Wound-Mapping® Ultrasound

Wound care treatment has seen some major advances over the years, but methods for accurate wound assessment have remained expensive and often underutilized.

Working with clinicians at the forefront of wound care Hitachi Aloka has developed unique ultrasound technology that can help you quickly and accurately assess your patients wounds and set them on the road to recovery.

Wound Mapping Ultrasound is a non-invasive imaging method that has no contraindications. It is about 1/10 the cost of an MRI and may be performed at patient’s bedside or during a routine clinic visit.

Wound-Mapping® Allows You to:
- Visualize Occult Pathology in the Clinic / at the Patient’s Bedside
- Evaluate Soft Tissue and Cortical Bone Surface
- Discover Occult Pathology such as Osteomyelitis
- Visualize Blood Flow to the Wound Bed
Wound Assessment Clearly Defined

Using the Wound-Mapping® Ultrasound Assessment Method, evaluation of both soft tissue and the cortical surface of bone in and around a chronic ulcer may be achieved. Besides being painless to patients, it is a powerful and easy-to-use diagnostic method to examine below the wound’s surface. Now you can define wound etiology, "see" hidden pathology, take precise measurements, accurate labeling and documentation, determine proper treatments, and monitor the healing process in three easy steps.

Step 1
Prepare the Transducer

Step 2
Prepare the Wound

Step 3
Start Scanning

Wound-Mapping® Ultrasound Assessment Method

Allows You to Qualify and Quantify:
- Wound Depth
- Thickness of Tissue Over Bone
- Extent of Undermining
- Blood Flow to Wound Base
- Bone Invasion (Osteomyelitis)

PictZar® Digital Planimetry Software Provides:
- Simple Calibration of Wound Images
- Accurate Surface Area Measurements
- User Addition of Depth Measurements
- Robust Reporting Package
- PUSH Report with Graph
- Tracking of Wound Progress over Time
- Digital and/or Hardcopy Archive

CPT Codes for Wound-Mapping®
Queries and responses from the American Medical Association on the clinical application of Wound-Mapping® when imaging wounds using diagnostic ultrasound.

Schedule a Demo Contact Sales
Wound-Mapping® Ultrasonic Assessment of a diabetic foot. This scan of the plantar mid-foot revealed an irregular periosteal surface with interruption of cortical bone. Note on the mid-right side of the image a hypo to anechoic area showing a periosteal abscess. These ultrasonic impressions are commonly seen in osteomyelitis. Ultrasound was then used to guide a needle to obtain a biopsy confirming this diagnosis.
Noblus Features

Scan Assist
The L64 high frequency linear transducer allows easy wound care measurement by providing marks at 5mm increments on the transducer housing. These marks correlate to reference lines superimposed on the ultrasound image providing convenient guidance for biopsies and aspirations.

Extended Field of View
Provides an extended field-of-view image created from a series of real-time images. As the user moves the transducer across the area of interest a larger image is created providing clear spatial relationship information of anatomy and structures. This is especially helpful in assessing structures that are larger than the transducer field of view.

Convenient Wound Reporting

Accessory Equipment

L64 High Frequency Transducer
This wide band, linear transducer has a frequency range from 5 MHz to 18 MHz making it ideal for wound assessment. The L64 features the exclusive Hitachi Aloka Scan Assist feature which displays reference lines in the ultrasound image that correlate to the markings on the transducer housing. This allows an enhanced understanding of the wound’s shape and size. Having a correlation between markings on the L64 transducer housing and reference lines on the ultrasound image is especially useful while performing ultrasound-guided biopsies and aspirations.

HydroStep™
Transducer Standoff

SoundSeal™
Wound Dressing
Ultrasound Broadband Engine (Ultra BE)
The most advanced broadband beam-forming technology combined with high speed image processing that allows for higher definition ultrasound imaging than ever before.

HI Definition Tissue Harmonic Imaging (HdTHi)
Provides high quality imaging using an expanded range of harmonic signals. This technology results in excellent image resolution and sensitivity and improved penetration.

HI REZ
Clearly displays differences in tissues, reducing speckle noise while maintaining the frame rate. It can also display outlines more clearly by selectively emphasizing boundaries.

Spatial Compound Imaging (SCI)
The ultrasound beam is transmitted and received in real time and in the multiple directions resulting in a reduction of speckle noise, suppression of artifacts, and improvement of contrast resolution allowing lesions to be clearly observed.

HI Support
At the touch of a button the B-mode image is instantly optimized to the user’s preference. This technology continually monitors the user’s typical settings to optimally adjust the image when pressed resulting in less manual adjustments and more efficient examinations.

Single Crystal Probes
A single crystal is used to provide the piezoelectric elements of the probe. Single crystal technology achieves higher sensitivity and wider bandwidths over standard piezoceramics.
Wound-Mapping® Ultrasound
Accurate Assessment... in Real-Time... Without Pain

Case Study - Osteomyelitis & Abscess of Foot
Patient Age/Gender: 45 y/o Hispanic male
Ulcer/Wound Type: Grade 2 Diabetic Foot Ulcer
Location: Lateral Plantar Left foot
History: Patient has a history of a non-healing diabetic foot ulcer of the left foot. The patient, who is neuropathic and has no sensation in the foot, had been treated for 2 months using multiple off-loading devices, debridement, and local care. Patient was subsequently referred for evaluation and treatment of his foot ulcer.

Case Study - Osteomyelitis of Sacrum
Patient Age/Gender: 80 y/o black male
Ulcer/Wound Type: Stage IV Pressure Ulcer
Location: Sacrum
History: Patient has a history of a non-healing pressure ulcer of the sacrum. Patient had been treated for over two years using numerous wound dressings, an off-loading wheelchair cushion, and specialized beds. Patient was sent for evaluation and management of the pressure ulcer.

Case Study - Foreign Body in Wound
Patient Age/Gender: 71 y/o white female
Ulcer/Wound Type: Non-healing post surgical wounds
Location: Abdomen wound
History: Patient has a history of carcinoma in situ with surgical excision. Patient also has an abdominal hernia repair with mesh. Patient presented with a small chronic non-healing wound that had been draining clear non-infected fluid for 6 months. Patient was referred for evaluation and treatment of the wounds.

Case Study - Pressure Ulcer Undermining
Patient Age/Gender: 85 y/o white female
Ulcer/Wound Type: Stage IV Pressure Ulcer, 8 month duration
Location: Sacrum
History: Patient has a history of a non-healing pressure ulcer of the sacrum. Patient had been treated for over 8 months using numerous wound dressings and a turning schedule. The wound was highly draining with foul odor. Patient was sent for evaluation of the wound and to examine for the possibility of osteomyelitis of the sacrum.
Hitachi Aloka Medical America, Inc.

HEAD

5th Metatarsal

LONG RT Foot

POSITIVE OSTEO
Contact Information

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Download a copy of our free brochure or schedule a demo today.

Schedule a Demo