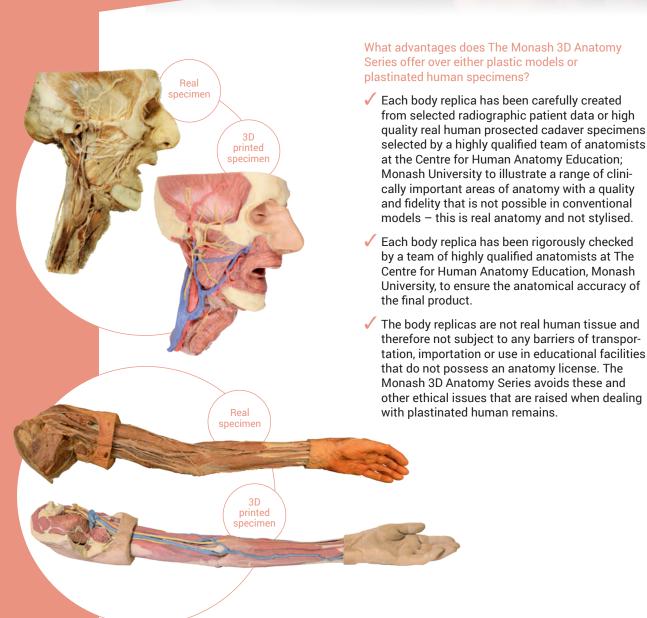


THE GROUND-BREAKING

Monash Anatomy Series represents an unique and unrivalled collection of colour-augmented human anatomy body replicas designed specifically for enhanced teaching and learning. This premium collection of highly accurate normal human anatomy has been generated directly from either radiographic data or actual cadaveric specimens using advanced imaging techniques. The Monash 3D Human Anatomy Series provides a cost effective means to meet your specific educational and demonstration needs in a range of curricula from medicine, allied health sciences and biological sciences. A detailed description of the anatomy displayed in each 3Dprinted body replica is provided.





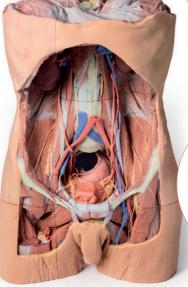


This large 3D printed specimen displays a great deal of anatomy spanning the head, neck, thorax, axillae and upper limbs.

Ref.no. MP1250









Posterior Abdominal wall

mal thigh specimen (MP1770).

This large 3D-printed specimen displays the entire male posterior abdominal wall from the diaphragm to the pelvic brim, as well as pelvic anatomy and to the proximal thigh. This same individual specimen is also available as a pelvic and proxi-

Ref.no. MP1300

Nervous System Dissection (posterior view)

This 3D printed specimen

presents a unique view of axial anatomy, presenting a dorsal deep dissection of the head, neck, axillae, thorax, abdomen, and gluteal regions. The removal of the posterior portions of the cranium and laminectomy from the cervical region to the opening of the sacral canal affords a continuous view of the central nervous system structures and origin of the segmental nerves relative to other axillary and appendicular struc-

Ref.no. MP1400

tures.

Posterior Body Wall / Ventral Deep Dissection

This 3D printed specimen complements our dorsal dissection specimen (MP1400) by presenting a ventral deep dissection of axial anatomy from the head,

neck, axillae, thorax, and abdomen to the proximal portion of the thighs. The removal of the anterior portions of the cranium and vertebral bodies from the cervical region to the 5th lumbar provides a continuous view of the central nervous system structures and origin of the segmental nerves re-

lative to other axillary and

appendicular structures. Ref.no. MP1410



Hand

This 3D printed specimen demonstrates a superficial dissection of a left hand and wrist. Anteriorly, the transverse carpal and palmar carpal ligaments have been removed to expose the tendons and nerves traversing the carpal tunnel and Canal of Guyon. The palmar aponeurosis has been removed to demonstrate the course of the tendons through the palm, the superficial muscles of the thenar and hypothenar eminences (abduc-

tors and flexors), and the lumbrical muscles arising from the flexor digitorum tendon.

