Quick Manual

Vesalii Anatomy VR

About Vesalii

"Vesalii" **the biggest medical library in the world**, , aims at assisting universities, students, healthcare professionals, and even patients in receiving quality and accurate medical information. It also provides different tools to easily view, study, and understand human anatomy of the male and female using 3D, virtual reality, and real CT scan models

We have the largest medically accurate content developed by our anatomy experts and doctors, offering more than 1,000 histology images, 50,000 landmarks, 20,000 traceable blood vessel and nerve paths, 500,000 CT images, and over 5 million medical words.

Vesalii Products

Our Products

Vesalii Anatomy 3D

Explore the comprehensive structure of the female and male human body in a stunning environment, covering every anatomical structure with full medical information for each.

Vesalii Anatomy VR

Explore the comprehensive structure of the female and male human body in an immersive virtual reality environment, covering every anatomical structure with full medical information for each.

Vesalii Dicom Converter 3D

Convert your DICOM files into a 3D model that can be used on your desktop computer or smartphone, allowing you to explore your DICOM images in a 3D environment.

Vesalii Dicom Converter VR

Convert your DICOM files into a 3D model that can be viewed using virtual reality (VR) gear, allowing you to explore your DICOM images in a one-of-a-kind experience you never experience before.

Vesalii Radiology 3D

Learn and understand how to read CT medical images, control tissue density, and body planes (axial, sagittal, coronal) on a stunning 3D model created from over 1 million CT images available for you to study.

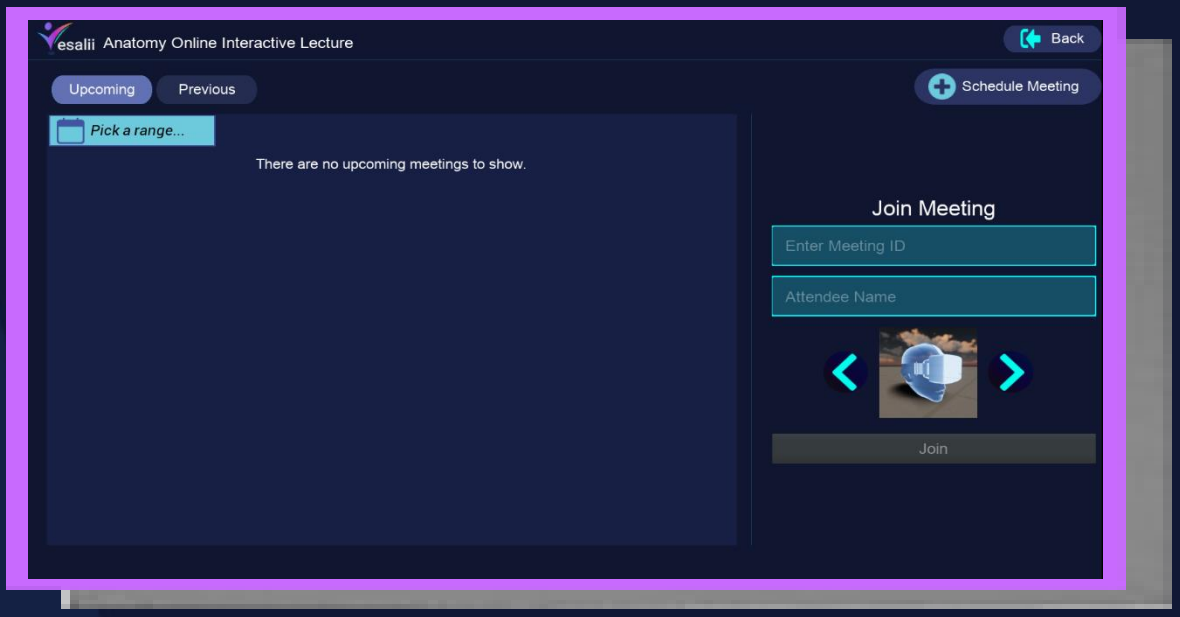
Vesalii Radiology VR

Learn and understand how to read CT medical images, control tissue density, and body planes (axial, sagittal, coronal) on a stunning 3D model viewed using immersive VR technology created from over 1 million CT images available for you to study.

