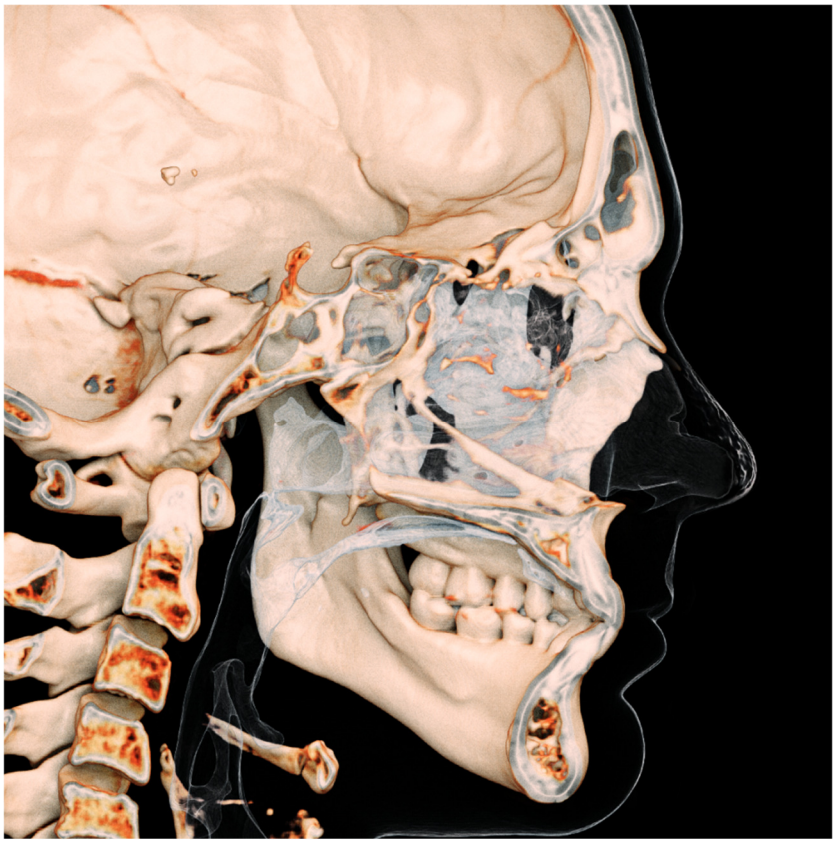
Anatomage Cloud Viewer 1.2 Manual English



Anatomage

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Anatomage Cloud 3D software is dependent on its hardware requirements. The life-cycle is limited only by the availability of the required hardware.

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About Anatomage and Anatomage Cloud 3D Software

This version of Anatomage Cloud 3D was released as an update to the InVivo Web Viewer 1.0 software from Anatomage, Inc. In this document, Anatomage Cloud 3D refers to the latest version of the Anatomage Cloud 3D software. To learn more about Anatomage, access the Anatomage website (www.Anatomage.com).

Intended User

Anatomage Cloud 3D is designed to be used by medical and dental professionals who have been appropriately trained to use 3D CT imaging devices and read the image data generated by the devices.

Language

The original language of this manual is English. Other versions are available. Please contact Anatomage for other language versions.

Caution: Federal law restricts this device to sale by or on the order of medical and dental clinicians.

Indications for Use

Anatomage Cloud 3D is a software application used for the display and 3D visualization of medical image files from scanning devices, such as CT and MRI. It is intended for use by radiologists, clinicians, referring physicians, and other qualified individuals to retrieve, process, render, review, and assist in diagnosis, utilizing web user interface. Additionally, Anatomage Cloud 3D is a preoperative software application used for the planning and evaluation of dental implants placement and surgical treatments.

This device is not indicated for mammography use.

Required Training

Prior to any clinical applications using Anatomage Cloud 3D, user is recommended to take training and practice for the following content:
View digital image in 2D and 3D; image operations such as pan, zoom, brightness/contrast adjustment; place implant at given location; move and rotate implant; and change implant parameters. The user is recommended to contact Anatomage technical support for a full software training at 408-885-1474 ext. 4.

General Precautions

Warning: The software provides tools for dental implant planning but is dependent on the user to determine and use the appropriate parameters. Incorrect parameters may affect the quality of the final milled products or otherwise to surgical delays or complications.

