

USERMANUAL

















# myINSiGHT User Manual (295-022, Rev. O)

5.1 — Last update: 14 April 2022

**CLA Inc** 

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# 1. Welcome to the World of INSiGHT Scanning Technology

Congratulations on making the decision to examine your patients with the very best in chiropractic scanning technology!

To get started with this new technology and get it up and running in your practice as quickly as possible, you can use this manual as a resource.

We recommend that you take the time to read through this User Manual to get a full understanding of the scanning protocols and software features to ensure a fast and easy set up and integration.

To ensure your successful integration of the INSiGHT™ Technology, included with your order is a one year subscription to CLA's myINSiGHT™ Membership Program giving your office 24/7 access to our full library of training, support, and practice growth material. Your membership has already been activated and you should have received an email from Info@subluxation.com containing your login credentials. Please check your inbox and spam box for this email. If you have not yet received your email, please contact us via phone at 702-848-SCAN (7226) or via email at Info@subluxation.com. Once you receive your email, please follow the enclosed instructions to complete your account registration and receive full access to your login on www.portal.subluxation.com.

#### Your myINSiGHT™ Membership Includes:

- A HIPAA Compliant Doctor-Patient Portal
- · Automatic patient scan back-up
- INSiGHT™ Training Videos
- Software upgrades and downloads
- Phone technical support which can be reached 9am-5pm EST M-F at 702-848-SCAN (7226) be reached 9am-5pm EST M-F at 702-848-SCAN (7226)\*

If you have any questions, please feel free to contact us at any time and our dedicated Customer Service Team will be happy to assist you.

Remember to check for software upgrades as CLA will post the newest version on www.portal.subluxation.com as they are released, all software updates are available for immediate download.

The CLA Team

### 1.1. Warranty Agreement

This outlines the terms and conditions of Chiropractic Leadership Alliance limited hardware and software warranty on the INSIGHT™ Discovery (INSiGHT™).

#### One Year Warranty Coverage Overview for your INSiGHT™ Equipment

- Warranty Duration is one (1) year from date of purchase\*
- Software Updates
- Hardware Repairs

#### **Transferability**

This warranty is non-transferable and is only valid for the equipment purchased while it is owned by the original owner. Selling or transferring ownership of the INSiGHT™ Equipment voids this Warranty Agreement.

#### **Telephone Technical Support**

Technical Support is available through your myINSiGHT™ Membership via phone at 702-848-SCAN (7226). Hours of Operation are Mon-Fri, 9:00am – 5:00pm (EST), excluding holidays.

#### **How to Prepare for your Technical Support Call:**

- Have your Serial Number available (located on the bottom of your INSiGHT™ unit)
- Please know the Computer Operating System you are using, ex: Win7, Win 8
- Brand names of other peripheral devices connected to your computer (e.g. Printer)
- Ensure you have Internet connection

#### One Time Charge per Incident:

If out of warranty, you may be charged a one-time-per-incident fee to evaluate the issue and provide Technical Assistance. Please call 702-848-SCAN (7226), for information concerning the fees and service details. This may also include evaluating the unit for repair and providing the RMA information as noted in the repair section of this warranty. Any repair fees are in addition to the one-time-per-incident fee.

#### **Software Updates**

You will be provided all updates to our INSiGHT™ Software through your myINSiGHT™ Membership. Software Updates can be found online at portal subluxation.com. CLA will only send upgrade email notices for major releases, it is your responsibility to log on to myINSiGHT™ periodically and check for and download available updates (Important: Please back-up your current software onto a flash drive or CD before uploading any new updates. CLA is not responsible for any loss of software or data).

#### Repairs

During your warranty period the labor and parts required to bring your INSiGHT™ back to working factory defaults are fully covered. This warranty does not cover shipping for the repaired equipment. Equipment needing repair within 30 days of purchase are eligible for replacement at the manufacture's discretion. Evaluation of the equipment is required prior to authorizing a replacement. After 30 days from purchase all equipment will be repaired. For out- of-warranty repairs please refer to the "one-time-charge-per-incident"

section. An estimate of charges will be provided prior to the repair being sent in for service.

#### **Devices covered under this warranty agreement:**

INSiGHT™ Base Unit Instrument Console

4 Surface Electromyography (EMG) Sensors (Including Foot Switch, Excluding Smart Handles)
neuroCORE™ (Wireless EMG)
neuroTHERMAL™
Pulse Wave Profiler
neuroPULSE™
spineROM™ Inclinometer
spineSENSE™ Algometer (including hand switch)
USB cable & International Electrotechnical Commission (IEC) line cable

#### If Required: Returning your equipment for repairs

In order to return your equipment for repair a Return Material Authorization (RMA) number is required and will be emailed to you. Once received you must send your equipment to the address provided within 30 days. Please pack your equipment appropriately, have insurance applied to the shipping and use a carrier which provides a tracking code. The client is fully responsible for all shipping charges, customs fees, lost or damaged equipment and wrongful delivery.

#### Miscellaneous

This limited warranty is governed by New Jersey law. The warranty coverage is between the device (and device owner) and CLA. CLA is not obligated to cover or repair any device damaged as a result of Force Majeure, including: Lightning, Flooding, Tornado, earthquakes, fire, hurricanes, as well as, accident, misuse, neglect, failure to follow instructions for proper care/use, improper or incorrect line voltages, fuses or incompatible devices.

# 1.2. Symbols Glossary

Symbol	Title	Reference	Description
	BF type applied parts	IEC 60417-5333	Medical electrical equipment in normal use necessarily comes into physical contact with the patient to perform its function
	Refer to instruction manual/ booklet	ISO7010-M002	Refers to instruction manual booklet must be read.
R <sub>X</sub> Only	Prescription Only	N/A	Caution: Federal (USA) law restricts this device to sale by or on the order of a physician.
	Manufacturer	ISO7000-3082	Medical Device Manufacturer
elFU	Consult Instructions for use	ISO7000-1641	This is the electronic instructions for use that will contain all hardware and software related information.
	Non-ionizing electromagnetic radiation	IEC60417-5140	Indicates medical devices that include RF transmitters

		Caution	ISO 7000 Reg# 0434A	Indicates the need for the user to consult the instructions for use for important cautionary information such as warnings and precautions that cannot, for a variety of reasons, be presented on the medical device itself.
X	<b>/</b>	WEEE Separate Collection	EU Directive 2006/66/EC	Waste Electrical and Electronic Equipment (WEEE)
EC	REP	Authorized Representative	ISO 15223-1 5.1.2	Indicates the authorized representative in the European Community.

# 1.3. Instrument Specifications Table

#### **Wireless Instrument Specifications**

Wireless wEMG (neuroCORE)	
Range	0.6 uV – 225 uV
Bandpass Filter	20 – 500 Hz
Signal Transmission Distance	Minimum 10 feet
Range of Load Impedances	$500\Omega - 5M\Omega$

Wireless wRT (neuroTHERMAL)	
Range	Room Temperature – 101 F
Minimum Room Temperature	54.8 F/ 12.7 C
Accuracy at 91 F/32.8 C	+/- 0.5 F/ 1.3 C
Distance at 20" roll	+/- 5%
Signal Transmission Distance	Minimum 10 feet

Wireless wPWP (neuroPULSE)	
HR Detection	+/- 1%
Temperature at 77.8 F/35.4 C	+/- 2 F/ 1.1 C
Signal Transmission Distance	Minimum 10 feet

Dual Inclinometer (spineROM)	
Range	0 – 360 degrees
Tolerance over 90 degrees	+/- 5 degrees
Signal Transmission Distance	Minimum 10 feet

#### **Wired Instrument Specifications**

Insight Discovery Console	
Input Voltage	110/220 VAC
Input Frequency	50/60 Hz

EMG	
Range	2 uV – 100 uV
Bandpass Filter	20 – 500 Hz
Range of Load Impedances	$500\Omega - 5M\Omega$

Thermal	
Range	Room Temperature – 101 F/38.3 C
Minimum Room Temperature	54.8 F/ 12.7 C
Accuracy at 91 F/32.8 C	+/- 0.5 F/ 0.3 C
Distance at 20" roll	+/- 5%

PWP	
HR Detection	+/- 1%
Temperature at 77.8 F/ 25.4 C	+/- 2 F/ 1.1 C
Range	0 – 150 psi
Tolerance at full range	+/- 10%

Inclinometer	
Range	0 – 360 degrees
Tolerance over 90 degrees	+/- 5 degrees

## 2. Initial Setup

This section covers initial setup, including going over the minimum specs, how to plug in your equipment, setting up drivers, and installing the software.

## 2.1. Minimum System Requirements

#### System compatibility

myINSiGHT™ is compatible with Windows Operating Systems 8, & 10 on a 32 or 64 Bit computer. It is required that the computer have a minimum 6 GB Ram, 200 GB Hard Drive, Intel CORE i3 or i5 or i7 processor, and integrated Bluetooth.

#### Recommendations

- · Additional memory will significantly improve performance of the software.
- Screen Resolution: Minimum of 1024 × 768 required.

#### **Internet Connection**

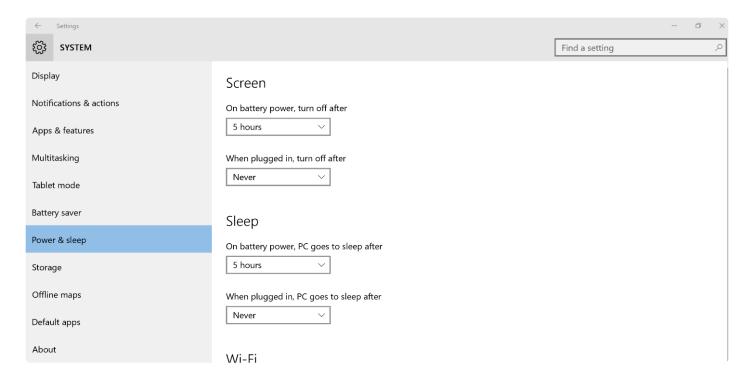
myINSiGHT™ is a cloud-based system. Your data resides in a database on our cloud server, not on your local computer. You must have a dedicated internet connection to use the myINSiGHT™ software. You will not be able to login without one. A faster connection will provide better performance saving and viewing scans. There is no way to conduct scans without an internet connection.

# 2.2. Update Computer Power Settings for INSIGHT™ Base Units

NOTE: If you are using a Base Unit, please follow the steps below. If you are not using the Base Unit, please skip ahead to myINSiGHT™ Software Installation Instructions.

#### Power Settings for Windows 8 & 10 Operating Systems:

Click the Windows Icon () in the bottom, left corner of your screen and type "Power & Sleep Settings". The following windows appears:



Under 'Screen', set 'On battery Power, turn off after' to: Never.

Under 'Screen', set 'When plugged in, turn off after' to: Never.

Under 'Sleep', set 'On battery power, PC goes to sleep after' to: Never.

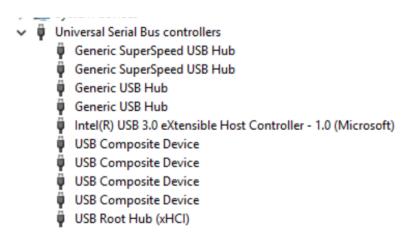
Under 'Sleep', set 'When plugged in, PC goes to sleep after' to: Never.

## 2.3. Update Power Settings for USB Ports

#### For Windows 8 and 10 operating systems:

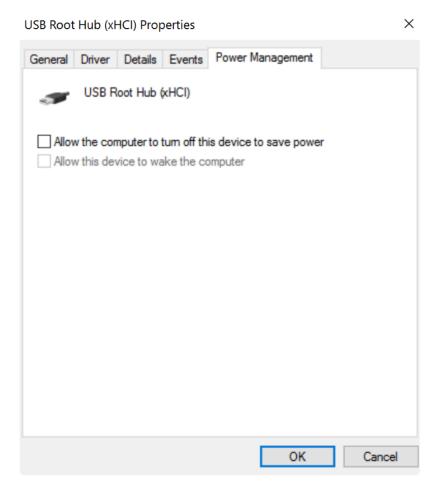
Click the Windows Icon in the bottom left corner of your screen and type "Device Manager".

In **Device Manager**, click the ">" sign next to Universal Serial Bus Controllers (as shown below).



For each **USB Root Hub** shown, right-click and choose Properties.

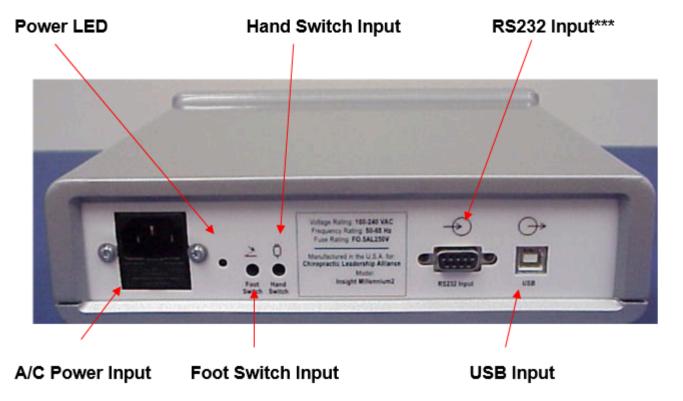
In Properties, select the Power Management tab (as shown below).



Make sure that "Allow the computer to turn off this device to save power" is unchecked.

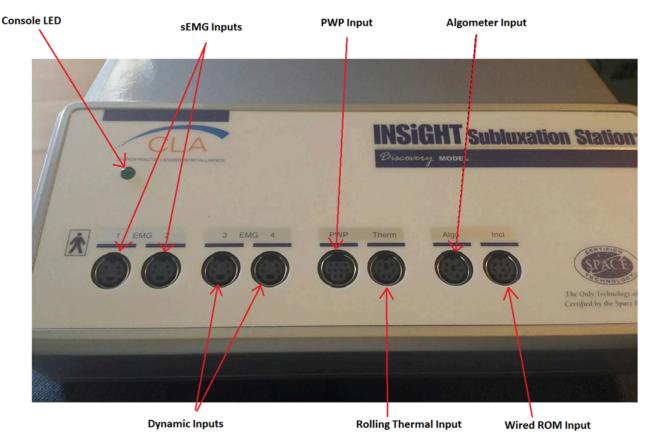
### 2.4. Hardware Installation

NOTE: A grounded wall outlet is required. A surge protector of at least 1000 joules is recommended.



NOTE: The RS232 Input will not allow your computer to communicate with the INSiGHT™ unit. It is reserved for future use.

- 1. Connect the power cord to the A/C Power Input on the INSiGHT™ rear panel and then plug the INSiGHT™ power cord into an outlet on your surge protector. The green Power LED on the back panel of the console will illuminate indicating that the Discovery console is receiving the necessary voltage to operate properly.
- 2. Attach the Foot Switch and/or Hand Switch (provided only with the Algometer) cable(s) to the appropriate inputs on the rear panel of the instrument console.
- 3. Because this is the first time you've connected the INSiGHT™ console to your computer, the Add New Hardware Wizard will begin. When it is complete, the Console LED on the front of the instrument will turn green. The wizard may run completely automatically, or may prompt you. If it prompts you, please select the options to find drivers automatically, and to continue the installation despite any warning that the device has not been validated by Microsoft, should one appear.



Front Panel Connections

#### Connecting the INSiGHT™ Accessories

- 1. Locate the red (left) and blue (right) EMG sensors. Position them so that the imprinted arrow on the cable connector is facing up. Now connect them, arrow facing up, to the receptacles in EMG Channel 1 (left channel) and EMG Channel 2 (right channel). Don't force the cables into the receptacles; they only go in with the arrows facing up!
- 2. You will use the sensors in Channels 1 & 2 for static scans. Locate the smart handles that were provided with your unit, and push one on each of the EMG sensors, making sure all three prongs firmly snap into place.
- 3. Reserve the two additional EMG sensors for dynamic scans or as substitutes for the red and blue sensors.
- 4. Locate the Thermal Scanner. Connect the Thermal Scanner to the Therm input, orienting the cable so that the imprinted arrow on the connector is facing up.
- 5. Locate the Algometer. Connect the Algometer to the Algo input, orienting the cable so that the imprinted arrow on the connector is facing up.
- 6. Locate the Pulse Waver Profiler (PWP) and PWP Adapter Cable. Connect one end of the cable to the PWP and the other to the Adapter Cable.
- 7. You have finished connecting the instrument and sensors, and both the back and front panel LED lights should be lit green, indicating the unit has power and is ready to be used. Once you have completed the rest of the installation procedure, please refer to the User's Guide for correct operation of each sensor type.

# 2.5. myINSiGHT™ Software Installation Instructions

NOTE: A new icon with the mylNSiGHT logo, will appear on your desktop after a successful installation.

#### Windows 8 & 10 Installation Instructions:

#### **STEP 1** – Obtaining the newest myINSiGHT™ version:

- Go to https://portal.subluxation.com
- Enter your user name and password
- Click the hamburger menu to expand the menu bar and click on Support Center, you will find a card labeled **Software**. Open it and follow the onscreen instructions to download the latest version of myINSiGHT™.
- Click on the myINSiGHT icon and follow the prompts to download and save the myINSiGHT™ zip file.
- Right click the zip file and choose Extract All to unzip the file.
- Make note of where the file is being extracted.

#### **STEP 2** – Install the new myINSiGHT™:

- Right click the setup.exe file that was extracted in Step 1.
- Follow the prompts to install the program.
- After the program is installed you should have the new myINSiGHT™ icon on your desktop.

#### **STEP 3** – Attach Your INSiGHT™ Unit to your computer:

- Plug in your INSiGHT™ unit and attach the USB cable to your computer.
- Check to see that the LED light on the front panel of the INSiGHT™ unit is on. If the light is on, then you are ready to use your INSiGHT™ technology with the newest version of the software. If it does not turn on proceed to Step 4.

#### STEP 4 - Initializing the INSiGHT™ Base Unit for Windows 8 and or Windows 10 user:

- Go to the Control Panel > Device Manager
- To get to the device manager click the Windows icon in the bottom left corner of your screen and type "Device Manager".
- Find and expand Universal Serial Bus Controllers.
- Find SRS Medical Bio Data Processing Device.
- Right Click.
- Click Update Driver Software.
- Select\* Browse Computer for Driver Software\*.
- In the sear bar under "Search for driver software in this location follow this file path C:\Program Files (x86)\CLA\myINSiGHT™\Drivers
- Click next and follow the prompts to allow driver installation regardless of any Windows Security Warnings.
- Once the driver is updated, your INSiGHT™ LED light will come on.

#### Connecting Your Bluetooth Technology to the Computer

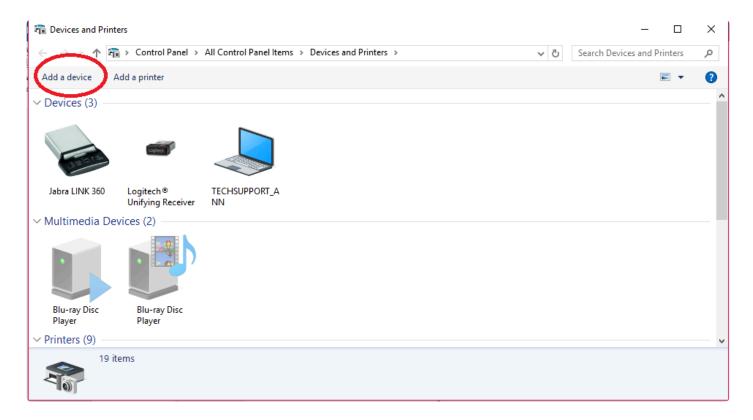
CLA offers the following Technology as Wireless Bluetooth Enabled Units:

- Wireless Rolling Thermal (BTRT)
- Wireless Pulse Wave Profiler (Wireless PWP)
- Wireless Range of Motion (3DDI)
- Wireless EMG (NEUROCORE)

The screen shots below may reference a Wireless Technology Different than the one you are currently pairing, please note the instructions and process are the same for each technology.

#### Windows 8 & 10 Installation Instructions:

Click the Windows Icon in the bottom left corner of your screen and type "Devices and Printers", the following screen will be displayed:



Click on Add a Device.

The PC will search for the Bluetooth Device, select the device and click next (Your Bluetooth Technology needs to be turned on).

The Technology you want to pair will appear as "Ready to Pair".

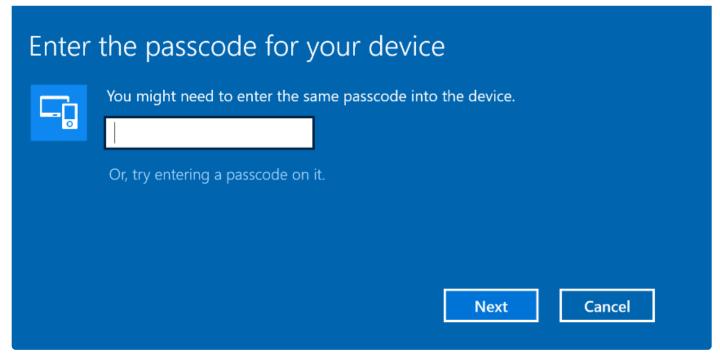
Left Click on the name and a button "pair" will appear, click it.



You might be prompted to enter a passcode for your device, enter "0" (the number ZERO) for the passcode

#### and click NEXT.

Enter the passcode for your device



When it is successfully connected, you have successfully paired the device.

You can now proceed to Connecting Your Bluetooth Technology to the mylNSiGHT™ Software.

#### **Windows 7 Installation Instructions:**

From the Desktop, click on the Windows Icon and select Devices and Printers.

In Devices and Printers, click on Add a Device.

The system will show a list of your Bluetooth devices in range.



Select Enter the device's pairing code, and enter 0 (the number zero) as the pairing code.

Click Close when you receive a message that the device has been successfully added to the computer.

Return to Devices and Printers. You will now see all the devices you have paired (3DDI, BTRT, and/or others) listed under Devices.



You can now proceed to Connecting Your Bluetooth Technology to the myINSiGHT™ Software.

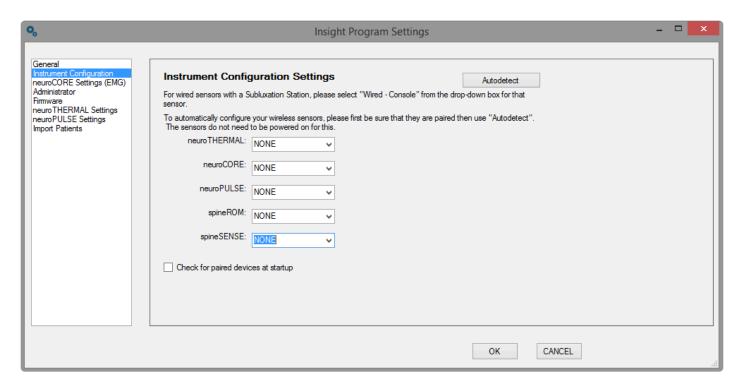
# 2.6. Connecting Your Bluetooth Technology to the mylNSiGHT™ Software

Before using your wireless technology, you must first pair it to the computer by following the instructions in section, Connecting your Bluetooth Technology to the Computer.

To connect the equipment to the software, open the myINSiGHT™ Software task pad and click "Settings" as shown below.



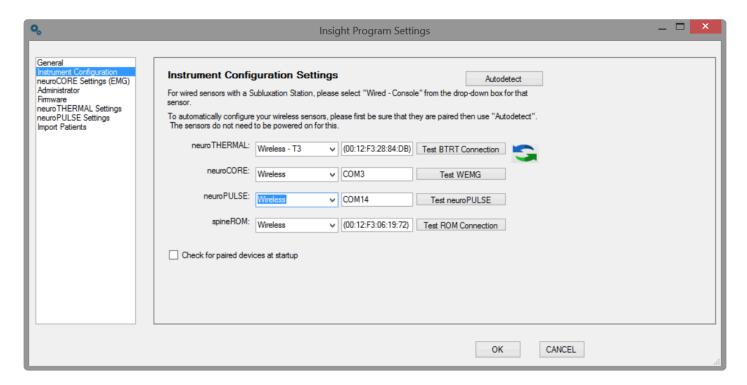
Click **Instrument Configuration** in the left side bar as shown below:



Click **AutoDetect** in the top right corner of the screen.

NOTE: The equipment must be paired to the computer already, but does not need to be turned on to detect the Bluetooth Address.

Auto detect can take 20-30 seconds to find the Bluetooth address. Once detected, the following fields will populate:



If you are using the wired versions of any of these devices, select Wired-Console under the associated

setting. If you are not using one or more devices, specify NONE. Click OK.

If you are plugging your spineSENSE (Algometer) into your wireless neuroPULSE unit, select **Wireless**. If you are plugging it into your Subluxation console, select **Wired**. If you do not have a spineSENSE, select **NONE**.

A message box will appear asking you to restart the software. Click **OK**. Once the software restarts and you log back in, your equipment will be ready to be used in conjunction with your software.