Quick Guide

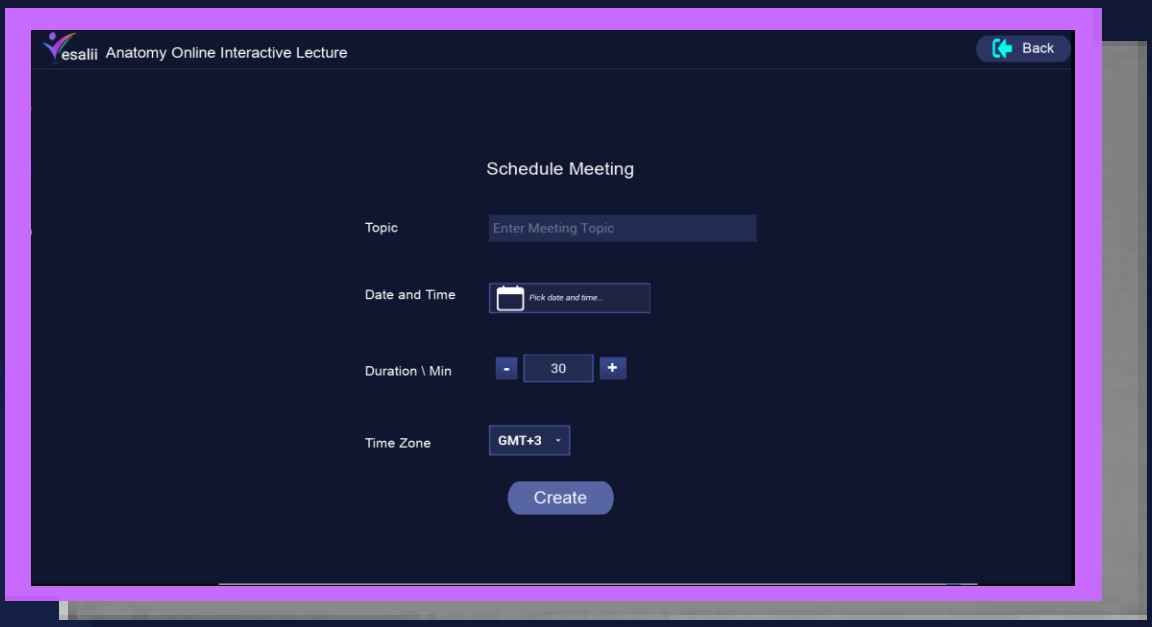
Figure 1
start screen

Button	Function
Male	Launch the application with the male 3D model in the VR environment as a single user
Female	Launch the application with the female 3D model in the VR environment as a single user
Meetings	Create a session to get other users involved.

