Gaining on Gait

Gait analysis in dogs is usually done using a force platform to measure ground reactive forces. However, these platforms cannot separate forces distributed by various areas of the foot. Such detailed information is helpful in disease investigation and in making medical and surgical decisions. Using a pressure-platform measurement system, investigators were able to measure the load distribution of the various pads of normal Labrador retrievers and greyhounds. As expected, differences in the load distributions between the 2 breeds were found; however, investigators made 2 important general findings: First, the main weight-bearing digits in dogs are the DP-3 and DP-4; second, loads are more evenly distributed than previously believed. This information allows the clinician more flexibility when deciding whether to manage fractures of the metatarsal or metacarpal bones nonsurgically or surgically. As a rule, internal fixation is recommended if the 3rd or 4th digit is fractured, but the results of this study suggest that if either of these digits is intact external fixation may be an option.

COMMENTARY: Why are the findings of this study important? Because the more we learn about normal gait, the more we will know about abnormal gait and how it affects or is affected by disease, which is especially important in many of the large breeds.—Katherine S. Gloyd, DVM