

USER MANUAL

Revision 1.2
Software version 2.0.0.2

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INTRODUCTION

Spine 3D is the new Sensor Medica tool that allows the acquisition of the surface of the patient's back thanks to a radiation-free and therefore non-invasive 3D scanning method.

The Spine 3D offers guidance on clinical parameters and information, complete with reports, useful for medical professionals to diagnose spinal deformities and posture problems.

The integration of the pressure plate (optional) allows at the same time to analyze the pressures and the breech support surfaces and how the patient's load is distributed.





CONTENTS OF PACKAGING

- Spine3D
- Keyboard
- Mouse
- Power cord
- Quick Start Menù
- FreeMED platform 40x40 (optional)
- Walkway
- Rear door keys
- USB stick for Wi-Fi connection
- Hex key for walkway fixing
- CE certified

TECHNICAL SPECIFICATIONS

- Painted aluminium structure
- Power supply: 100-240V, 50/60 Hz
- Current consumption: 300 mA (standby mode); 700 mA (during acquisition)
- Maximum power consumption: 170 W
- Height: 165 cm
- Width: 83 cm
- Depth: 237 cm (including walkway)
- Weight 90 kg (including walkway)
- Monitor touch screen:
  - Diagonal: 27'' (68.6 cm)
  - Resolution: 1920 x 1080 @60Hz (2.1 megapixel Full HD)
  - Aspect ratio: 16:9
  - WxH: 597.6 x 336.15mm, 23.5 x 13.2"
  - Orientation: Portrait

ToF Depth CAMERA

Spine3D with Dual ToF Depth CAMERA	**Spine3D with Single ToF Depth CAMERA**

• RGB Camera
  ○ Resolution: 1600x1200 pixels
  ○ Frame rate: 15 fps
  ○ Field of view: H-70° V-50°
• Depth Camera
  ○ Resolution: 640 × 480 pixels
  ○ Frame rate: 15 fps
  ○ Field of view: H-60° V-45°
• Measuring operating range: from 0.15 to 5 m
• Depth Technology: Time-of-Flight (ToF)
• Interfaccia: Gigabit Ethernet and RS485
• Certifications: FCC/CE/FDA
• Class I Laser Device
	• RGB Camera
	  ○ Resolution: 1920x1080 pixels
	  ○ Frame rate: 30 fps
	  ○ Field of view: H-70° V-50°
	• Depth Camera
	  ○ Resolution: 512 × 424 pixels
	  ○ Frame rate: 30 fps
	  ○ Field of View: H-70° V-60°
	• Measuring operating range: from 0.5 to 4.5 m
	• Depth Technology: Time-of-Flight (ToF)
	• Interface: USB Standard 3.0
	• Certifications: FCC/CE/FDA
	• Class I Laser Device

Software Version: 2.0.0.2

Laser Specification

CAUTION

The ToF Depth Camera complies with 21 CFR 1040.10 and 1040.11 with the exception of compliance with IEC 60825-1 Ed.3

The following Class 1 laser label is located on the bottom of the sensor.



Compliance and Standards Applied

IEC 60601-1: 2005 / A1: 2012 / A2: 2020 – Electrical safety

IEC 60601-1-2: 2014 / A1: 2021 - Electromagnetic compatibility

IEC 60601-1-6: 2010 / A1: 2013 / A2:2020 - Usability

IEC 62366-1: 2015 / A1:2020 – Application of Usability

EU Regulation 2017/745 on Medical Devices (medical version)

Directive 2014/30/EU Electromagnetic Compatibility (EMC)

Low Voltage Directive 2014/35/EU (LVD)

Directive 2011/65/EU (RoHS II) on the restriction of the use of certain hazardous substances in electrical and electronic equipment

Directive 2012/19/EU (WEEE) on waste electrical and electronic equipment

PRESSURE PLATFORM Freemed40x40 (optional)

DMFM4040	Details
15vcc	Power
50	Absorption (mA)
2,5 dpi	Resolution xy
8 bit	Resolution z
From 5 to 200 Hz	Freq. Acquisition
USB 2.0	Interface

440x620	Dimension (mm)
36 mm	Thickness (mm)
4	Weight (Kg)
Resistive with gold-coated contacts	Sensors
Matrix	Scanning
Automatic 10 bit	Calibration
Da 0° a 35°	Temperature work
150 N/cm2	Max Pressure on a single sensor

INTENDED USE

The Spine3D is a tool for the non-invasive analysis of the entire back of the human body or only of the surface of the back, the system identifies reference points and reconstructs the spine in 3D in order to provide useful information to the medical operator to analyze the person's posture. The Spine 3D is a device designed as a mere visual aid and postural documentation. The system is not a stand-alone diagnostic device and is in no way intended to replace clinical judgment and physician experience.

DEVICE DESCRIPTION

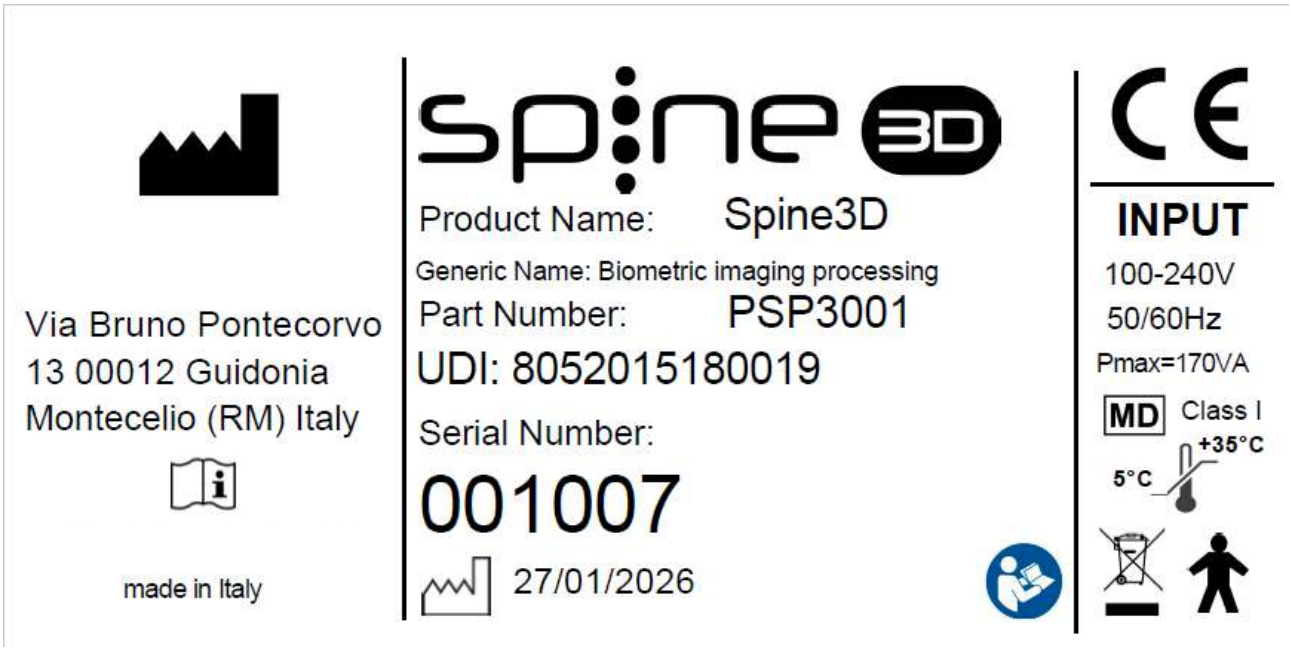
SPINE3D is a system consisting of a PC with a touch screen monitor connected to two infrared 3D RGB cameras with Time of Flight (ToF) technology that allow non-invasive 3D scanning of the back of the human body.

The technique is based on LiDAR imaging. A laser is used as the active source, the beams of which propagate instantaneously into the environment. Next to the emitter is a light-sensitive receiver that picks up reflections. After obtaining the time during which the reflected wave returned, the distance to the object in the sensor's field of view is determined. This time is converted to distance, allowing you to create an accurate 3D representation of the object.

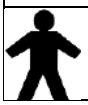
Once the 3D object is obtained, the system estimates the position of 6 anatomical reperé points for the upper part and 6 reperé points for the lower limbs. From these points, the competent medical practitioner is provided with information on various postural parameters useful for the study of the person's posture. The device does not provide therapeutic indications or elaborate diagnoses: the postural assessment and the formulation of any clinical plan fall under the exclusive and unquestionable responsibility of the medical operator.

The optional integration of the freeMed baropodometric platform allows the acquisition of the pressure information of the plantar support.

The SPINE3D label follows:



Key to symbols:

	Waste disposal according to the WEEE Directive
	Manufacturer data
	Production date
	Class I Medical Device
	Consult the User Manual
	It has the CE marking
	Consult the instructions for use online
	Type B

LIMITATIONS OF USE

The system is intended only for use in closed environments (indoors) such as, for example, healthcare facilities, clinics, gyms, etc., where it is necessary to carry out postural analysis and/or functional assessment for which it is intended.

Keep away from liquids and do not place it on wet or liquid surfaces or on sloping surfaces.

The manufacturer does not intend to use it other than those provided for in this manual.

The maximum permissible load on the walkway, or on the freeMed platform if provided, is one person weighing 200kg.

The minimum height of the subject that can be acquired is 110 cm and the maximum is 220 cm.

The data, images and 3D reconstructions provided by the system have a purely descriptive and qualitative value of the patient's postural attitude.

The software's graphical processing and textual reports should never be used as the sole basis for critical clinical, diagnostic or therapeutic decisions.

HANDLING AND STORAGE

Spine3D is shipped and delivered in a pallet-based packaging protected by polystyrene and cardboard.

If the product is damaged in any way, the buyer must inform the seller by writing an e-mail to helpdesk@sensormedica.com.

Spine3D must be kept away from water, fire and substances that can damage the device.

The transport and storage conditions to be respected are as follows:

1. Temperature : between -20° and +50°
2. Relative humidity: between 1% and 85%

ASSEMBLY, INSTALLATION AND IGNITION

N.B. The first installation must always be carried out by an authorized Sensor Medica technician.

Contact helpdesk@sensormedica.com to arrange an appointment with a specialized technician to install the system.

ATTENTION: The presence of at least 2 people is strongly recommended for the removal of the Spine3D system from the wooden case and the subsequent movement of the instrument to the prepared area.

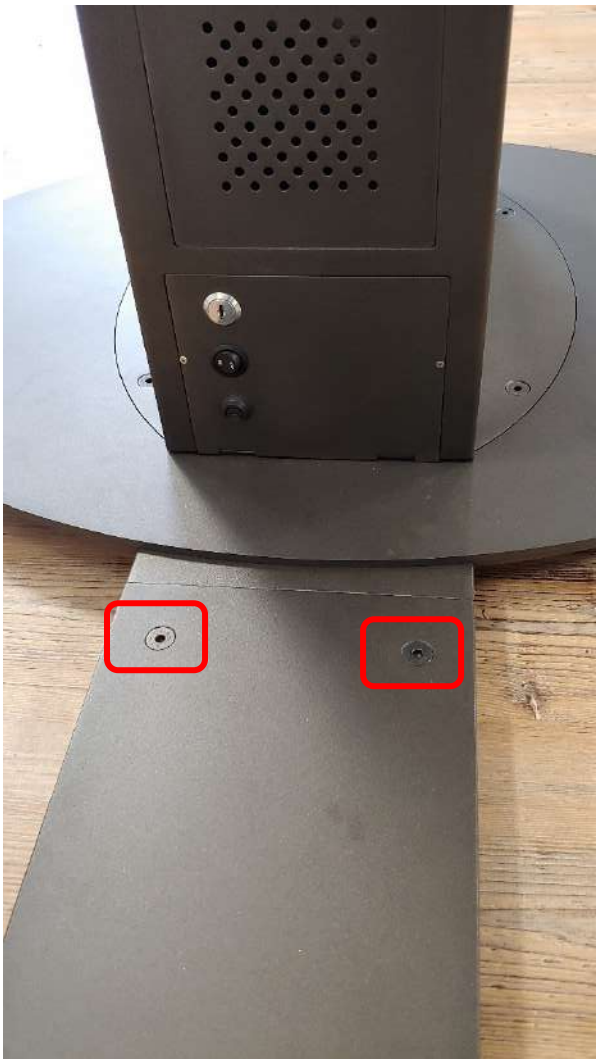
Once the Spine3D has been removed from the packaging, follow the steps below to position the system and proceed with the first start-up.

1. Open the wooden crate by removing the metal stops using a pin.
2. Remove the Spine3D and the walkway from the crate paying attention to the handling and positioning of the system.
3. Place the Spine3D in a comfortable accessible position respecting the following dimensions.



PLEASE NOTE: In front of the walkway there may be a wall as shown in the image. But there must NOT be surfaces, or objects, shiny or with reflective materials such as mirrors, windows, chairs, tables and more in the area in front of the walkway (at least for a distance of 40 cm if there is no wall) where the patient is positioned. Even the area on the sides of the walkway (at least for a distance of 40 cm) must not be present with shiny surfaces, or objects, or with reflective materials such as mirrors, windows, chairs, sunbeds and more.

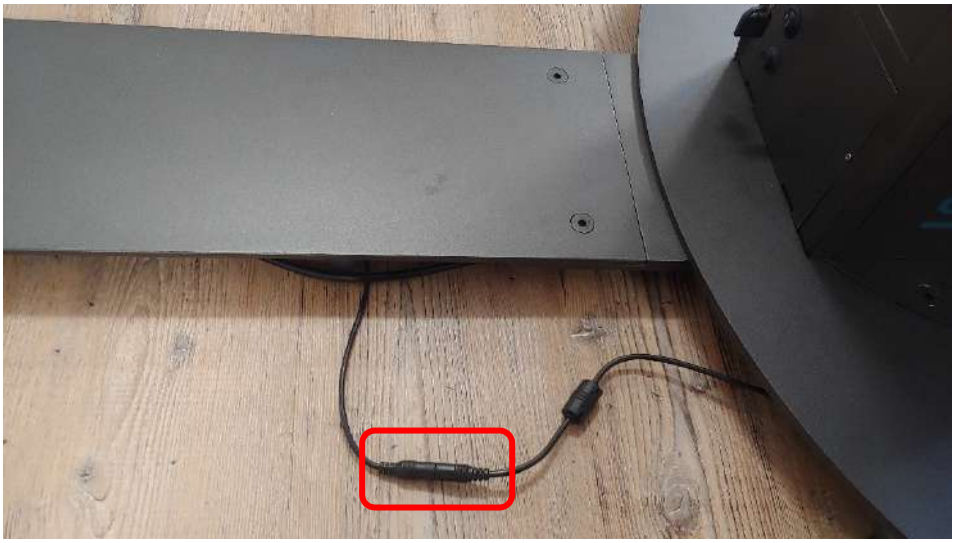
1. Insert the walkway in the appropriate slots prepared for the purpose and tighten the two bolts with the key present in the kit.



2. If the FreeMED40x40 pressure plate is present, go to the next point, **otherwise go directly to point 6.**
3. Place the FreeMED40x40 platform in the appropriate housing as shown in the figure.



4. Connect the extension to the platform power cord that runs under the positioning platform



5. Pass the USB data cable coming out of the Spine3D under the positioning platform and connect it to the FreeMED40x40 platform together with the power cable.

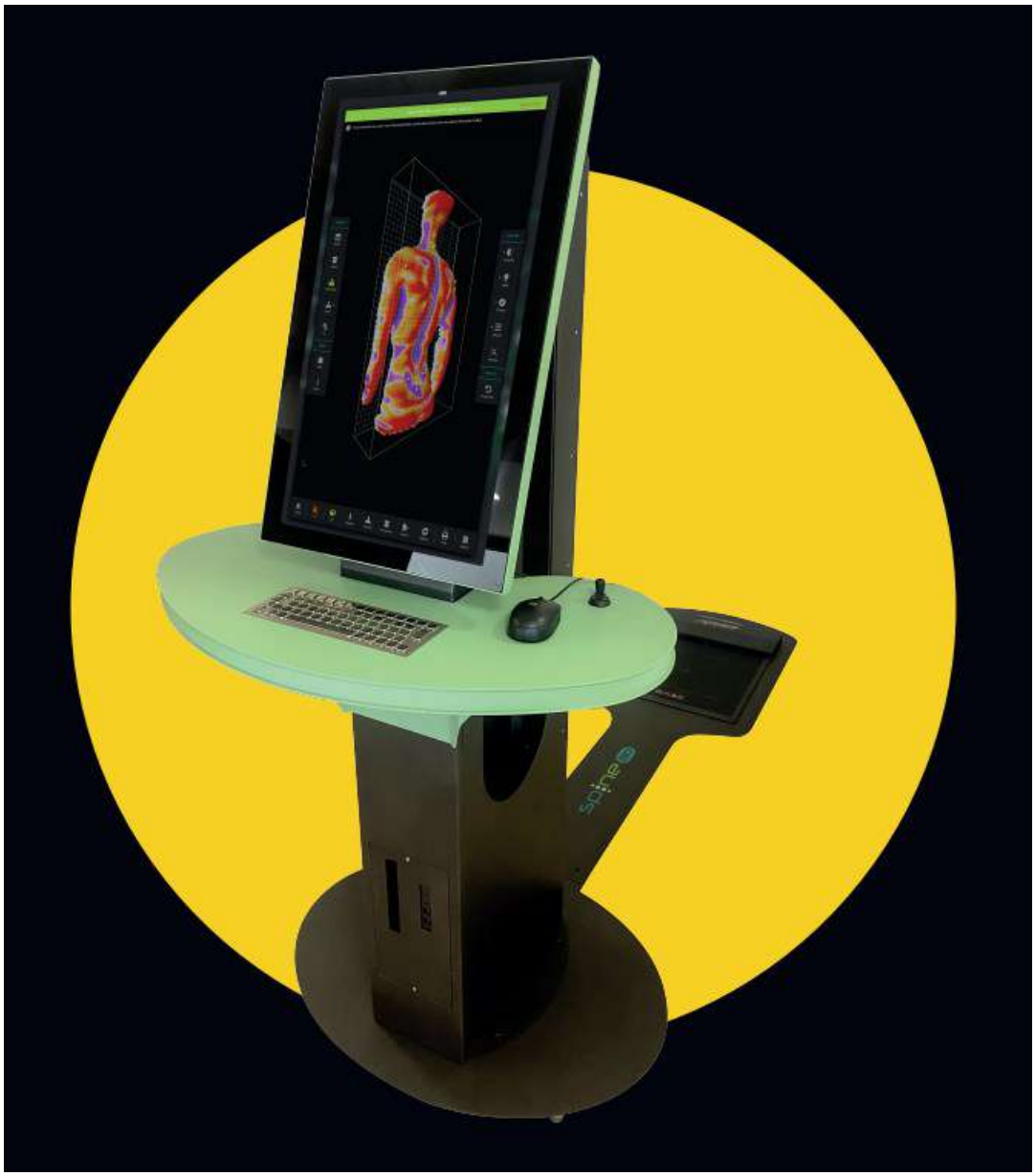


6. Connect the Spine3D power cable and power the device by pressing the I/II button.



7. Connect the mouse Bluetooth dongle to one of the front USB ports.
8. Connect the Wi-Fi USB stick to one of the available USB ports.

9. Now simply press the power button on the front to start the Spine3D.



Once turned on, the application will start automatically as soon as the system is initialized.

N.B. You don't need to click any icons.

Warning: While using the device, the power plug must remain **easily accessible** to allow quick disconnection from the power supply if the need arises.

**Warning**

The device must only be connected to a power outlet equipped with **protective earth**.



WORKING METHOD

For proper use of the device, the patient should be positioned 105cm away from the column of the device where the chambers are located. On the walkway, or on the platform, there are horizontal lines useful for positioning, the patient must position himself with his heels aligned with these horizontal lines.

The heels should be slightly detached from each other, while the position of the feet, such as the distance between them or the opening angle between them is at the discretion of the operator.

The patient must turn his back to the specialist who performs the analysis and to the column where the chambers are placed.

IMPORTANT: The patient should NOT wear clothing that can cover the back of the body such as T-shirts, tank tops and more. For women, it is also necessary to remove the bra so as not to alter the acquisition and identification of the points of reference. In this way, it will be possible to scan the patient's back correctly.

In the event that the subject has long hair, it will be necessary to collect it on the head, uncovering the cervical tract well.

In the event that the lower limbs are also to be acquired correctly, the patient must also take off his trousers and remain only with socks and underwear.

The examination takes place indoors.

The working conditions to be respected are the following:

- Working temperature: between +5° and +35°

- Relative humidity: between 1% and 85%

DETECTION AND TROUBLESHOOTING

If the buyer finds any defects or malfunctions, consult the manufacturer or dealer.

To contact the manufacturer, write an e-mail to helpdesk@sensormedica.com.

Self-troubleshooting is prohibited without the manufacturer's permission and can lead to warranty loss.

CLEANING AND MAINTENANCE

The Spine3D has been designed in such a way that it does not require particular maintenance and care by the user. However, the appliance should be cleaned from time to time depending on the conditions of use to which it is subjected.

The Spine3D does not come into contact with the patient's skin, therefore it cannot cause damage to the subject under examination.

Before cleaning, turn off the device.

It is advisable to use a soft cloth with non-alcoholic and non-corrosive detergents to clean the surface of the instrument, taking care not to let liquid enter the device.

DISPOSAL

Disposal of used equipment is the responsibility of the owner and must be carried out in accordance with the laws in force in each state.

SAFETY NOTICES

The Spine3D is examined by Sensor medica for safe use before delivery.

In order to maintain this condition for the entire time of use of the device, it is necessary to observe safety regulations.

- The Spine3D cannot be modified without the authorization of the manufacturer.
- During installation it must be considered that the user can use the system optimally.
- If the nameplate or other important notices are damaged or illegible, they must be replaced by the manufacturer.
- Exact compliance with the instructions for use is a prerequisite for the intended use of the products.
- Product safety, reliability and functionality can only be satisfied if:
    - Repairs are carried out by persons authorized by Sensor Medica Srl
    - The installation area complies with the installation standards in force
    - The products are connected to a socket with protective conductor
    - The products are used in accordance with the instructions for use
- After the irruption of liquids in one of the products, the Spine3D must necessarily be subjected to safety checks. Damaged connectors and cables should be replaced by an authorized technician.
- In case of malfunction or defects found, contact the manufacturer.
- The cables must be positioned so that they cannot be stepped on directly and that they do not constitute a tripping hazard.

- Have patients with damaged skin or an infected skin wear special protective footwear if use cannot be avoided.
- Always keep the surfaces clean between examinations with sanitizing products (Medical and Surgical Device compatible with the surface). "

CONNECTION TO THE NETWORK

The Spine3D requires connection to the internet to allow automatic software updates or remote assistance in case of need.

SOFTWARE

The Spine3D software is already configured and ready for first use upon delivery of the instrument to the buyer.

If the license is not entered, contact your distributor or manufacturer at helpdesk@sensormedica.com.

PLEASE NOTE: This manual is valid for all versions that are part of version 2.0.X.X with "X" indicating a version that only fixes minor features that do not add or modify the current functionality.

PRODUCT REGISTRATION

The product is registered and activated at the end of the production process directly by Sensor Medica technicians. However, the procedure to be carried out together with Sensor Medica technicians (remotely) is reported by contacting helpdesk@sensormedica.com first.
A license must be installed in order to use the software correctly.
If a license has not been entered, the software will show the following screen when started:



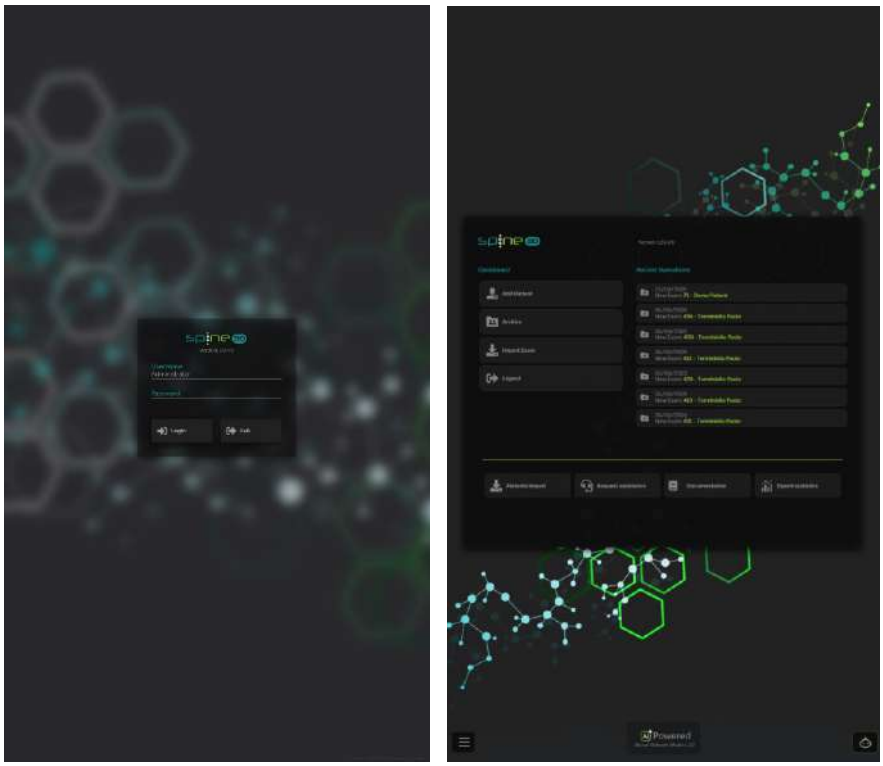
To obtain a valid license, please contact your reseller.
The license is a .dat file.
Click on Browse and select the path of the license to activate.
After selecting the license correctly, a code will appear in the “Serial Code” section. Click on Copy to copy the code and send it to the manufacturer together with the purchase data to the email helpdesk@sensormedica.com. The Sensor Medica technicians, having verified your data, will send you the activation code for your license. Copy and paste it in the “Activation Code” section and press the button ACTIVATE to proceed with activation.

Note: the license is valid only for one Spine3D device.

To start the demo version of the software, which allows the display of exams but not the creation of new ones, click on Demo.

FIRST START OF THE PROGRAM

When the software is started for the first time, a popup appears with "Username" and "Password". To access, simply click on "Login" as there is no user entered yet.



After clicking on “Login” the HOME of the software will appear.

From the main screen you can access the patient archive and recent exams, you can create a new patient and manage the software language.

In the next paragraphs these topics will be fully described.

Program MENù

To access the program menu, click on the button at the bottom right .



The menu is divided into 4 sections:

- DASHBOARD: by clicking on it is possible to return to the main screen.

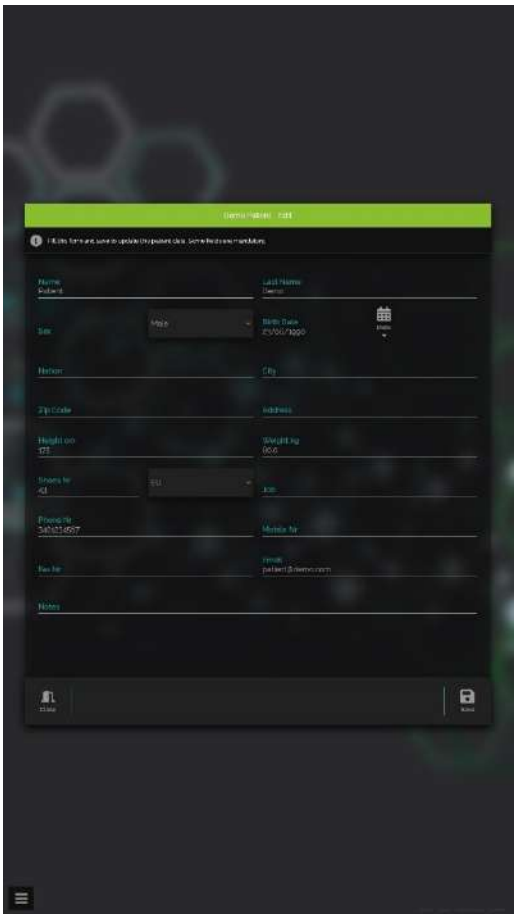
- PATIENTS: allows you to add patients, view the archive and manage the list of deleted patients.

- ADMINISTRATOR: menu active only for the administrator profile. From this panel it is possible to manage the profiles of the various users.

- APPLICATION: allows you to access the software settings.

With the button you can minimize the software, the key close the software, while close the menù.

PATIENTS



NEW PATIENT

To create a new patient click on the button in the home page or on of the main menù. The patient data will be entered on the page that will appear, some fields are required.

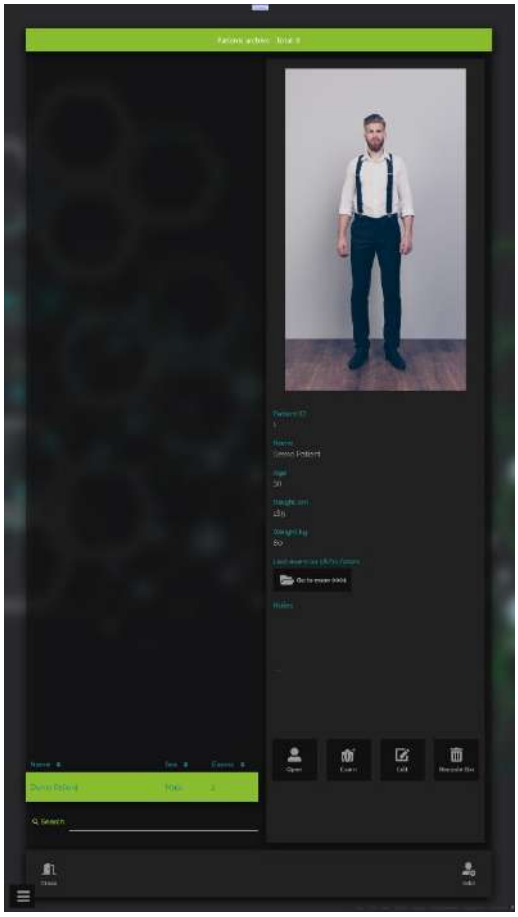
To save, click .

PATIENTS ARCHIVE

By clicking on in the Home, or on from menù, you can access the patient archive.

The entire list of patients registered within the software will be displayed. By clicking on each of them, a preview of the patient's image will appear on the right.

You can search by name, surname, e-mail of patients in the archive and by operator.



By clicking on  at the bottom right you can create a new patient.

Double-clicking on the patient will open the complete card, with the data and the list of tests performed. Again, by clicking on an exam, a preview of the selected analysis will appear on the right.

You can search by ID, title, notes and date of the exams performed.

PATIENT CARD



Right clicking on the button  you can open the selected exam.

In the bar below it is possible to:

 return to the general archive;

 take a profile photo of the patient;

 delete the patient's profile picture;

 enter the patient's image gallery;

 start a new exam;

 compare two selected exams;

 export the selected exam;

 delete the selected exam.

