

XSensor Pressure Mapping Tutorial

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Let's do it Together



How to start a new session



Record pressure data, what does the image means and how to understand the pressure scale (if I don't see the IT)



How to use the scale and calibrate for seating assessment (149.3 as a default is a good scale to see pressure distribution)



Functions (2D 3D, rotations, graphic, pressure evolution/time, notes, reports templates)

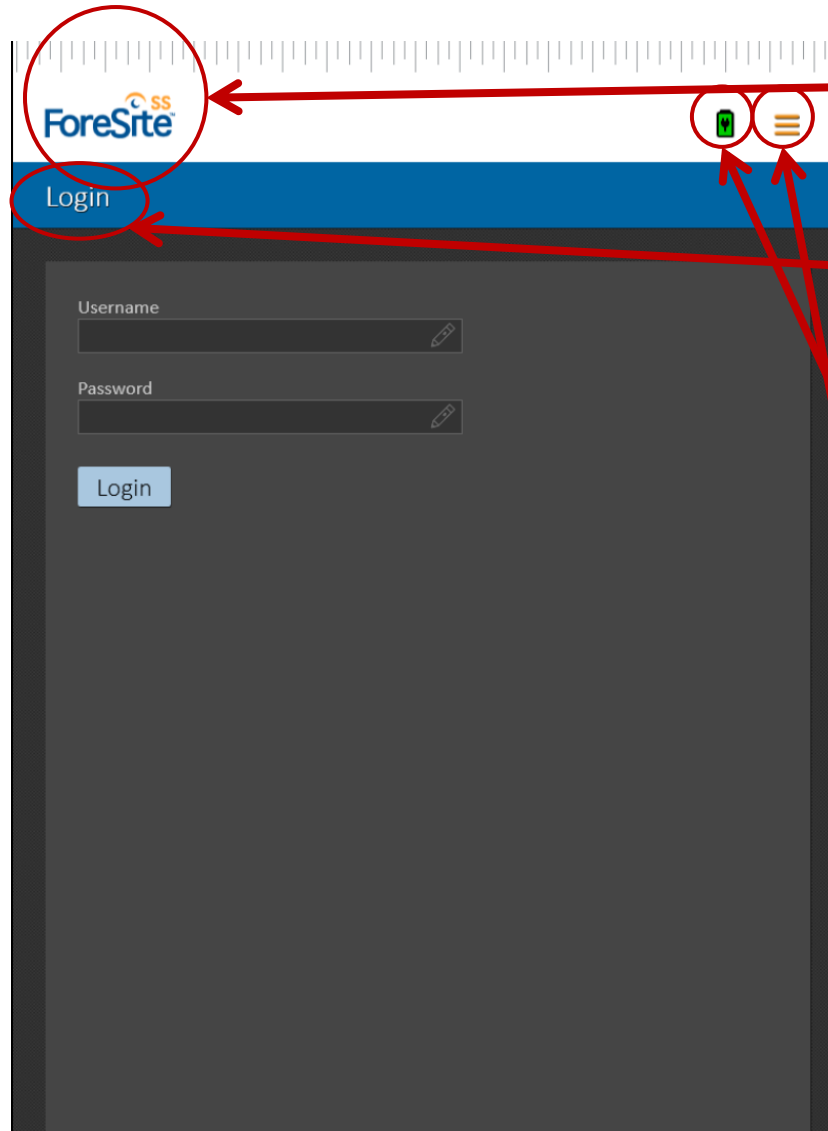


Example creating a patient session (ID, pathology, skin condition and cartography, Braden scale, personal notes)



Cushion trial comparison trial data gathering process, add the IT and GT TAGS

Software Overview: LOGIN SCREEN



ForeSite SS Logo

- Reset Feature – fast tap 5 to 9 times

Current Page: “Login”

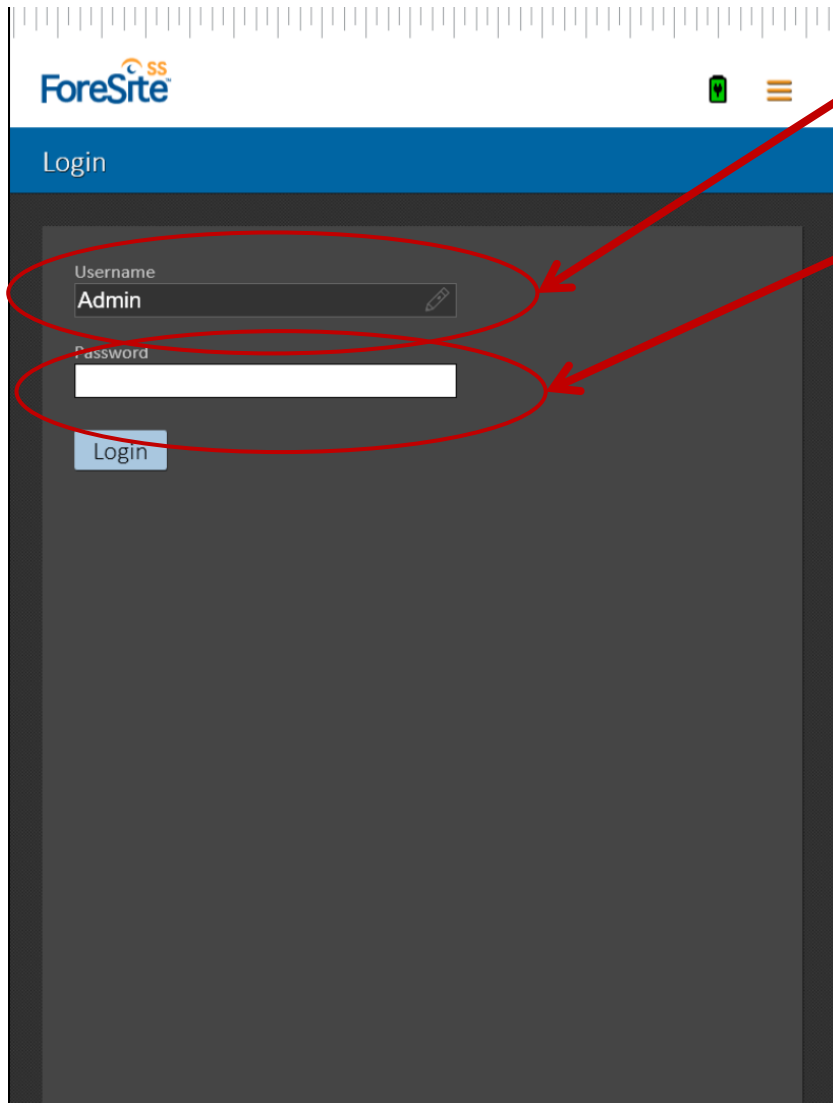
- The name of the page you are on
- No click function

Battery indicator

- No click function

Menu

Software Overview: LOGIN SCREEN



The screenshot shows a mobile application interface for 'ForeSite'. At the top, there is a blue header bar with the 'ForeSite' logo on the left and a green status icon and a hamburger menu icon on the right. Below the header, the word 'Login' is displayed in white text on a blue background. The main content area has a dark gray background. It contains two input fields: a 'Username' field with the text 'Admin' and a 'Password' field which is currently empty. Both fields are circled in red. Below the password field is a blue 'Login' button. Two red arrows point from the text labels on the right to the respective input fields.

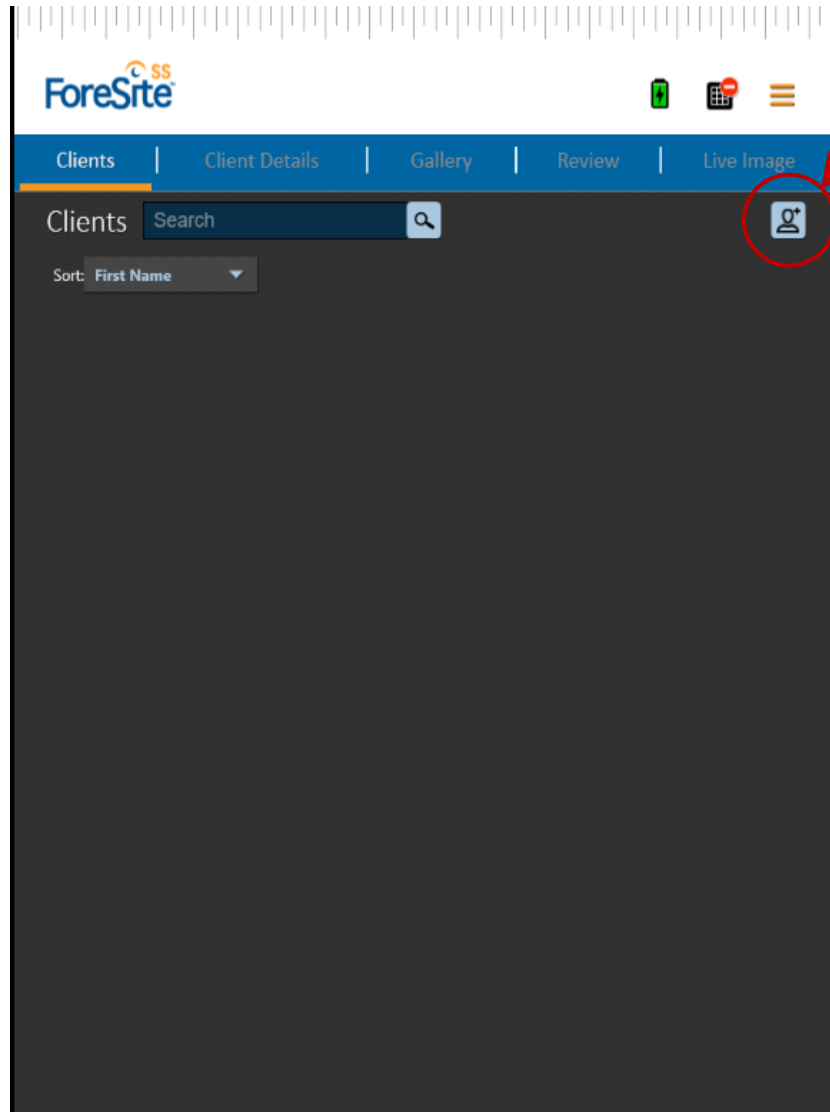
Username Field

- Enter your username

Password Field

- Enter your password

Software Overview: CLIENTS



Adding your first client

- Click the Add New Client button

Software Overview: CLIENTS

ForeSite

Clients | Client Details | Gallery | Review | Live Image

Add New Client

First Name
Test

Last Name
Example

ID
123456789

Information
Patient came in with Stage 2 Pressure ulcer under left IT. Currently sitting on cushion X

q w e r t y u i o p

a s d f g h j k l .

z x c v b n m , . ?