Ref.no. MP1530







of the scapula, proximal arm, and over the hand. The superficial veins, including the median

cubital vein, have been maintained; with the cephalic and basilica preserved from the wrist to the deltopectoral groove and termination in the brachial vein, respectively.

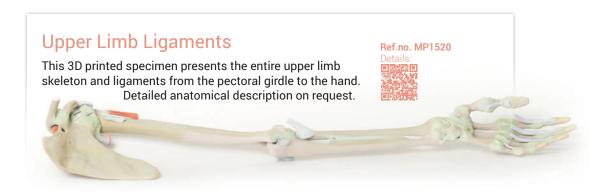
Ref.no. MP1500

Upper limb and hand

- deep dissection. This 3D print of a superficially dissected right upper limb specimen displays a mixture of the vascular, nervous and muscular anatomy of the distal arm, forearm and hand.







Upper Limb - biceps, bones and ligaments

This 3D-printed specimen shows the origin and insertion of biceps (most other arm and shoulder muscle bellies have been removed). The long head of biceps arises from the supraglenoid tubercle (hidden from view) and travels inferiorly in the bicipital groove, whereas the short head of biceps arises from the coracoid process. The bifid insertion of the muscle as the bicipital aponeurosis and the rounded tendon which can be seen winding around the radius to insert into the

radial tuberosity are clearly discernable.





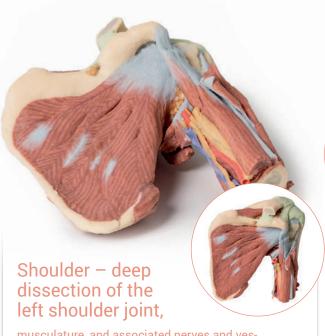
Cubital Fossa

This 3D printed cubital fossa displays a superficial dissection of the right distal arm and proximal forearm. The skin and superficial fascia has been removed anteriorly, medially and laterally to expose the superficial veins (basilic, cephalic, and median cubital) and cutaneous (medial, lateral and posterior antebrachial) nerves.

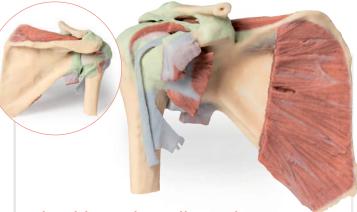


Cubital fossa – muscles, large nerves and the brachial artery

This 3D printed specimen presents a left distal arm and proximal forearm with all skin, subcutaneous fat and superficial cutaneous nerves and veins removed. The elbow region partially flexed to display the arrangement of muscles and neurovascular structures of the cubital fossa.



musculature, and associated nerves and vessels. This 3D printed specimen presents a deep dissection of the left shoulder joint, musculature, and associated nerves and vessels of the scapula and proximal humerus (to near midshaft). Anteriorly, the deltoid muscle has been detached from its origin to expose the underlying deeper structures of the shoulder joint and rotator cuff musculature.



Shoulder – deep dissection of a right shoulder girdle,

preserving a complete scapula, lateral clavicle, and proximal humerus. This 3D printed specimen preserves a deep dissection of a right shoulder girdle, consisting of a complete scapula, lateral clavicle, and proximal humerus. In the anterior view, the subscapularis muscle is present but sectioned to highlight the cross-sectional thickness of the belly within the subscapular fossa.