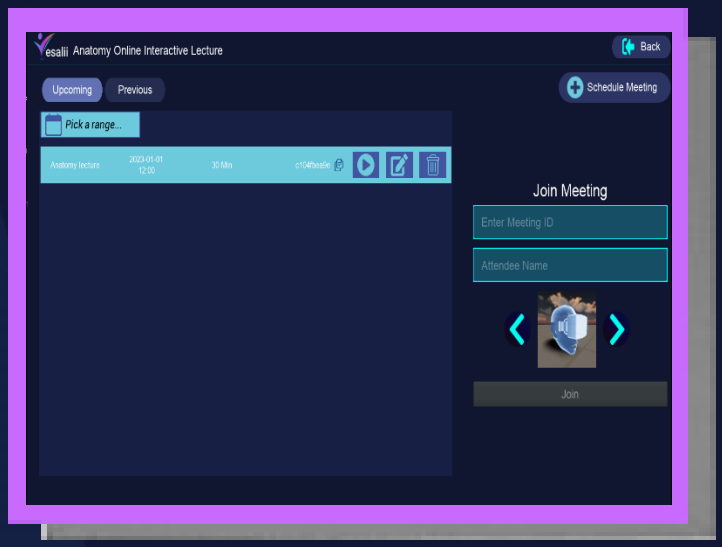


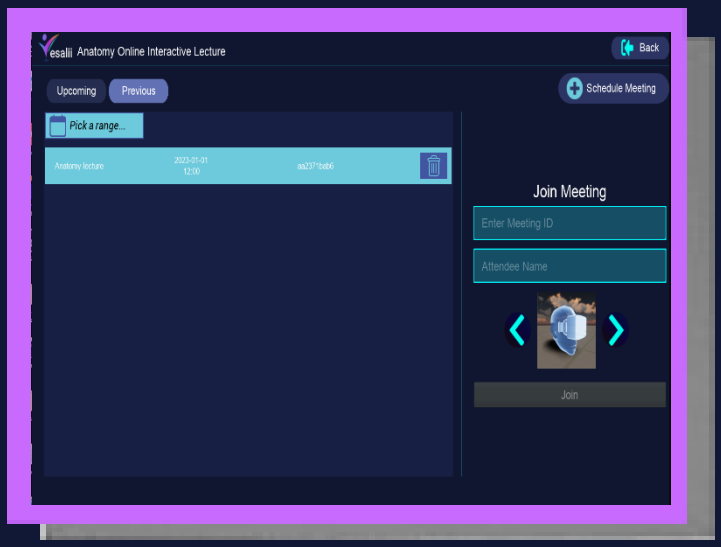
Button	Function
Upcoming	To display the upcoming scheduled meetings
Previous	To display a list of all finished meetings.
Pick a range	To search for meeting within date range.
Enter meeting ID	Enter the meeting address identifier to join meeting
Attendee Name	Enter the name of the session attendee, this option can be auto filled based on the server configuration
Avatar	To select the avatar color for the attendee face.
Join	To join a meeting.

Schedule meeting	To schedule a meeting for upcoming time, by clicking on it we will see the below figure.

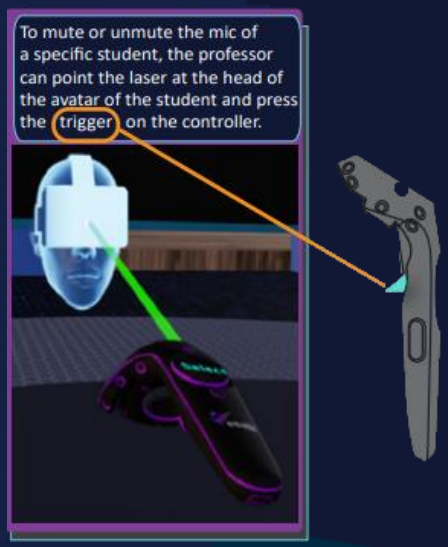


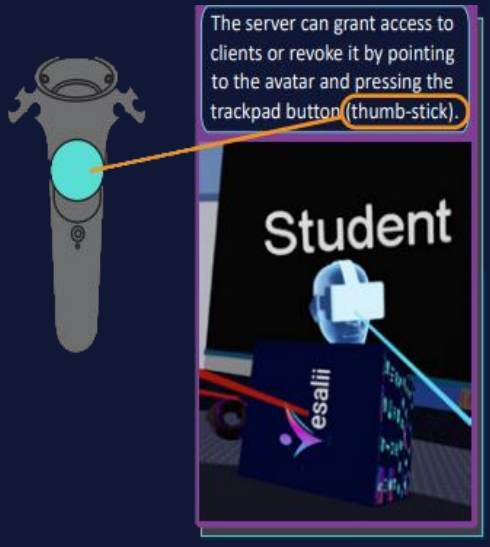
Button	Function
Topic	Enter meeting topic
Date and Time	To set the start time for upcoming next meeting
Duration \ Min	To set the duration for upcoming meeting with maximum of four hour incremental by 30 minutes each step
Time Zone	The offset of time zone from GMT for the host.
Create	To create the meeting.





Button	Function
Meeting id	Copy the meeting id by clicking on copy icon
Start Meeting	Start the meeting
Edit	To edit the scheduled meeting.
Delete	To delete the meeting.
Previous	To display a list of all finished meetings. To delete the finished meeting.





This icon appears above the students microphone is muted.