123 àè < >

Adding your first client

- Click the Add New Client button
- This will bring you to the Add New Client screen

Name, ID, Information fields

- Details entered here are permanent

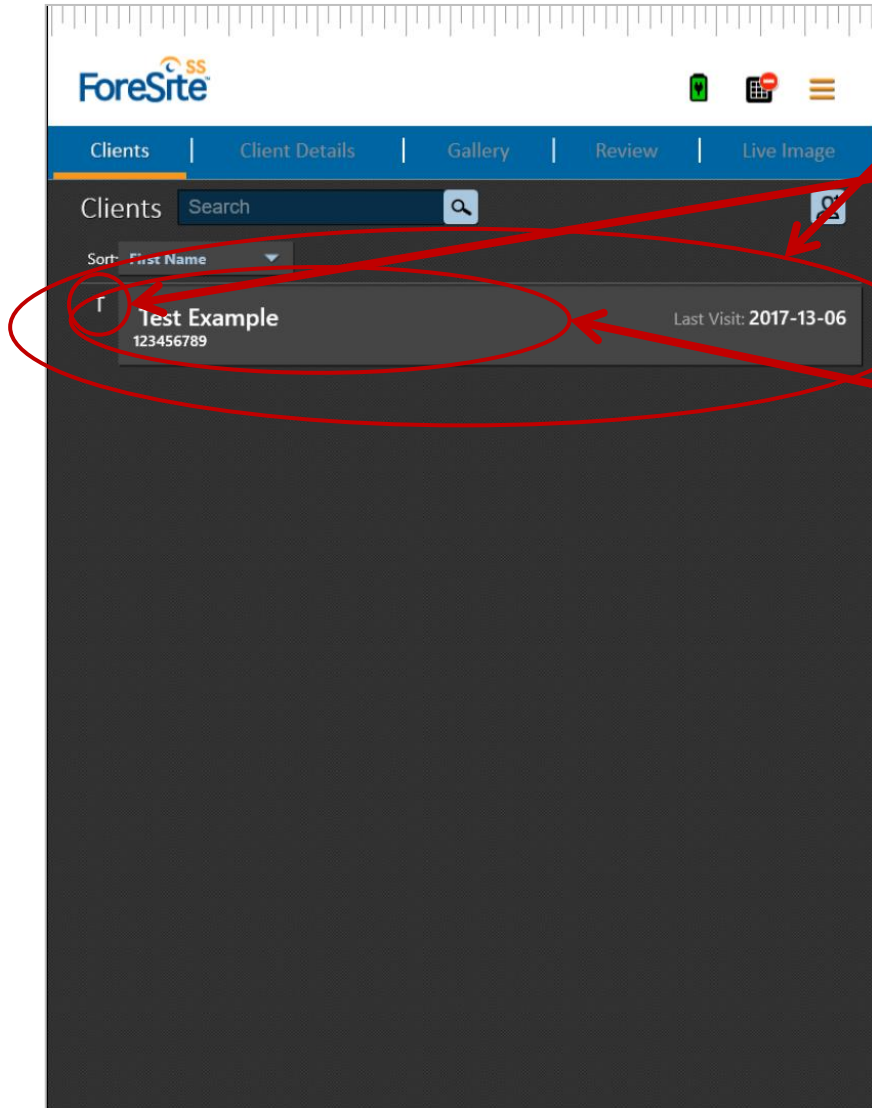
Client Notes field

- Details entered here are specific to the current date only

Press “Save” when finished

- This will return you to the Clients Screen

Software Overview: CLIENTS



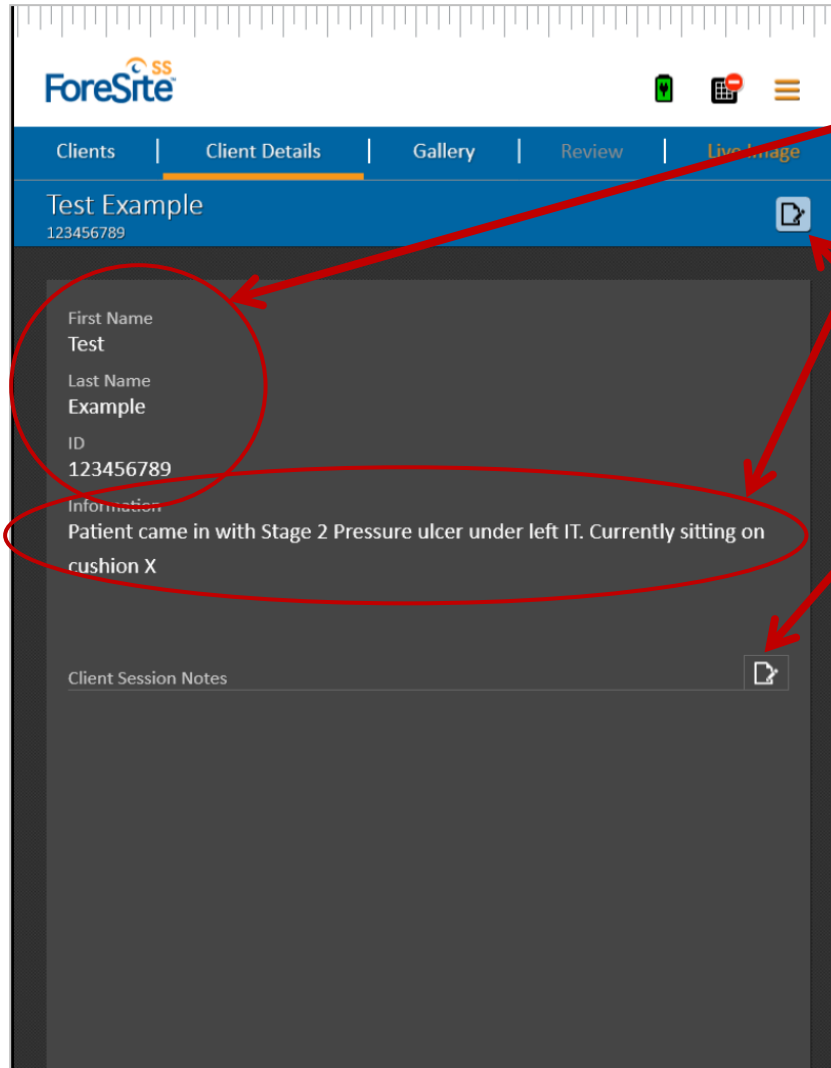
Adding your first client

- Your new client is listed here
- Clients are arranged alphabetically by his/her first name

Open a client

- Click on a client's name to open his/her Client Details

Software Overview: CLIENTS



The screenshot shows the 'Client Details' screen in the ForeSite application. The top navigation bar includes 'Clients', 'Client Details' (highlighted), 'Gallery', 'Review', and 'Live Image'. Below the navigation bar, the client's name 'Test Example' and ID '123456789' are displayed. The main content area is divided into two sections. The first section, titled 'First Name' and 'Last Name', contains the text 'Test' and 'Example' respectively. The second section, titled 'ID' and 'Information', contains the text '123456789' and 'Patient came in with Stage 2 Pressure ulcer under left IT. Currently sitting on cushion X'. A red circle highlights the 'First Name' and 'Last Name' fields. A red oval highlights the 'Information' field. A red arrow points from the 'Edit information notes click here' text to the 'Information' field. Another red arrow points from the 'Add a new client note' text to the 'Client Session Notes' field at the bottom.

ForeSite

Clients | Client Details | Gallery | Review | Live Image

Test Example
123456789

First Name
Test

Last Name
Example

ID
123456789

Information
Patient came in with Stage 2 Pressure ulcer under left IT. Currently sitting on cushion X

Client Session Notes

Client Details screen

- Client details are presented here
- Client information notes are shown here

Edit information notes click here

Add a new client note

- Add a new client note into this field

Software Overview: CLIENTS

ForeSite

Clients | Client Details | Gallery | Review | Live Image

Test Example
123456789

First Name
Test

Last Name
Example

ID
123456789

Information

New Note

✓

q w e r t y u i o p

a s d f g h j k l ' Enter

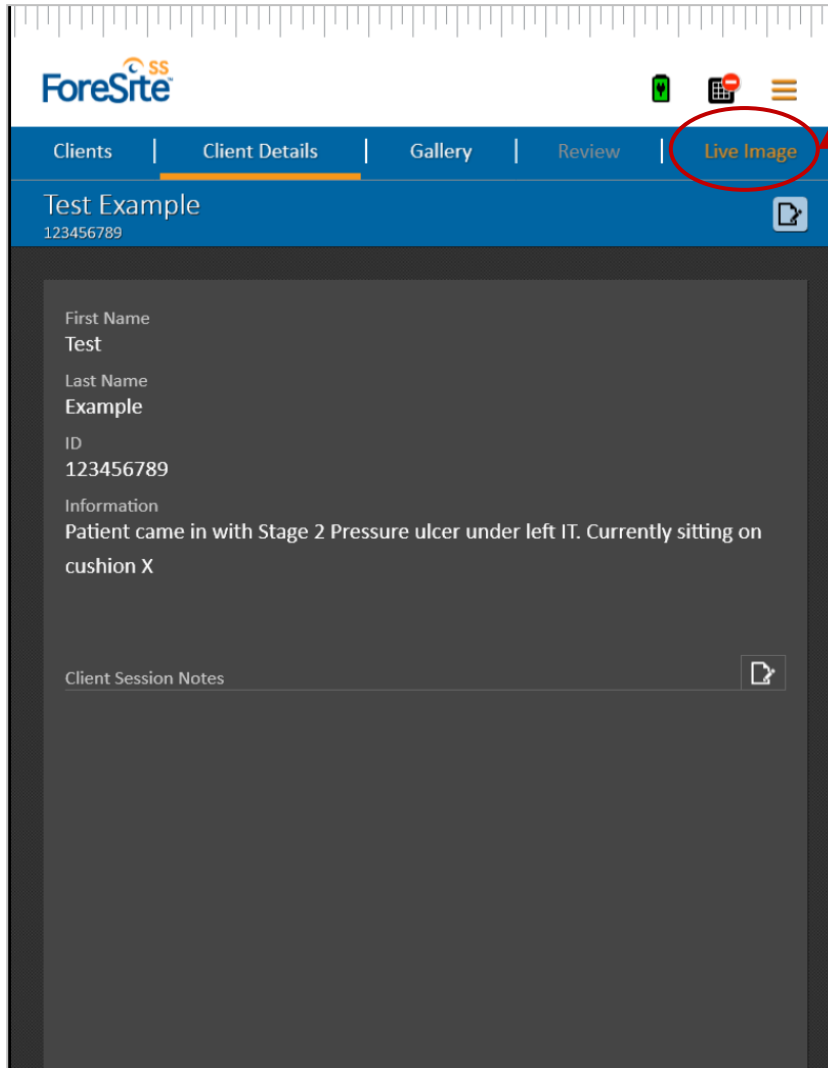
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123 àë < >

