

# ASCLEPIUS



Anatomy | Radiology | Histopathology Atlas | CTRender | Embryology | Animal Anatomy

# Digitalize Your Anatomy Education



## Perfect Teaching Aid

Asclepius has proved itself to be the best teaching aid a student can have. With a fully annotated human anatomy and the ability to read CT/MRI data and create 3D models with the data. The Asclepius is becoming a popular tool in medical education. The ability to perform any kind of dissection on the Asclepius enables the student to easily understand and visualize the complex structures of the human body. The Asclepius is also a great tool for professors in medical universities. Since the Asclepius can be used as a video output to teach a large group of students at once. Every student will get to see and understand the human anatomy through the Asclepius.

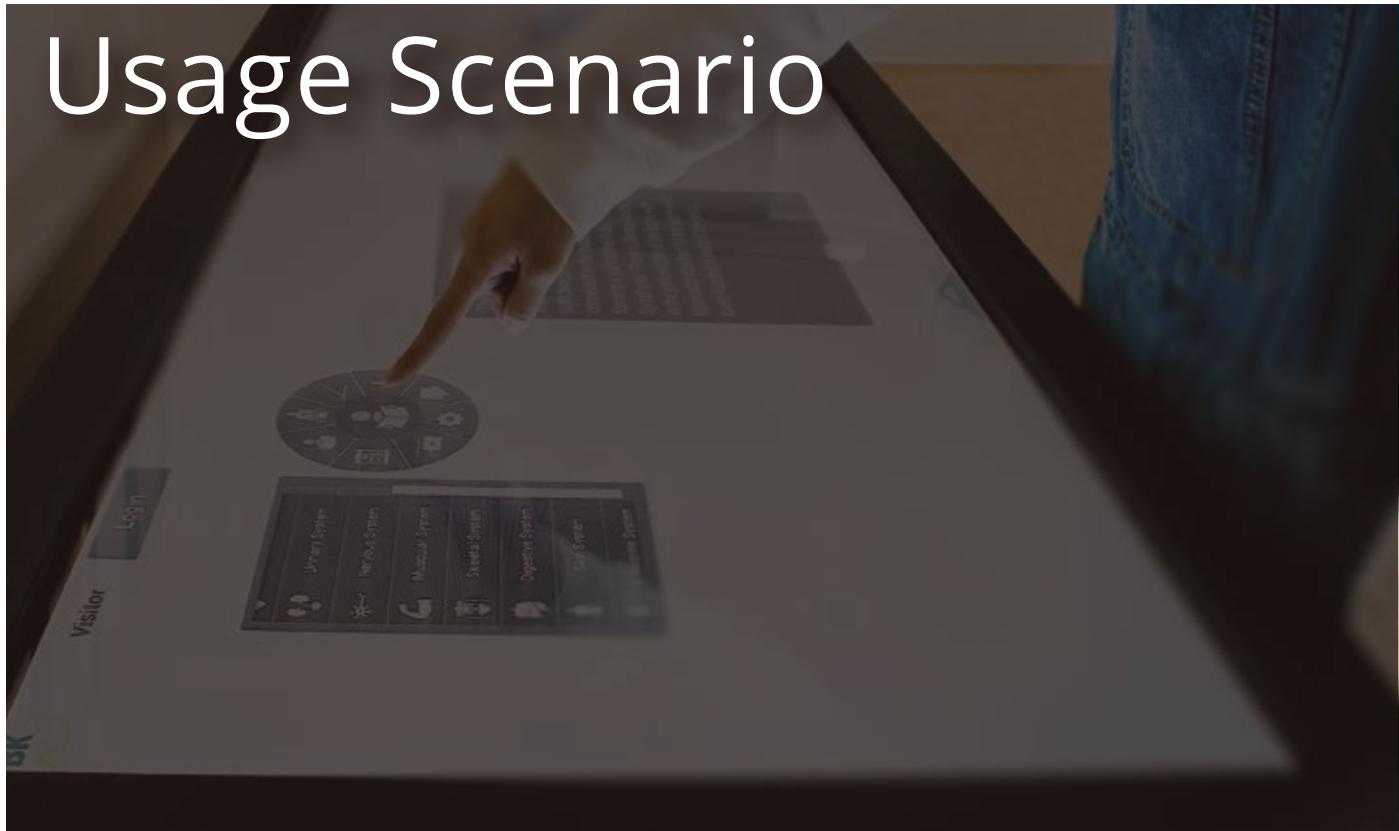
## Breakthrough in Teaching

Asclepius assist medical institutions in reducing yearly expense on real human cadavers. The re-usable content of the Asclepius makes it a lot simpler and sustainable for students and professors to perform virtual dissections of the virtual human cadaver as many times as they want, unlike a real human cadaver.

## Environmentally Friendly

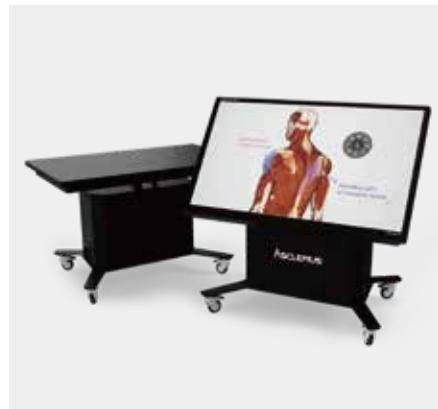
Asclepius offers a similar experience like that of a cadaver lab, but without the harmful chemicals and the stinky environment. There is no concern about exposure to radiation or other chemicals that can harm students physically.

# Usage Scenario



**TBK-43 LT**

TBK 43 LT is a smaller size, making it more portable. For easy use in classrooms for students to get hands-on experience with virtual anatomy.



**TBK-65 4K**

The TBK-65 4K has the ability to be tilted from horizontal to wallboard mode, with a resolution of 4K. It is suitable in assisting professors and lecturers with demonstrating human anatomy to a bigger class.



**TBK-84 EA | TBK-99 EA**

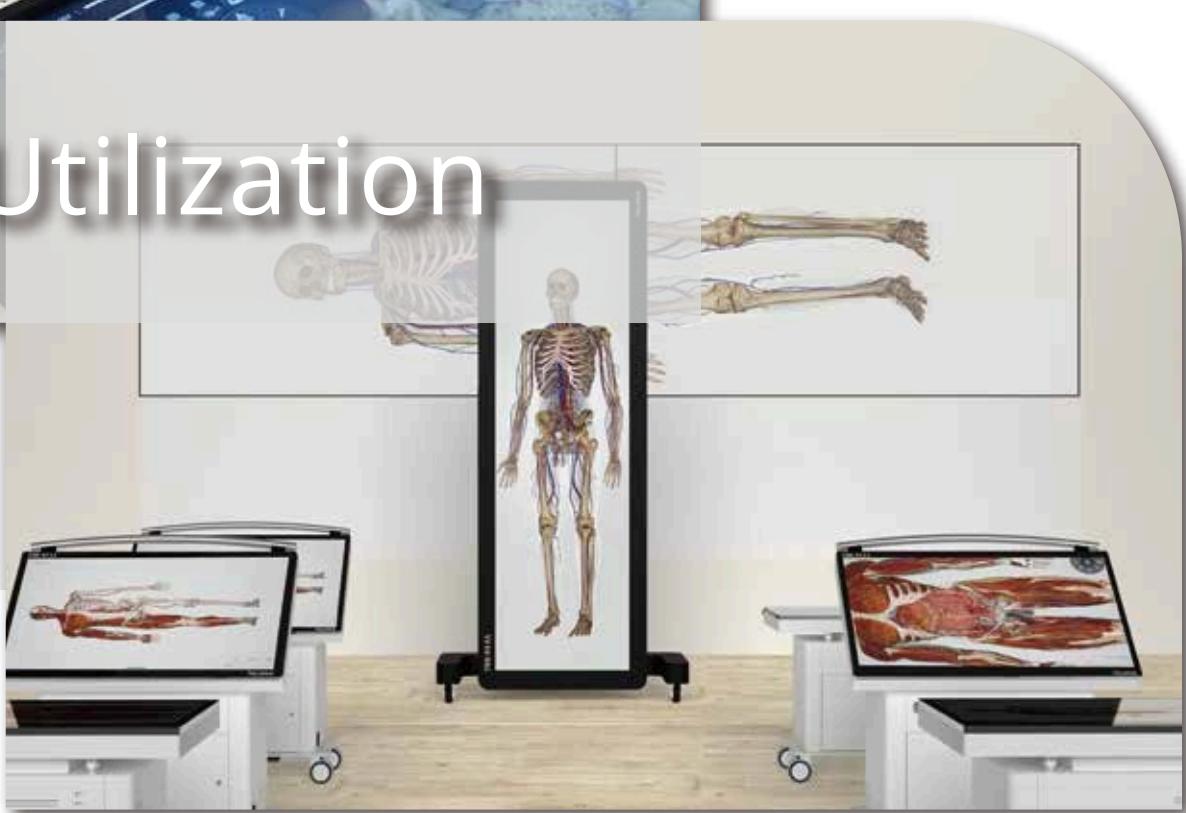
The TBK-84/99 EA boasts a larger display area. This feature brings the visuals closer to realism, enhancing both the image quality.



## Fully Tech Lab

Asclepius is adding an extra value to the teaching of the human anatomy enhancing the abilities of the students and assisting the professors in teaching in more interactive environment. With detailed realistic human anatomy and information about several body systems the Asclepius is more than just a virtual cadaver. The RADIOLOGY software also helps the students and professors rehearse pre-surgical planning before going in to the real-life surgical situations.

## Utilization



## Lecture

Asclepius intended use is in assisting professors in demonstrating simple to advanced medical concepts in medical institutions and colleges. Using the Asclepius professors can connect it to monitors or projectors to perform a lecture to a small or large group of students. The pre-loaded data in the Asclepius assists professors in instructing class. It also provides a unique way for students to memorize and visualize human organs, both externally and internally. The professors can also prepare their own teaching material to teach the students.

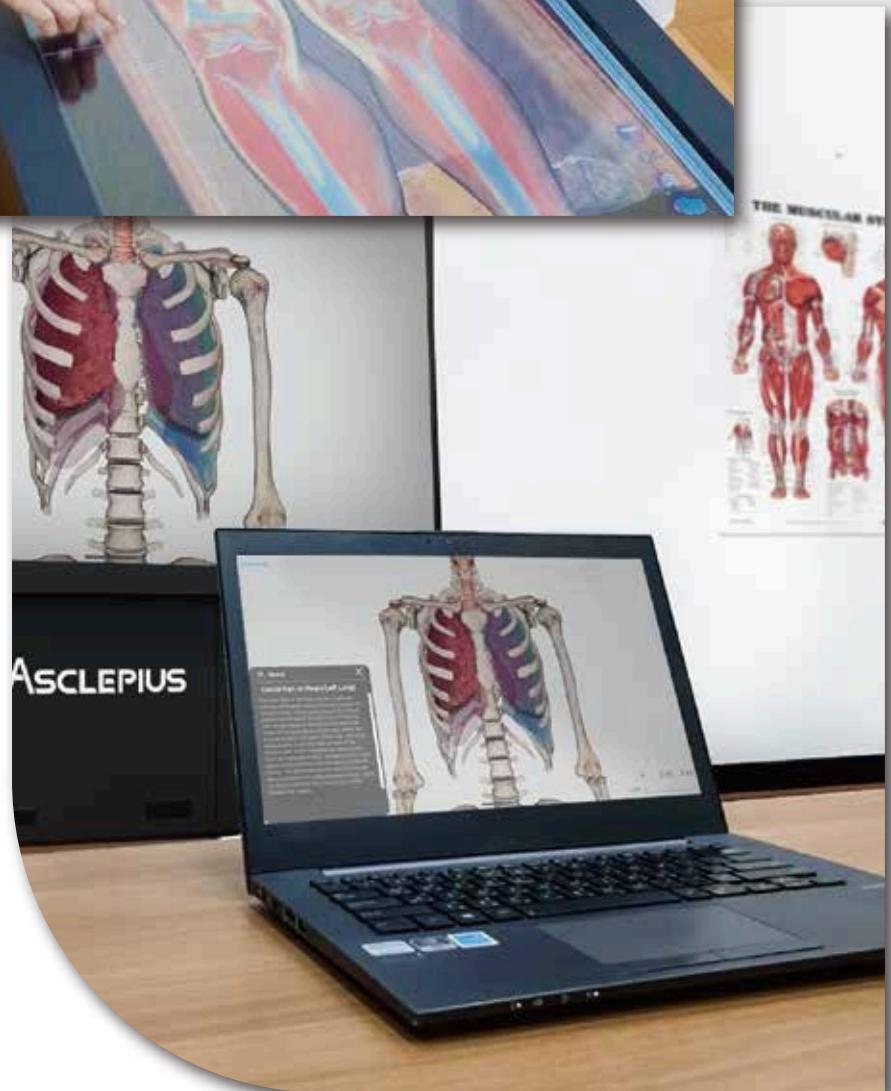
# RADIOLOGY

The software package of the Asclepius helps the surgeons, professors, and students to train themselves with pre-surgical planning by reading CT, MRI, or DICOM data files and converting it into a 3D model in less than 30 seconds for educational purpose only.