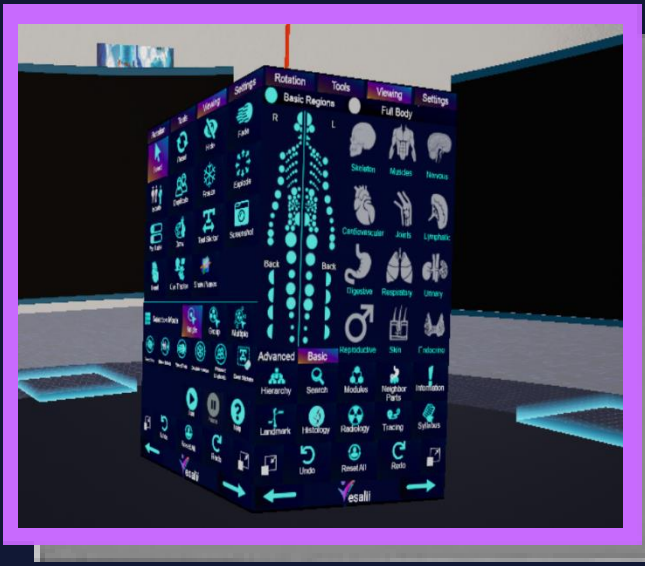
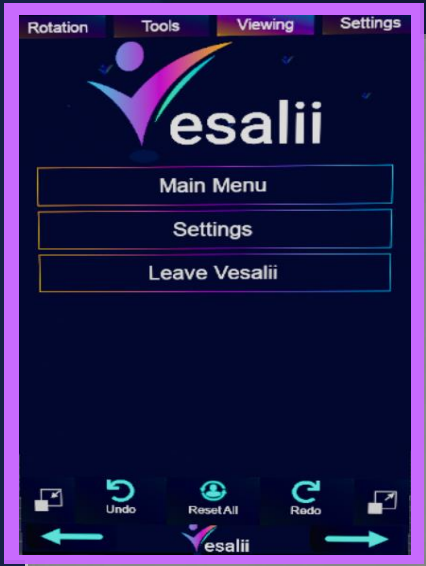
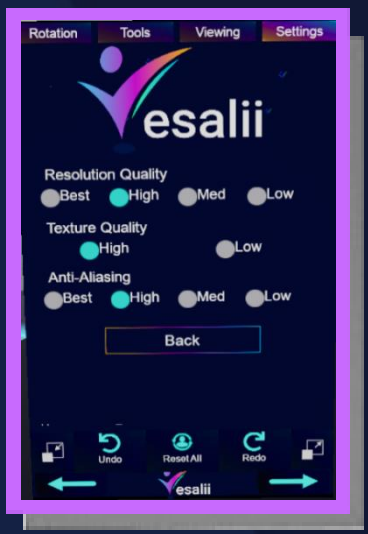


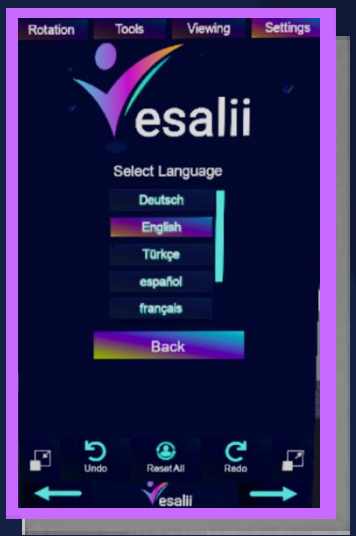
Figure 2
cube navigation

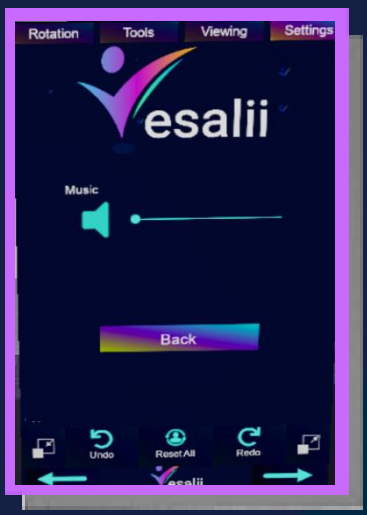


Num.	Button	Function
1	Topic	Bring the user back to the main menu (Figure 1 start screen)
2	Settings	Display a set of options to set resolution, language, sound & save path.
3	Leave Vesalii	Exit Vesalii Anatomy VR