Add assessment notes here

- To save notes click here

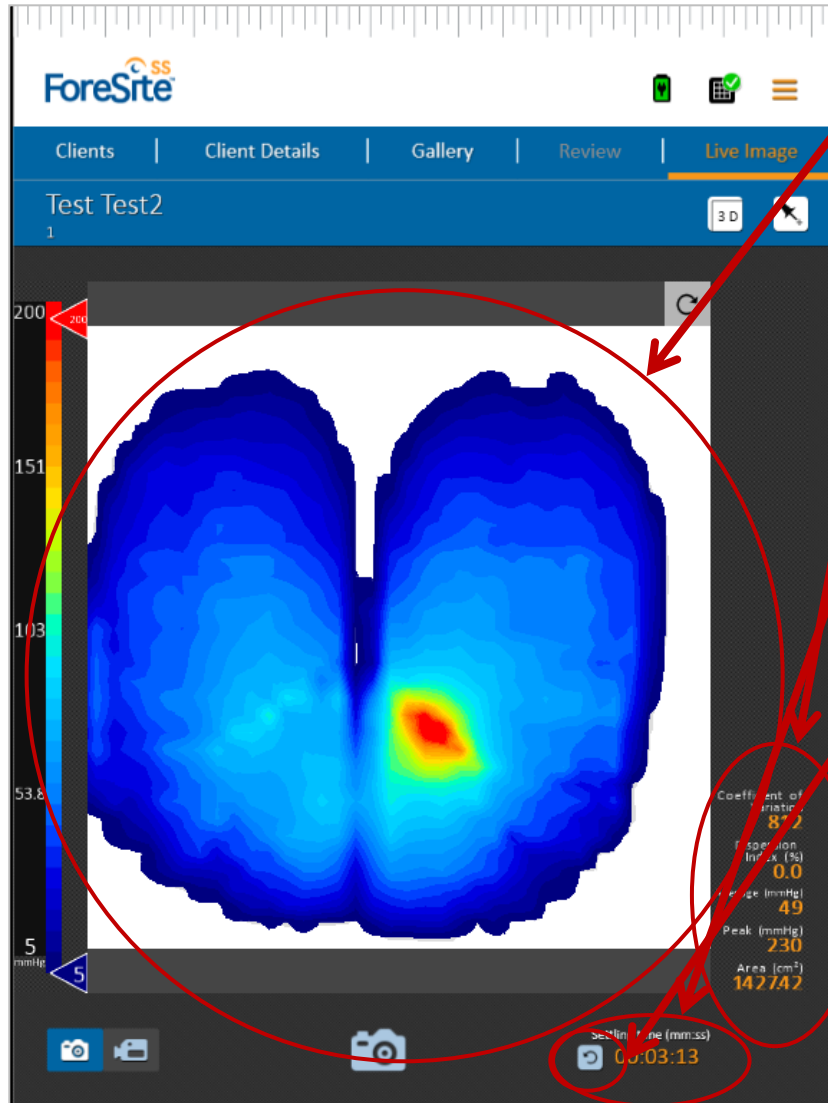
Software Overview: CLIENTS



Client Details screen

- Click on Live Image

Software Overview: **LIVE IMAGE**



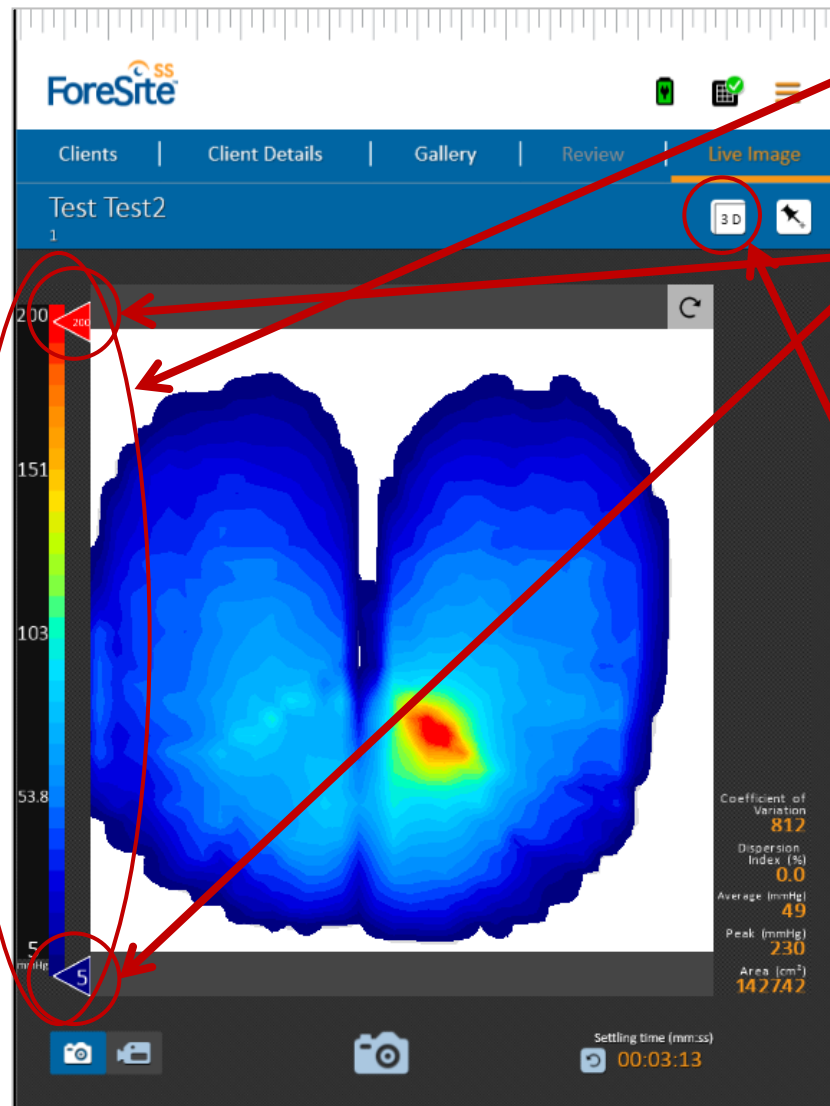
Live Image

- Previously known as “Preview Mode”
- Statistics are displayed to the right of the image

Settling time clock

- Located below the image, it records how long a client has been settling
- Displayed as mm:ss
- Reset the settling time by pressing the Refresh icon

Software Overview: LIVE IMAGE



Pressure Legend

- Pressure legend is located on the left side of the live image
- Upper and lower threshold can be adjusted using the red arrows on either end of the legend

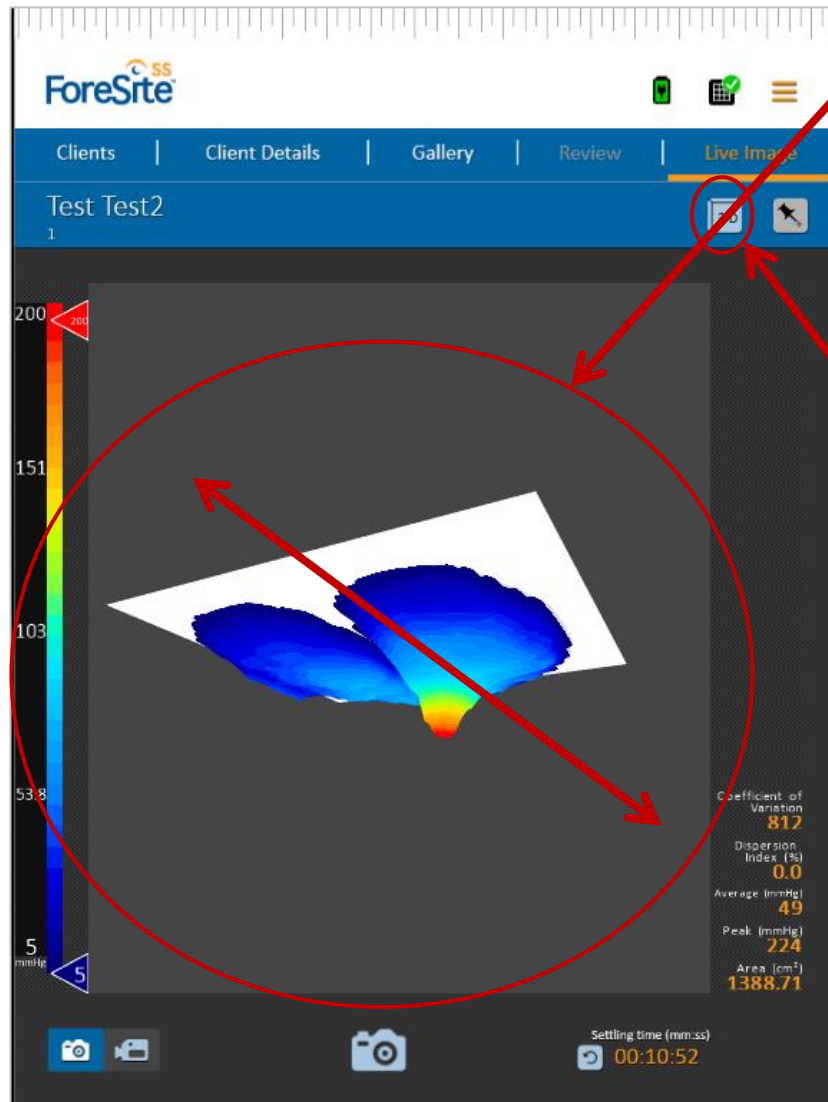
Activating 3D Mode

- Press the 3D icon to activate 3D mode

About ForeSite SS: SOFTWARE

Metric	X3 Display	ForeSite SS Tablet	Available 
2D			Not Available 
3D			Only Available in Seating Assessment Guide 
Recording Clock			
Notes			
Image Capture			
Video Capture			
Password Protection			
Email Reports			
Save to USB			
Anatomical Markers			
Client Database			
Ability to View Captured Images			

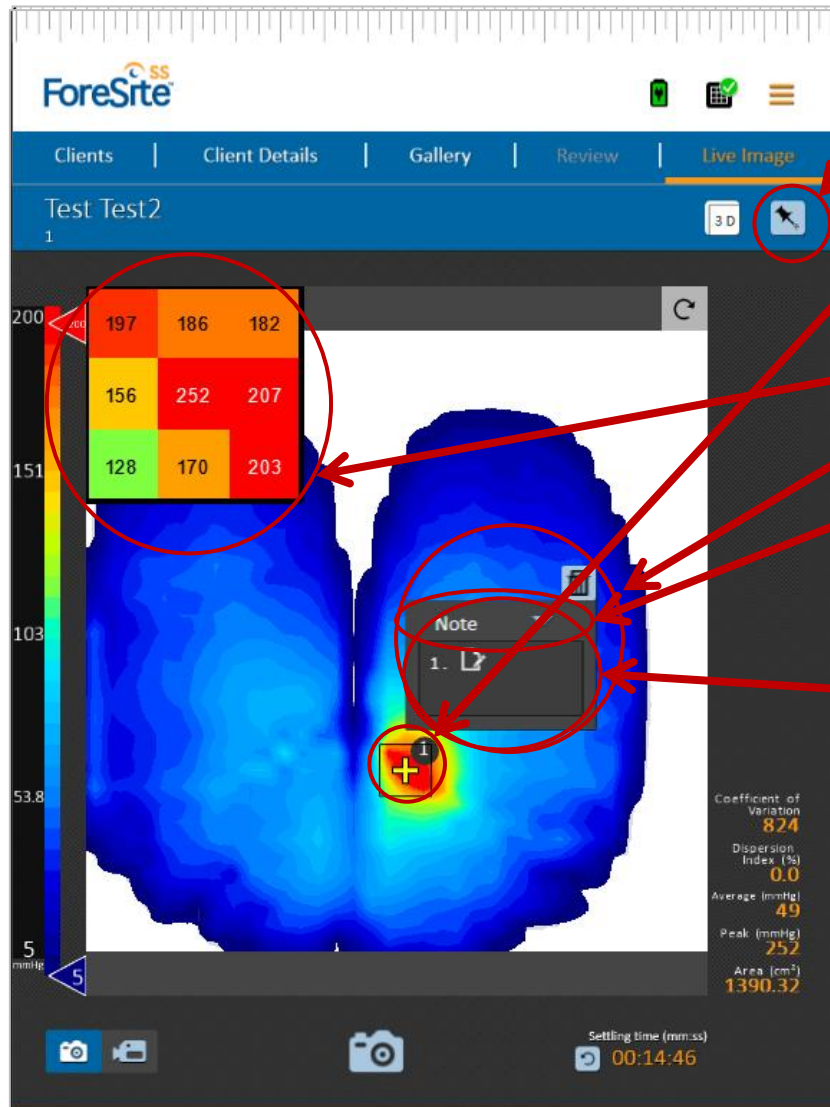
Software Overview: **LIVE IMAGE**



3D mode

- Activating 3D mode will display a 3-dimensional view of the live pressure image
- Press and drag across the screen to pivot the image
- Exit 3D mode by clicking on the 3D mode icon

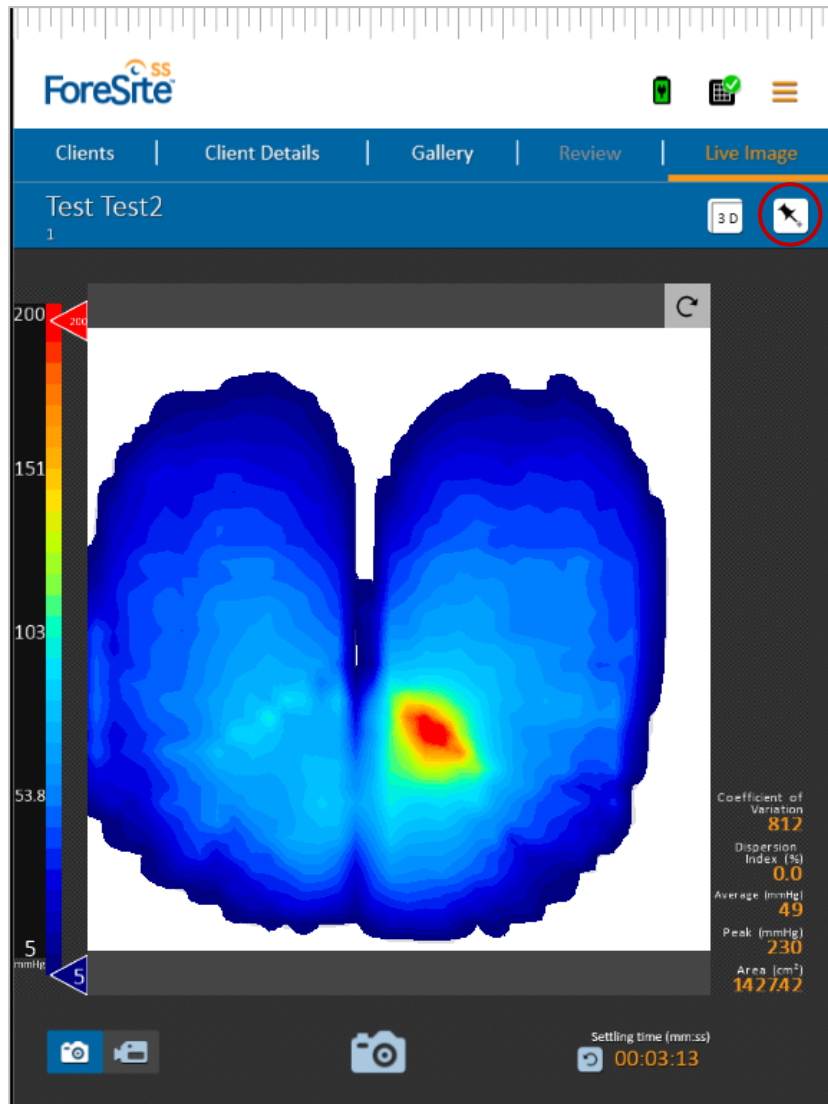
Software Overview: **LIVE IMAGE**



Marker Mode

- Anatomical markers can be placed by pressing the marker icon
- Press and hold for 3-5 seconds to place a marker
- Pressure Grid appears
- Add marker notes in the details box
- Leave it labeled as "Note", or click the drop down arrow to select "Coccyx", "IT", or "GT"
- Press in the empty field to add additional details about the marker