## 3. Upgrading from INSiGHT™ 9.2

Many myINSiGHT™ users are upgrading from INSiGHT™ 9.2 to myINSiGHT™. INSiGHT™ 9.2 uses a local database on your PC to hold patient data. myINSiGHT™ uses a database in the cloud. When you upgrade from INSiGHT™ 9.2, you will most likely want to import your patients into myINSiGHT™ so their previous scans and CORESCORE™ are available.

### 3.1. Automatic Import

If you are upgrading from INSiGHT™ 9.2, the first time you login to myINSiGHT™, you will see a pop-up dialog asking if you want to import your patients. To import your patients, click **Yes** and myINSiGHT™ will compress your local INSiGHT™ 9.2 database and copy it to the myINSiGHT™ web server in the cloud. Depending on how big your database is and the speed of your internet connection, this can take some time, from a few minutes to as much as an hour for very large databases. If you cannot spare the time to do it, you can cancel the dialog and upgrade your database later, perhaps right before you leave for the day.

Even if you do choose to upgrade immediately, myINSiGHT™ copies the database to the server but does not process it until that evening. You will receive an email when the import process is complete.

This upgrade process only imports patients who have been seen in the past two years (but it imports all of their data, no matter how long ago they were seen). This avoids filling your database with many patients who are no longer active in your practice. Should you need to import these older patients, or if you need to import patients while you are waiting for the batch import to complete, you can use one of the following methods to import an individual patient.

IMPORTANT NOTE: To use any of the import features discussed in this section, you must have myINSiGHT™ Desktop installed on the same computer as INSiGHT™ 9.2. myINSiGHT™ Desktop uses your INSiGHT™ 9.2 settings to locate and open your local INSiGHT™ 9.2 database.

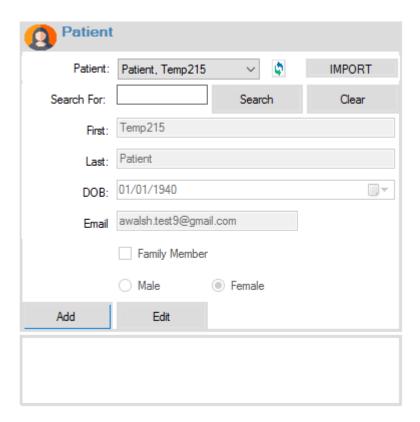
## 3.2. Importing All Patients

In addition to importing individual patients, you can choose to import the entire database by clicking **Import All Patients**. This works in the same way as the dialog that appears when you first start myINSiGHT™. When you click **Import All Patients**, myINSiGHT™ compresses the database file and copies it to the myINSiGHT™ server. It then schedules the database to be imported overnight. You will receive an email when the import is complete. If you canceled the dialog reminder when you first logged in, this is how you schedule the import.

### 3.3. Importing a Patient when Scanning

If you don't have time to import all your patients, or a patient arrives who has not been seen in more than two years, you can still import them from the scan form.

In the patient panel where you select the patient to be scanned, you will notice a new button, labeled **Import**.



Clicking on this button pops up a list of all the patients in your INSiGHT™ 9.2 database. You can select one of these patients and myINSiGHT™ will populate the patient panel with the patient's information from the INSiGHT™ 9.2 database. You can make changes if you wish (such as adding an email address) and then save the patient. This patient is now in your myINSiGHT™ database and available for scanning.

Since uploading the patient's scans from INSiGHT™ 9.2 takes time, myINSiGHT™ does not import the scans now, just the patient. Begin scanning the patient. When you are done scanning the patient, you will be prompted to upload his scans from the INSiGHT™ 9.2 database. You can choose to do that then, or you can cancel and upload their scans later from the Settings Form, as described previously.

## 4. Upgrading to Synapse

If you are currently using myINSiGHT and thinking about upgrading to <u>Synapse</u> please contact us at info@insightcla.com.

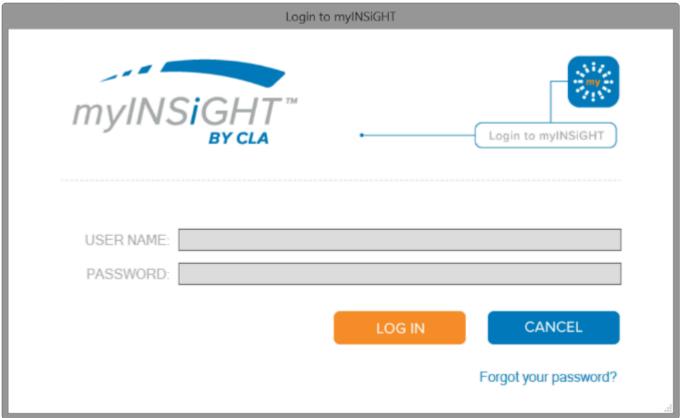
If you have already upgraded and need information on how to migrate your data, click <u>here</u>.

## 5. General Software Usage

This section will go over general usage and account management.

## 5.1. How to Log into the Software

To start the program, double click on the **software icon** on your desktop. A log in screen will appear shown on the right:



Enter your email address and password and click Log In. Once logged into the software, the task pad will be displayed.

Note you MUST be connected to the internet to login to the mylNSiGHT™ software.

## 5.2. Navigation

Click on one of the Available scan options on the left side of the task pad.

For example, click the red icon to conduct a Rolling Thermal Scan.



Manage Patients

Clicking this will take you to the web portal where you will have access to your patient database and office information.



View Patient Scans and Reports

Clicking this icon which will take you to your web portal where you can view scans and reports for the last patient you scanned.



Log Out and Close myINSiGHT™

To log out and shut down the program click this icon.



Close myINSiGHT™ without Logging Out

To close the program but remain logged in for a maximum of 30 minutes click the exit icon.

NOTE: To maintain compliance with Patient Medical Record Laws and Regulations your software and the web portal will automatically log you out after 30 min of inactivity.



Settings

Clicking this icon brings up the settings form, where you can configure a variety of settings for the myINSiGHT™ Desktop software.

## 5.3. Lost or Forgotten Password

If you forgot your password, first enter your user name in the Username Field then click **Forgot Your Password?** 

A dialog box shown on the right will appear.

Polaris

A link to reset your password has been emailed to you.



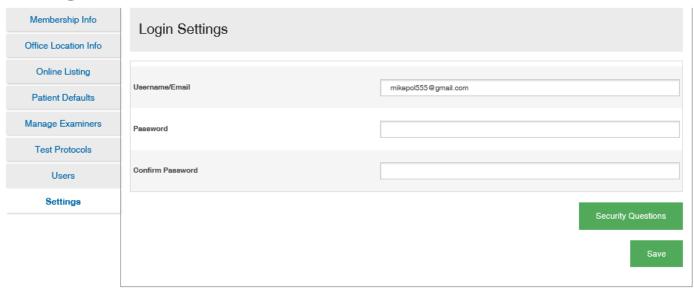
Check your email for a link to reset your password.

NOTE: You will need to provide answers to your security questions that were created when you set up your account. To update or change your security question follow the instructions listed under the Update or Change your Security Questions section.

### 5.4. Update your Password

You can update your password and user name to access the software and Office Portal in the **Settings Page** and then clicking on **Settings**. The following screen will appear:

### Settings



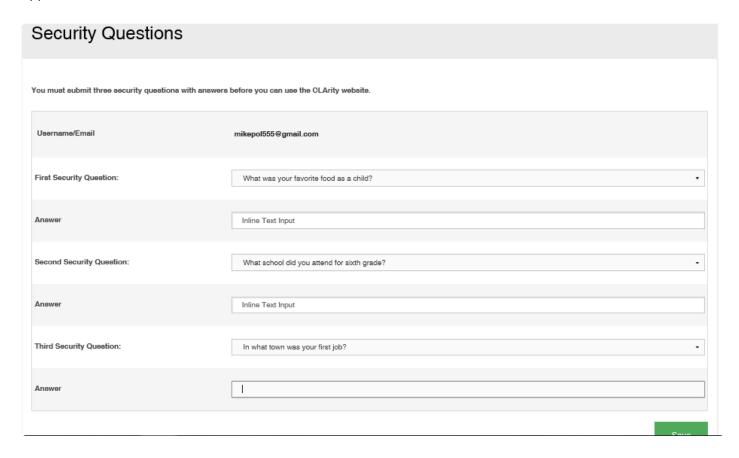
To change your password, enter the new password in the Password Field and then retype your password in the **Confirm Password** field, and then click **Save**.

To maintain compliance with patient record regulatory requirements and laws, myINSiGHT<sup>™</sup> has a secure password requirement which requires passwords to be a minimum of 8 characters with one uppercase, one lower case, one number and one symbol (non-alpha) character included somewhere in the password.

# 5.5. Update or Change your Security Questions

To maintain compliance with patient record regulatory requirements and laws, mylNSiGHT<sup>™</sup> has a security question requirement to reset and regain access after a lost password. This helps prevents unwanted access to patient records and data.

To change your security questions, click the **Security Questions Button** and the following screen will appear.



Provide the answers to three security questions and click Save.

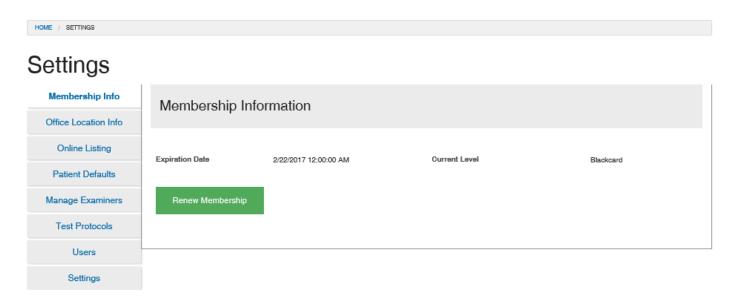
Remember the answers to these Security Questions, as you must supply them to reset your password.

## 5.6. Update Billing Information

Call 702-848-SCAN (7226) to update your billing information.

### 5.7. Membership Info

To view your current membership, go to your **Settings Page** and click on **Membership Info**.

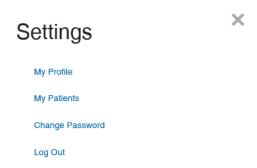


You can see the following information:

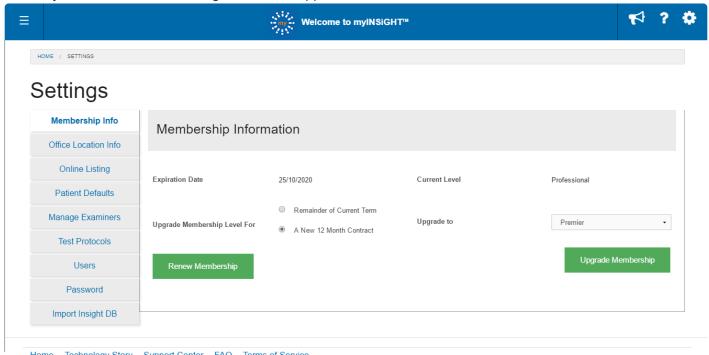
- Current Expiration Date The date your current membership will expire. After the expiration date has passed, you will no longer have access to your myINSiGHT™ account without renewing your membership.
- Current Membership Level
- Renew Membership Contact us at 702-848-SCAN (7226) to discuss your membership.

### 5.8. How to Access the Portal Settings Page

To open the web portal settings page, go to the doctor portal (www.portal.subluxation.com), which can be accessed by either of the following quick links, **Manage Patients** or **View Patient Scans and Reports**. Once on the doctor portal, click the gear icon in the top left menu bar of the website and the **Settings Menu** will open.

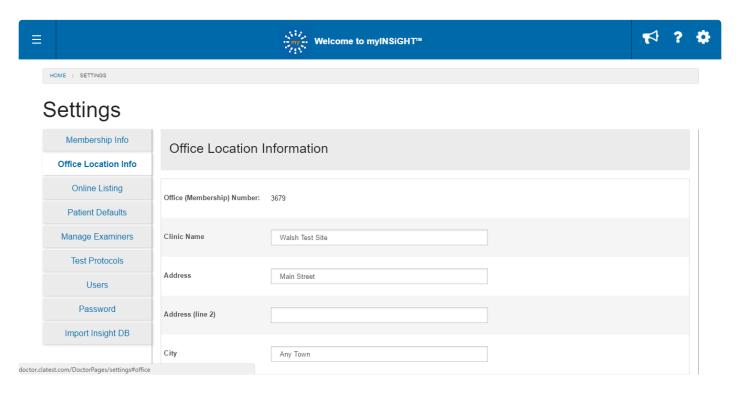


Click My Profile and the following screen will appear:



# 5.9. Entering and Editing Practice Location Information

To update your Practice's Information, go to your **Settings Page** and click **Office Location Info**.



Fill out the required fields and click Save. This information is used on reports as well as on the patient portal and **Find a Great Chiro** site.

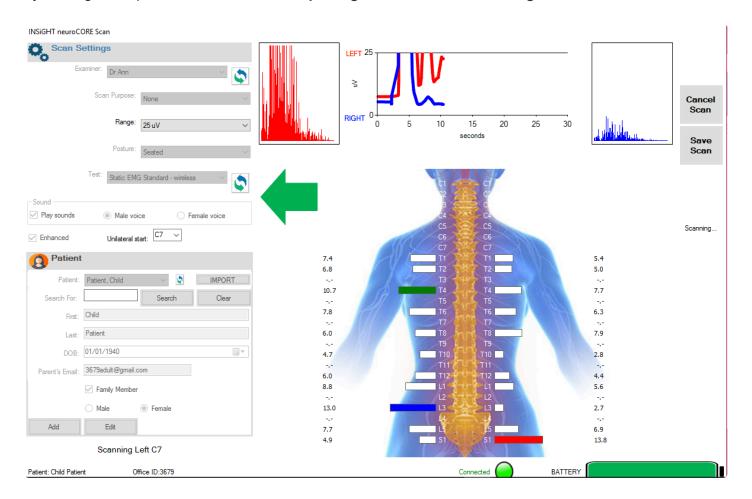
## 6. Adding Patients

This will go over how to add patients and the difference between accounts.

# 6.1. Add New Patient from mylNSiGHT™ Desktop

You can quickly add a patient to your patient database through any technology scan form by using the **Patient Panel** on the left side, shown below. Enter the patient's full name, email address, and date of birth, and then click **Save**. You must enter a valid email address.

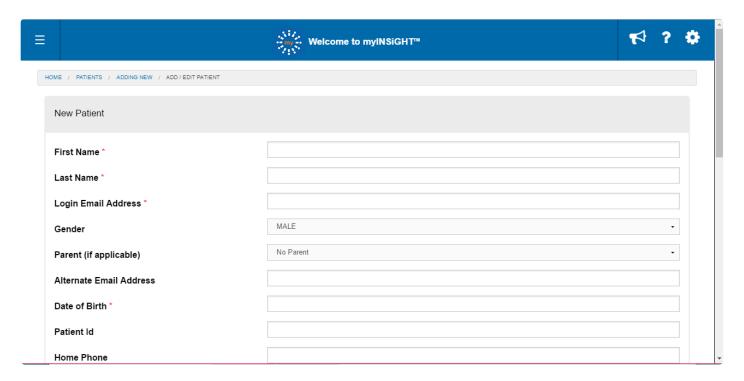
You can also import a patient from your INSiGHT™ 9.2 database if you are upgrading from INSiGHT™ 9.2, by clicking the import button. Please see **Importing a Patient when Scanning** for details.



You will now be able to perform a scan on this patient.

### 6.2. Add New Patient from Office Portal

Click on the **Manage Patients** icon from the task pad and the Online Portal will open. Click the **New Patient** icon in the top left corner of the screen. The following screen will appear:



Enter the patient information that you wish to track. Please note that the CORESCORE™ and scan uploads require a patient's full name, Email address, and Date of Birth.

For patients that do not have email addresses please use this format: Firstname.lastname@myCORESCORE.com

NOTE: If this patient is a child, see the \*Creating a Child Account section.\*

Click \*Save \*at the end of the screen.

Note that after adding a patient on the portal you must either restart the myINSiGHT™ Desktop software or refresh the list of patients on the portal using the refresh button. This button is on the patient panel on all the scan forms next to the list of patients:



### 6.3. Primary and Dependent Accounts

myINSiGHT™ allows you to create linked accounts for dependents who do not need to access the portal.

#### **Dependent accounts:**

- Are linked to a single primary account
- Cannot login to the patient portal.
- Do not receive email correspondence (Messages go to the Primary's email instead).

#### **Primary accounts:**

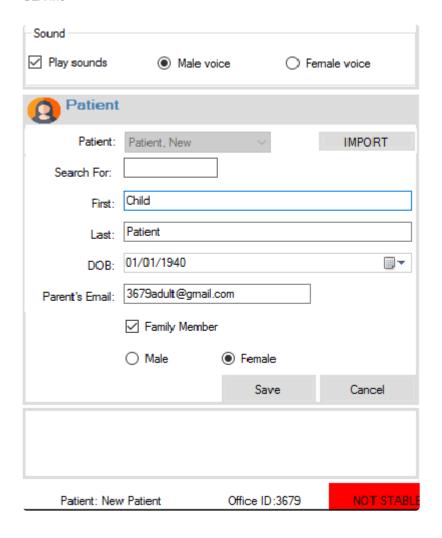
- Can have multiple family members associated with them
- · Can see scan data for any of the family
- Receive any emails sent to the family members' accounts.

On the doctor portal, users can easily filter by family and see the data for multiple family members.

#### Add a Dependent from mylNSiGHT™ Desktop

The primary account holder (i.e., parent) must be created before attempting to add a family member. To create the primary account holder, select Add and enter pertinent information.

To add a depending family member, select **Add** and then check the **Family Member** box. Enter the pertinent information and for the email field, enter primary account holder's email address. Hit Save.



#### Families on the Web Portal

Once a family member is added, you will see the Primary Icon next to the Primary's name and a Child Icon next to the dependent's name in the doctor portal.

If you click on either the primary or the dependent's icon, only that family's patient cards will appear on the **Patient's** page. You can also easily switch between family members on the patient page, from a drop down list at the top of the page.

## 7. Scanning and Patient Management

This goes over how to use myINSiGHT.

### 7.1. Scanning

The five different types of scans in myINSiGHT™ all share common elements to make the scan process consistent and easy. To begin scanning, from the Task Pad, click on any of the scan icons (Rolling Thermal, Segmental Thermal, PWP, Static EMG or ROM).

A scan form like the one below will appear (Rolling Thermal used as example): Click the **Start Scan** button to begin taking readings.

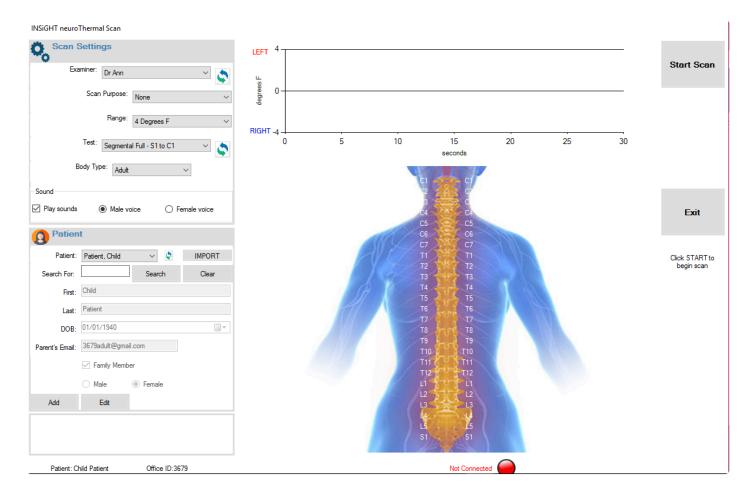
#### The right menu bar:

- Start Scan allows you to begin collecting scan data.
- Exit will close the scan form and take you to the task pad.
- Scan Icons indicate the other available technology and allows you to switch to a different scan type without having to go back to the task pad.



#### After you start the scan, the menu changes to:

- Cancel Scan allows you to cancel a scan without saving.
- Save Scan allows you to save the scan to the cloud database.
- The Scan Icons allow you to move on to the next scans after you are finished.



### 7.2. Technology Status Bar

At the bottom of the scan screen, this message bar will remain visible (Rolling Thermal Status bar used in this example).



This status bar displays important data quickly and easily at the bottom of the screen. The items displayed are as follows (Left to Right):

- · Patients Name you are currently scanning
- · Your Office ID Number
- **Stable Indicator** shows If you are receiving stable scan data for the rolling thermal. Data is "stable" when readings do not vary significantly within a window of time.
- **Speed Indicator** will display if you are rolling too quickly. If the indicator turns from green to red, you have moved the scanner too quickly and the scan data is suspect. We recommend cancelling and scanning again.
- Connection Status indicates that the Bluetooth device is currently connected to the computer and software and is ready for use.
- Green indicates the unit is connected and ready to be used.
- · Red indicates the Bluetooth device is not connected to the software.
- Battery indicates how much battery life is left in the Bluetooth device.

NOTE: These Icons vary depending on the technology you are using and the scan type you are performing.

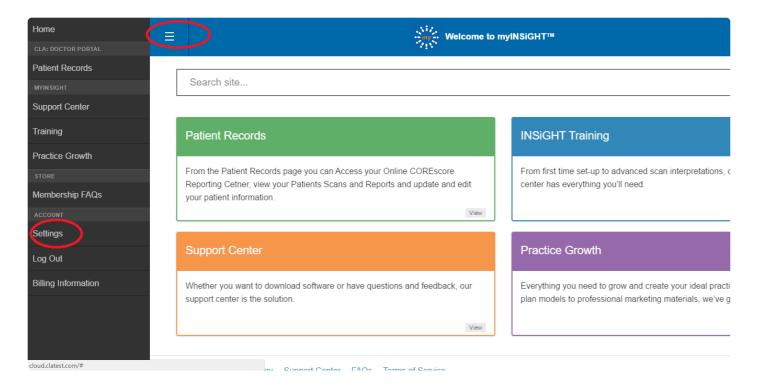
### 7.3. Enabling & Disabling the Sound Prompts

The myINSiGHT™ program has a built-in sound prompt feature that guides an examiner through the vertebral levels. The sound prompt can be set to either a male or female voice by selecting the radio button at the button of the scan settings window.

To disable the sound prompts, un-check the **Sound** box.

# 7.4. Changing the Language on your CORESCORE™ or CORESCORE™+ reports

In the doctor portal, Click on the three bars on the left and a menu will appear, select **Settings** on the bottom.



Click on the Language dropdown and choose your preferred language. If you do not see your language on the drop down, it is not yet supported.

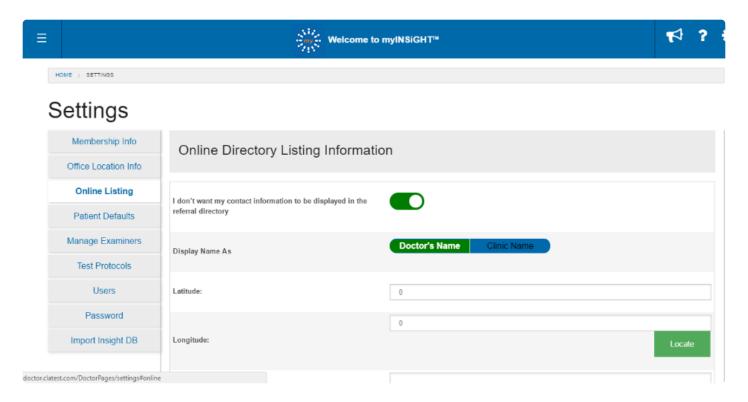


#### Click Save.

Changing the language will also change the formats of dates and numbers throughout the portal to reflect the regional settings for that country.

# 7.5. Updating your Listing on the Online Directory

The current online directory is under construction. On the **Settings Page** click **Online Listing** and the following page will appear:



You can supply the following information:

#### Basic Listing Includes:

- Office Location To get your office location click the Locate Button and the system will auto populate your Latitude and Longitude position.
- Phone Number
- Office or Doctor's Name This determines whether the Office Name or the Doctor's name appears in the report header.

#### The Full Listing Includes:

- Office Location To get your office location click the Locate Button and the system will auto populate your Latitude and Longitude position based on your office address.
- Phone Number
- Office Email Address
- Hours
- Logo
- · Photo of Primary Doctor
- Website URL

- Office Biography
- Type of Reports Used
- Type of Equipment Used
- Technique used
- Specialties

Once the above fields are completed, click Save and your online directory listing at www.insightcla.com/findagreatchiro will be updated.

