

*Long Term Care*

**Detection, Prevention and  
Assessment of Pressure Ulcers**

**LONGPORT** 



A NEW WEAPON IN THE FIGHT AGAINST  
**PRESSURE ULCERS**

NOW THERE'S SOMETHING WORTH SMILING ABOUT

# Incidence Long Term Care

13% of patients in acute and long-term care facilities in the US develop pressure ulcers.

Cost to treat/pressure ulcer: \$500-\$40,000

# Incidence

## Acute-care hospitals

- Acute care hospitals treat 2.5 million pressure ulcers each year.
- 15% of hospitalized patients may have pressure ulcers at any one time.
- Estimated cost of treating all pressure ulcers in the US range as high as \$11 billion annually.

# CMS Ruling

FY 2008 Inpatient Prospective Payment System

Final Rule

Improving the Quality of Hospital Care

**Beginning October 2008, CMS will no longer reimburse for reasonable preventable “hospital acquired” pressure ulcers!**

CMS Office of External Affairs

Fact Sheet

August 1, 2007

# EPISCAN I-200

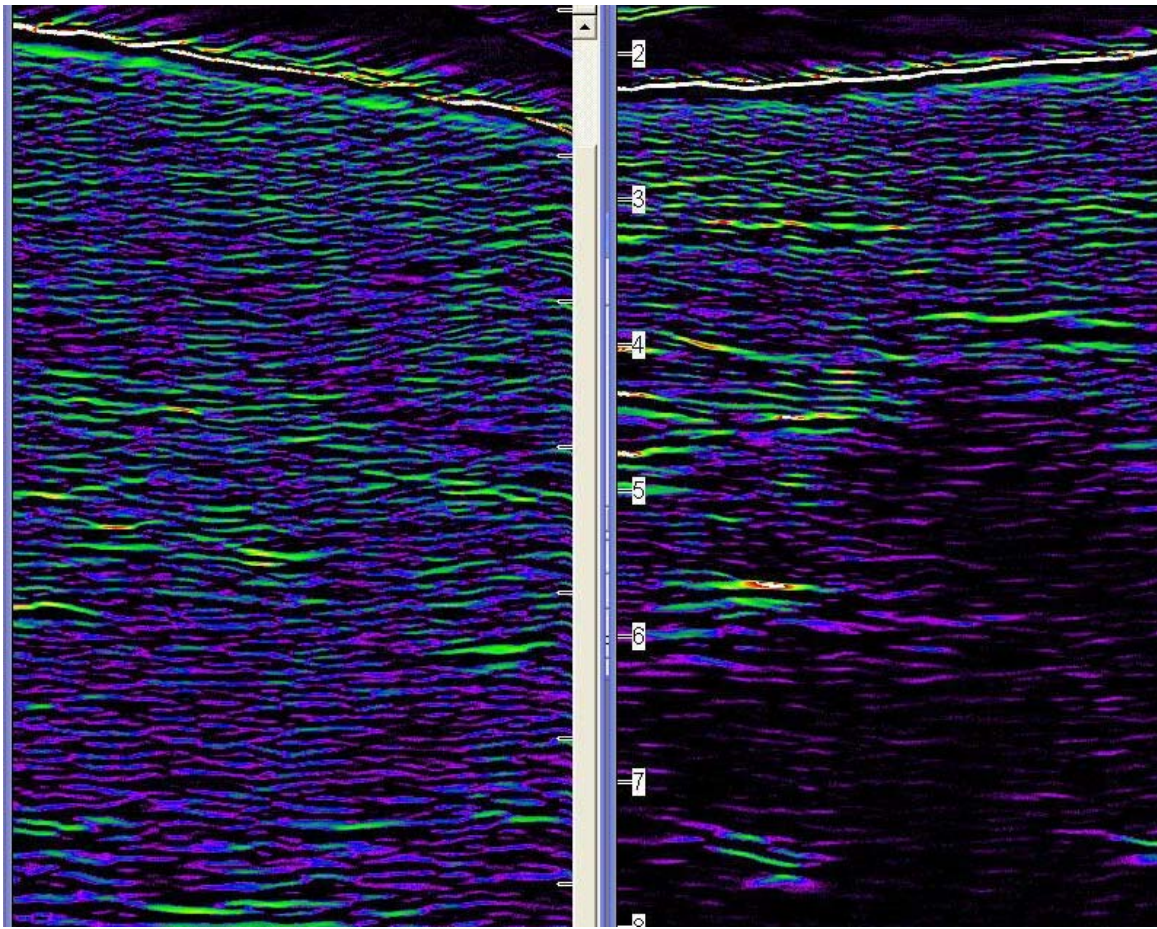
## High Resolution Ultrasound

- Non-invasive visualization of skin and underlying two centimeters of soft tissue
- 20MHz – 50MHz centre frequency
  - Standard ultrasound = 3MHz-10MHz

# High Resolution Ultrasound

- Early and reliable detection of developing pressure ulcers
- Image tissue changes that precede visible changes regardless of skin pigmentation
- Early detection leads to early intervention

# Ultrasound Images of Deep Tissue Injury



Normal Heel

Abnormal Heel

# BENEFITS

## Long Term Care

- Reduce the Incidence of Pressure Ulcers