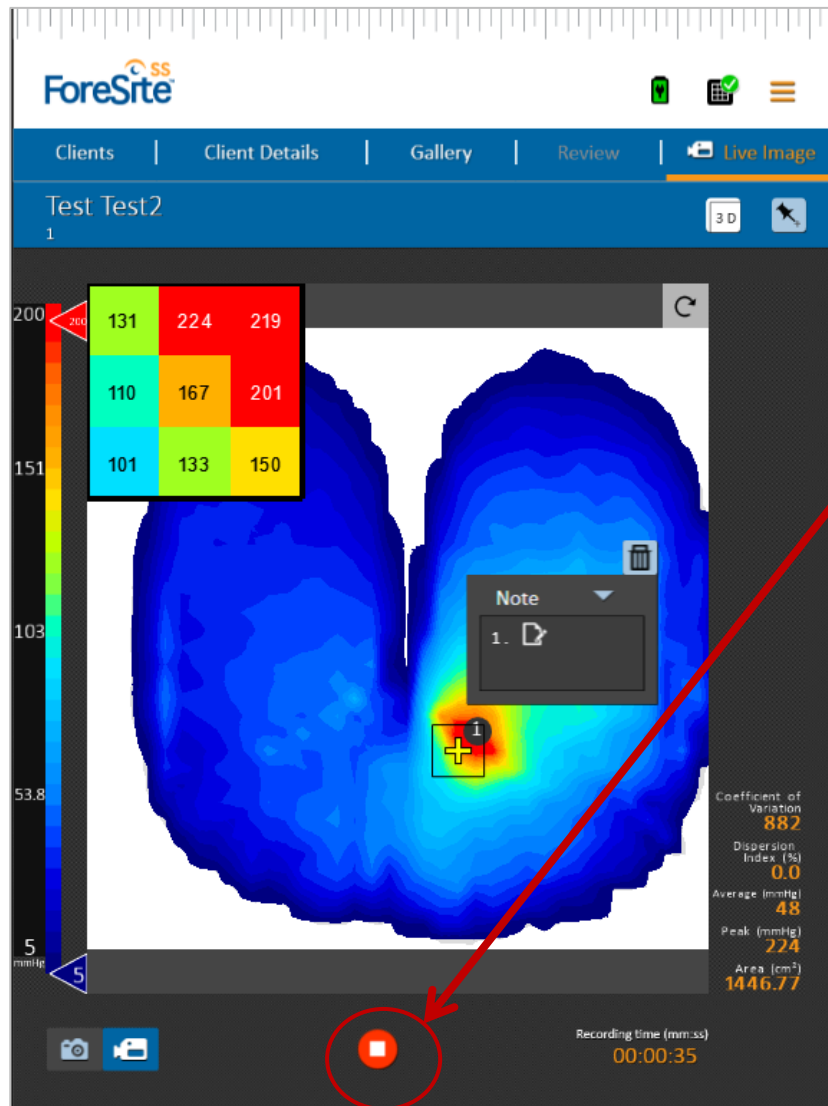
Software Overview: **LIVE IMAGE**



Marker Mode

- Anatomical markers can be placed by pressing the marker icon
- Press and hold for 3-5 seconds to place a marker
- Add marker notes in the details box
- Leave it labeled as “Note”, or click the drop down arrow to select “Coccyx”, “IT”, or “GT”
- Press in the empty field to add additional details about the marker
- Delete a marker by pressing the Delete icon
- Exit Marker Mode by pressing the marker icon again

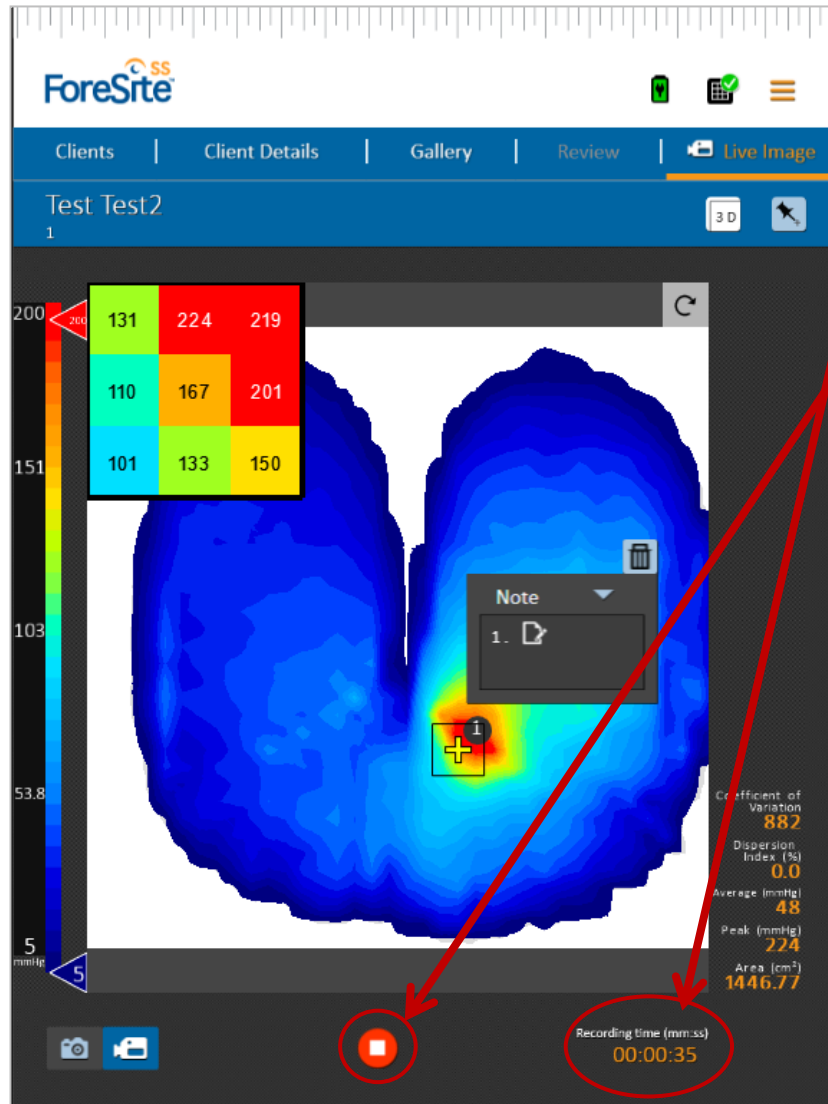
Software Overview: **LIVE IMAGE**



Capture stills and videos

- Capture an image from the live image screen by pressing the camera icon
- Use the switch to move into video mode
- Once in video mode, press the video icon to record

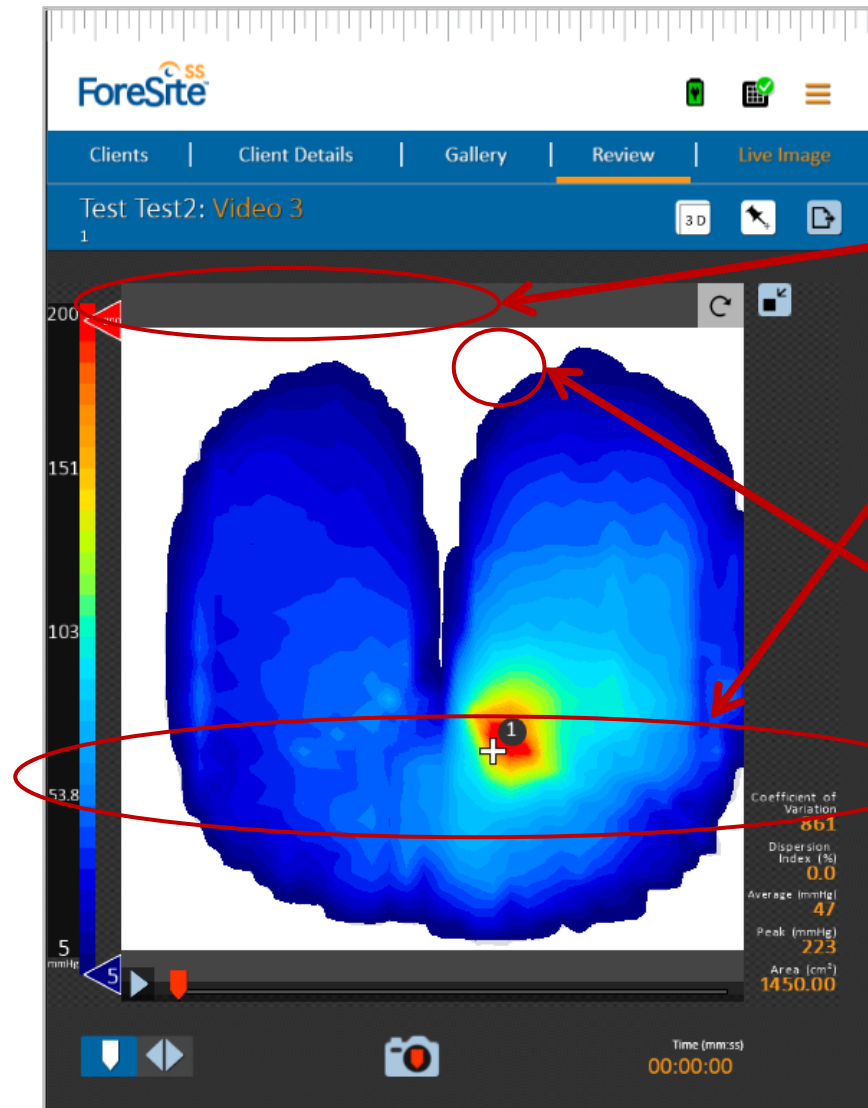
Software Overview: **LIVE IMAGE**



Record a video

- The settling time clock is replaced with a recording time clock while capturing videos
- Press the Stop icon to stop recording at any time

Software Overview: **SAVE AND REVIEW**



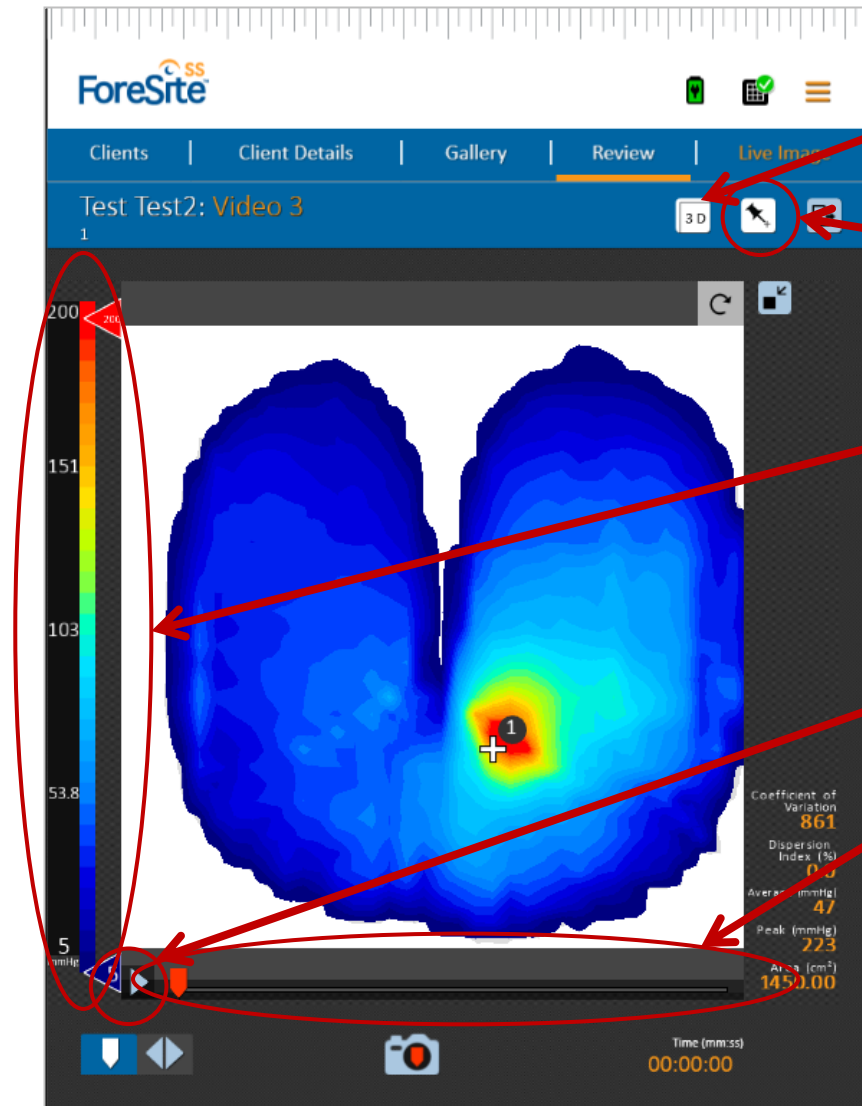
Save the recording

- After pressing the Stop icon, the Save screen is displayed
- Enter a title for the video.
 - The default title is “client ID, date, time”
- Enter additional notes