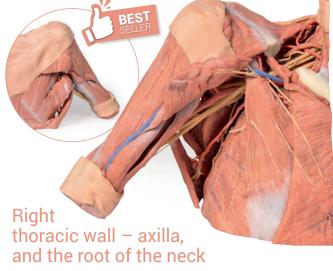


Shoulder left – Superficial muscles and axillary/brachial artery

This printed 3D left shoulder specimen consists of the scapula, humerus (sectioned near midshaft) and clavicle (sectioned at midshaft) with the superficial muscles around the shoulder joint, the rotator cuff muscles and the axillary artery as it progresses distally to become the brachial artery. The muscles attached to the clavicle have been preserved including the subclavius muscle attachment to the inferior

border of the clavicle and the deltoid covering the lateral aspect of the proximal upper limb (overlying the origins of the long head of biceps brachii and the lateral head of triceps brachii).

Ref.no. MP1523 Details:



This 3D printed specimen preserves a dissection of the right thoracic wall, axilla, and the root of the neck. Structures within the right chest wall are visible deep to the parietal pleura, including the ribs, muscles of the intercostal spaces and the origins of the neurovascular bundle in each intercostal space. The pectoralis major has been reflected medially towards the sectioned edge of the specimen to expose pectoralis minor which acts as a useful landmark as it divides the axillary artery into its three parts. The clavicle has had its middle 1/3 removed, but the

subclavius muscle has been retained. The brachial plexus and many of its branches are seen almost in its entirety from the roots of C5-T1 to its termination.

Ref.no. MP1521 Details:



Foot - Plantar surface

and superficial dissection on the dorsum.

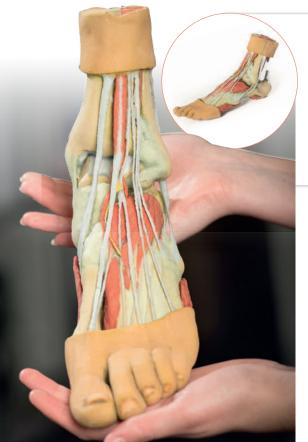
This 3D printed specimen is a left foot with superficial structures exposed on the dorsum, and the superficial layer of muscles and nerves on the plantar Ref.no. MP1910 surface. The anterior portion of the plantar aponeurosis has largely been removed to expose the first layer of muscles.



This 3D printed specimen provides a view of deep plantar structures of a right foot. Medially, the cut edge of the great saphenous vein is visible within the superficial fascia, just anterior to the cut edges of the medial and lateral plantar arteries and nerves overlying the insertion of the tibialis Ref.no. MP1940 posterior muscle. The superficial fascias, the plantar aponeurosis, and superficial musculature have been removed to expose the deep (third layer) of musculature.



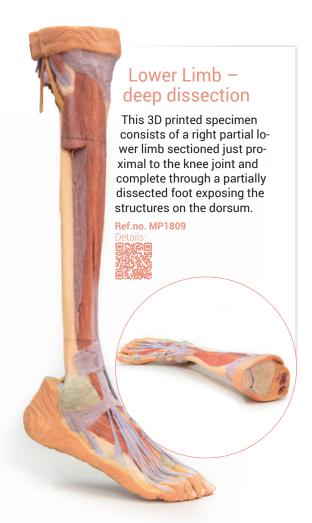


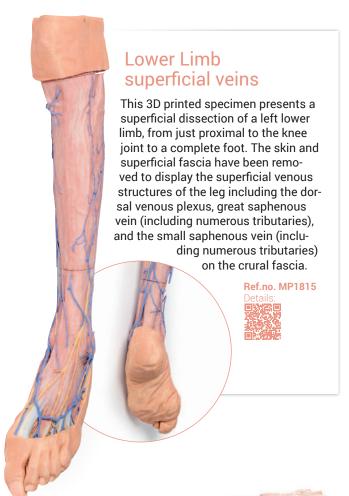


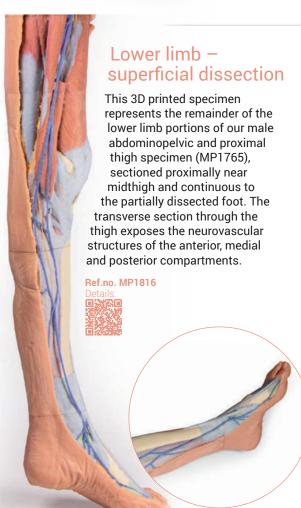
Foot – Structures of the plantar surface

This 3D print records the anatomy of a right distal leg and the deep structures of the plantar surface of the foot. Proximally, the tibia, fibula, interosseous membrane, and leg muscles are discernable in cross-section. Medially, Ref.no. MP1900 at the level of the ankle joint, the long tendons of the dorsi- and plantar-flexors are visible superficial to the capsular and extra capsular ligaments.