- Maximize resident's quality of life
- Increase the quality of care of facility
- Decrease potential for CMS sanctions
- Decrease the potential for litigation
- Cost beneficial

# Cost Benefit Analysis

**“We conclude that EPISCAN, in extended care rehabilitation units, is a cost-benefit to providers for preventing costly pressure ulcers. The expected cost savings for the at-risk patient is approximately \$5,300.00 per resident over a 1 year period.”**

**Ronald Shannon  
Global Health Economics Projects  
Abstract from Poster Presented at  
SAWC, April 2007**

# Customer's Prospective

**“...the scanner’s utility has already been realized through reduced treatment costs. The incidence of pressure ulcers at Hawfields had dropped to 2 percent in February 2007, from 7 percent in September 2005, and the nurses’ treatment time has been better utilized in other direct-care patient issues.....”**

Abstract from article in *Provider* April 2007  
by Bill Osman, RN, Max H. Kernodle of *Presbyterian Home of Hawfields, Mebane, N.C.*

# Customer's Prospective

“... The ultrasound scanner “has more than met our expectation for reducing pain and suffering caused by preventable pressure ulcers,...”

“Because such a high number of pressure ulcers has been prevented, patients have been able to continue with therapy and, at times, have had a more rapid discharge to home or to a lower level of care.”

Abstracts from article in *Provider* April 2007  
by Bill Osman, RN, Max H. Kernodle of *Presbyterian Home of  
Hawfields, Mebane, N.C*

