**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. She also has an abdominal hernia repair with mesh. She presented with a small chronic non-healing wound that had been draining clear non-infected fluid for 6 months. She was referred for evaluation and treatment of the wounds.

**DIAGNOSIS - Wound A**

Wound-Mapping® Ultrasonic Scan of wound “A” revealed that the implanted abdominal wall mesh had moved from deeper tissues and traveled into the base of the non-healing wound. The mesh could not be visualized through the wound bed’s granular base. The mesh was found to be acting as a foreign body keeping the wound open and allowing excess drainage to come from the wound. This Wound-Mapping® scan provided the etiology of the non-healing wound. The scan revealed the exact location and depth of the mesh.

**DIAGNOSIS - Wound B**

Wound-Mapping® Ultrasonic Scan of wound “B” revealed the depth of the wound reaching the abdominal mesh (at 1.0 cm). In addition, it was noted that there was a tear within the mesh and a new hernia was starting to protrude through the mesh (C). Again this was valuable information that the clinician needed to best understand the etiology of this non-healing wound.

**TREATMENT**

The evaluation results was used by the patient’s abdominal surgeon to identify the proper corrective treatment regimen. The clinician was able to remove the offending object by excising the part of the mesh that was keeping this wound open.
**SYSTEM DESCRIPTION**

The Hitachi Aloka Noblus is a premium portable ultrasound system that supports multiple applications over a wide range of clinical environments. All circuits related to image quality are fully digital which allows for high spatial resolution, high contrast resolution and a wide dynamic range. The removable console contains an internal battery allowing examinations to be performed even when an external power source is not available. Noblus also supports wireless LAN for DICOM communication.

A full complement of linear, convex and phased array transducers are available for Noblus allowing the ultimate in clinical flexibility.

**CLINICAL USES**

Shared Services, Emergency Medicine, Pain Management, Wound Care

**APPLICATIONS**

Radiology, Interventional Radiology, Obstetrics, Gynecology, Abdominal, Peripheral Vascular, Urology, Musculoskeletal, Pediatrics, Cardiology, Small Parts

**POWER REQUIREMENTS**

Input: 240/120 V @ 60 Hz

Power Consumption:
(Standard Components): 250W
(Using Cart): 550W

**ENVIRONMENT**

Temperature: 10 ~ 35°C
Relative Humidity: 30 ~ 85% (No Condensation)
Atmospheric Pressure: 700 ~ 1060hPa

**PHYSICAL DIMENSIONS**

**CONSOLE**

Weight: 19.9lbs (9kg)
Dimensions: 13.8" x 20.2" x 15.0"
Display: 15" Non-interlaced HD LCD
Pixels: 1,024 x 768
Display Range of Motion:
Swivel Angle: +/-90 deg. (Horizontal direction)
Tilt Angle: -90 ~ +30 deg.

**CONSOLE WITH CART, PROBE EXTENSION UNIT AND B&W PRINTER**

Weight: 88.2lbs (40kg)
Dimensions: 20.5" x 20.4" x 44.3" (Height is 52.2" in fully raised position)

**STANDARD IMAGE QUALITY FEATURES**

**HI Definition Tissue**

**Harmonic Imaging (HdTHI)**
Extends penetration and increases resolution by transmitting a wide band pulse and receiving the second harmonic and sub-harmonic signals across the entire spectrum of the probe bandwidth.

**HI Compound Imaging (HI Com)**
Is especially beneficial for improving the visibility of luminal structures. HI Com transmits and receives ultrasound beams in various directions and superimposes the resultant images in real time.

**Adaptive Imaging (HI REZ+)**
Utilizes Hitachi Aloka’s high speed digital processing engine to extract structures and emphasize tissues without reducing frame rate.

**Fine Flow**
Displays high-definition, high frame rate color doppler images down to fine vessels with minimal blooming.

**STANDARD WORKFLOW EFFICIENCY**

**HI Support**
Reduces examination time by allowing time gain compensation, B mode gain, base line, pulse repetition frequency and doppler gain, etc. to be adjusted with a single touch.

**On-Board User Manual**
User Manual Is integrated with the application allowing for convenient user guidance.

**Examination Data Management and Storage**
Noblus stores full-fidelity images, measurements, and other data internally and can also copy information to USB and USB HDD.

**Auxiliary Monitor Support**
Noblus includes a DVI-D connector for auxiliary monitor attachment.

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