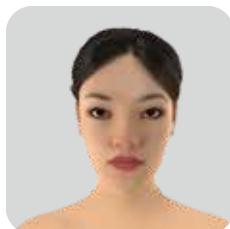
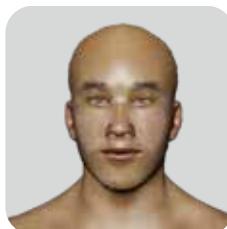
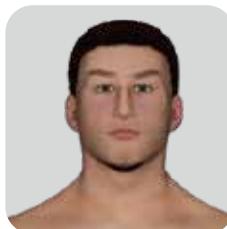
## Remote access

The Asclepius series is equipped with tools to access the table remotely from any location. Providing flexibility to professors and instructors to use the Asclepius virtually from home as well.





# Anatomy



## Fully Annotated Human Anatomy

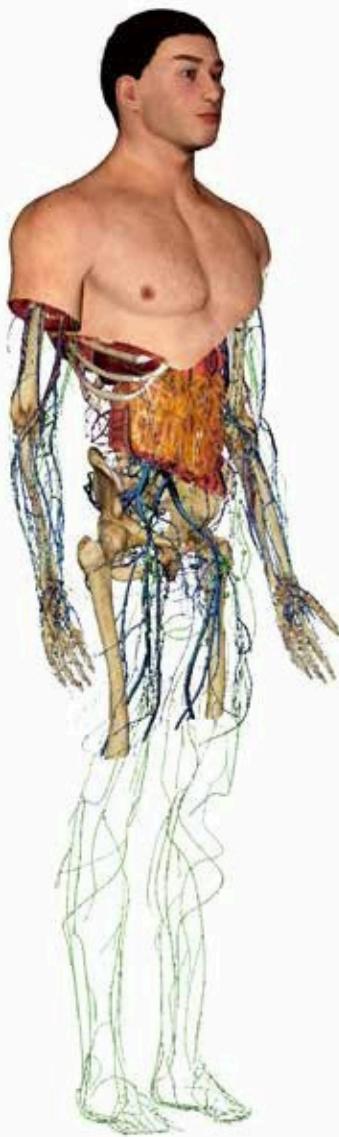
Asclepius is equipped with 3 male and 3 female human virtual cadaver from real frozen dead bodies with more than 4500 physiological models and annotations. The table is equipped with the different planes of view, i.e., coronal, sagittal and transverse, providing the details from all angles of the human body.



## Systematic anatomy

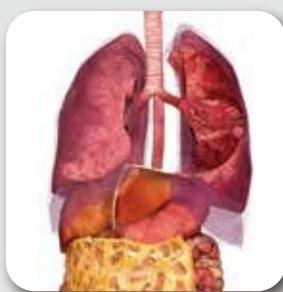
Asclepius content is divided into 13 sections. Professors can go around each section and teach students each section in detail. For example, working on the reproductive system, respiratory system, and other systems. These segments make it easier for the students to remember the pictorial presentation of each section of the human anatomy.





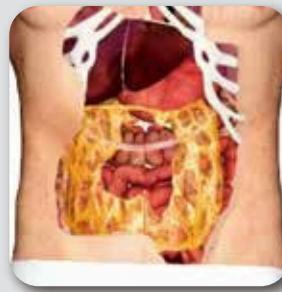
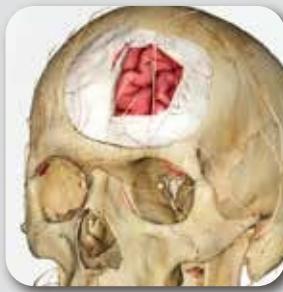
## Virtual Interactive Dissection

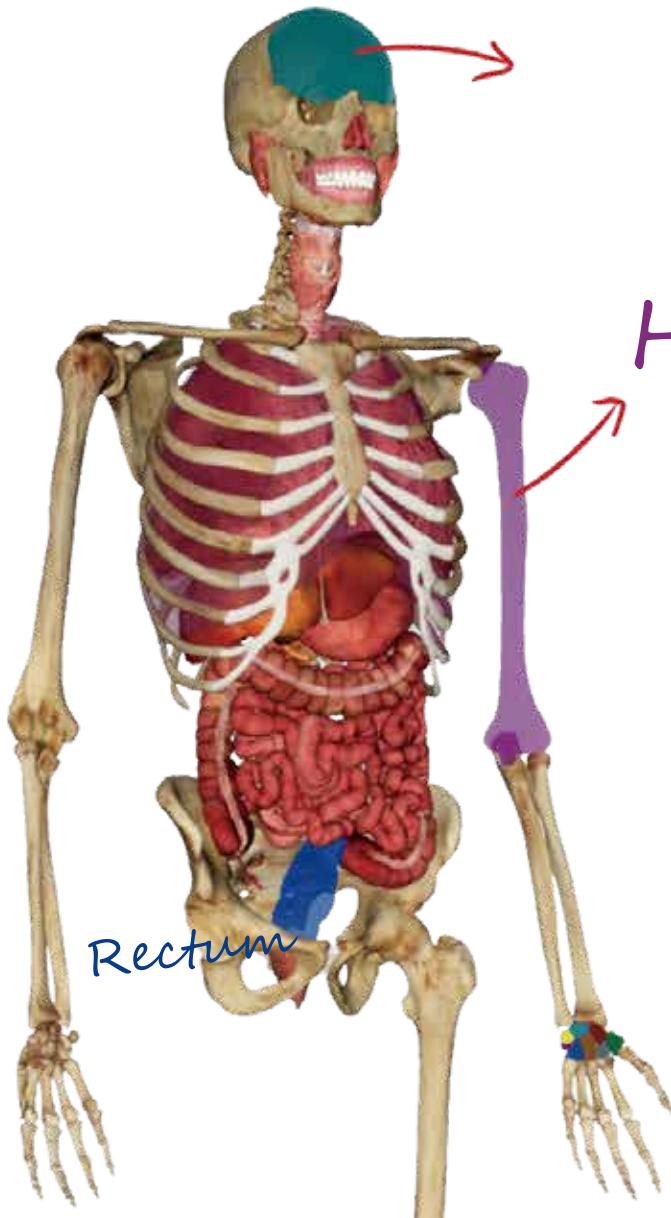
The virtual dissection tool of Asclepius is one of the most user-friendly features available among the virtual dissection tables. One touch dissection of the virtual human cadaver with full annotation is available with the Asclepius. Virtual dissection is gradually replacing the traditional anatomy labs in the universities as it is a re-usable virtual cadaver that can be used as many times as one would want.



## Free Hand Cut

Free hand cut gives the option to perform the dissection of the virtual human cadaver in form. Professors or students can draw any form to perform the dissection in that respective form.





## Humerus

### Note

Asclepius is equipped with tools for teachers to mark notes or enter texts as notes while teaching. It can also take screenshots and save it into an external USB to be used during other lectures .

Scaphoid      Lunate  
Trapezium      Pisiform  
Capitate      Hamate  
Trapezoid      Triquetrum

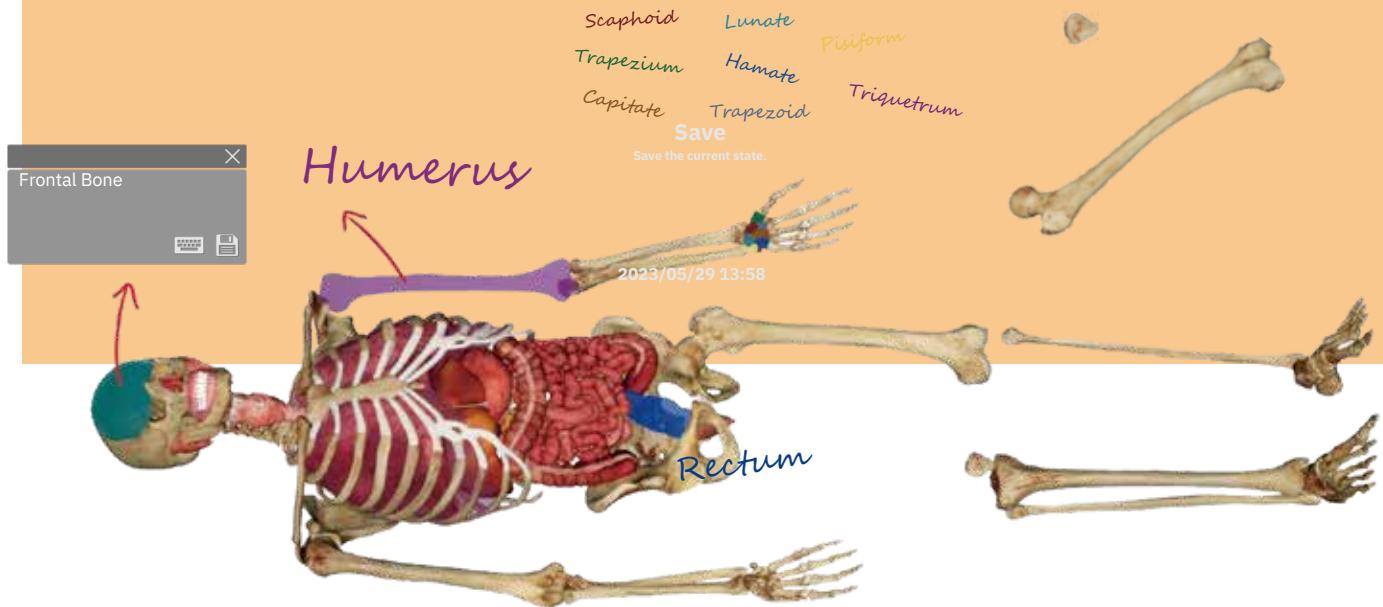
### Change Color

A selected body part can be changed to a specific color to make it more distinct. If the instructor wants to teach a specific body part it will be easier to highlight the body part. For example, if a lecturer wants to teach Carpal bones, the lecturer can select all regions of the Carpal bones and change it to a different color.



## Save The Current State

Asclepius allows professors to save their current teaching session on the screen they can pick up where they left off when teaching the next lesson.

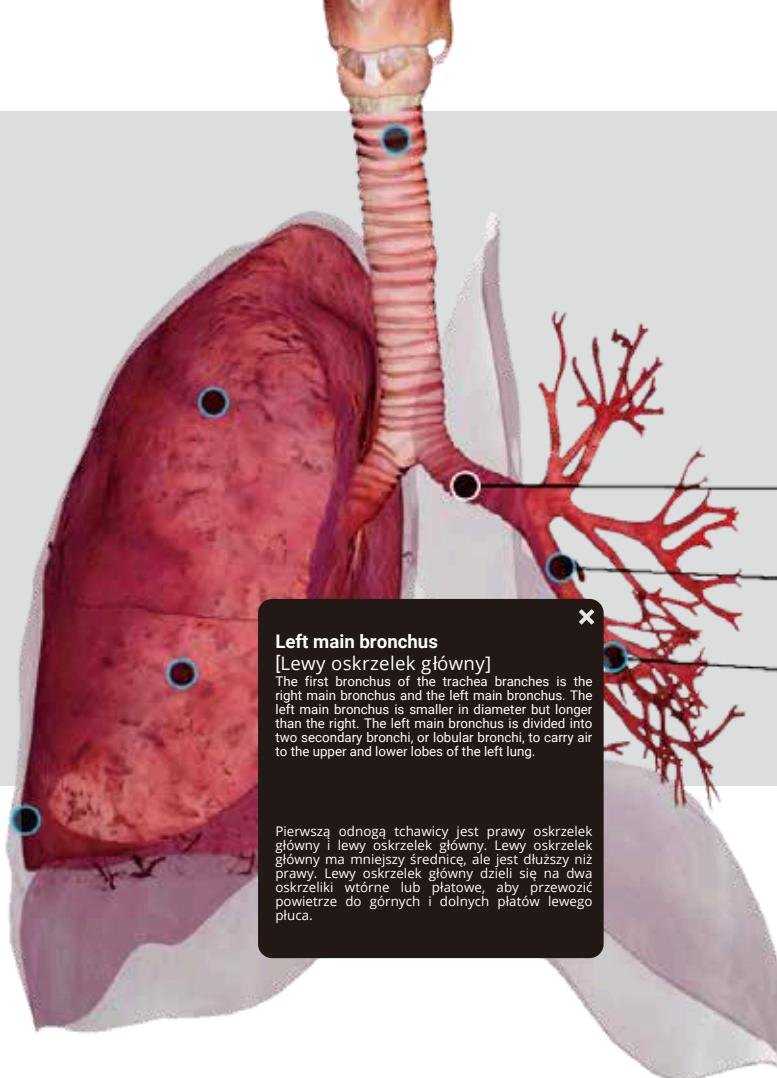


## Measurement Tools

Measure the distance from one point to another point.