# BENEFITS

## Acute-care hospital

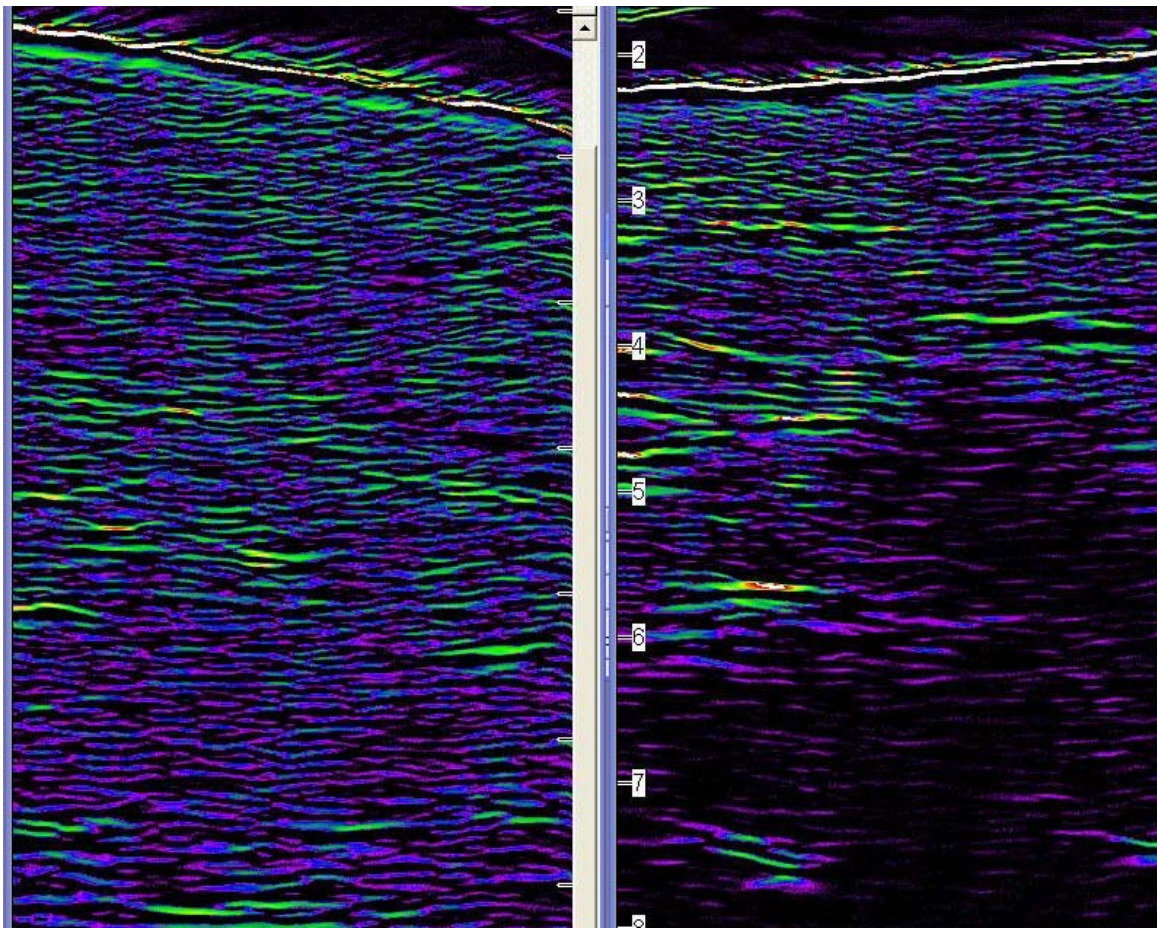
- **More reliable/objective skin assessment on admission**
  - Helps to determine where deep tissue injury originated
- **Early detection of deep tissue injury prior to changes being visually apparent**
  - Enables earlier intervention which can prevent breakdown
- **Potential to avoid unnecessary costs**

# BENEFITS

## Assessment of Wounds

- Targeting treatments to specific anatomical areas
- Distinguishing between pressure ulcers and friction ulcers
- Measuring treatment effectiveness
- Increasing awareness and compliance

