

Anatomy Teaching Guide

A quick guide through the cases in Education Portal



SECTRA

Knowledge and passion

Introduction

Education Portal contains cases that suit different specialties and education models. This is a beginners guide for Gross Anatomy, that can lead you while starting on the platform or serve as a guideline for exploring the platform. All the mentioned cases and bookmarks in this guideline are in the Public Space and were selected carefully by an educator.

Please note that the full collection contains hundreds of cases, this guideline contains those that were selected as recommended by Sectra.

Nervous
S034, S055

Endocrine
S034, S135

Muscular and skeletal
S009, S021, S037, S040,
S042, S043, S052, S062,
S064, S082, S094, S107

Lymphatic
S004, S087

Cardiovascular

S010, S011, S012, S032,
S039, S045, S049, S053,
S060, S080, S081, S089,
S090, S107

Digestive
S001, S087, S109

Respiratory

S017, S024, S044

Urinary
S002, S011, S058

Reproductive
S005, S050

Monash 3D Anatomy Library

This library consists in 51 cases of prosected cadavers, developed by Monash University (Australia). The collection features models of different body parts where muscles, nerves, cardiovascular structures and bones are visible and labeled in 3D. Along with these, additional material such as descriptive documents, high resolution images and gross anatomy videos can be found with each case.

Cardiovascular

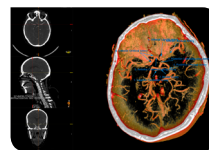
Neck and brain vasculature

- » **S010 Brain Angio** — This case shows the cerebral arteries with a labeled bookmark of the Circle of Willis.
- » **S032 Neck Angio** — This case has contrast which highlights many of the major arteries and veins of the head and neck. Several labeled bookmarks can be found here.
- » **S080 Carotid Artery** — This is an examination done with contrast, demonstrating the carotid arteries and their branching with the structures labeled.

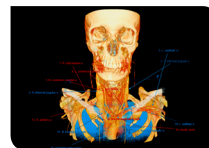
Other recommended cases:

S035 Cerebral Hemorrhage

S135 Carotid and Thyroid



*Circle of Willis
(System bookmark)*



*Major vasculature
(System bookmark)*



*Common carotid (labeled)
(System bookmark)*

Monash 3D Anatomy Library

- » **M003 Cranial Circulation** — There are two bookmarks in this case showing the arteries in the brain and the dural venous sinuses.

Other recommended cases:

M001 Head, Neck, Shoulders

M050 Dorsal Axial Body and Nerves



*Arteries
(System bookmark)*

Cardiovascular

Abdominal cavity blood supply

- » **S011 Peripheral Angiography B** — This case features the abdominal arteries and heart. The mesenteric vessels are clearly visible, as are the major thoracic and abdominal organs.
- » **S039 Peripheral Vascular Angiography** — This case can be used for teaching peripheral arteries, abdominal arteries and much more. There are several labeled bookmarks.
- » **S045 Aorta Dissection (stented)** — This case contains labeled bookmarks of both abdominal- and pelvic circulation.

Other recommended cases:

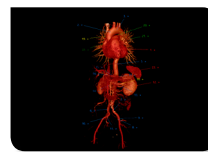
S002 Abdomen

S013 Aorta Dissection

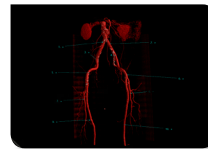
S014 Abdominal Aortic Aneurysm (Stented)

S060 Abdomen C

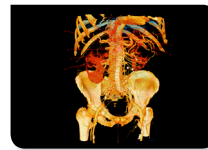
S066 Iliac Aneurysm



*Thoracic and abdominal vasculature
(System bookmark)*



*Common Iliac artery
(System bookmark)*



*Abdominal vasculature
(System bookmark)*

Monash 3D Anatomy Library

- » **M049 Posterior Abdominal Wall** — Offers an overview of the main vascular structures in the abdominal region.

Other recommended cases:

M041 Male Pelvis, Gluteal



*Vasculature
(System bookmark)*

Cardiovascular

Heart

» **S012 Thorax A** — This case shows labeled structures of the heart.

» **S053 Heart F** — This case features the valves, aortic branches and the internal structures of the left ventricle.

» **S081 Heart G** — Both the cardiac cycle and structures of the heart are labeled in this case.

