



FCNY's Gait Lab Receives a High-Tech Upgrade; Expands Lab's Capabilities by Loretta Logan, DPM, MPH



Photos show evaluation of patient after 11 months of treatment with and without a Pelvic Band.

The Foot Center of New York's Gait Lab recently acquired a new Video Gait Analysis System, Dartfish, to enhance and update the equipment and technology in our gait lab. Dartfish joins the other systems in our Gait Lab (F-Scan for in-shoe pressure analysis and the Walkway System, a pressure-sensing floor mat) we use to analyze foot function and gait. It provides a much-needed upgrade to the Gait Lab; it moves us to a newer high-tech gait-analysis system running on a newer operating system platform with enhanced features. It also boosts our abilities in patient evaluation and student education.

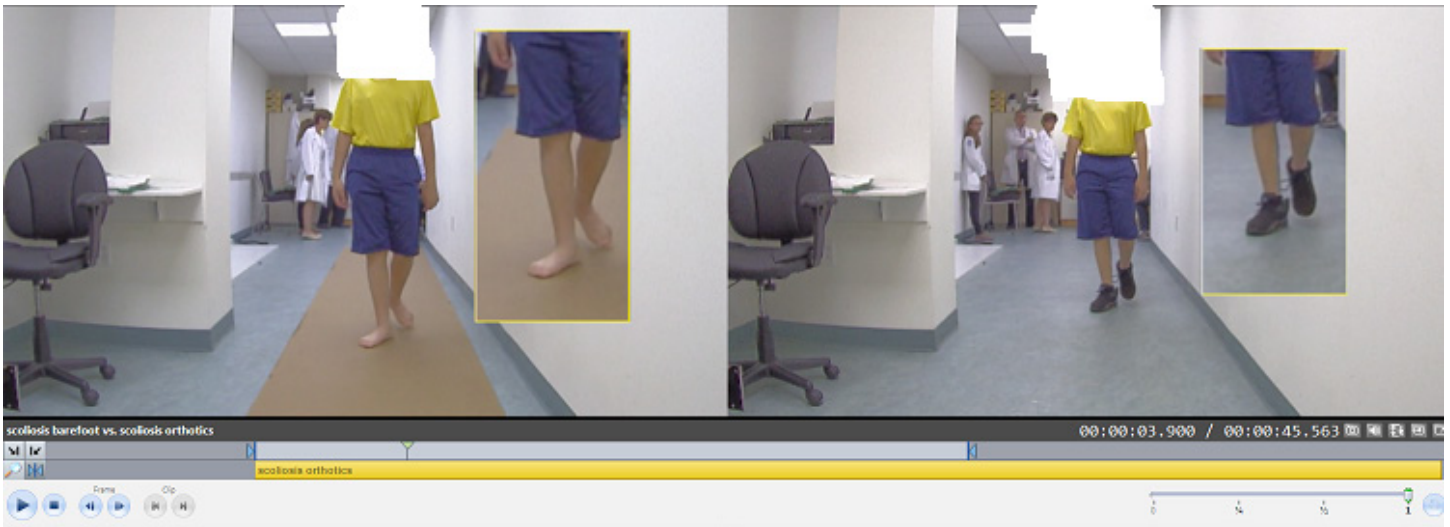
Dartfish is two-dimensional video analysis software that enables biomechanical observation, comparison and quantitative measurement of time, distance, angle and position. Measurements can be recorded in Data Tables that calculate timings and speeds from position/time data. For precise imaging, Dartfish records a live video stream from high-definition IP cameras that are designed for scientific purposes, offering high frame rates and accurate image representation.

Dartfish is also able to integrate data from third-party software with video and simultaneously record video and telemetrically received data. This is a useful feature because of the poten-

tial to display our F-Scan data alongside Dartfish video analysis data.

Some of the most beneficial features of our new Dartfish Gait Analysis System are: it allows us to easily capture videos of our patient's gait via remote control with immediate replay; videos can be captured from two cameras simultaneously, allowing us to look at gait from the sagittal and frontal planes; we can compare 2-4 videos side-by-side; we can print freeze-frame photos; we can analyze video captures and include verbal and written comments; we can precisely superimpose one movement over another; and we can break movement down into key elements.

Dartfish is a welcome addition to our Gait Lab as it joins the F-Scan and The Walkway System in achieving the goals of the Lab: to 1) provide an adjunct to assist in the evaluation and treatment of FCNY patients, 2) improve students' understanding of normal and pathologic gait and 3) foster an environment to stimulate research employing technology used in the Gait Lab.



Evaluation of patient with scoliosis pre- and post-treatment with orthotic devices.



Jeffrey Cusack, DPM ('81), uses the Dartfish app on his computer.