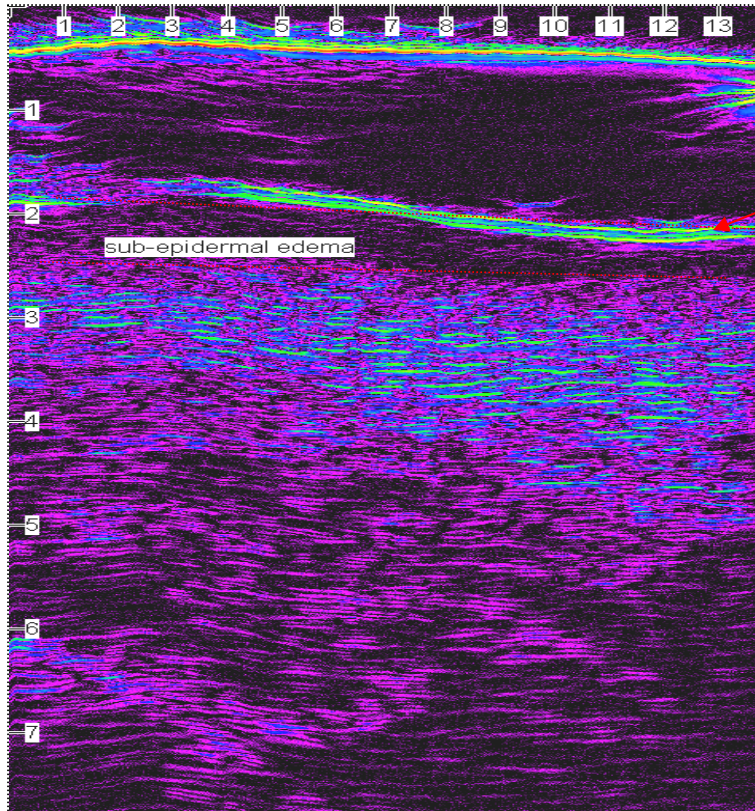
# Ultrasound Images of Deep Tissue Injury



