 0.31 mm, respectively; P = 0.01) and dorsal (0.23 vs 0.23 mm, respectively; P = 0.03) aspects of the lateral trochlear ridge. However, we did not detect significant differences in cartilage thickness between adult male and female dogs at the proximodorsal (0.38 vs 0.29 mm, respectively) and distal (0.28 vs 0.21 mm, respectively) aspects of the lateral trochlear ridge.

Adult male dogs typically had a thicker mean cartilage thickness than did adult female dogs, although the values did not differ significantly at the proximal (0.40 vs 0.27 mm, respectively; P = 0.06), proximodorsal (0.36 vs 0.29 mm, respectively; P = 0.07), and dorsal (0.26 vs 0.20 mm, respectively; P = 0.05) aspects of the medial trochlear ridge.

Significant differences were detected between male and female dogs for the trochlear sulcus. Mean cartilage thickness was greater in adult males than in adult females at the dorsal (0.27 vs 0.19 mm, respectively; P = 0.04) and distal (0.31 and 0.20 mm, respectively; P = 0.03) aspects of the trochlear sulcus.
For adult male dogs, mean cartilage thickness was 0.47 mm at the lateral and 0.52 mm at the medial cochlea tibiae. For female dogs, mean cartilage thickness was 0.46 mm at the lateral and 0.44 mm at the medial cochlea tibiae. There was not a significant sex-dependent difference in cartilage thickness for the cochlea tibiae.

Discussion

The function of articular cartilage is to protect the subchondral bone and to simplify joint movement. Compressive force is absorbed and punctiform pressure reduced. In the study reported here, the tarsocrural joints of cadavers of juvenile (approx 3 months old) Beagles and adult dogs were used for measurements of cartilage thickness. In OCD-affected dogs, the typical onset of clinical signs such as lameness is usually at approximately 6 months of age; even so, pathological changes of the cartilage can be detected in dogs < 3 months old. Therefore, the measurements of cartilage thickness for 3-month-old dogs in the present study can be used as a reference for comparison with affected tali as well as for distribution of cartilage thickness in older dogs.

Cartilage thickness in the juvenile dogs decreased from proximal to distal at both trochlear ridges and the trochlear sulcus. This was partly similar for the adult dogs as well, but the cartilage thickness at the medial ridge initially decreased from proximal to dorsal and then slightly increased from dorsal to distal (Table 2). In the juvenile dogs, there was a reduction in cartilage thickness from proximal to distal of approximately 74% at the lateral trochlear ridge and approximately 64% at the medial trochlear ridge. The adult dogs had a smaller decrease in cartilage thickness (approx 39% at the lateral trochlear ridge and 19% at the medial trochlear ridge).

The comparison of cartilage thickness at similar locations revealed that the cartilage at the proximal aspect of the lateral trochlear ridge was significantly thicker than at the proximal aspect of the medial trochlear ridge. In contrast, the cartilage thickness at the proximodorsal, dorsal, and distal aspects was almost the same at both ridges. In the juvenile dogs, cartilage was always thinner in the trochlear sulcus than at the ridges. This corresponds with results reported for the human talus. In contrast, there was no significant difference in cartilage thickness between the trochlear sulcus and ridges for the adult dogs of the present study.

The large differences in cartilage thickness between juvenile and adult dogs were attributable to the difference in age of the animals. In juvenile dogs, there is still a high amount of epiphyseal cartilage that has not been replaced by bone through enchondral ossification. A decrease in cartilage thickness with age has also been reported for rats, rabbits, and humans. In contrast, the mean cartilage thickness in the cochlea tibiae was almost the same in the juvenile and adult dogs. This may have been attributable to the higher ossification status in the concave cochlea than at the convex trochlear ridges of the talus in the juvenile dogs.

The SD was larger at the proximal and proximodorsal aspects in the juvenile dogs and proximal aspects in the adult dogs than at the remaining measurement locations. For the juvenile dogs, this may have been attributable to the differences in body weight of the dogs (range, 2 to 5 kg) or, less likely, differences in the status of enchondral ossification of the talus. For the adult dogs, this could be explained by the comparatively small number of animals and the fact that the group of adult dogs was heterogeneous with regard to breed, age, and body weight.