Review the recording

- Press the Expand icon to review the video

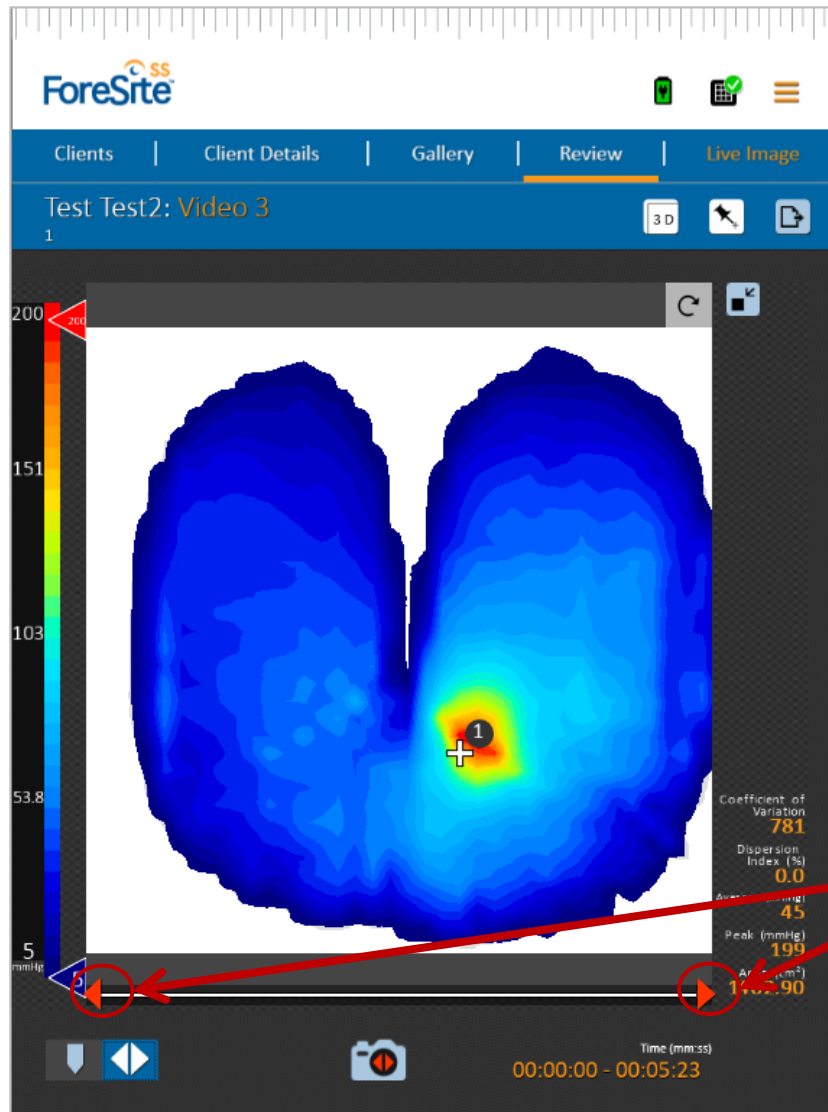
Software Overview: **SAVE AND REVIEW**



Review the recording

- Press the 3D icon to view the video in 3D mode
- Press the Marker icon to view, move, add or delete anatomical markers within the video
- Adjust the upper and lower pressure threshold by using the red arrows on either end of the pressure legend
- Press the Play icon to play the video
- Skip to a certain time within the video by dragging the slider

Software Overview: **SAVE AND REVIEW**



Capture an image from video

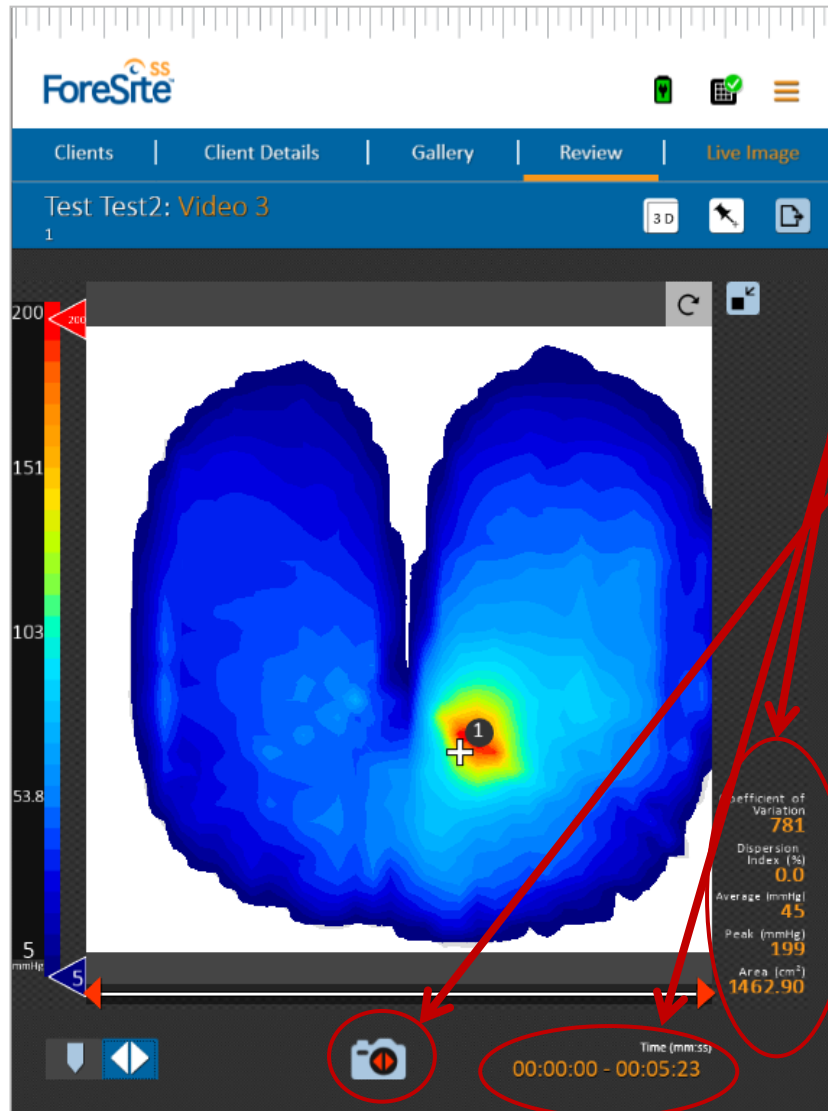
Capture a single frame

- Capture a single frame image within the video by ensuring the Capture Frame function is activated, then pressing the camera icon

Capture an average of frames

- Capture a frame representing the average pressures from a section of the video by activating the Capture Average function
- Once selected, use the sliders to select the desired range

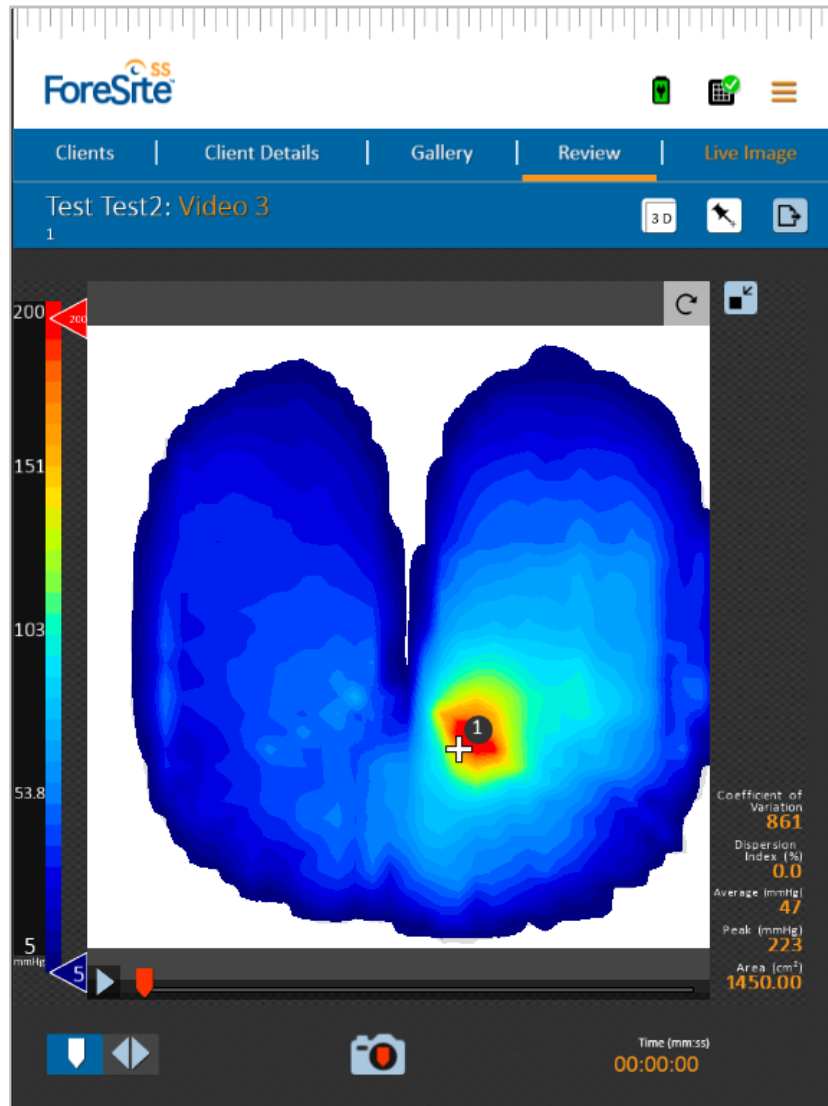
Software Overview: **SAVE AND REVIEW**



Capture an average of frames

- The statistics will now reflect the average frame
- The clock will now reflect what section of frames have been selected for the average
- Press the camera icon to capture the average and save it as a new image