Normal Heel

Abnormal Heel

# Differentiate pressure ulcers from friction or incontinence related breakdown

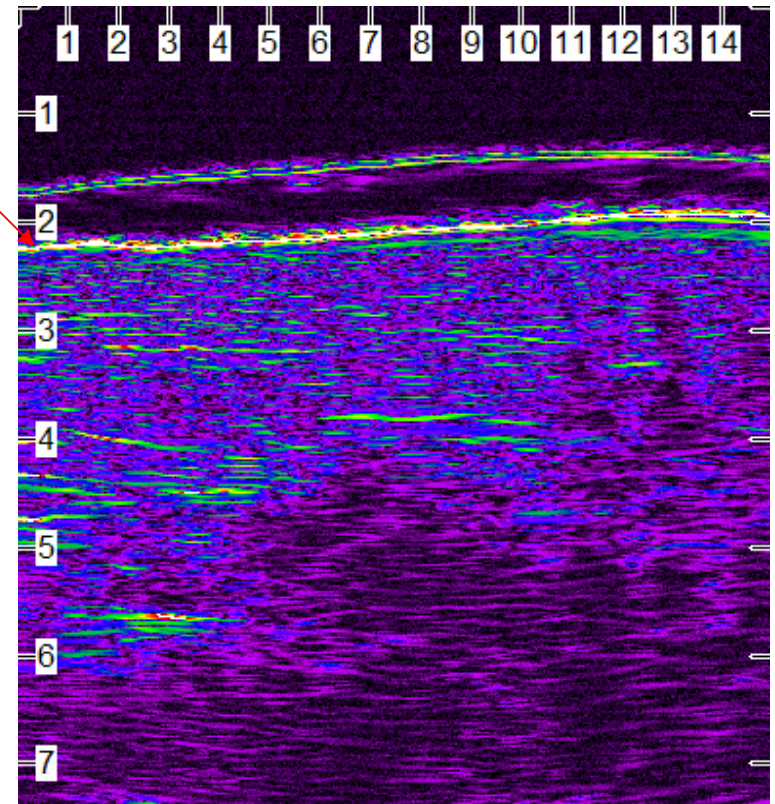


Superficial Edema

Friction

Epidermis

Dermis



Deep Edema

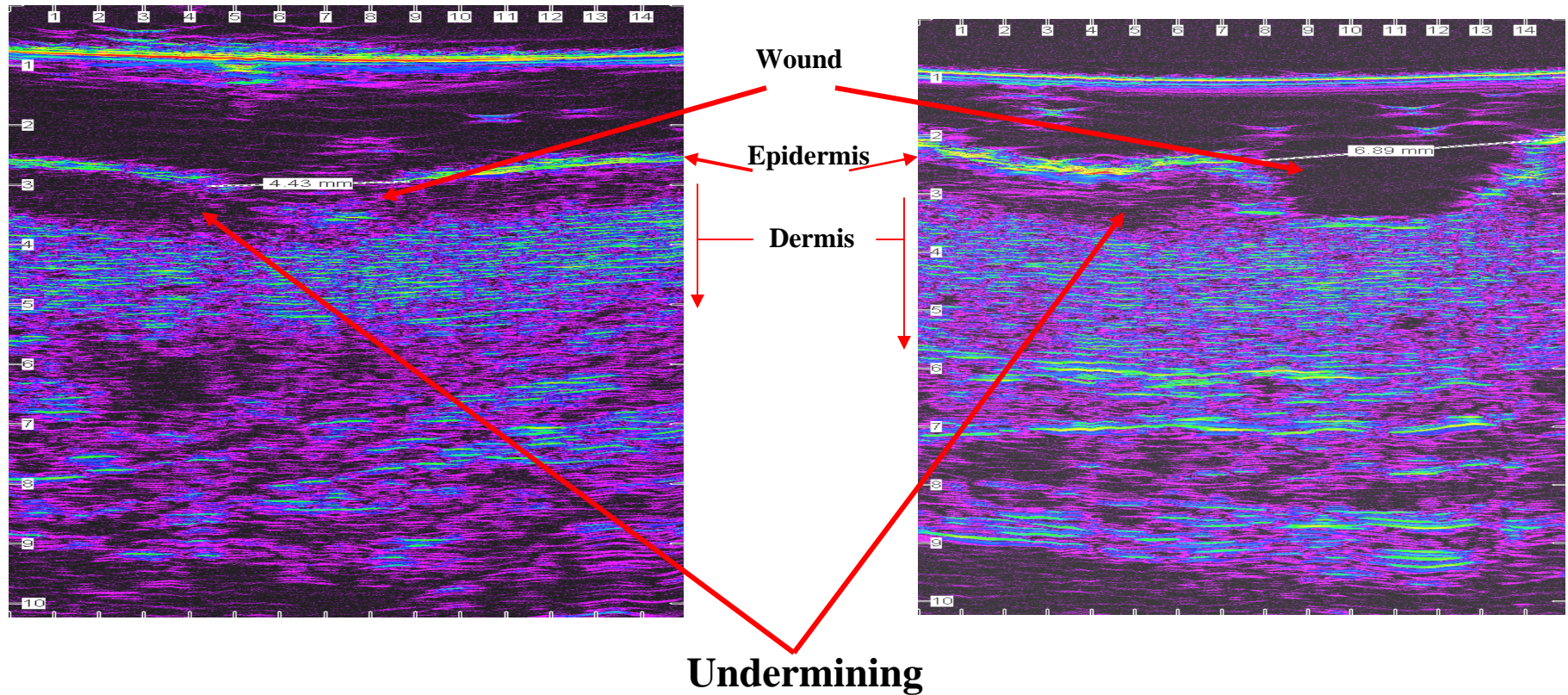
Pressure

# Improved monitoring of existing wounds

“ Up until now, nurses have been limited to a two-dimensional picture and the presence of exudate for assessing a wound. With this scanner we can see if healing has taken place in deeper tissue and not just on the surface. This device takes the guess work out of wound treatment.”