Length  
44.2 cm





## Characteristic Point Teaching

Provide the names of key anatomical parts, and clicking on each will display detailed annotations for that specific part.

**Left main bronchus**  
[Lewy oskrzelek główny]

**Secondary bronchus**  
[Sekundarny oskrzelek]

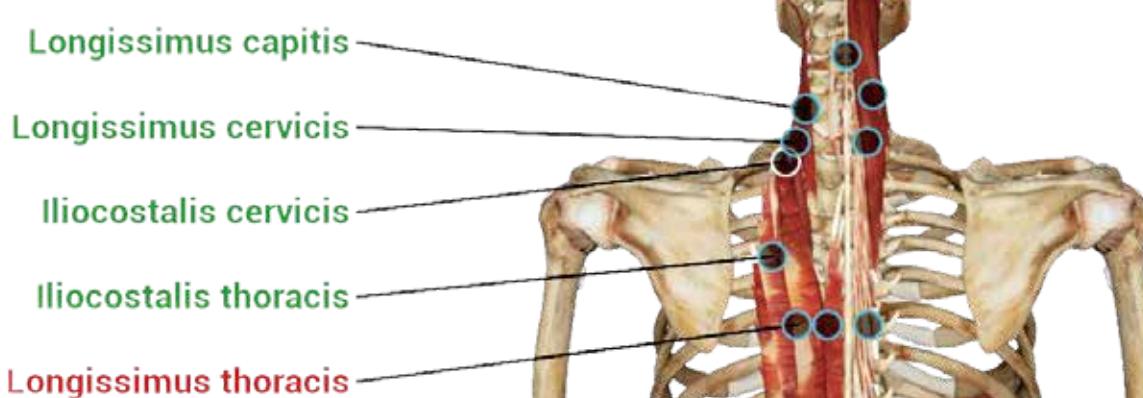
**Tertiary bronchus**  
[Trzeci oskrzelek]

### Left main bronchus

[Lewy oskrzelek główny]

The first bronchus of the trachea branches is the right main bronchus and the left main bronchus. The left main bronchus is smaller in diameter but longer than the right. The left main bronchus is divided into two secondary bronchi, or lobular bronchi, to carry air to the upper and lower lobes of the left lung.

Pierwszą odnogą tchawicy jest prawy oskrzelek główny i lewy oskrzelek główny. Lewy oskrzelek główny ma mniejszy średnicę, ale jest dłuższy niż prawy. Lewy oskrzelek główny dzieli się na dwa oskrzeliki wtórne lub płatowe, aby przewozić powietrze do górnych i dolnych płatów lewego płuca.



## Quiz

Asclepius comes with a pre-installed quiz for professors to check their student's understanding of the content. Asclepius also provides a cloud-based system where professor's can design their own questionnaire and use it to evaluate the students.

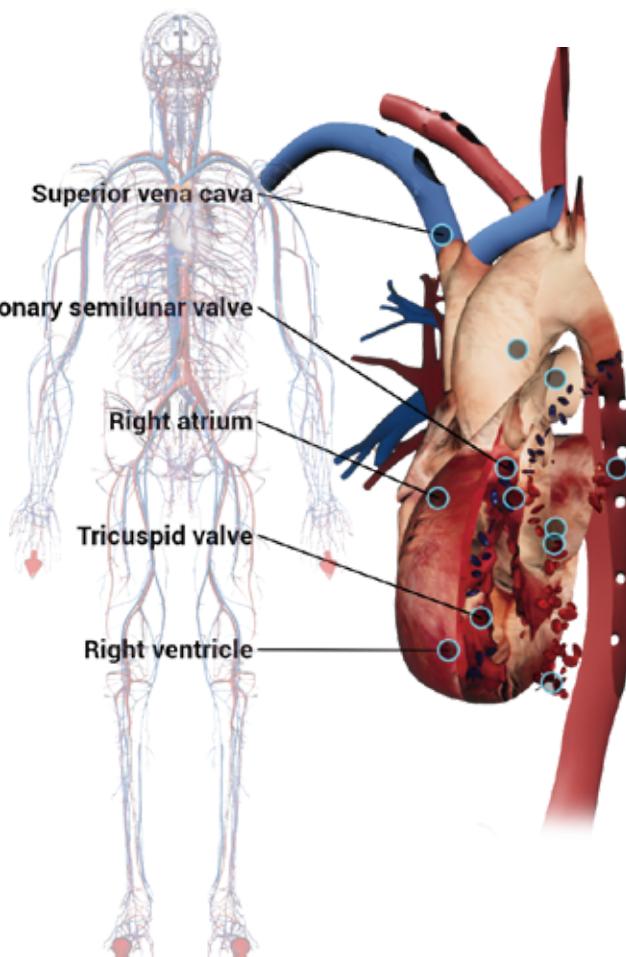
**×** Please drag the correct answer to the right place

### Choose

- Iliocostalis
- Quadratus lumborum
- Ligamentum nuchae
- Semispinalis thoracis
- Semispinalis cervicis
- Longissimus cervicis
- Iliocostalis cervicis
- Spinalis thoracis
- Multifidus
- Longissimus capitis
- External oblique
- Semispinalis capitis
- Iliocostalis lumborum
- Longissimus
- Spinalis
- Longissimus thoracis
- Iliocostalis thoracis

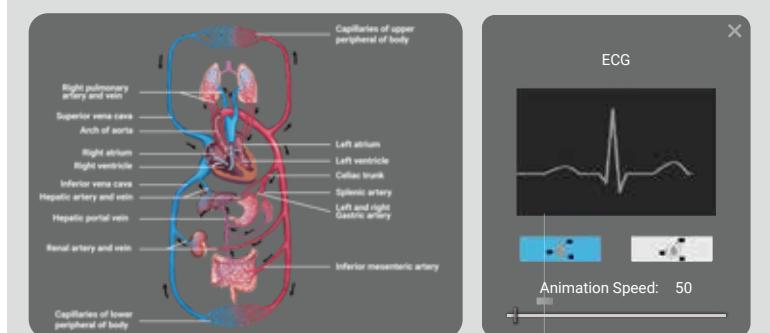
### Answer

1. Longissimus capitis
2. Iliocostalis cervicis
3. Longissimus cervicis
4. Iliocostalis thoracis
5. External oblique
6. Spinalis thoracis
7. Iliocostalis
8. Longissimus
9. Spinalis
10. Iliocostalis lumborum
11. Longissimus cervicis
12. Quadratus lumborum
13. Multifidus



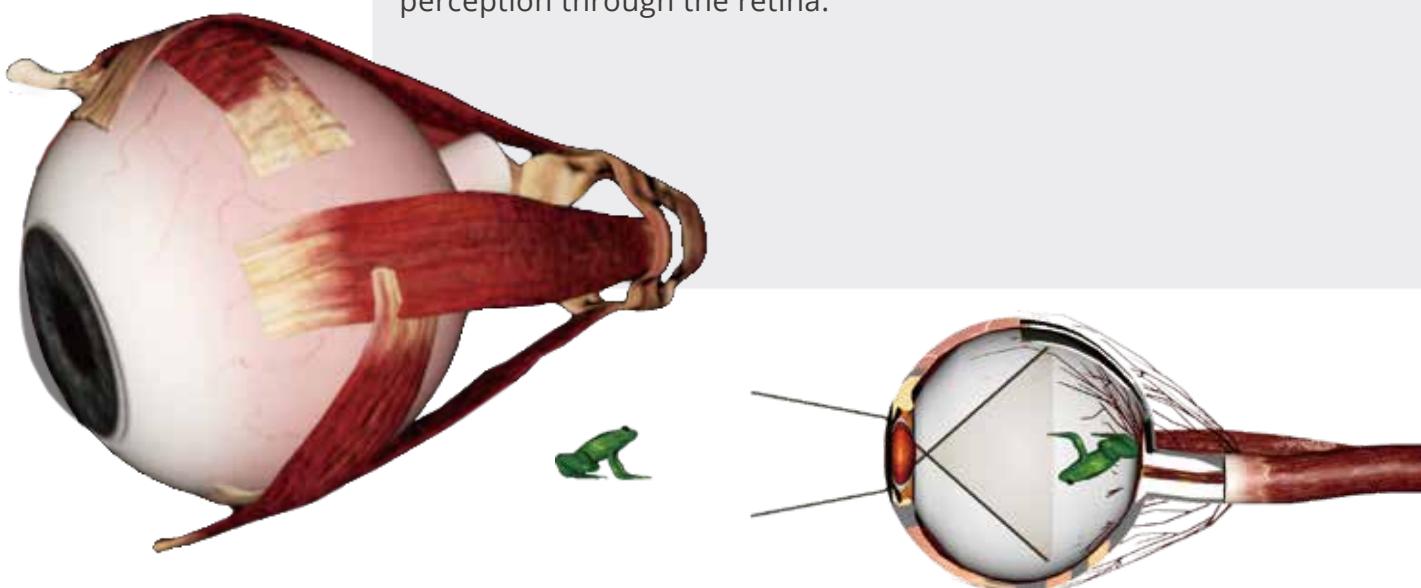
## Organ Animation

Asclepius is equipped to show the animations of the heart with full annotations describing each part of the heart. With the ability to view the sagittal, coronal, and transverse view of the heart, the users can gain a deeper understanding of how the heart functions.



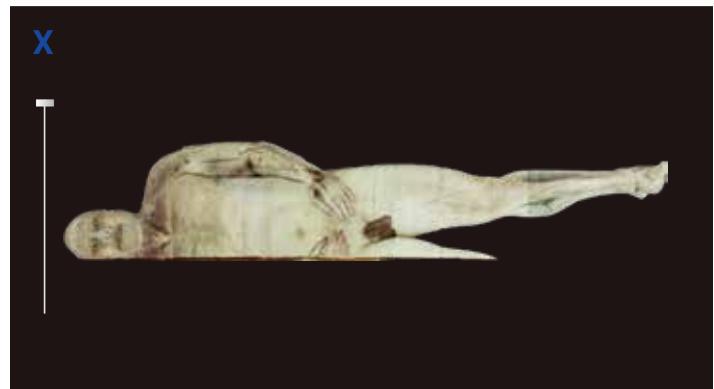
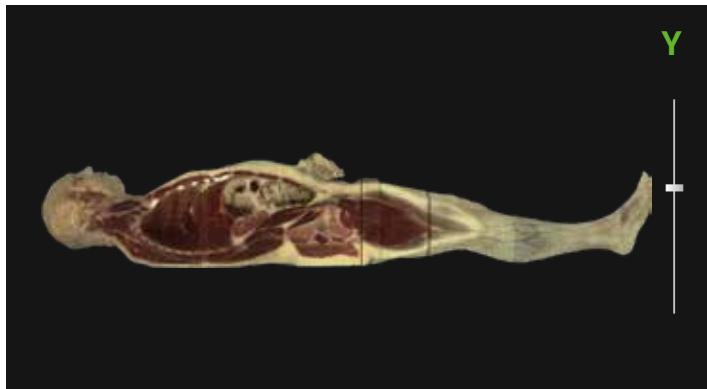
## Ocular Movement

The operation principles of ocular muscle movement and the depiction of eye movements in different directions based on light perception through the retina.