Warning: Incorrect image orientation may cause surgical delays or complications. The software orients the scan based on the inherent scan information and clearly labels the directionality. However, the software should only be used by licensed clinicians familiar with dental and medical imaging who can best identify any discrepancies with scan orientation in the software.

Warning: Please ensure all hardware devices with the software are password-protected from unauthorized use and all patient information is secure.

Warning: Implant planning must be performed by a trained healthcare professional for proper implant placement relative to the patient's anatomy. Implant angulation, divergence, location, and depth should abide by the implant manufacturer's instructions for use and placement parameters.

Table of Contents

Anatomage Cloud 3D Imaging Software

Anatomage, Inc. is a medical imaging company composed of a cross-functional team consisting of the most elite researchers, mathematicians, engineers, software developers, business analysts, industry leaders, academic faculty, and dental specialists. Ultimately, our mission is dedicated to developing simple and refined software specially designed for dentists to utilize the most advanced cutting-edge software and technology to better serve their patients. With our software, doctors can create 3D volume renderings on their own computers, get cross sections, trace nerves, place implants, print images, save images, and many more functions. The software is designed to reconstruct these 3D volume renderings from DICOM files generated by CBCT, Medical CT, and MRI radiography machines. Anatomage Cloud 3D is intended for use for the planning and evaluation of dental implants placement and surgical treatments.

This manual is intended to provide supplementary information to your direct training with the Anatomage support team. For correct and safe use, training is available to all Anatomage Cloud 3D users and is highly recommended. In this document, Anatomage Cloud 3D refers to the latest version of the Anatomage Cloud 3D software. For more information, please contact the Anatomage customer support team at (408) 885-1474 or email support@anatomage.com

System Requirements

Below are the minimal and recommended system configurations.

The Anatomage Cloud 3D is a browser-based application and only requires Internet access.

Anatomage recommends the following configurations to fully utilize all the features within the Anatomage Cloud 3D. The following recommendations have been updated in November 2020:

Summary

	Recommended
Browser	Firefox 82.0.2, Google Chrome 86.0.4240.183

Note: If the browser does not match the above, there may be some display differences or discrepancies.

Feature List

An overview of the various features provided by Anatomage Cloud 3D.

- **Scan Visualization**
- **Section View Operations**
- **Volume Rendering of Scan Data**
- **Linear and Angular Measurements***

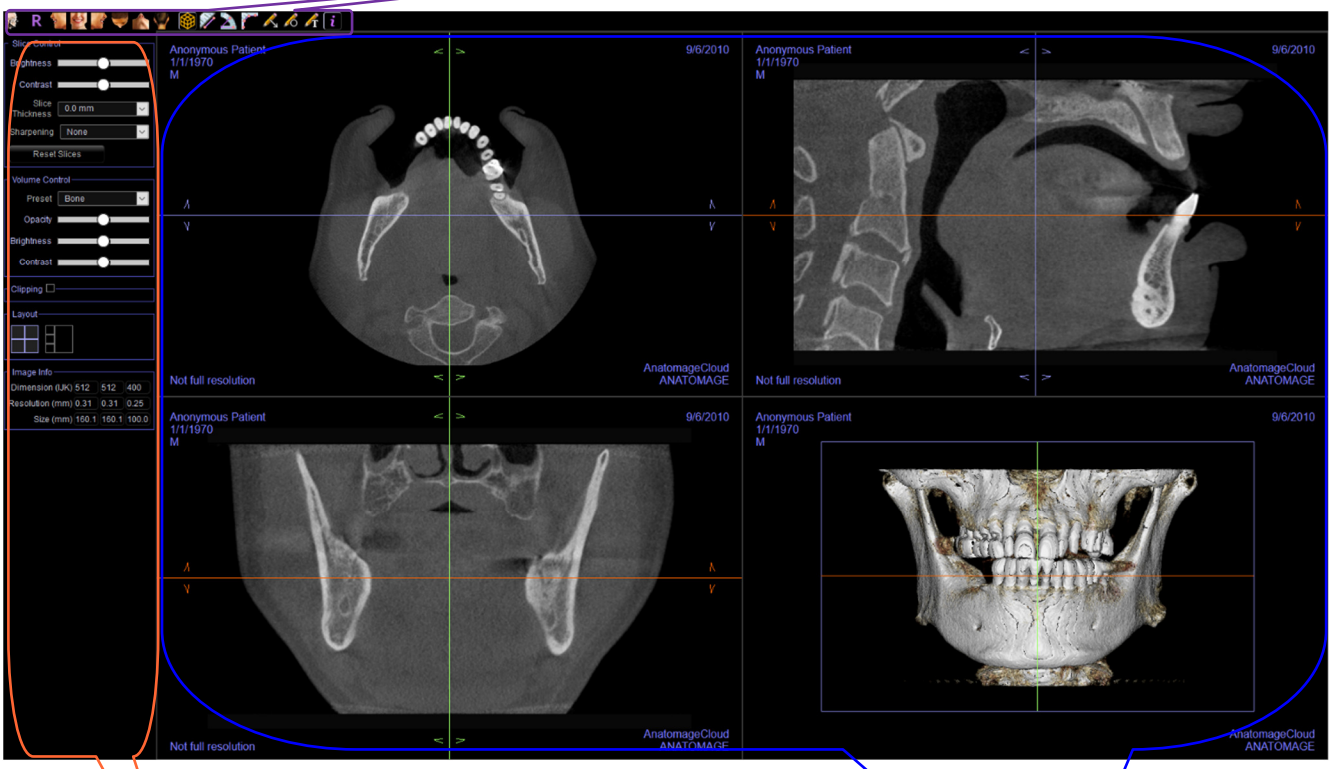
*All measurements are performed with the metric system.