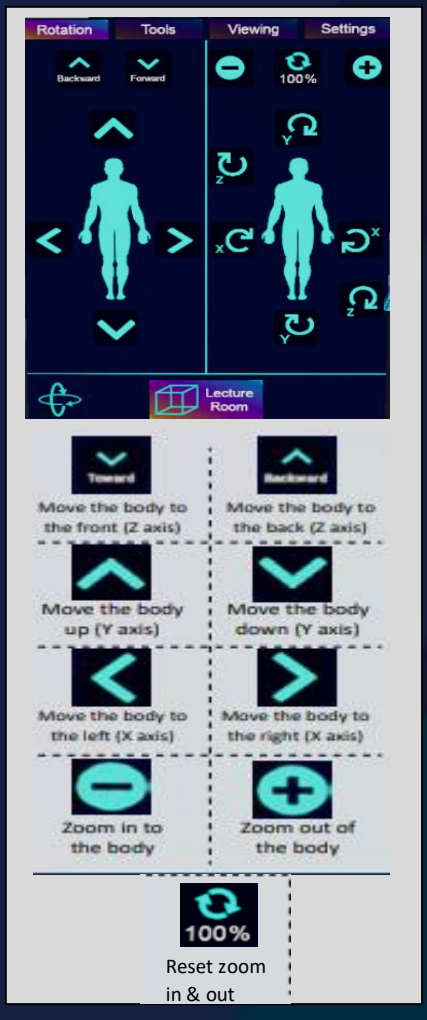
Num.	Icon	Name	Function
2	Resolution Language Sound Save Path Back	Setting	Open setting menu where resolution, language, sound option, and save path for screenshots and recordings can be changed



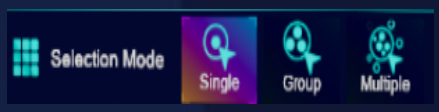




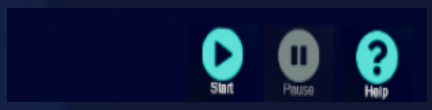
Num.	Icon	Name	Function
2.1	  	Resolution Resolution Quality Texture Quality Anti Aliasing	Change resolution quality (Best, High, Med, or Low). Change the quality of textures (High or Low). Change anti-aliasing option (Best, High, Med, or Low). The higher the setting, the smoother the edges of displayed objects in the scene become.
2.2		Language	Select the language for the application. Language change is application-wide, meaning that it affects all aspects of the application, including menus, bars, panels, and body structure names and description. There are 8 languages available now (German, English, Turkish, Spanish, French, Portuguese, Arabic, and Chinese).
2.3		Sound Music	Control background music volume.

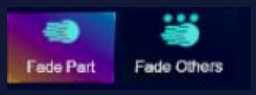


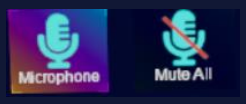
Num.	Icon	Name	Function
2.4	Save Path	Save Path	Select the desired save path for screenshots and screen recordings taken through the application.
2.5	Back	Back	Go back to the previous menu.
		Scale down	Reduce the size of the cube by 10% for each click
	Undo	Undo	Revert last action
	Reset All	Reset All	Reset single part/group/multiple to its original location
	Redo	Redo	Reapply last action (only activated after Undo function)
		Scale up	Used to enlarge the cube by 10% for each click
		Left arrow	Press to switch to the previous cube face.
		Right arrow	Press to switch to the next cube face.
			Undo function will revert the last action as it was taken (if you select a group it will revert all the group back)
1	Rotation Tools Viewing Settings	Transform Panel	By using the tools and buttons on this Panel you can move the body in the 3D scene
			Note that you can control the body by clicking at any arrow in gizmo
			Pressing on the body image icon the camera will return to the default pose
2		Show Visua Gizmo	Showing visual (X,Y,Z) axes arrows on the body
3	Surgery Room	Surgery room	The default VR room where application starts
			Switch off the surgery room by clicking on it, you can change the background color using