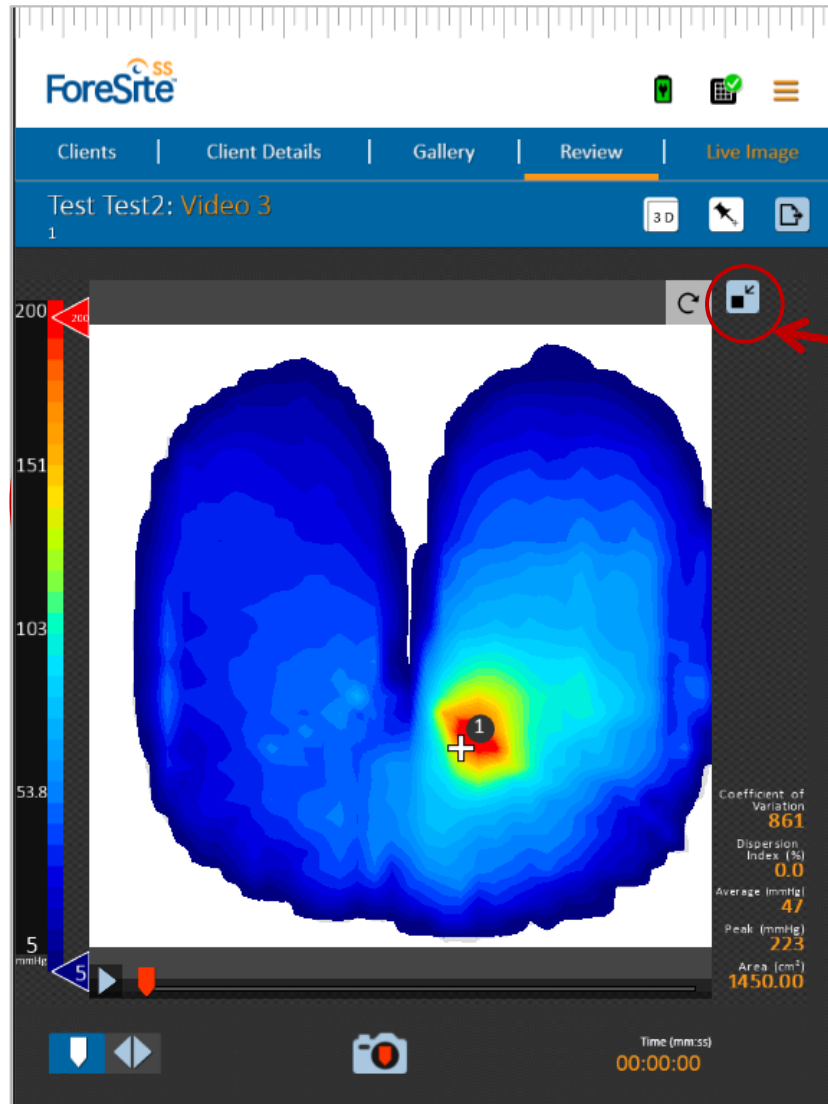
Software Overview: **SAVE AND REVIEW**



Review the recording

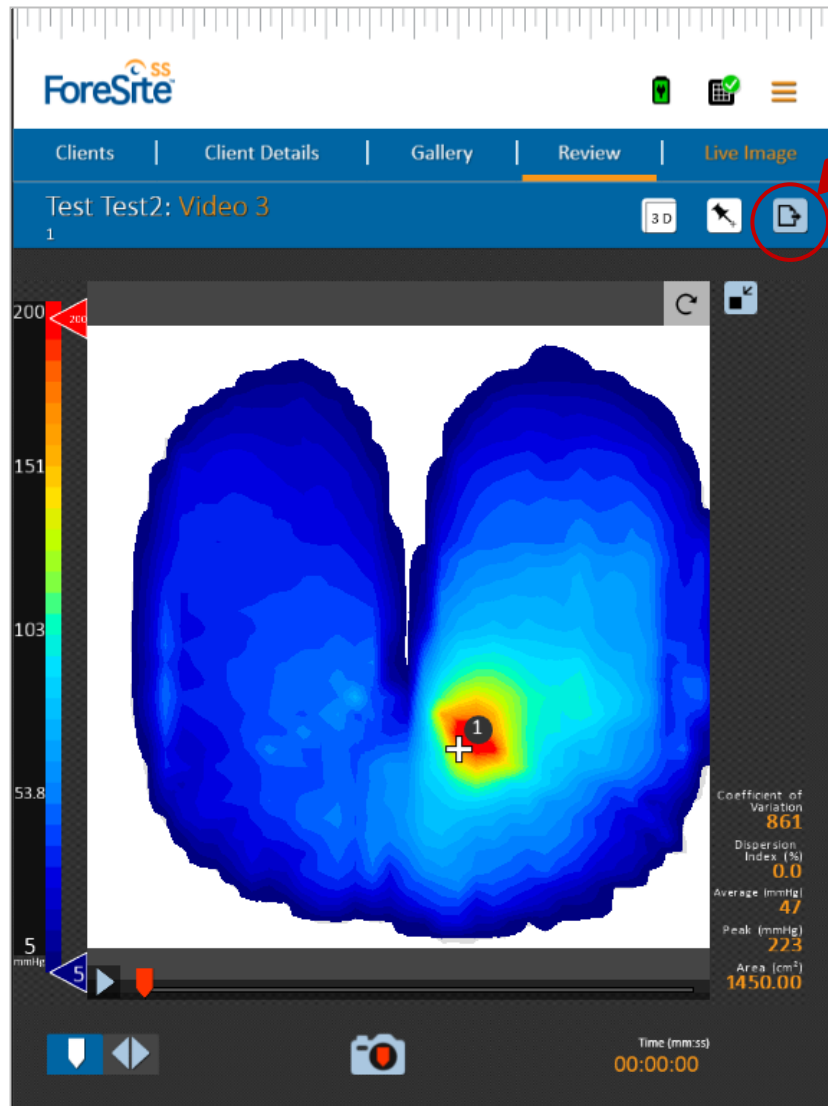
- When you press the stop button you will be prompted to give the video a title
- Once your video is saved, the Review screen is displayed

Software Overview: **SAVE AND REVIEW**



- The Gallery screen shows all captured files for the client
- Files are organized by date
- To select a file, press its name
- This displays the Review screen
- Select the Minimize icon to shrink the pressure image and re-name it or add a note

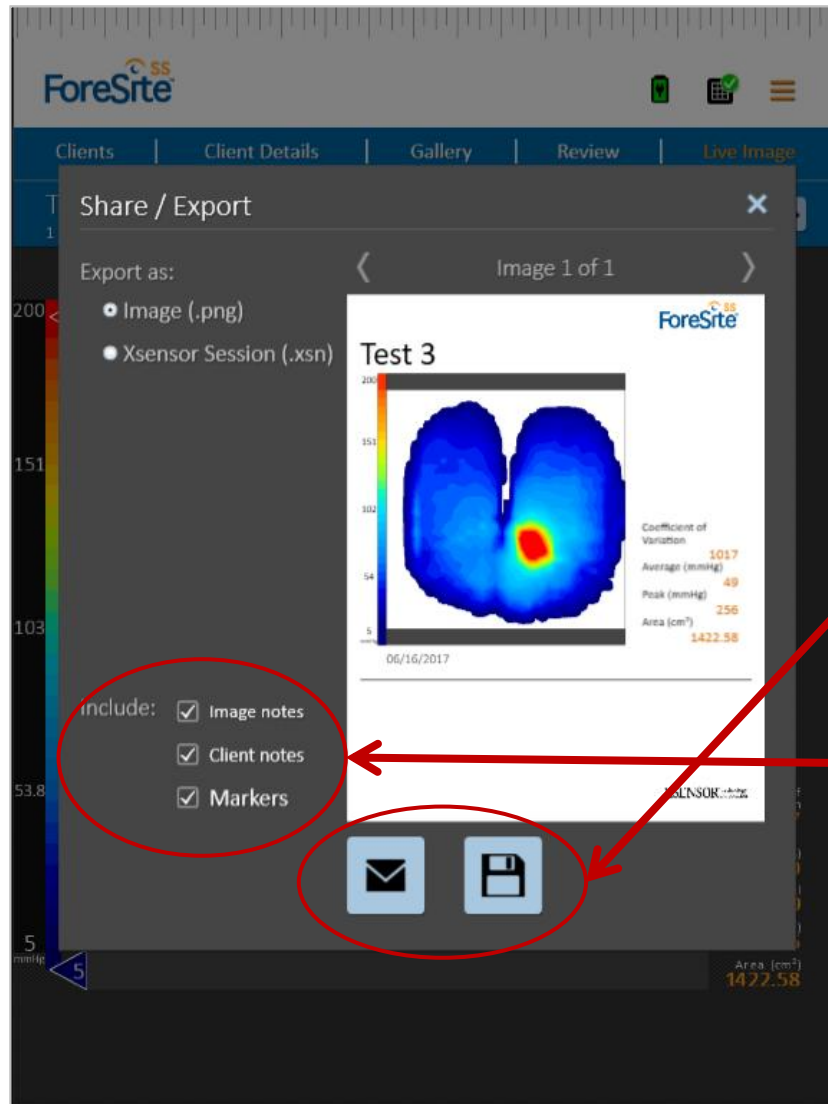
Software Overview: SHARE AND EXPORT



Export a video

- To export the file, start by pressing the Export icon

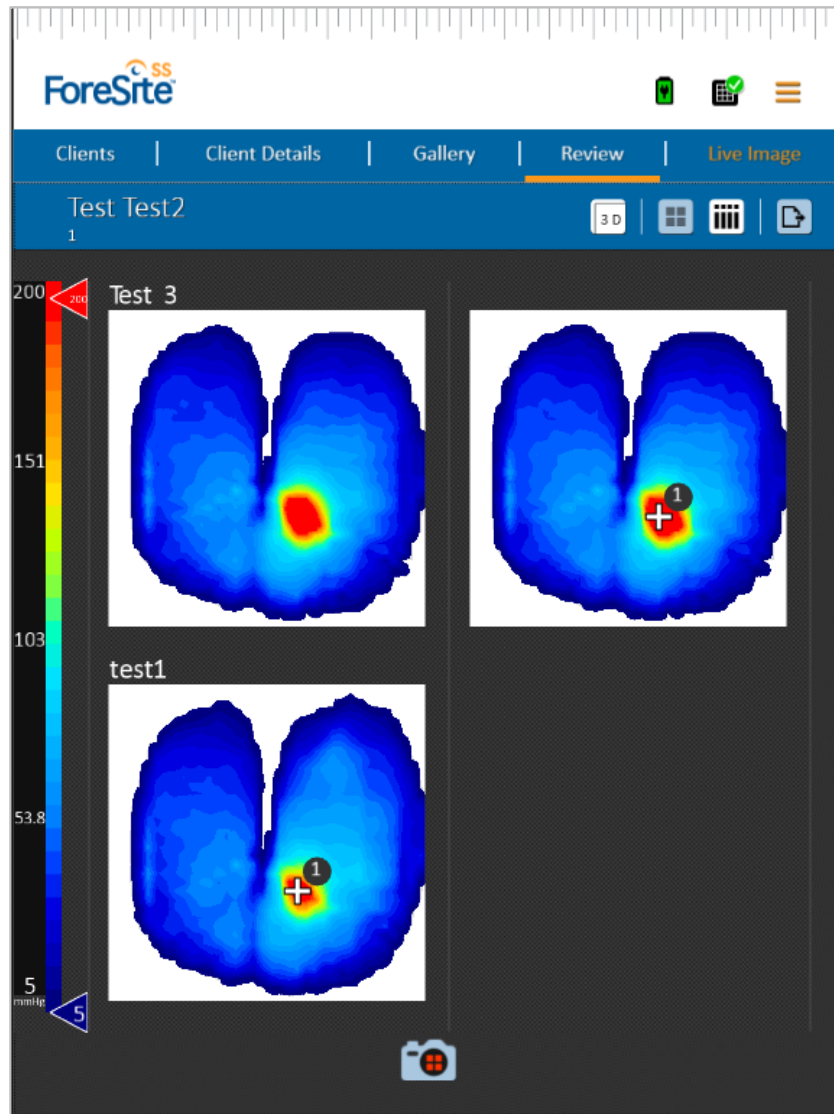
Software Overview: SHARE AND EXPORT



Export a video or photo

- To export the file, start by pressing the Export icon
- The Share/Export screen will be displayed
- Select additional information you want to provide in this export (ie. image notes, client notes, markers)
- Press an icon to indicate whether you'd like to email the file or save it to USB
 - The email option is only available once email has been set up