Software Layout

The following is a description of how Anatomage Cloud 3D is organized by Toolbar, View Control Panel, and Rendering Window.

Toolbar

Tools can be accessed to perform certain functions on patient images.



Control Panel

The **Control Panel** is the region where patient images can be manipulated and controlled.

Rendering Window

Rendering Window is the region where patient images are displayed.

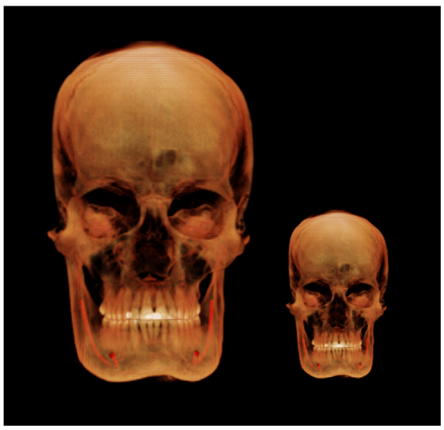
Image Navigation

Below is an explanation showing how to manipulate images in the rendering window with the keyboard and mouse.

Slider Scroll

- Click and drag the slider (e.g. opacity, brightness, etc.) to adjust the image.
- Click the slider header text to reset the slider to the center position.

Zoom In/Out



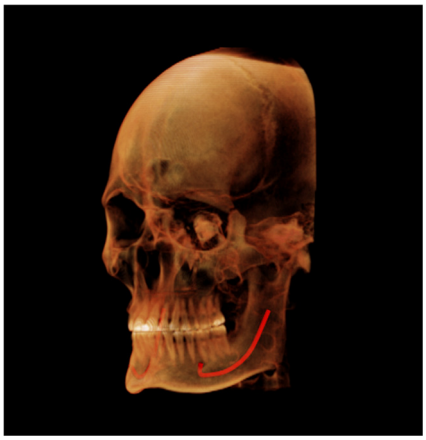
- Place the mouse cursor in the center of the image you want to zoom.
- Hold down the "Control" key + left-button on the mouse.
- While holding down the buttons indicated above, move the mouse up and down on the screen.
- This shrinks/enlarges the image: Down vertically zooms out. Up vertically zooms in.

Pan (Shift)

- Place the mouse cursor in the center of the image you want to shift.
- Hold down the "Shift" key + left-button on the mouse.
- While holding down the buttons indicated above, move the mouse any direction to achieve the desired image displacement.

Free Rotate

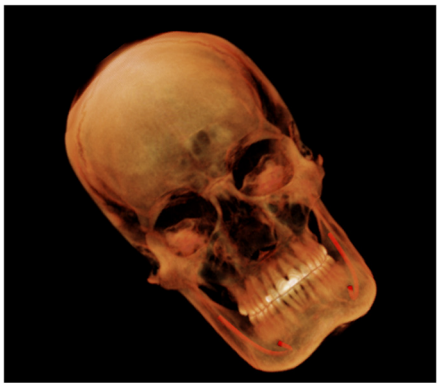
Applicable only for 3D images.