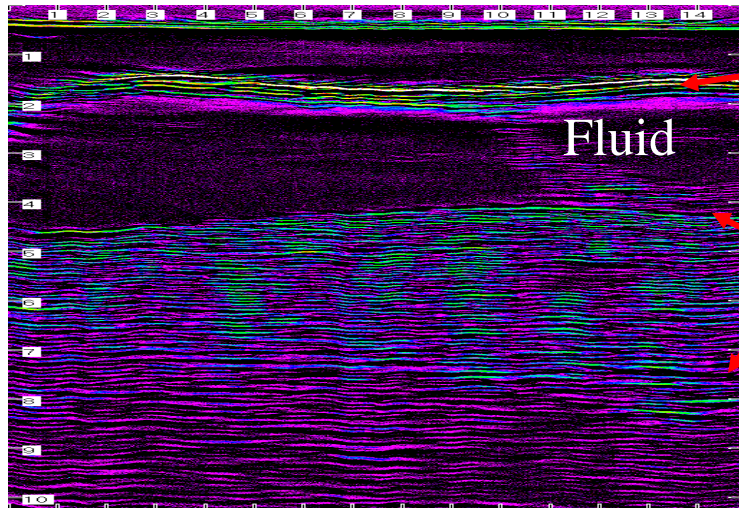
Courtney H. Lyder, ND  
Professor, University of VA

# Wound Undermining

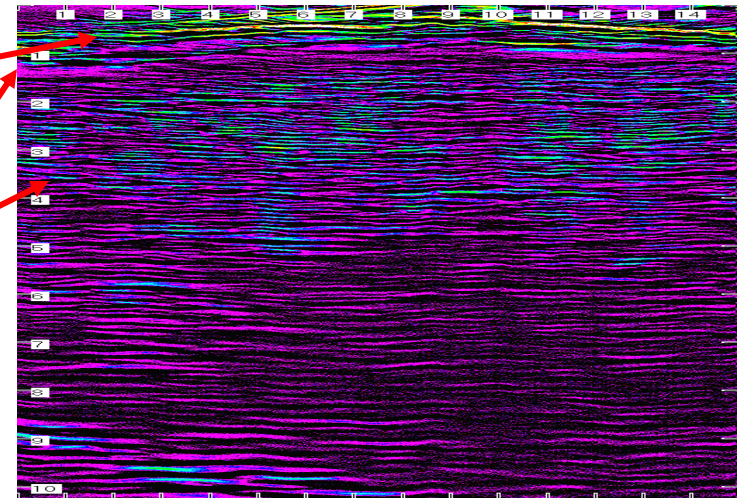


# Measuring Treatment Effectiveness

left heel (day 1)



left heel (day 7)



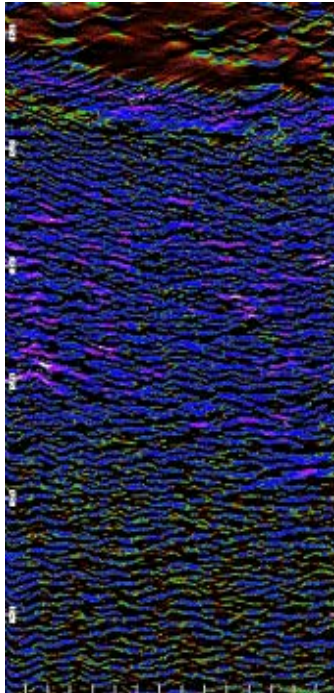
Epidermis

Dermis

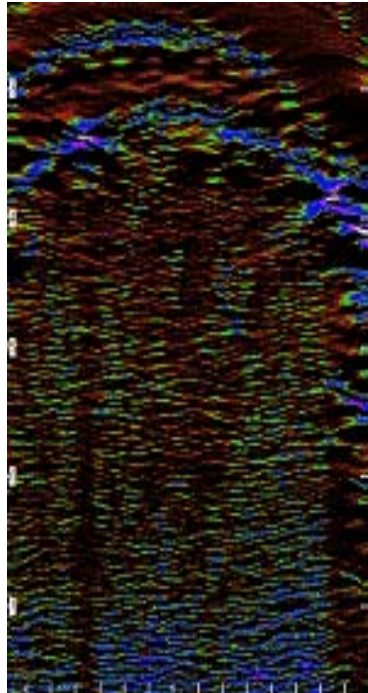
Same heels compared a few days after heel care program implemented. Notice a dramatic reduction of fluid between epidermis and dermis.