Other recommended cases:

S011 Thorax and Abdomen B

S020 Heart B

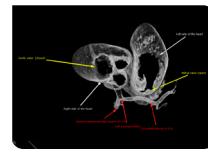
S089 Heart H

S123 Cardiac Ultrasound

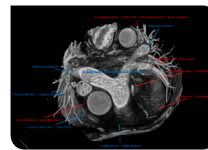
S134 Heart (electrocardiogram)



*Heart (labeled)
(System bookmark)*



*Mitral and aortic valve
(System bookmark)*



*Cardiac cycle
(System bookmark)*

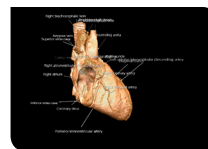
Monash 3D Anatomy Library

» **M044 External Heart Vessels** — This case gives you an overview of the vasculature of the heart.

Other recommended cases:

M043 External Heart

M045 Internal Heart Structures



*All structures
(System bookmark)*

Cardiovascular

Aorta

- » **S039 Peripheral Vascular Angiography** — This case can be used for teaching peripheral arteries, abdominal arteries and much more. There are several labeled structures in this case.
- » **S060 Abdomen C** — The abdominal part of aorta with labeled branches is presented in this case.
- » **S089 Heart H** — The aortic arch with labels is shown in this case. Compare with case S053 to see variations of the aortic arch.

Other recommended cases:

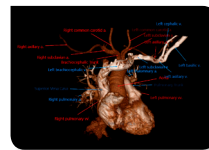
- S011 Thorax and Abdomen B**
- S013 Aorta Dissection**
- S014 Abdominal Aortic Aneurysm (stented)**
- S015 Abdominal Aortic Aneurysm A**
- S039 Peripheral Vascular Angiography**
- S040 Lower Skeleton**
- S049 Heart E**
- S053 Heart F**
- S066 Iliac Aneurysm**
- S129 Kidney Cyst and Hydronephrosis**



*The Aorta
(System bookmark)*



*Abdominal Aorta
(System bookmark)*



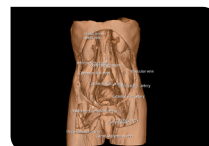
*Heart (labeled)
(System bookmark)*

Monash 3D Anatomy Library

- » **M049 Posterior Abdominal Wall** — Gives you an overview of the main vessels of the abdominal region.

Other recommended cases:

- M044 External Heart Vessels**

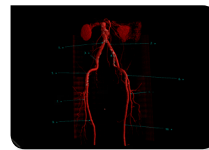


*Vasculature
(System bookmark)*

Cardiovascular

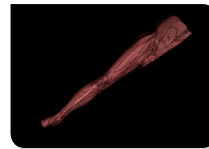
Lower limb

» **S039 Peripheral Vascular Angiography** — The branches originating from the lower abdominal- and pelvic region are labeled, and peripheral vessels are visualized all the way down to the distal lower limb.



Common Iliac artery

» **S107 Peripheral Angiography** — The vessels in the lower limb are shown in this case.



*Lower limb
(System bookmark)*

Other recommended cases:

S040 Lower Skeleton

S102 Hip, Knee, Feet

Monash 3D Anatomy Library

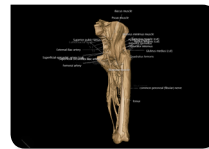
» **M036 Deep pelvis, thigh** — This case demonstrates the main arteries of the thigh.

Other recommended cases:

M038 Male Hemipelvis

M041 Male pelvis, gluteal

M042 Superficial veins, leg

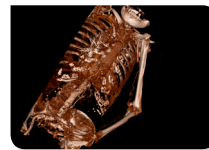


*All structures
(System bookmark)*

Cardiovascular

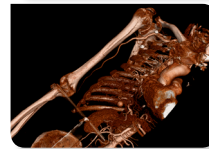
Upper limb

» **S049 Thorax and Upper Limb** — The 3D rendered CT-stack shows the main arteries of the arm.



Screenshot of the 3D model

» **S090 Axillary Artery** — The 3D rendered CT-stack visualizes the main artery of the upper arm.



Screenshot of the 3D model

Monash 3D Anatomy Library

» **MO10 Upper Limb Superficial** — This case shows the vasculature of the arm.