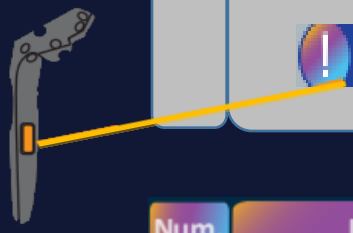
Num.	Icon	Name	Function
1		**Select**	Select a part to control it
		Reset	**Reset selected part/group to its original position by clicking on it**
		Hide	Make the selected part/group invisible
		Fade	**Make the selected part transparent and see underlying layers**
		Isolate	**Isolate the selected part/ group from the whole body in VR view**
		Duplicate	**Make another copy of the selected part/ view**
		Freeze	**Make the selected part unaffected by all functions**
		Explode	**Expand the selected part to its primary segments**
		Part Label	**Select a body part/group with an indication of it by showing label**
		Draw	**Used to draw on a separate board or directly on the model**
		Text Sticker	**Allows the creation of a sticker on any part the user wants**
		Screenshot	Takes a screenshot for your current view
		Heart	Play/stop the motion of the Heart
		Eye Tracker	Displays a black dot that represents the spot where the user is looking
		Show Planes	Reveal lines for the three planes to be moved on the body
2		**Single selection**	Allows select/hide/fade/isolate on a single part of the human body
		Group selection	Allows select/hide/fade/isolate on a group part of the human body
		Multiple selection	Allows select/hide/fade/isolate on a multi parts part of the human body
3		Reset Hide	Undo the hiding action
		Reset Isolate	Reset all isolated parts to their original
		Reset Fade	Undo the fade action
		Disable Freeze	Undo the explode action
		Remove Duplicate	Delete the duplicated part/view
		Clear Stickers	Remove all body part stickers



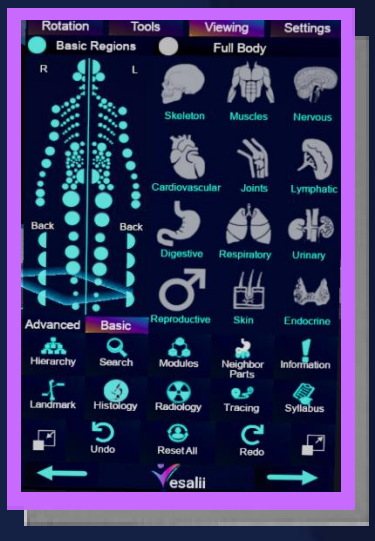


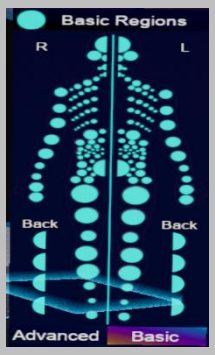


Num.	Icon	Name	Function
4		**Start**	Takes a video recording of the screen as you work on the model
		Pause	Pause and resume a video recording of the screen as you work on the model
		Help	View product manuals, FAQs, setup guides, and more
5		**Freeze All**	Make all parts in the current view unaffected by Hide and Fade
6		**Fade Others**	Make the unselected part transparent and see underlying
7		**Mute self**	Only active in multi-user sessions. Used by student or server to mute the users mic.
		Mute All	Only active for the professor in multi-user sessions. Used to mute the mic of all other users.

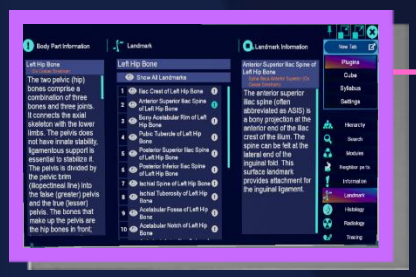
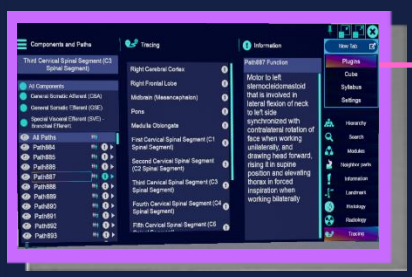