## 3 Axis Display Mode

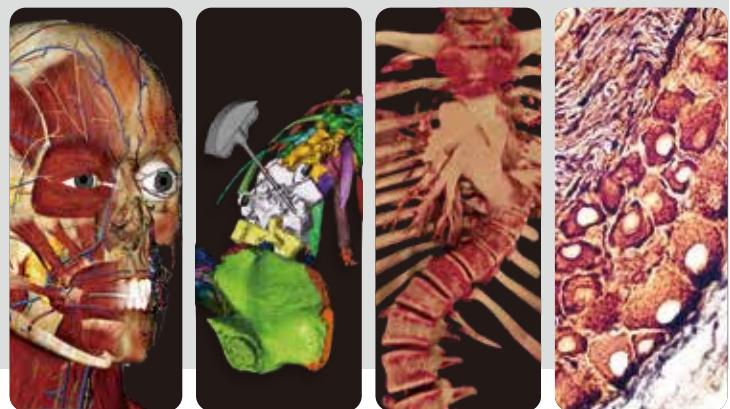
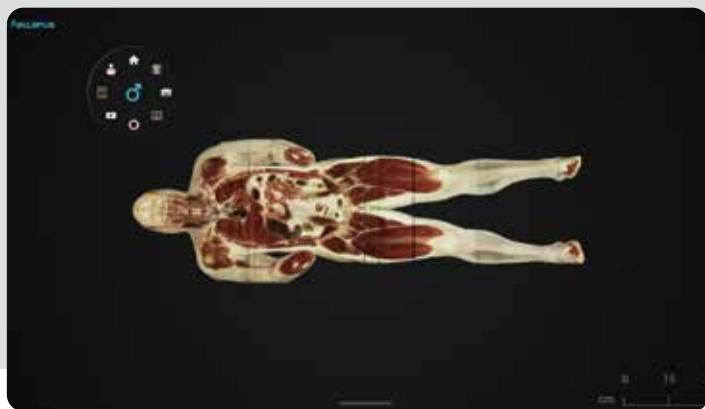
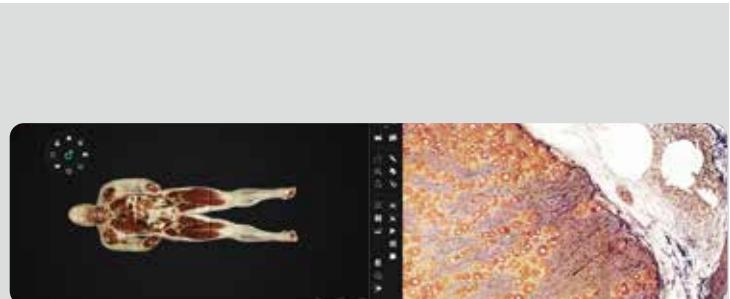
The possibility of viewing the sagittal, coronal, and transverse views comes in handy with the Asclepius. With the control bar, it provides professors and instructors full control over the point of view of the human anatomy.

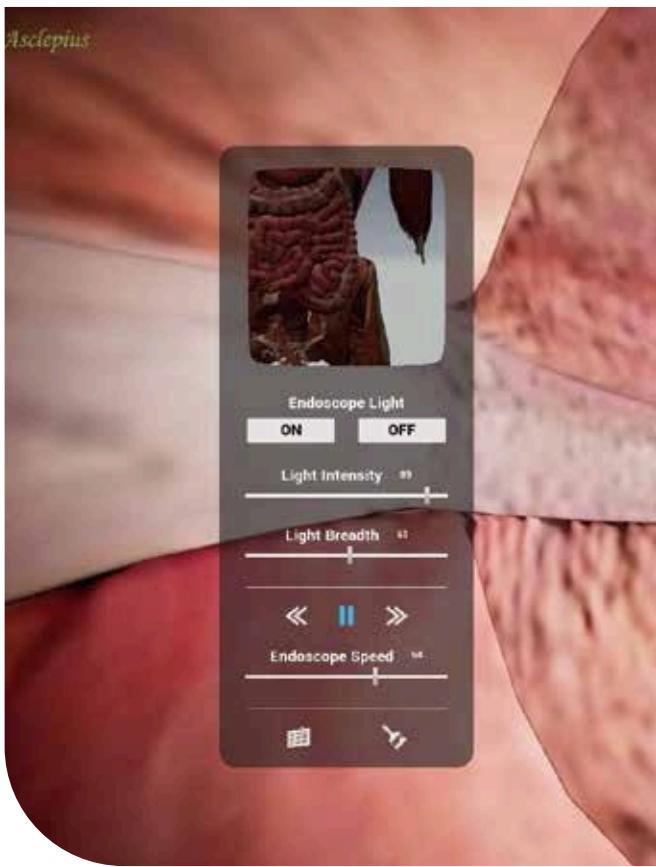


## Split Screen Function

(The function will be provided based on the model.)

Two of software will be displayed at the same time, allowing users to watch two software screens at the same time. The function of splitting the screen is selected according to the user's needs, providing a rich variety of software.





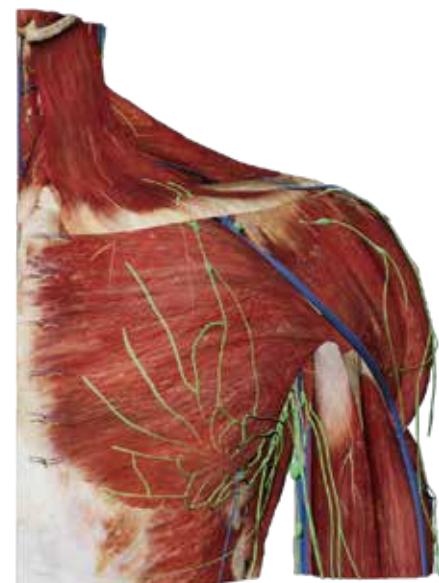
## Virtual Scope Teaching Mode

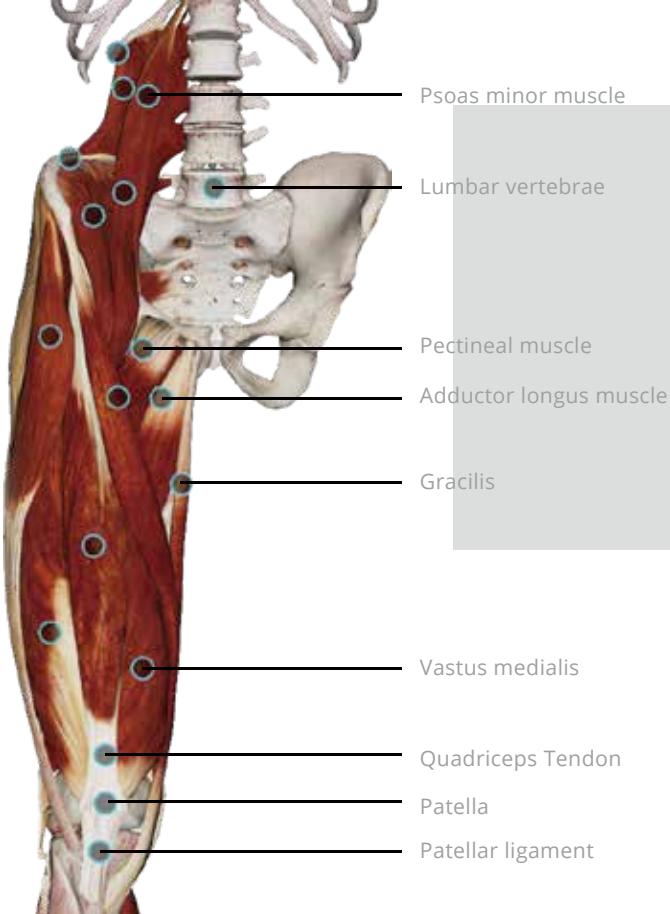
Endoscope teaching mode gives the professors, students, and instructors the advantage of traveling through the hollow organs of the human body. This feature comes with the ability to zoom in, zoom out, illuminate, adjust the aperture, and the change the movement rate.



## Regional Anatomy

Along with a full human anatomy, Asclepius comes with 88 regional anatomy of the human body, providing even more detail to understanding the human body. The regional anatomy of the body is divided into chest, ankle, elbow, thighs and more.





## 2D Feature Points

Real 2D feature points can be learned together with 3D features. Users can compare and intuitively understand the relationship between muscles, bones, and organs. Clicking on the noun will display an explanation and quickly understand the purpose of this feature point. and function.



## Quizzes

Asclepius Table has pre-stored past examination questions for the Taiwan Nursing National Examination, as well as relevant questions from the United States NCLEX (National Council Licensure Examination) and USMLE (United States Medical Licensing Examination). Additionally, it includes comprehensive nursing questions from the Philippine Nurse Licensure Examination (PNLE). This feature allows users to familiarize themselves with a more international range of question types.

Score: 2      Time left : 59 : 50

**1.(A)**  
Which of the following observations in the patient who has undergone allograft for treatment of burn site must be reported to the physician immediately?

(A) Crackles in the lungs  
 (B) Pain at the allograft donor site  
 (C) Sanguineous drainage at the allograft donor site  
 (D) Decreased pain at the allograft recipient site

**Unlocking**

**2.(B)**  
The nurse is teaching the mother regarding treatment for enterobiasis. Which instructions will be given regarding the medication?

(A) Treatment is not recommended for children less than 10 years of age.  
 (B) The entire family should be treated.  
 (C) Medication therapy will continue for 1 year.  
 (D) Intravenous antibiotic therapy will be ordered.

**Unlocking**

Check      Answer: Green/Wrong: Red  
 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25

Finish

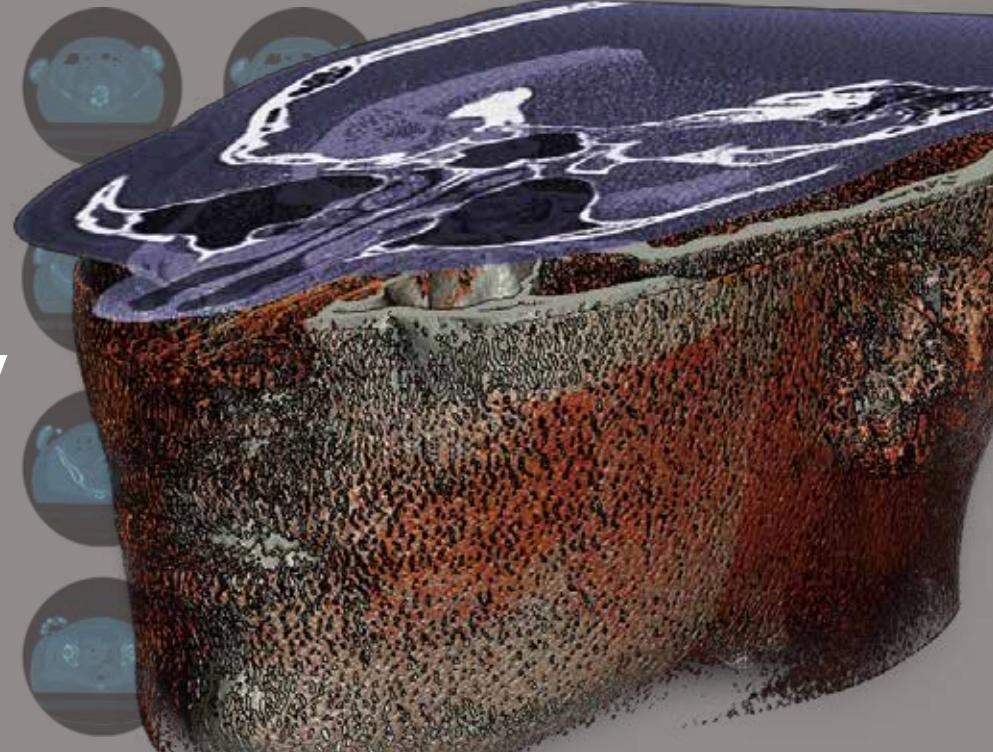
**NCLEX Exam**  
Total number of the quiz : 8909

RN  
 PN  
 Medical-Surgical Nursing  
 Psychiatric Nursing  
 Leadership, Management, Bioethics and Research

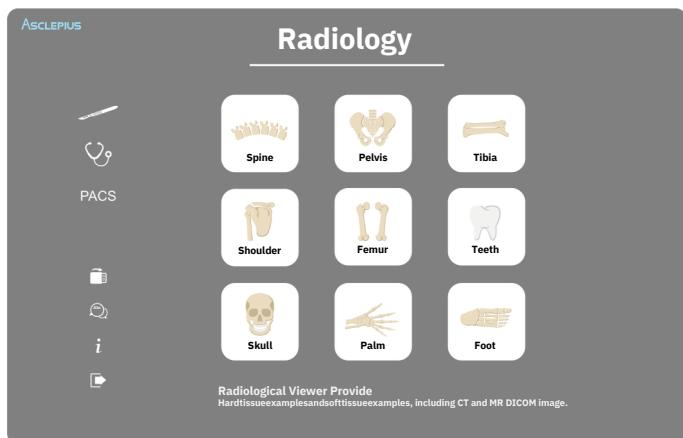
Examination time       60 minutes       Unlimited  
 Number of quiz       80       100       120

**Start**

# Radiology



The Radiology is a 3D imaging educational application software system. It serves as an image application for DICOM medical image formats, capable of reading 3D image models with CT, MRI, and 2D/3D image transformation operations. Radiology offers visual analysis and 2D/3D image conversion of DICOM data, catering to biomedical engineering education, digital medical image viewing, and simulation analysis of image models.