*All structures
(System bookmark)*

Other recommended cases:

M009 Superficial Hand

M013 Distal Upper Limb

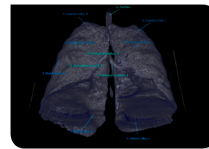
M014 Cubital Fossa Veins

M017 Superficial Shoulder

M019 Axilla and Thorax

Respiratory

» **S017 Pulmonary Emphysema** — This is a case demonstrating the lungs with several public bookmarks, many of them showing labeled structures. You can see the lobes, bronchi, skeletal system, ribs, trachea and more.



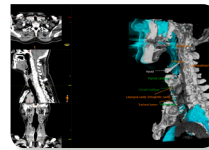
*Lungs labeled
(System bookmark)*

» **S024 Pneumothorax** — This is a pathological case featuring a pneumothorax, therefore is suitable for teaching about pleural cavity. Inner lung structures are also visible and labeled.



*Pneumothorax Air
(System bookmark)*

» **S044 Airways** — This case visualizes the upper airways and has bookmarks with labels showing like oropharynx, laryngopharynx, laryngeal cavity, tracheal ring and tracheal lumen.



*Pharynx and Airways
(System bookmark)*

Other recommended cases:

S003 Thorax and Abdomen A, #1

S009 Head

S011 Thorax & Abdomen B

S012 Thorax A

S057 Thorax, Tumor

S078 Lung

S089 Heart H

Monash 3D Anatomy Library

» **M046 Bronchial Tree** — This case presents detailed visualization of bronchi and the different segments.

Other recommended cases:

M007 Lateral Orbit



*All structures
(System bookmark)*

Digestive

» **S001 Colon** — This case presents three bookmarks of the colon which allows a great overview.

» **S087 Abdomen E** — This case gives you an overview of the small intestine.

» **S109 Abdomen F** — This case, containing three CT-stacks has a bookmark of the colon with labeled structures.

Other recommended cases:

S007 Mrcp, Gallstones

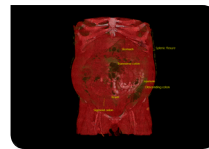
S060 Abdomen C

S085 Thorax and Abdomen D

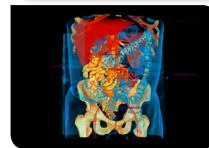
S086 Thorax C



*Pink colon
(System bookmark)*



*Small intestine
(System bookmark)*



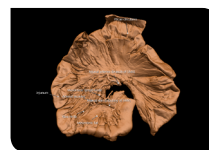
*Colon and stomach
(System bookmark)*

Monash 3D Anatomy Library

» **M047 Jejunum** — This case shows a crosssectional portion of the jejunum.

Other recommended cases:

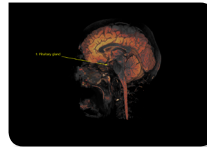
M048 Ilium Segment



*All structures
(System bookmark)*

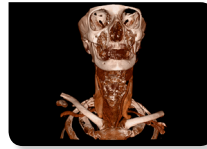
Endocrine

» **S034 Brain** — This case is a brain MRI where the pituitary gland is visible.



*Pituitary gland
(System bookmark)*

» **S135 Carotid and Thyroid** — This case shows the right thyroid together with vessels of the neck and submandibular glands.



Screenshot of the 3D model

Lymphatic

» **S004 Spleen Rupture** — The case contains CT Angiography images before and after a ruptured spleen treatment, and an x-ray series captured during the intervention.

» **S087 Abdomen E** — Case of the abdominal and pelvic area showing an enlarged inguinal lymph node.

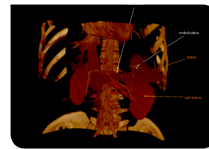
Other recommended cases:

S011 Thorax and Abdomen B

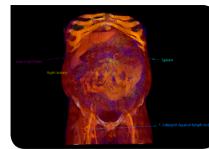
S044 Airways

S085 Thorax and Abdomen D

S109 Abdomen F



*Post operative
(System bookmark)*



*Lymphatic
(System bookmark)*

Muscular and skeletal

Head and neck

- » **S009 Head** — This case has bookmarks showing labeled structures like the cranial base, teeth, and the skull.
- » **S021 Ear** — This case demonstrates the anatomy of the external ear, middle ear, much of the sphenoid and occipital bones, the temporal bone, and the middle and posterior intracranial fossae.
- » **S062 Cervical Vertebrae** — This case has a bookmark visualizing the vertebrae of the neck, hyoid bone, cricoid cartilage and the thyroid cartilage.