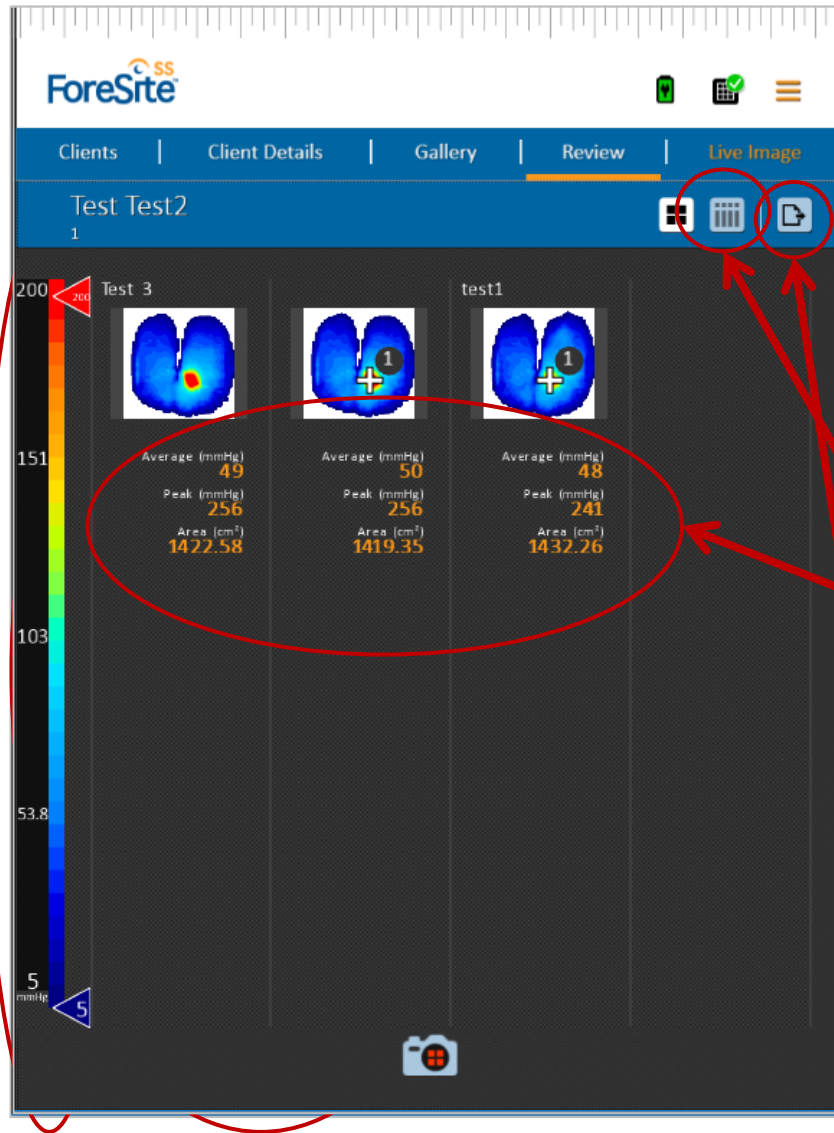
Software Overview: GALLERY SCREEN



Using the Gallery

- Select videos and images using the checkbox next to each item's name
- Press the Delete icon to erase the selected files
- Compare the selected files by pressing the Compare icon
- This displays the Compare screen

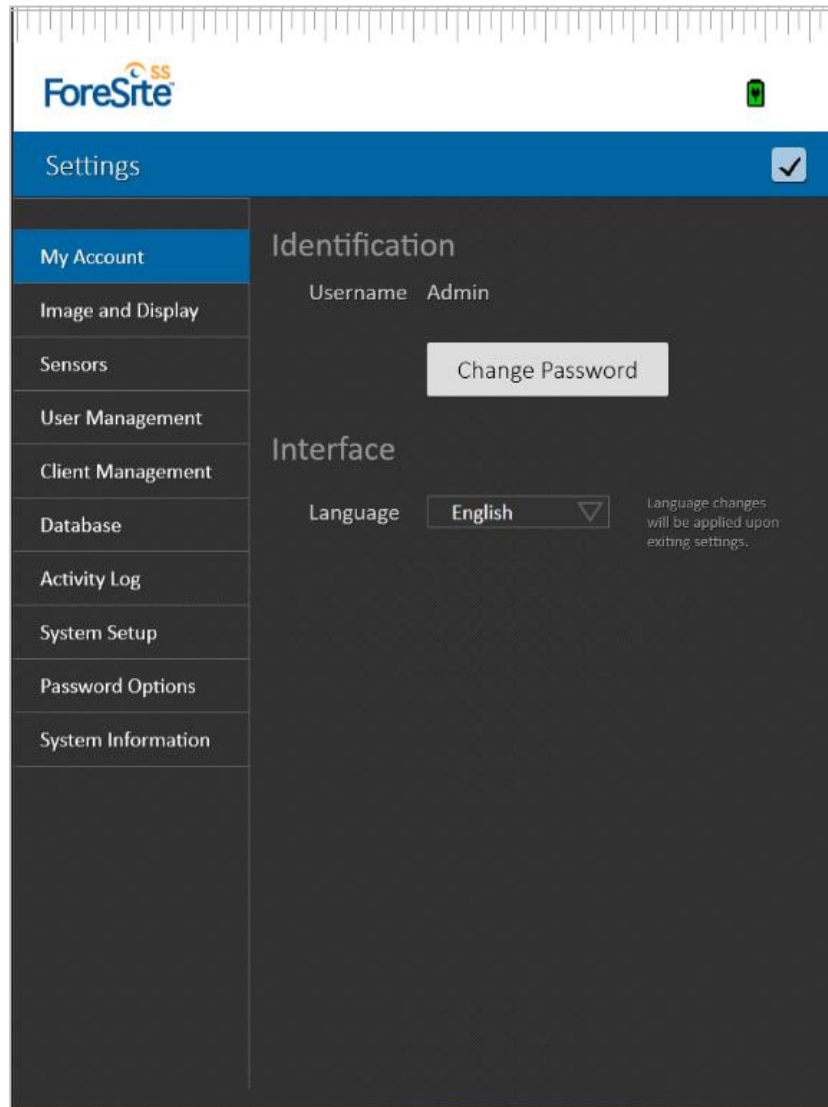
Software Overview: GALLERY SCREEN



Compare Images

- Compare up to four images or videos at once
- Use the red sliders to adjust the pressure thresholds on all the images at once
- Press the 3D icon to analyze the images in 3D
- Press the Vertical Compare icon to compare all the images vertically
- When comparing vertically, the statistics are displayed below each thumbnail
- Export from Compare mode by pressing the Export icon

Software Overview: SETTINGS



Navigate to Settings

- The Menu icon in the top right corner is displayed on every screen except the Login screen
- When pressed, two options are presented: “Settings” and “Logout”
- Select “Logout” or “Shut Down” when your session or mapping is finished. This locks the system and keeps the data secure
- Press “Settings” to navigate to the Settings screen

Software Overview: SETTINGS

ForeSite

Settings

My Account

User Management

System Setup

Pressure Imaging Options

Display Settings

History

Data Management

Sensor Management

Users → New User

Save User

Identification:

First name:

Last name:

Username:

Password:

Confirm Password:

Interface

Language: English (United States)

Permissions

Role

Standard User

Administrator

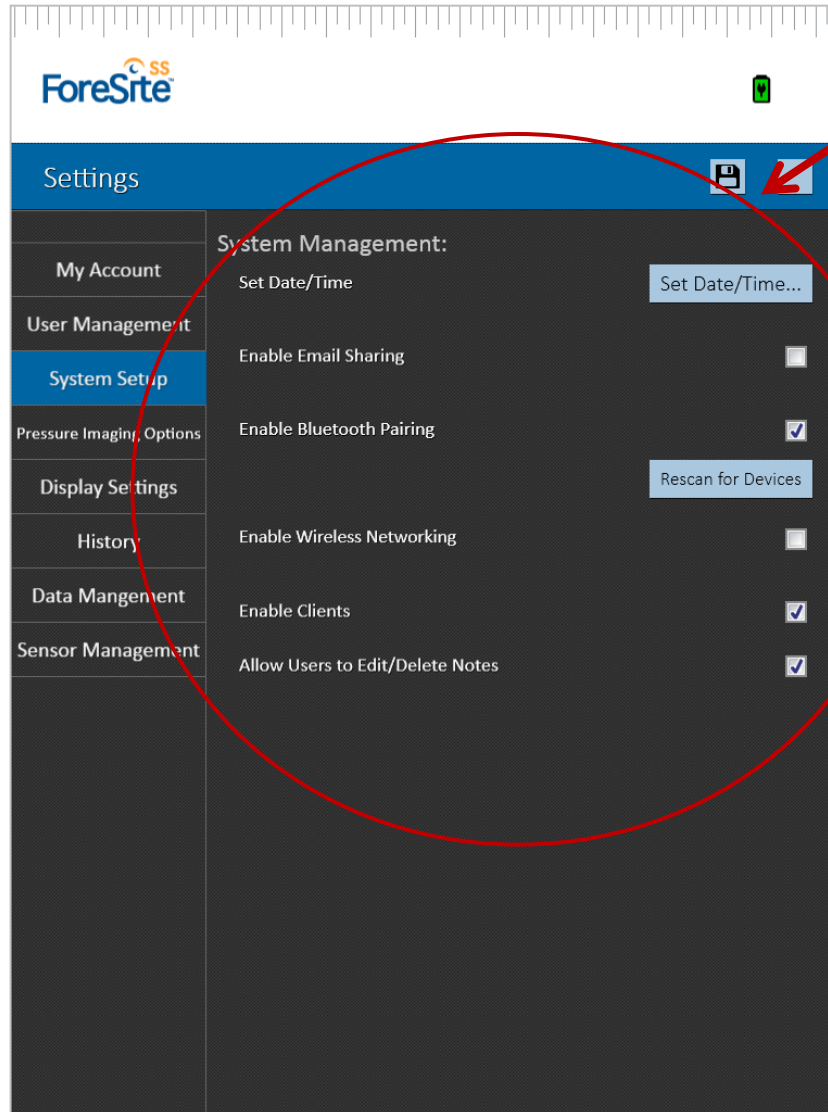
My Account

- Under the tab, “My Account”, you can:
 - Add a user’s first and last name
 - Change your password
 - Change the software language

User Management

- Add users or admins under the User Management tab
 - Click the Add User icon
 - Fill in all the new user’s information

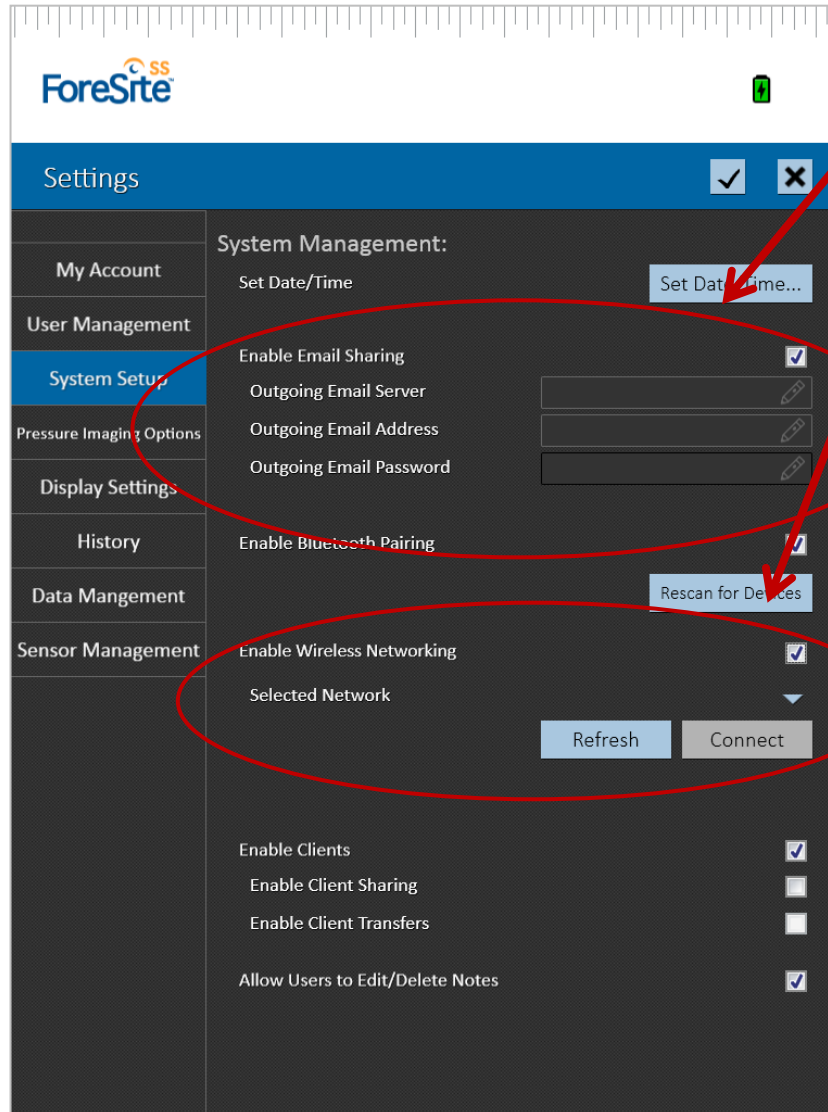
Software Overview: SETTINGS



System Setup

- Under the tab, “System Setup”, you can:
 - Set the Date and Time
 - Enable email sharing for emailing reports
 - Enable Bluetooth pairing for connecting sensors
 - If using a wired sensor, turn this setting off to save battery life
 - Enable wireless networking (internet)
 - Enable individual clients
 - Allow users to edit and delete notes