- Place the mouse cursor in the center of the image you want to shift. Hold down the left-button on the mouse.
- While holding down the left-button, move the mouse in any direction to achieve the desired rotational position.

Free Rolling

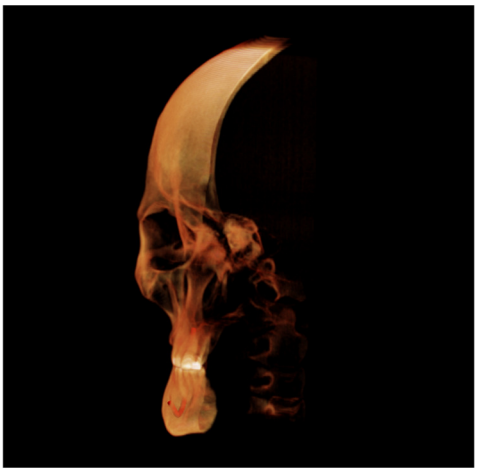
Applicable only for 3D images.



- Hold down the "Space" key + left-button on the mouse.
- While holding down the buttons indicated above, move the mouse up and down to rotate the image about a central axis.

Clipping

Applicable only for 3D images.

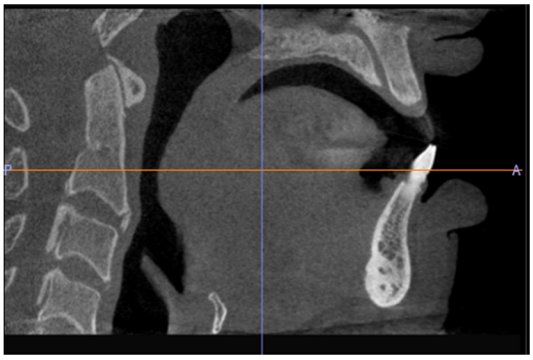


- Place the mouse cursor over the center of the image, then scroll the mouse wheel forward or backward to clip the anatomic plane as you like (after enabling clipping in the Control Panel).

Scroll Slice

Use when you would like to move through the series of sections when in the 2D slice views.

- Place the mouse cursor in the center of the image then scroll the mouse wheel forward or backward to move one section at a time as you advance through the data slices.



Toolbar

The following is a detailed explanation of the various features provided by Anatomage Cloud 3D.

About: Displays the software version information.

Reset Zoom: Resets the rendering window to the original view size.

Left: Automatically orients the volume in a left sagittal view.

Front: Automatically orients the volume in a front view.

Right: Automatically orients the volume so the patient is facing right sagittal.

Top: Automatically orients the volume in a top-down view.

Bottom: Automatically orients the volume in a bottom-up view.

Back: Automatically orients the volume to the posterior view.

Toggle Cursor Visibility: Conceals or displays cursors.

Distance Measurement: After selecting this tool, click two points to mark the desired distance. A number in millimeters will automatically display. Click on the measurement and press the "delete" key to delete it. Measurements can only be created on the 2D slice views.

Angle Measurement: After selecting this tool, click the first point, then click the vertex, then click the last point to create an angle. A number in degrees automatically displays. Click on the measurement and press the "delete" key to delete it.

Polyline Measurement: Select this option and mark any number of points in the slice view. Right-click to end the measurement, and the total distance appears. Clicking on the nodes and moving the cursor can modify points. Click on the measurement and press the "delete" key to delete it.

Arrow Notation: Allows an arrow to be drawn on the image.

Circle Notation: Allows a circle to be drawn on the image.

Text Notation: Allows text to be written and edited on the image.

Information Display: Displays or hides case information embedded in the data.

Warning: Any measurement that is incorrect can lead to surgical complications if diagnosis, treatment plans and/or actual treatment is based on the incorrect measurements. It is critical for the end user to learn how to perform measurements correctly and employ proper usage of all measurement tools. Measurement accuracy depends on the image data and the hardware scanner that generated the image data. The measurement cannot be more precise than the resolution of the image. Software reports the value based on user-picked points. Due to the nature of medical imaging, the boundary is not always well defined. The apparent boundary depends on the current brightness and contrast setting. The boundary may shift as the user makes adjustments to brightness and contrast. The user must understand the limitation of the measurement value before applying to the patient. If you notice any inconsistencies or software problems with measurements, or have further questions or concerns about using measurement tools correctly, please contact us at (408) 885-1474 or email us at info@anatomage.com

