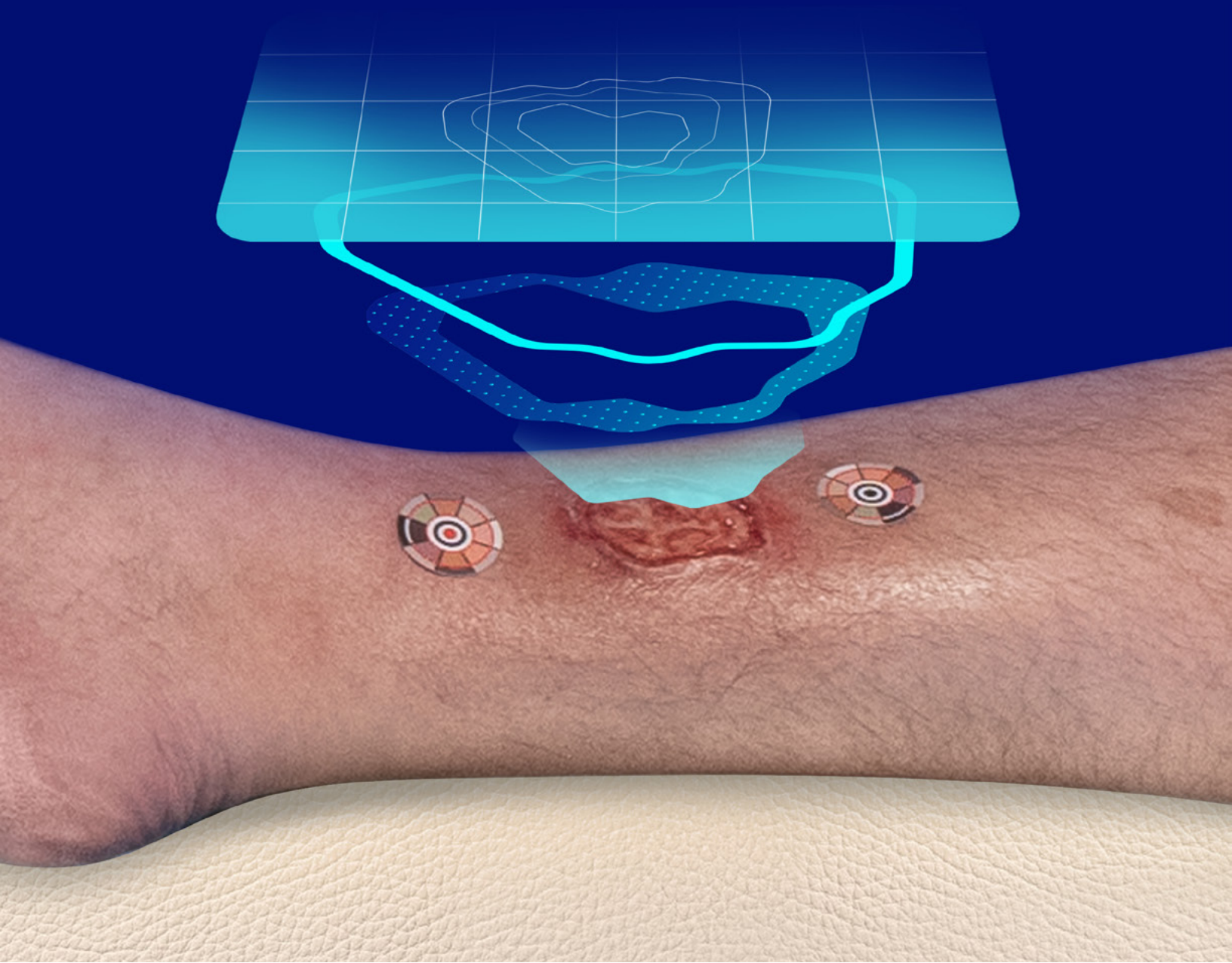
Healthy.io

2D vs. 3D Measurements: A New Dimension of Accuracy

How 3D imaging can solve the measurement problem at the heart of wound care

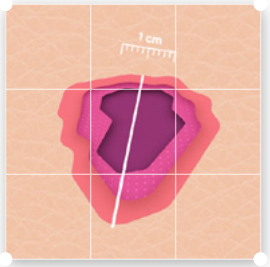


Visual documentation of chronic wounds is particularly valuable to clinicians, helping them measure and track wounds, informing their care decisions and expediting healing. But traditional 2D photography does not allow for precise measurements. With 3D imaging, wounds can be measured, analyzed and tracked accurately over time.

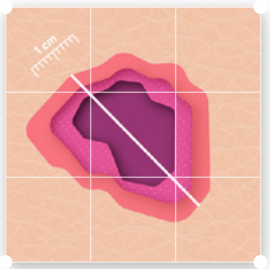
2D

The Problem with 2D Measurements

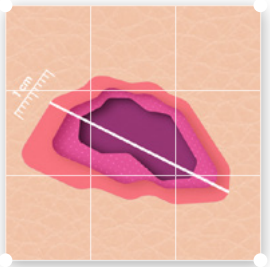
Traditional 2D photography is an unreliable method for wound measurement. 2D measurements work by comparing the wound to an element with a known size, usually an adhesive sticker placed alongside the wound. However, this method does not allow for accurate wound measurements and for precise tracking of a wound's progress over time.