Analysis of sex differences in cartilage thickness in the juvenile dogs revealed that the cartilage of male dogs was significantly thicker than that of female dogs at all measured locations; however, there was a significant difference between males and females only at the proximodorsal trochlear sulcus. In contrast, the adult dogs had significant differences between males and females only at the proximal and dorsal aspects of the lateral trochlear ridge. On the basis of the results for the homogenous (breed, age, body weight, and size) juvenile dogs, it can be concluded that male dogs usually have thicker cartilage at the talus than do female dogs. In contrast, the group of adult dogs was more heteroge-
neous; therefore, results for that group cannot be used to make general statements concerning sex-dependent differences. Although the literature on sex-dependent differences in canine cartilage thickness is sparse, results obtained for the present study are similar to those reported for the stifle joint of humans.  

In addition to results for the proximal aspect of the trochlear ridges, it is remarkable in adult and juvenile dogs that the cartilage thickness in the proximodorsal, dorsal, and distal aspects of the trochlear ridges is almost the same. Proximally, the cartilage is significantly thicker at the lateral trochlear ridge than at the medial trochlear ridge.

On the basis of the cartilage thickness at the trochlear ridges, it can be hypothesized that the facilities for absorbing pressure forces are needed more proximally and proximodorsally than dorsally and distally. In most cases, the greatest cartilage thickness was measured at the proximal aspect of the lateral trochlear ridge. The shape of this ridge is sharper than that of the medial trochlear ridge. Thus, the lateral trochlear ridge has less surface area than the medial trochlear ridge to smoothly absorb force, which thus requires that the lateral trochlear ridge have a greater cartilage thickness.

Three anatomic findings should be evident from the results of the present study. First, cartilage at the proximal aspect of the lateral trochlear ridge is thicker than at the medial trochlear ridge. Second, cartilage of both trochlear ridges is almost equal in height at the proximodorsal and dorsal aspects. Third, cartilage is thin at the dorsal and distal aspects of both trochlear ridges. These facts were evident for the juvenile and adult dogs.

On the basis of these results in unaffected tarsocrural joints, there may be the expectation that OCD will develop primarily at the proximal aspect of the lateral trochlear ridge. However, investigators in a clinical study found that 84 of 114 (74%) dogs had OCD in the medial trochlear ridge and only 30 (26%) dogs had OCD in the lateral trochlear ridge. Furthermore, the proximal and dorsal aspects of the trochlear ridges are predisposed to development of OCD in the tarsocrural joint of dogs. The dorsal aspect has thin articular cartilage in the talus, and the difference in cartilage thickness between the dorsal and distal aspect of the trochlear ridges was small, but OCD lesions in the distal aspect of the talus have been described in 1 study. Thus, in unaffected tarsocrural joints, the cartilage thickness of the proximal trochlea of the talus does not correspond with the OCD-predisposed sites observed clinically in dogs. However, because the present study lacked results for affected tarsocrural joints, it remains unclear whether the cartilage thickness in an OCD-affected talus exceeds the measured values in healthy joints. If the distribution for cartilage thickness in an affected joint is the same as for healthy joints (such as those in the present study), other factors, such as repeated trauma, may be more important.

In addition, we detected sex-dependent differences in cartilage thickness, with higher values in male dogs. Comparison of anatomic results with clinical observations would yield the expectation that OCD lesions at the talus would be more frequent in male dogs than in female dogs. Such results were found in only 1 study, whereas other investigators observed an equal number of OCD-affected males and females or more affected females than males. A limitation of the present study is that only healthy tarsocrural joints of cadavers of juvenile and adult dogs were examined. For the juvenile dogs, husbandry details as well as complete medical records were available prior to the examination. In contrast, data for the adult dogs were limited because they were client-owned dogs that were euthanized. It remains unclear whether the adult client-owned dogs were affected with hind limb lameness or received cartilage-harming drugs during their lifetime. It is also possible that in other OCD-predisposed joints (eg, shoulder, elbow, and stifle joints), cartilage thickness may correspond with the typical localizations. This study can serve as a reference for cartilage thickness distribution at the proximal trochlea in the healthy canine talus and additionally be used for cartilage thickness comparison with OCD-affected tarsi in the future.

For the study reported here, we concluded that localization of OCD in the talus of dogs does not correspond with the results of cartilage thickness measurements. Thus, further research is needed to determine whether the distribution of cartilage thickness in affected joints differs from values for the unaffected joints measured in the present study.

References