DELETED PATIENTS

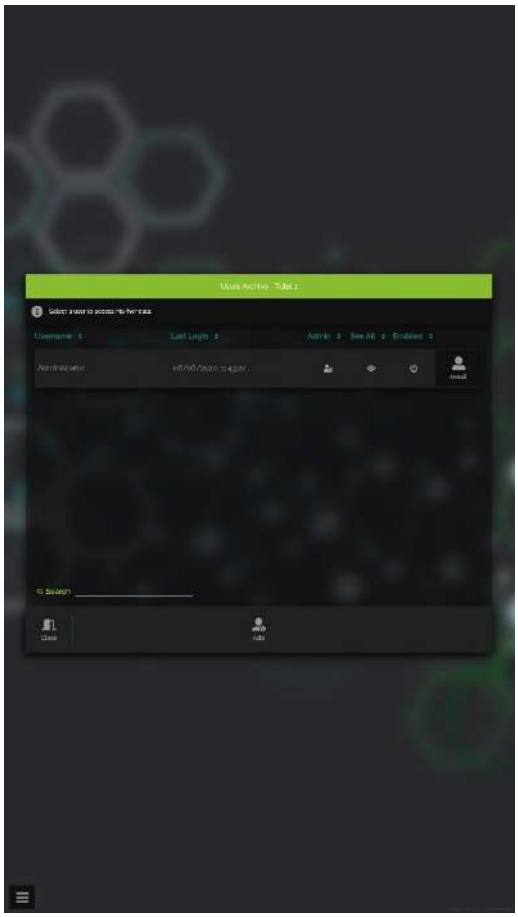
All the patients deleted by the various users will be shown in the "Trash" archive.

In this archive, the user is able to permanently delete them or not.

USERS PROFILE

To access user management, click on "Settings" and then on "User management".

The list of all enabled users will be shown. You will also be able to search by name.



On the right the information of each user with the various permissions is shown:

 if the user has administrator privileges

 if the user can view all patients

 if the user is enabled.

To view all profile data, click  . To change user data or permissions, click on the button . To delete a user, click on  .

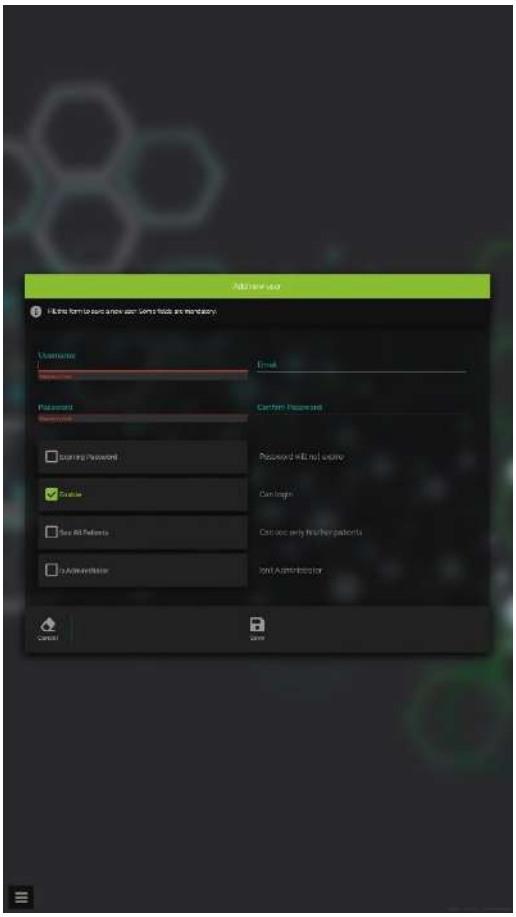
To add a new user click on . A screen will open in which some data will be entered (those in red are mandatory) and the permissions to be enabled:

- The user's password can be set in such a way that it is always valid or that it expires after 6 months

- The user can be enabled or disabled

- The user can be given permission to view all patients, including those of other operators, or only those performed by him

- Administrator privileges can be given to the user.



LICENSE

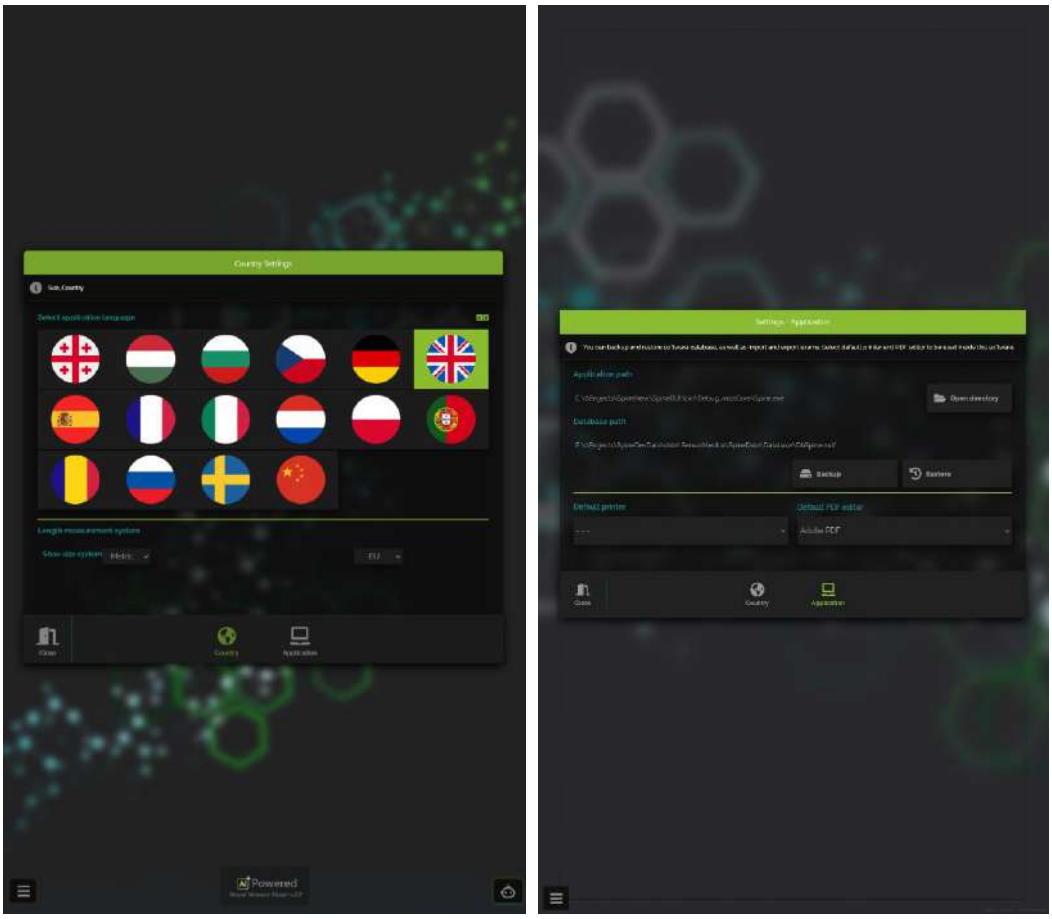
To view the license data, change the company data and insert the logo, from the "Settings" menu select "License".



From this screen, you can enter the information related to the company or owner, you can enter name/header, address, logo, and other information.

SETTINGS

To access the software settings from the "Settings" menu, click on "Application". Here you can set the language and the system of measurement.



By clicking on  you can view the basic paths of the application, perform a backup or restore and set the default printer.

ACQUIRE

From version 1.2.4.23 a new "Full body" capture mode is available that allows the capture of the entire back of the subject from head to toe. You will then have the option to capture in "Torso" and "Full body" mode.

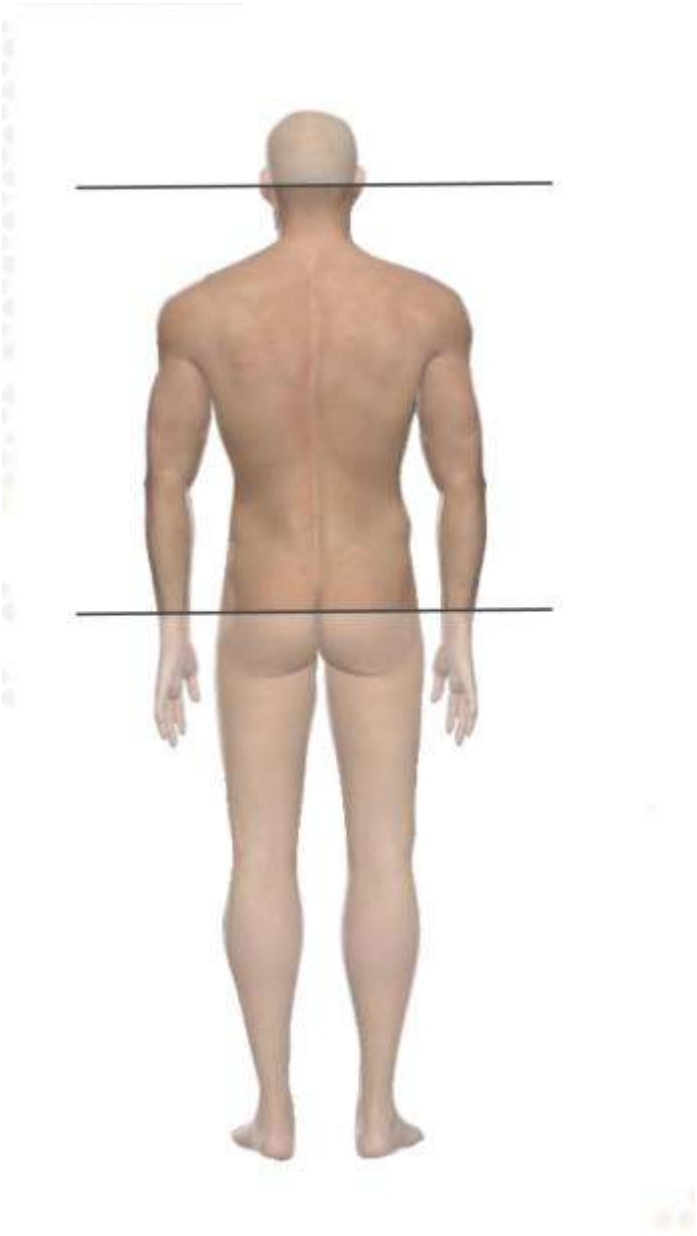
PLEASE NOTE: In the Spine3D version with double camera it will be possible to make ONLY "Full Body" and "Full Body with platform" acquisitions.

TORSO ACQUISITION

To start a new acquisition, select the patient if already in the archive, or create the patient, and click on "Exam+". And select the "Torso Acquisition" or "Torso Acquisition with Platform" exam (only available with the purchase of the FreeMED40x40 platform):

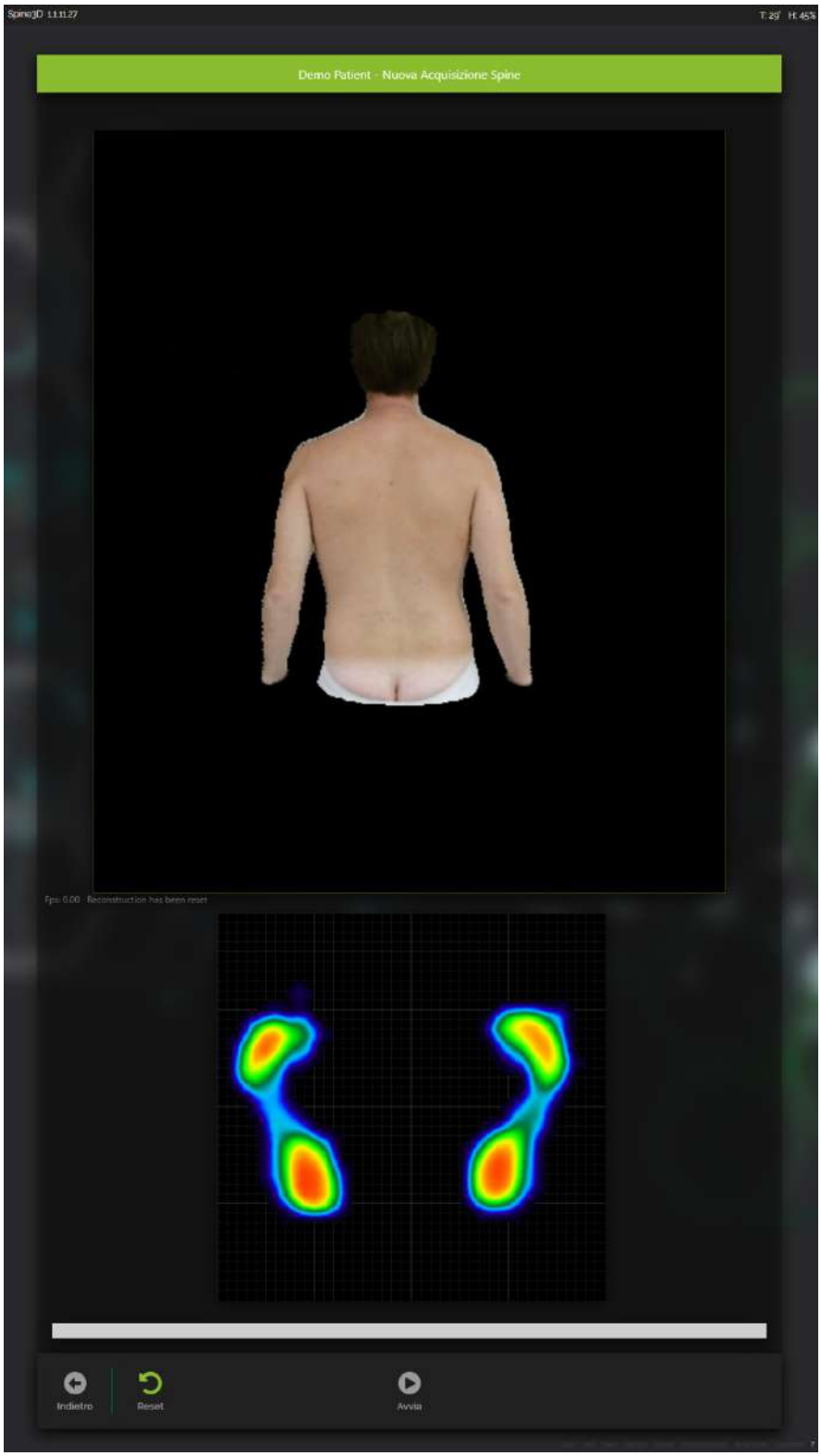


Verify that the patient is positioned correctly

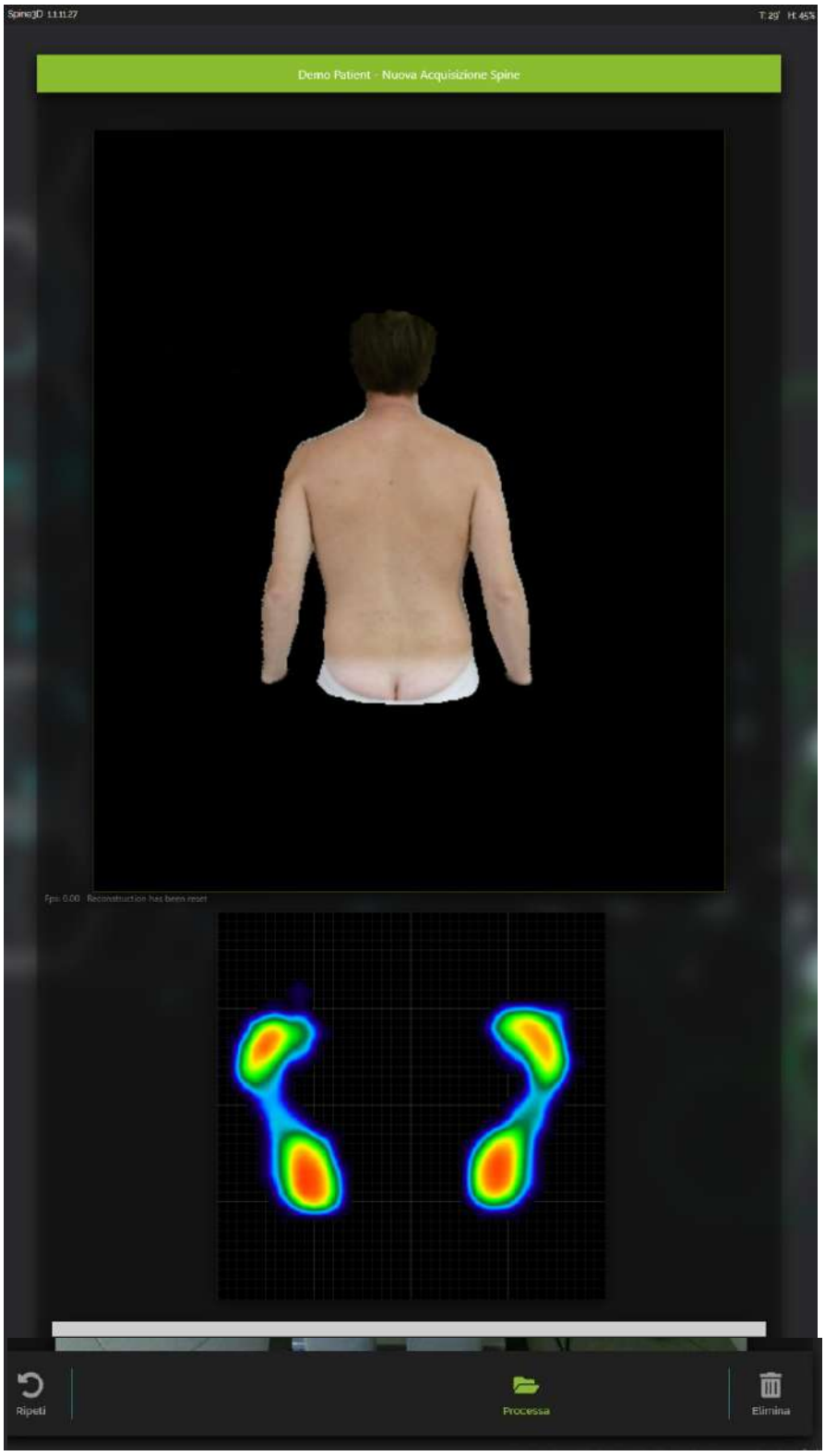


- The patient must be positioned above the walkway (or platform) provided with the heels placed along the horizontal lines.
- The patient must not wear a t-shirt (for women it is also necessary to remove the bra so as not to alter the acquisition).
- The patient must keep trousers and undergarments lowered at least halfway up the buttock so as to make the intergluteal groove visible. In case you want more accuracy on the lower limbs, also remove the pants.
- The nape of the neck must be visible at least up to the ears, keeping the hair gathered on the head.
- The arms must be in a relaxed and natural position, if possible detached from the body.

Once the patient is positioned correctly, start the examination by clicking on "**Start**" and from that moment the patient must remain still for 10 seconds.



By clicking on  the 3D is cleaned and recalculated in the event that the patient or the camera move during the acquisition.



Once the capture is finished, a win dow will appear indicating that the capture is finished. Clicking on "ok" will open the "Edit 2D repere" screen for confirmation and saving.

Edit Repere2D



From this screen you can change the position of the reference points identified by the Spine3D. To do this, select one of the green dots with the cursor and move it to the desired point. A zoom window is also active to help the operator in the positioning of the point.

The Spine3D system identifies the following anatomical landmarks:

- **VP** (Prominent Vertebra) = identifies the promimentum vertebra which is the representation of C7;

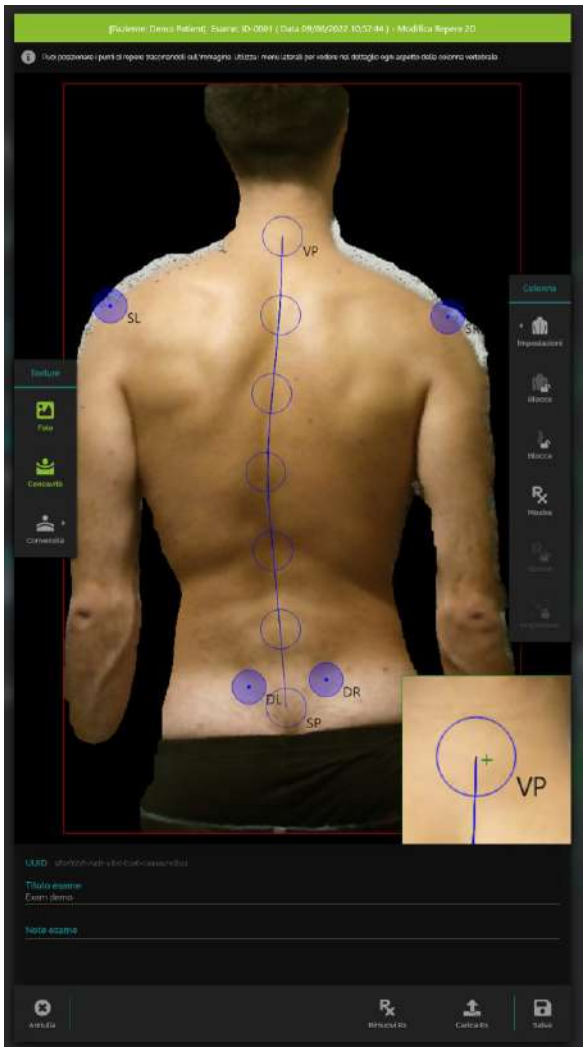
- **SL** (Left Shoulder) and **SR** (Right Shoulder) = identify the acromion of the left shoulder and the acromion of the right shoulder, respectively;
- **DL** (Left Dimple) and **DR** (Right Dimple) = identify respectively the left lumbar dimple and the right lumbar dimple which would represent the posterior iliac crests of the pelvis;
- **SP** (Sacred Prominent) = identifies the prominence of the sacred which is a representation of S1-S2;

PLEASE NOTE: this is an operation that should only be carried out by personnel experienced in identifying landmarks and trained in the correct use of the system.

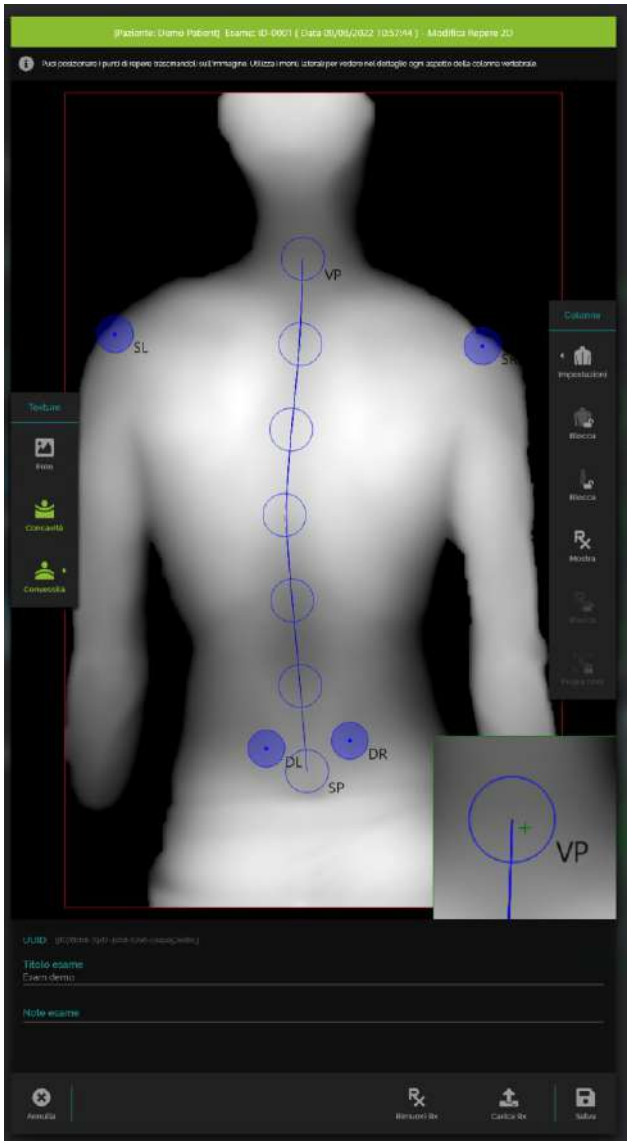
At the bottom you can enter the "Exam Title" and notes.

Using the buttons on the left, you can use four different views: the actual photo of the subject, the concavity and convexity photo, and two depth images, one in grayscale and one colorimetric.

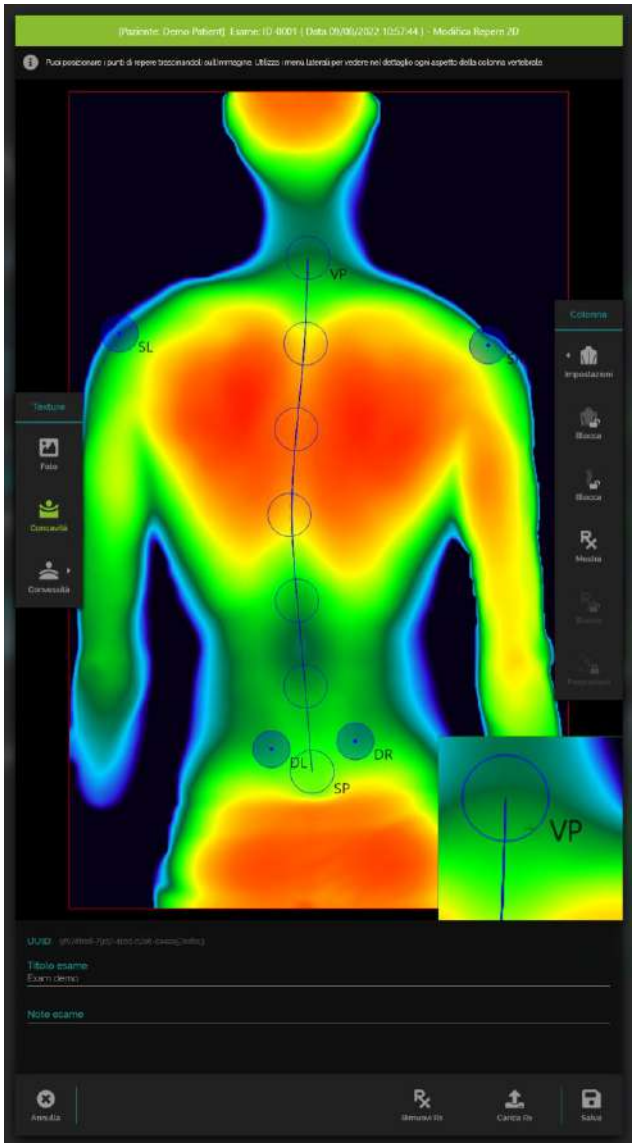
Photo



Depth gray scale



Depth color

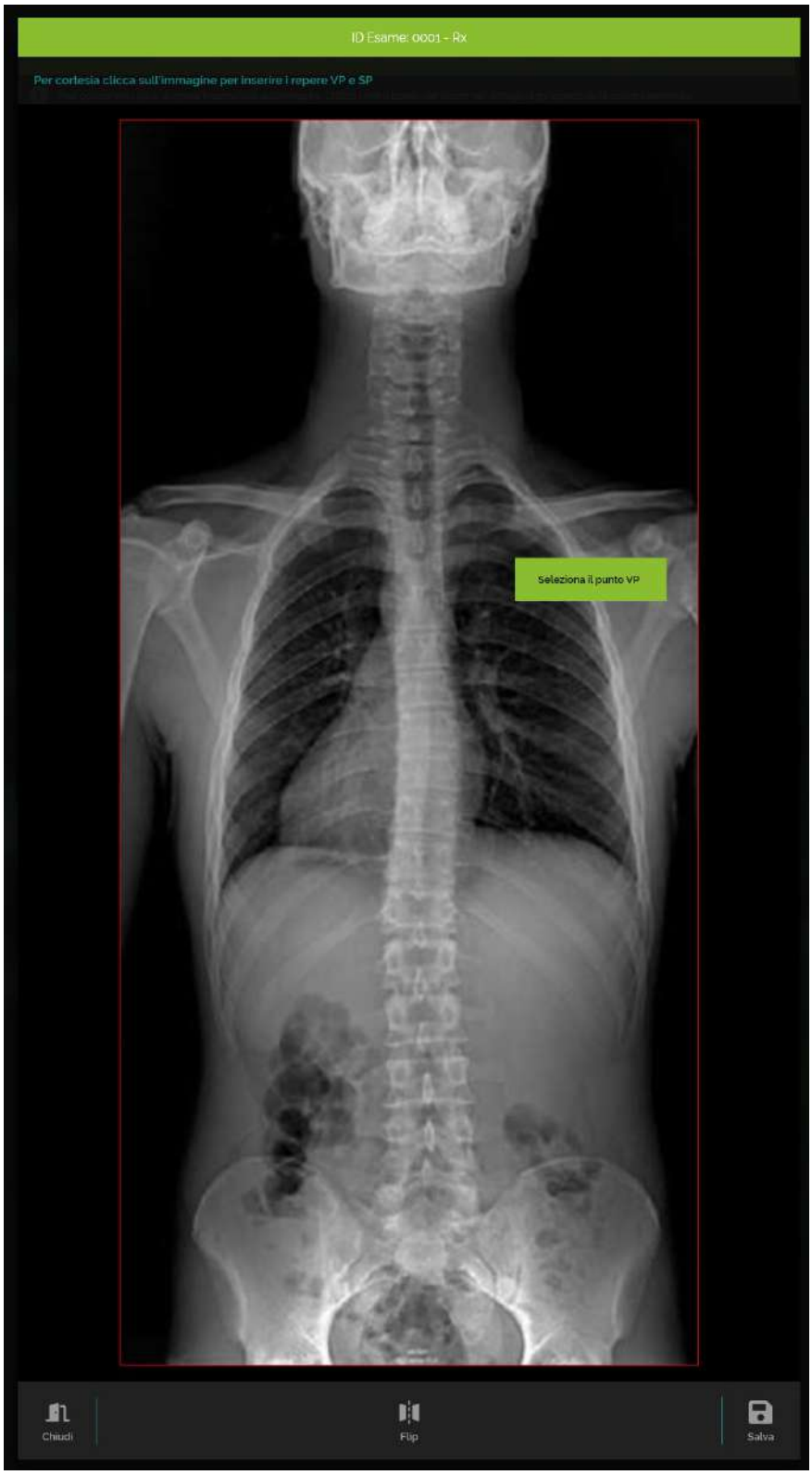


RX Image Import

From this screen, you can import an RX image of the subject. You have to click on the "Load Rx" button at the bottom right, a Windows explorer window will open from where you can select the image file.