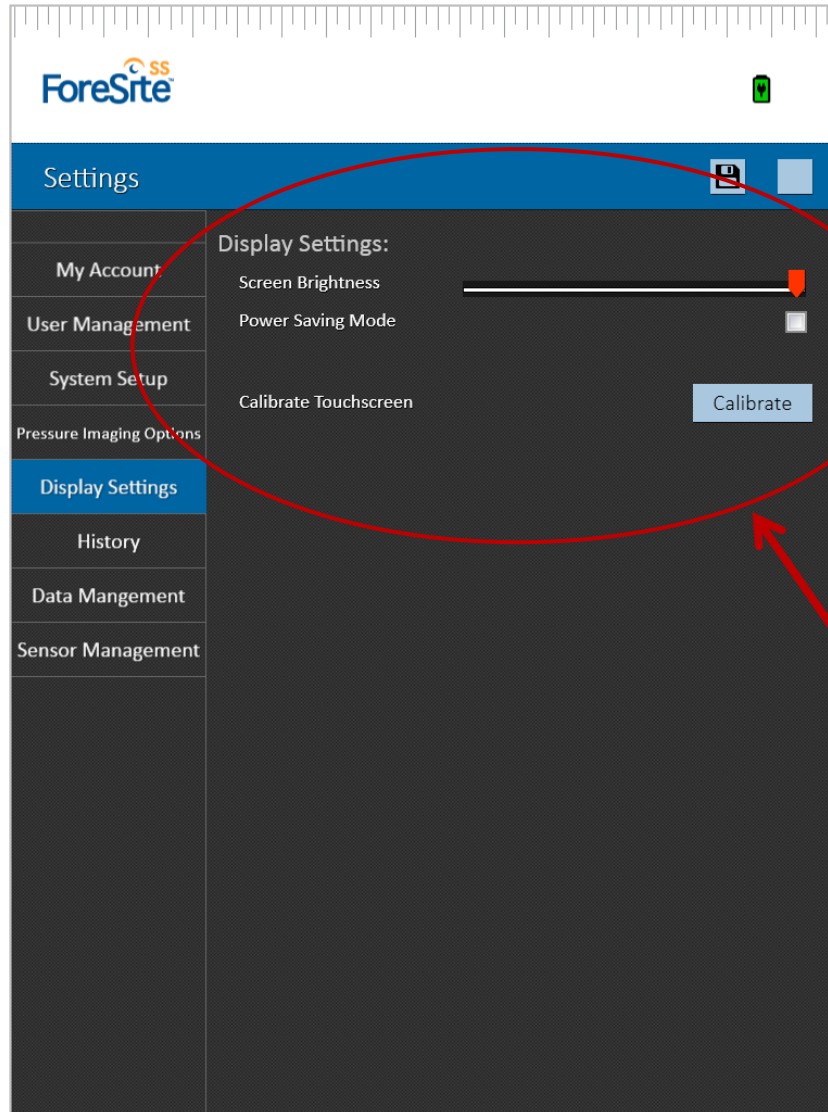
Software Overview: SETTINGS



System Setup

- Set up email sharing by entering the outgoing email server, email address, and email password
- Setup a WiFi connection by selecting the correct internet connection from the drop-down menu

Software Overview: SETTINGS



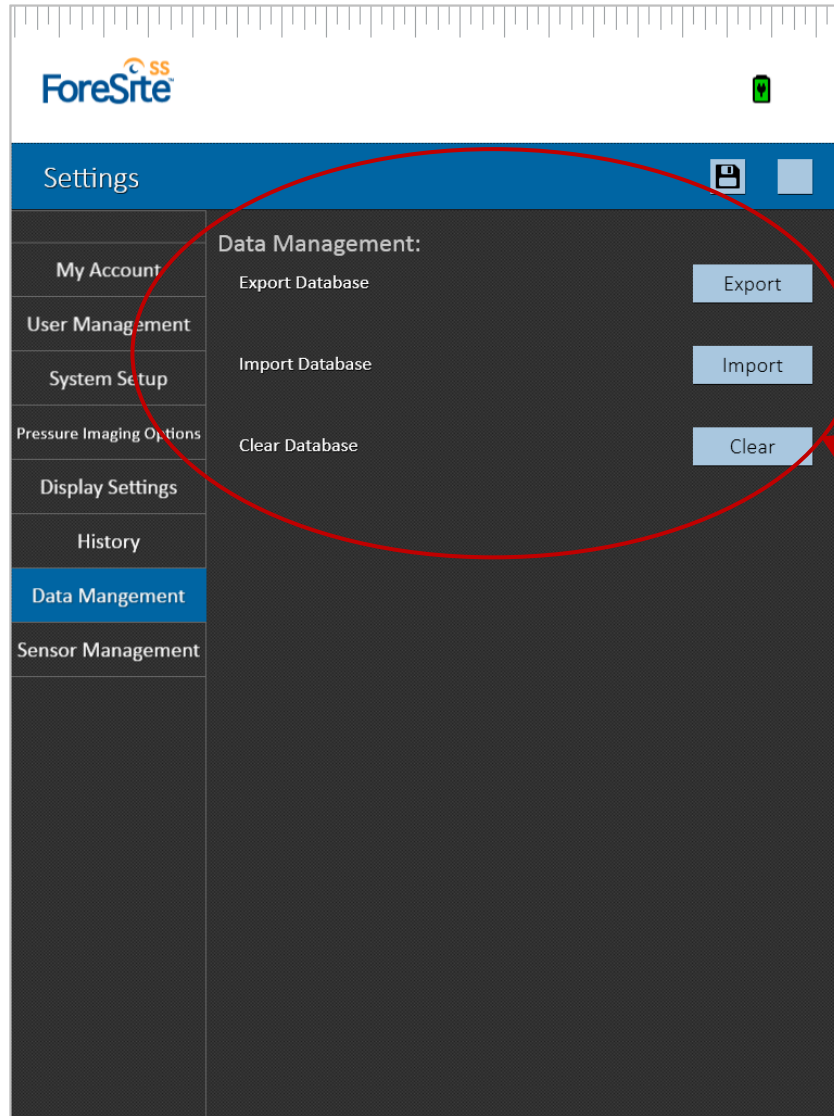
Pressure Imaging Options

- Under the tab, “Pressure Imaging Options”, you can:
 - Change the pressure legend
 - Lock the pressure legend
 - Change the pressure units
 - Edit what statistics are shown
 - Adjust the maximum recording time for videos

Display Settings

- Under the tab, “Display Settings”, you can:
 - Adjust screen brightness
 - Turn on power saving mode
 - Calibrate touchscreen

Software Overview: SETTINGS



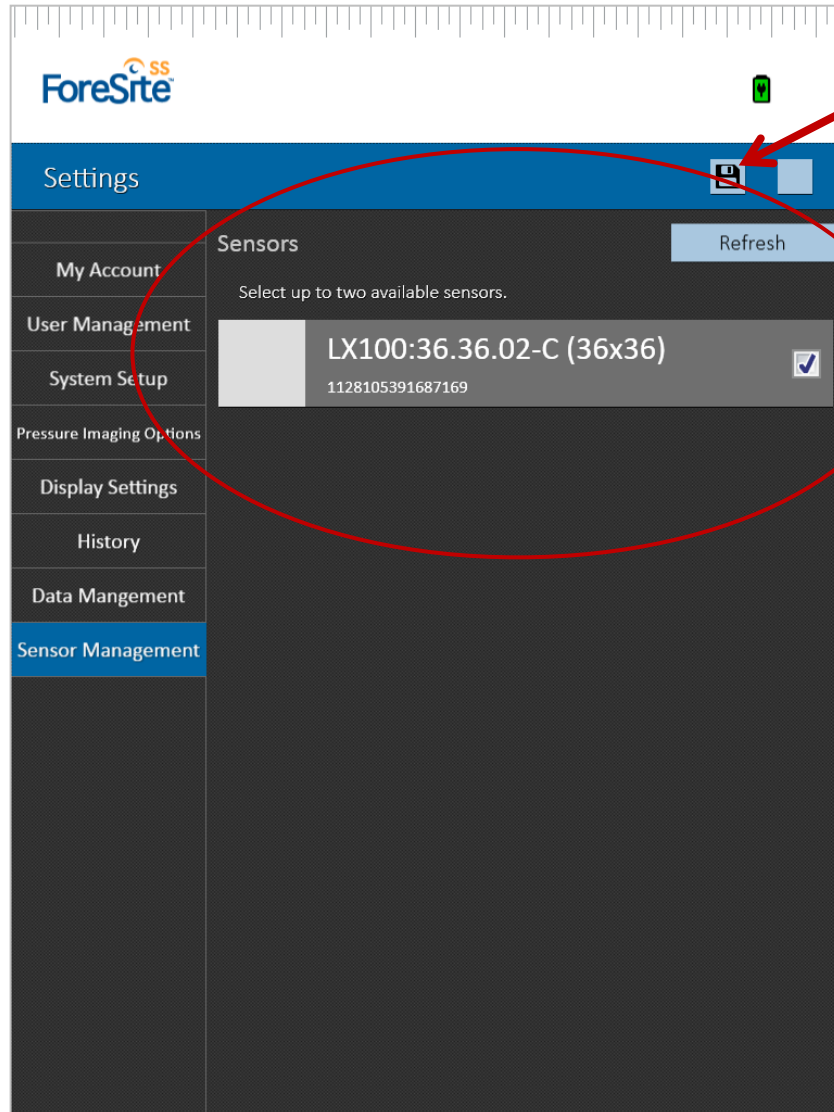
History

- As the administrator, view a complete history of all tasks completed on the device under the “History” tab

Data Management

- Under the tab, “Data Management”, you can:
 - Export the tablet database to another ForeSite SS device
 - Import a database from another ForeSite SS device
 - Clear the database

Software Overview: SETTINGS



Sensor Management

- Under the tab, “Sensor Management”, you can:
 - Select the desired sensor
 - Check the connection status of sensors
 - Refresh the sensors list

DEFINE A COMMON PROTOCOLE FOR ALL YOUR CLIENTS

1. Set Goals
2. Explain the technology
3. Once goals established use the client current seating system
4. Place the Sensor Pad onto the surface
5. Have client sit, not yet connected
6. Ensure footplates, armrests, backrest, etc..., are adjusted
7. Ensure cushion is properly adjusted and positioned
8. Connect sensory Pad to Tablet
9. Set a standard Xsensor screen for pressure mapping (toolbar data display)
10. Determine a standard pressure range for the sampling. We recommend as a general rule for seating to be set at 125mmHg
11. Wait 5min for the cushion to conform body shape
12. During those 5min, complete the comments section with information (names, date, equipment description, interventions goals...)
13. Ensure to limit the creases or kinks in the pressure mat, straighten the mat out until inconsistent sampling disappear
14. Begin recording and involve client, carers and family to develop better compliancy
15. Once confident the sample is consistent, press the "Stop record" button
16. If peak pressures are visible, use hands to identify the cause
17. On the bottom of "Comments Docker", 3 options (general, frames and all frames), when recording stopped the frame option will show the number of the last frame recorded. Click on this option and make a note that it's the frame that is most appropriate for future reference.
18. Press record again and check preferential position, pressure relief abilities, test tilt/recline etc... make comments and remarks at relevant frames
19. If cushion comparison, we advise you to save a file for each product evaluated (choose wisely name and location). Open a new file and repeat the above for the next product.

Evidence Based Practice Resources for this Presentation

The relative contributions of compression and hypoxia to development of muscle tissue damage: an in vitro study.

Gawlitta D ¹  , Li W , Oomens CW , Baaijens FP , Bader DL , Bouten CV 

Author information ▶

Annals of Biomedical Engineering, 29 Nov 2006, 35(2):273-284

<https://doi.org/10.1007/s10439-006-9222-5> PMID: 17136445

DOI: 10.1007/S12195-009-0046-X • Corpus ID: 85130015

Membrane-Stretch-Induced Cell Death in Deep Tissue Injury: Computer Model Studies

N. Slomka, Shira Or-Tzadikario, +1 author A. Gefen • Published 12 February 2009 • Medicine, Engineering • Cellular and Molecular Bioengineering

TLDR This work hypothesized that sustained tissue deformations can lead to elevated intracellular concentration of cell metabolites, e.g., calcium ion (Ca²⁺), due to a stretch-induced increase in the local permeability of plasma membranes, which may ultimately lead to cell death due to intracellular cytotoxic concentrations of metabolites. [Expand](#)