

A TIME SAVINGS COMPARISON STUDY:

Radiography vs. CT Scan vs. WBCT Imaging

EACH METHOD EXPLAINED:

Radiography

Most common diagnostic imaging technique, typically available in-office; uses electromagnetic rays (radiation) that pass through targeted dense body parts to reflect internal structures two-dimensionally on to exposed film.



Computed Tomography (CT)

More sophisticated, powerful X-rays, typically only available in hospitals or imaging centers; perform multiple 360° rotations around a prone person's body to produce detailed, high quality cross-section imaging of internal parts.



Weight Bearing CT

Uses Cone Beam CT technology, available in-office; enables imaging of ankles and feet under normal weight bearing standing state, providing enhanced functional joint biomechanics data. Cone beam-shaped X-ray source, covers large volume in one single 360° rotation to produce images reconstructed by use of algorithms to provide excellent high-resolution volumetric images.



Group 1:

Radiographs and Traditional CT Scans Performed Over 1 Full Year
 • Year: 2012
 • # of Radiograph Scans: 1,850
 • # of CT Scans: 254

Group 2:

WBCT Scans Performed Over 5.2 Years by
 • Years: July 1, 2013 to Sept 30, 2018
 • # of WBCT Scans: 10,087

Purpose of Studies:

Two studies were conducted to determine both the efficiency and time spent to perform each imaging method.

IMAGE ACQUISITION & TIME SPENT FOR EACH METHOD:

Times calculated in each study includes time spent in both patient positioning and time needed for the imaging; data entry is not included.



Radiography Imaging

Patient positioned on special step with a holding apparatus for digital film; X-ray emitter was adjusted, and images taken of feet bilateral dorsoplantar and lateral views and Saltzman hindfoot views.

Radiation Exposure Time: Approximately 1/10th of a second for each image.



CT Scan

Patient positioned in supine position with feet placed in special holding device, ensuring neutral foot/ankle position; images taken of both feet and ankles scanned from 10cm proximal to ankle level with slice thickness adjusted to 1 mm.

Pure Scanning Time: 60 seconds

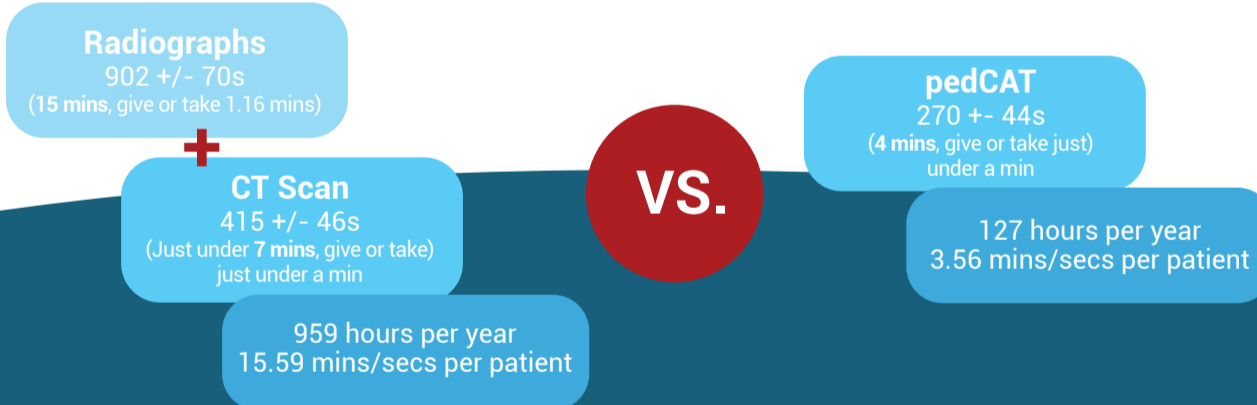


CurveBeam pedCAT

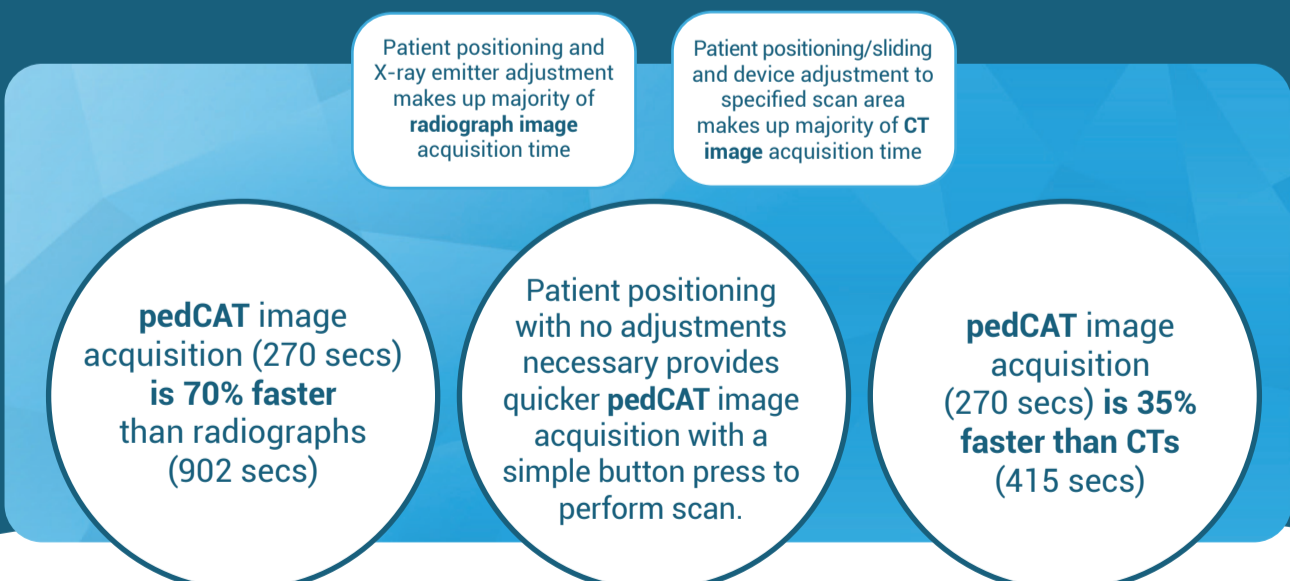
Patient walked into device and placed in bipedal standing position; X-ray emitter and opposing flat-panel-sensor rotated horizontally around feet, providing conventional CT scan comparable resolution and contrast imaging.

Pure Scanning Time: 68 seconds

STUDY RESULTS:



Outcomes and Factors Affecting Time Efficiency of WBCT vs. Radiography or CT Scans



CurveBeam's Weight Bearing 3D Cone Beam CT Imaging provides improved diagnostic information, better patient outcomes, and streamlined practice workflow. [Click here to learn more.](#)