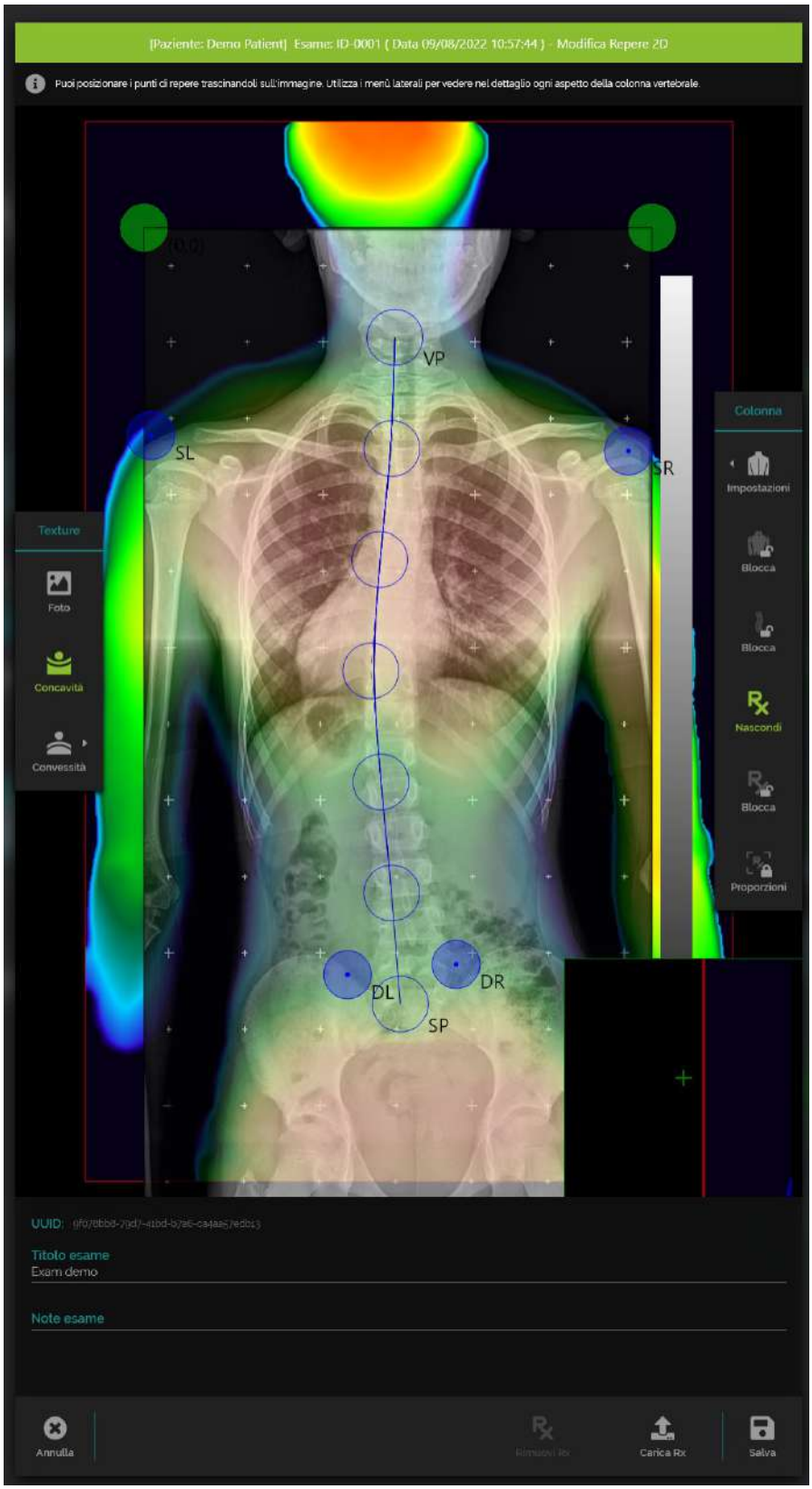
Once the image is selected, the following screen will open:



At this point the operator will first have to check that the image is rotated correctly, otherwise use the "Flip" button to turn the image.

Then you will have to select the "VP" point on the RX image and then the "SP" point so that the software does a first resizing.

Once this is done, the following screen will appear:



On this screen, you will be able to adapt the Rx image even better for overlay on the 3D image. Click "Save" to save everything.

N.B. the image file must be in .jpg, .jpeg or .png format

The file can be loaded onto the PC by inserting a CD or by connecting a USB stick with the file inside.

Clicking on the "Save" button will save the exam and open the 3D view.

FULL BODY ACQUISITION

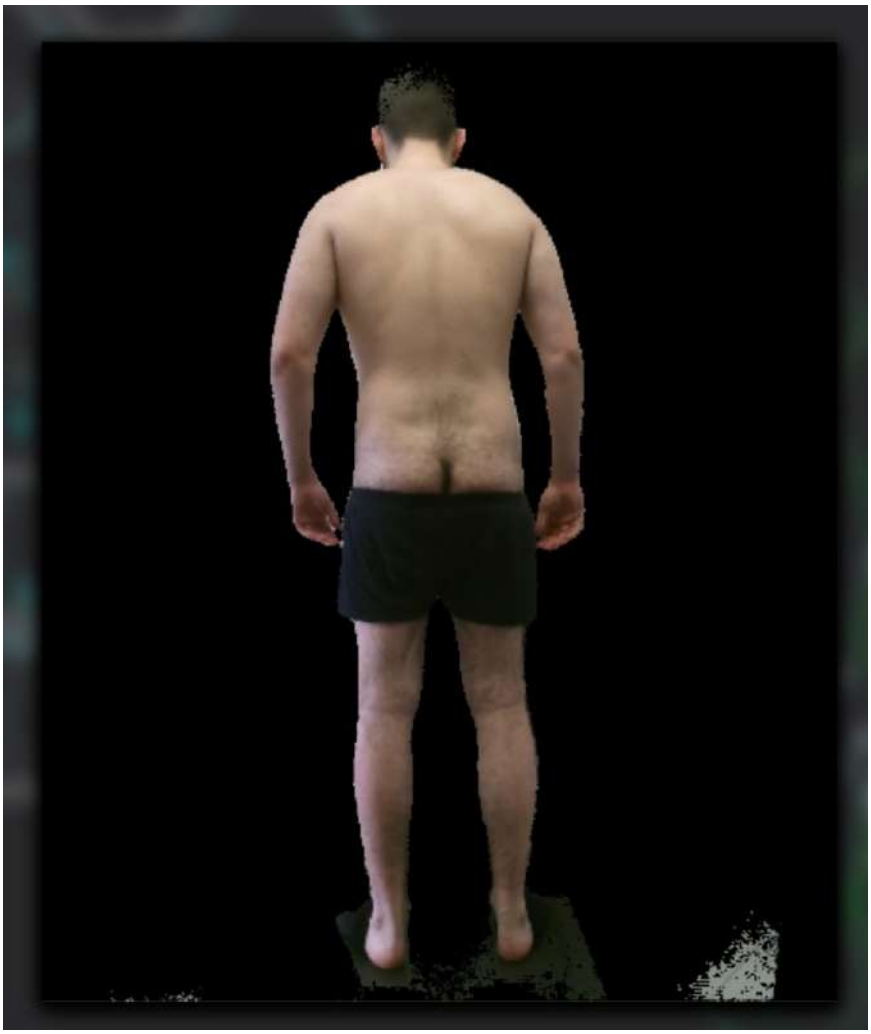
To start a new acquisition, select the patient if already in the archive, or create the patient, and click on "Exam+". And select the "Full Body Acquisition" or "Torso Acquisition with Platform" exam (only available with the purchase of the FreeMED40x40 footplate):



Check that the patient is positioned correctly according to the following indications:

- The patient should be positioned on top of the platform provided with the heels placed along the horizontal markers
- The patient should not wear a t-shirt and trousers (for women, it is also necessary to remove or unfasten the bra so as not to alter the acquisition)
- The patient should keep the undergarments down at least halfway up the buttock so that the intergluteal groove is visible
- It is necessary that the nape of the neck is visible at least up to the ears, keeping the hair gathered above the head
- The arms must be in a relaxed and natural position, possibly not attached to the body
- The heels must be detached in such a way that there is "light" between the legs

An example is shown in the following image:



FOR THE SINGLE-CAMERA SYSTEM: Once the patient has been correctly positioned, the chamber must be positioned at the highest point of the spine, going all the way to the end of the stroke. Then, using the joystick, move the camera as shown. This will frame the entire top of the subject as shown below:

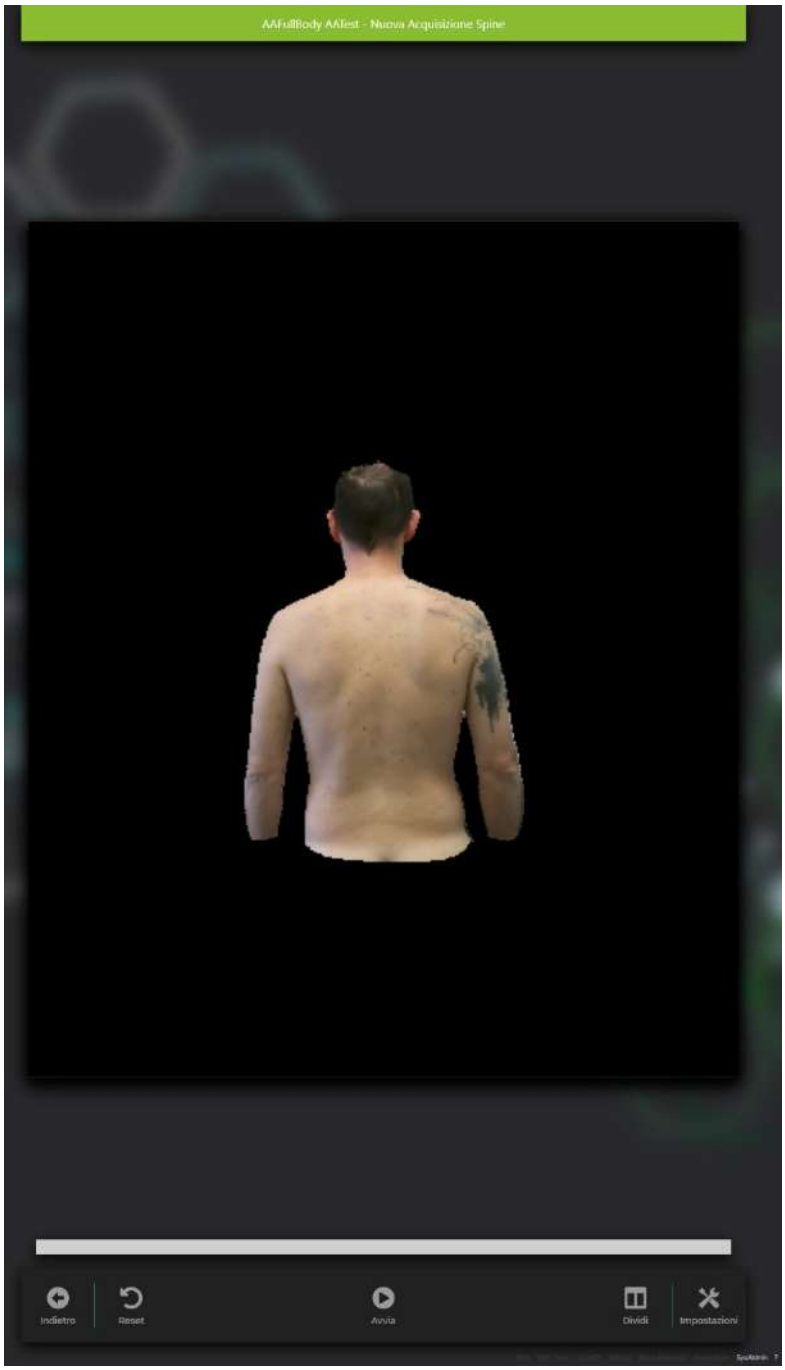
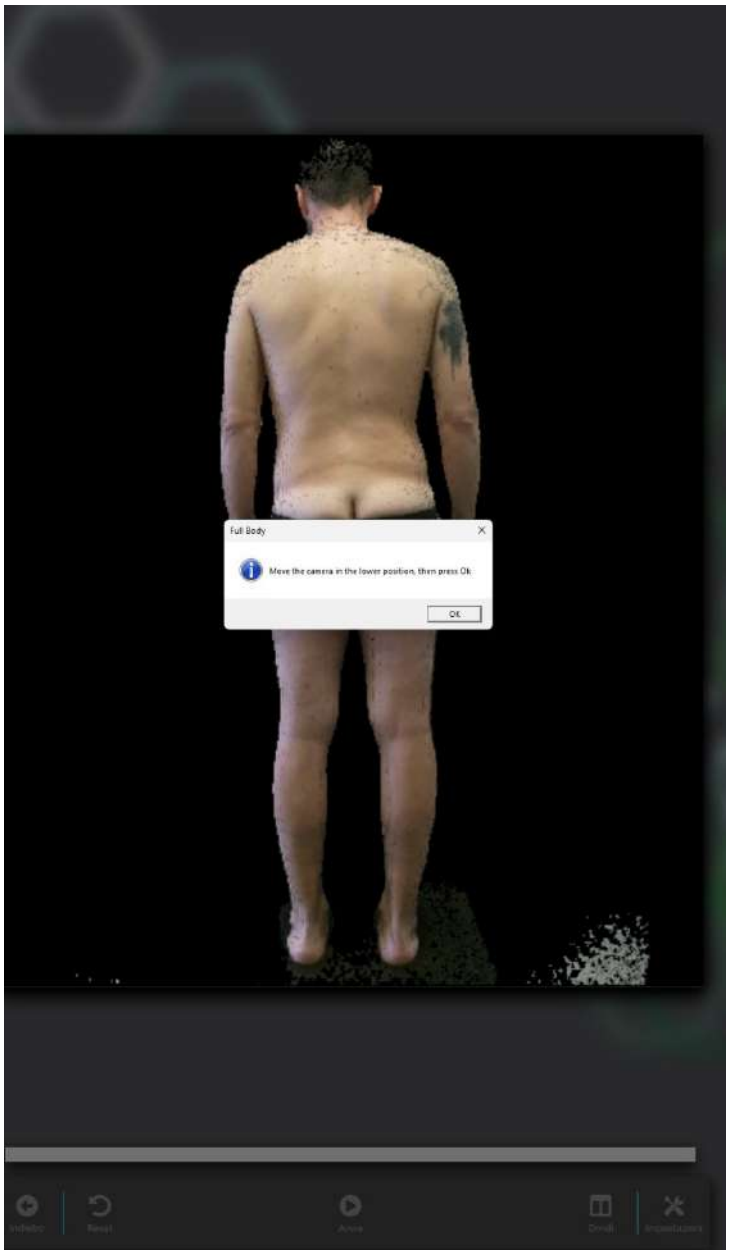
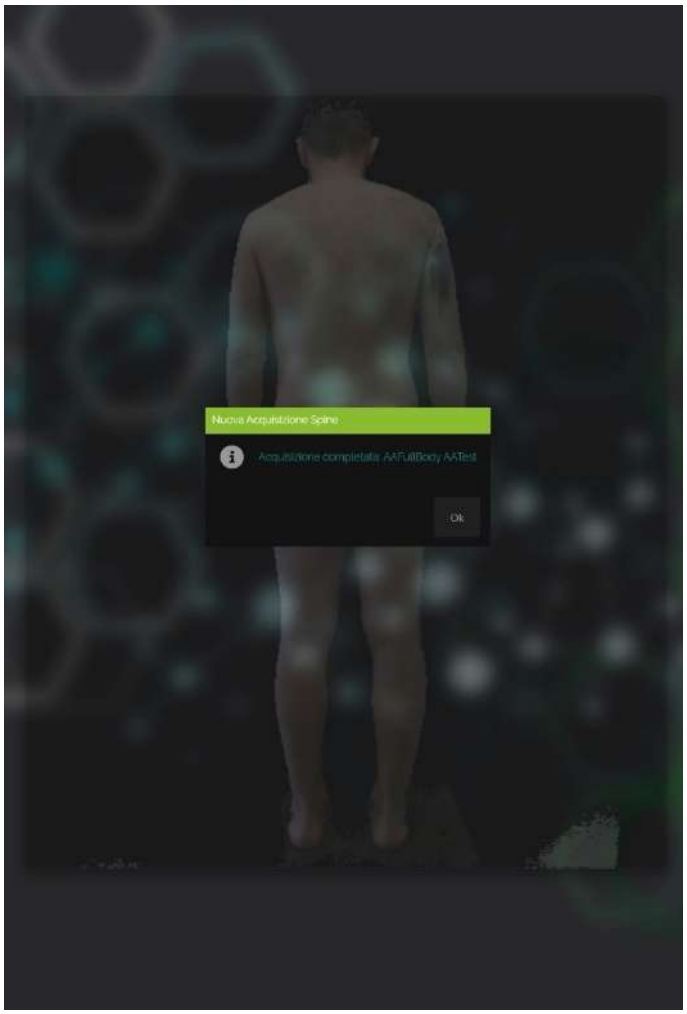


Image That Contains Text, Font, Logo, Graphics Auto-generated description. From that moment on, the patient must remain still for 10 seconds and wait for the first part of the acquisition to finish. A pop-up window will appear, instructing you to move the camera to the lowest part of the column. After this operation, press "Ok".

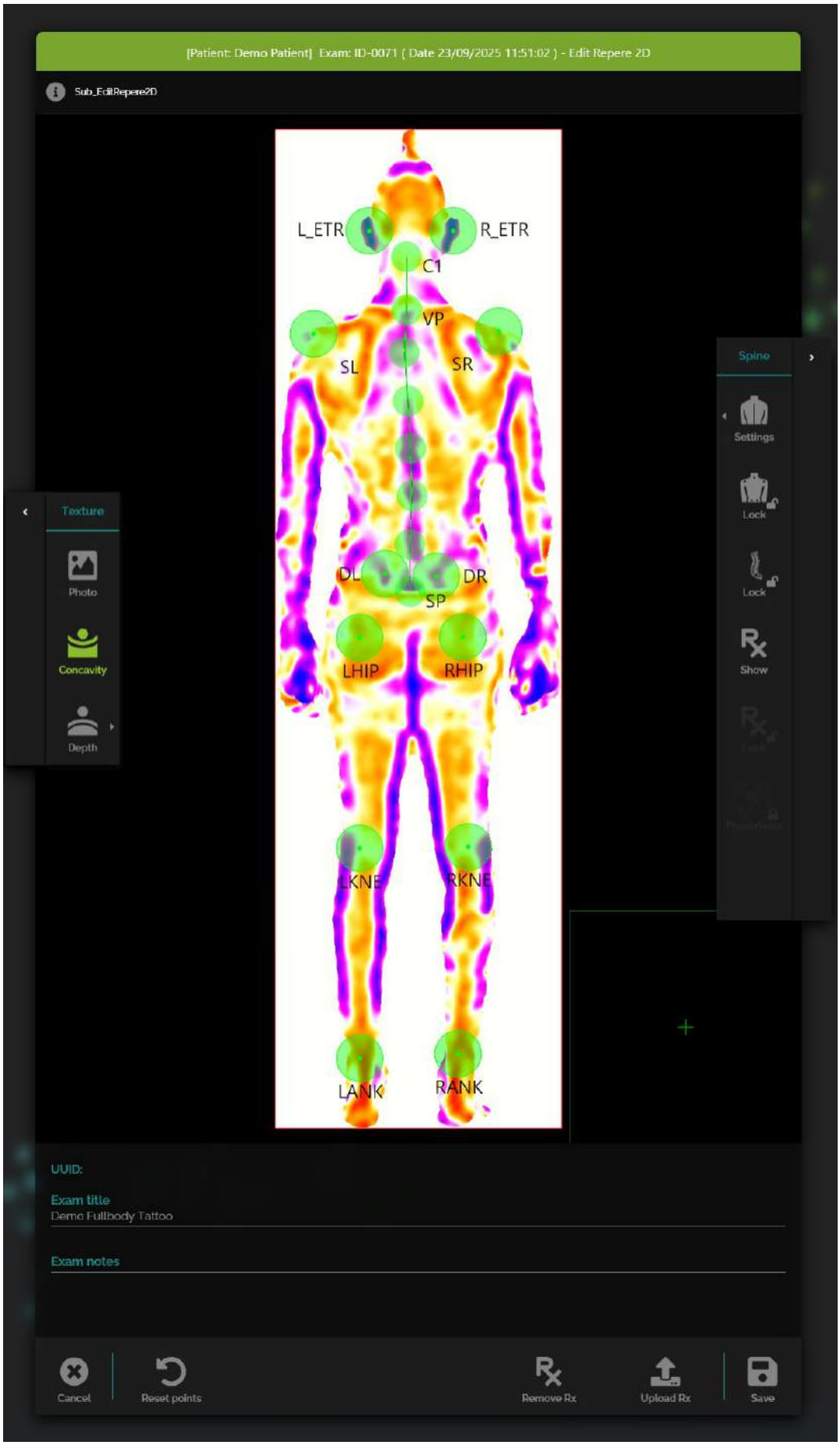


Clicking on "ok" will start a new acquisition. At the end of the capture, the following image will appear:



FOR THE TWO-CAMERA SYSTEM: Once the patient is positioned correctly, simply click on the "Start" button at the bottom center to automatically acquire the whole body.

Clicking on "ok" will open the "edit 2D reperé point" screen:


[Patient: Demo Patient] Exam: ID-0071 (Date 23/09/2025 11:51:02) - Edit Repere 2D
Sub_EditRepere2D
L_ETR
R_ETR
C1
VP
SL
SR
DL
DR
SP
LHIP
RHIP
LKNE
RKNE
LANK
RANK
Texture
Photo
Concavity
Depth
Spine
Settings
Lock
Lock
Show
UUID:
Exam title
Demo Fullbody Tattoo
Exam notes
Cancel
Reset points
Remove Rx
Upload Rx
Save

From this screen you can edit the reference points identified by the Spine3D. To do this, select one of the green dots with the cursor and move it to the desired point. A zoom window is also active to help the operator in the positioning of the point.

The Spine3D system identifies the following anatomical landmarks:

- **VP** (Prominent Vertebra) = identifies the promimentum vertebra which is the representation of C7;
- **SL** (Left Shoulder) and **SR** (Right Shoulder) = identify the acromion of the left shoulder and the acromion of the right shoulder, respectively;
- **DL** (Left Dimple) and **DR** (Right Dimple) = identify respectively the left lumbar dimple and the right lumbar dimple which would represent the posterior iliac crests of the pelvis;
- **SP** (Sacred Prominent) = identifies the prominence of the sacred which is a representation of S1-S2;
- **LHIP** (Left Hip) and RHIP **(Right Hip)** = are the representation of the left hip center and the right hip center, respectively;
- **LKNEE** (Left Knee) and **RKNEE** (Right Knee) = are the representation of the left knee center and the right knee center, respectively;
- **LANK** (Left Ankle) and **RANK** (Right Ankle) = are the representation of the left ankle center and the right ankle center, respectively;
- **L_ETR** (left tragus) = identifies the tragus of the left earlobe
- **R_ETR (**right tragus) = identifies the tragus of the right earlobe
- **C1 =** identifies the first cervical vertebra C1

At the bottom you can enter the "Exam Title" and notes.

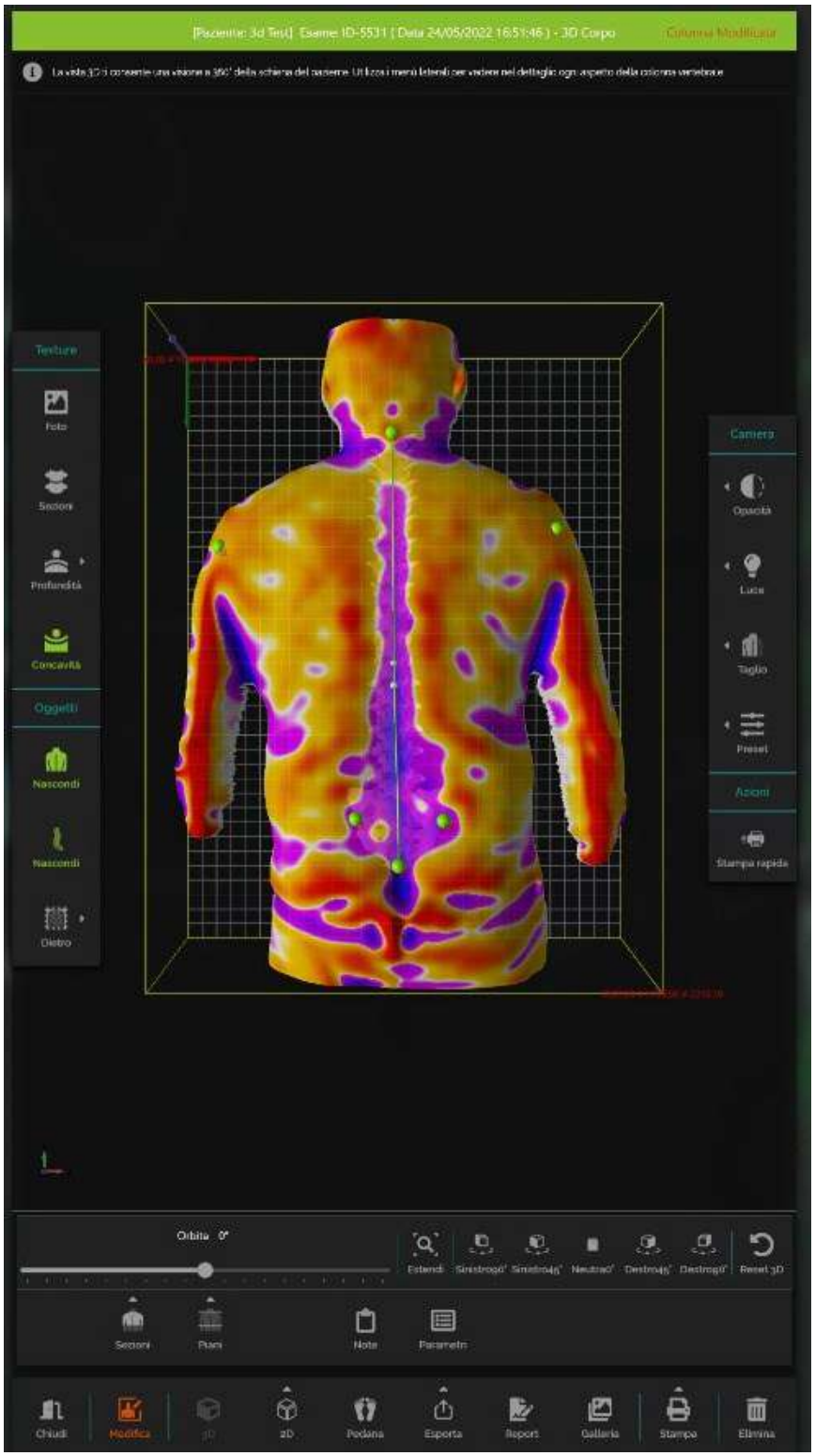
Using the buttons on the left, you can use four different views: the actual photo of the subject, the concavity and convexity photo, and two depth images, one in grayscale and one colorimetric as shown in the previous chapter.

Clicking on the "Save" button will save the exam and open the 3D view.

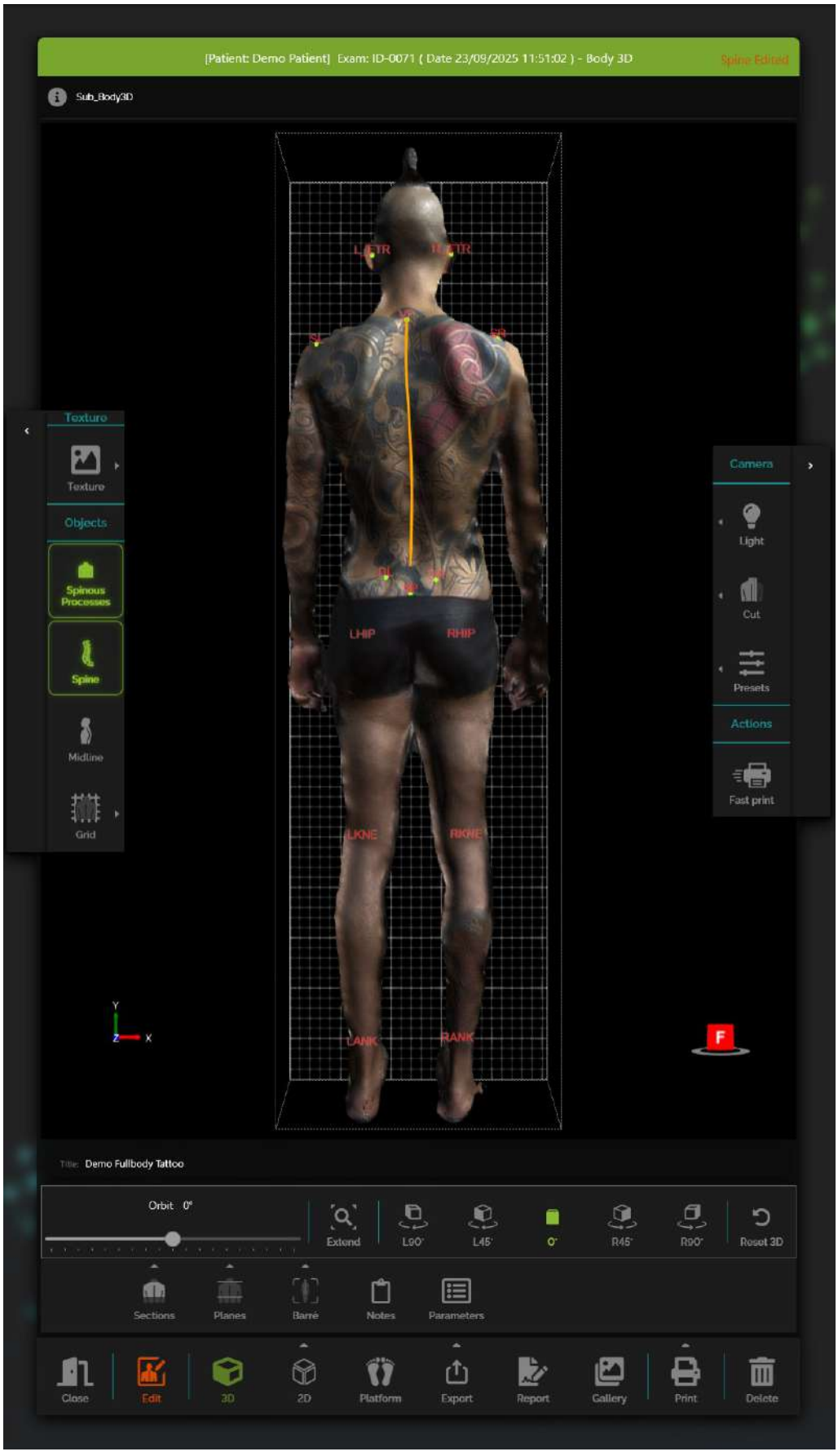
3D VISUALIZATION

To open an exam, double-click on the patient from the archive and select the analysis of interest.