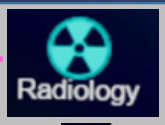
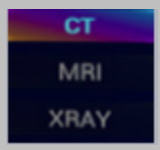
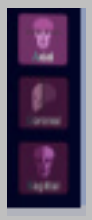
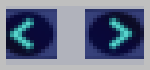
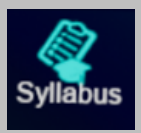
(Use Grip button on the controller as a quick snapshot shortcut)



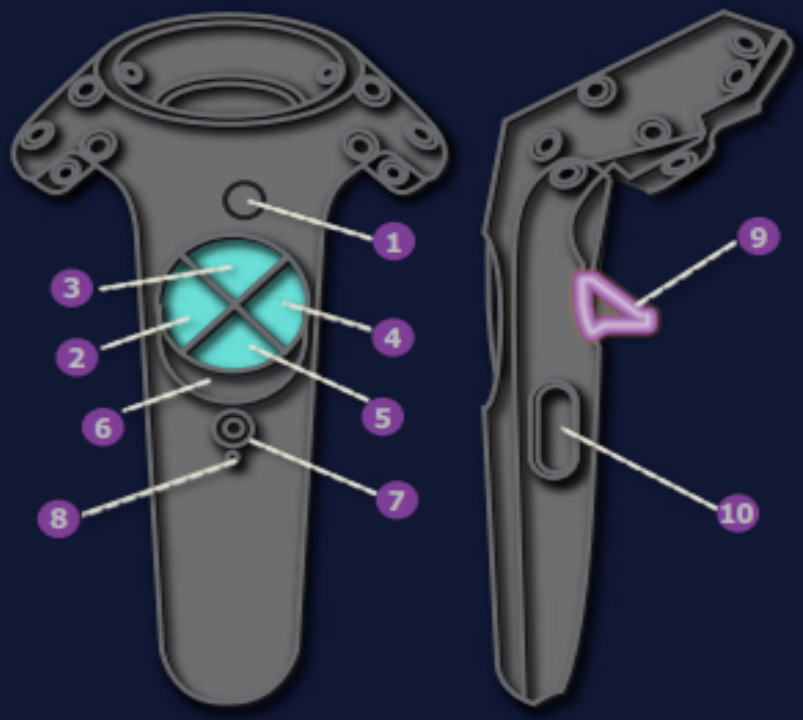
Num.	Icon	Name	Function
1		Regions component Advanced	A small sample of a dotted human body is displayed in order to turn on/off the dots to show/hide the human body regions in VR Open advanced regions to activate advanced body structure view in more details, for example (show all nerves and blood vessels)
2		Body systems component	Enables you to hide/show the human body systems in VR (Skeletal system, Muscular system, cardiovascular system, Nervous system, Lymphatic system, Joints system, Endocrine system, Digestive system, Urinary system, Respiratory system, Reproductive system, Integumentary system)

Num.	Icon	Name	Function
1	Hierarchy	**Hierarchy**	Display the Hierarchy panel that allows the user to discover the systems and their parts and groups in a hierarchical list Expands the hierarchical list Show/hide the part in VR
2	Search	**Search**	Search button is used to search for a specific part or group or landmark Filter search results (by Part/Group or System)
3	Modules	**Modules**	Display the Modules panel which shows all available modules
		Create Module	Ability to edit/create new module to be customized
		Vesalii Modules	View pre-created modules from Vesalii
		User Modules	View Modules created and customized by the user
			Take a snapshot of the current view and save it as a module
			Delete the created module
4	Neighbor Parts	**Neighbor Parts**	Reveal the neighboring parts for any selected part from any other system (s). • Select a part from the model • Select the system (s) for the neighboring parts you wish to reveal • Move the slider to reveal the neighboring parts in a radius around the originally selected part
		Select Part	
		System Filter	