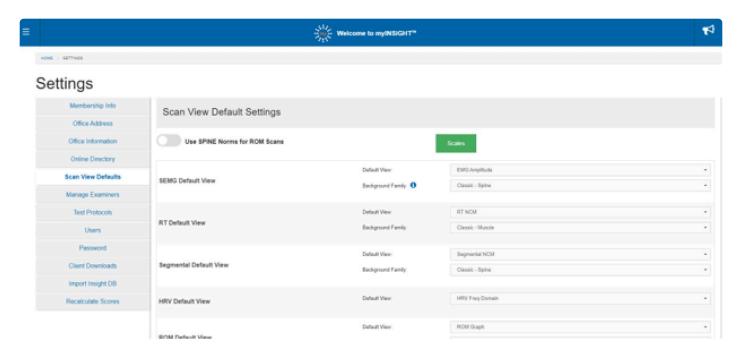
NOTE: Find A Great Chiro is being relaunched and may be under construction for the part of 2017.

### 7.6. Setting Scan View Defaults

To change what Scan Views are listed as your default views for the portals, go to the **Settings Page** and click **Scan View Defaults** on the left side and the following screen will appear.

Using the drop down arrow select the name of the view you want to use as the default view for that scan type for both the **Patient Portal** and the **Doctor Portal**.

On this page, you can also specify what background graphic you would like to use for the views for each scan type. **Blue Man** is the new blue graphic used by myINSiGHT™, while the "Classic" graphics are the old backgrounds used in INSiGHT™ 9.2.

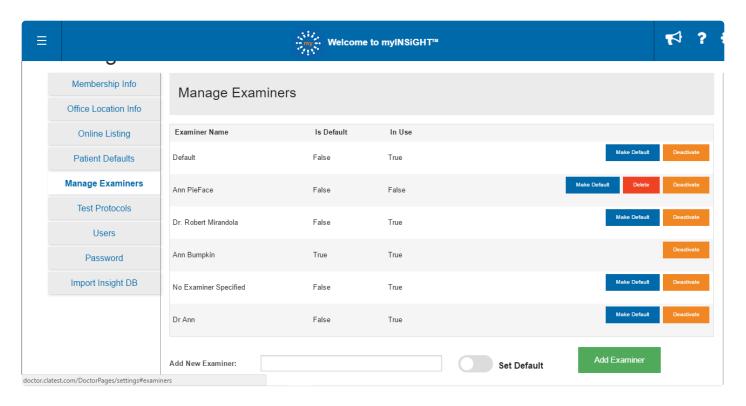


Clicking the "Scales" button allows you to specify a scale for each scalable view. Selecting "Auto" is the default and it means that the system will calculate the best scale for the graph.

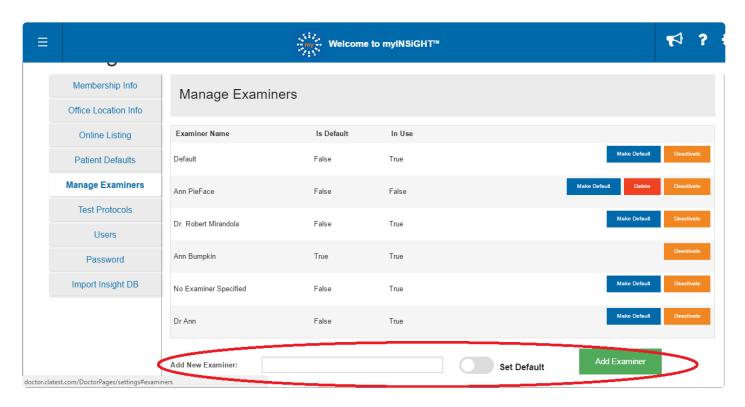
Click Save.

### 7.7. Setting and Adding an Examiner

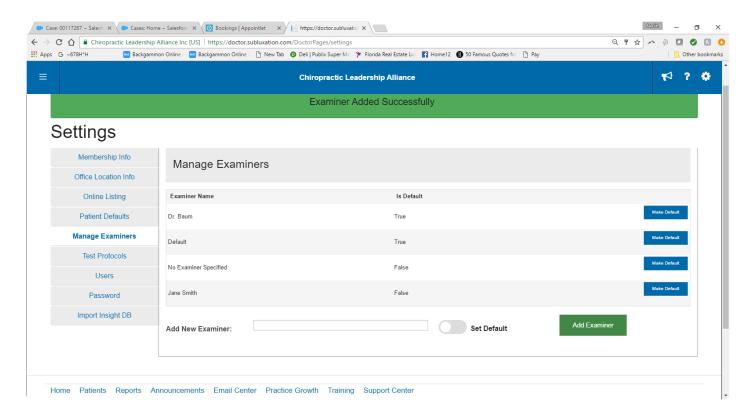
You use the Manage Examiners panel on the **Settings Page** to create and modify the list of examiners that is available to select during scanning in myINSiGHT™ Desktop.



To add a new examiner, click on **Add Examiner** and supply the examiner's name. If you wish to make them the default examiner, activate the Set Default radio button.



If you wish to make someone else in the list the default examiner, click on the Make Default button in the list of examiners.



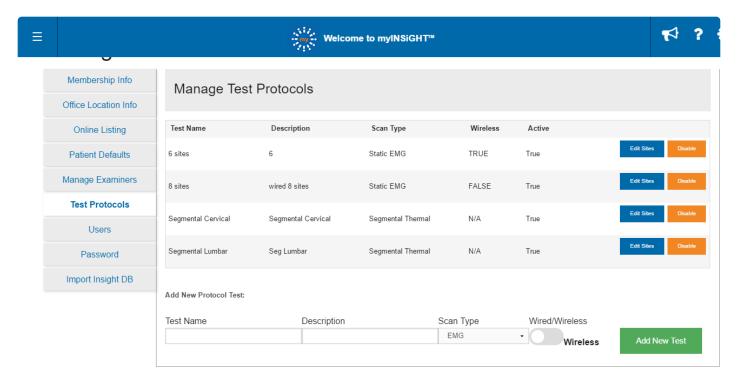
Please note that you can only deactivate and delete examiners that do not have any scans in the system associated with them.

Any examiner can be deactivated as well. A deactivated examiner will no longer appear in the list of examiners in mylNSiGHT™ Desktop. You can only delete an examiner entirely if they have no scans in the database. To remove examiners with scans from the desktop use deactivate.

Remember to restart myINSiGHT™ Desktop or refresh the list of examiners to see your changes.

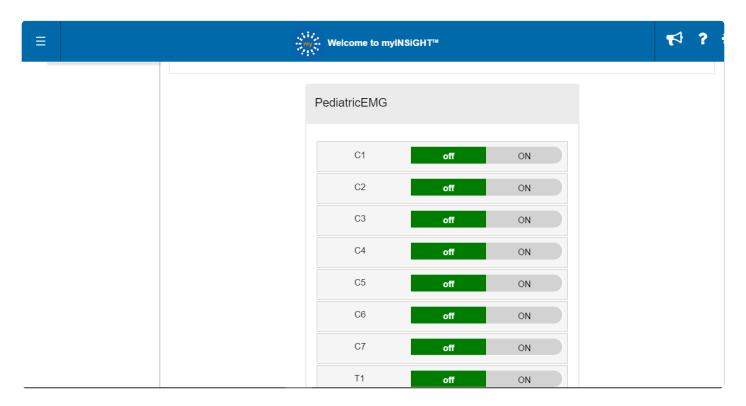
### 7.8. Creating a Custom Test Protocol

You can create custom test protocols for the **Static EMG Test** and the **Segmental Rolling Thermal Test**. you will need to go to the **Settings Page** and click **Test Protocols** on the left side and the following screen will appear.

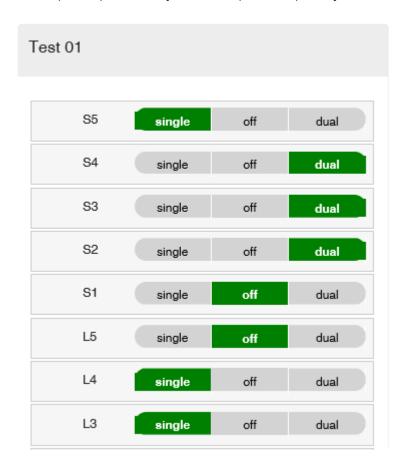


Give the protocol a name and add a description of the type of protocol you are creating. Use the slider to determine if you want your new protocol to start at C1 or S1.

Click Add New Test, the following window will appear:



For Segmental Thermal scans, you can determine each scan point if you want to take a reading on both sides (DUAL) or on only one side (SINGLE) or if you want to skip that point (OFF), as shown here.



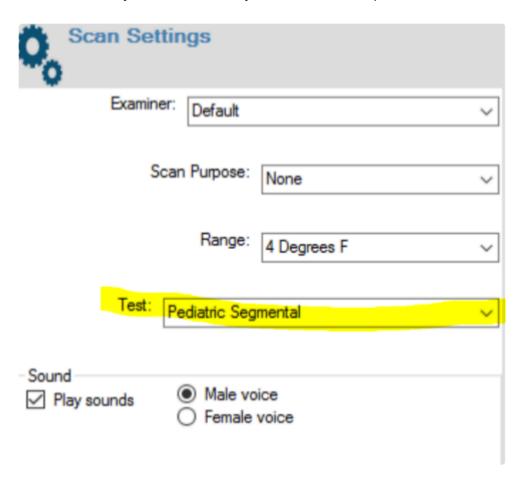
For **Static EMG scans**, locations can be either ON or OFF there is no single/dual setting.

Click Save at the bottom of the screen.

NOTE: You can create Customized Tests, which you can enable or disable to determine which custom tests are displayed in the software for use. However, the default scan test cannot be disabled or customized.

Your **Custom Test Protocol** will now be available for use under the **Scan Screen** for the **EMG Scan** and the **Segmental Thermal Scan**. Select by using the drop down field labeled Test as shown on the right.

Remember that you must restart myINSiGHT™ Desktop or refresh the list of tests to see your changes.

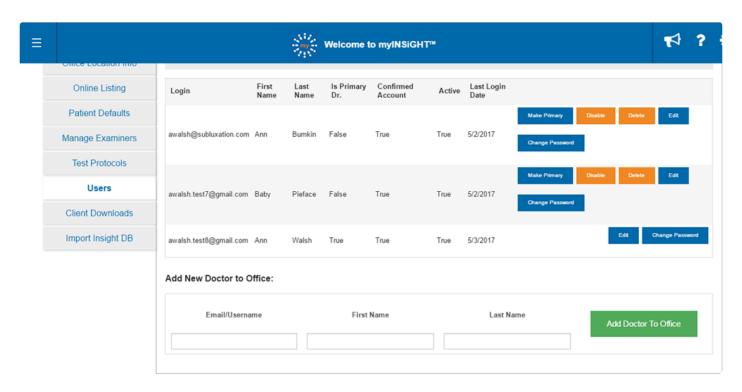


### 7.9. Creating and Editing New Users

From time to time, you may need to add, edit or delete a user that has access to the myINSiGHT Software and Portal. To do so, follow these steps:

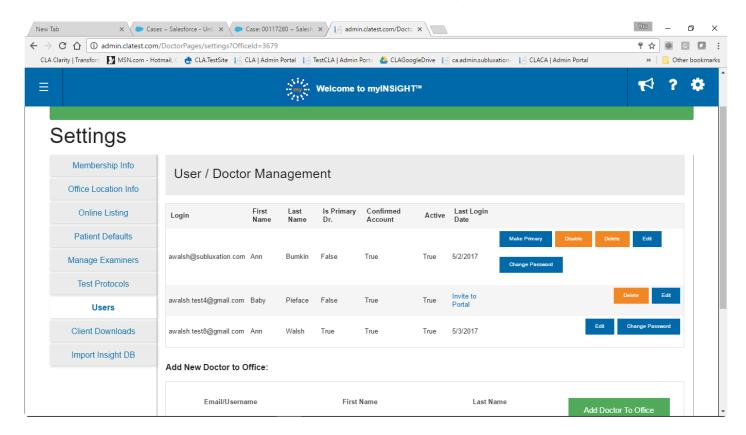
- Log into the primary user's account at www.portal.subluxation.com
- Click on the **Hamburger Menu** in the upper left corner of your screen
- Select **Settings**, then click on **Users**

To add a user, scroll down to the **Add New Doctor** to Office section and enter their email address, first name and last name, and then click **Add Doctor to Office**. They will then receive an email asking them to set up their account. Please note that while the prompt is to add a doctor, this could be any user you deem appropriate – staff, doctor or otherwise.

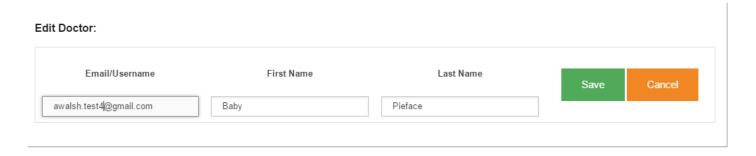


NOTE: If you need to modify the email address of an existing user, once you save the change, you will be sent an invite to the new email and you must log out immediately and confirm the new user by clicking on the link in the email.

• To edit a current user, click on **Edit** and modify as needed.



• To delete a current user, simply click the **Delete** button next to their name.



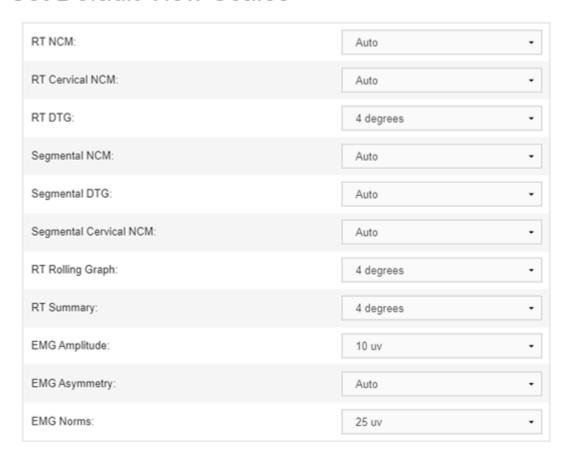
### 7.10. Scan View Scales

Many of the scan views in myINSiGHT are scalable graphs. By default, the system will determine the scale of a graph based on its largest value. The user can override this and tell the system to always use a fixed scale for a particular view. Users can set the scale values from the Scale Dialog, which is accessible in three places:

- · On Settings->Scan View Defaults
- · On the Patient/Visit page
- · On the Report Builder page

On any of these pages the user will find a "Scales" button which you can click to popup the dialog to change the scale:

### Set Default View Scales



Exit

The user can select any available scale and the change is saved as soon as they make the selection. A selection of "Auto" means the user wants the system to automatically calculate the scale. These scales will be used for that view type until the user makes a different selection.

## 8. Static Electromyography (sEMG)

This section will go over the sEMG Scan protocols.

The INSiGHT sEMG Smart Sensor measures Electromyographic activity by utilizing state-of-the-art signal processing technology. The INSiGHT Smart Sensor allows for accurate and precise data collection at all spinal regions. The data collected by the Smart Sensor enables an examiner to view an accurate "picture in time" of a patient's spinal muscle tone and any abnormal muscular imbalance.

You can conduct Static EMG scans using the wired sensors, which plug into the base station, or using the wireless sensors. Both devices use the INSiGHT™ Smart Sensor technology.

### 8.1. Static EMG Preparation: Exam Area

The INSiGHT Smart Sensor is designed to detect and report electrical activity. The smart sensor can detect and reporting any type of electrical field, even if the electrical field is not the intended target of the sensor.

The smart sensor can filter out predictable levels of outside electrical activity, however, there are many common devices that produce electrical fields large enough and powerful enough to overcome the filtering technology built into the smart sensor. Some examples of these devices are X-Ray View Boxes, Computer Monitors, TV screens, Fluorescent, Halogen and Neon lights, stereo sub-woofers and autoclaves.

If any of the above devices are present in the exam area, they should be turned off or removed prior to the sEMG scan being performed.

A bare, tiled or wooden floor is recommended for the exam area, as a carpeted area can produce static electrical build-up on the patient, the examiner and the equipment. If the exam area is carpeted, an antistatic mat is recommended.

### 8.2. Static EMG Preparation: Patient

A patient coming in for an sEMG scan should not be taking any medication that would affect muscular activity (e.g., muscle relaxants, steroids) and should also refrain from any strenuous muscular activity in the hours prior to the sEMG scan.

Prior to initiating the Static EMG scan the patient should be prepared as follows.

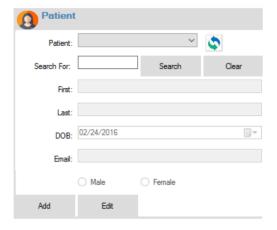
- Ask men to remove their shirt and women to change into a gown.
- Pin up any hair covering the patient's neck or back.
- Wipe down the patient's spinal region with isopropyl alcohol and allow the alcohol time to dry.
- The patient should be sitting with both feet flat on the floor, hands palm up, resting on their lap, looking straight ahead and remaining as stationary as possible.

### 8.3. Static EMG Scanning Procedure

IMPORTANT NOTE: If you are performing a Rolling Thermal Scan and a Static EMG scan on the same patient, perform the Rolling Thermal Scan first. This will ensure that the lowered skin temperature that results from the alcohol wipe does not affect the thermal readings.

Open the scanning window by clicking on the Run a Scan icon.

Once the patient has been selected, you check the Scan Settings, which will allow you to change the examiner and the **Test Protocol** you want to use. Once you have selected the Test and Examiner you are ready to run the scan.

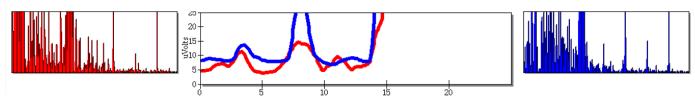


Dip the sEMG sensors in alcohol, place them on the patient's skin and select **Start Scan**.

### 8.4. Enhanced EMG Mode

**Enhanced EMG Mode** is made possible by INSiGHT's Digital Signal Processing capabilities. In Enhanced mode, your sEMG scans measure the amount (amplitude) of muscle energy in the paraspinal muscles as well as the type of energy the muscles are emitting. The type of energy changes with muscle fatigue, changes in active muscle fiber types and various clinical conditions. The INSiGHT™'s Enhanced EMG mode detects the type of energy by measuring the frequency of the EMG signal.

The Enhanced EMG mode Static scanning window is illustrated below:



A red and blue signal will move across the graph, indicating the level of the signal being recorded. As the signals move across the graph, you will see some activity in the grids on the left and right. These grids display the frequency of the **EMG signal**. The red and blue signals will continue across the graph until a reading is taken. Once you take a reading, the red and blue signals will begin again moving from left to right and the voice prompt will state the next level. Always wait for the signal to stabilize prior to taking a new reading. Dip the EMG sensors in alcohol as needed during the scan.

The left and right frequency grids in the above illustration, display left and right frequency components detected by the **sEMG sensors**.

**Enhanced Static EMG Mode** also uses an enhanced signal processing technique that provides faster signal stabilization and also allows the myINSiGHT software to filter out unwanted electrical signals during a sEMG scan.

Enhanced EMG Mode can be disabled by clearing the check box next to Enhanced on the EMG Scan Screen.

For wired EMG sensors, Auto Scan is the default once you click **Begin Scan** and place the sensors on the patient the system will begin collecting scan data automatically. For wireless sensors, see below.

When the scan is complete myINSiGHT will prompt you to save the scan. Click YES to save the scan or NO to continue and re-scan levels.

### 8.5. Re-Scanning a Level

You can re-scan a site prior to the saving the scan. If you want to re-scan a site during a **Static EMG scan**, follow the steps below to do so.

**Option 1** – Click on the level that you want to re-scan. This will allow you to take a new reading for the level you right clicked on and all the levels below it or you can redo a single level by right clicking it. The voice prompt will begin at the level that has been clicked.

**Option 2** – On a touch screen enabled monitor or laptop you can use your finger to select different spinal points during the scan to re scan at that level.

**Option 3** – If you are using the wireless EMG scanner, you can use the touchscreen on the device itself to change sites. During the scan, touch on the site label (e.g., S1) on the device's touchscreen and a list of all the sites in the protocol will appear, along with scrolling arrows. Touch the site you want to re-scan, and both the device's screen and the PC screen will move to that site.



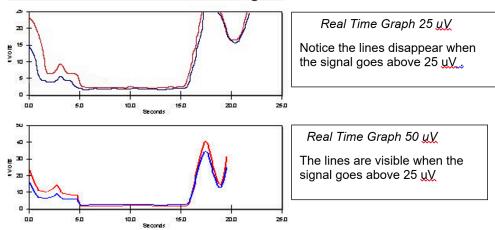
NOTE: If you choose to go back and re-scan a level after the scan is complete, you will not be prompted to save the scan again. You must click on the Save button to save the scan.

### 8.6. Static EMG Range Settings

#### Setting the Range of a Scan

The Range may be set to **25**, **50 75** or **100** uV. Adjusting the Range DOES NOT affect the data that is recorded during a scan, it just adjusts the Real Time Graph so that a signal above the default Range setting of **25** uV will be displayed. The Real Time Graph set to 25 and 50 uV is illustrated below.

#### These are two views of the same signal:



#### **Adjusting the Range Setting**

For most patients, the Default Range Setting of **25 uV** is sufficient to run a scan and retrieve data. Certain patients, athletes and infants will return readings above **25 uV**. You can adjust the Range Setting prior to or while running a scan. If a patient is returning readings over **25 uV**, adjust the Range until the red & blue signal lines appear in the Real Time Graph.

The Range Setting will revert to the default setting of **25 uV** after you leave the form. The **EMG Scan Form** will always default to a range setting of **25 uV**.

#### **High EMG Readings**

Although some patients will return readings above **25 uV**, most patient's readings should fall between **0** and **25 uV**. It would be a rare event to have any patient register over **100 uV** during a Static EMG scan. If you are consistently receiving readings over 25 uV it is likely that the Smart Sensors are picking up interference from the exam area environment.

#### <u>AutoScan</u>

Note that this feature only applies to the wired EMG sensors used with the base unit. See below for details on scanning with the wireless EMG scanner.

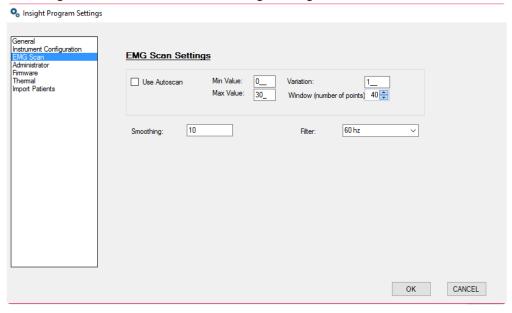
The **Auto Scan** feature allows an examiner to perform a Static EMG scan with the myINSiGHT™ software, automatically indicating the optimal time to take a reading. This is not available with the Wireless EMG. **Auto Scan** allows an examiner to determine the point at which the most accurate reading can be taken.

The Auto Scan Feature is set to (ON) by default for wired EMG, to turn it off, clear the checkbox in the scan

settings section of the form. Note that this checkbox will not be visible for the wireless EMG.

#### **EMG Scan Settings**

There are several settings you can change which affect neuroCORE scans. You can adjust these by returning to the **Task Pad** and selecting Settings.



Here you can change the minimum and maximum values and the number of points within that range to get the most accurate auto scan EMG.

To determine when to automatically take a reading during an EMG scan, mylNSiGHT™ keeps track of how many readings it receives:

- · Above the Min Value
- Below the Max Value
- Within the amount specified by Variation

If myINSiGHT<sup>™</sup> receives Window points that meet this criteria, it automatically selects the next reading. So, in the example above, if myINSiGHT<sup>™</sup> received 40 points that were all above 0, below 40 and within 1 uV of each other, it would determine that the reading is stable and automatically take a reading.

Filter changes filter values: **60hz** if for North America, 50hz is for most other countries. This allows myINSiGHT™ to filter out noise generated by electrical devices.

neuroCORE Scan Delay: when the user pulls the trigger on the neuroCORE, there is a brief delay to display the value on the touch screen. This delay is configurable and you can change it here.

Smoothing should NOT be changed unless CLA Technical Support instructs you to do so.

Auto-Scan will remain enabled until Auto Scan is cleared here or in the EMG Scan Form.

# 8.7. Scanning with the Wireless EMG Scanner (neuroCORE)

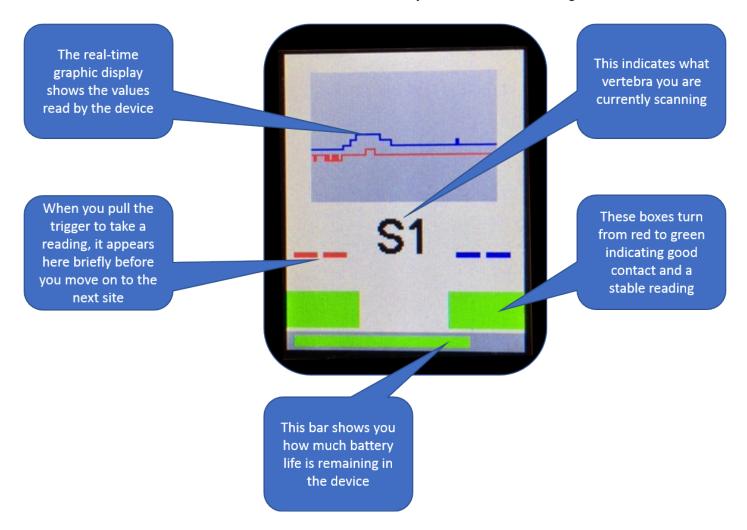
NOTE: This section only applies if you are using the \*Wireless Bluetooth connected EMG scanner (neuroCORE).\*

The wireless EMG scanner uses the same scanning technology as the wired scanner, but because it is designed to be used with one hand instead of two and both sensors are fixed in place (with some limited swiveling motion possible), there are a few differences in how you perform a scan.