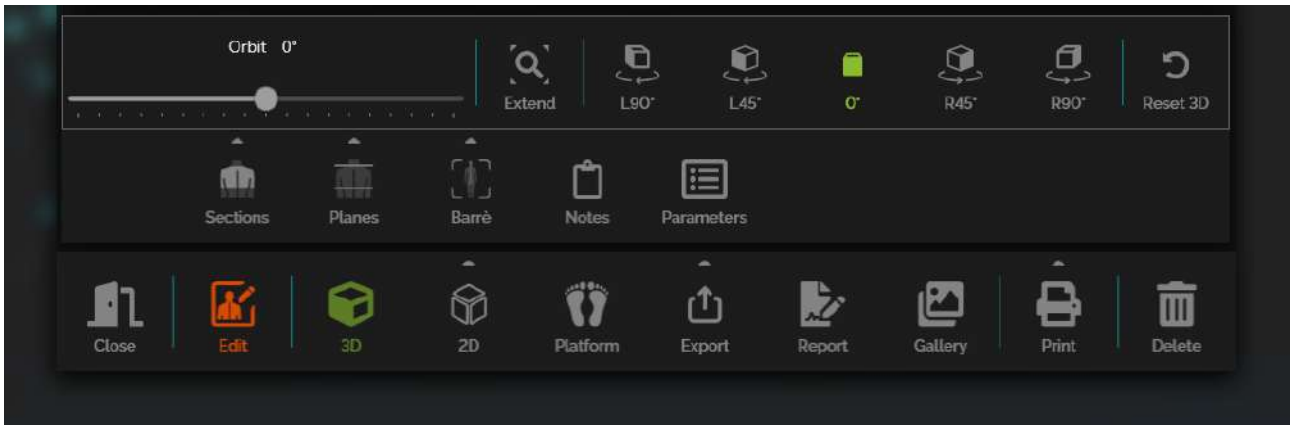
Visualization only for Torso:



Full Body Display:

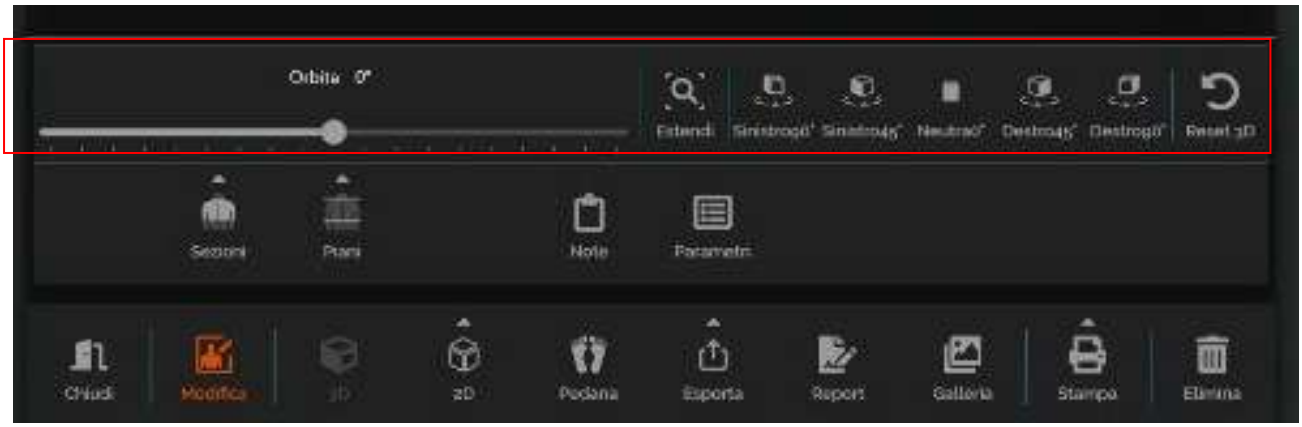

[Patient: Demo Patient] Exam: ID-0071 (Date 23/09/2025 11:51:02) - Body 3D
Spine Edited
Sub_Body3D
Texture
Texture
Objects
Spinous Processes
Spine
Midline
Grid
Camera
Light
Cut
Presets
Actions
Fast print
LHIP
RHIP
LKNE
RKNE
LANK
RANK
F
Title: Demo Fullbody Tattoo
Orbit 0°
Extend
L90°
L45°
0°
R45°
R90°
Reset 3D
Sections
Planes
Barré
Notes
Parameters
Close
Edit
3D
2D
Platform
Export
Report
Gallery
Print
Delete

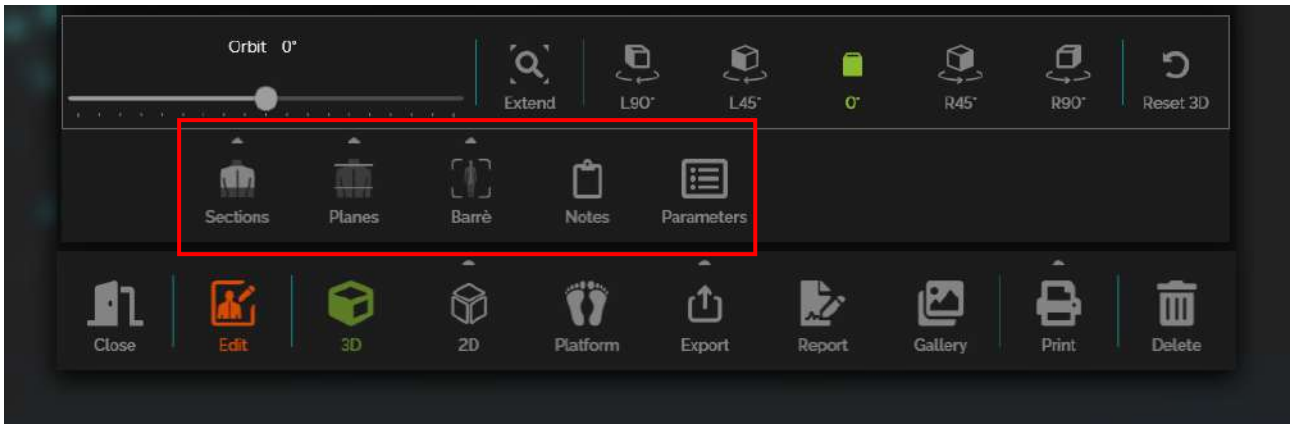
In the lower center there is the menu of the various sections of the exam display:



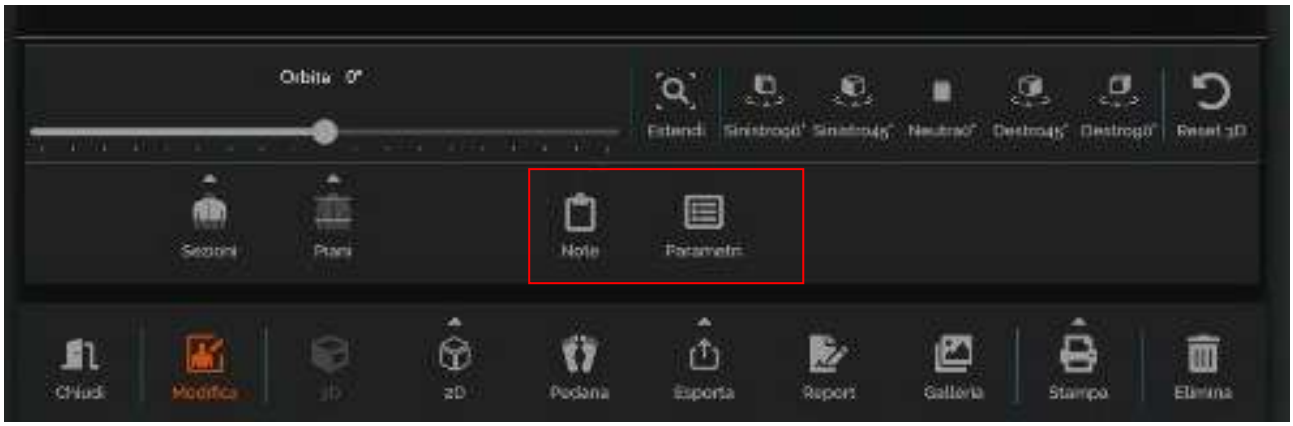
- Close: Closes the exam view
- Edit: Reopens the "Edit 2D landing" screen described above
- 3D: Three-dimensional view of the acquisition
- 2D
    1. Sagittal: side view parameters.
    2. Coronal: frontal view parameters.
    3. Cross: Viewing Sections
    4. Cervical Cervical: Cervical Parameters Display
    5. Sacred: Pelvis Parameter Display
- Platform: displays blood pressure test data
- Export: Export data in .csv format
- Report: opens the screen with the automatic test report
- Gallery: Viewing Captured Images
- Print: Exam Printout
- Delete: Delete exam.

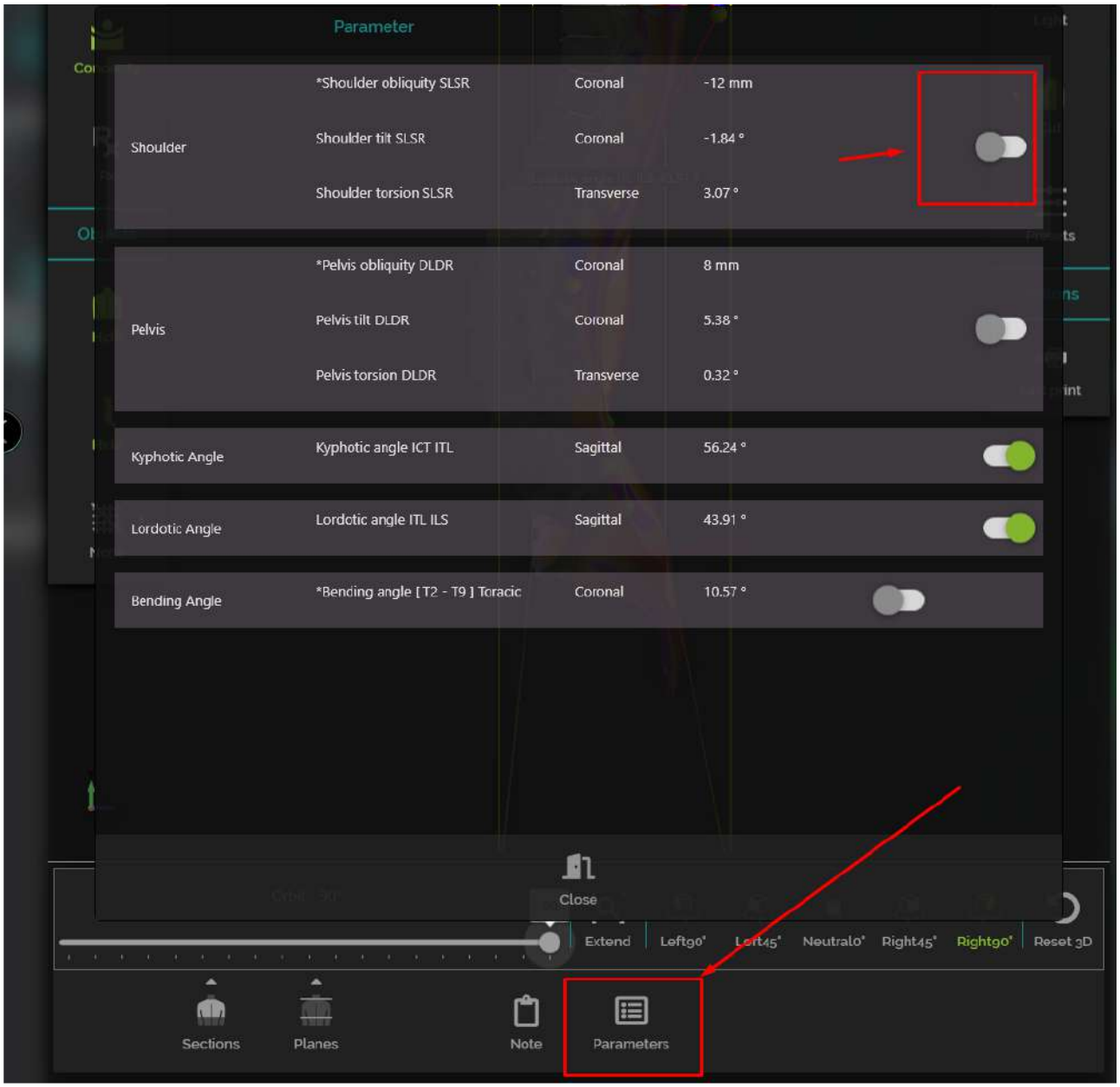
With the scroll bar at the top it is possible to rotate the 3D and with the keys on the side it is possible to perform pre-established rotations or reposition the 3D.



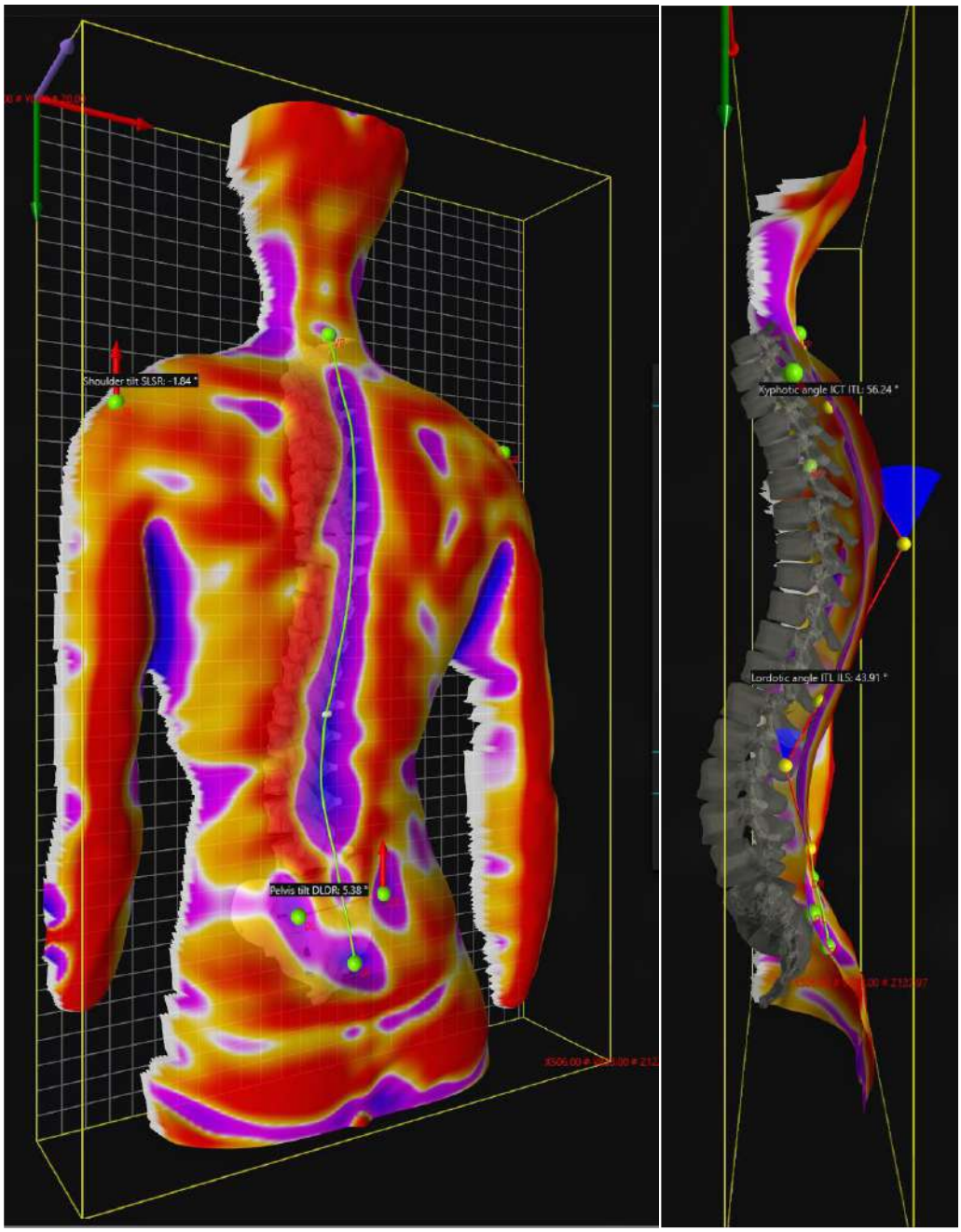


- Sections: Highlights or hides a certain portion of the spine.
- Planes: inserts a transverse plane at the thoracic or cervical level.
- Barrè: projects verticals on 3D passing through different anatomical points such as L4 or VP.
- Notes: Adds notes to the exam
- Parameters: projects some parameters that can be found in 2D planes onto 3D.

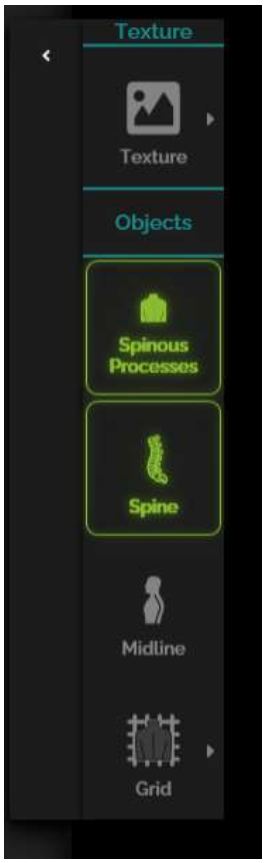




The parameters will appear on the 3D as shown in the image:

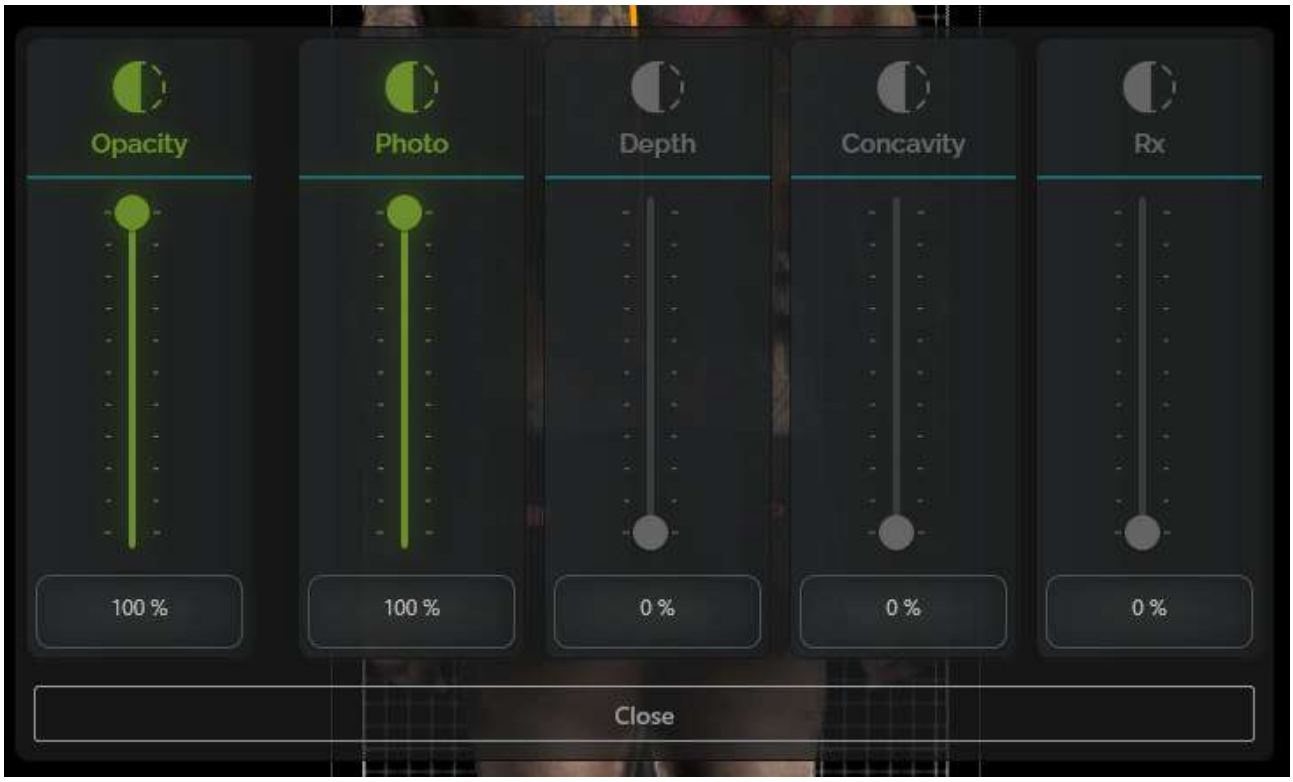


In the side bars there are the adjustment and display menus.



On the left we find:

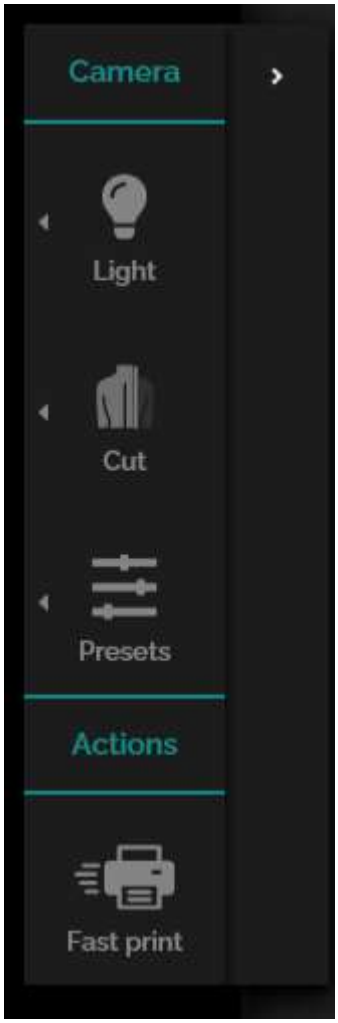
- **Texture**



- Opacity: Allows you to hide the 3D mesh
- Photo: Shows the capture with the patient photo superimposed
- Concavity: colorimetric display of concavities
- Depth: Colorimetric display of depths
- RX: Imported X-ray display

- **Spinous Processes:** allows you to hide or not the line of spinous processes
- **Spine:** allows you to hide the 3D spine
- **Midline:** allows you to hide the line representing the centers of the verts
- **Grid:** allows you to project vertical and horizontal lines on the 3D

A destra troviamo:



- Opacity: adjust the opacity of the displayed image
- Light: adjust the brightness
  or Azimuth
  or Altitude
- Cut: allows you to move planes along the frontal, transversal and sagittal axes and to display only one part or another of the cut

- Presets: With those buttons you can save your favorite combination of camera, light, rotation, texture, etc.

There is also a default preset that is loaded every time an exam is opened.

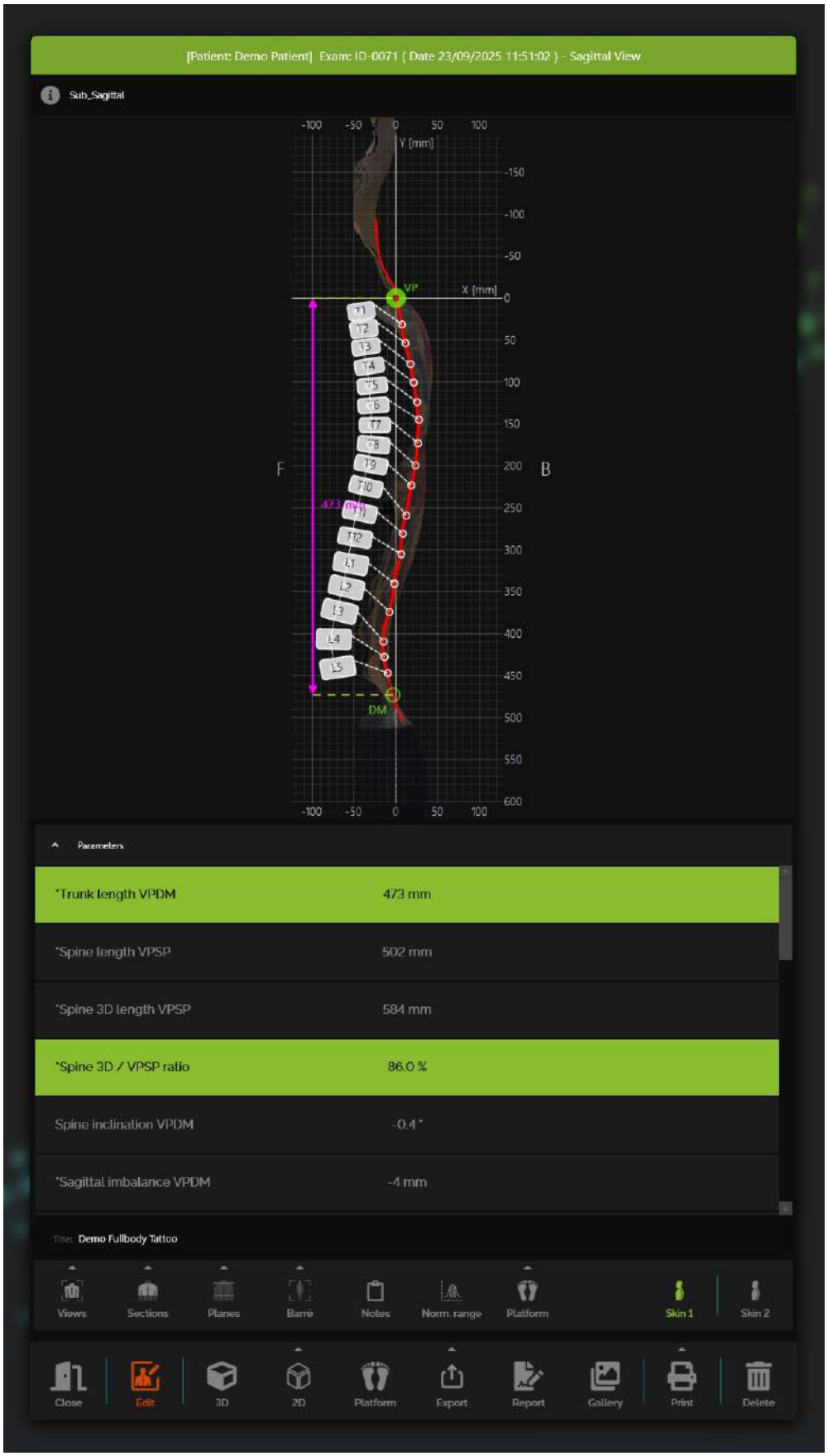
- The quick print button allows you to print a pdf of the exam with the basic information and the 3D displayed.

Also on the right we find the Reset3D key which allows you to arrange the 3D image as when the test was opened.

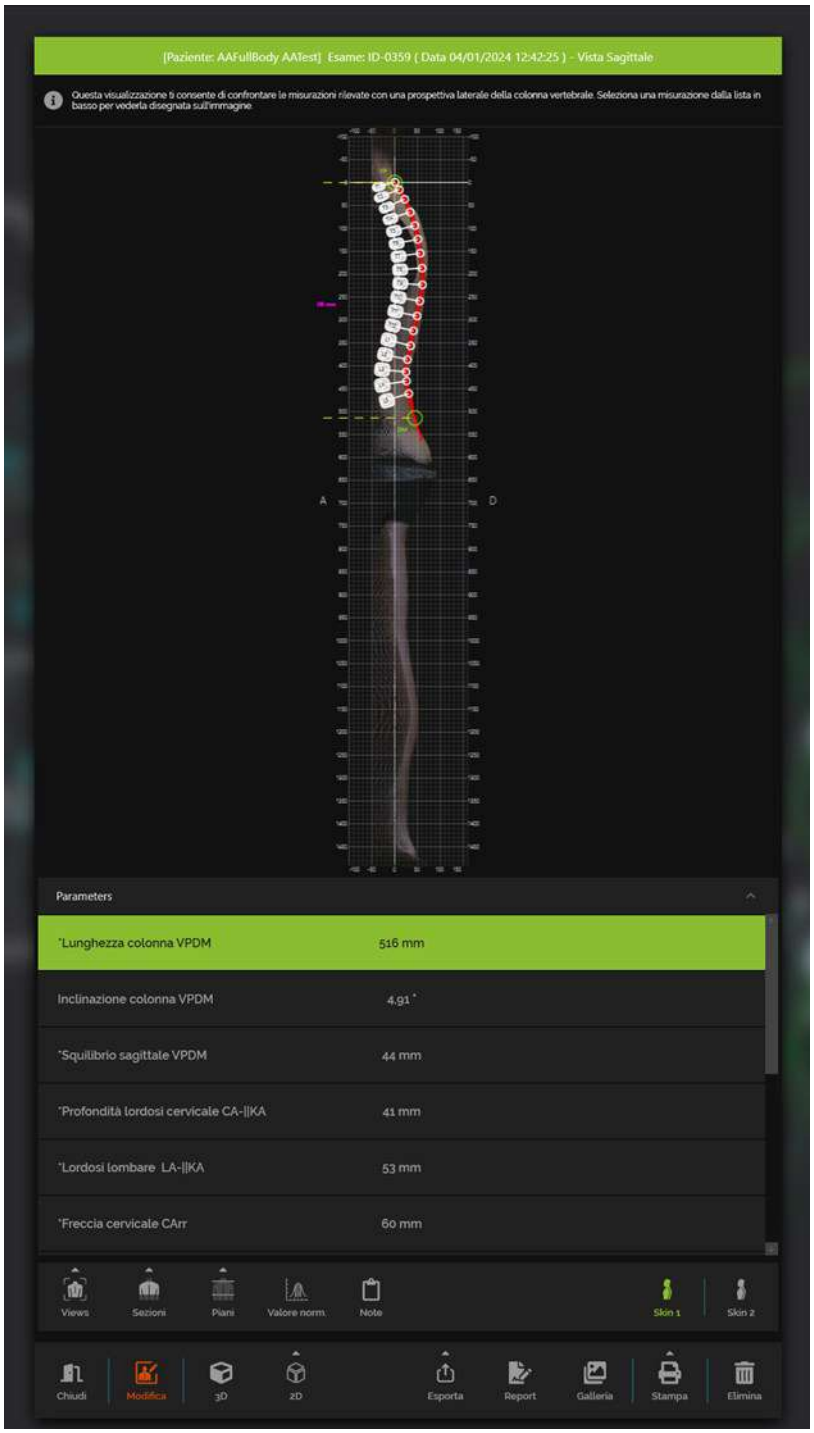
Finally, just below the Reset3D key we find the PNG key that allows you to export the image in .png format.

Sagittal Plane

This section shows all the parameters automatically calculated by the software in the side view of the patient acquisition. The drawing in this view is updated by selecting one of the parameters in the list below. Keeping the SHIFT key pressed, it is possible to click and select several parameters at the same time, to see them all represented on the drawing.


[Patient: Demo Patient] Exam: ID-0071 (Date 23/09/2025 11:51:02) - Sagittal View
Sub_Sagittal
Y [mm]
X [mm]
VP
DM
F
B
473 mm
Parameters
*Trunk length VPDM 473 mm
*Spine length VPSP 502 mm
*Spine 3D length VPSP 584 mm
*Spine 3D / VPSP ratio 86.0 %
Spine inclination VPDM -0.4 °
*Sagittal imbalance VPDM -4 mm
Title: Demo Fullbody Tattoo
Views
Sections
Planes
Barre
Notes
Norm. range
Platform
Skin 1
Skin 2
Close
Edit
3D
2D
Platform
Export
Report
Gallery
Print
Delete

If you have made a Full Body capture, the following screen will appear:



Using the "**Views"** button it is possible to select the full body display or an automatic display on the selected parameter using the "auto" button**.**

With the "**Sections" button**, you can show or hide the representation of the vertebrae in the two sections: thorax and lumbar.

With the **"Planes" button**, you can show or hide two cervico-thoracic braying planes on VP and the thoracolumbar inversion plane.