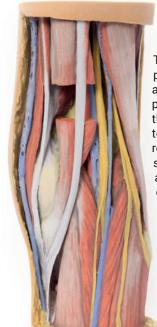


Popliteal Fossa distal thigh and

proximal leg. This 3D printed specimen preserves the distal thigh and proximal leg, dissected posteriorly to demonstrate the contents of the popliteal fossa and surrounding region.

Ref.no. MP1820





Popliteal Fossa

This 3D printed specimen preserves the distal thigh and proximal leg, dissected posteriorly to demonstrate the contents of the popliteal fossa and surrounding region. The proximal cross-section demonstrates the anterior, posterior and medial compartment muscles, with the femoral artery and vein visible within the adductor canal. The sciatic nerve and great saphenous vein are also visible.

Ref.no. MP1830







Flexed knee joint deep dissection

This 3D printed specimen displays a deep dissection of a left knee joint with the internal joint capsule structures relative to superficial tissues in a flexed position.

Ref.no. MP1807





Knee Joint, flexed

This 3D printed specimen demonstrates the ligaments of the knee joint with the leg in flexion. In the anterior view, with the patella and part of the patellar ligament removed, the medial and lateral menisci and anterior and posterior cruciate ligaments are visible.

Ref.no. MP1800 Details:



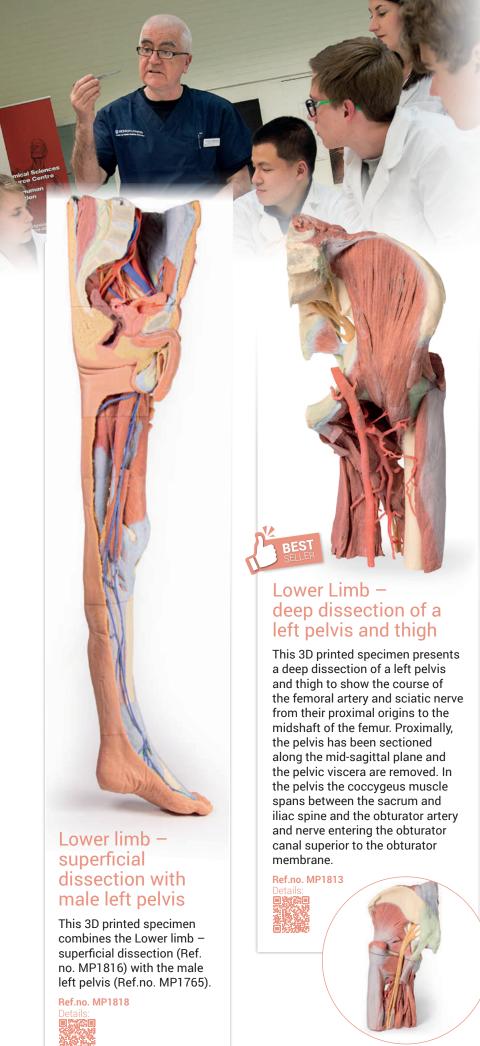


Knee Joint, extended

This 3D printed specimen demonstrates the ligaments of the knee joint with the leg in extension; it represents the same specimen as MP1800 knee joint printed in a flexed position. Both tibial and fibular collateral ligaments are intact.