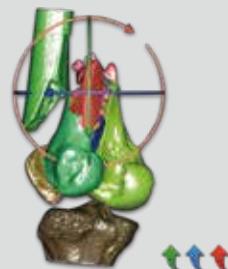
## Import Option

Asclepius comes with fetaure where the DICOM files can be imported into the table. DICOM files can be of the human or animal for the comparative study .



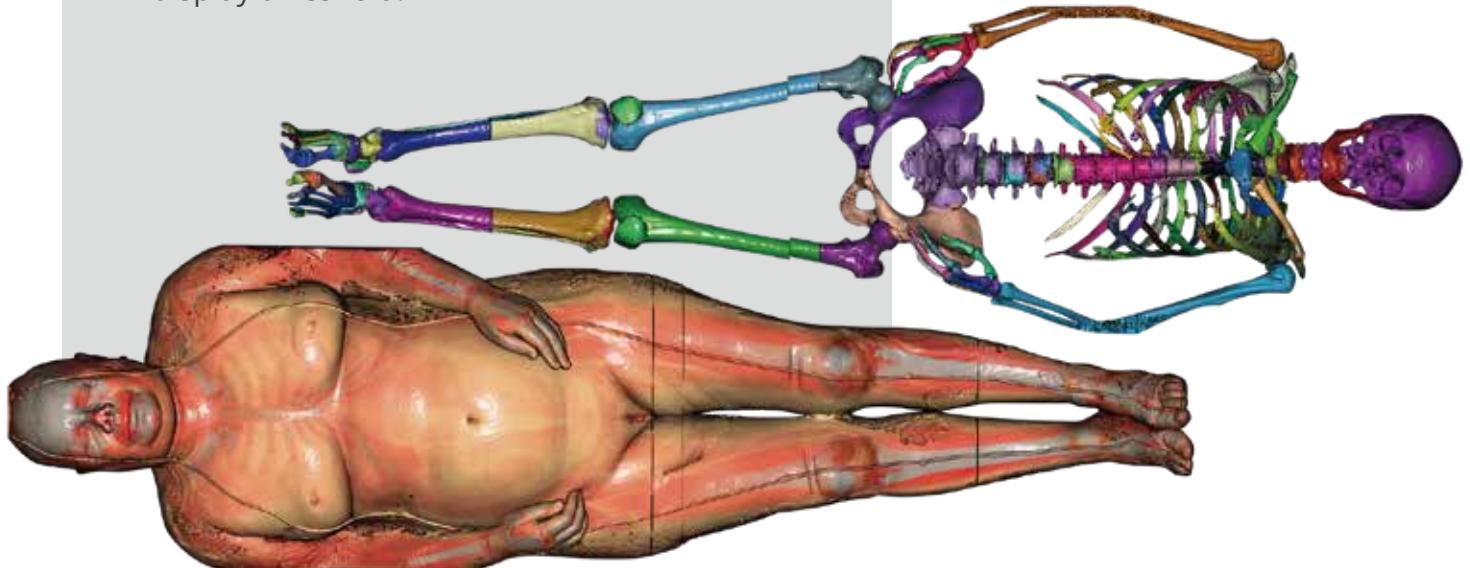
## Image Tool

Radiology provides basic operation and multiple image features. Such as, image processing, image rendering, image measurement, drawing tools, duplication, including 3D image area split, and cutting and applying objects and images in the simulator suitable for general use of medical imaging operation.



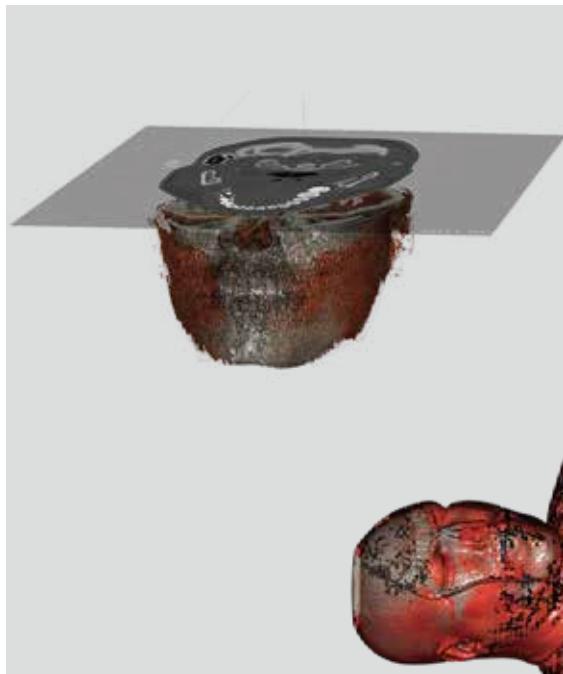
## Soft Tissue And Hard Tissue

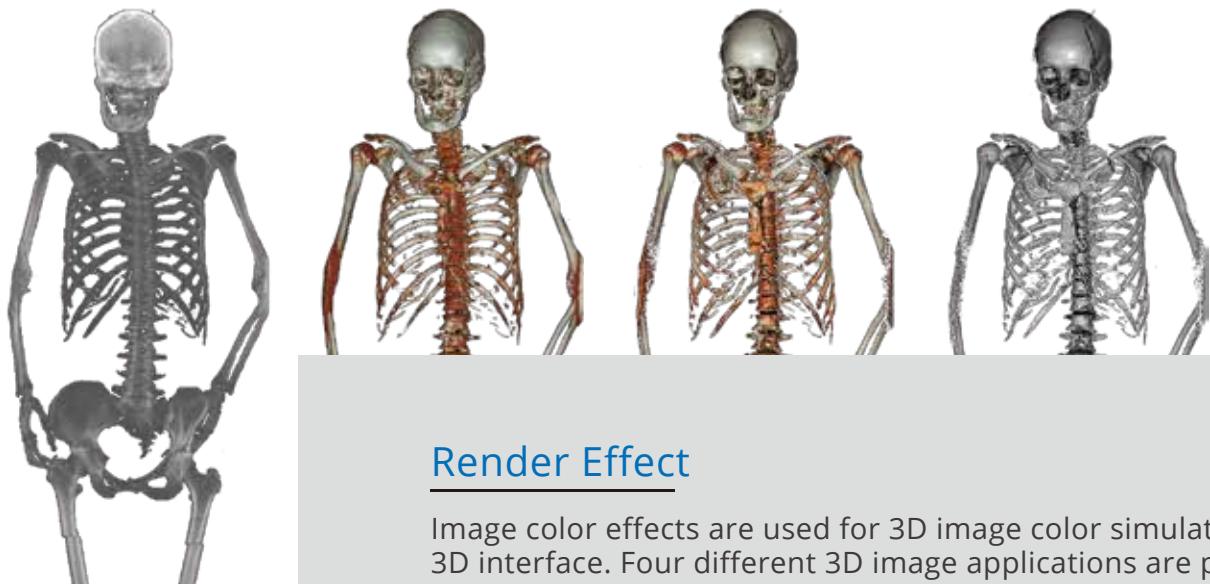
The display function switches the display between soft tissue and hard tissue. The loaded image file can switch the 3D image display threshold in the 3D image interface. There are two kinds of switching between skin and bone block display. The 3D image can be switched into the desired display threshold.



## DICOM Based Virtual Cadavers

Radiology is providing real sized virtual cadavers that are built from combination of DICOM data and 3D rendering system to universities, so that students are able to study in depth of human anatomical structure.





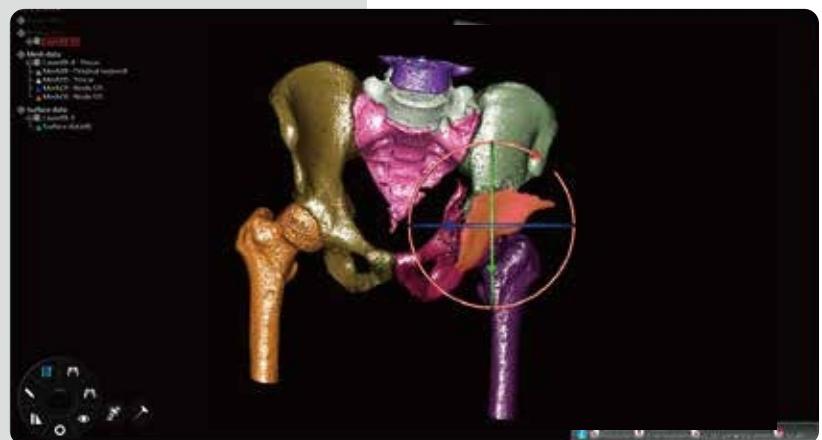
## Render Effect

Image color effects are used for 3D image color simulation in 3D interface. Four different 3D image applications are provided.

- Basic effect
- Material dyeing
- Stereo rendering method
- X-ray simulation

## Simulation of Pre-surgical Planning For Education

Radiology is dedicated as a software system for orthopedic medical imaging and educational applications. It has developed a number of digital image simulation operations and visual image operations. Radiology's core function is to simulate pre-surgical planning of digital images to educate the future doctors and surgeons.



- Spinal puncture path planning simulation
- General/customized bone plate planning simulation
- Screw locking / SI locking screw / screw implant planning simulation
- Manual reset / automatic symmetrical reset planning simulation



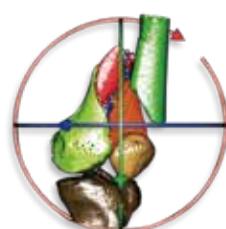
Spinal puncture



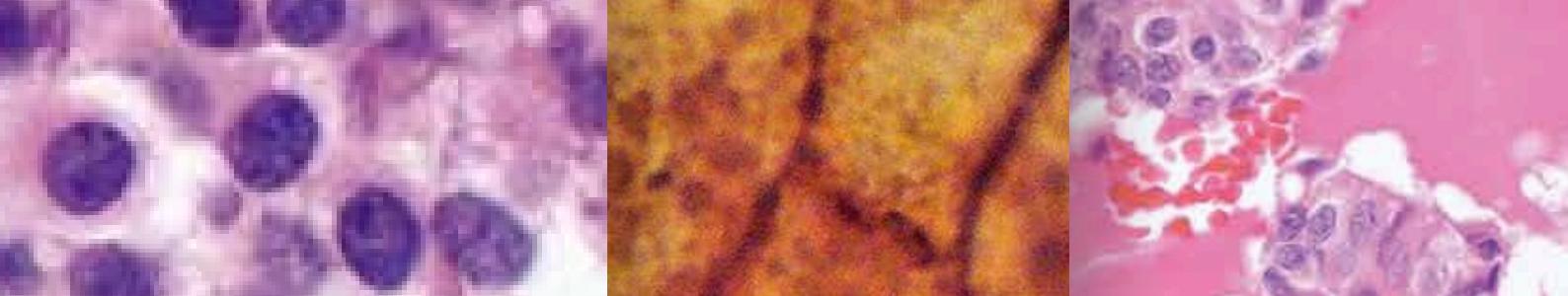
Bone plate



Dental Screw



Reduction of fracture

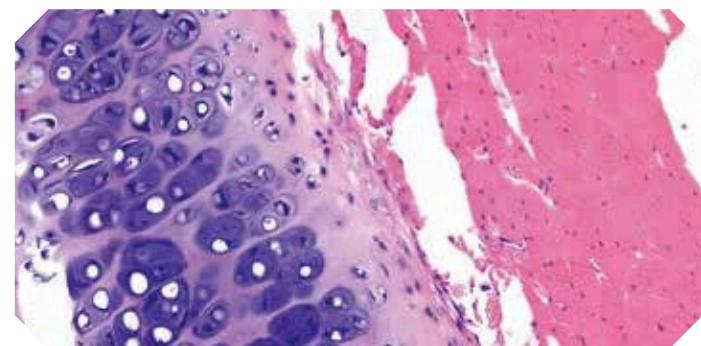
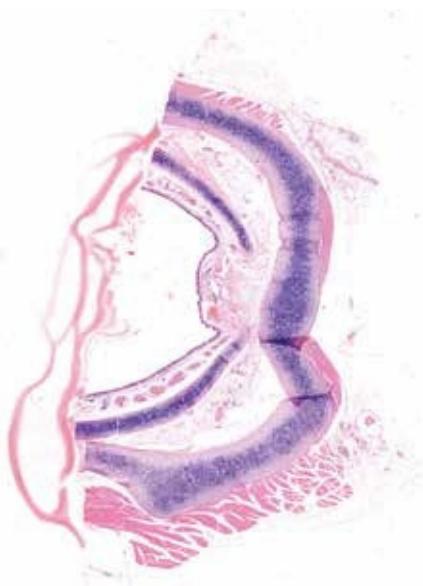


# Histopathology Atlas



Histopathology Atlas provide a total of more than 1100 pre-installed histology and pathology cases with the feature to import own cases. Image reading formats support \*.jpg, \*.png, \*.tif, \*.bmp and other image format files. Video reading formats support \*.mkv, \*.mp4, \*.avi, \*.mov and other video format files. The Histopathology Atlas system operation interface includes the selection of Pathology and Histology menu interfaces. The main image operation interface is the display interface of 2D the image. Histopathology Atlas provides a selection of tools to use, including, image list, basic tools, brush tools, image adjustment tools, and note storage functions.