# Typical Ultrasound Profile of a Healing Wound

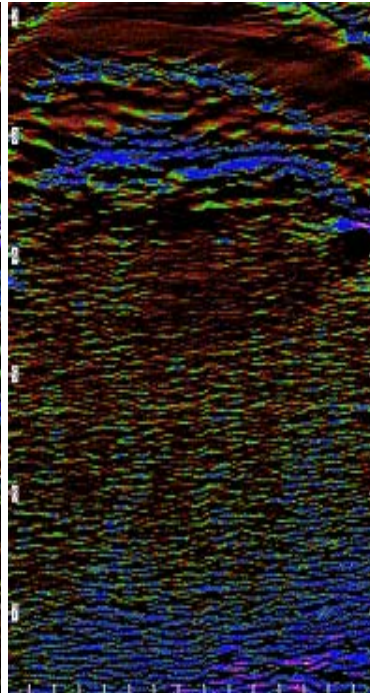
**normal**



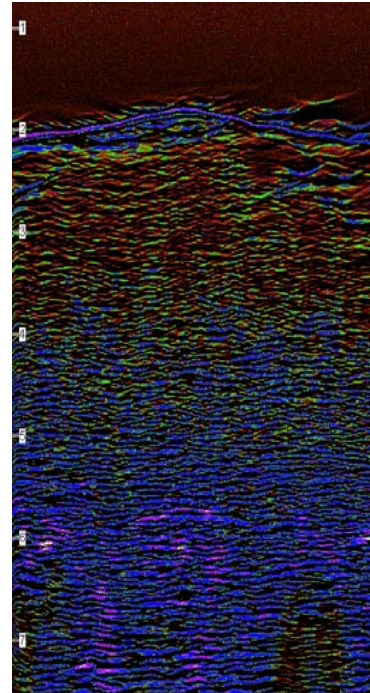
**time 0**



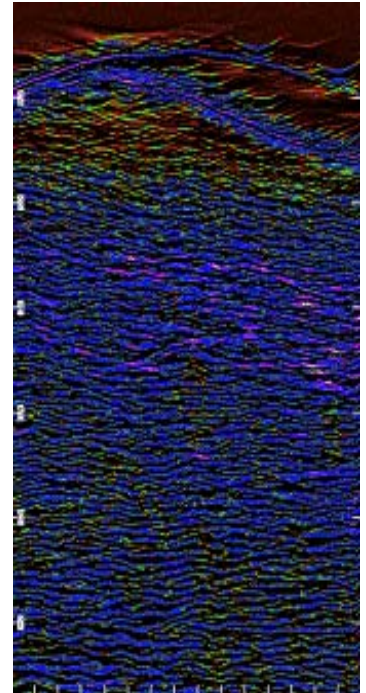
**2 weeks**



**1 month**



**2 months**



# Reduce Exposure to Litigation and Sanctions

**“Pressure ulcers are the #1 litigated wound problem in nursing homes and long term care.”**

Courtney H. Lyder, ND  
Professor, University of VA

# **Reduce Exposure to Litigation and Sanctions**

**When patients develop pressure ulcers, which can grow into ghastly wounds, their families often sue caregivers for negligence.**

**"It's very hard for staff to prove they were doing everything right in spite of the fact that they were," Zulkowski said. "It's very costly to defend staff actions."**

**Using ultrasound when patients are admitted to facilities to scan parts of the body prone to sores can "show staff isn't responsible."**

**Karen Zulkowski, Associate Professor, Montana State University  
College of Nursing.**

# Document, Document, Document!

- Advanced record keeping
- Comprehensive electronic record
- Integrate patient and wound assessment data
- Integrate treatment protocols and ultrasound images

# Helps Answer Questions...

- **WHO OWNS THE PRESSURE ULCER?**
- **WAS THE PRESSURE ULCER UNAVOIDABLE?**

# EPISCAN I-200



**WHY NOT win the battle against  
pressure ulcers?**



# High Resolution Ultrasound

## Detection, Prevention and Assessment of Pressure Ulcers



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