#### Touchscreen Display

One of the biggest differences is the touch screen display on the device. Because the device is not tethered to a base station, you have the freedom to move around your exam room with the device. You also no longer need to watch the PC screen when scanning. You can use the neuroCORE touch screen to conduct the scan and go back the PC to review and save it.

The neuroCORE touchscreen shows all the vital information you need while scanning:



The neuroCORE protocols go in the opposite direction from the wired EMG protocols. In other words; they start at **S1** and go UP the spine to C1, like the Rolling Thermal protocols. This is to support unilateral scanning in the cervical regions, as explained in the next section.

You prep the patient just as you would for the wired EMG. After you click **Start Scan**, the protocol will prompt you for the first site, S1 in the standard protocol. Place the device on the patient's back in the correct position for that vertebra. Notice that the heads of the device swivel independently, allowing you to make sure that all three metal tips are making good contact with the skin.

Now look at the device screen, as pictured above. In the center of the screen you will see the current location indicated. Just above that is a real-time graph indicating the data streaming in from the sensors. At the very bottom are two colored blocks which are red initially. Once the signal from the device becomes stable, they will both turn green. Each block corresponds to a sensor, left and right. When both blocks are green, you can press the trigger to take a reading.

The display will then change slightly, to show the values you just took for a brief time before moving to the next site. If you don't like the reading and need to re-scan, you can touch the site location on the device's touchscreen to move the protocol back to the previous site, as described above.

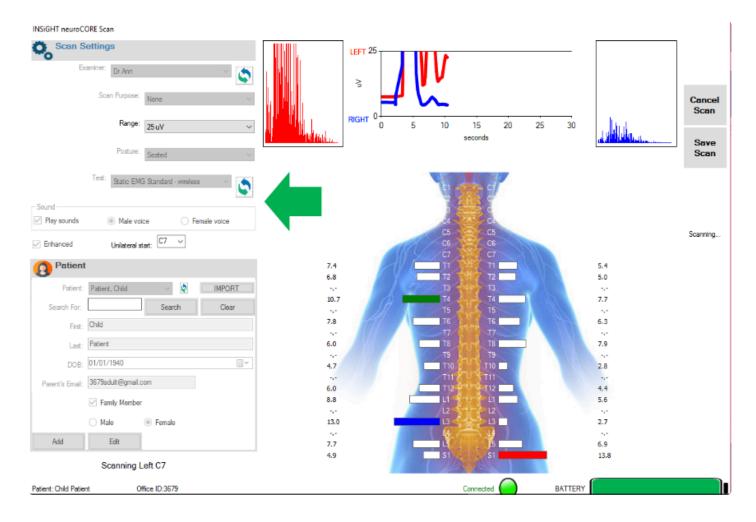
#### **Unilateral and Bilateral Scanning**

Because the neuroCORE scanner heads are attached, it can be difficult for both sides to make good contact at the same time in the cervical region. This is the same effect seen with the Thermal Scanner at **C1** – you cannot measure both sides at once instead you measure first the left side then the right.

You will need to do the same thing with the neuroCORE scanner. At some point, most likely in the cervical region, you will go from scanning both left and right sides together to first scanning the left, then the right. We call this unilateral mode because you are scanning one side at a time.

Since the unilateral sites are usually all going to be in the cervical region, we have changed the direction of the standard EMG scan to start at **S1** and continue up the spine through **C1**, just like the Rolling Thermal scan. When you reach **C7**, you will be prompted for first left, then right. You will be prompted both via voice prompt and also by an on screen arrow which indicates that we are scanning left, then right.

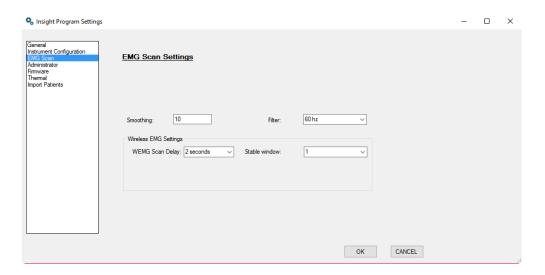
For most patients, you will need to start scanning unilaterally at **C7**. For some, however, you might be able to scan bilaterally until you get higher into the cervicals, **C5** or even **C3**. Others, you might need to start lower. For this reason, you can adjust the site at which you start scanning unilaterally by selecting a different site from the drop down list on the page.



You can even choose to not scan unilaterally at all by selecting None from the list. For the clear majority of patients, however, you will want to scan unilaterally in the cervical region, which is why the default value of this selection is **C7**.

#### neuroCORE Settings

There are a few settings you can modify to change the behavior of your neuroCORE device. To see these, go to the **Settings Form** from the **Task Pad** and select **EMG Scan**:



The two neuroCORE settings are:

neuroCORE Scan Delay: This is the brief delay after you pull the trigger before the neuroCORE protocol moves on to the next site. The purpose of this delay is to allow the user time to see the values on the device's touchscreen. You can adjust it to .25 secs, .5 secs, 1 second (default) or 2 seconds.

Stable window: Sometimes, the act of pulling the trigger can introduce some noise into the signal (what we call signal jiggle because the device itself moves a bit). If this is a problem, you can increase the stable window, which defaults to **1**, to a greater value up to **5**. This adjusts the point in time at which we select the desired value from the stream of data, so that we are selecting a value from just prior to the trigger pull.

Do not adjust this value unless you believe you are experiencing this issue.

### 8.8. Static EMG Scan Views

You can display Static EMG scan data as listed below.

EMG Amplitude	Shows Static sEMG readings for each spinal level as a color-coded bar indicating amplitude and deviation from norms, superimposed on an illustration or photo.
Bar Graph	Shows Static sEMG readings for each spinal level as a simple color-coded bar graph. Bars indicate the amplitude in micro volts; bar color shows standard deviations from norms.
Normal Means Graphic	Shows normal sEMG readings for each spinal level as a white bar, superimposed on a spine or muscle illustration or photograph. Bars indicate the amplitude in micro volts.
Normal Means Bars	Shows normal sEMG readings for each spinal level as a simple white bar graph. Bars indicate the amplitude in micro volts.
Assymetry	Shows percentage differences in sEMG readings between right and left levels as triangles; the triangle marks the higher side. Colors show standard deviations from norms.
Table	Shows all statistics for each spinal level, including the Neurocalorimetric (NCM) (left/right differential) value, expected NCM norm and standard deviations, and absolute temperatures.
Pattern View	Details below.

When you click on the "View" icon after saving an EMG scan, myINSiGHT™ launches your browser and displays both the Static EMG Amplitude View and the Pattern View.

#### **Pattern View**

The Pattern View shows scan data in a holistic manner that compares the patient's muscle energy distribution pattern to a normal distribution pattern. The focus is not on a segmental breakdown by spinal level, but on the whole spine.

In the pattern views, the white sections that create a "pear" shape represent the normal patterns for muscle energy distribution, and the heavy black lines show the patient's pattern. In a perfectly normal pattern, the heavy black lines would go down the middle of the white areas on each side of the pear, and would be a very smooth pear shape. It is very easy to see how the patient's pattern contrasts with the normal pattern by looking at how well the black lines conform to the shape of the white areas – smoother, pear-shaped black lines show better patterns and jagged, spiky black lines show poorer patterns.

In these views, you can see certain places on the spine, such as the upper thoracic in the view on the bottom, where the patient's data **(black lines)** are outside the pattern. In such cases, the colors in the "spike" outside the pattern indicate the severity of the deviation by showing the number of standard deviations outside the pattern. Deviations above the expected pattern are shown in **green**, **blue**, or **red**, and

deviations below the pattern are shown in yellow. (The faint white lines outside the pear shape represent boundaries for each level of deviations, up to 4 deviations or more above the norms). In addition to the very clear illustration of total energy distribution provided by the view, several statistic "scores" shown on the right aid further in interpretation.

#### The scores are as follows:

- Pattern Score Pattern is a cumulative score relative to a "perfect" pattern (a pattern that exactly matches the normal.) A perfect pattern has a score of 100%, and the goal is to increase the pattern score as the patient advances through care.
- Symmetry Score Symmetry is a cumulative score that shows the presence or absence of left-right imbalances (asymmetries). A perfect score of 100% means a completely balanced spine with no asymmetries. As with the pattern score, the goal during care is to improve the symmetry score, and in this case the scores improved from 63.60 to 76.82.
- Total Energy Score Total energy is a cumulative score representing the total amplitude of sEMG values. A score of 100 indicates that the sum of all the amplitudes in the each of the scanned levels equals that of the normative data. Scores of less than 100 indicate lower than normative total amplitude, and scores of greater than 100 indicate higher than normative total amplitude. In this case there has been a very slight increase in total energy, from 99.62 to 106.74.

### 8.9. Smart Sensor Maintenance

To record accurate and consistent readings, your sEMG Smart Sensors must remain clean and free of any corrosion. If the Smart Sensors are not properly maintained, they will be prone to picking up un-wanted electrical noise, which will result in high EMG readings. Continued improper maintenance could lead to a failure of the Smart Sensor ... The picture below illustrates the difference between a properly maintained Smart Sensor and a Smart Sensor, that has become corroded.





Properly maintained sensor | A sensor that has corrosion.

The female snaps on a properly maintained Smart Sensor should have a shiny metallic luster. The gray plastic housing should be free of stains and debris.

If necessary, the female snaps and plastic housing can be cleaned using jewelry cleaner.

- Use a Q-Tip that has been dipped in jewelry cleaner to swab out the female snaps.
- Use a small brush or towel that has been dipped in jewelry cleaner to clean up the plastic housing.

#### IMPORTANT NOTE: DO NOT USE ALCOHOL TO CLEAN THE SENSORS.

For further information concerning the Care and Maintenance of the Smart Sensors, please contact CLA Technical Support at 702-848-SCAN (7226).

# 8.10. Maintaining your sEMG Cables

#### Why is it important to properly coil your cables?

If coiled incorrectly:

- 1. It can create kinks and twists resulting in deformed shape and internal damage.
- 2. It can create a signal loss resulting in a need for repair or replacement.
- 3. It gets tangled easier resulting in time loss.

Coiling your cables allows the cable to lie flat and makes for easier, faster work. The life expectancy of your cable will increase and save you money!

## 8.11. The Over/Under Coiling Technique

#### Step 1

Hold one end of the cable in dominant hand.

#### Step 2

Starting at the end of the cable that is in the dominant hand, take your non-dominant hand and slide your thumb and pointer finger down the cable about 1 foot. The purpose of sliding your fingers down is to smooth out any kinks that may be in the cable at this time.

#### Step 3

Bring cable up to dominant hand to form a regular loop – don't force the cable smaller than it naturally wants to go.

#### Step 4

Next, you will be making an inverted loop. Take your non-dominant hand and twist your hand so that your thumb is going downward toward the center of your body and your palm is facing out towards your elbow of the same arm.

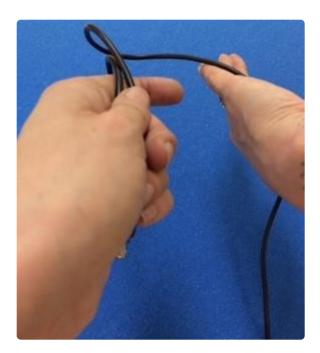
#### Step 5

Bring loop back up to dominant hand while twisting your hand back into normal position. The part of the cable you are holding in your non- dominant hand should be underneath the start of this loop formation. Bring loop in as shown in the picture below.

#### Step 6

Repeat steps 3 through 5 until cord is completed coiled.









#### **Helpful Coiling Hints**

When the coiling process is complete, loops should not be over lapping each other. When looping, make sure to keep control to avoid knotting when it comes time to uncoil.

Uncoiling should be easy when this process is followed correctly. Cable should uncoil straight with no kinks quite quickly.



Make sure to adjust cable while coiling to ensure there are no kinks or twists that feel unnatural. Tie cables with a twist tie of some variety – never tie cable with itself.

# 8.12. Charging the neuroCORE Battery

The Wireless EMG scanner (neuroCORE) uses an internal battery identical to the Wireless neuroTHERMAL. This cable has an **RCA style jack** on one end, which plugs into the device and a **USB plug** on the other. Charge the unit by plugging the **RCA jack** into the unit and the **USB plug** into a PC that is turned on or an appropriate charger that has been confirmed to work with the equipment.

#### DO NOT PLUG IN THE EQUIPMENT TO A WALL CHARGER THAT ACCEPTS A USB CABLE.

While it is plugged in, the unit's screen will show "Charger Attached" and the battery level will appear at the bottom of the screen.

Because of its touchscreen, the battery on the neuroCORE does not last as long as the one on the Wireless neuroTHERMAL. Turn it off between scans and plug it into the charger every evening to recharge completely.

### 9. Rolling Thermal

The neuroTHERMAL measures bi-lateral skin temperature on both sides of the spine. The neuroTHERMAL uses two non-contact sensors that utilize thermal imaging technology. The Rolling Thermal sensors are activated by setting the Thermal Scan to one of three possible modes: Adult, Child or Infant. Setting the scan to Adult, Child or Infant is done by adjusting the wheel position on the Rolling Thermal Unit.

myINSiGHT™ supports three Rolling Thermal models:

- T3 the T3 is the wireless, Bluetooth enabled scanner also referred to as the BTRT. Most new users will have a T3 unit.
- T2 the T2 scanner is identical to the T3 scanner, except that it is wired and plugs into the INSiGHT™ base station.
- T1 the T1 scanner is our legacy scanner which some users upgrading from INSiGHT™ 9.2 might have. This scanner has three sensors rather than two although only two are used at a time. If you are using a T1 scanner it is critical that you specify the correct patient body type (Adult, Child or Infant) in the software.

# 9.1. Rolling Thermal Scan Preparation: Exam Area

The neuroTHERMAL works best in a stable environment with a temperature between 55°F/12.8°C and 95°F/35°C, relative humidity 5%-95% and atmospheric pressure 700 – 1060hPa When performing a scan, the exam area temperature needs to be stable. Doors or entry ways should be closed, any direct sunlight muted and the exam area needs to be free of any cooling or warming air currents. This does not mean that you must block all sunlight or turn off the heat or air conditioning in the exam area. Sunlight should not be directly on the neuroTHERMAL and the exam area should not be in the immediate vicinity of heating or air conditioning vents.

# 9.2. Rolling Thermal Scan Preparation: Patient

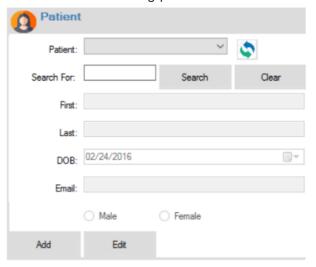
Once the patient removes their top, allow three to five minutes for the patient's skin to acclimate to the exam areas ambient temperature. The patient should not be near any environmental elements that could artificially cool or warm their skin (i.e., direct sunlight, heating or cooling vents, open windows or doors).

For the neuroTHERMAL to collect data, the patient's skin temperature must be higher than the ambient temperature of the exam area. This is of concern for outdoor screenings. For example: If the outside temperature is 99°F/37.2°C and the patient's skin temperature is 98°F/36.7°C the Rolling Thermal scan will not return any data.

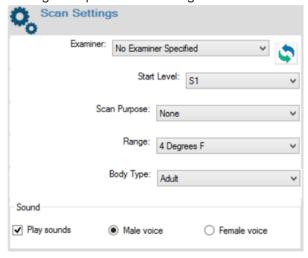
## 9.3. Conducting a Rolling Thermal Scan

Open the task pad and click the red Rolling Thermal Icon to open the Rolling Thermal Scan Screen.

Then select an existing patient from the list or add a patient using the Patient Window shown below.



Before you begin the scan, verify that the settings are correct. For a Rolling Thermal Scan this includes selecting an Examiner and Sound settings as you do with the other scan types. But there are also several settings unique to the Rolling Thermal scan:



**Start Level:** The Rolling Thermal scan by default begins at **S1**. You can, however choose to begin at a level higher than **S1**, up to **C2**. If you choose a level higher than **S1**, the scan will not be eligible for a scan score or be included in a CORESCORE™ or CORESCORE™+.

Scan Purpose: You can note a purpose for the scan. Be default this is none, but you can mark the scan as:

- Pre: Marks the scan as performed prior to the patient receiving chiropractic care.
- Post: Marks the scan as performed after the patient was under Chiropractic care.
- Comparative: Marks the scan to be compared to another scan or set of scans.

**Range:** Setting the range does not affect the values of the readings, but it changes the min and max displayed on the real-time graph.

**Body Type:** Select Adult (default), Child or Infant. You must also adjust the wheels of your scanner, as described in the section below. Note that this is critical to obtaining valid temperature readings.

# 9.4. neuroTHERMAL Wheel Settings\*

Prior to scanning you must set the scanner wheels for the patient's body type: adult, child or infant.

The photo below illustrates the correct way to adjust the wheels on the **T2** and **T3** scanners for adult, child and infant scanning.

"Adult" Spacing

"Child" Spacing

"Infant" Spacing



The **T1** Scanner requires different adjustment and scanning technique, because it has three sensors instead of two.

#### **T1 Scanner Wheel Settings**

+ Adult Mode+	Child Mode	Infant Mode
The RIGHT hole is the one on the left side in the		
pictures below, the <b>CENTER</b> hole is right next to	In Child Mode, the Right wheel is slid to the	In Infant Mode, the L
the RIGHT hole, the LEFT hole is by its self on	center and now sits between the Right and	center and now sits b
the right side of this screen shot. In Adult	Center holes. The Left Wheel stays by the Left	Center holes. The Rig
<b>Mode</b> , the Left wheel in beside the Left hole and	hole.	Right hole.
the Right Wheel is beside the Right hole.		







### 9.5. Beginning the Scan

Once you have verified the settings and adjusted the wheels if necessary, you can begin the scan. Select the **Start Scan Button**. If sound is enabled, the voice prompt will tell you to begin the scan. About one second later the voice prompt will state the starting level for the scan.

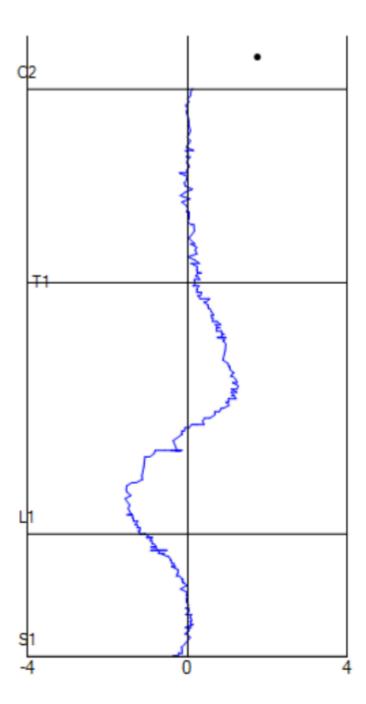
Place the neuroTHERMAL at the starting point for the scan. Wait a few seconds for the neuroTHERMAL to stabilize. After it has stabilized, the **Stable Flag** will change from red to green.

Press the trigger to take the first reading and listen for the beep and the prompt for the next level. At that point, start rolling the scanner up the spine at a slow steady pace. As the wheels turn you will hear a clicking sound indicating that the scanner is collecting data. You press the trigger to mark each spinal region. Normally, these are **S1**, **L1**, **T1**, **C2**, and then **C1**. When you reach **C1**, the system will prompt you to first take a left, then a right reading. You must lift the scanner off the patient's back and first point the LEFT sensor at the left **C1** atlas, then the RIGHT sensor at the right **C1** atlas. If you are using a **T1** scanner, the left and right sensors will depend upon the body type of the patient. For each of these **C1** readings, wait for the Stable Indicator to turn green before pulling the trigger. When the scan is complete myINSiGHT™ will prompt you to save the scan. After saving, you will see an NCM (bars) view of the scan beside the real-time graph. You can also click the Views icon to launch your browser and see a Rolling Thermal Summary View of this scan. During the Rolling Thermal scan, the data signal line should always be visible in the Display Box. If you cannot see the signal, increase the range using the Range Setting.

myINSiGHT™ records and displays data as you roll the neuroTHERMAL up the patient's spine.

#### **Excessive Speed Indicator**

The Excessive Speed Indicator at the bottom of the page will warn if you are rolling the neuroTHERMAL too fast during a scan. If the flag turns from green to red you should cancel the scan and start over.



### 9.6. Rolling Thermal Scan Views

The myINSiGHT™ program displays the data collected during each scan, assessment or exam as a Scan View. Each Scan View displays a different aspect of the data that was collected from the patient during the scan, assessment or exam. The Scan Views vary depending upon which scan type, assessment or exam was performed on patient.Rolling Thermal scan data can be displayed in up to six views. The six Rolling Thermal Scan Views and their descriptions are listed below.

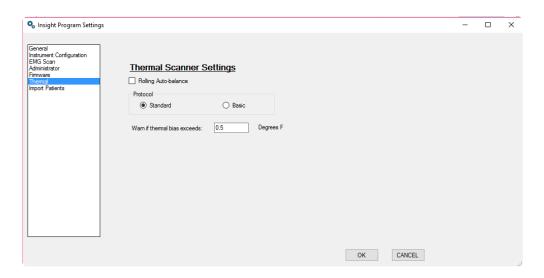
Segmental Neurocalorimetric (NCM)	Shows NCM (left-right temperature differentials) with a color-coded bar on the higher-temperature side. Bar color shows standard deviations from norms.
Segmental NCM Cervical Zoom	For thermal scans which start at T4 or above, the Cervical Zoom version of the Segmental NCM view shows just the cervical section of the spine.
Dermo- Thermographic (DTG) Comparison	Shows the differences between the temperatures at S1 and the temperature at each spinal level as a set of white bars (warmer than S1) or black bars (cooler than S1).
Table View	Shows all statistics for each spinal level, including the NCM (left/right differential) value, expected NCM norm and standard deviations, and absolute temperatures.
Continuous NCM	Shows NCM differentials for the entire spine – red graph color indicates higher values on the left; blue graph color indicates higher values on the right.
Rolling Thermal Summary View	This view is a combination of the Continuous NCM and DTG Comparison view and is the best overall to view results. This view is the one displayed when you click "Views" from the Rolling Thermal scan form after completing a scan.

For scans that begin above **S1**, the **DTG Comparison** and Rolling Thermal Summary views will not appear as an option as these views rely on data at S1. For scans that begin at **T4** and above, the Segmental NCM Cervical Zoom view will appear as an option, otherwise it will not appear.

### 9.7. Rolling Thermal Settings

There are two settings that apply to Rolling Thermal Scans. From the **task pa\*d select Settings**, **then click on \*thermal** to display these settings:

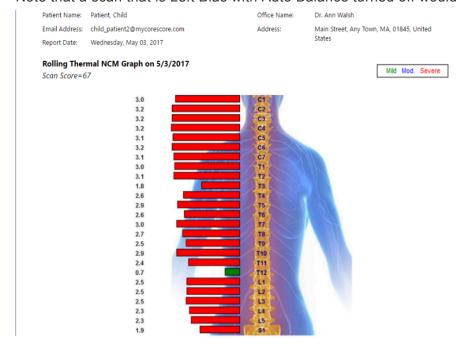
<u>Rolling Autobalance</u> – This setting is on (checked) by default and you should keep it on in most cases. This keeps the Rolling Thermal scan balanced around zero and helps you see asymmetries and variations in the normal pattern.



When using Autobalance, the myINSiGHT program automatically corrects for any left or right bias in a scan. This allows the viewer to look at patterns along the centerline.

To turn the Auto Balance off, go into Settings, select 'Thermal' and uncheck the Rolling Auto-balance box.

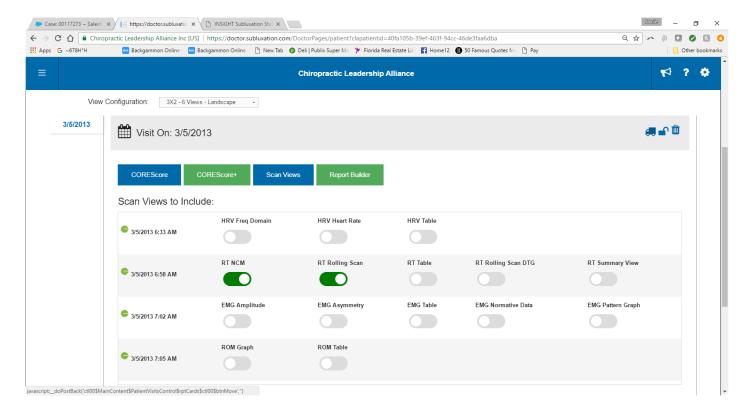
Note that a scan that is Left Bias with Auto Balance turned off would look as follows:



If you are observing all one-sided scans (either to the right or the left) this could be an indication that you need to sync your Rolling Thermal instrument.