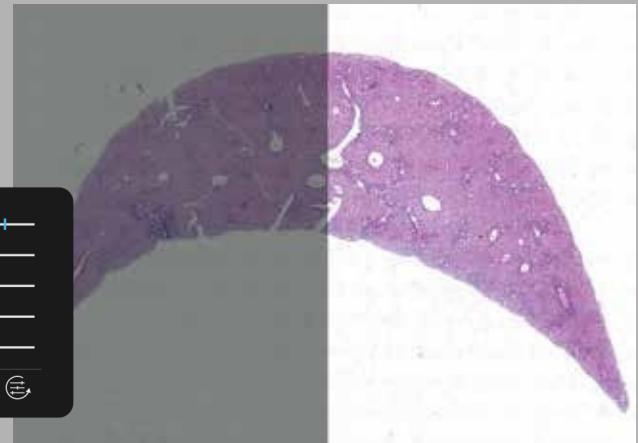
## High Quality



Asclepius is equipped with more than 1000 case example collected from the real cases. The images are high quality with more than 10,000x10,000 pixels.

## Image Tool

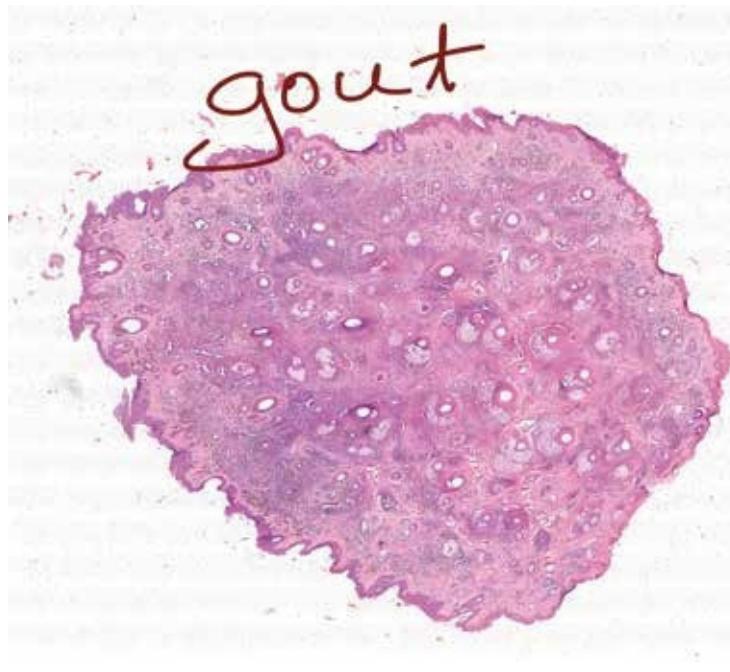
The image tool provides the flexibility to adjust the quality of the image on the screen by adjusting the brightness, contrast or sharpness of the image.



## Annotation

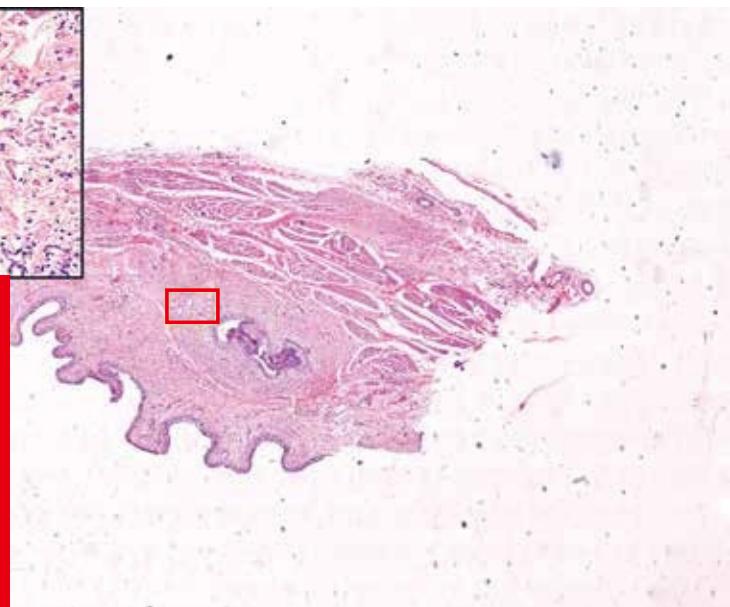
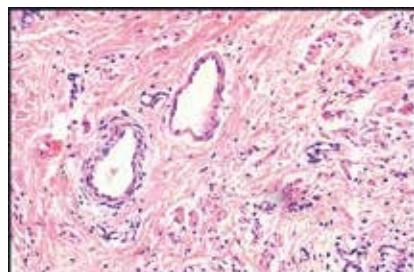
Standard description of the Pathological Case is pre-loaded with the image of the Pathological Case.

Squamous cell carcinoma About 95% of penile cancers start in flat skin cells called squamous cells. Squamous cell carcinoma (also known as squamous cell cancer) can start anywhere on the penis. Most of these cancers start on the foreskin (in men who have not been circumcised) or on the glans.



## Pen Tool

A marker that assists professors and instructors in putting foot notes on the images and take screenshots for the next classes.



## Amplification

Helps you amplify and enlarge the targeted area to make it more clear and understandable.



# CTRender



CT Render provides the data visualization technique which creates a 3D representation of DICOM data. CT and MRI data are frequently visualized with volume rendering in addition to other reconstructions and slices.

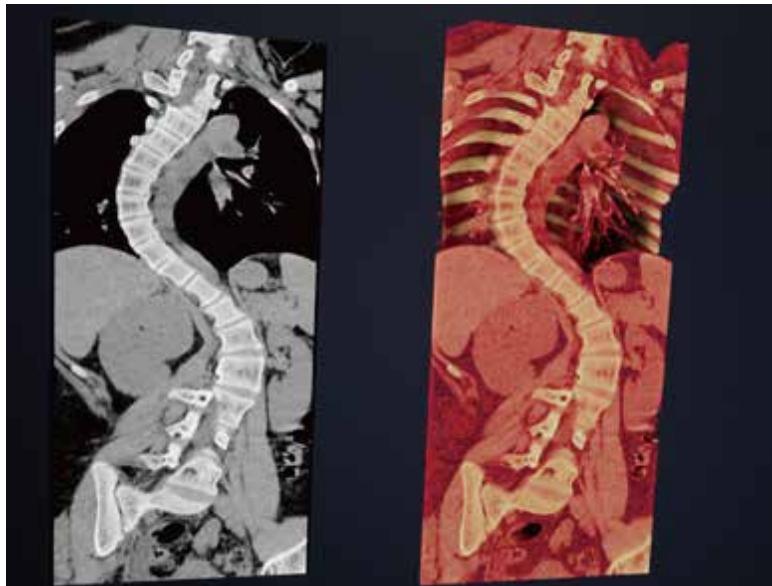
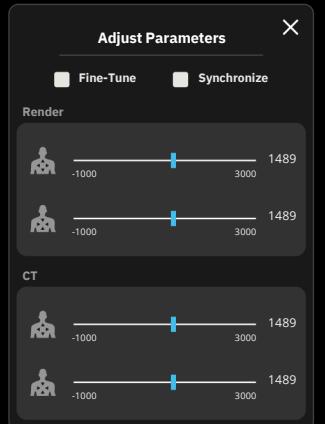


## Interface

The user interface of the medical image renderer is simple and easy to understand. The interface mode can be switched according to the needs of the user. The CT image or the 3D rendering model can be displayed independently, and the CT image and the 3D rendering model can be displayed simultaneously. And provide a three-axis anatomical plane for observation.

## Instant Rendering

Immediately after importing DICOM data, the 3D rendering model will be presented. The smaller the DICOM slice spacing, the higher the detail of the 3D rendering model. It can help doctors, teachers and students to better observe the required parts, which is conducive to simulation learning. And the softness in the 3D rendered model, the rendering effect of hard tissue has high fidelity, and it brings easy readability to users.

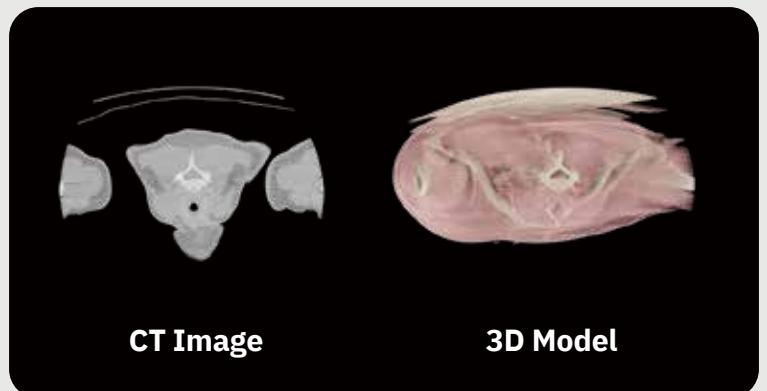
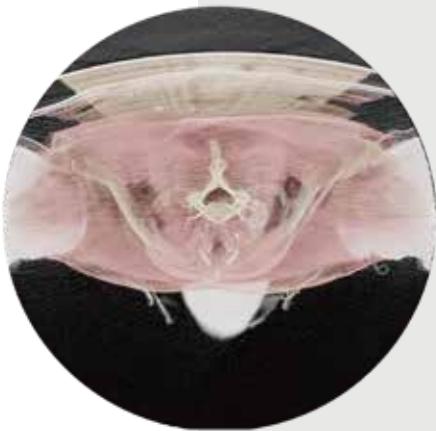


## Renderer

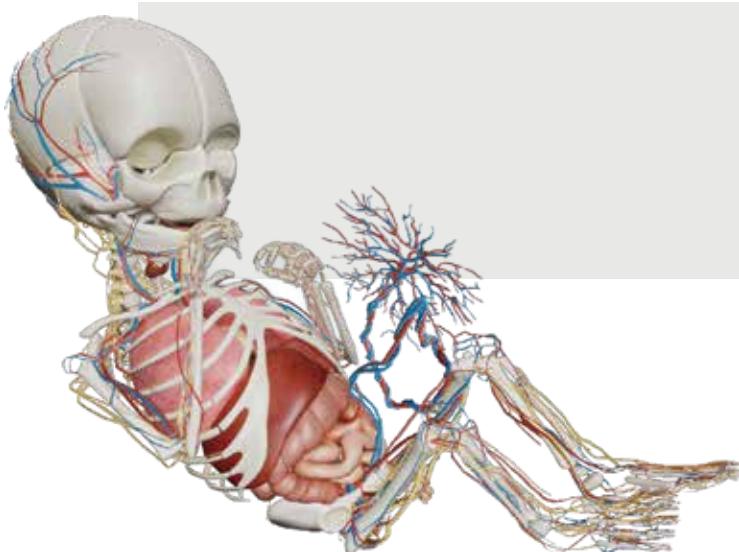
The renderer has a variety of preset rendering modes with rich colors and fine textures. Muscles, fats, bones, blood vessels, etc. are represented by different colors, which can highlight each body system and facilitate observation. Users can also adjust the parameters of the renderer by themselves to achieve the desired visual effect.

## Combining CT Images With 3D Rendering Models

The medical image renderer allows users to separate or overlap CT images and 3D rendered models. Allows users to better observe the relative position of the two.