With the "**Barrè" button** it is possible to project vertical lines passing through some anatomical points such as L4 or VP.

With the "**Norm value**" button it is possible to show or hide the "normal" ranges to have a reference with respect to the scientific literature.

PLEASE NOTE: These values are taken from the scientific literature and do not provide any type of evaluation or diagnostic analysis.

With the "notes" button it is possible to enter notes on the exam that will be reported in the final report.

With the "**Platform**" button you can view the data of the pressure platform:


[Patient: Demo Patient] Exam: ID-0071 (Date 23/09/2025 11:51:02) - Sagittal View
Sub_Sagittal
Y [mm]
X [mm]
VP
DM
F
B
T1
T2
T3
T4
T5
T6
T7
T8
T9
T10
T11
T12
L1
L2
L3
L4
L5
Baropodometry
Info
Detailed info
Close [x]
COP R
COP
COP L
Max
Views
Sections
Planes
Barre
Notes
Norm. range
Platform
Skin 1
Skin 2
Close
Edit
3D
2D
Platform
Export
Report
Gallery
Print
Delete

With the "**Skin1"** and **"Skin2**" buttons, you can show or hide the upper limb.

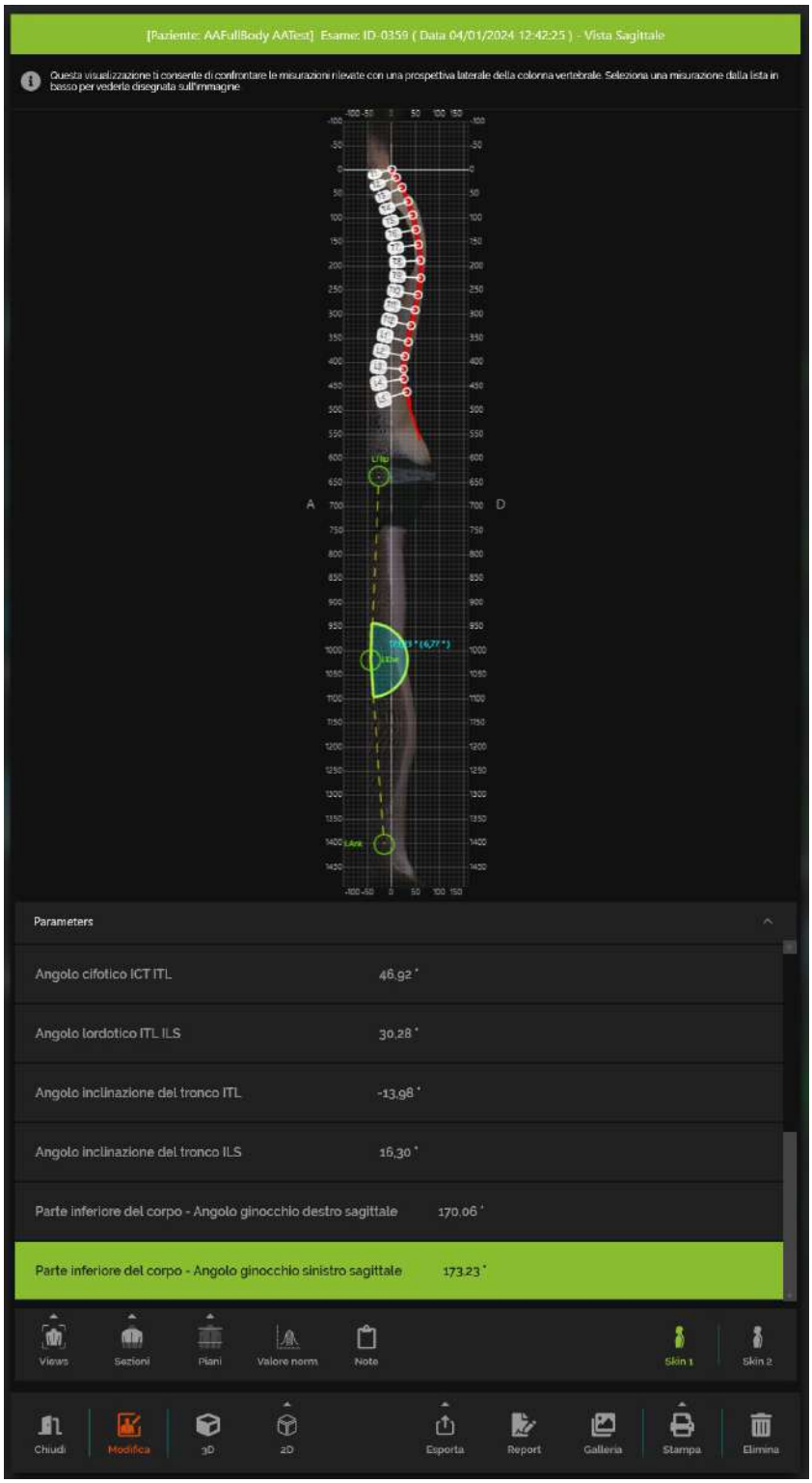
The definitions of the parameters are as follows:

- **VPDM trunk length**: Length of the junction segment between VP and DM
- **VPSP trunk length**: Length of the junction segment between VP and SP
- **Spine 3D length VPSP**: 3D length of the spinal curve between VP and SP, calculated along the final 3D midline of the spine.
- **3D spines /VPSP ratio**: Straight line VP-SP distance divided by the length of the 3D spinal curve (VP-SP), expressed as a percentage.
- **VPDM column inclination**: angle formed between the line passing through VP and DM and the vertical plane (along the sagittal section)
- **Sagittal imbalance VPDM**: Horizontal distance, along the sagittal plane, between VP and the vertical through DM
- **Cervical Lordosis Depth CA-||KA:** Distance between CA (cervical apex) and the tangent to KA (kyphotic apex) which is parallel to the VPDM line
- **Lumbar lordosis LA-||KA:** Distance between LA (lumbar apex) and the tangent to KA (kyphotic apex) which is parallel to the VPDM line
- **Carr Cervical Arrow:** Sagittal distance between the deepest point of the cervical spine and the virtual vertical plumb line
- **Carr-VP Cervical Arrow**: Sagittal distance between the VP point and the virtual vertical plumb line
- **Lumbar Arrow LArr:** Sagittal distance between the deepest point of the lumbar spine and the virtual vertical plumb line
- **ICT ITL kyphotic angle**: upper angle formed by tangents to the surface in ICT and ITL
- **ITL ILS lordotic angle**: upper angle formed by tangents to the surface in ITL and ILS
- **Kyphotic angle VP T12:** upper angle formed by tangents to the surface in VP and T12
- **T12 DM lordotic angle:** upper angle formed by tangents to the surface in T12 and DM
- **ITL trunk inclination**: angle of the perpendicular to the tangent of the ITL thoracic-lumbar inversion point
- **ILS trunk inclination**: angle of the perpendicular to the tangent of the ILS lumbosacral inversion point
- **Craniovertebral angle**: Estimated cranio-vertebral angle in the sagittal plane: angle between the line joining the earlobe attachment (used as a proxy for the tragus) and C7 and the cranial reference line passing through the same point on the earlobe.
- **Lower body** – **Left sagittal knee angle**: it is the angle, in the sagittal plane, formed by the LHip-LKnee-LAnk points between 0-180°;
- **Lower body – Right sagittal knee angle**: it is the angle, in the sagittal plane, formed by the RHip-RKnee-RAnk points between 0-180°;
- **Lower body – Left femur length**: This is the distance between the LHIP hip center and the LKnee knee center
- **Lower Body – Right Femur Length**: This is the distance between the RHIP center and the RKnee knee center

- **Lower body – Left tibia length**: is the distance between the center of the knee LKnee and the center of the ankle Lank
- **Lower Body – Right Shin Length**: This is the distance between the center of the knee RKnee and the center of the ankle Rank

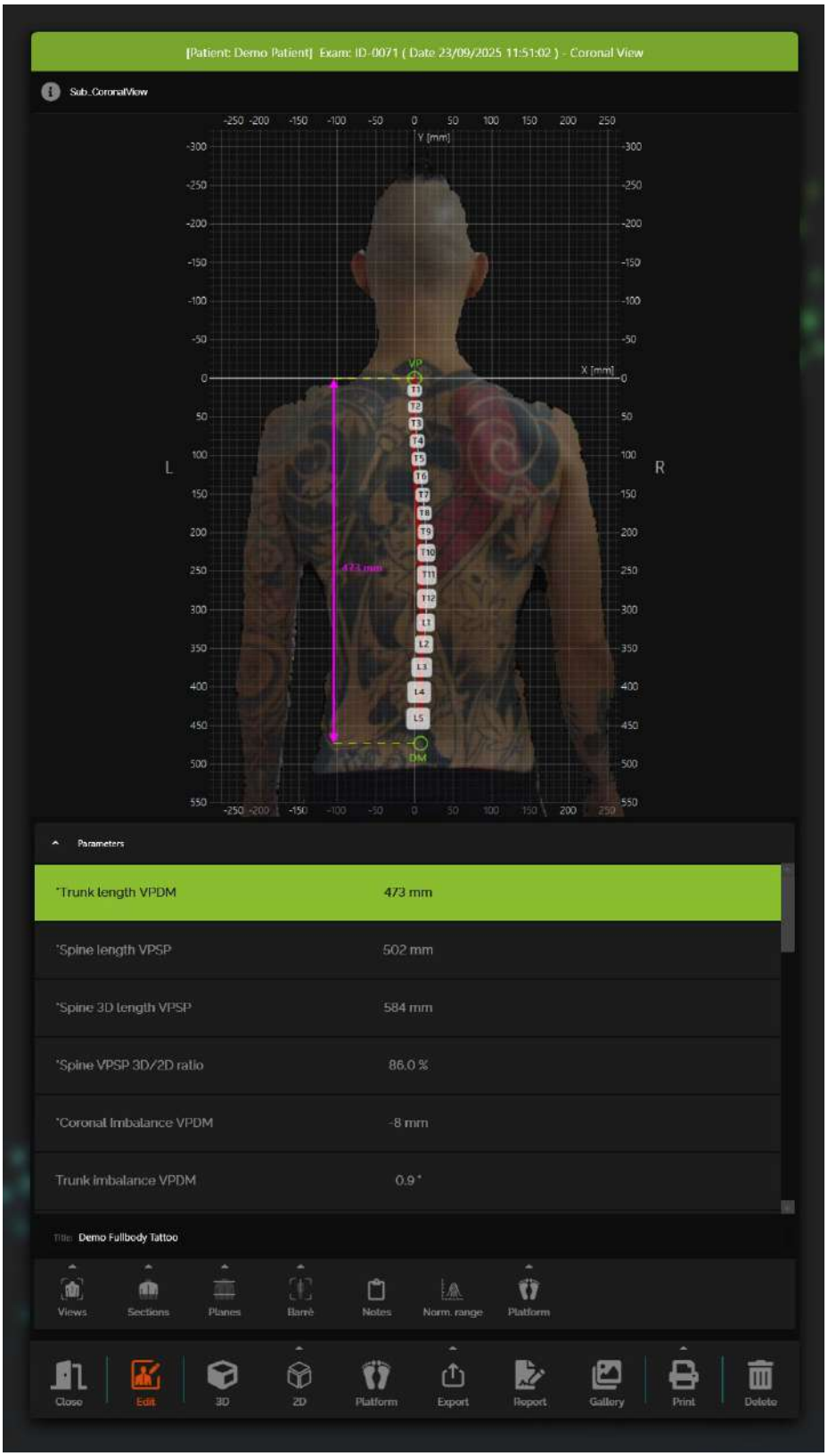
PLEASE NOTE: All angles, distances and parameters indicated on the screen or in the printed reports are for guidance purposes only. They do not constitute a medical report, but serve only to facilitate the visual observation of the professional.

N.B. angles are always between 0° and 180°. If the angle at the knee is facing the back of the subject, the value is reported with a positive sign (knee flexion attitude). If the angle at the knee is facing anterior to the subject, the value is reported with a negative sign (knee extension attitude). An example is shown in the following figure:



Coronal Plane

This section shows all the parameters automatically calculated by the software in the front view of the spine. The drawing in this view is updated by selecting one of the parameters in the list below. Keeping the SHIFT key pressed, it is possible to click and select several parameters at the same time, to see them all represented on the drawing.


[Patient: Demo Patient] Exam: ID-0071 (Date 23/09/2025 11:51:02) - Coronal View
Sub_CoronalView
Y [mm]
X [mm]
L
R
VP
DM
473 mm
Parameters
*Trunk length VPDM 473 mm
*Spine length VPSP 502 mm
*Spine 3D length VPSP 584 mm
*Spine VPSP 3D/2D ratio 86.0 %
*Coronal imbalance VPDM -8 mm
Trunk imbalance VPDM 0.9 °
Title: Demo Fullbody Tattoo
Views
Sections
Planes
Barré
Notes
Norm. range
Platform
Close
Edit
3D
2D
Platform
Export
Report
Gallery
Print
Delete



Using the "**Views"** button it is possible to select the full body display or an automatic display on the selected parameter using the "auto" button**.**

With the "**Sections" button**, you can show or hide the representation of the vertebrae in the two sections: thorax and lumbar.

With the **"Planes" button**, you can show or hide two cervico-thoracic braying planes on VP and the thoracolumbar inversion plane.

With the "**Barrè" button** it is possible to project vertical lines passing through some anatomical points such as L4 or VP.

With the "**Norm value**" button it is possible to show or hide the "normal" ranges to have a reference with respect to the scientific literature.

PLEASE NOTE: These values are taken from the scientific literature and do not provide any type of evaluation or diagnostic analysis.

With the "notes" button it is possible to enter notes on the exam that will be reported in the final report.

With the "**Platform**" button you can view the data of the pressure platform

With the "**Skin1"** and **"Skin2**" buttons, you can show or hide the upper limb.

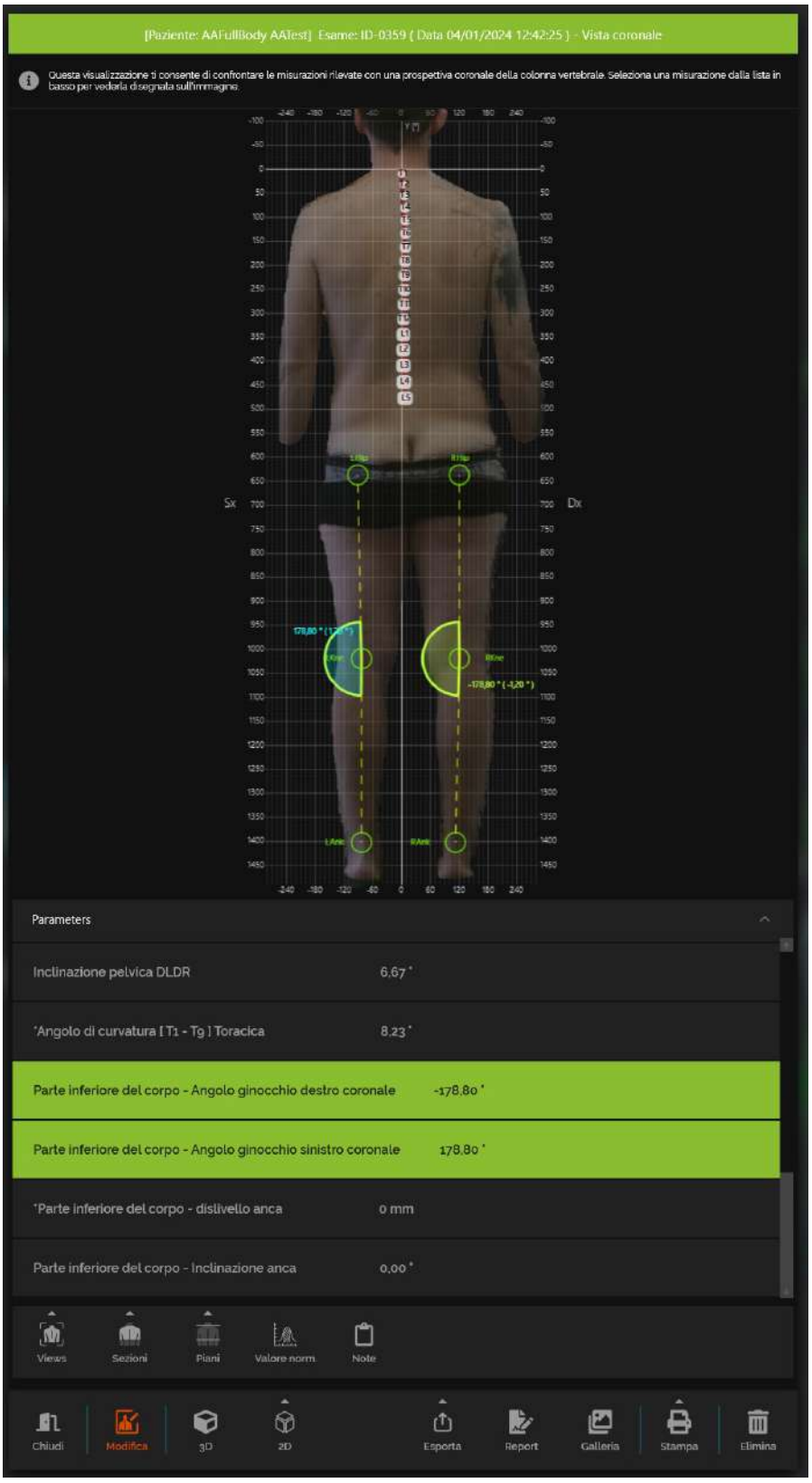
The definitions of the parameters are as follows:

- **VPDM trunk length**: Length of the connecting segment between VP and DM
- **VPSP trunk length:** Length of the junction segment between VP and SP
- **Spine 3D length VPSP**: 3D length of the spinal curve between VP and SP, calculated along the final 3D midline of the spine.
- **3D spines /VPSP ratio**: Straight line VP-SP distance divided by the length of the 3D spinal curve (VP-SP), expressed as a percentage.
- **VPDM Coronal Imbalance**: Distance between DM and the vertical line passing through VP
- **VPDM trunk imbalance**: lateral deviation between VP and DM, angle formed between the line joining VP and DM and the vertical axis
- **Shoulder inclination SLSR**: lateral deviation between SL and SR, angle formed between the line joining SL and SR and the horizontal axis
- **Pelvic tilt DLDR**: lateral deviation between DL and DR, angle formed between the line joining DL and DR and the horizontal axis
- **RMS vertebral deviation**: In the coronal plane, the square mean of the lateral horizontal deviation of the center of the bodies vertebral with respect to the line of conjunction between VP and DM
- **Left max vertebral deviation (-):** Convexity to the left
- **Right max vertebral deviation (+):** Convexity to the right
- **RMS rotation surface**: quadratic mean of the angle formed between the straight line passing through the center of the vertebral body and the apex of the corresponding spinous process and the perpendicular to the coronal plane
- **Max Left rotation surface (-):** angle formed between the straight line passing through the center of the vertebral body and the apex of the corresponding spinous process and the perpendicular to the frontal plane, displacement of the surface to the left and therefore right vertebral rotation
- **Max Dx rotation surface (+):** angle formed between the straight line passing through the center of the vertebral body and the apex of the corresponding spinous process and the perpendicular to the frontal plane, displacement of the surface to the right and therefore left vertebral rotation
- **Pelvic height difference DLDR**: Distance between the horizontal axis passing through DL and the horizontal axis passing through DR
- **Pelvic tilt DLDR**: The angle between DL and DR in the coronal plane
- **Curvature angle**: it is an estimate of the angle formed by the intersection of the two tangent lines of the upper and lower plate respectively of the first and last vertebrae affected by scoliosis. If there are more bending angles, more angles are shown.

- **N.B. this parameter appears only if there is an angle greater than 5°.**
- **Lateral head tilt**: Lateral tilt angle of the head in the coronal plane, calculated as the angle between the line connecting the left and right earlobe attachments and the line connecting the left and right acromial processes.
- **Lower body – Hip height difference:** it is the difference, in mm, between the L Hip point and the R Hip point along the vertical axis of the subject;
- **Lower Body – Hip Inclination**: it is the angle formed between the horizontal axis passing through L Hip and the line joining L Hip and R Hip.
- **Lower part of the body** – **Coronal left knee angle**: this is the angle, in the sagittal plane, formed by the LHip-LKnee-LAnk points between 0-180°;
- **Lower part of the body – Coronal right knee angle**: this is the angle, in the sagittal plane, formed by the RHip-RKnee-RAnk points between 0-180°;
- **Lower body – Left femur length**: This is the distance between the LHIP hip center and the LKnee knee center
- **Lower Body – Right Femur Length**: This is the distance between the RHIP center and the RKnee knee center
- **Lower body – Left tibia length**: is the distance between the center of the knee LKnee and the center of the ankle Lank
- **Lower Body – Right Shin Length**: This is the distance between the center of the knee RKnee and the center of the ankle Rank

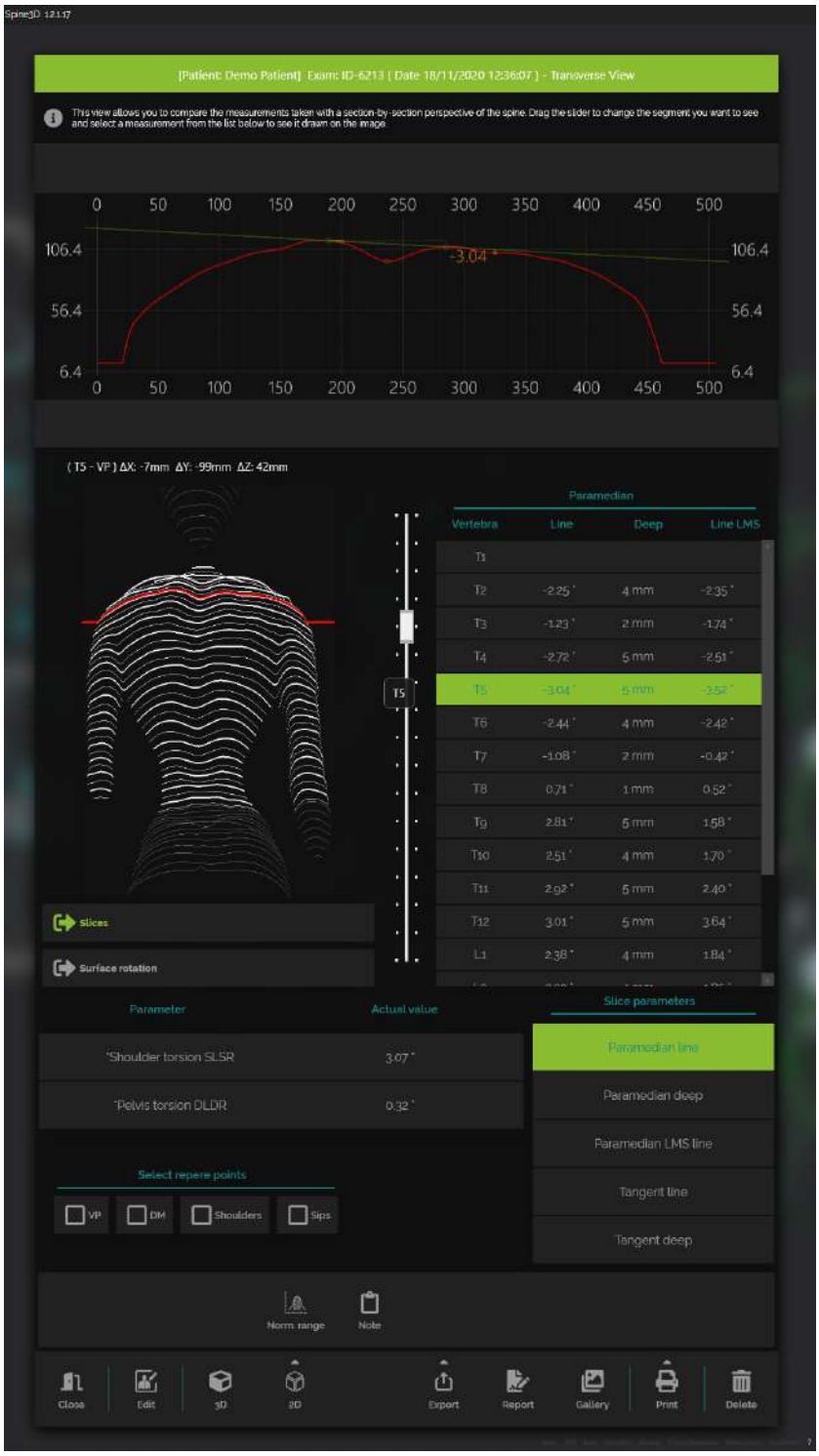
PLEASE NOTE: All angles, distances and parameters indicated on the screen or in the printed reports are for guidance purposes only. They do not constitute a medical report, but serve only to facilitate the visual observation of the professional.

N.B. angles are always between 0° and 180°. If the angle at the knee is facing the outside of the subject, the value is reported with a positive sign (valgus attitude). If the angle at the knee is turned inwards, the value is reported with a negative sign (varus attitude). An example is shown in the following figure:


[Paziente: AAFullBody AATest] Esame: ID-0359 (Data 04/01/2024 12:42:25) - Vista coronale
Questa visualizzazione ti consente di confrontare le misurazioni rilevate con una prospettiva coronale della colonna vertebrale. Seleziona una misurazione dalla lista in basso per vederla disegnata sull'immagine.
Sx
Dx
Parameters
Inclinazione pelvica DLDR 6,67 °
°Angolo di curvatura [T1 - Tg] Toracica 8,23 °
Parte inferiore del corpo - Angolo ginocchio destro coronale -178,80 °
Parte inferiore del corpo - Angolo ginocchio sinistro coronale 178,80 °
°Parte inferiore del corpo - dislivello anca 0 mm
Parte inferiore del corpo - inclinazione anca 0,00 °
Views
Sezioni
Piani
Valore norm
Note
Chiudi
Modifica
3D
2D
Esporta
Report
Galleria
Stampa
Elimina

Transversal Plane

In this screen it is possible to analyze section by section, scrolling along the bar in the center. The drawing in this view is updated by selecting one of the parameters in the list below. Keeping the SHIFT key pressed, it is possible to click and select several parameters at the same time, to see them all represented on the drawing.



With the "**Norm value**" button it is possible to show or hide the "normal" ranges to have a reference with respect to the scientific literature.

PLEASE NOTE: These values are taken from the scientific literature and do not provide any type of evaluation or diagnostic analysis.

With the "**notes**" button it is possible to enter notes on the exam that will be reported in the final report.

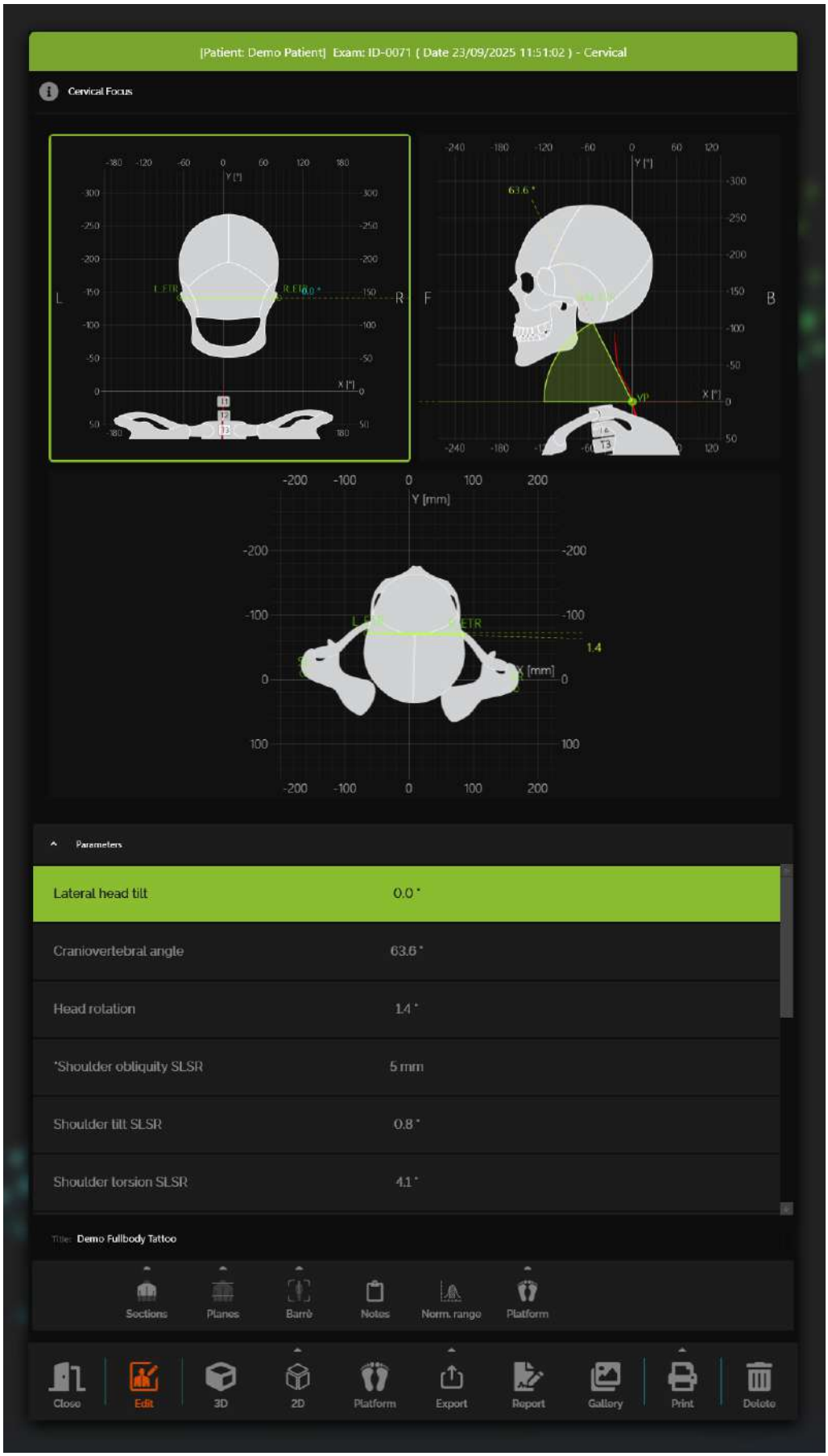
The selected section will be displayed at the top, with the parameters viewable on the right of the screen:

- **Shoulder Torsion**: it is the angle formed between the parallel to the coronal plane and the line joining SL and SR.
- **Pelvic torsion**: it is the angle formed between the parallel to the coronal plane and the joining DL and DR.
- **Paramedial line**: it is the straight line that joins the two right and left apexes of the curve profile and forms the angle with the straight line parallel to the plane and passing through the highest apex.
- **Paramedial depth**: it is the greatest perpendicular distance between the right or left apex furthest from the parallel of the opposite apex.
- **Paramedial LMS line**: it is the angle formed between the straight line parallel to the plane and passing through the highest apex and the tangent to the deepest point of the curve.
- **Tangent line**: it is the angle formed by the line passing through the two points of inflection right and left.
- **Tangent depth**: it is the greatest perpendicular distance between the right or left inflection point furthest from the parallel of the opposite inflection.