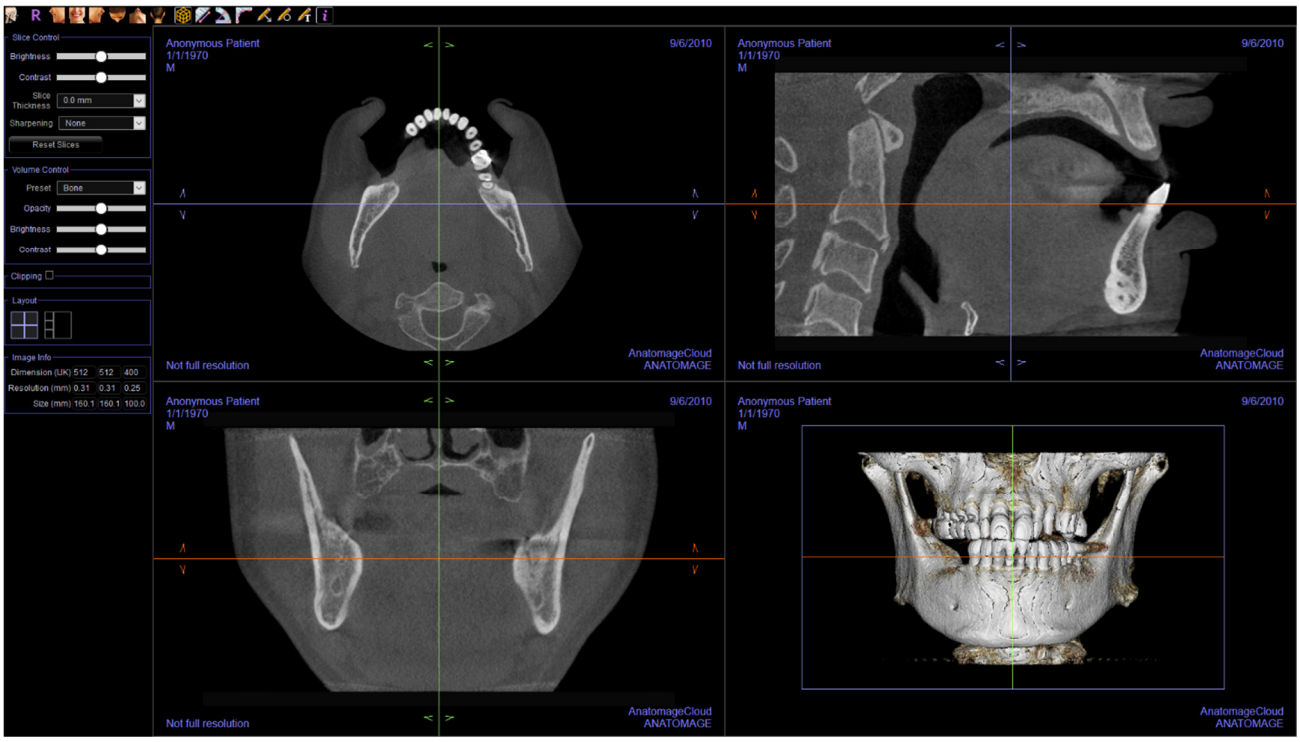
Warning: Any implant planning that is performed incorrectly in any aspect including but not limited to implant location, orientation, angle, diameter, length, and/or manufacture can lead to surgical complications if diagnosis, treatment plans and/or actual treatment is based off of the implant planning error(s) in question. It is critical for the end user to learn how to use the implant treatment planning tools correctly. If you notice any inconsistencies or software problems with implant planning or have further questions or concerns about correct utilization of implant planning, please contact Anatomage support at (408) 885-1474 or email us at info@anatomage.com

Warning: Implant planning must be performed by a trained healthcare professional for proper implant placement relative to the patient's anatomy. Implant angulation, divergence, location, and depth should abide by the implant manufacturer's instructions for use and placement parameters.