Other recommended cases:

S059 Facial Fracture

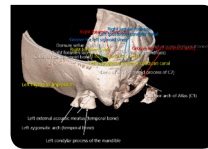
S032 Neck Angio

S114 Teeth

S135 Carotid and Thyroid



*Skull labeled
(System bookmark)*



*Bony landmarks
(System bookmark)*



*Cervical vertebrae
(System bookmark)*

Monash 3D Anatomy Library

- » **M001 Head Neck Shoulders** — Showing the cervical spine, thoracic vertebrae and muscles in the fascial and cervical region.
- » **M005 Dural Skull** — This case of an opened cranial cavity displays bony landmarks, the dural folds and dural venous sinuses, including the falx cerebri.

Other recommended cases:

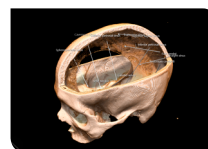
M002 Head Deep Dissection

M004 Orbit Medial

M007 Head, Neck, Pharynx



*Vasculature
(System bookmark)*



*All structures
(System bookmark)*

Muscular and skeletal

Spine, thorax and pelvis

» **S037 Spinal Disc Herniation** — This case is an MR in multiple views showing an intervertebral disc herniation. Please note this case is better used in 2D.



Screenshot of MR image

» **S040 Lower Skeleton** — This case demonstrates the lumbar spine, the pelvis and the lower limbs. Use the bone segmentation tool to remove structures you don't want to highlight.



*Lower limbs and feet
(System bookmark)*

» **S064 Hip** — This case has several bookmarks visualizing the muscle and bone anatomy of the pelvic region and the proximal part of the lower limbs. Many structures are labeled.



*Muscles in red
(System bookmark)*

Other recommended cases:

S002 Abdomen

S011 Thorax and Abdomen B

S016 Fracture

S017 Pulmonary Emphysema

S056 Spine, Scoliosis

S102 Hip, Knee, Feet

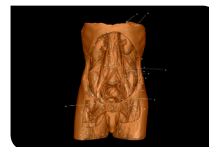
Monash 3D Anatomy Library

» **M049 Posterior Abdominal Wall** — This case demonstrates some of the muscles in the abdominal and pelvic region.

Other recommended cases:

M001 Head, Neck, Shoulders

M036 Deep Pelvis, Thigh



*All structures
(System bookmark)*

Muscular and skeletal

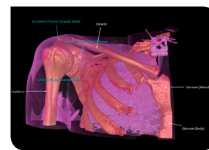
Shoulder and upper limb

- » **S042 Shoulder Fracture** — This case of the right shoulder demonstrates a Hill-Sachs lesion and glenoid fracture consequent of an anterior shoulder dislocation. There are bookmarks showing labeled bony landmarks.
- » **S082 Hand** — A CT scan of the hand with bookmarks that show the carpal bones, the metacarpals and tendons of the dorsum of the hand.
- » **S094 Shoulder** — This case shows the anatomy of the joint and the proximal humerus. A bookmark demonstrates the muscles around the shoulder, with labels.

Other recommended cases:

S090 Axillary Artery

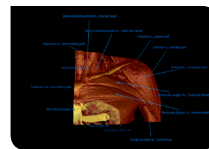
S098 Carpus



*Shoulder fracture
(System bookmark)*



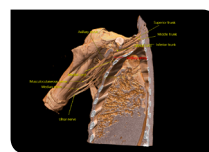
*Bones of hand and wrist
(System bookmark)*



*Musculature Pectoral
and Scapular (Labeled)
(System bookmark)*

Monash 3D Anatomy Library

- » All the cases **MO09-MO22** contains different bookmarks of muscles, ligaments and bony landmarks of the upper limb.



*MO19 Axilla and Thorax
(System bookmark)*

Muscular and skeletal

Lower limb

» **S043 Tibiofibula Fracture** — This case of multiple tibiofibular fractures demonstrates for example the muscles of the distal part of the lower limb.



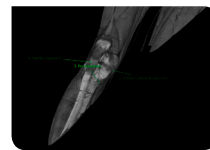
*Muscles
(System bookmark)*

» **S052 Foot, Fracture** — This case shows the joints and bones of the foot and ankle.



*Bones of the foot
(System bookmark)*

» **S107 Peripheral Angiography** — In this case you get a good overview of the bones of the lower limbs. There are also bookmarks showing muscles and the ligaments of the knee joint.