Num.	Icon	Name	Function
 5	Information	**Information**	Used to hide/show the information panel for the selected part Contains the name of the selected part in English and Latin, in addition to information about the part. On the top, you can see the hierarchy path for the selected part to understand the anatomical structure of the human body.
 6	Landmark	**Landmarks**	Click to show/hide landmark number to see all landmarks on the part Click for detailed information
 7	Histology	**Histology**	Browse histology images related to cell and tissue structure with their landmarks use to browse between histology images and find image description for each image Icon shows more information about image description, tissue category, and tissues Zoom in, zoom out and reset respectively
 8	Tracing	**Tracing**	Follow the path of a blood vessel or nerve impulse on the VR model to trace the path from its origin to the related part. Click to isolate the selected path Click to fade other paths Click for detailed information on the path

Num.	Icon	Name	Function
9		**Radiology**	View CT/MRI/X-ray images for the selected part
		Close	Close the current window
		Scale up	Increase the size of the window by %10
		Scale Down	Decrease the size of the window by %10
		Pin	Pin down the current view on the wall
		CT MRI XRAY	Browse CT images for the selected part Browse MRI images for the selected part Browse X-Ray images for the selected part
		Axial plane Coronal plane Sagittal plane	View the image in the axial plane View the image in the coronal plane View the image in the sagittal plane
		Medical image	Red dot shows the selected point as a landmark on the CT/MRI/X-ray image
		Navigation arrows	Use the to move between slices
		Zoom	Zoom in, zoom out and reset respectively
6		**Syllabus**	Manage/edit your syllabus (coming soon)

Landmark on medical images will remain visible in a dynamic manner as you move across all the slides that show the organ or structure



1 Menu button (Shoulder)

This button is used to teleport the user within the scene. Press and hold this button, move the circle that appears to where you want to be, and then release the button to teleport (the arrow on the circle shows the direction you will be facing after you teleport).

2 Trackpad Left

Pressing this button will move radiology or histology images to the left.

3 Trackpad Up

a) Pressing this button will move radiology or histology images up.

b) Touching this button without pressing will scroll up on tabs containing text information, such as in the information tab for a body part (the scroll action using this method is slow).

4 Tackpad Right

Pressing this button will move radiology or histology images to the right.

5 Trackpad Down

a) Pressing this button will move radiology or histology images down.

b) Touching this button without pressing will scroll down on tabs containing text information, such as in the information tab for a body part (the scroll action using this method is slow).

6 Trackpad Press (Thumbstick)

a) This button is used to perform the action of a selected tool. For example, pressing this button while pointing at a body part after selecting the hide tool will hide the body part you are pointing at.

b) In a multi-user session, the host (professor) can point at the head of the avatar of another user and press the thumb to grant or revoke access to that user.

When the thumbstick or any of the trackpad buttons (buttons 2 to 6) is pressed, the color of the laser from the controller changes from the default red to blue to indicate that the button has been pressed. The color of the laser reverts to red when the button is released.

7 System Button

This is the power button for the controller, i.e., pressing this button will turn the controller on.

8 System Light

This light indicates the status of the controller.

Green indicates that the controller is on and functioning normally.
Flashing red indicates that the controller requires charging.
Solid red indicates that the controller is currently charging.
Blue indicates that the controller needs to be paired with a device.
White indicates that the controller is fully charged.

9 Trigger (Trigger and Trigger Axis)

This button has multiple functions:

1. Move a body part by pointing at it, pressing and holding the trigger, dragging it to where you want it to be, and then releasing the trigger.

2. Scale up or scale down the size of a body part by pointing at it with both controllers and pressing and holding the trigger on both controllers. While holding the triggers, move the controllers apart to scale up or move them toward each other to scale down.

3. Select buttons on tabs or the cube by pointing at the button and pressing the trigger once.

4. Move a slider by pointing at it, pressing and holding the trigger, dragging it as desired, and then releasing the trigger.

5. Move a tab or window to another location by pointing at it, pressing and holding the trigger, dragging it to where you want it to be, and then releasing the trigger.

6. In a multi-user session, the host (professor) can point at the head of the avatar of another user and press the trigger to mute or unmute that user.

When the trigger is pressed, the color of the laser from the controller changes from the default red to green to indicate that the button has been pressed. The color of the laser reverts to red when the button is released.

10 Grip Button (Grip 1)

a) Pressing both of these buttons at the same time on the controller with the cube will take a screenshot.

b) Pressing both of these buttons at the same time on the controller opposite to the cube will activate the eye tracker feature.