You can now calculate the thermal score independent of the bias. To recalculate your Rolling Thermal scans please follow these steps:

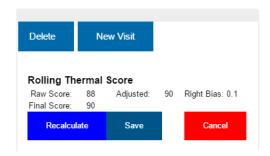
1. On the myINSiGHT portal, in the patient record, click on the truck icon (move visit)



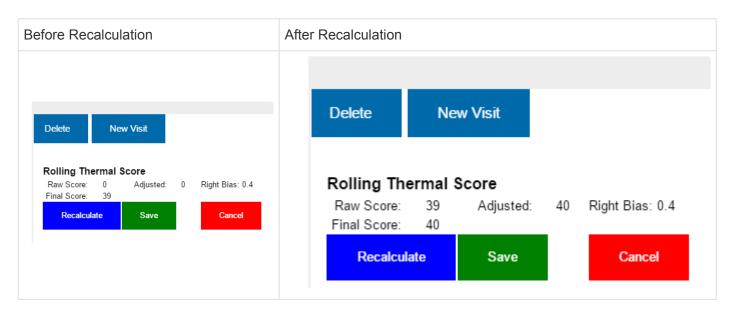
2. Click on the thermal scan that you wish to recalculate and click 'recalculate'



3. When you click on the thermal scan you will see RAW, Adjusted and if Auto-balance was originally on, Bias.



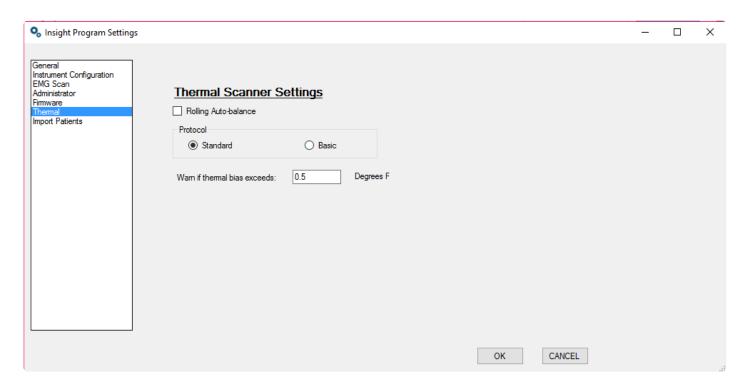
- 4. Once you click on 'Recalculate', you will then see the raw score, then the adjusted score and if Autobalance was on, you will also see the Bias in addition to the Final Score.
- 5. The thermal is the only scan that can be recalculated.



<u>Protocol</u> – This setting defaults to Standard and you will not change it in most cases. The standard protocol prompts you to pull the trigger at S1, L1, T1 and C1. This anchors the points at those positions. If you are having trouble precisely marking those points while scanning, it can cause scans to appear to be inconsistent when they are not. If you are having this problem you can switch to the basic protocol, which only prompts for S1 and C1 and distributes the points evenly between them. If you scan at a consistent speed, you might get more consistent results this way.

**Bias Warning** – If set to .5, you will get a warning at the end of a scan telling you that the Rolling Thermal is reading heavy on the left or right. If this is the case, it is suggested you look at the Thermal Sync. Thermal Scanner Settings can range from 0 and up, but it is recommended you set it between .3 and .6 and not above 1.0:

- · Basic: You will be prompted to take reading at S1, C2, C1 left and right
- Standard: You will be prompted to take readings at S1, L1, T1, C2, C1 left and right



### 10. Segmental Thermal

The Segmental Thermal Scanning feature of the myINSiGHT™ program is designed for situations where rolling a thermal scanner up a patient's spine to collect thermal data is impractical. The Segmental Thermal Scanning Protocol is particularly useful when scanning infants, as it avoids the sensation of the wheels rotating against the infant's skin, which might cause an infant to become agitated.

The neuroTHERMAL collects thermal data from a patient during a Segmental Thermal Scan in much the same manner that it does during a Rolling Thermal Scan. The main difference between the two scan types, is that during a Rolling Thermal Scan, the thermal data collection sites are determined by the rotation of the wheels on the thermal scanner. During a Segmental Thermal Scan, instead of relying on the rotation of the wheels to determine the data retrieval point, the examiner determines where to place the thermal scanner to retrieve the thermal data.

# 10.1. Segmental Thermal Scan Preparation: Exam Area

**55°F/12.8°C and 95°F/35°C**, relative humidity 5%-95% and atmospheric pressure **700 – 1060hPa**. When performing a scan, the exam area temperature needs to be stable. Doors or entryways should be closed, any direct sunlight muted and the exam area needs to be free of any cooling or warming air currents. This does not mean that you must block all sunlight or turn off the heat or air conditioning in the exam area. Sunlight should not be directly on the neuroTHERMAL and the exam area should not be in the immediate vicinity of heating or air conditioning vents.

# 10.2. Segmental Thermal Scan Preparation: Patient

Once the patient removes their top, allow three to five minutes for the patient's skin to acclimate to the exam area's ambient temperature. The patient should not be near any environmental elements that might artificially cool or warm their skin i.e. direct sunlight, heating or cooling vents, open windows or doors.

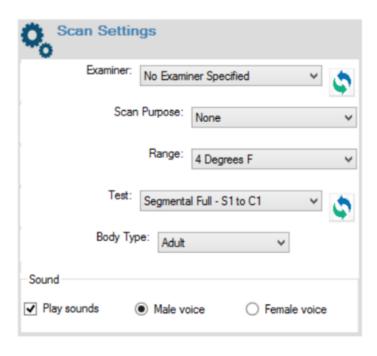
NOTE: When performing a Segmental Thermal Scan, the thermal scanner should be positioned so that the sensors are parallel to the patient's back without touching the patient's skin. If the thermal sensors are placed directly against the patient's skin it can affect the reliability of the readings by increasing the ambient temperature of the thermal scanner.

### 10.3. Segmental Thermal Scanning Procedure

Open the Segmental Scanning Form by clicking on the icon, shown on the left, on the **task pad** and then select an existing patient or create a new one from the patient window on the left side of the scan screen as shown below.



After you have selected the patient you can set the scan settings in the Scan Settings on the left side of the scan screen as shown below.



You can set the following: **Examiner, Scan Purpose, Range, Body Type and Test Protocol**. The **Scan Purpose** and **Range** are described in detail in the previous section (Rolling Thermal Scan).

The **Test Protocol** defines what sites you will scan during the test, in the same way it does in the Static EMG scan. There are two standard Segmental Thermal protocols:

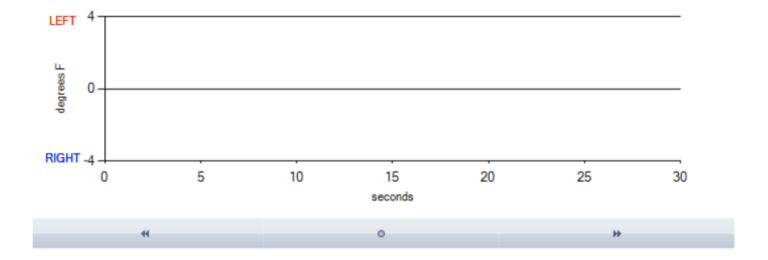
- Segmental Full includes all the spinal vertebrae from S1 through C1.
- **Pediatric Segmental** includes only those vertebrae required for pediatric patients. You can also define your own standard protocol tests on the portal. For instructions on how to do that see how to create your own Protocol Tests.

As with the Rolling Thermal Scan, it is critical that you set the correct Body Type in the scan settings and configure the wheels on your scanner correctly. See **neuroTHERMAL Wheel Settings** for details.

# 10.4. Differential Graph

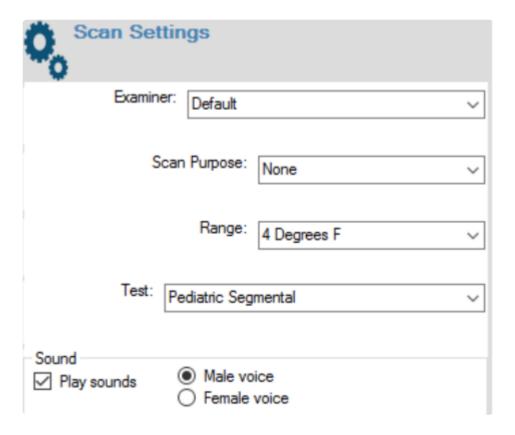
The thermal data that is returned during a Segmental Thermal Scan can be displayed on the **Differential Graph** at the top of the scan screen shown below.

The **Differential Graph** only shows the highest thermal signal during the scan.



## 10.5. Differential Graph Range Setting

By default, the Segmental Thermal Range is set to **4°F/-15.6°C**. The Range Setting maybe adjusted prior to or during a scan. Adjusting the Range DOES NOT affect the thermal data recorded during a scan. Adjusting the Range adjusts the graph in which the thermal data is displayed during a scan. This setting is useful for patients whose readings do not fall within the default Range of **4°F/-15.6°C**. The Range can be changed using the drop down in the **Scan Settings**.



# 10.6. Performing a Segmental Thermal Scan

Once you have selected an **Examiner**, **Scan Purpose**, **Range**, **Body Type and Test Protocol** configured the wheels on your scanner, you are ready to being scanning. Click the **Start Button** and myINSiGHT™ will prompt you to begin the scan and prompt for the first location.

Place the neuroTHERMAL at the location and observe the thermal signal in the graph. Once the thermal signal stabilizes, take a reading by pressing the trigger on the neuroTHERMAL.

myINSiGHT™ will display the reading on the bar graph and prompt for the next location. Move the neuroTHERMAL to the next level, wait for the thermal signal to stabilize and take a reading.

Repeat this process until the scan is complete and you are prompted to save the scan. Select **OK** to save the scan.

# 10.7. Segmental Thermal Scan Views

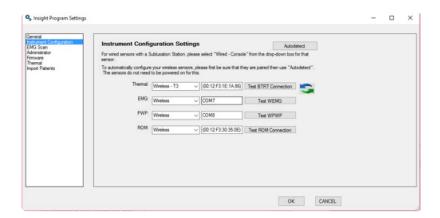
Segmental Thermal scan data can be displayed in several different views. The four Segmental Thermal Scan Views and their descriptions are listed below. The **DTG Comparison view** is the default view, and this is the view you will see when you click on the Views button after saving the scan.

Segmental NCM	Shows NCM (left-right temperature differentials) with a color-coded bar on the higher-temperature side. Bar color shows standard deviations from norms. Superimposed on drawing or photo.
DTG Comparison	Shows the differential between the temperatures at S1 and the temperature at each spinal level as a set of white bars (warmer than S1) or black bars (cooler than S1).
Table View	Shows all statistics for each spinal level, including the NCM (left/right differential) value, expected NCM norm and standard deviations, and absolute temperatures.

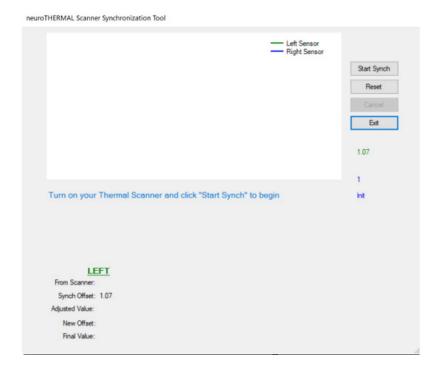
# 10.8. How to Synchronize your neuroTHERMAL

Occasionally, you might need to synchronize your neuroTHERMAL. If you consistently get one-sided scans this might be an indicator that the scanner needs to be synchronized. This is not something you should need to do often, as scanners are synchronized at the factory.

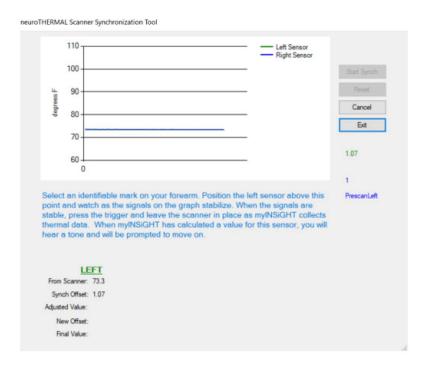
To Sync your neuroTHERMAL, open the mylNSiGHT™ Software Task Pad and go to Settings. Click Instrument Configuration in the left side bar as shown here.



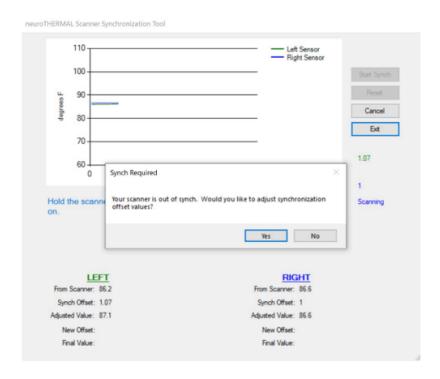
Click the Sync Icon () next to the Thermal Setting (your neuroTHERMAL will need to be turned on). The following screen will appear after clicking the Sync Icon:



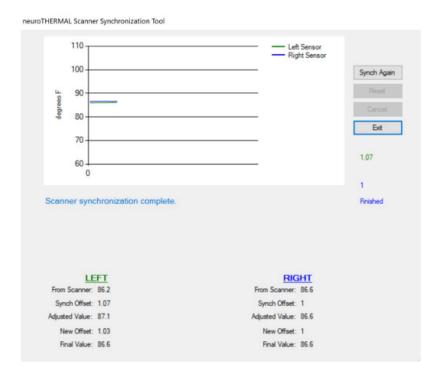
Click Start Sync the following screen appears:



Find a mark on your forearm such as a freckle and point the left sensor of your scanner at the mark. Wait for the graph to stabilize and click the trigger. KEEP THE SCANNER IN PLACE. The system will determine a sync value automatically, and then sound a tone. When you hear the tone you then repeat this process for the right sensor, on THE SAME spot on your forearm.



Click Yes and the following screen will appear which will show the new Sync Values:



Click Exit, the scanner is now synced and ready for use.

For T1 scanners, you will synch three times, once for left, once for the center and once for the right sensor.

NOTE: Successful Synchronization of the neuroTHERMAL is a process that relies heavily on technique. The sensors must be kept equidistant from the assistant's skin during the synch process and the triangles on the top of the neuroTHERMAL must line up with the same heat source when taking the thermal readings. The sensors should not be touching the skin. Due to these factors, it may take multiple attempts to successfully synchronize neuroTHERMAL. If you have any difficulty with the synchronization process, please contact CLA Technical Support.

# 10.9. Using and Caring for your neuroTHERMAL

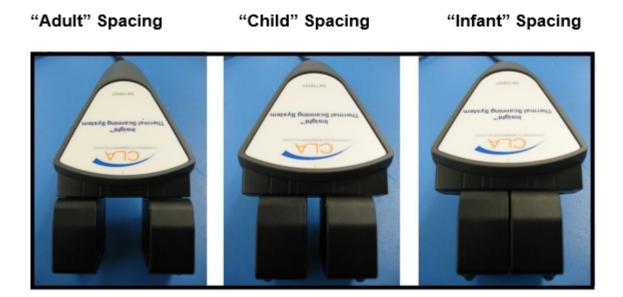
NOTE: Before your Wireless neuroTHERMAL can be used, you must first pair it to your computer.

#### How to turn on/off your Wireless neuroTHERMAL

To turn on your Wireless neuroTHERMAL, press the orange trigger. When the Wireless neuroTHERMAL is on but not connected to the myINSiGHT™ Software, the LEDs will sweep back and forth. When the software connects to the Wireless neuroTHERMAL, the LEDs will remain solid indicating that the unit and computer are communicating. To turn off your Wireless neuroTHERMAL, simply press and hold down the orange trigger for three to five seconds. Note that the unit can only be powered down when it is not connected to the MyINSiGHT™ Software.

#### How to adjust the neuroTHERMAL for different sized spine

The T2 and T3 neuroTHERMALs have two non-contact thermal sensors. One is pointed to the left of the spine and the other to the right of the spine. The sensor placement can be adjusted to one of three positions to match the size of the patient.



Each of these sensors is housed in the black adjustable housings at the front of the device. There are three locators on the housing to adjust the sensors into one of three standard positions.

Each sensor is held into place by an adjustment thumbscrew, which is located on the underside of the sensor. To adjust the sensor position, simply loosen the thumbscrew by turning it counterclockwise. Slide the housing into the desired position and retighten the thumbscrew. The "adult" position is achieved by placing both housings into the outermost position. The "infant" position is achieved by placing both housings into the innermost position. The "child" position is achieved by placing both housings in the center position. Each of these positions is shown in the picture above.

The **T1** scanner has three sensors: left, right and center. The **T1** sensor does not have thumbscrews. The wheels simply snap in place. Press against the wheels with moderate pressure to slide them along their axle and snap them into the correct position for the body type.

#### + Adult Mode+ Child Mode

The RIGHT hole is the one on the left side in the pictures below, the CENTER hole is right next to the RIGHT hole, the LEFT hole is by its self on the right side of this screen shot. In Adult Mode, the Left wheel in beside the Left hole and the Right Wheel is beside the Right hole.

In Child Mode, the Right wheel is slid to the center between the Right and Center holes. The Left Who Left hole.





#### How and why to use the optional plastic "eyebrows"

Two optional plastic inserts (the "eyebrows") for your thermal scanner have been included with your system. Some clients have found the eyebrows useful in taking thermal measurements within the hairline of the upper cervical spine. The eyebrows help to clear a path through a patient's hair. If you decide to use the eyebrows, the goal is to not touch the skin with them until you reach the hairline.

To install the eyebrows, first locate the holes above each of the sensors on the black housings. To insert an eyebrow, first squeeze it between your thumb and forefinger, and then push the eyebrow into the two holes above the sensor. If you do not wish to use the eyebrows, simply remove them.

Begin scanning with the eyebrows just above the skin. When you reach the hairline, gently press the

eyebrows down on the skin to displace the hair. You can also use the eyebrows as locators to scan left and right C1.

#### How to care for your neuroTHERMAL's Wheels

The neuroTHERMAL wheels can be wiped along the edge with an alcohol dampened cloth or swab.

#### How to charge your Wireless neuroTHERMAL

Your Wireless neuroTHERMAL includes a cable that is used to charge the unit's internal battery. To charge the unit, plug one end of the cable into the jack at the end of the scanner's handle and the other end into any USB port on your computer. A **status LED** indicates when the unit is charging by lighting yellow. When the unit is fully charged, the LED will be **green**. Note that the unit cannot function when the charging cable is connected, so it is important to always have the battery charged to a sufficient level to be used during scanning. The on-screen battery monitor will indicate the level of battery charge remaining.

## 11. Pulse Wave Profiler (PWP)

The myINSiGHT™ program uses the INSiGHT™ Pulse Wave Profiler™ to perform a heart rate variability (HRV) assessment. The patient places their left hand in the PWP and several signals are detected which allow for both the monitoring of the rhythmic variability of heart rate and autonomic arousal.

NOTE: The PWP Assessment is unique; it should be performed without an examiner in the exam room.

## 11.1. PWP Assessment: Patient Preparation

Place the **PWP Sensor** on a flat surface such as a table or desk.

The patient should be seated comfortably in such a manner that their left hand is below their heart and their forearm is properly supported. The patient will need a clear view of the computer monitor to allow them to keep an eye on how much time is left in the PWP protocol.

The \*PWP Senso\*r precisely monitors the blood flow entering and exiting the capillary beds on the tip of the middle finger. If the patient's hand is above heart level, the blood flow to the hand maybe reduced, this will reduce the quality of the heart rate signal.

The patient's forearm must rest on the table or desk surface so that it is supported and parallel with the floor. The patient should not have to "reach" to place his or her hand in the **PWP Sensor**. If the patient must "reach" to place their hand into the PWP Sensor, unstable skin contact with the electrodes may result. This will cause signal artifact and insufficient data collection.

Have the patient place their index finger, middle finger and ring finger in the **PWP Sensor**. Make sure that the tip of the patient's middle finger extends all the way to the back wall of the **PWP Sensor**. The wall or post contains a temperature sensor and direct contact is needed to accurately measure the patient's skin temperature.

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# 11.2. PWP Protocol: Background and Overview

The **PWP Assessment** consists of monitoring the patient's heart rate variability for five minutes. By monitoring the patient's heart rate variability (HRV), we can observe how the autonomic nervous system controls the heart muscle for this period.

The key to interpreting the **PWP Assessment** is ensuring that the patient's autonomic nervous system is "at rest" during the exam. This is analogous to performing a static EMG exam and ensuring that the para spinal muscles are at rest. When we think of the autonomic nervous system being at rest, we mean in a non-aroused state. The autonomic nervous system can become aroused through either physical or emotional activity. The goal of the five-minute heart rate variability assessment is to keep the autonomic nervous system in a non-aroused state. If the system is aroused during the five minutes, then the interpretation of the data changes, because we are not observing how the heart muscle is controlled during rest, but rather during arousal.

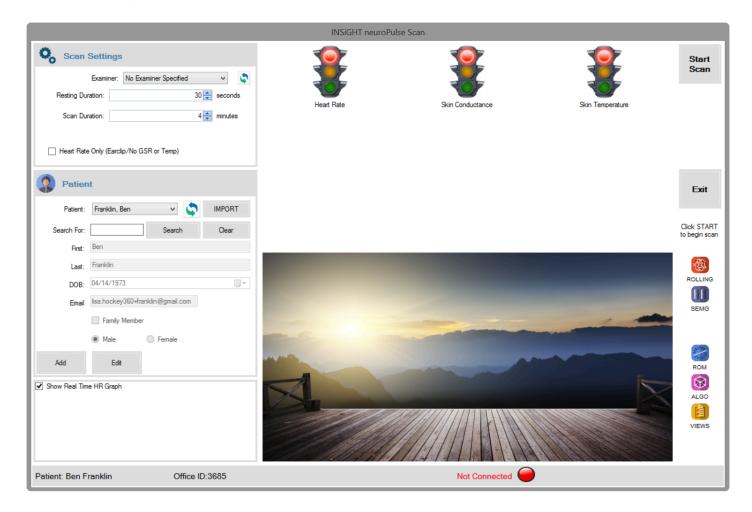
There are three events that need to take place to keep the autonomic nervous system at rest during the five-minute protocol:

- 1. <u>The examiner leaves the room:</u> Clearly if the patient is engaging with or observing the examiner, the autonomic nervous system will be activated. Once the examiner starts the protocol, he or she leaves the exam room for the duration of the exam.
- 2. <u>There is a pre-exam "acclimation" period:</u> To keep the patient at rest during the five-minute exam, there is a configurable acclimation or rest period prior to starting the exam. This is selected by the examiner and can range from 30 seconds to 5 minutes. Directly after this period, the actual 5 minute HRV protocol begins. The configuration and use of this acclimation period is discussed below.
- 3. <u>Simultaneous monitoring of autonomic arousal:</u> Autonomic arousal is often not detectable from observation. Therefore, the PWP sensor has a built-in "arousal indicator", which is displayed along with the HRV data. This is accomplished by monitoring the galvanic skin resistance of the index finger and ring finger, which is an independent indicator of sympathetic arousal. If during the exam, your patient has a physical activity (such as a sneeze), or an emotional activity (such as reflecting on a horrible traffic jam earlier in the day) this will cause a change in skin conductance which will be presented to you as an indication of autonomic arousal during the assessment.

## 11.3. Running a PWP Assessment

#### Running a PWP Assessment

To access the PWP Assessment, open the **PWP Scan Form** by selecting the PWP icon from the **task pad** and the following form will appear. Select a **Patient**.

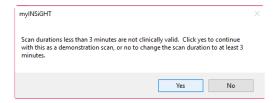


### 11.4. PWP Scan Settings

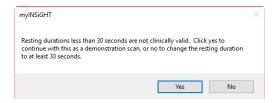
The **Resting Duration** defaults to 30 seconds and the Scan Duration defaults to 5 minutes. This can be changed in the scan settings box at the top of the scan screen.



To be consider a **Clinically Valid scan**, the **Scan Duration** cannot be set to less than 3 minutes. If the **Scan Duration** is set to less than 3 minutes, the following window will display.



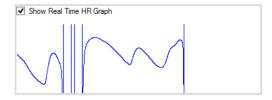
The **Resting Duration** set below 30 seconds is considered clinically invalid and the following error message will appear:



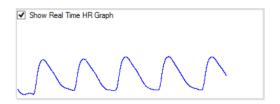
If you select **Yes** to either of these messages, you will be able to perform the **PWP Assessment**, however, it will not be considered **Clinically Valid**.