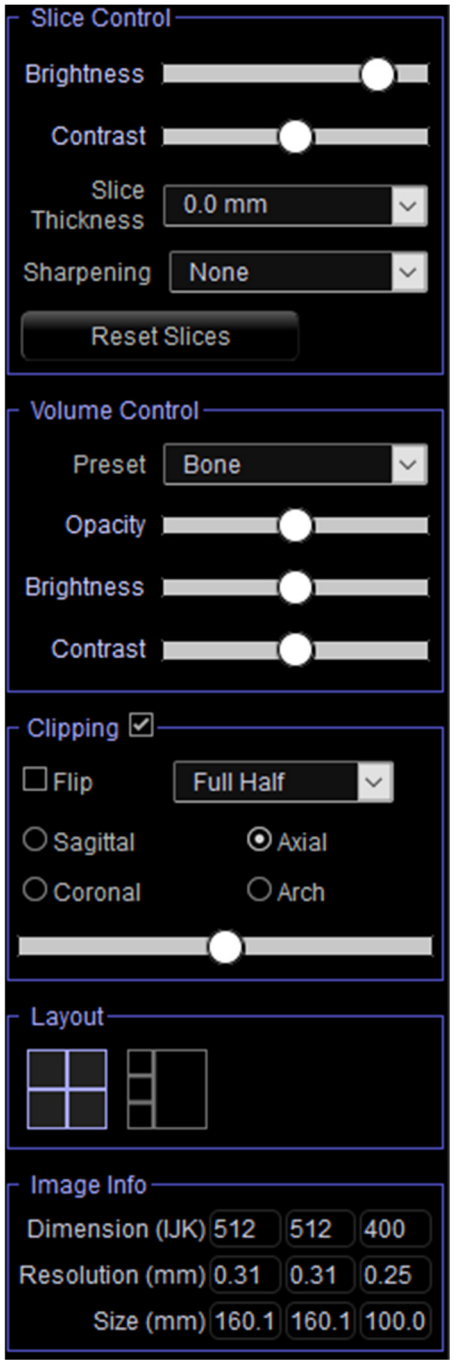
Warning: Any nerve that is traced in a way that does not conform to the actual pathway of the nerve can lead to surgical complications if diagnosis, treatment plans and/or actual treatment is based off of the incorrect tracing. It is critical for the end user to learn how to properly perform nerve tracings correctly. If you notice any inconsistencies or software problems with nerve tracing or have further questions or concerns about nerve tracing, please contact Anatomage support at (408) 885-1474 or email us at info@anatomage.com

Scan Overview

This is the default layout for any scan. The axial, sagittal, and coronal 2D slices are displayed alongside the 3D volume rendering.



Control Panel



Slices Control

- Brightness & Contrast: Can be adjusted for each of the presets to enhance the image.
- Slice Thickness: Uses ray sum when reconstructing the 3D image along each orthogonal plane.
- Sharpening: Applies the selected sharpening filter from the drop-down menu to the 2D slice renderers.
- Reset Slices: Resets the orientation of the 2D slices altered with the rotation widgets to the scan orientation.

Volume Control

- Preset: Sets the rendering type of the 3D volume.
  - Bone: Shows a realistic view of patient anatomy
  - Teeth: Shows a translucent skeletal view highlighting the teeth, roots, and bone
  - Soft Tissue: Shows translucent soft tissue
  - Soft Tissue+Teeth: Combines the Teeth and Soft Tissue renderings
- Opacity: Adjusts the translucency of the volume
- Brightness & Contrast: Can be adjusted for each of the presets to enhance the image.

Clipping

- Check the "Clipping" box to slice the image along the predefined anatomical planes (sagittal, axial, coronal, and arch) and to reveal the clipping options.
- To switch the clip to the opposite side, click "Flip."
- Select the amount of volume to clip in the drop-down menu.
- Scrolling the mouse wheel or slider moves the clipping plane.

Layout

- Toggle between the available layout options.

Image Info

- Dimension, resolution, and field of view size are summarized.
- Warning: Images may be resampled for browser display optimization. Resampled images may not be the same size and resolution or contain the same details as the original scan and are indicated in the rendering window.

Anatomage Cloud 3D Troubleshooting

Category	Issue	Solution
General	Measurement cannot be created.	Please make sure that the measurement creation is on a 2D slice view. Measurements cannot be created in the 3D rendering.
	Toolbar appears to be missing certain tools.	Click the Toggle Toolbar icon to reveal all tools. Click the Show Measurements tool to reveal the Distance Measurement tool.

For all other issues, please contact Anatomage Inc. Customer Support at (408) 885-1474.

Index

This comprehensive list provides a quick and easy way to find the relevant information that you would like to examine.

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