*Ligaments of the knee joint
(System bookmark)*

Other recommended cases:

S008 Knee

S040 Lower Skeleton

S064 Hip

S102 Hip, Knee, Feet

S103 Knee B

S120 Fractured Tibia

Monash 3D Anatomy Library

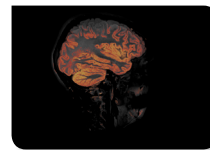
» All the cases **M023–M036** contains different bookmarks of muscles, ligaments and bony landmarks of the lower limb.



*M024 Distal Lower Limb
(System bookmark)*

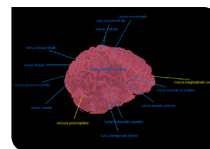
Nervous

» **S034 Brain** — MR scan of the brain and spinal cord that gives you a good look at the cerebrum, cerebellum, spinal cord, pituitary gland and the ventricles.



*Brain sagittal section
(System bookmark)*

» **S055 Brain B** — This case contains several bookmarks of different labeled structures of the brain. The high resolution of the MR scan provides visualization of both surface and internal anatomical structures.



*Sulci and fissures
(System bookmark)*

Monash 3D Anatomy Library

Central Nervous System

- » **M006 Head, Neck, Face**
- » **M007 Head, Neck, Pharynx**
- » **M050 Dorsal Axial Body and Nerves**
- » **M051 Ventral Axial Body and Nerves**

Peripheral Nervous System

- » **M009 Superficial Hand**
- » **M010 Upper Limb Superficial**
- » **M013 Distal Upper Limb**
- » **M019 Axilla and Thorax**
- » **M021 Upper Limb B**
- » **M024 Distal Lower Limb**
- » **M036 Deep Pelvis, Thigh**
- » **M038 Male Hemipelvis**
- » **M049 Posterior Abdominal Wall**

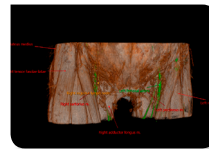


*M050 Dorsal Axial Body
and Nerves
(System bookmark)*

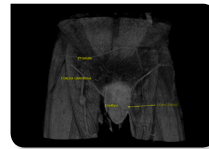
Reproductive

» **S005 Female Pelvis** — This MR scan of a female pelvis demonstrates muscles, major vasculature, uterus and ovaries.

» **S050 Femoral Head Replacement** — This case visualizes some structures of the penis and provides identification of the prostate.



*Muscles of the thigh
(System bookmark)*



*Penile anatomy
(System bookmark)*

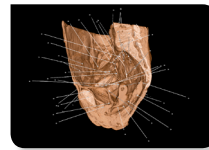
Monash 3D Anatomy Library

» **M040 Female Hemipelvis C** — Shows the female hemipelvis.

Other recommended cases:

M038 Male Hemipelvis

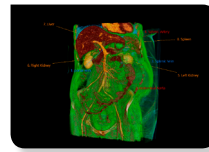
M049 Posterior Abdominal Wall



*All structure
(System bookmark)*

Urinary

» **S002 Abdomen** — This case is an abdominal Triple-Phase CT scan. You can view some of the internal organs and there are bookmarks demonstrating the kidneys.



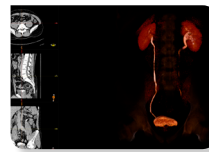
*Abdominal anatomy
(System bookmark)*

» **S011 Thorax & Abdomen B** — This case gives you a nice overview of the abdominal area. The kidneys and the renal blood supply are highly visible in several bookmarks.



*Calcified plaques
(System bookmark)*

» **S058 Urography** — This CT Urography scan with contrast, demonstrates an obstruction in the left kidney. Detailed parts of the kidney and the ureter is shown in one of the bookmarks.



*Urinary system
(System bookmark)*

Other recommended cases:

S028 Kidney Transplantation

S031 Kidney Cancer

S107 Peripheral Angiography

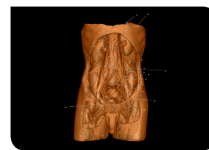
Monash 3D Anatomy Library

» **M049 Posterior Abdominal Wall** — Gives you an overview of the kidneys, the ureters and the bladder.

Other recommended cases:

M040 Female Hemipelvis C

M038 Male Hemipelvis



*All structures
(System bookmark)*