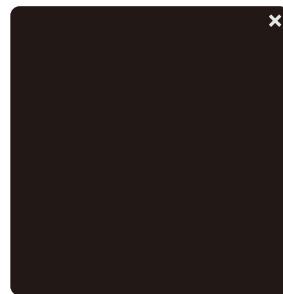
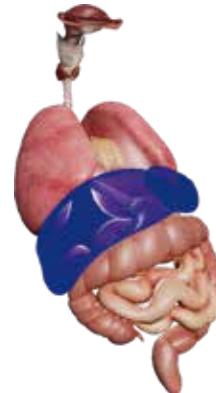


# Embryology



## System layering

The multi-touch dissection platform is equipped with an Embryology module that contains data from Carnegie to 42 weeks, with each system displayed independently or overlaid and providing complete annotation of organs.



## Arbitrary cutting

Teachers or students can draw any shape for single-layer anatomy or multi-layer anatomy to understand the relationship between various organs.

## Embryopathology

Various systems of pregnant women undergo a series of adaptive changes due to the growth and development of the fetus. Once these changes exceed the physiological scope or the pregnant woman is ill and cannot adapt to the changes of pregnancy, both the pregnant woman and the fetus may develop pathological conditions and become a high-risk pregnancy. This function can learn various conditions that occur when a fetus is diseased.

**Choroid plexus cysts**

**Prevalence:**

- 1 in 50 fetuses at 20 weeks' gestation.
- More than 90% resolve by 26 weeks.

**Ultrasound diagnosis:**

- Single or multiple cystic areas (>2 mm in diameter) in one or both choroid plexuses of the lateral cerebral ventricles.

**Associated abnormalities:**

- Associated with increased risk for trisomy 18 and possibly trisomy 21.

**Investigations:**

- Detailed ultrasound examination for presence of other markers of trisomies 18 and 21. In the absence of other markers there is no need for invasive testing.

**Follow up:**

- Follow-up should be standard.

**Delivery:**

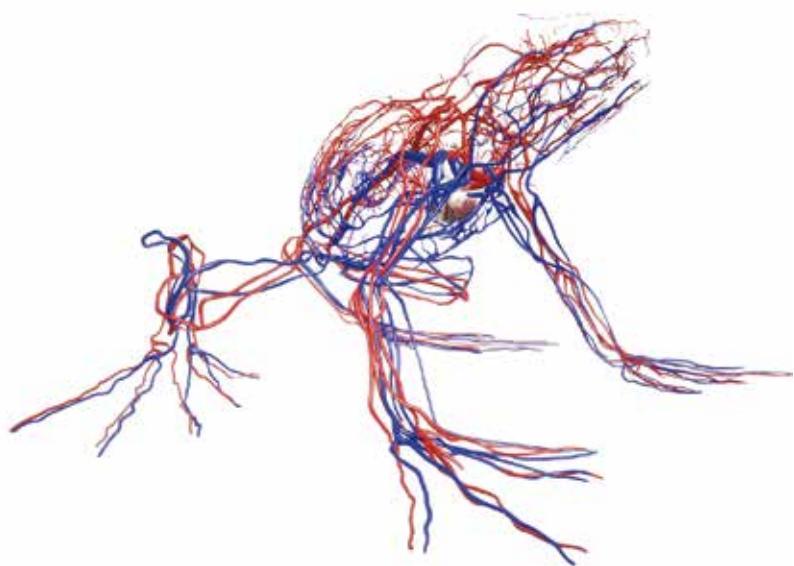
- Standard obstetric care and delivery.

**Prognosis:**

- Good.

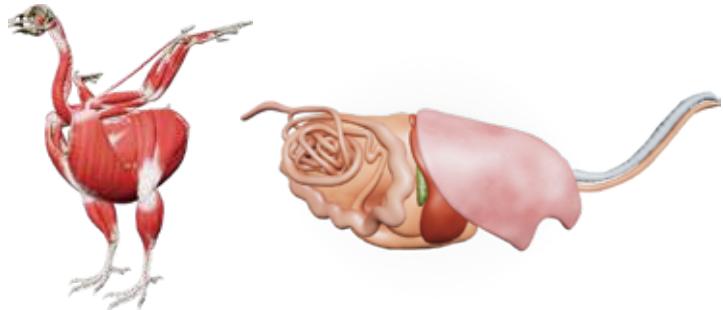


# Animal Anatomy



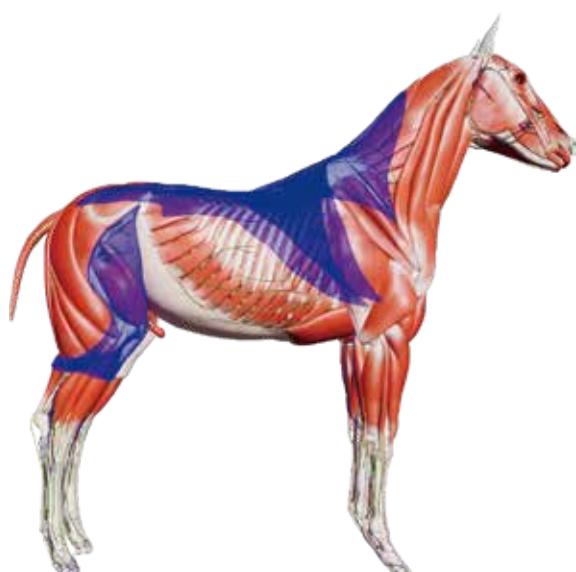
## System layering

From land to sea, the touch anatomical table provides a variety of animals to choose from, and can understand the anatomical structure of animals. Each system can be displayed independently or superimposed, and complete annotations of organs can be provided.



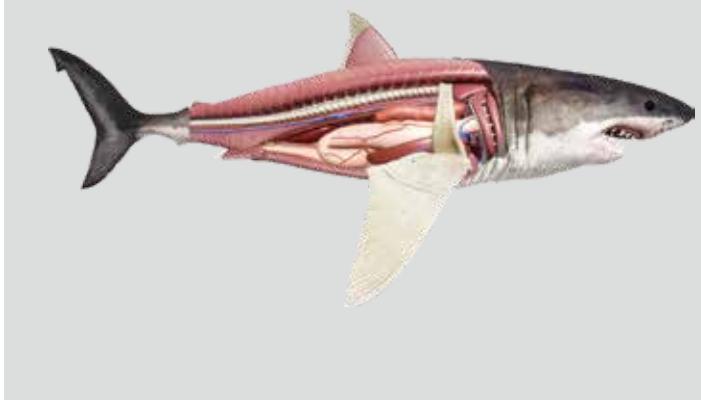
## Click function

Teachers can freely press and hold the desired part to obtain its name and detailed annotations, or hide the extracted part.



## Arbitrary cutting

Teachers or students can draw any shape for single-layer anatomy or multi-layer anatomy to understand the relationship between various organs.



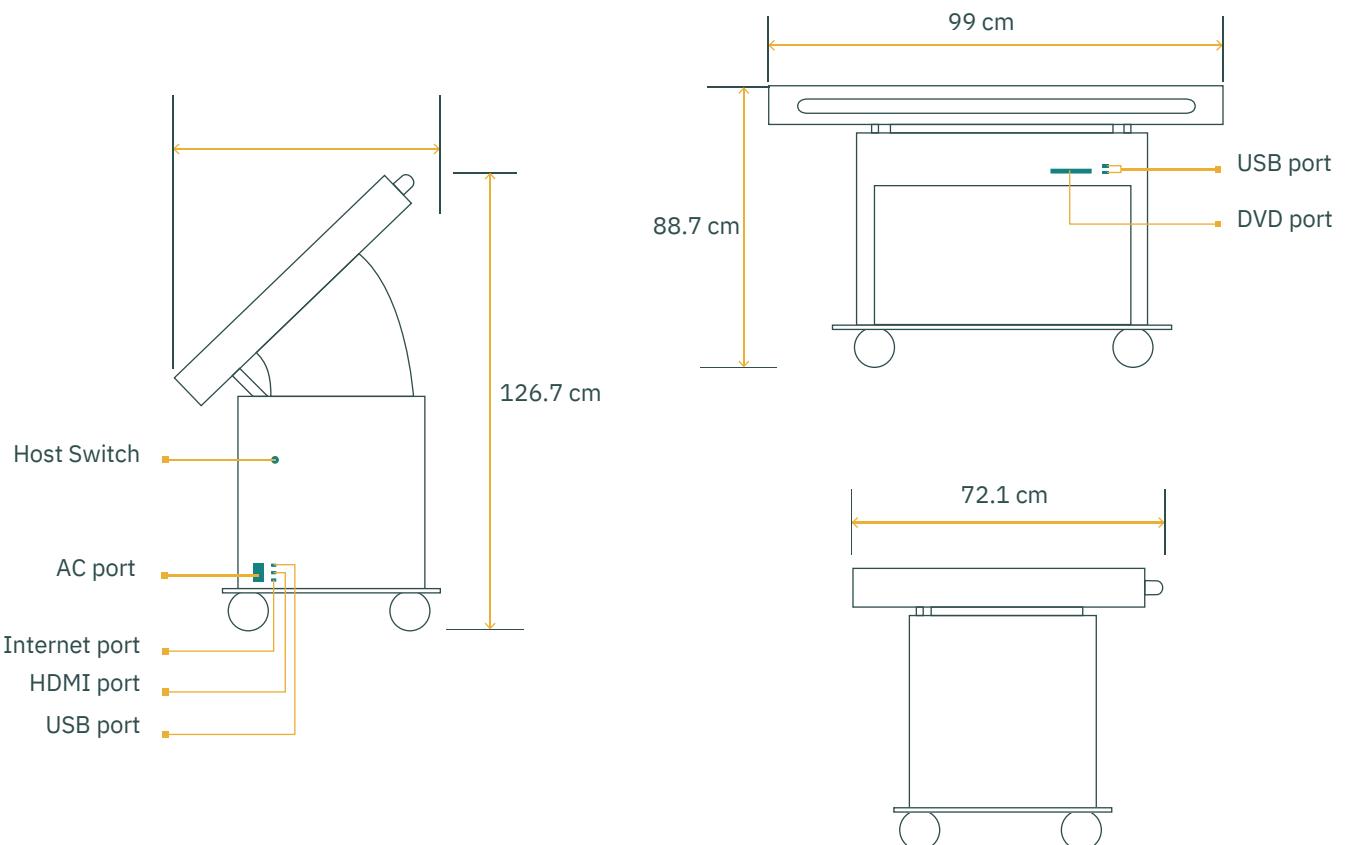
# Model Specifications

## TBK-43 LT

CPU	RAM	HDD	SSD
			Intel i5 16 GB 1 TB
Screen	size	240 GB	43 inch 1920
Resolution	Angle	X 1080	0 ° ~ 45 °
Software			Anatomy, Radiology



\* Taiwan Main Orthopaedic Biotechnology Co., Ltd. will upgrade the system for better performance at our own discretion.



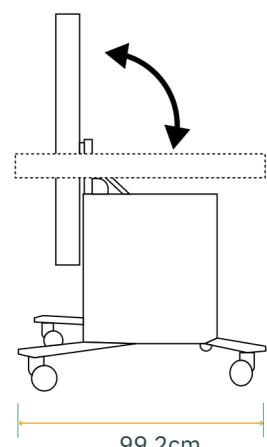
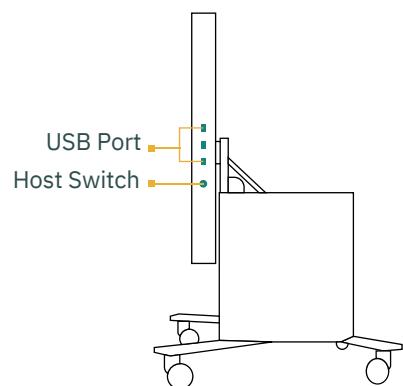
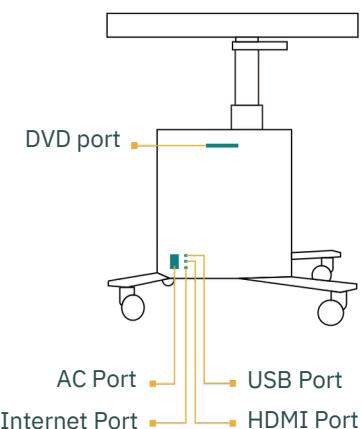
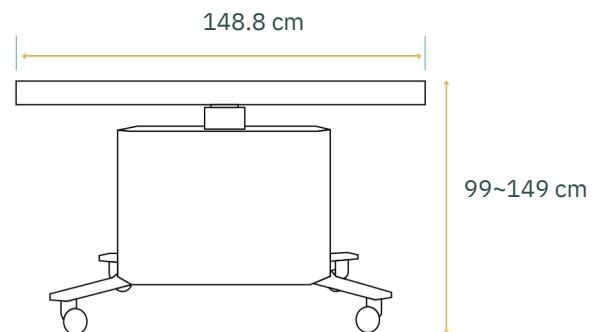
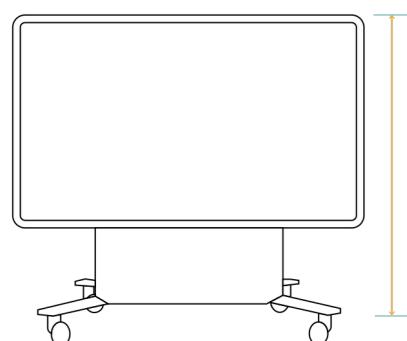
# Model Specifications

## TBK-65 4K

CPU	-----	Intel i7 32 GB 6 TB 1 TB
RAM	-----	65 inch 3840 X 2160
HDD	-----	(4K) 0° ~ 90° Anatomy,
SSD	-----	Radiology,
Screen size	-----	Histopathology Atlas,
Resolution	-----	CTRender, Embryology,
Angle	-----	Animal Anatomy
Software	-----	



\* Taiwan Main Orthopaedic Biotechnology Co., Ltd. will upgrade the system for better performance at our own discretion.