Ref.no. MP1805







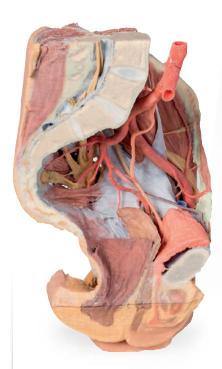
Male left pelvis and proximal thigh

This 3D printed male left pelvis and proximal thigh (sectioned through the midsagittal plane in the midline and transversely through the L3/4 intervertebral disc) shows superficial and deep structures of the true and false pelves, inquinal and femoral region. In the transverse section. the epaxial musculature, abdominal wall musculature (rectus abdominis, external and internal abdominal obliques, transversus abdominis), psoas major and quadratus lumborum are visible and separated from each other and the superficial fat by fascial layers such as the rectus sheath and the thoracolumbar fascia. The psoas major muscle lies lateral to the external iliac artery, with the left testicular artery and vein lying on its superficial surface. More laterally (and moving inferiorly), the ilioinguinal nerve, the lateral cutaneous nerve of the thigh and the femoral nerve are positioned over the superficial surface of the iliacus muscle.









Female left pelvis and proximal thigh

This 3D printed female left pelvis and proximal thigh preserves both superficial and deep structures of the true and false pelves, inquinal region, femoral triangle, and gluteal region. The specimen has been sectioned transversely through the fourth lumbar vertebra, displaying the crosssection of the musculature (epaxial musculature, psoas and quadratus lumborum muscles) and cauda equina within the vertebral canal. The ventral and dorsal roots of the cauda

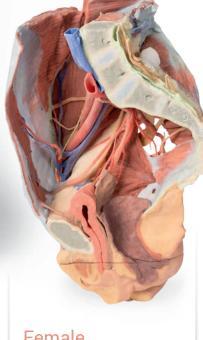
equina are also visible exiting the intervertebral and sacral foramina in the sagittal section.

Ref.no. MP1780



Female right pelvis superficial and deep structures

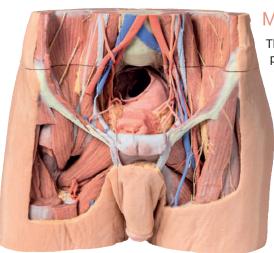
This 3D printed female right pelvis preserves both superficial and deep structures of the true and false pelves, as well as the inguinal ligament, the obturator membrane and canal, and both the greater and lesser sciatic foramina. Somewhat unique is the removal of portions of the peritoneum (a grayish colour) to create 'windows' Ref.no. MP1783 displaying extraperitoneal



Female right pelvis

gluteal region.

This 3D printed specimen represents a female right pelvis, sectioned along the midsagittal plane and transversely across the level of the L4 vertebrae and the proximal thigh. The specimen has been dissected to demonstrate the deep structures of the true and false pelves, the inferior anterior abdominal wall and inquinal Ref.no. MP1785 region, femoral triangle and



Male Pelvis

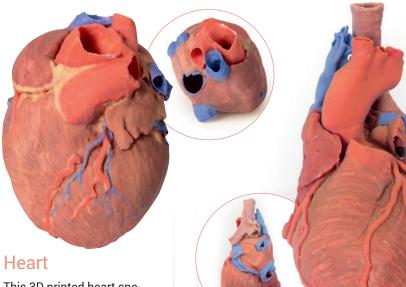
structures.

This 3D printed specimen represents the inferior posterior abdominal wall, the pelvic cavity and the proximal thigh. The common iliac veins unite to form the inferior vena cava. The iliacus and psoas

muscles are easy to identify, the latter has a prominent psoas minor tendon. The nerves of the iliac fossa and their course is clearly visible, as is the genitofemoral nerves on the surface of psoas muscle. The ureters also descend on the superficial surface of the psoas and cross from its lateral to its medial border. They enter the pelvis

at the bifurcation of the common iliac arteries into external and internal arteries. The external iliac arteries and veins running along the pelvic brim are clearly visible, as is the vas deferens crossing the brim from the deep inguinal ring to enter the pelvis.