Once you hit Start Scan each of the signals is evaluated for signal integrity. As each signal is verified, the corresponding traffic signal will turn from red to green once all three signals are Green, click next and the scan can begin.

Prior to pressing the **Next** button, discuss the details of the protocol with the patient. Remind them to relax, clear their mind and not to wiggle their left fingers. It is **VERY IMPORTANT** that there be no finger motion whatsoever. Using the real-time graph on the bottom left of the page, show the patient what happens when they move their fingers even slightly:

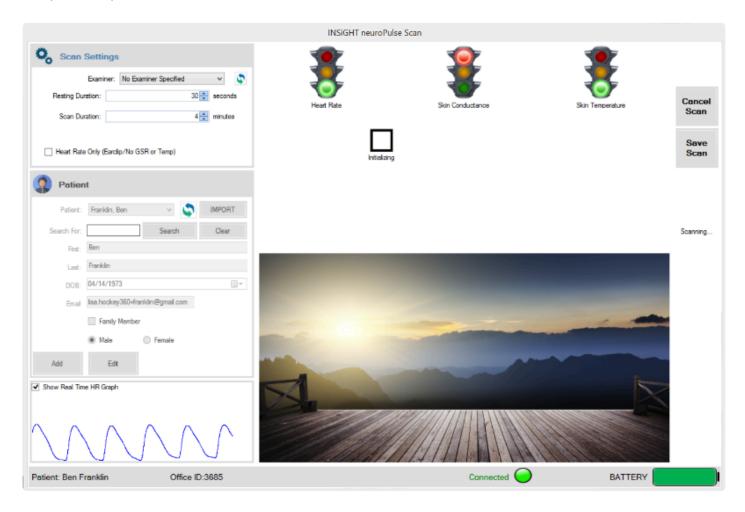


Show them what a valid scan looks like when there is no finger motion:



Be sure the graph remains steady like this throughout the scan. You can (and should) leave the graph on during the entire scan so that the patient can see that they are sitting quietly and not moving their fingers.

To begin the rest period, press the Next button. At this point, the patient should be left in the room to complete the protocol.



The first screen the patient will see is the Countdown for the Rest Period, shown below.

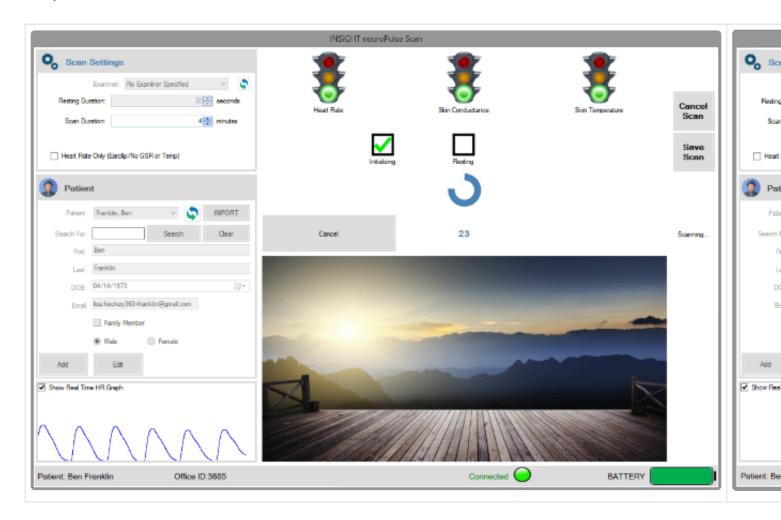
The Seconds Remaining Counter starts at the Resting Duration and counts down. This defaults to 60.

Once the acclimation period has completed, the protocol will automatically continue into data collection stage. The timer counts down from the time specified in the Scan Duration.

After the data collection stage has completed, the data will be automatically saved by the mylNSiGHT™ program.

#### At this point you can:

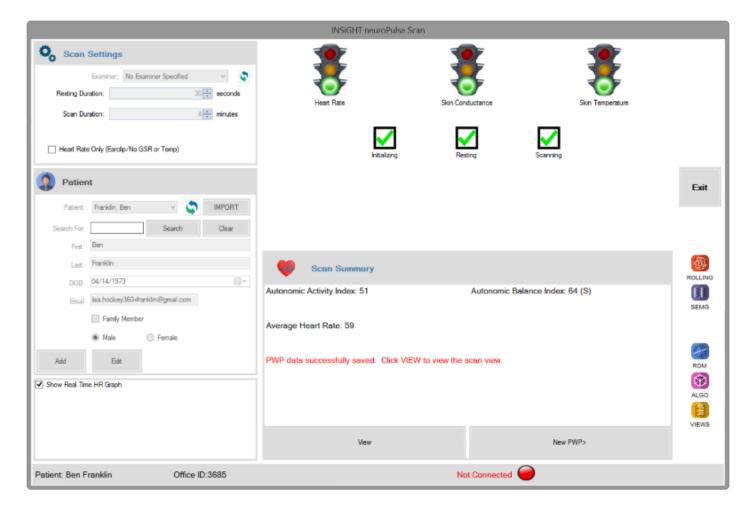
View the scan by clicking the View Button which will take you to the Office Portal to view the scan online and perform a new PWP Assessment.



## 11.5. Patient Motion during the Scan

If the patient moves a finger during the scan, the real-time graph will reflect this and the patient can be still again and the graph will return to normal. It is acceptable for this to happen a few times during the scan (but better if the patient remains still for the entire scan). The software will filter this data out of the scan, interpreting it as noise due to patient motion rather than the HRV signal.

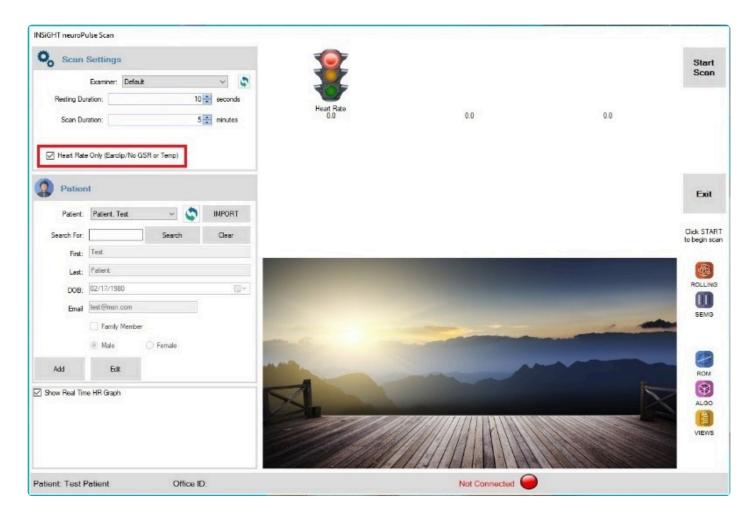
If the patient moves too many times, however, too much data will be lost and the scan will not be valid. At the end of a scan, if the myINSiGHT detects that too much data has been lost due to patient motion, the system will include a warning on the scan summary that you should re-scan this patient:



### 11.6. Alternative Heart Rate Data Collection

The Wireless Pulse Wave Profiler™ also allows for heart rate data collection from either an ear clip or finger sleeve sensor. To utilize either of these sensors, plug them into the jack on the side of the PWP marked **Heart Rate**. When using these sensors, the **Galvanic Skin Resistance** and T\*emperature measurements\* will not be recorded, and the patient's hand will not be in the PWP device. When recording data with the ear clip or finger sleeve sensors, the same guidelines for heart rate data collection should be observed (left hand below the heart, no finger movement). During **ear clip use**, the patient should remain still in a relaxed state. The ear clip should be applied to the fleshy part of the ear lobe. The finger sleeve is slid onto either the index, middle or ring finger so that the small hole on the sensor aligns with the fleshy part of the fingertip.

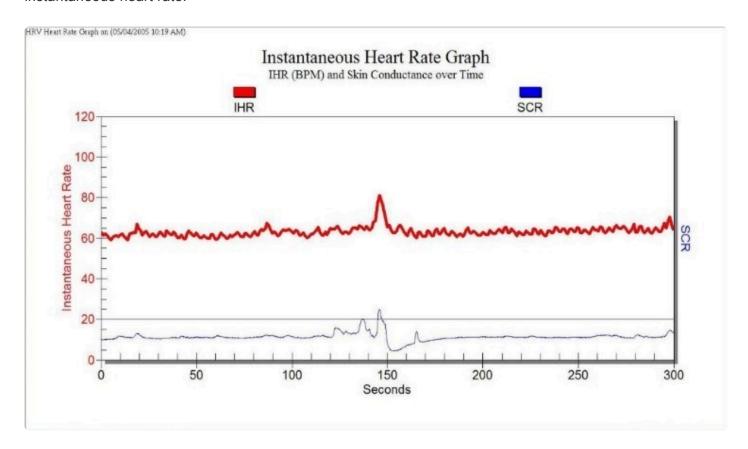
Before starting data collection in this mode, it is necessary to indicate that you will only be collecting heart rate data by clicking on the **Heart Rate Only** box in the Scan Settings section of the data collection screen as shown below. Remember to uncheck this setting when you switch back to standard heart rate data collection mode.



## 11.7. Signal Definitions

#### Instantaneous Heart Rate Graph

The red signal is the instantaneous heart rate over time. In the graph below, you can observe that the heart rate of this patient is approximately 60 beats per minute, but there is a rhythmic variability to the instantaneous heart rate.



The blue signal is the Galvanic Skin Resistance. In the graph below, you can observe that the patient's autonomic nervous system was stable, except for an arousal that occurred approximately 150 seconds into the protocol.

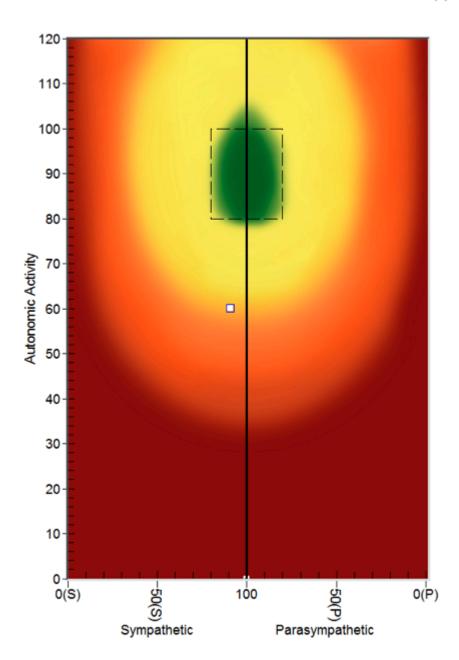
#### **Autonomic Activity Diagram**

This view quantifies the instantaneous heart rate graph. The graph presents two pieces of information:

- · Overall autonomic activity level.
- Degree of balance between the sympathetic and parasympathetic branches.
   The graph consists of a target zone for overall activity and balance, and places a white square as to the results of the patient's five-minute assessment.

This graphic directly displays autonomic activity and autonomic balance. The autonomic activity is presented on the Vertical Axis (Y) and the balance on the Horizontal Axis (X). An example of this scan view is directly below.

Autonomic Activity Index: 60.02 Autonomic Balance Index: 90.91(S)



#### In addition, there are two statistics provided:

- Autonomic Activity Index A Score of 100 indicates an idealized amount of autonomic activity or tone. Scores below 100 indicate less tone and scores above 100 indicate greater tone
- Autonomic Balance Indicator (S) or a (P) to indicate the dominant branch. S corresponds to sympathetic and P to parasympathetic.
- **Table View** Included are statistics regarding the average heart rate, as well as quantifications of the variability of that heart rate in both the time and frequency domains.

Statistic	Value	
Mean IBI (ms)	953.17	
Mean Beats Per Minute	63.00	
Std Deviation of IBI (ms)	57.87	
RMS Std Deviation IBI (ms)	1361.85	
Total Power Spectrum	1358.73	
/ery Low Frequency	154.08	
ow Frequency (LF)	390.93	
figh Frequency (HF)	786.06	
Normalized LF (%)	33.21	
Vormalized HF (%)	66.79	
.ow/High Ratio	0.50	
Sympathetic Activity	in Normal Range	
Parasympathetic Activity	in Normal Range	

## 11.8. PWP Scan Views

HR (Heart Rate) Graph	Shows in red the Instantaneous Heart Rate data collected during the PWP scan, as well as the Skin Conductance Response (SCR) for the same period.
Frequency Domain Analysis	Plots the parasympathetic and sympathetic results of the PWP scan, shows the balance between the results, and compares these two expected (normal) values. An Autonomic Activity Index and Autonomic Response Index quantify these results on a percentage basis (100% is best).
Scan Statistics (Table View)	Shows all the statistics calculated for the PWP scan, including both Time Domain and Frequency Domain statistics.

# 12. Wireless Range of Motion (ROM) Scanning Protocol

This section will go over the ROM and its usage, as well as how to scan with it.

## 12.1. Connecting the 3DDI

NOTE: The base unit portion of the Wireless Inclinometer should not be turned on until it is connected to the USB cable provided and to the satellite unit. The Base and Satellite units must remain cabled together during the entire ROM assessment procedure. If the units are accidentally separated at any time during the ROM assessment, the entire ROM assessment must be repeated.



The 3DDI device operates in one of four states: **Off, On, Connected & Transmitting**. The 3DDI device uses Four Blue LED's to indicate the current state of the device. Each state is listed below:

Blue LED Status	Device Status
All LED's are off	Device is off.
One Blue LED is blinking	Device is On – Ready to Scan.
All LED's are solid blue	Connected to computer.
All LED's are blinking	Transmitting data to PC.

When the device is in the Off State, push the button on the bottom of the Base Unit to turn it On. The device goes from **State 2 to State 3 and State 4** under software control during scans. Pushing the **Power Button** during State 3 or State 4 will have no effect on the device. While in the On State, you can return to the Off State by holding down the bottom button for three seconds.

## 12.2. Charging & Recharging the 3DDI Battery

The Base Unit of the 3DDI device contains a rechargeable battery. The battery is charged by connecting the Base Unit to a USB port. When charging the battery, the Base Unit must be turned off. The same USB cable that connects the Base Unit and the Satellite Unit is used to charge the Base Unit. The charge level of the battery is monitored when collecting data during a scan. When the battery level drops **below 25%** you must recharge it. To charge the battery in the Base Unit, follow the steps listed below:

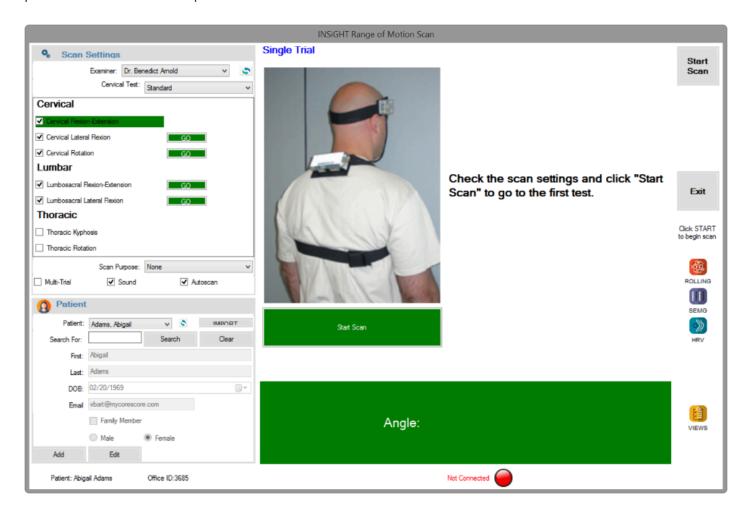
- 1. Turn the Base Unit off by holding down the Power Button on the bottom of the unit for three seconds.
- 2. Unplug the cable from the Satellite Unit.
- 3. Plug the end of the USB cable that was attached to the Satellite Unit into any available USB port on your computer.
- 4. A Charging LED will come on indicating that the base unit battery is charging. If the battery has been completely run down, it could take up to four hours to fully charge.
- 5. When the Base Unit is completely charged, the Charge Completed LED will be illuminated.
- 6. Disconnect the Base Unit USB cable from the computer. Your 3DDI device is fully charged and ready to use.



## 12.3. Patient Preparation

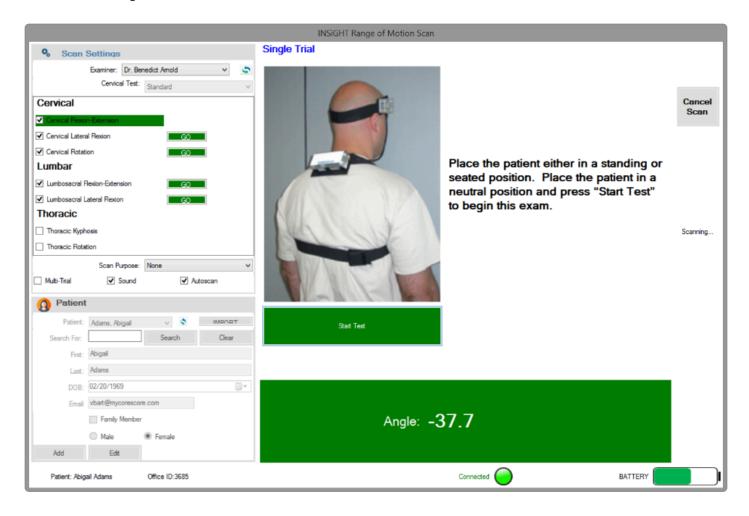
NOTE: The Base Unit and Satellite Unit must remain cabled together once the ROM assessment is in process. If the units are accidentally separated at any time during the ROM assessment, the entire ROM assessment must be repeated.

Shown here is an example of how the Wireless ROM device should be attached to the patient for the Cervical Flexion Extension Scan. Each test displays a photo showing unit placement along with the prescribed movements required.



# 12.4. Conducting A WROM (Wireless Range of Motion) Assessment (Scan)

To conduct an assessment, open the **ROM Scan Form** by selecting the spineROM Scan Icon from the **task pad**. Select a patient from the drop down list. Please be sure that your Wireless Inclinometer is turned **On** before continuing. Turn the base unit on and select Start Scan.

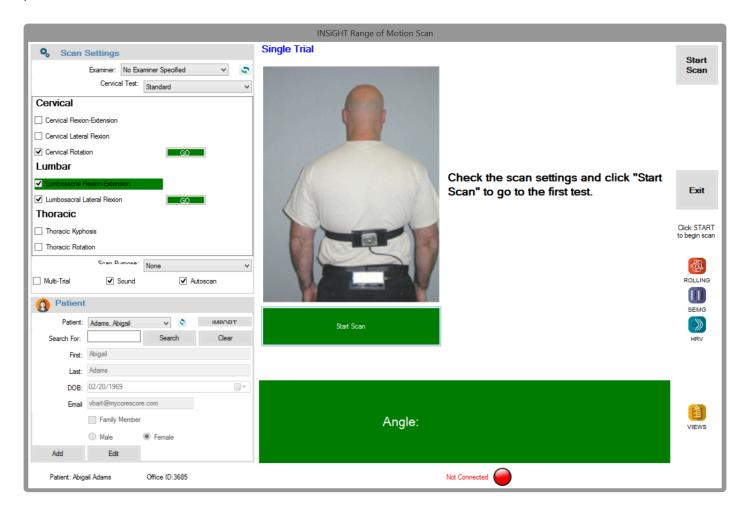


A blue LED on the 3DDI will be blinking. If the ROM wireless device is not **On**, turn it **On** by pressing the black **Power Button** on the side of the unit. The unit should begin blinking. To start the scan, press the **Start Scan Button** (you can use the Green Start or the Gray Start).

Once the device is initialized, its LED will glow a solid **blue**. You should then see the screen shown here.

## 12.5. Wireless Range of Motion Scan Settings

Scan Settings are in the top left corner of the screen. You can select the **Examiner, Type of Scan and check boxes for a Single/Multi-trial, Sound and Autoscan**. You can also specify an alternate test procedure for the Cervical Rotation test as shown here.



Besides the standard, standing test there are two other options: **Alternate Standing and Alternate Lying** (prone).

In the bottom right of the screen is the Battery Monitor. The battery is monitored only when collecting data, so nothing will appear here until the test has begun. Once the test has started the remaining battery life will appear here.

In the the **Scan Settings** are the **Test Settings**. The checkbox to the left of each test shows which tests are **Active**, meaning which ones will be a part of this scan. Each active test has a Go Button next to it. Clicking on this allows you to navigate directly to that test, instead of following the standard order. This is also how you re-execute a test if you were unsatisfied with the results. The checkbox to the right of the test indicates whether you have already completed that test. Finally, the green highlight indicates the current test. Since the scan has not yet started, the highlight indicates the first test. You cannot deactivate the "current" test. So, if you do not want to perform this test, you must first hit the **Go** button to go to another test, then click on

the checkbox to deactivate the first test.

## 12.6. Using Autoscan

In almost all cases, you will leave **Autoscan On**. During a ROM Scan, the patient performs a sequence of motions. The measurement of interest is the extent or "peak" of that motion. For example, you might be conducting a flexion-extension test where you are interested in the patient's maximum flexion and maximum extension capabilities.

When Autoscan is On, the program automatically detects these peaks and displays them on screen for you. When you end the test, the program records these values. With **Autoscan Off**, you must manually indicate to the program when you believe the patient has reached these maximum values.

## 12.7. Single-Trial ROM Scans

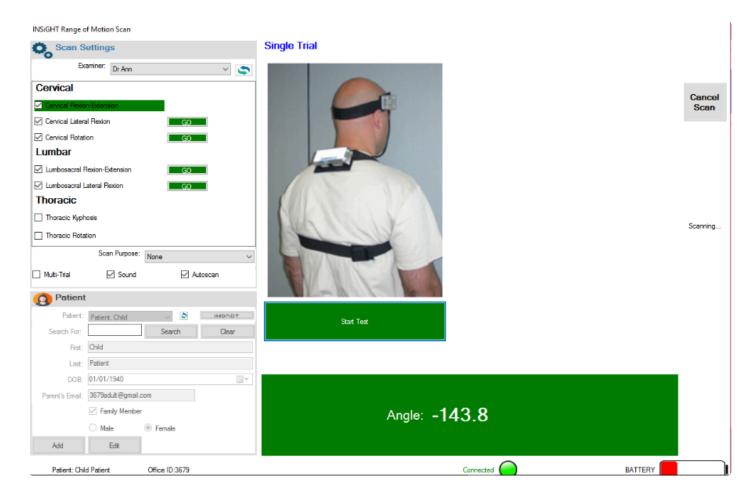
To perform a Single Trial ROM test, first be sure that the scan setting for **Multi-Trial ROM box** is not checked. Also, be sure that the Autoscan Box is checked, unless you will be performing a manual scan.

The instructions which follow are for an automatic scan:

Before beginning the scan, select the tests you would like to perform by clicking on the Activation Checkbox to the left of each test. This is a toggle box so checking once activates, checking again deactivates. After selecting the tests, position the Wireless ROM device and the patient for the first test. The screen will display a photo and instructions showing how to perform each test.

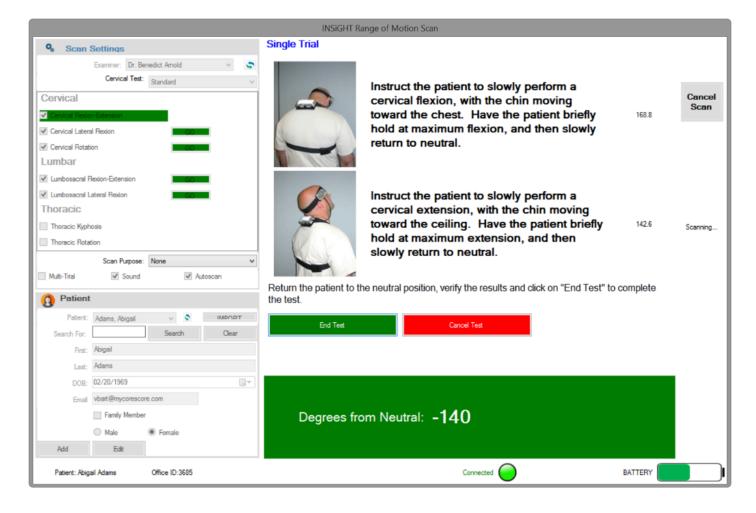
Click on the **Start Scan Button**, or press the spacebar when you are ready to begin the scan. The LEDs on the device will begin blinking in a round-robin fashion, indicating that data is being collected.

Notice that the Battery Indicator now shows the current battery level. Should this level drop **below 25%**, you should recharge your battery. Also, notice the real-time angle measurement appears in the middle of the screen, as well as a photo and instructions for taking the neutral measurement for this test.



When the patient is in position for the neutral measurement, click on the **Start Test Button**, or press the spacebar. The system records the neutral reading and displays the screen shown here.