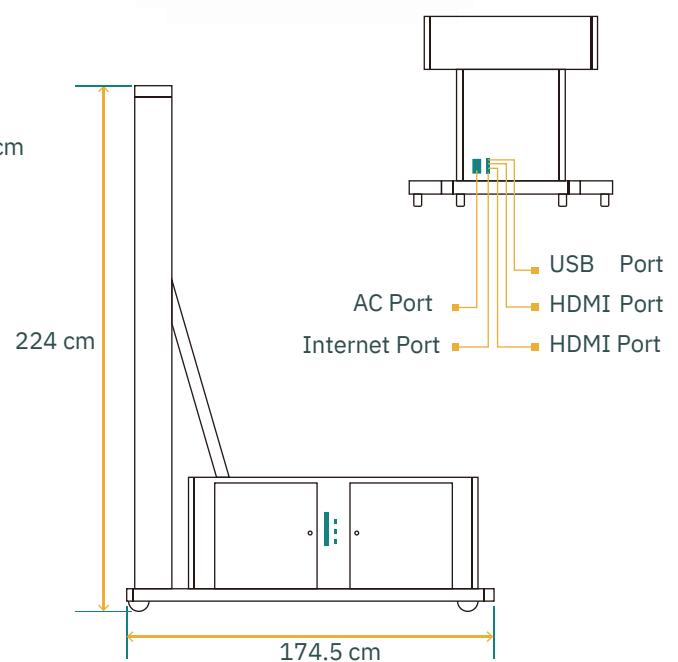
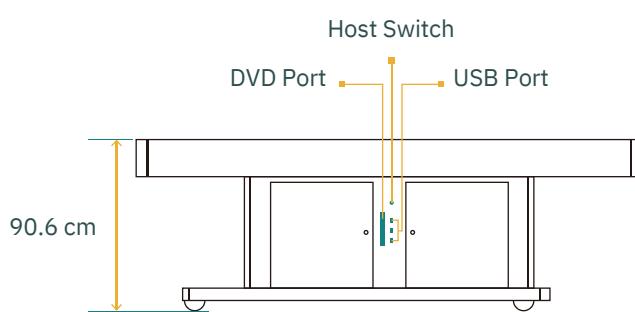
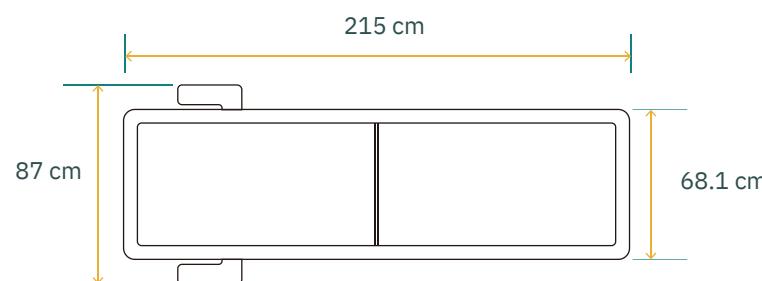
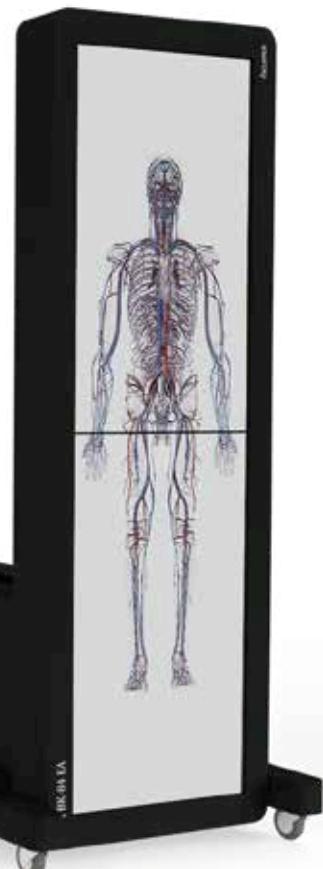


# Model Specifications

## TBK-84 EA

CPU	-----	Intel i7 32
RAM	-----	GB 6 TB 1
HDD	-----	TB 84 inch
SSD	-----	3840 X 1080
Screen size	-----	
Resolution	-----	
Angle	-----	0° & 90° <b>(Conversion from Horizontal to Vertical using remote control.)</b>
Software	-----	Anatomy, Radiology, Histopathology Atlas, CTRender, Embryology, Animal Anatomy

\* Taiwan Main Orthopaedic Biotechnology Co., Ltd. will upgrade the system for better performance at our own discretion.

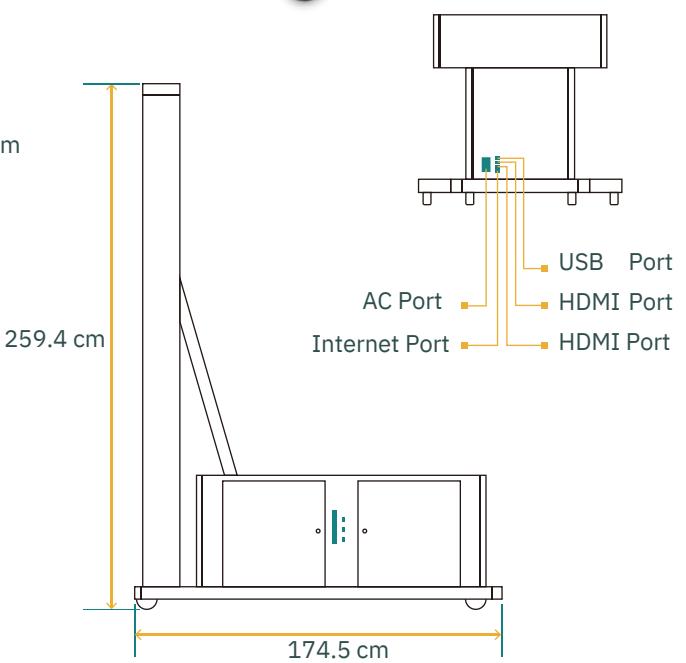
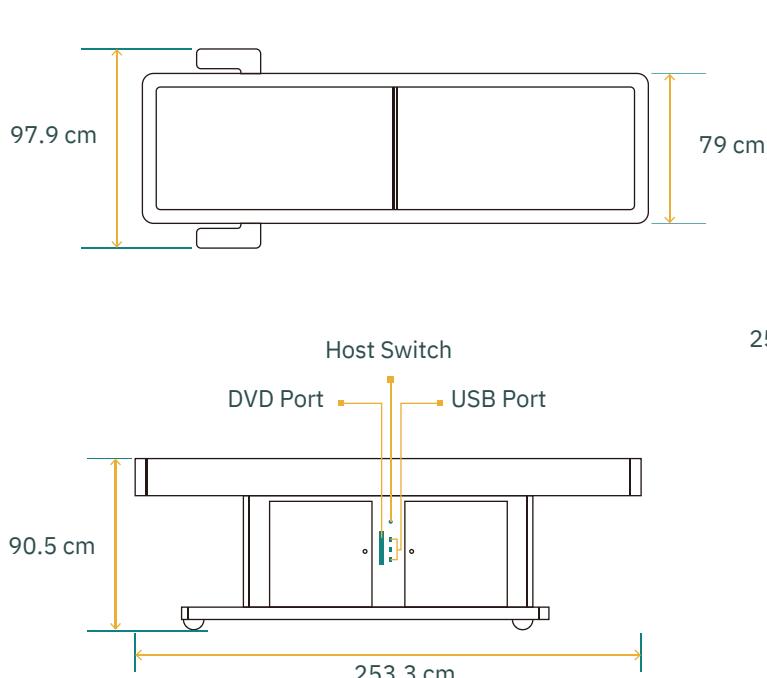


# Model Specifications

## TBK-99 EA

CPU	RAM	-----	Intel i9 32
HDD	SSD	-----	GB 8 TB 2
Screen size		-----	TB 99 inch
Resolution		-----	3840 X 1080
Angle		-----	
Software		-----	 0° & 90° (Conversion from Horizontal to Vertical using remote control.)  Anatomy, Radiology, Histopathology Atlas, CTRender, Embryology, Animal Anatomy

\* Taiwan Main Orthopaedic Biotechnology Co., Ltd. will upgrade the system for better performance at our own discretion.



# Specification List

\*TaiwanMainOrthopaedicBiotechnologyCo.,Ltd.will upgrade the system for better performance at our own discretion.

	<b>TBK-43 LT</b>	<b>TBK-65 4K</b>
CPU	Intel i5	Intel i7
RAM	16 GB	32 GB
HDD	1 TB	6 TB
SSD	250 GB	1 TB
Screen size	43 inch	65 inch
Resolution	1920 X 1080	3840 X 2160 (4K)
Angle	0° ~ 45°	0° ~ 90°
Dimension (Horizontal)	99*72.7*88.7 cm	148.8*99.2*99~149 cm
Dimension (Wallboard / Vertical)	99*63*126.1 cm	148.8*99.2*142~192 cm
Software	Anatomy Radiology	Anatomy Radiology Histopathology Atlas Embryology  Animal Anatomy



**TBK-43 LT**



**TBK-65 4K**

# Specification List

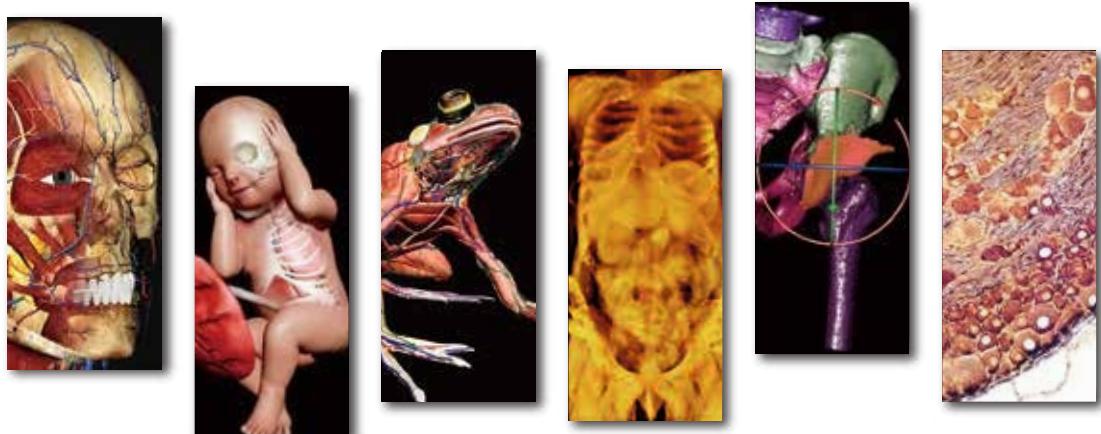
\* Taiwan Main Orthopaedic Biotechnology Co., Ltd. will upgrade the system for better performance at our own discretion.

	<b>TBK-84 EA</b>	<b>TBK-99 EA</b>
CPU	Intel i7	Intel i9
RAM	32 GB	32 GB
HDD	6 TB	8 TB
SSD	1 TB	2 TB
Screen size	84 inch	99 inch
Resolution	3840 X 1080	3840 X 1080
Angle	0° & 90°	0° & 90°
Dimension (Horizontal)	215*87*90.6 cm	253.3*97.9*90.5 cm
Dimension (Wallboard / Vertical)	174.5*87*224 cm	174.5*97.9*259.4 cm
Software	Anatomy Radiology Histopathology Atlas CTRender Embr yology Animal Anatomy	Anatomy Radiology Histopathology Atlas CTRender Embr yology Animal Anatomy



**TBK-84 EA |TBK-99 EA**

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