This 3D printed heart specimen preserves superficial cardiac anatomy and the bases of the great vessels. All four chambers (atria and ventricles) are preserved, with the pericardial reflections on the left atrium demarcating the position of the transverse and oblique pericardial sinuses. On the posterior aspect, the coronary sinus receives all the cardiac veins (great, middle, small) and a prominent posterior vein of the left ventricle. The aortic and pulmonary semilunar valves are visible at the bases of the ascending aorta and pulmonary trunk, respectively.

Ref.no. MP1700 Details:



Heart and the distal trachea, carina and primary bronchi

This 3D printed specimen preserves the external anatomy of the heart and the distal trachea, carina, and primary bronchi in the posterior mediastinum relative to the great vessels and left atrium The left auricle has been sectioned to demonstrate the course of the circumflex artery in the coronary groove. The pulmonary trunk has been removed to expose the (open) pulmonary semilunar valves, while the arch of the aorta is intact to display the origins of the brachiocephalic trunk, left common carotid, and left subclavian.

Ref.no. MP1710 Details:





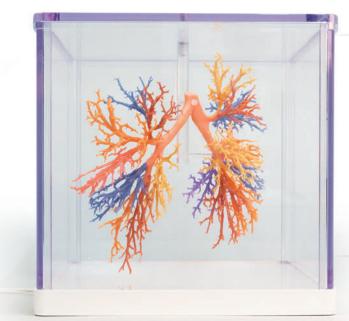
Heart internal structures

This 3D printed heart has been dissected to display the internal structures of the chambers. At the base of the heart the termination of the superior vena cava is preserved entering the right atrium. Part of the inferior vena cava is also preserved on the inferior aspect of the right atrium; however, most of the vessel lumen and much of the anterior wall has been removed to expose the pectinate muscles of the right auricle and the fossa ovalis. The anterior wall of the right ventricle has also been removed.

Ref.no. MP1715





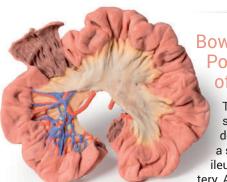


Bronchial Tree

This 3D printed specimen presents the conducting pathways of the respiratory system from the trachea, carina, and complete right and left bronchial trees to the level of the tertiary lobar bronchi. Each set of lobar bronchi have been colour-coded to demonstrate the bronchopulmonary segments of the right and left lobes.



Ref.no. MP1690 Details:



Bowel -**Portion** of Ileum

This 3D printed specimen demonstrates a small loop of ileum and mesentery. A window into the mesentery has been dissected (removing fat and visceral peritoneum) to show arterial arcades in the mesentery.

Bowel -Portion of Jejenum

This 3D printed specimen presents a small loop of jejenum and mesentery. A window into the mesentery, fat and visceral peritoneum has been removed to illustrate the arterial arcades in the mesentery.

Ref.no. MP1730



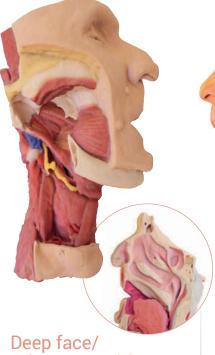


Head and visceral column of the neck

This 3D print specimen preserves a series of features of the head and visceral column of the neck: The face: On the right side of the head the parotid gland has been removed to reveal the facial nerve and all its branches (temporal, zygomatic, buccal, marginal mandibular and cervical) and demonstrate the spatial relations of structures embedded in the gland from superficial to deep (facial nerve, retromandibular vein, external carotid artery). In the surrounding region the temporalis, masseter and posterior belly of digastric are exposed, as are and the facial artery, transverse facial artery and superficial temporal artery. The facial vein and transverse facial vein are clearly visible uniting to form

the common facial vein which is joined by the retromandibular vein to form the external jugular vein.