PLEASE NOTE: All angles, distances and parameters indicated on the screen or in the printed reports are for guidance purposes only. They do not constitute a medical report, but serve only to facilitate the visual observation of the professional.

Cervicale

This section shows all the parameters automatically calculated by the software for the cervical spine. The drawing in this view is updated by selecting one of the parameters in the list below. By holding down the SHIFT key you can click and select several parameters at the same time, to see them all represented on the drawing.


[Patient: Demo Patient] Exam: ID-0071 (Date 23/09/2025 11:51:02) - Cervical
Cervical Focus
Y [mm]
X [mm]
Parameters
Lateral head tilt 0.0 °
Craniovertebral angle 63.6 °
Head rotation 1.4 °
*Shoulder obliquity SLSR 5 mm
Shoulder tilt SLSR 0.8 °
Shoulder torsion SLSR 4.1 °
Title: Demo Fullbody Tattoo
Sections
Planes
Barre
Notes
Norm. range
Platform
Close
Edit
3D
2D
Platform
Export
Report
Gallery
Print
Delete

Using the "**Views**" button it is possible to select the full body display or an automatic display on the selected parameter using the "auto" button.

With the "**Sections**" button you can show or hide the representation of the vertebrae in the two sections of the chest and lumbar.

With the "**Planes**" button it is possible to show or hide two planes of cervico-thoracic braying on VP and the plane passing through thoracolumbar inversion.

With the "**Barrè" button** it is possible to project vertical lines passing through some anatomical points such as L4 or VP.

With the "**Norm value**" button it is possible to show or hide the "normality" ranges to have a reference with respect to the scientific literature.

PLEASE NOTE: these values are taken from the scientific literature and do not provide any type of diagnostic evaluation or analysis.

With the "**notes**" button it is possible to enter notes on the exam that will be reported in the final report.

With the "**Platform**" button, you can view the data of the pressure plate.

Below are the definitions of the parameters:

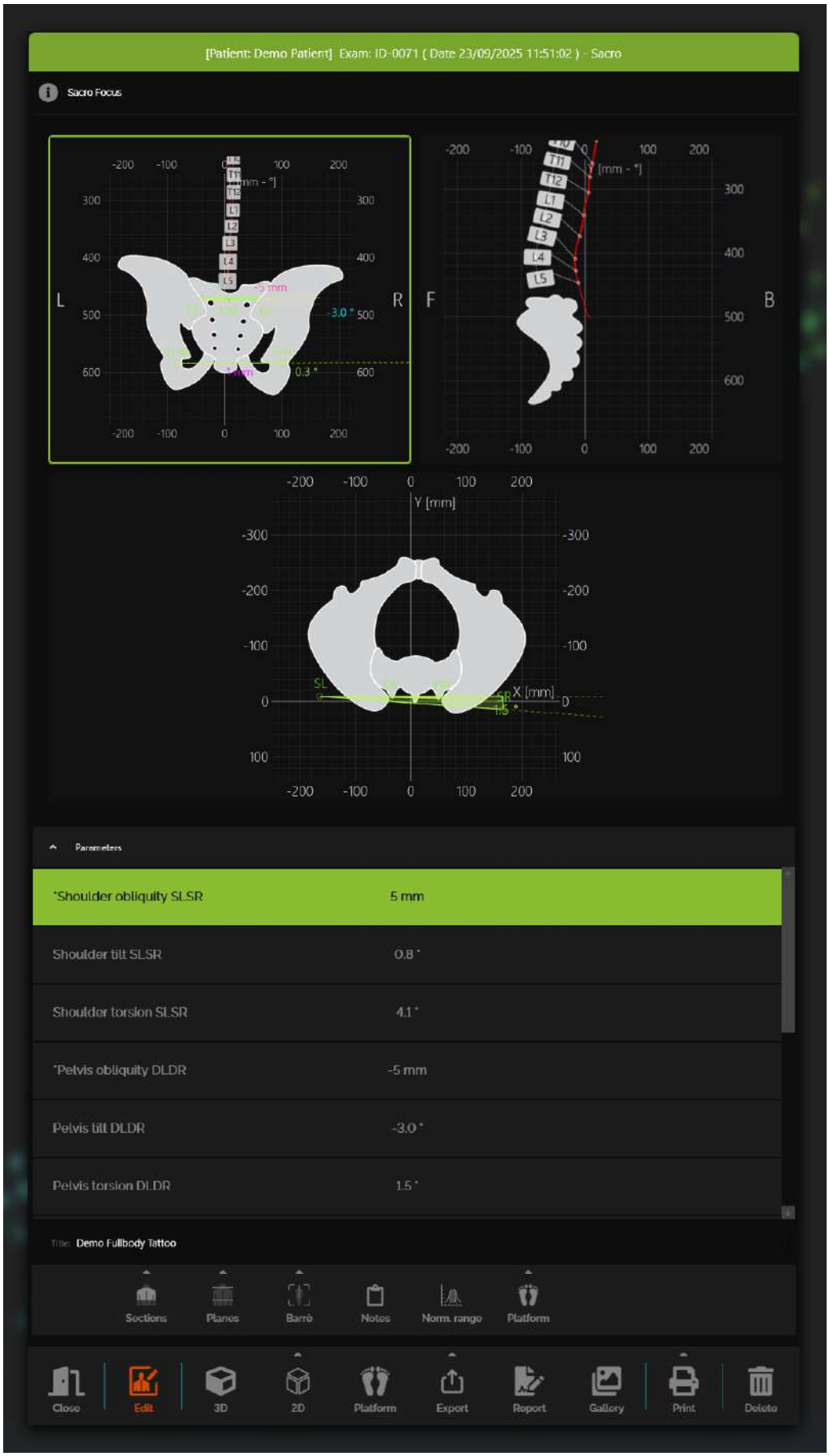
- **Lateral head tilt**: Angle of lateral tilt of the head in the coronal plane, calculated as the angle between the line connecting the left and right earlobe attachments and the line connecting the left and right acromial processes.
- **Craniovertebral angle**: Estimated craniovertebral angle in the sagittal plane: angle between the line joining the earlobe attachment (used as a proxy for the tragus) and C7 and the cranial reference line passing through the same point on the earlobe.
- **Head Rotation**: Angle of rotation in the transverse plane between points L_ETR and R_ETR.
- **SLSR shoulder inclination**: lateral deviation between SL and SR, angle formed between the junction of SL and SR and the horizontal axis
- **Shoulder Torsion**: it is the angle formed between the parallel to the coronal plane and the joining SL and SR.
- **DLDR pelvic tilt**: lateral deviation between DL and DR, angle formed between the junction of DL and DR and the horizontal axis
- **Pelvic torsion**: it is the angle formed between the parallel to the coronal plane and the connecting DL and DR.
- **Lower body – Hip height difference:** this is the difference, in mm, between the L Hip point and the R Hip point along the vertical axis of the subject;
- **Lower body – Hip inclination**: it is the angle formed between the horizontal axis passing through L Hip and the straight line joining L Hip and R Hip.
- **Cervical Lordosis Depth CA-||KA:** Distance between CA (cervical apex) and the tangent to KA (kyphotic apex) which is parallel to the VPDM line
- **Carr Cervical Arrow:** Sagittal distance between the deepest point of the cervical spine and the virtual vertical plumb line

- **Carr-VP Cervical Deflection**: Sagittal distance between the VP point and the virtual vertical plumb line

PLEASE NOTE: All angles, distances and parameters indicated on the screen or in the printed reports are for guidance purposes only. They do not constitute a medical report, but serve only to facilitate the visual observation of the professional.

Sacro

This section shows all the parameters automatically calculated by the software for the sacrum spine. The drawing in this view is updated by selecting one of the parameters in the list below. By holding down the SHIFT key you can click and select several parameters at the same time, to see them all represented on the drawing.


[Patient: Demo Patient] Exam: ID-0071 (Date 23/09/2025 11:51:02) - Sacro
Sacro Focus
L
R
F
B
Y [mm]
X [mm]
Parameters
*Shoulder obliquity SLSR 5 mm
Shoulder tilt SLSR 0.8 °
Shoulder torsion SLSR 4.1 °
*Pelvis obliquity DLDR -5 mm
Pelvis tilt DLDR -3.0 °
Pelvis torsion DLDR 1.5 °
Title: Demo Fullbody Tattoo
Sections
Planes
Barrè
Notes
Norm. range
Platform
Close
Edit
3D
2D
Platform
Export
Report
Gallery
Print
Delete

Using the "**Views**" button it is possible to select the full body display or an automatic display on the selected parameter using the "auto" button.

With the "**Sections**" button you can show or hide the representation of the vertebrae in the two sections of the chest and lumbar.

With the "**Planes**" button it is possible to show or hide two planes of cervico-thoracic braying on VP and the plane passing through thoracolumbar inversion.

With the "**Barrè" button** it is possible to project vertical lines passing through some anatomical points such as L4 or VP.

With the "**Norm value**" button it is possible to show or hide the "normality" ranges to have a reference with respect to the scientific literature.

PLEASE NOTE: these values are taken from the scientific literature and do not provide any type of diagnostic evaluation or analysis.

With the "**notes**" button it is possible to enter notes on the exam that will be reported in the final report.

With the "**Platform**" button, you can view the data of the pressure plate.

The parameters in this section are the same as those presented in the previous sections. So you can refer to them directly.

Platform (only available with the purchase of the FreeMED40x40 Platform)

By clicking on the "Platform" button, the following results will appear:



The distribution of pressures and the podalic imprint with the COP pressure centers are present. The following are then highlighted:

• **Load distribution**: it is the distribution of the patient's weight between the right and left sides.

• **Distribution of the surface**: it is the distribution of the support surfaces of the feet.

• **Detailed load distribution**: the anterior/posterior values of the single support are also shown.

• **Maximum and average pressures**: average and maximum pressure values in kPa of the four macro-areas of the right and left foot.

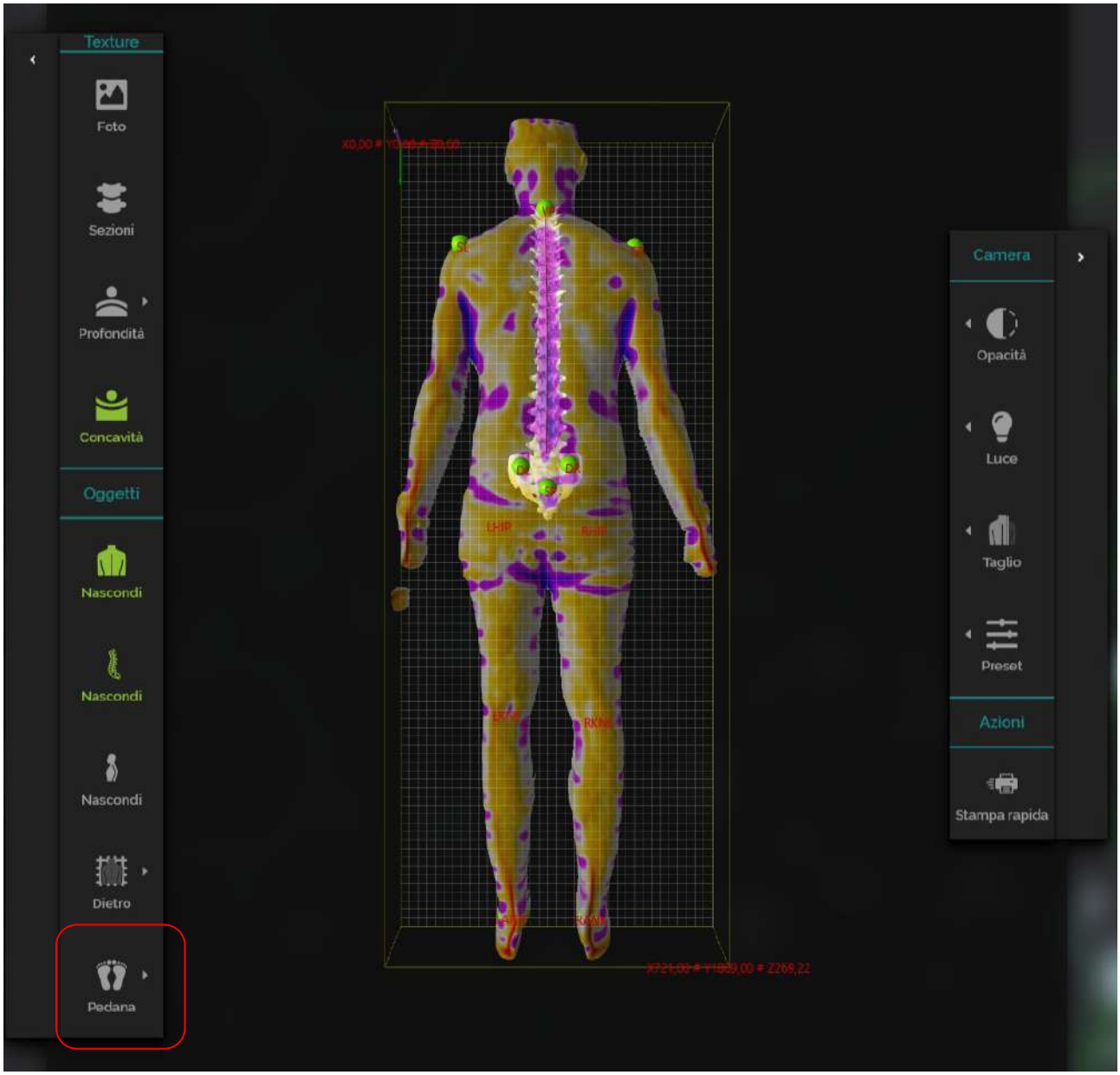
PLEASE NOTE: All angles, distances and parameters indicated on the screen or in the printed reports are for guidance purposes only. They do not constitute a medical report, but serve only to facilitate the visual observation of the professional.

3D visualizations with Baropodometric Platform

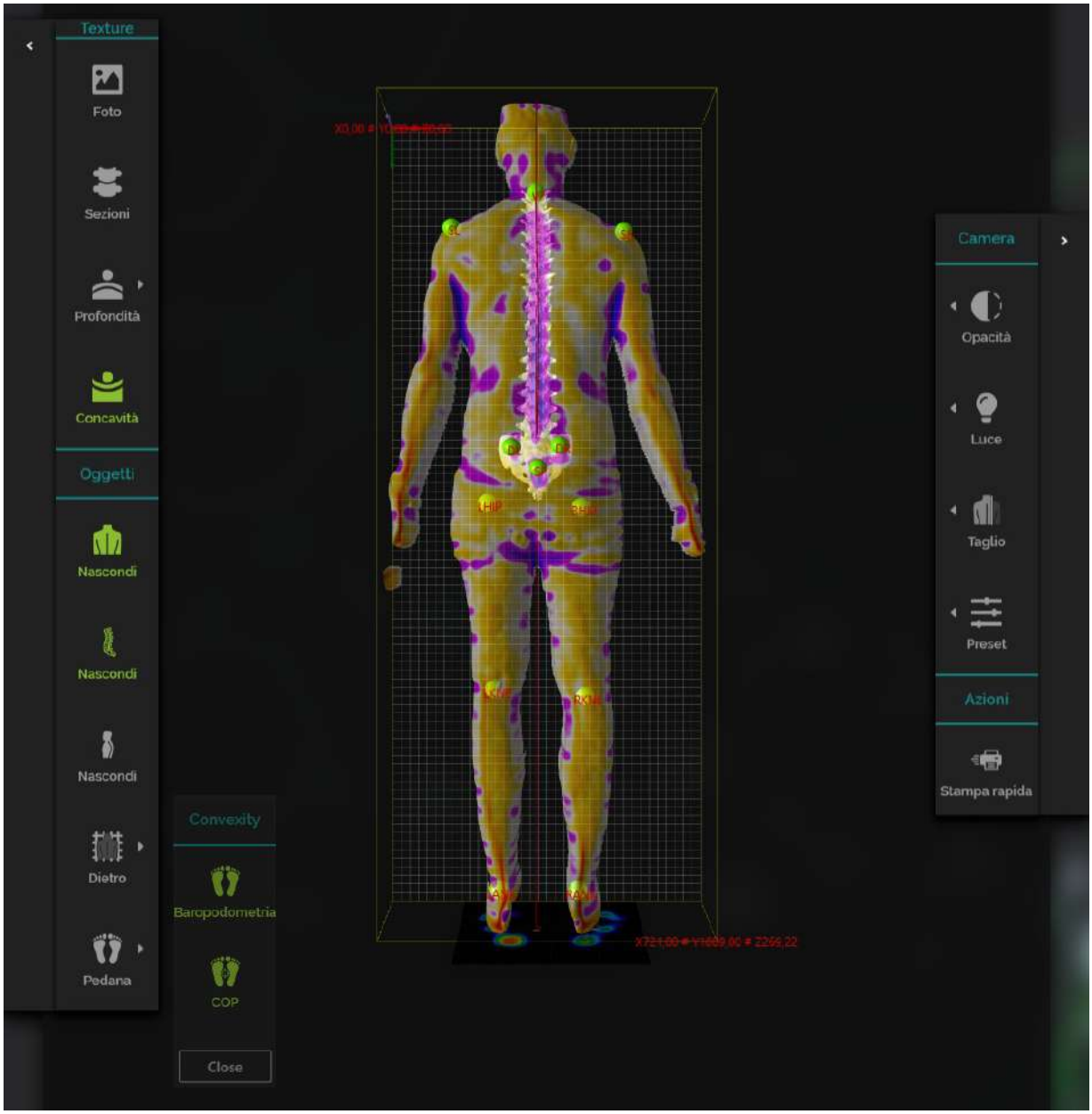
NOTE: This feature is only present from version 2.0.0.X.

If you want to activate this feature, you must contact customer service via helpdesk@sensormedica.com

If an examination is recorded with the baropometric platform as well, the following button will also appear in the 3D display:

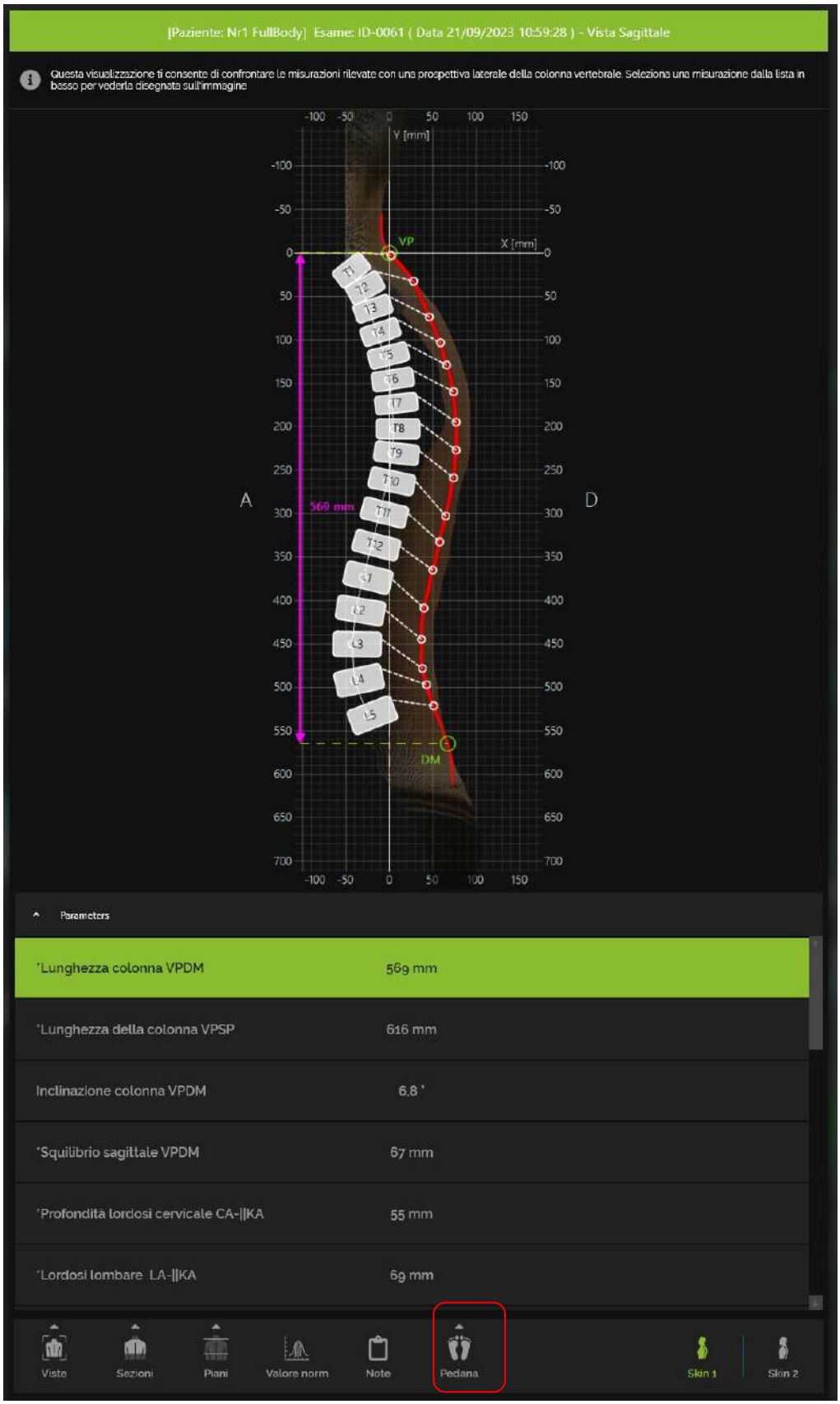


By clicking on this button it will then be possible to view both the acquired pressure image and the projection of the CoP obtained on the 3D of the Spine3D:



2D Visualizations with Baropodometric Platform

By clicking on one of the 3 2D result views you can also see the results of the blood pressure analysis and the projection of the CoP on the body. For example, selecting the sagittal view will show this screen:



By clicking on the platform it will be possible to project both the pressure image and the CoP:



By clicking on "Information", "Detailed information" and "Close" you can interact with the results provided by the baropodometric platform.

Gallery

The archive of the patient's images is visible in the Gallery section. To acquire new ones, click on the button .

Report

On the 3D display screen there is a button at the bottom right "Report" that allows you to view the automatic report provided by the Spine3D system:

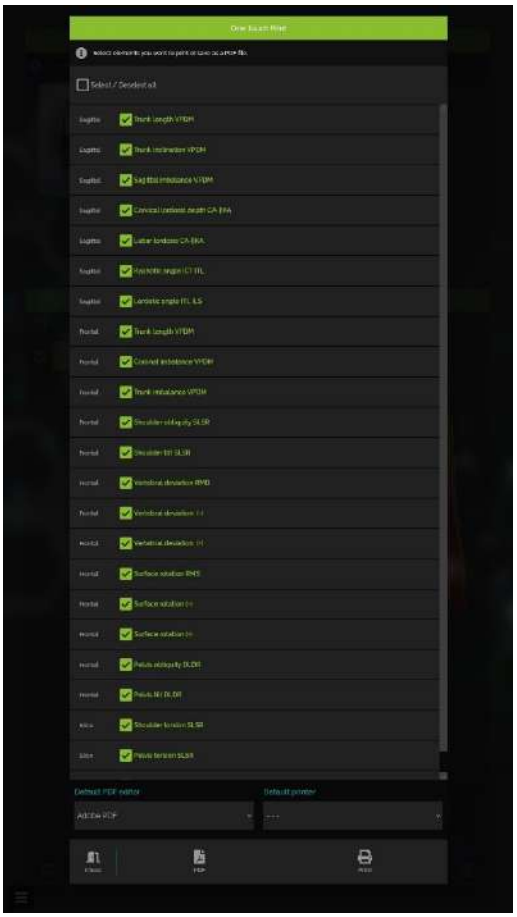


In this section, you can edit the text and translate it into the available languages. To translate, select the language from the drop-down menu and then click on "Reset":



PRINT

Clicking on in the bottom bar and then up the OneTouch print screen will appear.



Here it will be possible to select the parameters to be printed by ticking those of interest.

To proceed with printing in .pdf press .

Export

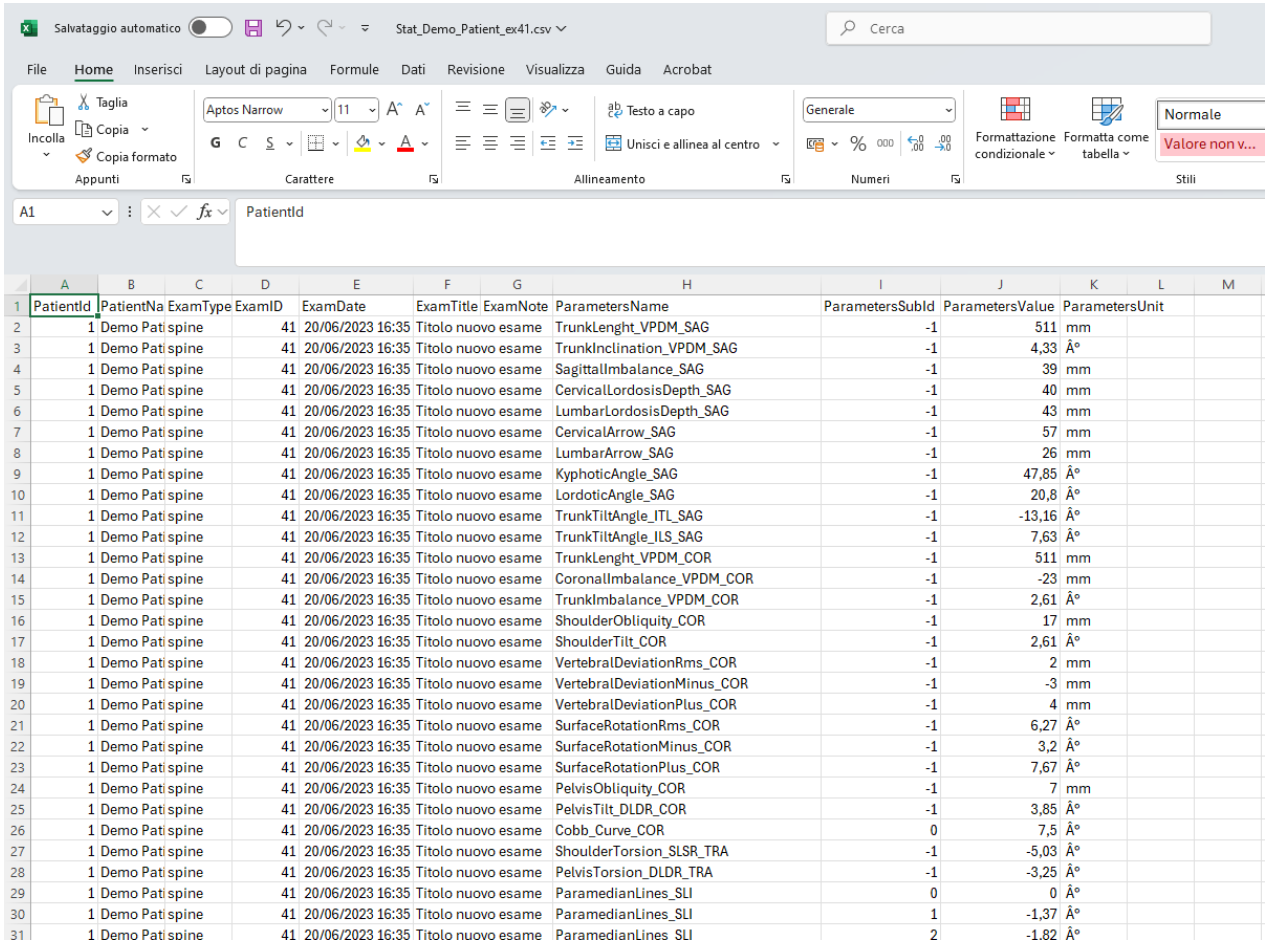
On the 3D display screen there is an "Export" button at the bottom center that allows you to export the exam data in .csv format.

The software exports 2 or 3 files (3 in the case of acquisition with the freeMed platform).

The file named "Stat_nome_cognome.csv" contains all the parameters present in the 3 analysis screens, sagittal, coronal and transverse.

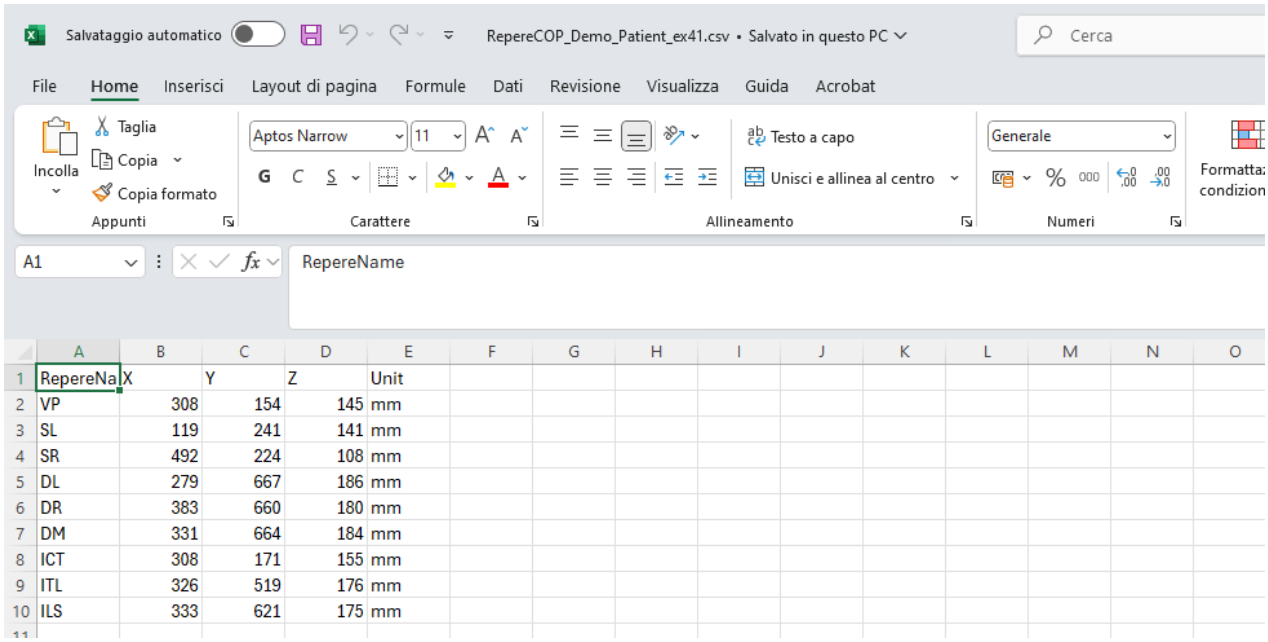
Please note that Finding Points and COP measurements are intended for scientific and research use. For detailed explanations or guidance on how to interpret this data, please contact the helpdesk.

Column A contains the patient's ID. Column B shows the patient's name. Column C indicates the type of parameters, specifying whether they come from the Spine3D system or from the baropodometric platform. Column D shows the exam ID. The E column contains the date and time the exam was created. Column F includes any notes about the exam. Column H is critical: it specifies the name of the parameter to be reported.



