Objectifying lameness: A better way to communicate lameness to pet owners

By Erica Shoults, DVM
For the Education Center

Lameness is an indication of pathological changes relative to physiological or mechanical changes within the body. Evaluating lameness can be subjective and difficult to quantify. Furthermore, communicating the degree of changes to stance or gait and the source of the patient's lameness to the pet owner can be even more challenging. Diagnostic tools like the Companion Stance Analyzer can help bridge that communication gap while providing valuable data that you can use to identify where a patient is exhibiting abnormalities in weight bearing.

When should the Companion Stance Analyzer be used?

General wellness exams are a great time to obtain a patient's baseline stance analysis, which can be re-evaluated yearly to assess any changes. This data can potentially aid in early recognition of chronic conditions such as osteoarthritis so that a proper treatment plan can be implemented to help minimize disease progression. It's also a good tool to have for patients who come in with a "limp." The ability to quickly obtain objective numbers that show how patients are bearing weight can provide clues as to where you need to focus your further diagnostic efforts and treatment plans.

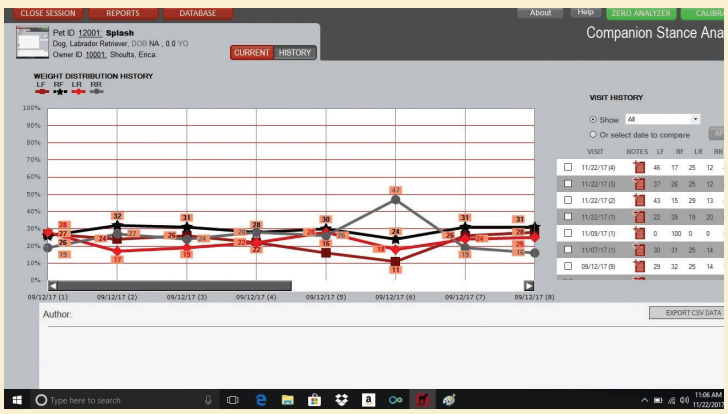
The Companion Stance Analyzer also objectively assesses treatment outcomes. If the patient has had surgery or is actively engaged in a treatment plan that could include medications, laser therapy, nutraceuticals, and/or hydrotherapy, you can create a pre- and post-treatment evaluation protocol to ensure that the patient is trending in a positive direction.

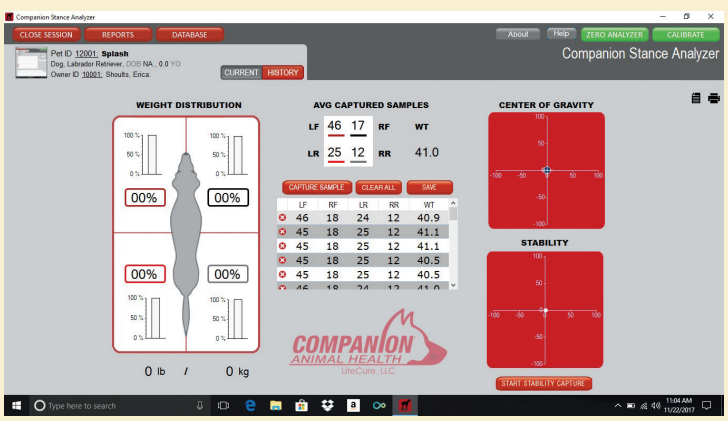
How does the Companion Stance Analyzer work?

The system is a flat platform mat that the veterinary patient stands on with one foot in each quadrant. Data is collected in real time via a handheld remote control that interfaces with a software program. The data output provides four averaged numbers that express the percent of the patient's weight being placed on each individual limb. Additionally, it will provide stability and center of gravity data as well.

For the Companion Stance Analyzer, the dog stands with one foot in each quadrant of the flat platform mat. Data is collected in real time via a handheld remote control that interfaces with a software program. The output provides four averaged numbers that express the percent of the patient's weight being placed on each individual limb and provides stability and center of gravity data.

The Companion Stance Analyzer system and platform mat.





How is the data interpreted?

The numbers to focus on are the four numbers averaged for each limb. Canines place 60 percent of their weight on their forelimbs and 40 percent on the rear limbs; the ideal percentages are 30 percent for each forelimb and 20 percent for each rear limb. If there is a deviation of 4 to 5 percent of weight being offloaded or onloaded onto a particular limb(s), this could be a clue that there may be an issue warranting further diagnostics. After the data has been collected, and by utilizing intuitive reports, it is essential to communicate your findings and recommendations to the pet owner.

How can the results of the Stance analysis be communicated?

There are several ways you can explain the data collected. The first option is to point out what you are seeing on the computer screen after the analysis is complete. Relating the visual of the dog on the platform with the four averaged numbers displayed on the screen will give the owner a better idea about which limb(s) are of concern. Or, you can print the visual data report and discuss the discrepancies you noticed while the patient was standing. You can make any notes and send the data printout home with the pet owner so they have a visual picture of stance abnormalities and where possible problems may exist. You can continue to provide this data report for subsequent visits so that any changes can be compared to previous assessments.

What are the next steps?

The Companion Stance Analyzer data allows you to gather valuable information about how a patient is bearing weight and assists you in presenting the appropriate diagnostic and/or treatment plan to the pet owner.

A visual representation of a canine patient's stance can help clarify the pet's general lameness and make it easier to explain the issue to the pet owner, what the follow-up plan will be, and how you will be able to show the pet's progress throughout the treatment program. Highlighting the percentages of weight bearing for each limb, and any deviations from normal, will support your follow-up recommendations.

Whether you believe the patient needs radiographs, prescription medications, or even surgery, it will help the pet owner focus on what is in the best interest of the pet while working toward getting him as close to normal weight bearing as possible. ●

Dr. Erica Shoults, a graduate of Kansas State University's veterinary college, has been helping veterinary clinics all over the world incorporate alternative therapies into their practices for the past seven years. She has worked with several organizations in product development and improvement including the creation of the Stance Analyzer for lameness diagnosis. Her extensive knowledge of hydrotherapy has helped place dozens of canine underwater treadmills throughout North America, and she has worked on several new hospital builds in designing physical rehabilitation suites.

REFERENCE

[1] Millis D, Levine D. Canine Rehabilitation and Physical Therapy. Saunders, 2014.

This Education Center article is underwritten by Companion Animal Health of Newark, Del.