Infratemporal fossa

In this 3D printed specimen of a midsagittally-sectioned right face and neck, the ramus, coronoid process and head of the mandible have been removed to expose the deep part of the infratemporal fossa. The pterygoid muscles have also been removed to expose the lateral pteygoid plate and posterior surface of the maxilla. The buccinator has been retianed and can be seen originating from the external aspect of the maxilla, the pterygomandibular

raphe and the external aspect of the (edentulous) mandible.

Ref.no. MP1665

Head and Neck

This 3D printed specimen of a parasagittally sectioned head and neck demonstrates a range of anatomical features: Lateral aspect of the face: A window has been created to expose the parotid region. The pinna of the ear has been left intact, however the mastoid process has been exposed by reflection of the sternocleidomastoid (SCM) muscle. The parotid gland has been carefully removed to display structures which are normally embedded or hidden by the gland. The attachment of the posterior belly of digastric arising from the digastric groove medial Ref.no. MP1660 to the mastoid

process can be

clearly seen.

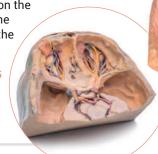
Superior Orbit

This 3D printed model captures a dissection in which the calvaria and cerebrum have been removed to expose the floors of the anterior and middle cranial fossae. The midbrain has been sectioned

at the level of the tentorium cerebelli and on the cross sectional surface one can identify the superior colliculi, cerebral peduncles and the substantia nigra. Anterior to the mid-brain

the vertebral artery can be clearly identified rising from the posterior cranial fossa and dividing into the posterior cerebral arteries.

Ref.no. MP1675
Details:





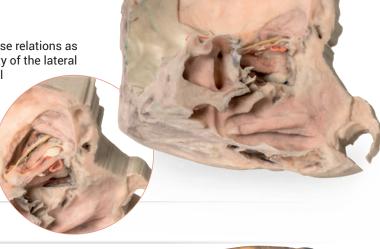
Medial Orbit

This 3D print displays the orbital contents and its close relations as viewed from the medial perspective when the majority of the lateral

wall of the nasal cavity and the intervening ethmoidal sinuses have been removed. The posterior ethmoidal nerve (PEN) (a branch of the nasociliary nerve, CN

V1) can be seen passing between the medial rectus (MR) inferiorly and the superior oblique muscle superiorly. Detailed anatomical description on request.

Ref.no. MP1685 Details:



Lateral Orbit

This 3D printed specimen shows the orbit from the lateral perspective when the bony lateral wall and part of the calvaria of the skull have been removed. The frontal and temporal lobes of the brain are exposed. In the orbit the lateral rectus (LR) has been divided to demonstrate the intraconal space. The muscle near its insertion has been

reflected anteriorly to reveal the insertion of inferior oblique muscle (IO). The portion near its origin from the annulus is reflected to reveal the abducens nerve (VI Nv) entering the bulbar aspect of the muscle belly.







Paranasal Sinus model

This unique model has been created from CT imaging and segmentation of the internal spaces of the viscerocranium. Parts of the skull have been retained but sections or windows have been removed to expose the

paranasal sinuses. The paired frontal sinuses, with the right being partially subdivided, are coloured blue.

Ref.no. MP1630 Details:



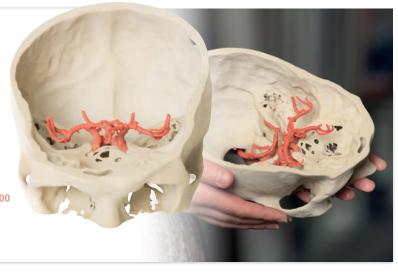
complex anatomy of the temporal bone including bone ossicles, canals, chambers, foramina and air spaces. In addition, the spatial relations between temporal bone and other structures of otological importance, i.e. carotid artery, dural venous sinuses, related nerves and the dura mater are indicated. Internal casts (endocasts) of the bony chambers and canals have been created to aid visualisation of the internal anatomy of the temporal bone. The model set consists of three parts: Part 1 Skull Preparation. Part 2 The Petrous Part Of The Temporal Bone. Part 3 The Auditory And Vestibular Apparatus.