5.1 cm



5.5 cm

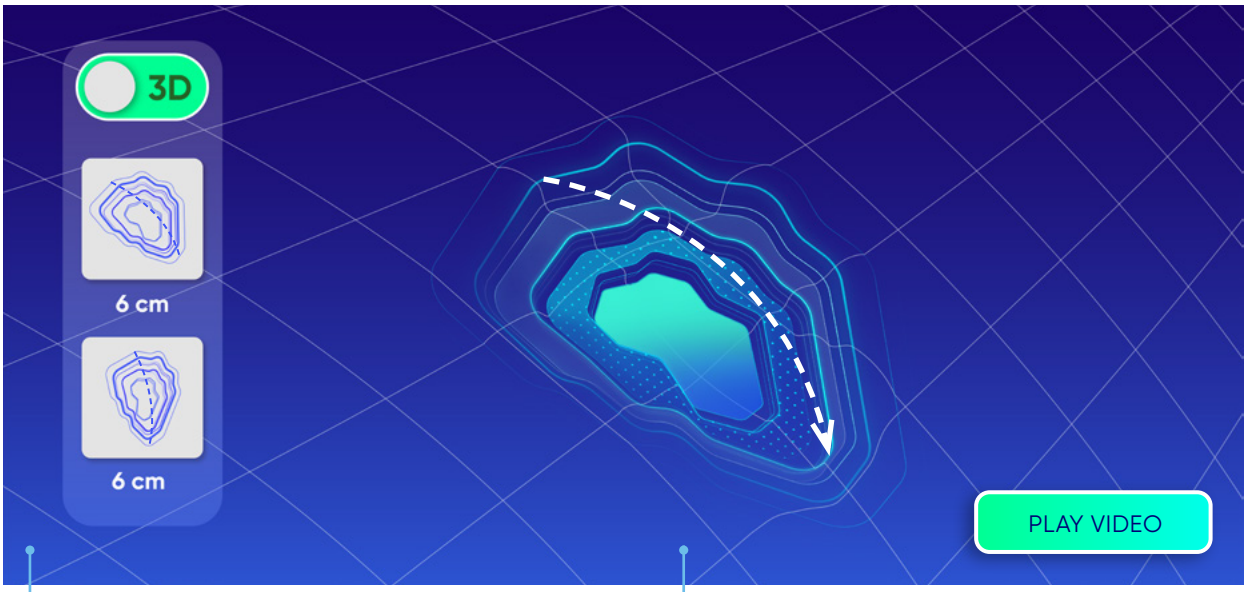


5.0 cm

- 2D imaging assumes the wound lies on a flat plane, and fails to take body curvature into account
- The reference sticker must be placed on the same plane as the wound, which is usually impossible when dealing with some of the most common types of wounds, such as foot wounds
- 2D imaging's failure to account for curvature results in inaccurate measurements. Attempting to calculate the wound's surface area compounds the measurement error.
- The rotating group of clinicians, often operating under time pressure from patients' homes, are unable to consistently reproduce the same camera angle over multiple visits—another requirement of 2D imaging

The Reliability and Accuracy of 3D Imaging

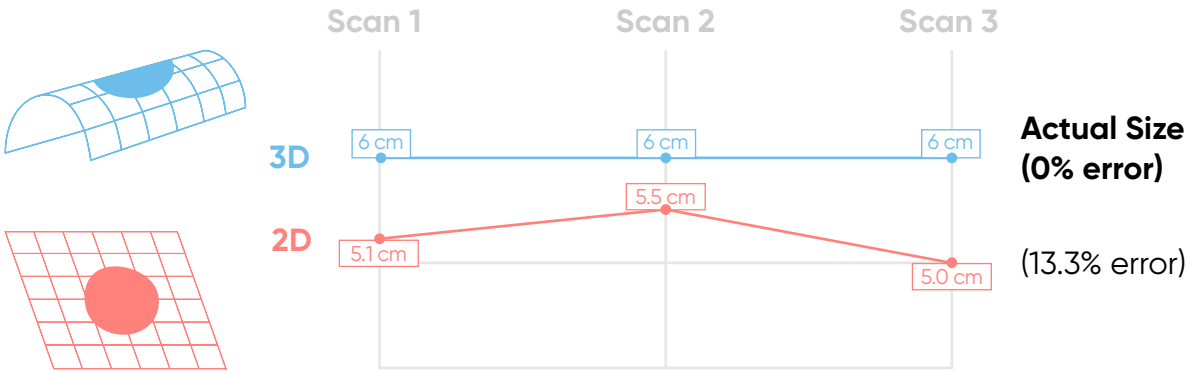
3D imaging creates an accurate and consistent model of the wound that can be compared with earlier and later renderings. This allows the wound's progress to be reliably tracked over time. Photogrammetry techniques enable sophisticated and standardized measurements that are difficult to achieve otherwise.



- Accounts for body and wound curvature, allowing for accurate area measurements
- Standardized measurements- data is collected consistently over time, despite changes in clinician and location
- 3D methods allow for more flexibility in placing the reference stickers
- Agnostic to camera angle- accurate every time
- Provides a true-to-life reproduction of the wound

By accounting for curvature, 3D wound imaging allows for reliable measurements that reveal each wound's true progress.

Comparison of Wound Measurement Accuracy Using 3D vs. 2D Imaging



* Example based on an internal accuracy study comparing 2D measurements taken with a digital camera and 3D measurements captured with Healthy.io's smartphone app.

Healthy.io's Digital Wound Management Solution provides 3D wound imaging that's fast, easy to use, and highly portable.

All that's needed is a smartphone app—unlike other 3D solutions that require expensive scanning hardware. A simple smartphone scan of the wound produces a fully comprehensive wound model, including tissue type evaluation.
Wound data and imagery are automatically uploaded to a secure, cloud-based portal, and can be safely shared among members of the care team. The solution can be fully integrated with existing EMRs to streamline workflows.

Healthy.io

Contact us to find out how you can use the best of 3D imaging technology to seamlessly transform your wound care practices

wound-us@healthy.io
healthy.io/services/wound