PatientId	PatientNa	ExamType	ExamID	ExamDate	ExamTitle	ExamNote	ParametersName	ParametersSubId	ParametersValue	ParametersUnit
1	Demo Pati	spine	41	20/06/2023 16:35	Titolo nuovo esame		TrunkLenght_VPDM_SAG	-1	511	mm
1	Demo Pati	spine	41	20/06/2023 16:35	Titolo nuovo esame		TrunkInclination_VPDM_SAG	-1	4,33	Â°
1	Demo Pati	spine	41	20/06/2023 16:35	Titolo nuovo esame		SagittalImbalance_SAG	-1	39	mm
1	Demo Pati	spine	41	20/06/2023 16:35	Titolo nuovo esame		CervicalLordosisDepth_SAG	-1	40	mm
1	Demo Pati	spine	41	20/06/2023 16:35	Titolo nuovo esame		LumbarLordosisDepth_SAG	-1	43	mm
1	Demo Pati	spine	41	20/06/2023 16:35	Titolo nuovo esame		CervicalArrow_SAG	-1	57	mm
1	Demo Pati	spine	41	20/06/2023 16:35	Titolo nuovo esame		LumbarArrow_SAG	-1	26	mm
1	Demo Pati	spine	41	20/06/2023 16:35	Titolo nuovo esame		KyphoticAngle_SAG	-1	47,85	Â°
1	Demo Pati	spine	41	20/06/2023 16:35	Titolo nuovo esame		LordoticAngle_SAG	-1	20,8	Â°
1	Demo Pati	spine	41	20/06/2023 16:35	Titolo nuovo esame		TrunkTiltAngle_ITL_SAG	-1	-13,16	Â°
1	Demo Pati	spine	41	20/06/2023 16:35	Titolo nuovo esame		TrunkTiltAngle_ILS_SAG	-1	7,63	Â°
1	Demo Pati	spine	41	20/06/2023 16:35	Titolo nuovo esame		TrunkLenght_VPDM_COR	-1	511	mm
1	Demo Pati	spine	41	20/06/2023 16:35	Titolo nuovo esame		CoronalImbalance_VPDM_COR	-1	-23	mm
1	Demo Pati	spine	41	20/06/2023 16:35	Titolo nuovo esame		TrunkImbalance_VPDM_COR	-1	2,61	Â°
1	Demo Pati	spine	41	20/06/2023 16:35	Titolo nuovo esame		ShoulderObliquity_COR	-1	17	mm
1	Demo Pati	spine	41	20/06/2023 16:35	Titolo nuovo esame		ShoulderTilt_COR	-1	2,61	Â°
1	Demo Pati	spine	41	20/06/2023 16:35	Titolo nuovo esame		VertebralDeviationRms_COR	-1	2	mm
1	Demo Pati	spine	41	20/06/2023 16:35	Titolo nuovo esame		VertebralDeviationMinus_COR	-1	-3	mm
1	Demo Pati	spine	41	20/06/2023 16:35	Titolo nuovo esame		VertebralDeviationPlus_COR	-1	4	mm
1	Demo Pati	spine	41	20/06/2023 16:35	Titolo nuovo esame		SurfaceRotationRms_COR	-1	6,27	Â°
1	Demo Pati	spine	41	20/06/2023 16:35	Titolo nuovo esame		SurfaceRotationMinus_COR	-1	3,2	Â°
1	Demo Pati	spine	41	20/06/2023 16:35	Titolo nuovo esame		SurfaceRotationPlus_COR	-1	7,67	Â°
1	Demo Pati	spine	41	20/06/2023 16:35	Titolo nuovo esame		PelvisObliquity_COR	-1	7	mm
1	Demo Pati	spine	41	20/06/2023 16:35	Titolo nuovo esame		PelvisTilt_DLDR_COR	-1	3,85	Â°
1	Demo Pati	spine	41	20/06/2023 16:35	Titolo nuovo esame		Cobb_Curve_COR	0	7,5	Â°
1	Demo Pati	spine	41	20/06/2023 16:35	Titolo nuovo esame		ShoulderTorsion_SLSR_TRA	-1	-5,03	Â°
1	Demo Pati	spine	41	20/06/2023 16:35	Titolo nuovo esame		PelvisTorsion_DLDR_TRA	-1	-3,25	Â°
1	Demo Pati	spine	41	20/06/2023 16:35	Titolo nuovo esame		ParamedianLines_SLI	0	0	Â°
1	Demo Pati	spine	41	20/06/2023 16:35	Titolo nuovo esame		ParamedianLines_SLI	1	-1,37	Â°
1	Demo Pati	spine	41	20/06/2023 16:35	Titolo nuovo esame		ParamedianLines_SLI	2	-1.82	Â°

In the "RepereCOP_nome_cognome.csv" file there are the X, Y and Z coordinates of the points of VP, SL, SR, DL, DR, DM, ICT, ITL and ILS.

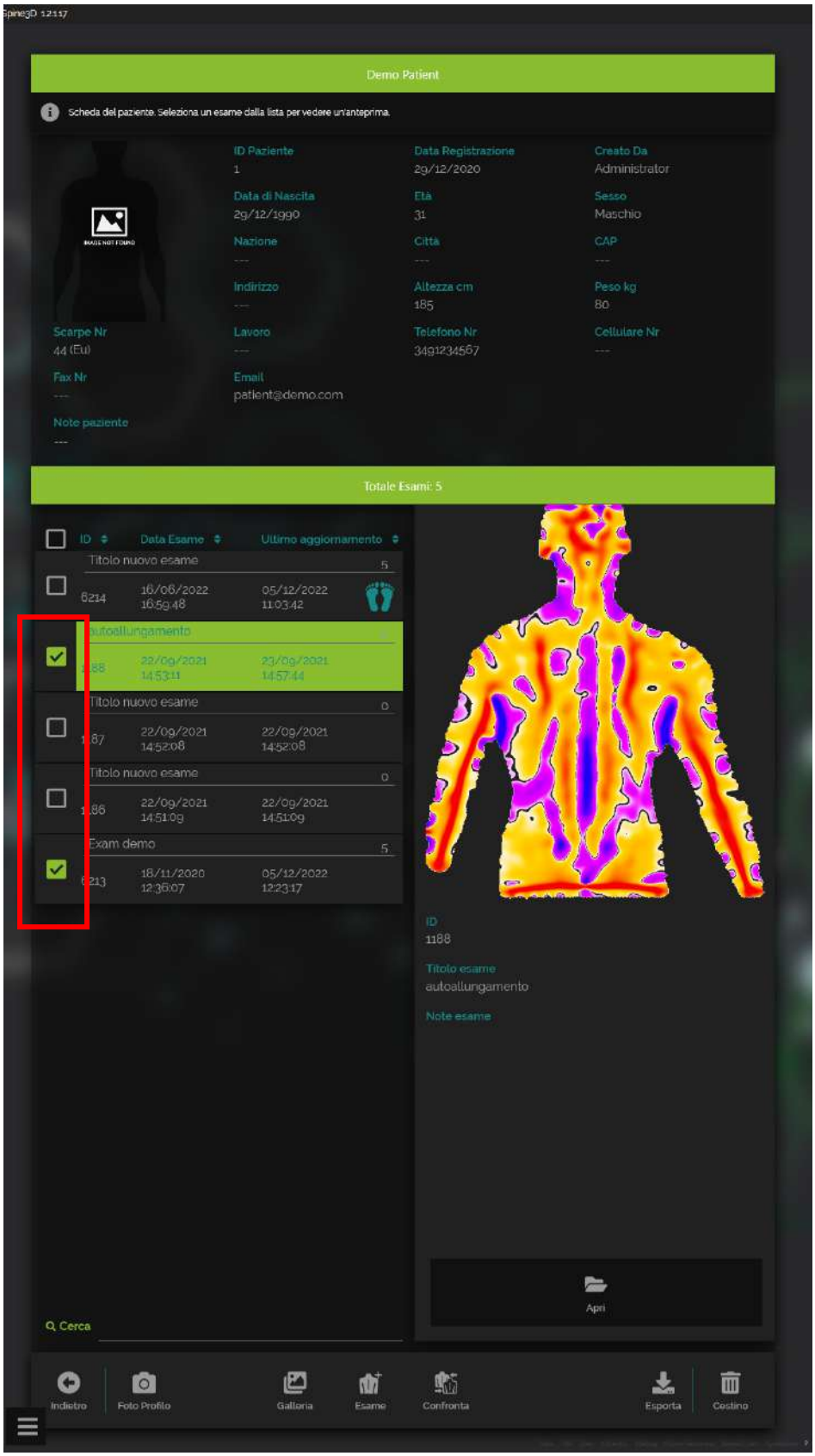


RepereNa	X	Y	Z	Unit
VP	308	154	145	mm
SL	119	241	141	mm
SR	492	224	108	mm
DL	279	667	186	mm
DR	383	660	180	mm
DM	331	664	184	mm
ICT	308	171	155	mm
ITL	326	519	176	mm
ILS	333	621	175	mm

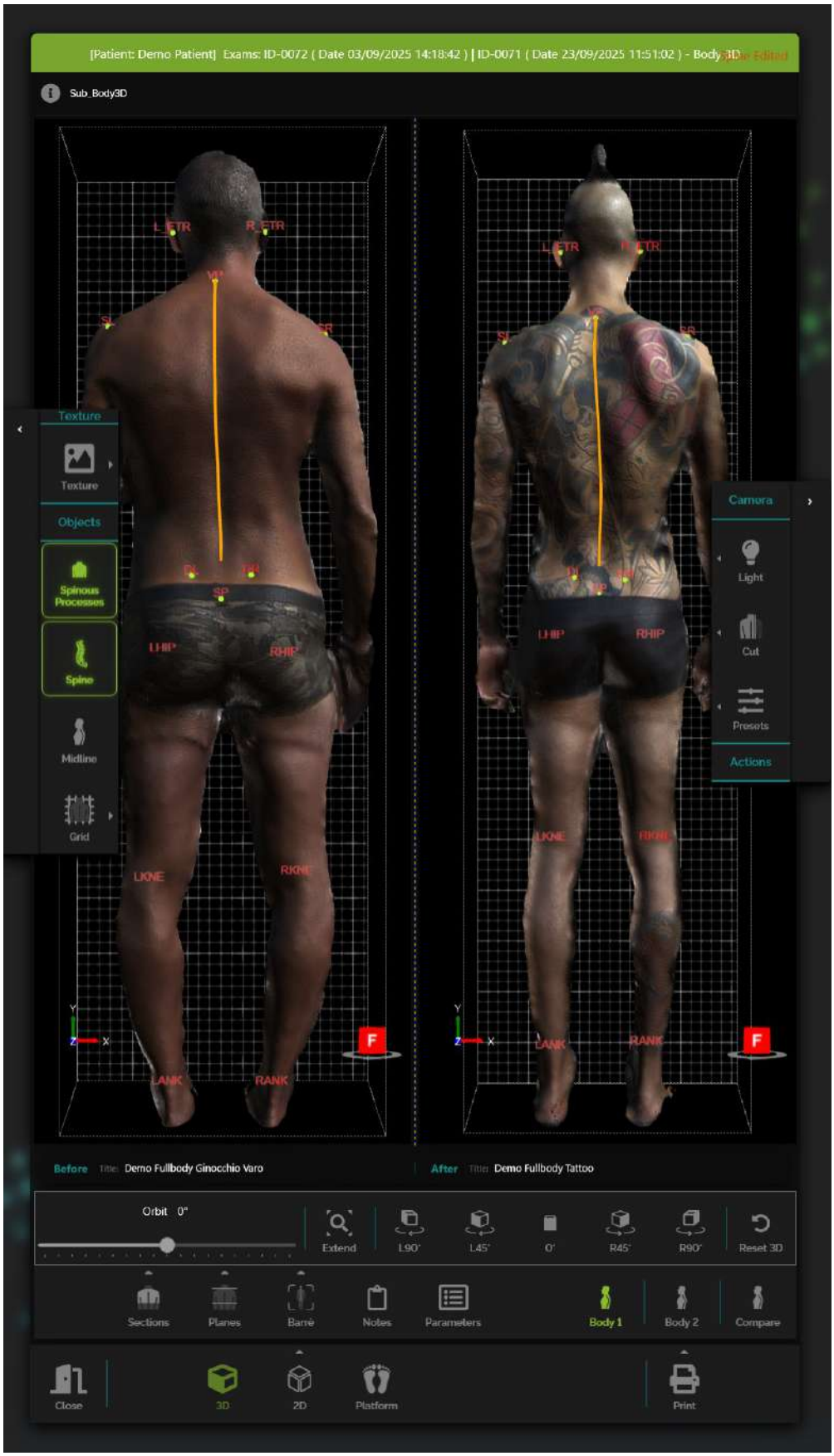


Compare Exasms

To compare two tests, select them from the Patient tab and click on the "Compare" button below:



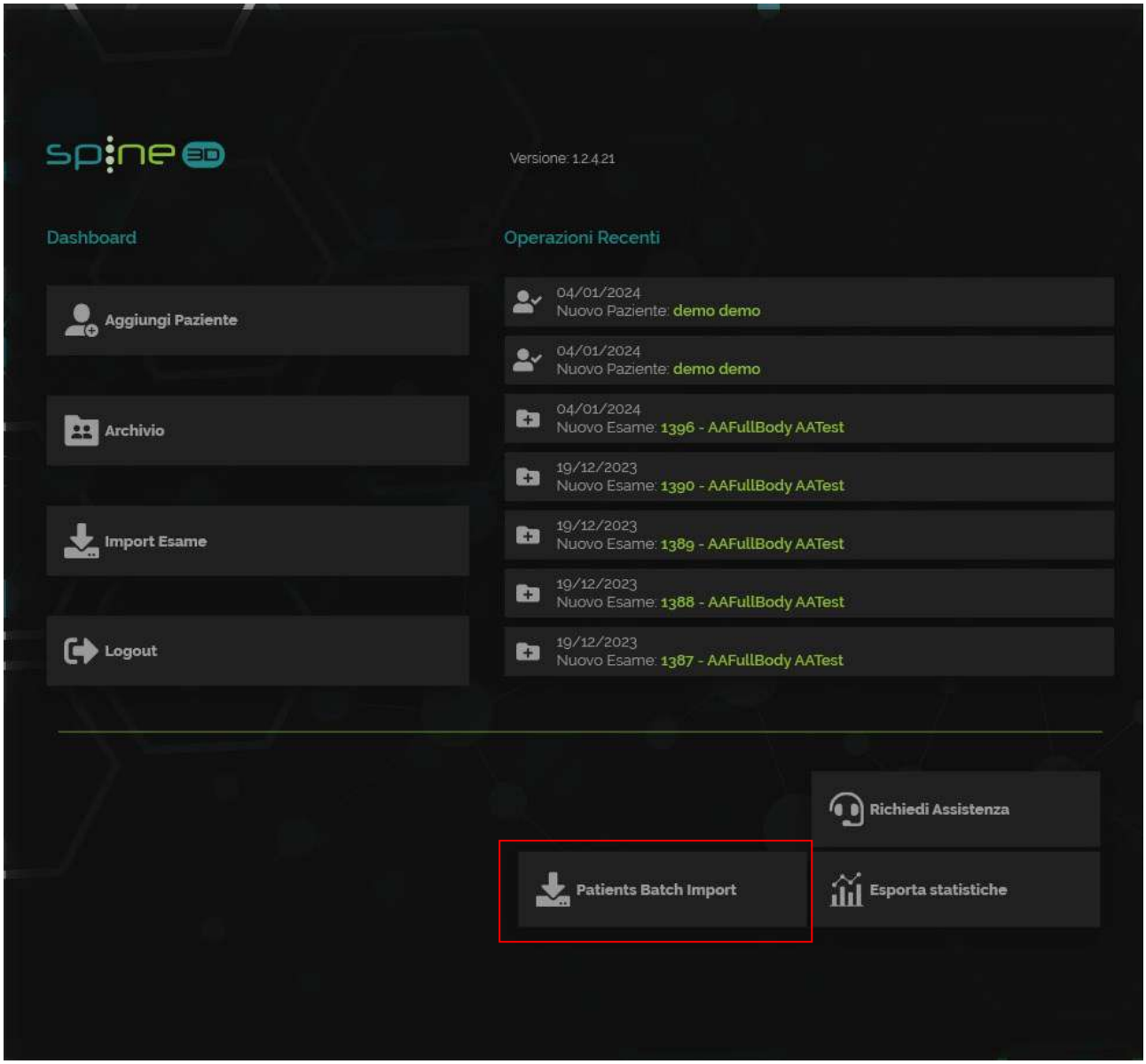
To view the two 3D images together, click on the "Compare" button below:


[Patient: Demo Patient] Exams: ID-0072 (Date 03/09/2025 14:18:42) | ID-0071 (Date 23/09/2025 11:51:02) - Body3D
Sub_Body3D
Texture
Texture
Objects
Spinous Processes
Spine
Midline
Grid
Camera
Light
Cut
Presets
Actions
L_ETR
R_ETR
LHIP
RHIP
LKNE
RKNE
LANK
RANK
Before Title: Demo Fullbody Ginocchio Varo
After Title: Demo Fullbody Tattoo
Orbit 0°
Extend
L90°
L45°
0°
R45°
R90°
Reset 3D
Sections
Planes
Barre
Notes
Parameters
Body 1
Body 2
Compare
Close
3D
2D
Platform
Print

At this you can switch to views on the three planes sagittal, coronal and transverse as shown previously. If there is a baropodometric platform, it will also be possible to compare its data.

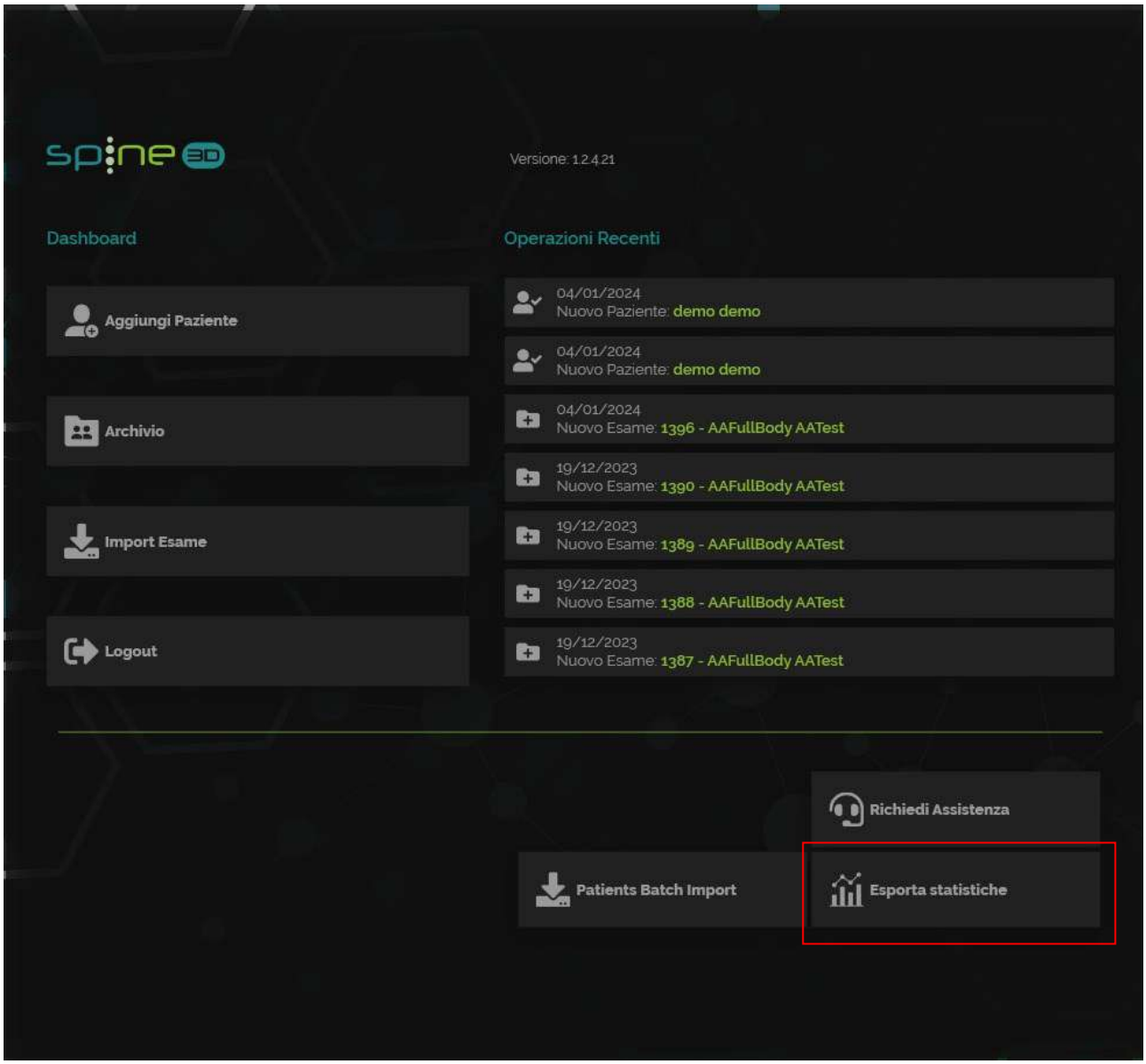
Patient Batch Import

From the Home screen of the dashboard it is possible through the "Batch patient import" button to select a patiens.csv file containing a patient master previously exported from another Spine3D system.



Export Statistics

From the Home screen of the dashboard it is possible through the "Export Statistics" button to export the .csv files with the data of the subjects of each exam.



In Spine 3D, you can export multiple exams and patients. To do this, you need to enable the "Export statistics" function

Statistics Export (Multiple Exams) - Configuration

Navigate to the configuration folder and open File Explorer and navigate to the following path:

"C:\Utenti\<YourUser>\AppData\Roaming\SensorMedica\SpineData\Config"

Replace <YourUser> with your actual Windows username.



Open the configuration file, locate the file named app.conf. Right-click and select Edit with Notepad++ (recommended). If you don't have Notepad++, you can download it from here or use any other text editor.

Enable the Export statistics function, in the app.conf file, find the following line:

DashBoard_ExportWindow_FeatureEnabled

Set its value to true, like this:

DashBoard_ExportWindow_FeatureEnabled=true

Save and close, save the changes you made to the file, and close the editor.

The export window feature should now be enabled in the SpineData application.



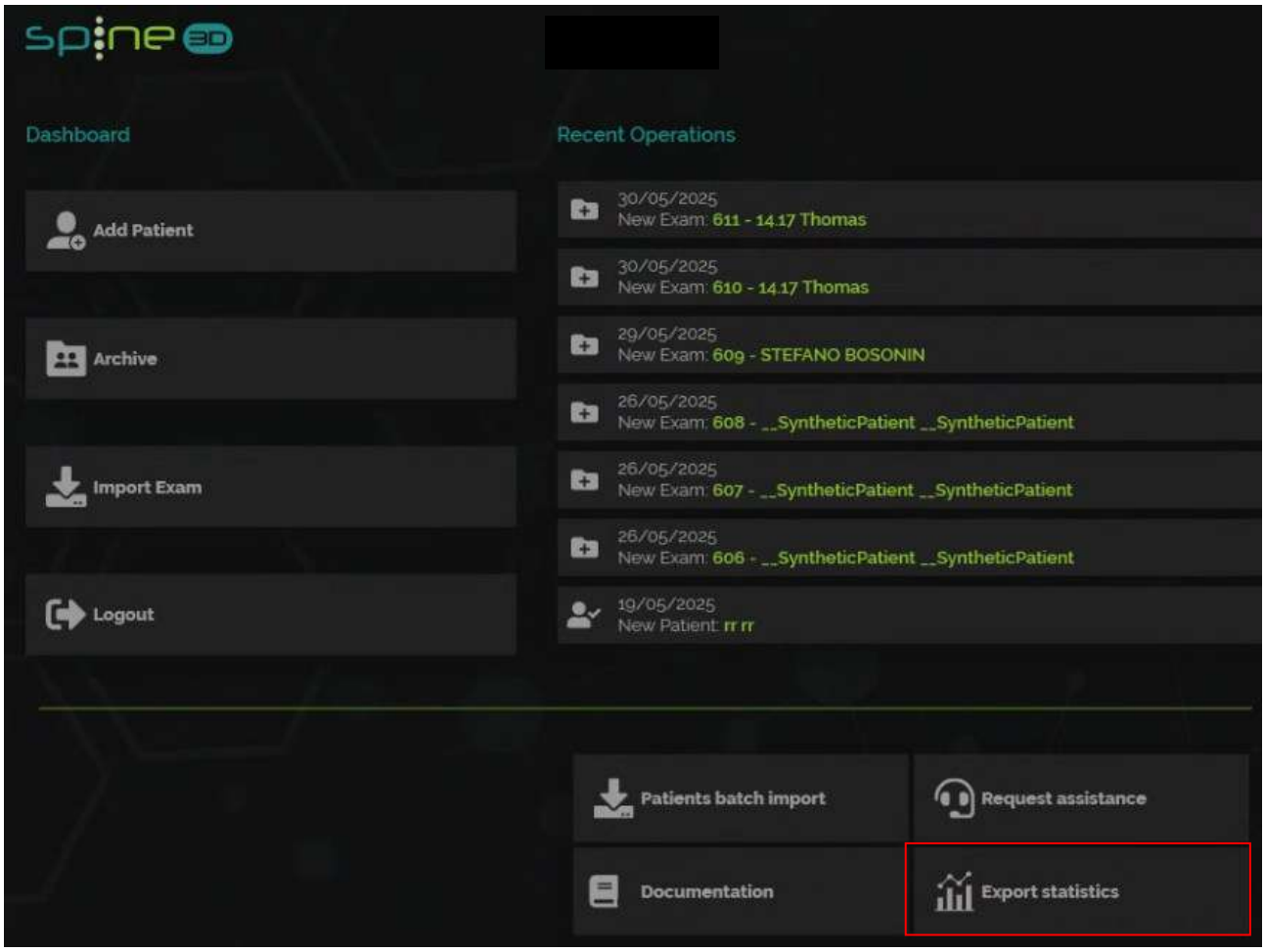
Open the app.conf and going to set the flag “DashBoard_ExportWindow_FeatureEnabled” on true



Export Statistics Tutorial 1 – Feature Guide

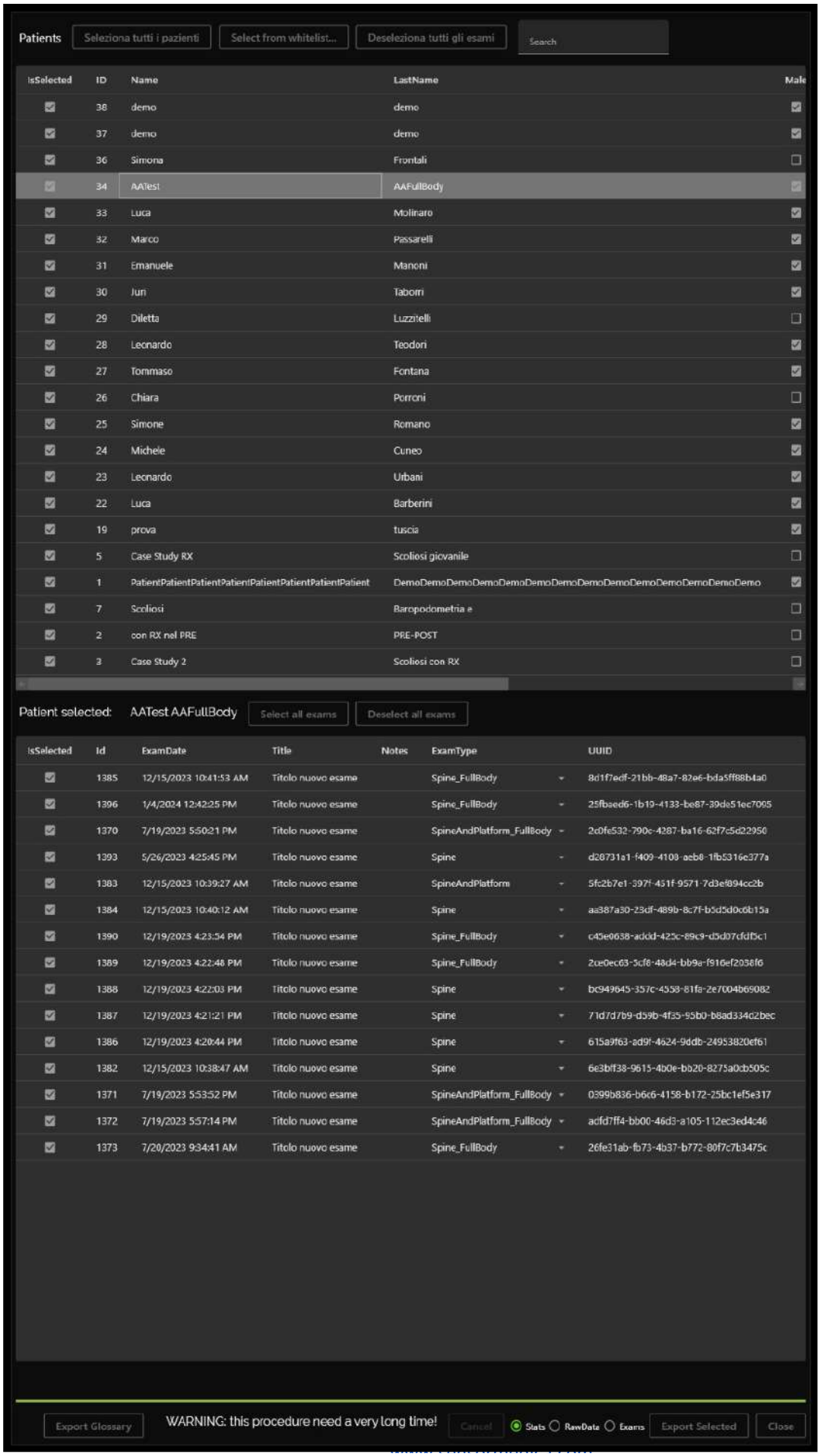
From the Home screen of the dashboard, if correctly enabled, you can have access to the "Export Statistics" function. The Export Statistics feature allows you to export three categories of information:

1. Exams, which include exams in zip format.
2. Raw data captured without any processing.
3. Statistics



The statistics export GUI consists of two macro windows, the first window allows users to choose patients, while the second window allows the selection of examinations for the chosen patient.

In the patient area, you can use the following options: Select all patients, Select from whitelist, Deselect all exams, Search patient mode. At the first opening, all examinations of all patients are selected. If you do not want to export the entire database but only some exams, press "Deselect all exams". If you want to select the entire database, click on "select all patients". Select from Whitelist is an advanced feature that allows you to select only specific exams using a universally unique identifier for each exam, better known as a universally unique identifier or by the acronym UUID that can be displayed under each exam.