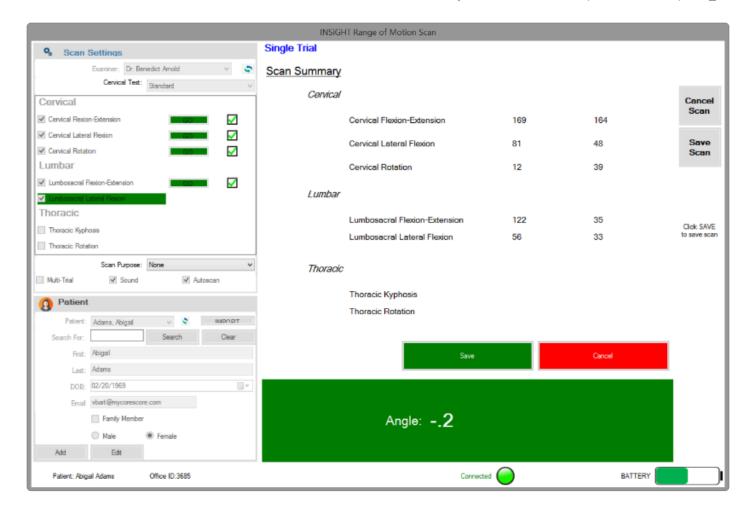
For most tests, the patient will be performing two motions. In this case, there is a flexion and an extension. The screen shows photos for each of these motions. It also shows the current angle from the device. This angle is expressed as an absolute difference from the neutral angle for the test.



As the patient executes the motions, myINSiGHT™ will automatically record the peak flexion and extension or other movements based on the test. After the patient has completed the test, click **End Test** or press the spacebar to move on to the next test.

At any time, you can click the **Cancel Button** to cancel the test or the **Cancel Menu** Item to cancel the entire scan. When you have completed all the activated tests for the scan, myINSiGHT™ will display a summary screen like the one shown here.

This screen shows a summary of results for all the tests you completed for this scan. Click Save Scan to save the scan for the patient, or Cancel to discard the results. Once the scan is complete, the wireless ROM device will return to the solid blue LED state.



### 12.8. Multi-Trial ROM Scans

Multi-Trial ROM works similarly to Single-Trial, but you must repeat each test at least three times. The software will show which trial that you are on. At the end of the third trial for each test, it will calculate the variance in the results for each test. If the results vary too much, mylNSiGHT™ will prompt you for a fourth trial. The process is repeated, and you might be prompted for a fifth and sixth trial. If, after six trials the results still vary by too much, the result is considered Invalid and is recorded that way. You can choose to accept the results or to cancel and restart the test at the first trial.

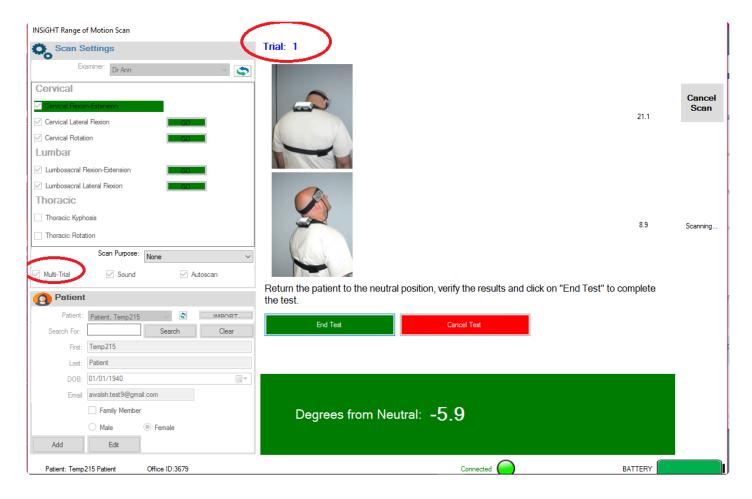
For a motion in a ROM test to be considered Valid, the following must be true:

- 1. Three consecutive trials of this motion must produce results that are within **5 degrees or 10%** of each other (10% if the average is >50 degrees).
- 2. Results of the three consecutive trials are averaged to produce the final result for a test.
- 3. There can be no more than six trials of a motion if there is not a valid result after six trials, the motion is considered invalid for use in evaluating impairment.

An additional rule is that Multi-Trial ROM testing is by spinal region. You must complete all tests within a region (cervical, thoracic, lumbo-sacral). This contrasts with the Single-Trial ROM, in which you can choose to do any or all tests from any or all regions. You will notice that the test settings in multi-trial ROM do not allow you to select individual tests, only spinal regions.

To start a Multi-Trial Scan, first click on **Multi-Trial** (Note that this scan setting is not available during a scan so you must do this before you start the scan). Then select which of the three spinal regions you would like to be part of the scan. You should see a screen that looks like this:

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Notice that the trial number (1) appears above the picture.

First take the neutral reading for the first test, as instructed. Then have the patient execute the motions while the system records the maximums. After ending the test, the system will prompt for the neutral reading for the same test, and indicate that this is the second trial. Then again, the system will prompt you for a third time.

Using the criteria discussed above, the software may prompt for a fourth, fifth and sixth test.

When you have completed all the tests, the software will again show the Scan Summary. The results in the Scan Summary are the averaged results of the last three values recorded for each test. If the variance between these three results is more than 5 degrees or 10% as explained above, the result is considered Invalid, and will appear in red in the Scan Summary.

**ROM Views** 

Whether you perform a Multi-Trial or Single-Trial ROM scan, the default views (ROM Table and ROM Graph) show the same results for all tests in the scan. In a Multi-Trial Scan, the averaged results of the trials for each test are displayed, if a Single-Trial, there is one result for each test.

## 13. Algometer Scanning Protocol\*

This section will go over the spineSENSE.

## 13.1. Connecting the spineSENSE

The spineSENSE can be connected in one of two ways:

- 1. If you are using an all-wireless configuration without an INSiGHT Millennium console, you can connect the spineSENSE to your neuroPULSE.
- 2. If you are using an INSiGHT Millennium console, you can connect the spineSENSE directly to it.



## 13.2. Wireless Configuration

First, setup your neuroPULSE device as described on page 43. After you have verified that your neuroPULSE is setup and working properly, from the **task pad** select Settings then "Instrument Configuration". Be sure that Wireless is selected for the spineSENSE. Save your changes and exit and restart myINSiGHT.

To use the spineSENSE in a wireless configuration, you insert the cable into the neuroPULSE device as indicated here.

You can now begin scanning with your spineSENSE.



## 13.3. Wired Configuration

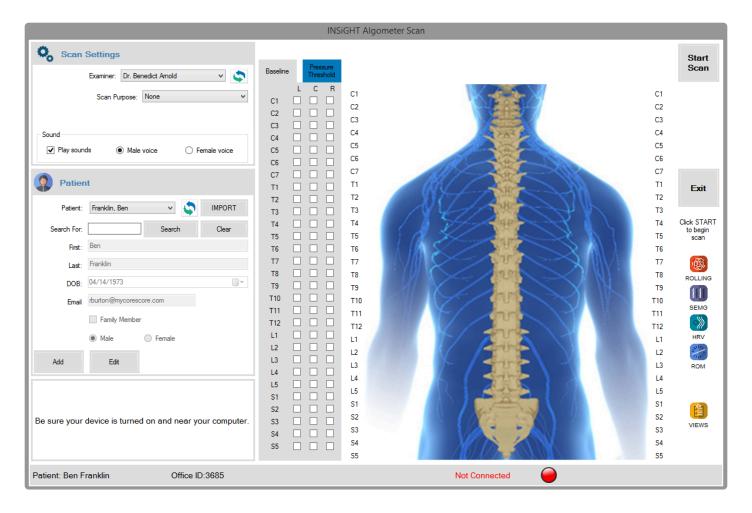
To use the spineSENSE with your Insight Millennium substation, on the Settings then **Instrument Configuration** panel you must select Wired. Save your changes and exit and restart myINSiGHT.

The spineSENSE cable plugs into the console as shown.



# 13.4. Conducting an Algometer Scan

After you have setup your spineSENSE sensor, you can conduct an Algometer scan. Select **Algometer** to conduct an Algometer Scan. You should see a window that looks like this:



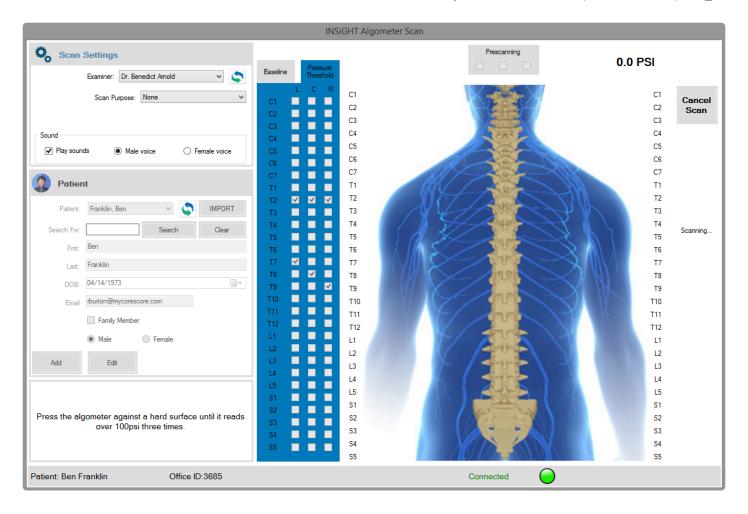
NOTE: If you are scanning in a Wireless configuration, be sure to turn on your **Wireless PWP** before starting the scan.

Before starting the scan, you must identify your Baseline sites and the sites which you will be taking actual readings at. To view statistics versus baseline, you must take readings at a baseline site that is in the same spinal region (C,T,L,S) and the same location (Left, Center, Right) as the sites that you will be scanning.

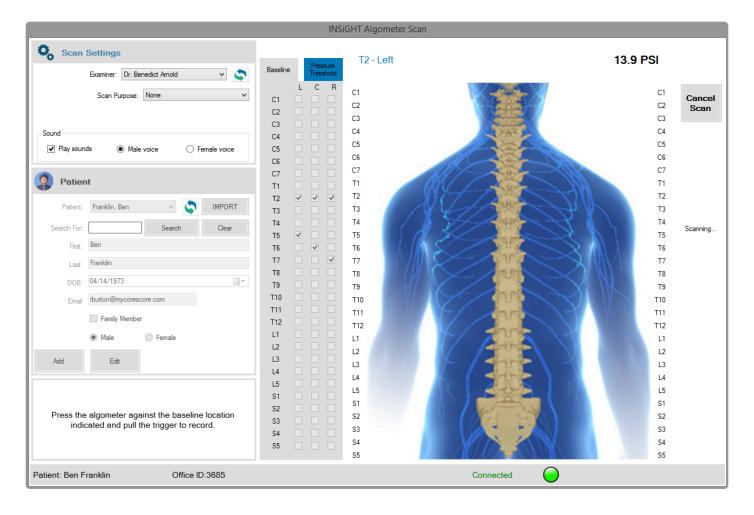
So, for example, if you plan on scanning the patient at **T7** right, you must take a baseline reading at one of the Thoracic vertebra on the right side.

Click on each of the **Baseline locations** you want to scan for comparison, then click on the **Pressure**Threshold tab and identify the sites you want to scan. When you have identified all the sites for the scan, click **Start Scan** at the top right of the scan window.

You will see the following (with your sites checked off):



You are now in pre-scanning mode. To calibrate your spineSENSE sensor, you must push it against a hard surface like a desk or table until the reading at the top of the page goes over 100 PSI. After you've done that, remove the sensor and repeat twice more. The scan will then progress to the **Baseline phase**:



The system will prompt you for each of the sites you identified, both with voice prompts (unless you have turned sound off) and with a visual prompt at the top of the window.

When the scan is complete, you will be prompted to save or cancel. After saving to the mylNSiGHT cloud, you can view the scan you just completed by clicking on the Views button at the bottom left, just as you can on all the mylNSiGHT scan windows.

# 13.5. Algometer Views

For an Algometer Scan, you will see two views, the Bar Graph View and the Algometer Scan Table View:

Patient Name: **Email Address:** Report Date:

Franklin, Ben rburton@mycorescore.com Sunday, December 10, 2017 Office Name: Address:

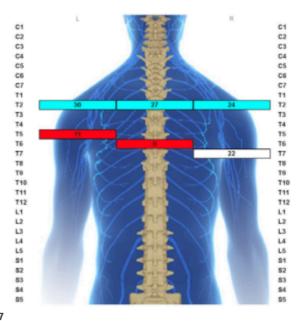
Dr. Lisa Ryan

123 Main Street, Milford, DE, 19963,

United States

Algometer on 12/10/2017





Algometer Table on 12/10/2017

Site	%Ref	Ref	Left	%Ref	Ref	Center	%Ref	Ref	Right	Site
C1	10,00	400	10,00	304	*.*	*,*	10,00	10,00	10.00	C1
C2	1,1	11,11	0,0	0,0	0,0	0,0	0,0	1,1	4,4	C2
C3	2.5	635	5/5	202	10.00	100	2.5	1,0	100	C3
C4	4,4	*,*	*,*	*,*	-,-	4,4	*,*	4,4	4,4	C4
C5	2.5	4.0	4,4			**	*.*	4,4	4.4	C5
C6	0,0	4,4	0,0	4,0	4.0	1,1	0,0	4,4	10,00	C6
C7	101	500	525	202	100	0.00	355	10,00	400	C7
T1		30.26	10,0	1,1	26.62	4.0	1,0	23.63		T1
T2	2.5	30.26	2,2	200	26.62	2.0	2.0	23.63	5.5	T2
T3	4,4	30.26	4,4	4,4	26.62	1,0	4,4	23.63	4,4	T3
T4	100	30.26	100	305	26.62	0.00	300	23.63	100	T4:
T6	0.37	30.26	11.3	1,2	26.62	1,0	1,0	23.63	4,4	T6
T6	2.5	30.26	5.5	0.34	26.62	8.95		23.63	2.2	T6
T7	4,4	30.26	4,4	1,1	26.62	1,0	0.92	23.63	21.73	T7
T8	55	30.26	100	200	26.62	200	100	23.63	0.00	T8
T9	4,7	30.26	0,0	1,2	26.62	1,1	4,4	23.63	4,4	T9
T10	5.5	30.26	5/5	0.0	26.62	5.5	0.0	23.63	0.0	T10
T11	-,-	30.26	-,-	-,-	26.62	*,*	*,*	23.63	-,-	T11
T12	25	30.26	4,4	-0.0	26.62	55	0.00	23.63	0.0	T12
L1	100	100	4,4	4,4	-,-	4,0	100	4,4	4,4	L1
L2	200	400	5/5	202	100	200	0.00	2,2	0.00	L2
L3	**	-,-	4,4	2,0	-,-	*.*	1,0	-,-	4,4	L3
L4	2.5	0.00	200	-0.0	2.0	5.0	0.00	2.5	2.0	1.4
L5	4,4	4,4	-,-	4,4	4,4	4,4	4,4	4,4	4,4	L5
81	200	200	4,4	200	5.0	200	100	5,5	2.2	S1
82	4,0	4,4	4,4	4,0	4,0	4,0	4,4	4,4	4,4	82
83	2.0	2.2	20	0.0	2.0	2.0	0.0	2.5	0.0	S3
S4	4,0	*,*	4,4	*,*	4,4	4,0	*,*	4,4	4,4	S4
95						4.4			4.4	S5

# 14. Viewing Scan Results and Reports

## 14.1. How to use portal subluxation.com

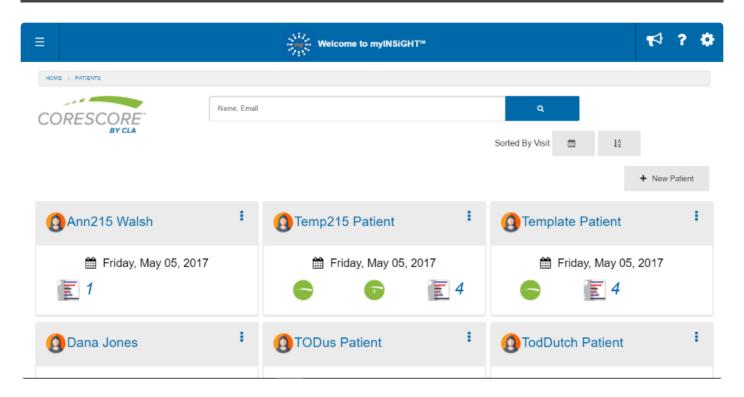
The INSiGHT Technology and myINSiGHT Software connect to and store patient Scan Records on myINSiGHT's secure web servers. Since scan data is not stored locally, to view scan records and reports you will need to access CLA's myINSiGHT web portal which houses the patient's CORESCORE.

To access Patient Records and Scan Views \*from the software task pad click icon. This icon is a quick access link to the \*Scan Views and Reports of the LAST patient you scanned.

You can also open your browser and go to http://www.portal.subluxation.com and log in using the same Username and Password used to access your software. Once logged in, you will land on the myINSiGHT Home Screen. On the Home Screen, click on **Patient Records** to go to the **Patients Page** shown below, which will provide access to your patients, their scans, and CORESCORE Reports. This is no different than linking from the task pad, which launches your browser and navigates to a specific page.

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# 14.2. Patients Page



From this page you have access to all of your Patients. For easy navigation you can:

- Sort by Date Sort your patient list by Visit Date by clicking the Calendar Icon in the top Right of the screen.
- **Sort Alphabetically** Sort your patient list alphabetically by clicking the Sort Alphabetically Icon in the top right of the screen.
- Add a New Patient You can create a new patient by clicking the Plus Sign Icon at the top right of the screen.
- **Search** Search for a patient using the search bar, shown below, by typing the patients name or email address and clicking the Search Button to complete the search.



#### 14.3. Patient Cards

Patient Card Display – Each patient visit is displayed as an individual **Patient Card** which provides basic information about the patient's visit. The cards show information for the most recent visit for that patient.

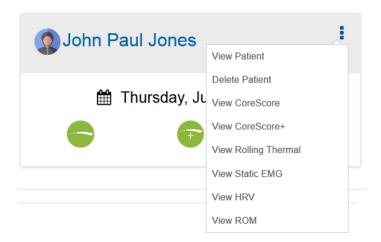


At the top is the patient's name. The displayed date is the date of that patient's last visit.

Icon	Description
	CORESCORE™ Icon– Indicating the patient has a CORESCORE™ Report
+	The CORESCORE™+ Icon- Indicating the patient has a CORESCORE™+ (Plus) Report
<b>4</b>	Scans Icon – Indicating the patient has scans for that visit. The number displayed next to the Scans Icon is the number of scans performed on that visit for that patient.

NOTE: Only scans or reports that have been completed and uploaded will display Icons, for example if you do not perform four valid scans on a patient the CORESCORE™+ Icon will not appear on their card.

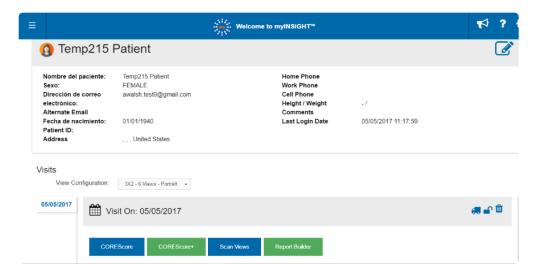
By clicking the **Ellipses Icon** on the top of the card a menu will display as shown here.



This menu provides a quick link to view the default scan view or report. You can also view or delete a patient from here. If you delete a patient, you will lose all their scan data. There is no way to recover this data so be completely sure before you delete it.

## 14.4. Detailed Patient Records

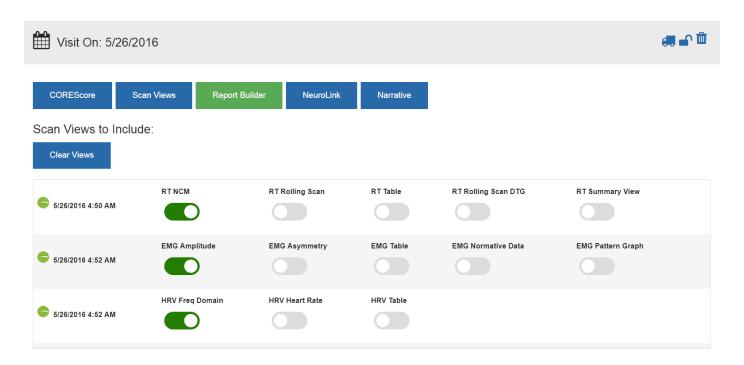
To access a **Patient's details** and to view all Visits, Scans, and Reports for that patient, go to their **Patient Page**. You will need to open the **Patient's Page** by clicking on the patient's name. You will be redirected to the following page:



By clicking the Edit Icon you can edit the patient's contact and personal information. See Editing Patients.

## **14.5. Visits**

The main section of the **patient page** shows scan and visit data and allows you to create reports from this data.



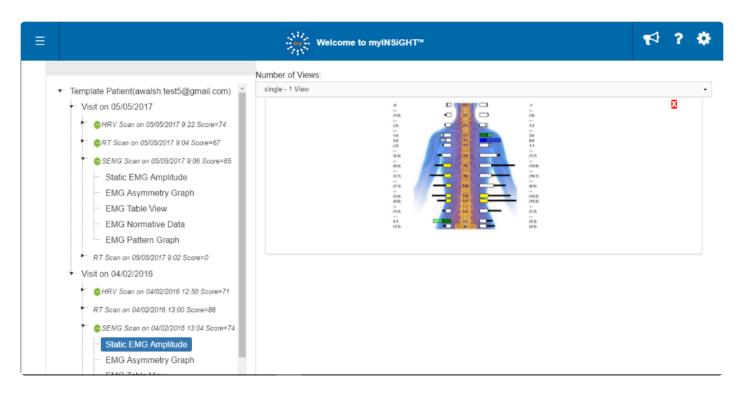
The tabs on the left show the visits for this patient. Click on a tab to select a different visit. From this page you can:

Display and Print a CORESCORE™	Clicking the CORESCORE™ Button displays a print preview of the CORESCORE™ report which you can print or export.
Display and Print a CORESCORE™+	Clicking the CORESCORE™+ Button displays a print preview of the CORESCORE™+ report which you can print or export.
Display and Print a Scan View Report	This will create a print preview of a grid of all the Scan Views you have selected with the switches below. The grid will be displayed in the grid configuration you select from the list. 1×2 grids (2 views) and 2×5 grids (travel cards) are printed in portrait orientation, the rest are printed in landscape orientation.
neuroLINK	Click here to access the neuroLINKTM tool for Thermal and Static EMG scans.
Display and Print a Narrative Report	Clicking Narrative displays a narrative report which shows results from Rolling Thermal, Static EMG or ROM scans in a narrative (text) format.
Display and Print a CORESCORE™ or CORESCORE™+ Progress Report	Clicking these buttons creates a comparative report over multiple visits. These buttons will not appear if the patient does not have more than one visit with a score.

Move scans and visits	Clicking on the Moving Truck Icon takes you to the visit editing tool where you can move scans from visit to visit or patient to patient or delete individual scans.					
Delete an Entire Visit	Deletes all the scans in the visit. Be certain, once they are gone, you cannot recover them.					
Lock a Visit	Locking the visit makes it unavailable for the patient to see on the patient portal.					
Compare Scans from Different Visits	Clicking either Compare Scans or Report Builder takes you to the freeform Report Builder Tools which allows you to create a grid of whatever scans you like, across visits, including comparative views. This tool is described below.					

# 14.6. Comparing Scans

Clicking on **Compare Scans** or **Report Builder** takes you to the freeform **Report Builder Tools** where you can create comparative views or mix and match **Scan Views** from different visits. In this example, we will create an EMG Comparison view.



Click and drag an EMG Amplitude view to the graph. Click and a 2nd scan and drop it on top of the 1st view an EMG Comparison view will appear

You can include a comparison view as part of any grid configuration.

Thermal comparative views are created with the **Continuous NCM** view. You can include up to three **Rolling Scans** in a **Rolling Scan Comparison View**.

You can also create **ROM Graph** comparison views by dragging and dropping as many as three **ROM Graph Scan Views** on top of each other.

# 14.7. Comparing CORESCORES

If a patient has had more than one visit with a CORESCORE™, you can print a Comparative CORESCORE™ report. This report shows the patient's latest CORESCORE™, along with past CORESCORE™s in a graph, along with a CORESCORE™ goal, which you can establish. If you have not yet established a goal, the report shows the system-wide default. This value is the patient's current score +12%.