Ref.no. MP1620

Circle of Willis

This 3D printed specimen demonstrates the intracranial arteries that supply the brain relative to the inferior portions of the visceroand neurocranium. This print was created by careful segmentation of angiographic data. The model shows the paired vertebral arteries entering the cranial cavity through the foramen magnum and uniting to form the basilar artery. The basilar can be seen dividing into their terminal posterior Ref.no. MP1600

cerebral arteries. The superior cerebellar arteries arise just proximal to this termination.



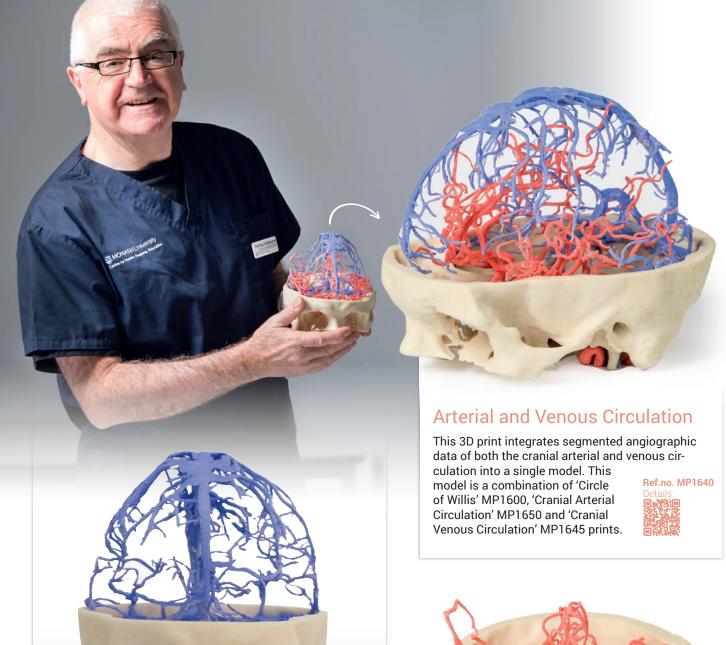
Dural Skull

This 3D print of a dissected and opened cranial cavity displays the dural folds and dural venous sinuses, including the falx cerebri (preserved by a retained midsagittal portion of the calvaria. The intact tentori-

um cerebelli demonstrates the tentorial notch which normally houses the midbrain.







Venous Circulation

Based on the same dataset as MP1600 and MP1650, in this 3D print the dural venous sinus network has been segmented based on structures visible from the circulation of contrast medium. As a result, while most of the sinuses are present, the lack of contrast in the anterior portions of the venous system means that some structures (cavernous sinus, petrosal sinuses) are not included in the model. The extensive network of dural veins and venous lacunae are visible, joined in the midline to the superior sagittal sinus. Deep to this network of sinus veins are the great cerebral vein, the inferior sagittal sinus and the straight sinus to its convergence with the superior sagittal at the confluence of sinuses. Several dural veins drain into the left and right transverse sinuses as they pass anterior towards the petrous portion of the temporal bone. The sigmoid sinuses

can be seen in the posterior cranial fossa prior to exiting the skull at the jugular foramen and forming the internal jugular vein (visible on the inferior surface of the skull).

Ref.no. MP1645 Details:



Arterial Circulation

Like our circle of Willis print, this model demonstrates the internal carotid and vertebral arteries entering the skull, branching into the intracranial arteries that supply the brain. This more expanded 3D print of the internal carotid and vertebral artery anastomoses and branches, inclu-

sive of the circle of Willis, displays the full branching pattern of the cerebral and cerebellar arteries. Ref.no. MP1650 Details:



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