IsSelected	ID	Name	LastName	Male
☑	38	demo	demo	☑
☑	37	demo	demo	☑
☑	36	Simona	Frontali	☐
☑	34	AATest	AAFullBody	☑
☑	33	Luca	Molinaro	☑
☑	32	Marco	Passarelli	☑
☑	31	Emanuele	Manoni	☑
☑	30	Jun	Taborri	☑
☑	29	Diletta	Luzzitelli	☐
☑	28	Leonardo	Teodori	☑
☑	27	Tommaso	Fontana	☑
☑	26	Chiara	Porroni	☐
☑	25	Simone	Romano	☑
☑	24	Michele	Cuneo	☑
☑	23	Leonardo	Urbani	☑
☑	22	Luca	Barberini	☑
☑	19	prova	tuscia	☑
☑	5	Case Study RX	Scoliosi giovanile	☐
☑	1	PatientPatientPatientPatientPatientPatientPatientPatient	DemoDemoDemoDemoDemoDemoDemoDemoDemoDemoDemoDemoDemo	☑
☑	7	Scoliosi	Baropodometria e	☐
☑	2	con RX nel PRE	PRE-POST	☐
☑	3	Case Study 2	Scoliosi con RX	☐

IsSelected	Id	ExamDate	Title	Notes	ExamType	UUID
☑	1385	12/15/2023 10:41:53 AM	Titolo nuovo esame		Spine_FullBody	8d1f7edf-21bb-48a7-82e6-bda5ff88b4a0
☑	1396	1/4/2024 12:42:25 PM	Titolo nuovo esame		Spine_FullBody	25fbaed6-1b19-4133-be87-39de51ec7065
☑	1370	7/19/2023 5:50:21 PM	Titolo nuovo esame		SpineAndPlatform_FullBody	2c0fe532-790c-4287-ba16-62f7c5d22950
☑	1393	5/26/2023 4:25:45 PM	Titolo nuovo esame		Spine	d28731a1-f409-4100-aeb8-1fb5316e377a
☑	1383	12/15/2023 10:39:27 AM	Titolo nuovo esame		SpineAndPlatform	5fc2b7e1-397f-451f-9571-7d3ef894cc2b
☑	1384	12/15/2023 10:40:12 AM	Titolo nuovo esame		Spine	aa387a30-23df-489b-8c7f-b3d5d0c6b15a
☑	1390	12/19/2023 4:23:54 PM	Titolo nuovo esame		Spine_FullBody	c45e0638-addd-425c-89c9-d5d07cfdf5c1
☑	1389	12/19/2023 4:22:48 PM	Titolo nuovo esame		Spine_FullBody	2ce0ec63-5cf8-48d4-bb9a-f916ef2038f6
☑	1388	12/19/2023 4:22:03 PM	Titolo nuovo esame		Spine	bc949645-357c-4558-81fa-2e7004b69082
☑	1387	12/19/2023 4:21:21 PM	Titolo nuovo esame		Spine	71d7d7b9-d59b-4f35-95b0-b8ad334d2bec
☑	1386	12/19/2023 4:20:44 PM	Titolo nuovo esame		Spine	615a9f63-ad9f-4624-9ddb-24953820ef61
☑	1382	12/15/2023 10:38:47 AM	Titolo nuovo esame		Spine	6e3bff38-9615-4b0e-bb20-8275a0cb505c
☑	1371	7/19/2023 5:53:52 PM	Titolo nuovo esame		SpineAndPlatform_FullBody	0399b836-b6c6-4158-b172-25bc1ef5e317
☑	1372	7/19/2023 5:57:14 PM	Titolo nuovo esame		SpineAndPlatform_FullBody	acfd7ff4-bb00-46d3-a105-112ec3ed4c46
☑	1373	7/20/2023 9:34:41 AM	Titolo nuovo esame		Spine_FullBody	26fe31ab-fb73-4b37-b772-80f7c7b3475c

To select an exam, you must first select a patient. After you select a patient, all exams are selected by default. In order to be able to select a specific exam first, all exams must be deselected. To select a patient or exam you need to click on the box under the "IsSelected" column.

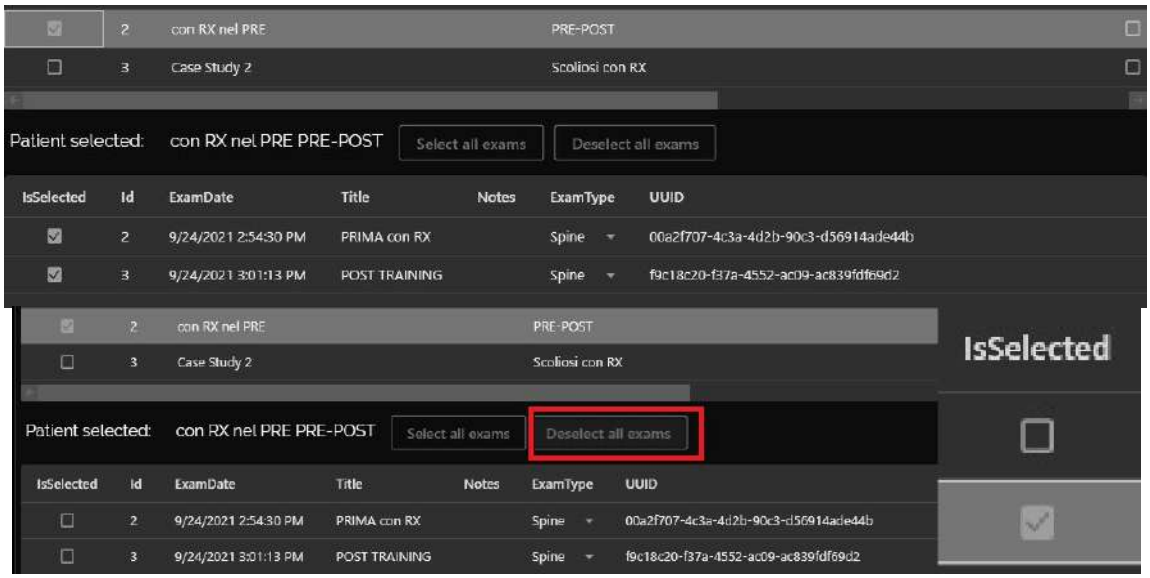


Figure 1Pipeline to select an exam on Export Stastics.

You can select the type of export.

Once you have selected what you want to export, click on "Export Selected".

Clicking "Close" will close the export interface.

Export Statistics Tutorial 2 – How to Export Spine3D Exams and Parameters

Spine3D and Platform Parameters

To export all parameters generated by Spine3D, select the **Stats export type**.

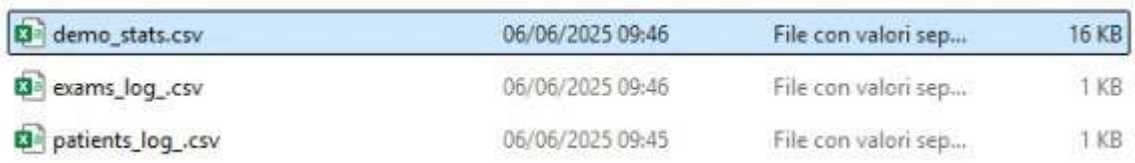


The exported files will be saved in a folder located in:

C:\Users\<YourUser>\Desktop\Spine3D_StatsExports\Export_20XX-XX-XX--HH-MM-SS



Replace <YourUser> with your actual Windows username. Inside this folder, you will find a CSV file with the patient's name and exam. This file contains all the parameter data calculated by Spine3D.



Regarding thee stats.csv file

PatientId	PatientName	ExamType	ExamID	ExamDate	ExamTitle	ExamNote	ParametersName	ParametersSubId	ParametersValue	ParametersUnit
1	demo	spine	573	14/06/2024 18:11	Demo Stats		TrunkLenght_VPDM_SAG	-1	494	mm
1	demo	spine	573	14/06/2024 18:11	Demo Stats		TrunkLenght_VPSP_SAG	-1	541	mm
1	demo	spine	573	14/06/2024 18:11	Demo Stats		TrunkInclination_VPDM_SAG	-1	5.7	Â°
1	demo	spine	573	14/06/2024 18:11	Demo Stats		SagittalImbalance_SAG	-1	49	mm
1	demo	spine	573	14/06/2024 18:11	Demo Stats		CervicalLordosisDepth_SAG	-1	45	mm
1	demo	spine	573	14/06/2024 18:11	Demo Stats		LumbarLordosisDepth_SAG	-1	45	mm

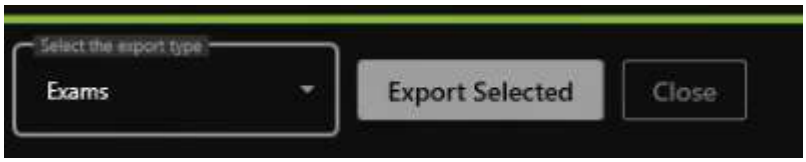
Column A contains the **patient ID**. Column B displays the patient's name. Column C indicates the **type of parameters**, specifying whether they come from the **Spine3D system** or from the **Baropodometric Platform**. Column D shows the **exam ID**. The E column contains the **date and time** the exam was created. Column F includes any **exam notes**. Column H is critical: it specifies the name of the **parameter** to report. The following columns provide the value of the **parameter** and the **associated unit of measurement**.

Units Explained:

1. **A° (degrees)** – Used for angular measurements (e.g., spinal curvatures, tilt angles).
2. **mm (millimeters)** – Indicates distances (e.g. thigh length)
3. **Kgf (kilogram-force)** – Represents force or load measurements (e.g., weight distribution)
4. **% (percentage)** – Shows proportional values (e.g., percentage of weight distribution between feet).
5. **cm² (square centimeters)** – Refers to the surface area (e.g., foot contact area on the platform).
6. **KPascal (kilopascal)** – Measures the intensity of pressure (e.g., plantar pressure on the surface of the foot).

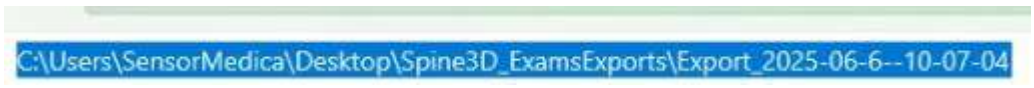
Exams

If you want to export entire exams, select the exams you want to export from the interface.

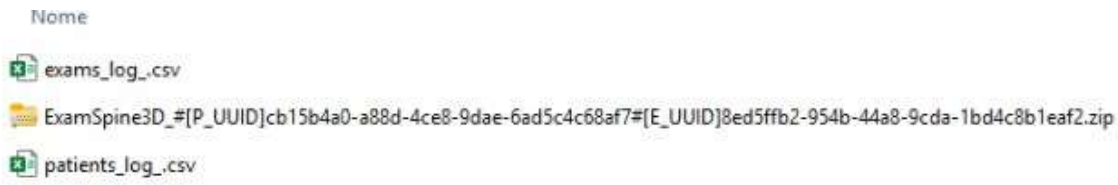


The exported exams will be saved in a folder at the following location:

C:\Users\<YourUser>\Desktop\Spine3D_ExamsExports\Export_20XX-XX-XX--HH-MM-SS



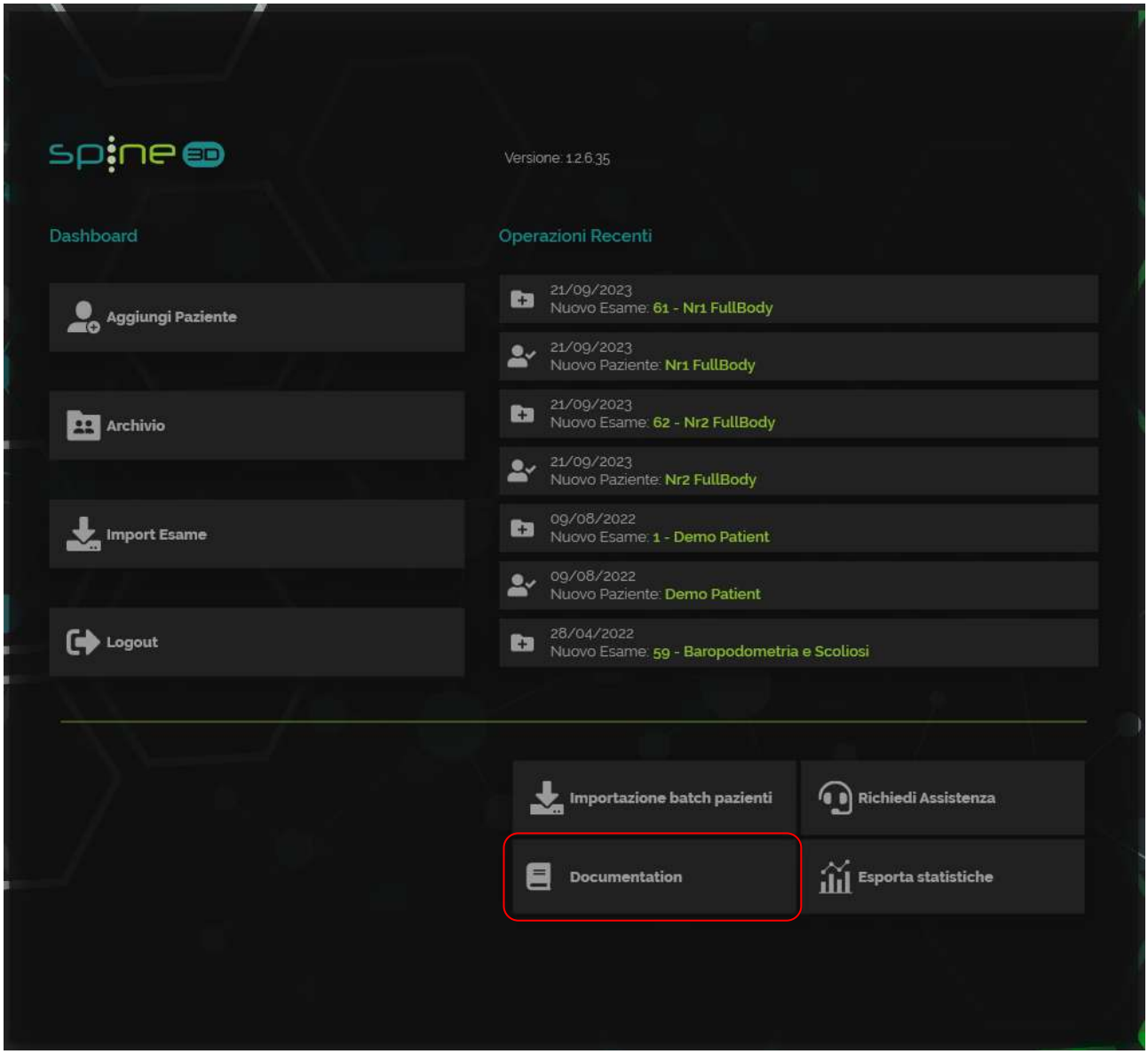
Each exported exam will be saved with a unique Universally Unique Identifier (UUID).



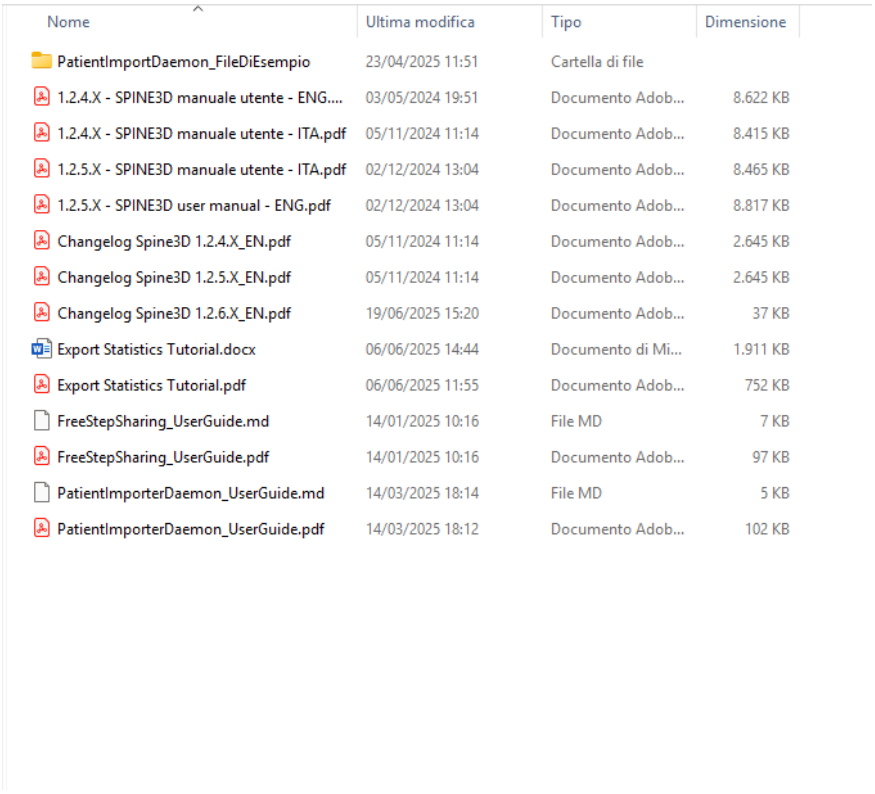
Clicking on "Close" closes the export interface.

Documentation

From the dashboard, click on the following button:



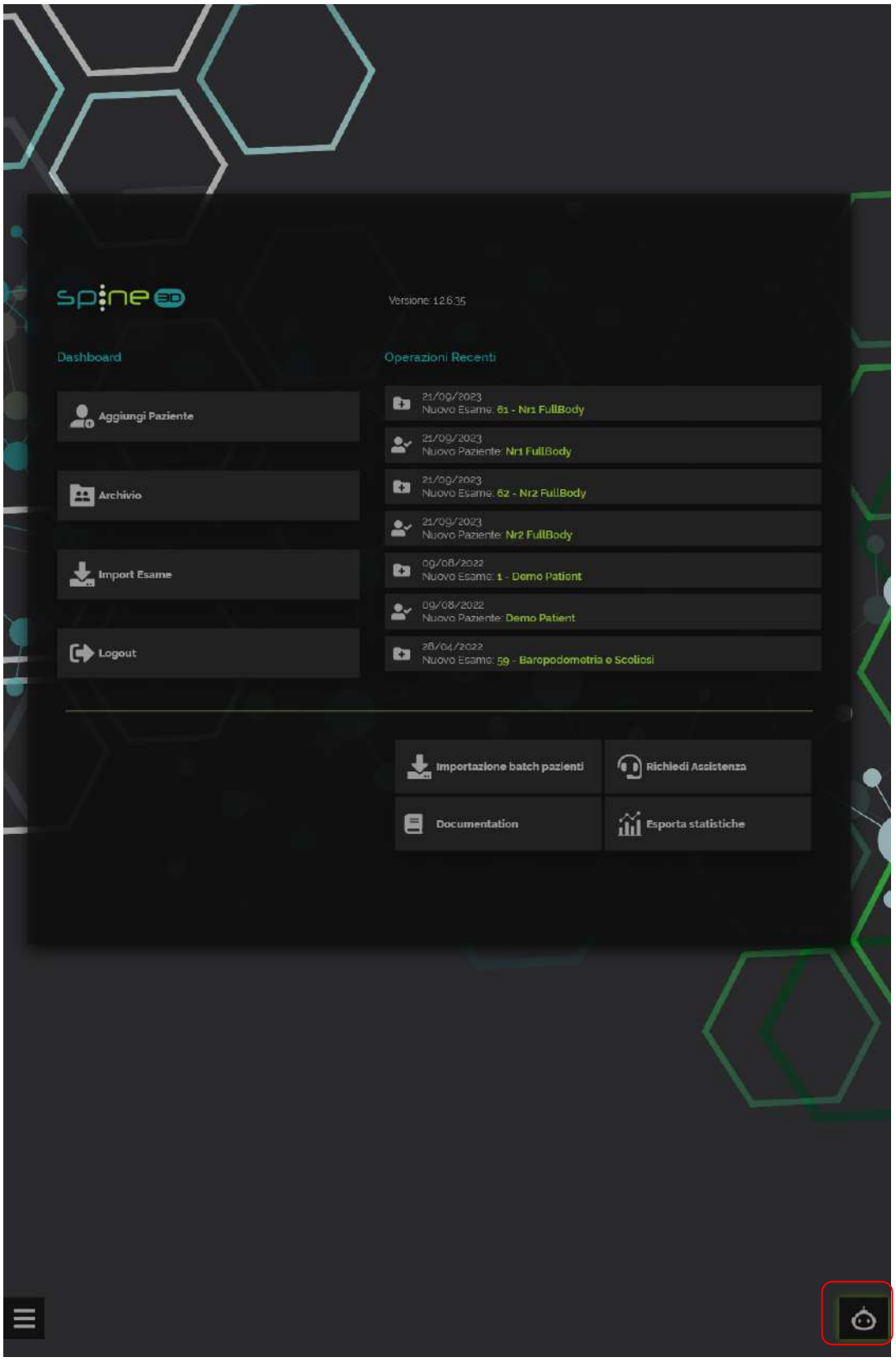
a Windows Explorer window will open containing the latest Spine3D user manuals and some tutorial guides:



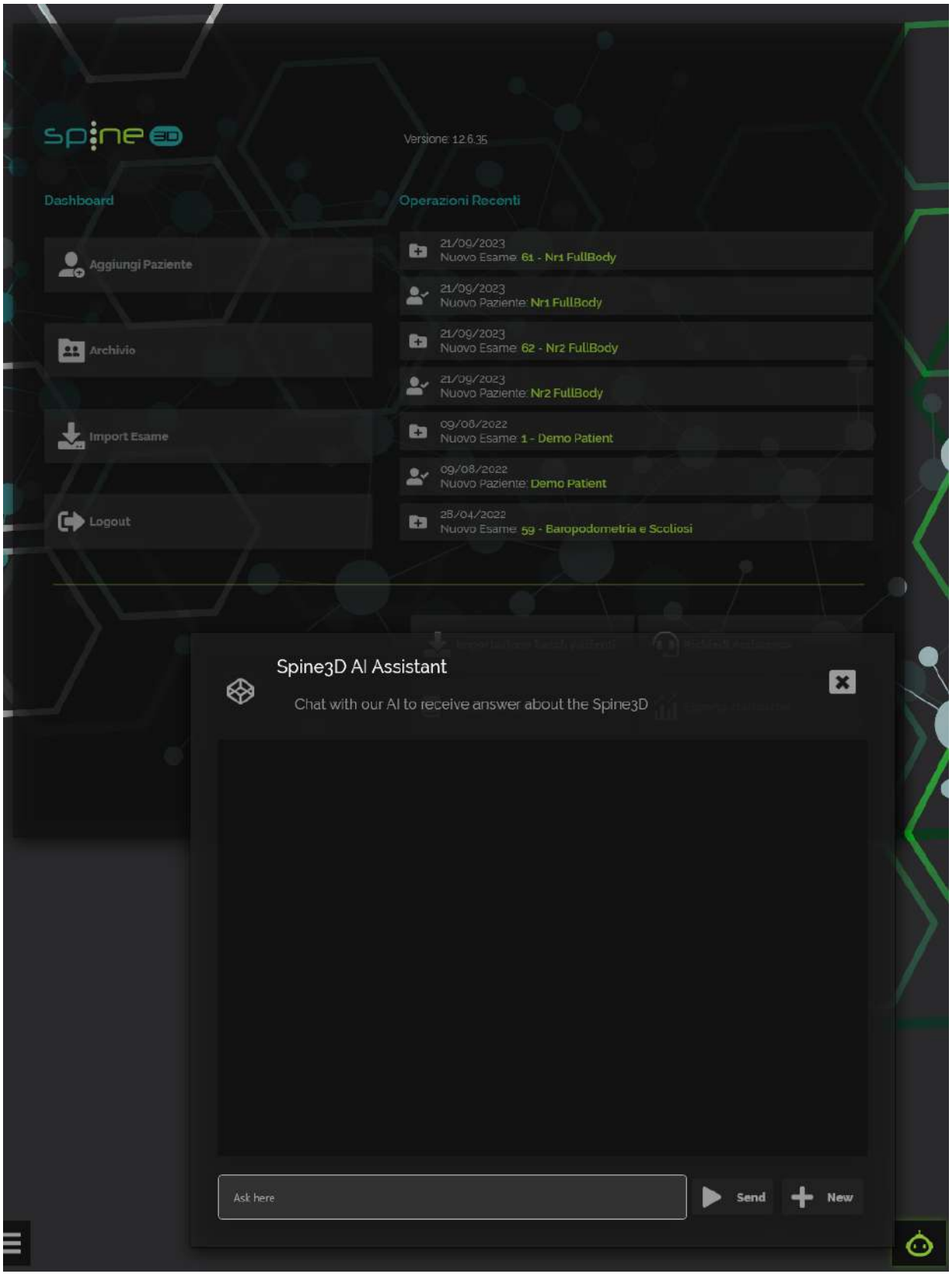
Nome	Ultima modifica	Tipo	Dimensione
PatientImportDaemon_FileDiEsempio	23/04/2025 11:51	Cartella di file	
1.2.4.X - SPINE3D manuale utente - ENG....	03/05/2024 19:51	Documento Adob...	8.622 KB
1.2.4.X - SPINE3D manuale utente - ITA.pdf	05/11/2024 11:14	Documento Adob...	8.415 KB
1.2.5.X - SPINE3D manuale utente - ITA.pdf	02/12/2024 13:04	Documento Adob...	8.465 KB
1.2.5.X - SPINE3D user manual - ENG.pdf	02/12/2024 13:04	Documento Adob...	8.817 KB
Changelog Spine3D 1.2.4.X_EN.pdf	05/11/2024 11:14	Documento Adob...	2.645 KB
Changelog Spine3D 1.2.5.X_EN.pdf	05/11/2024 11:14	Documento Adob...	2.645 KB
Changelog Spine3D 1.2.6.X_EN.pdf	19/06/2025 15:20	Documento Adob...	37 KB
Export Statistics Tutorial.docx	06/06/2025 14:44	Documento di Mi...	1.911 KB
Export Statistics Tutorial.pdf	06/06/2025 11:55	Documento Adob...	752 KB
FreeStepSharing_UserGuide.md	14/01/2025 10:16	File MD	7 KB
FreeStepSharing_UserGuide.pdf	14/01/2025 10:16	Documento Adob...	97 KB
PatientImporterDaemon_UserGuide.md	14/03/2025 18:14	File MD	5 KB
PatientImporterDaemon_UserGuide.pdf	14/03/2025 18:12	Documento Adob...	102 KB

Spine3D AI Assistant

Starting from the Spine3D version 1.2.6.X an artificial intelligence system is available with the function of helping the user in exploring the features of Spine3D and to quickly answer some questions that may arise with the use of the system.

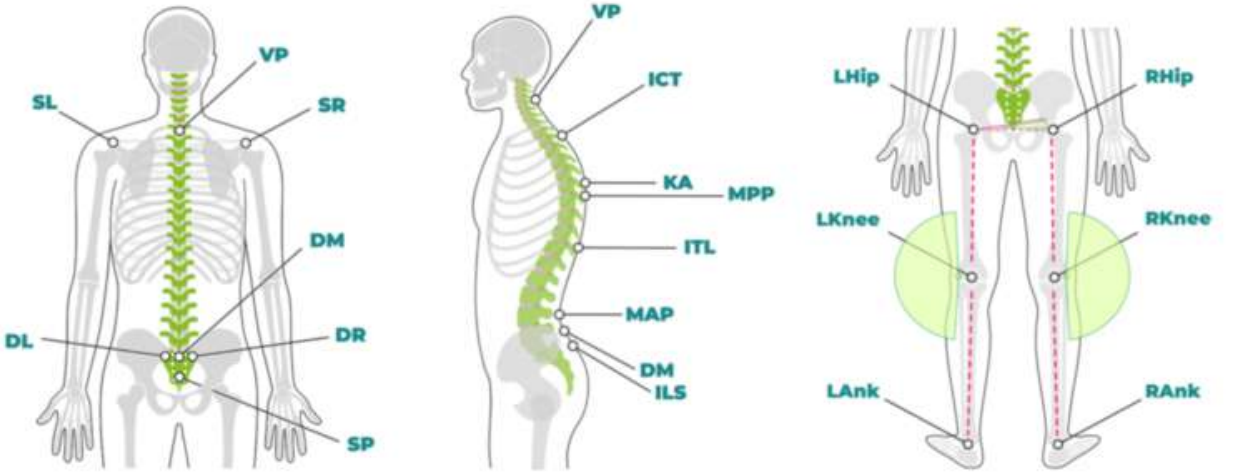


Clicking on the icon will open a dialog box where you can write questions that the AI system will answer.


Versione: 12.6.35
Dashboard
Operazioni Recenti
Aggiungi Paziente
Archivio
Import Esame
Logout
21/09/2023
Nuovo Esame: 61 - Nr1 FullBody
21/09/2023
Nuovo Paziente: Nr1 FullBody
21/09/2023
Nuovo Esame: 62 - Nr2 FullBody
21/09/2023
Nuovo Paziente: Nr2 FullBody
09/08/2022
Nuovo Esame: 1 - Demo Patient
09/08/2022
Nuovo Paziente: Demo Patient
28/04/2022
Nuovo Esame: 59 - Baropodometria e Scoliosi
Spine3D AI Assistant
Chat with our AI to receive answer about the Spine3D
Ask here
Send
New

GLOSSARY

Repere



Glossary

VP	Vertebra Prominens
DL	Left dimple
DR	Right dimple
DM	Midpoint between DL and DR
SP	Sacrum point
KApex	Kyphotic apex ICT-ITL
LApex	Lordotic apex ITL-ILS
ICT	Cervicothoracic joint
ITL	Thoracolumbar joint
ILS	Lumbosacral joint
SL	Left acromion
SR	Right acromion
Mpp	Most posterior point
Map	Most anterior point
CLDP	Cervical lordosis depth point
LLDP	Lumbar lordosis depth point
CA	Cervical apex
LA	Lumbar apex
CArr	Flèche cervicale
LArr	Flèche lombaire
LHIP	Left hip
RHIP	Right hip
LKNE	Left knee
RKNE	Right knee
LANK	Left ankle
RANK	Right ankle
CarrVP	Flèche cervicale VP
V_T12	T12
KApex VPT12	Kyphotic apex VP-T12
LApexT 12DM	Lordotic apex T12-DM
C1	C1
L_ETR	Left ear tragus
R_ETR	Right ear tragus
M_ETR	Midpoint between L_ETR and R_ETR

CE DECLARATION

SPINE3D_CE_DM_PSP3001_04

Date:
March 25th, 2025

CE DECLARATION OF CONFORMITY

CE

Declaration of Conformity Regulation (EU) 2017/745

Trade Mark: SPINE 3D

Part Number: PSP3001

Manufacturer: Sensor Medica Srl - Via Bruno Pontecorvo, 13 00012 Guidonia Montecelio - Rome (Italy)

Actor ID/SRN: IT-MF-000032343

Product: Biometric imaging processor

Intended Use: Non-invasive 3D scanning system for postural analysis

Basic UDI-DI: 8052015180019SY

CND: Z11069001

Class: Class I

Technical report and documentation are at the applicant's disposal.Declares under its responsibility that the above-mentioned device complies 2017/745 European Community Regulation.

Andrea Olivi
Sensor Medica Srl CEO

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Via Bruno Pontecorvo, 13
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P.Iva 11419101008

Company with certified quality management system N° 5010016690

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00012 Guidonia Montecelio (Rome) - Italy