#### **Progress Report**

#### Patient Information

Patient Name: John Paul Jones

Gender: MALE Birth Date: 9/24/1947

Email Address: boss3@mycorescore.com

Report Date: 2/15/2017

#### Office Information

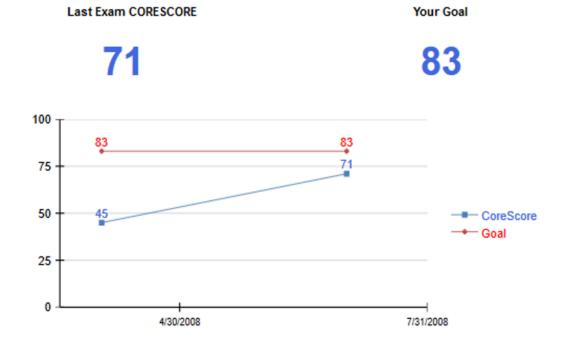
Office Name: Dr. Test5 WEMG

Address: 000

Milford, DE

Phone: 555555555

#### **Assessment Summary**

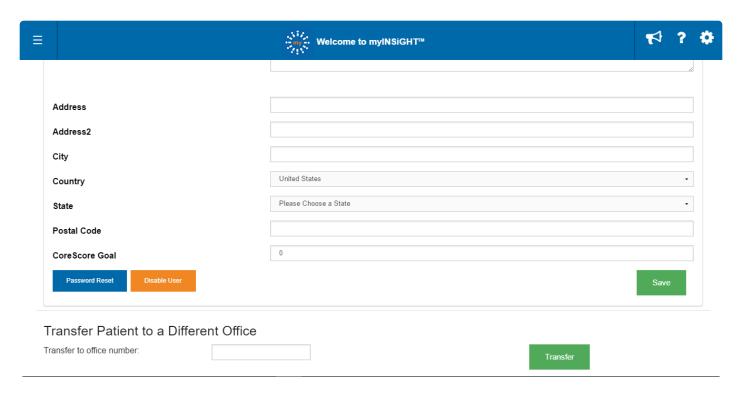


# 14.8. Editing Patient Information

Clicking on the Edit Patient icon from the Patient Page takes you to a page where you can edit the detailed information about that patient. On this page, the following information is required:

- Patient Name (First and Last)
- Valid, Unique Email Address
- · Date of Birth
- Gender

All other fields are optional and you can choose whether to store them. You can also specify whether a patient is a child account and link the parent account here.



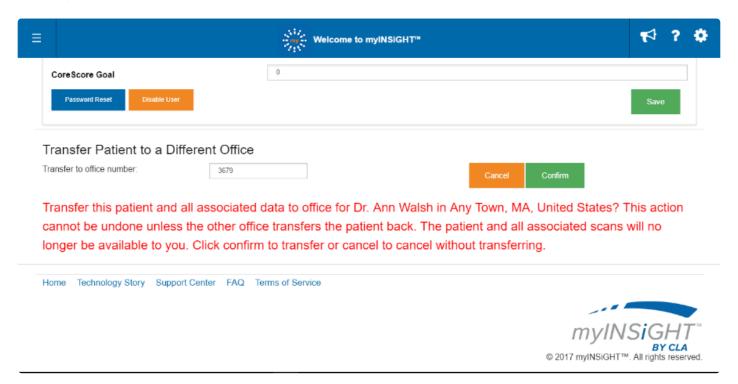
Towards the bottom of the page, you will find the CORESCORE™ Goal for this patient. The CORESCORE™ Goal appears on a patient's CORESCORE™ Progress Report and setting a value here overrides the office default in Settings.

Near the bottom of this page on the left is the **Give Portal Access** button. If you click this button, myINSiGHT™ will create an account for this patient on the **Patient Portal** and send them an email inviting them to confirm that account.

At the bottom is a tool to allow you to permanently transfer this patient to another office.

# 14.9. Transfer Patient to Different Office

From the **Office Portal**, select the patient, click on **Edit**. At the bottom of the Edit Patient Page there is a **Transfer Patient to Different Office** section. Enter the office ID and click on the green **Transfer Button**, the following window will appear:

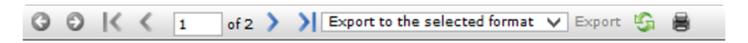


Click **Confirm** to permanently move the patient to a different office.

# 14.10. Printing

To print a patient's scans, open their **Patient Page** in your **Office Portal** by following the Instructions under\* Viewing Scan Results and Reports\*. Select the **Scan Views** you want to print by turning on the toggle switches next to each scan view that you want to print and click Scan Views.

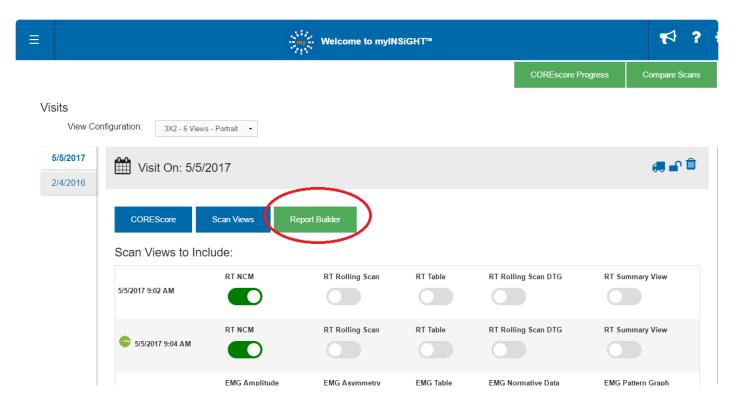
The **Scan Views** will appear in the grid format you specified. The display appears in **Print Preview** mode, so you see the scan views exactly as they will be printed, one page at a time. At the top of the page there are icons which allow you to print (to the printer) or export (to PDF or other format).



You can also print from the **Report Builder** (see below) which allows you to create a custom grid of scan views.

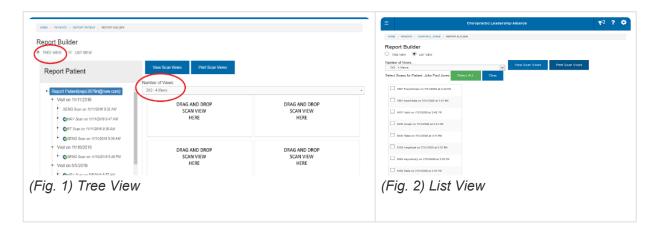
#### 14.11. Report Builder

To create reports with scans from different visits, or to create comparative **Scan Views**, click on **Report Builder**. The following screen will appear:

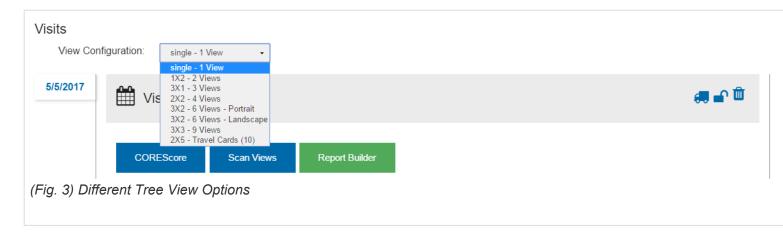


Tree View (See Fig, 1) groups scans by visit and makes it easy to compare scans from different visits. From the **Tree View** you can drag and drop into specific locations on a grid.

List View (See Fig. 2) will list scan views in order by date. It is more appropriate for large numbers of views, and it will automatically select the best grid configuration based on the number of views.



From the **Tree View**, you can choose from **Single View**, **1×2**, **2×2**, **3×1**, **3×2**, **3×3** and travel cards **2×5**. **1×2** and **Travel Card** grids are rendered in portrait mode. All the others are rendered in landscape mode. Travel cards print without a header and are appropriate for printing on labels (*See Fig. 3*).

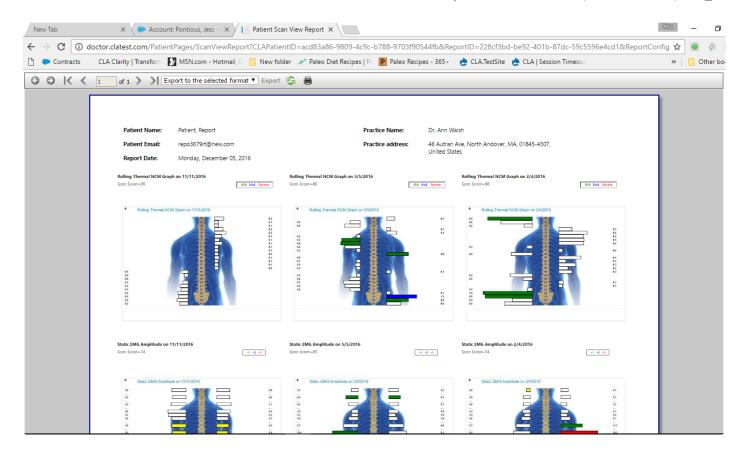


In this example, a 3×2 with the thermals and EMG's from the last 3 visits will be shown. Expand the **Scan List**, select the **Scan View**, drag and drop it into the graph in the location you want it to appear on the report.

Once you have all your scans in the graph, click Print and the Print Preview will appear.



On the tool bar above the report you can click on the **Printer Icon** and print the scans.



# 14.12. Export Scan Printout

Export report to PDF, CSV, Excel, text, TIFF, webArchive and XPS, by simply selecting the format and clicking **Export**.

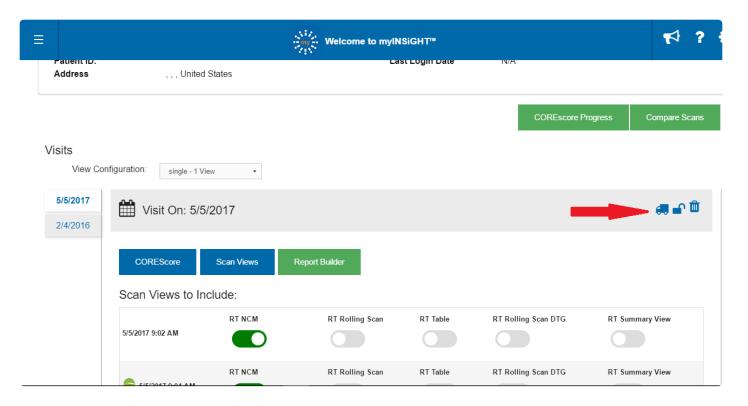
## 15. Manage Visits

The Manage Visits Tool in the Office Portal allows doctors to move and delete visits and scans and change which scans are used for CORESCORE™ Report calculation:

Click on the name of a patient you want to manage visits and scans for.

Click on the truck icon on the visit card in the top right area of the card.

This page, shown here, shows a Tree View of your selected patient with all the patient's Visits and Scans arranged in the tree, exactly like the Report Builder.



#### From this page, you can perform the following actions:

**Delete a Patient** – Select the patient and click Delete. Click OK when you see the confirmation dialog. This deletes the patient, along with all scans and visits. The orange X does NOT delete the patient, only removes this patient from the page.

NOTE: Deleting patients cannot be undone.

**Delete a Visit** – Select the Visit you want to delete and click Delete. Click OK when you see the confirmation dialog. This deletes the visit and all scans. NOTE: This cannot be undone.

**Delete a Scan** – Select the scan you want to delete and click Delete. Click OK when you see the confirmation dialog. This deletes the scan and if necessary clears the score from the Visit. NOTE: This cannot be undone.

Mark a Scan for the CORESCORE – Select the Scan to mark and click Mark CS. This will set the CORESCORE™ flag for that scan, and deselect any other scans of that type for that visit. It will also update the score in the Visit Table.

**Move a Scan to Another Visit (Same Patient)** – Click on the scan you want to move and drag it on top of the visit you want to move it to, or any scan in that Visit. Release the mouse button. The scan will be moved to the other Visit.

NOTE: The CORESCORE™ flag is cleared from the scan. If you want to use this scan in the CORESCORE™ in the new visit you can mark it. If the visit you moved the scan from has no remaining scans, it will be deleted.

Remove a Scan from the Visit – On some occasions, it might be necessary to remove a scan from a visit. To remove the scan, click on the scan then click New Visit. This will create a new Visit with the same Visit Date as the scan and move the scan into it.

NOTE: You can only do this if: The scan has a DIFFERENT date from the other scans in the visit and There is not already a visit on that date (in that case just move the scan to the existing visit).

# 15.1. Moving Scans and Visits to Other Patients

You can display up to three patient trees at a time on this page and move scans and visits between them. This is most commonly used if you accidently scan a patient under the wrong patient name. To display another patient, click on the Add Patient button at the top of the page. This shows a list of patients from the office. This list is searchable using the search bar at the top of the page. You can search any part of the Name or Email Address.

Select the patient you want to add and click the **OK** button. You can only add one patient at a time. After three patients are displayed, the **Add Patient** button will no longer appear. To display a different patient, use the Orange X Button on the patient tree to dismiss a patient and you can add a different one. NOTE: This only dismisses the patient from the page, it does not delete the patient.

Once you have more than one patient displayed, you can perform the following actions:

- <u>Move Visit from One Patient to Another</u> To move an entire visit, including all scans, from one patient to another, click on the visit and drag it to the other patient's tree. You can drop it anywhere on the tree. Note that you cannot move a Visit to another patient if that patient already has a visit on the same date. A patient cannot have more than one Visit on the same date.
- Move Scan from One Patient to Another:
- To Move a Scan to an Existing Visit Click on the scan you want to move and then drag it to the other patient. Drop it on either the Visit or any of the scans in the Visit.
- To Move a Scan to a New Visit Click on the scan and drag it to the patient's name or anywhere in the empty space below the tree on the Patient Card.

If you make a mistake and accidently drop it into an existing visit when you wanted a new one, you can select the scan and click New Visit to remove it to a new visit.

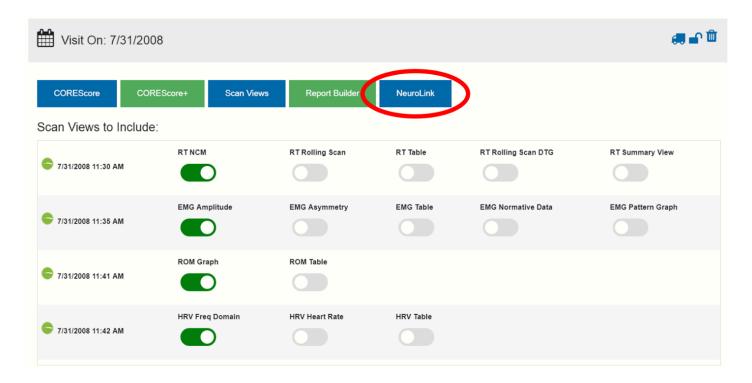
NOTE: When moving to a new visit, the scan must have a different scan date than any existing visit dates. If a visit exists on the same date as the scan, it will be automatically moved into that visit.

NOTE: When moving a scan, The CORESCORE™ flag is cleared from the scan. If you want to use this scan in the CORESCORE™ in the new visit you can mark it. If the visit you moved the scan from has no remaining scans, it will be deleted.

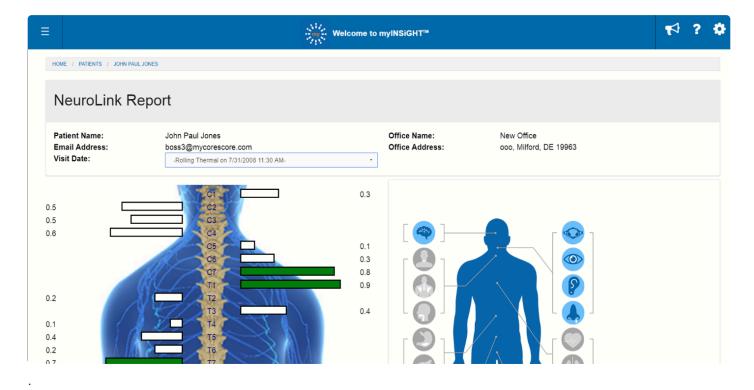
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#### 16. neuroLINK

neuroLINK is a graphical tool that allows you to show your patients the relationship between the areas affected on their spine and their organ systems. For any visit containing Thermal or Static EMG scans, click on the neuroLINK button to access the tool:

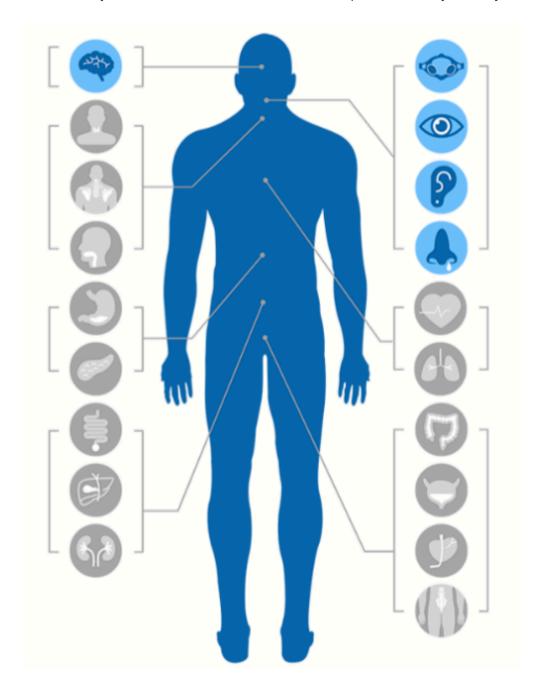


You can click on NL for any visit that has a Rolling Thermal Scan, Segmental Thermal Scan, or EMG Scan



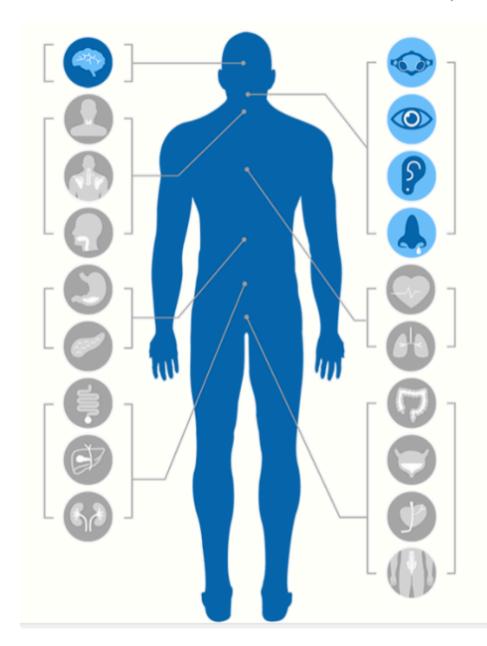
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At the top of this page, you see the patient demographics as well as a pull-down selection box. You can switch to any other Thermal or Static EMG for this patient, for any visit, by selecting the scan from this box.



Below the header information you see two graphical images. On the left is a scan view. This is either an NCM Bar Graph for Thermal scans, or a Static EMG Amplitude (bar) graph for static EMG scans. You can click on any of the bars on the graph OR on the spine label itself (C1, C2, etc...). When you select a location in this way, the graph on the right will highlight which organ systems are affected by the location shown here.

Hovering over or clicking a specific organ will display information about that organ system, as shown here. You can then click on any of the items in the list to see a list of abstracts that pertain to that item.

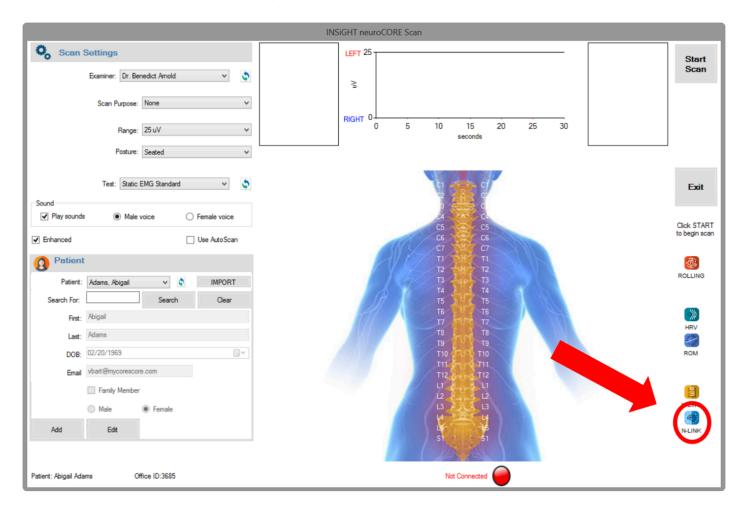


#### **Brain**

- · Nervous System Adult
- Nervous System Child
- Multiple Sclerosis
- Seizures
- Immunity
- Improved Brain Function
- Autism
- ADHD
- <u>Learning Disabilities and</u>
   <u>Dyslexia</u>
- Parkinson's
- Depression

# 16.1. Accessing neuroLINK from myINSiGHT Portal Desktop

In addition to accessing neuroLINK from the myINSiGHT Portal, you can also access it from the desktop application at the completion of the scan. You will find a button on the bottom left of each scan for which allows you to link to the neuroLINK page in the portal:



## 16.2. Narrative Reports

Narrative reports are text reports that describe a scan and include recommendations. These follow a standard template. Narrative reports are available for **Rolling Thermal**, **Static EMG** and **ROM** scans.

To display a Narrative report, go to the **Visits page** for a patient and click on the **Narrative button**. You will see a page similar to what is shown here.

You can print the report by clicking the **Print** button. You can select another scan for this patient by dropping down the selection next to **Visit Date**, and choosing a different scan. Note that Narrative reports are only available for **Rolling Thermal**, **Static EMG** and **ROM** scans.



#### THERMAL NARRATIVE REPORT

On 5/26/2016 at 4:50 AM a paraspinal thermal scan was performed on Thomas Jefferson to measure skin differences along the spine. Infrared sensors were used to compare temperatures at 25 paired anatomical points. The purpose of the test was to assess sympathetic nerve function. Alterations in skin temperature patterns are associated with aberrations in the function of the autonomic nervous system, which includes the sympathetic system. The autonomic nervous system controls the organs, glands, and blood vessels.

In the analysis of thermal differentials, we are concerned with two factors, symmetry and pattern. Symmetry refers to the difference in temperature between the left and right sides at the same spinal levels. Differences in temperature from side to side are maintained within strict limits in healthy persons.

Uematsu et al of the John Hopkins Medical Institutions determined normal values for skin temperature differences based upon asymptomatic "normal" individuals. The results were published in the Journal of Neurosurgery. According to the study, "These values can be used as a standard in assessment of sympathetic nerve function, and the degree of asymmetry is a quantifiable indicator of dysfunction...Deviations from the normal values will allow suspicion of neurological pathology to be quantitated and therefore can improve assessment and lead to proper clinical management."

Temperature differences found in Thomas Jefferson's thermal scan were compared to these reference values. Mild, moderate, and severe asymmetries are identified by color. Temperature differences

# 17. Patient Portal

This section will go over the patient portal.

## 17.1. Patient Access

For patients to log in and access their CORESCORE™ Reports and scans as well as see your office contact information and general wellness tips they must log into the patient portal by going to: <a href="https://www.portal.subluxation.com">www.portal.subluxation.com</a>.

#### 17.2. First Time Patient Account Set Up

When you complete a CORESCORE™ for a patient, the system prompts you to send an email to the patient. If you choose **Yes**, then myINSiGHT™ will create an account for that patient on the patient portal, if they do not already have one. The patient will receive an invitation email to confirm their account, which they must do within 48 hours of receiving the email or the link will expire.

Patient user names are the patient's email address. When they confirm their account, they will create a Password. Passwords must be minimum 8 characters, with one uppercase, one lower case, one number and one symbol (non-alpha).

They must enter their date of birth the same as it appears in your office portal patient profile, to confirm their identity. The patient then must create create three security questions for account verification in the future should the patient need to reset their password.

They will need to accept the HIPAA Agreement by putting a check mark in the box next to "I accept the following terms and conditions."

Then click Create Account.

They will see a **Congratulations Message** stating that they have successfully set up their account with a link to the login page. They can click the **Login Link** and follow the instructions below in section **Login for** returning Patients.

If the patient does not confirm their account and the link expires, you can send them another invitation email at any time by logging into the office portal, selecting the patient and navigating to the Edit Patient page (edit icon at the top of the page). Click Give Portal Access at the bottom of the page to send another invitation.

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# 17.3. Login for Returning Patients

After the account has been confirmed, the patient can see their scan data by going to: <a href="https://www.portal.subluxation.com">www.portal.subluxation.com</a> and entering their Email Address and Password for their account as created above in the section <a href="https://www.portal.subluxation.com">First Time Patient Account Set Up</a>.

#### 17.4. Patient Referrals

Patients can easily refer friends through their patient portal. The patient should log into the patient portal following the instructions above under section called Login for Returning Patients. Once the patient logs in the be brought to the homepage with a Select My Reports Card button. Click the Refer a Friend button and a pop-up window appears asking for the patient's Friend's Name and the patient's Friend's Email Address and a place for them to type a message. The patient can then they can preview the email before sending it by clicking the green Preview Button. Or they can just send the refer a friend link by clicking the blue Send Button. The friend will receive an email with your office's contact information address and a link to your website so that your patient's friend can have the contact information to become a patient of your office as well.





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