

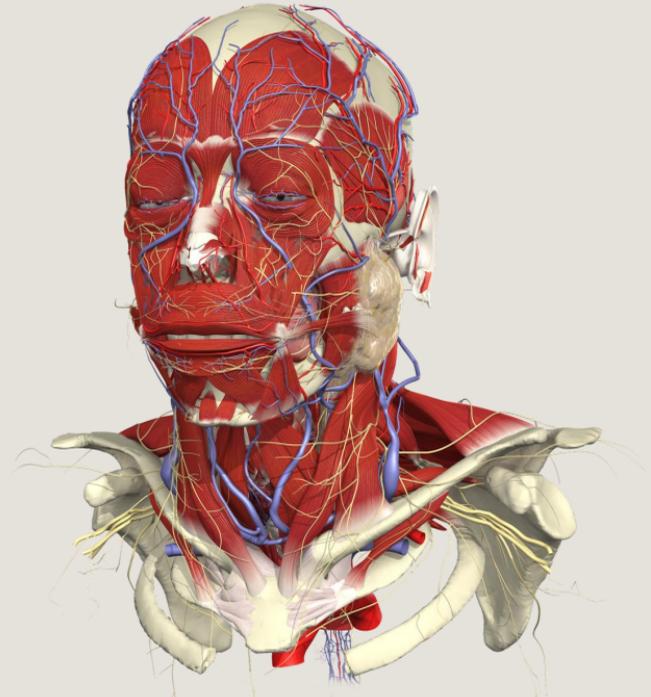
PRIMAL PICTURES

PIONEERING THE EXPLORATION OF THE HUMAN BODY



Primal Pictures

Digitally innovative A&P solutions, driving engagement and outcomes across all sectors



YEDİTEPE
UNIVERSITY

Informa's Reach

15+

Specialist markets

1,000+

Brands

100,000+

Customers

30+

Offices in over 30 countries

//

Informa's strength is in the Brands each business has and how industry specialism and focus is at the heart of what we offer and how we operate. Specialism gives you expertise and, in expertise, you can deliver value.

– Stephen A . Carter



£2.3B

2018 Total Group Revenue

FTSE 100

Part of the LSE FTSE 100

11,000+

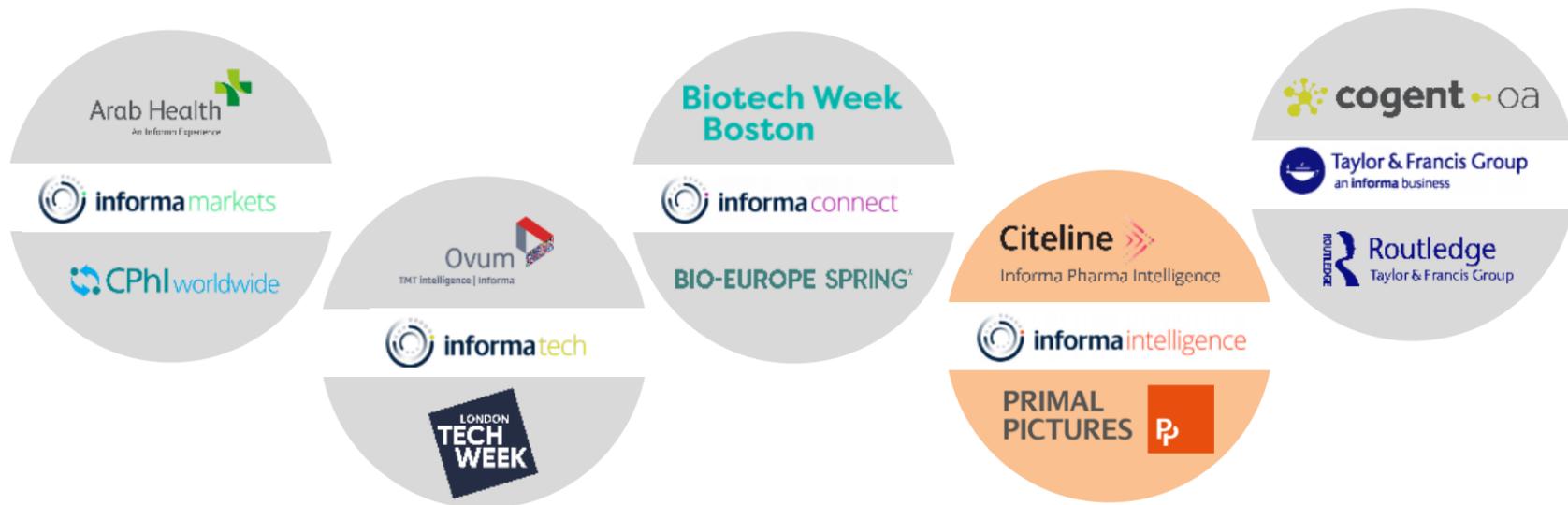
Colleagues worldwide

500+

Exhibitions organized each year

Informa's Global Divisions and Key Brands

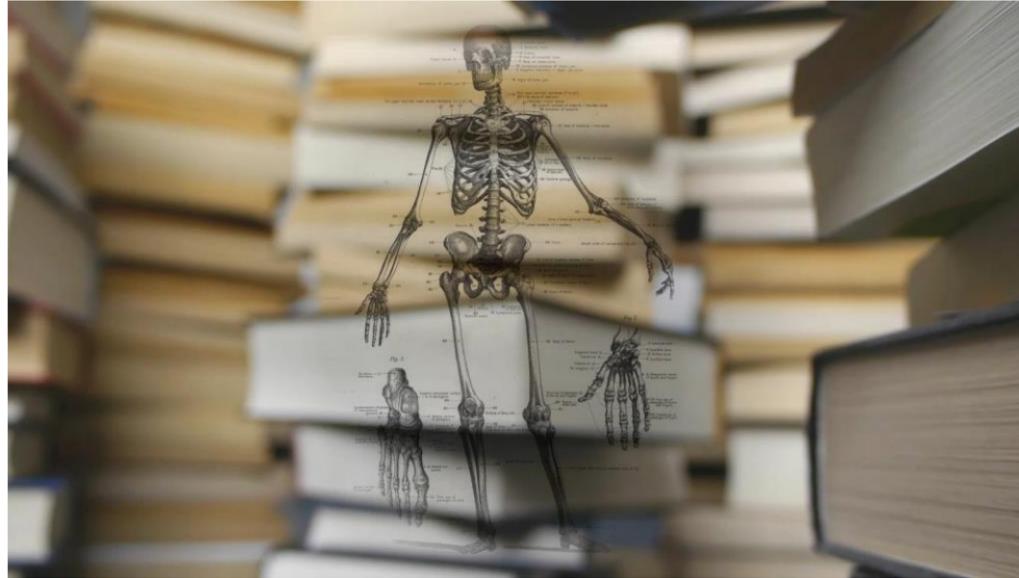
Informa has five operating divisions, which help commercial, professional and academic communities to connect and learn...



...and which create and provide access to content and intelligence that helps customers work smarter and make better decisions faster.

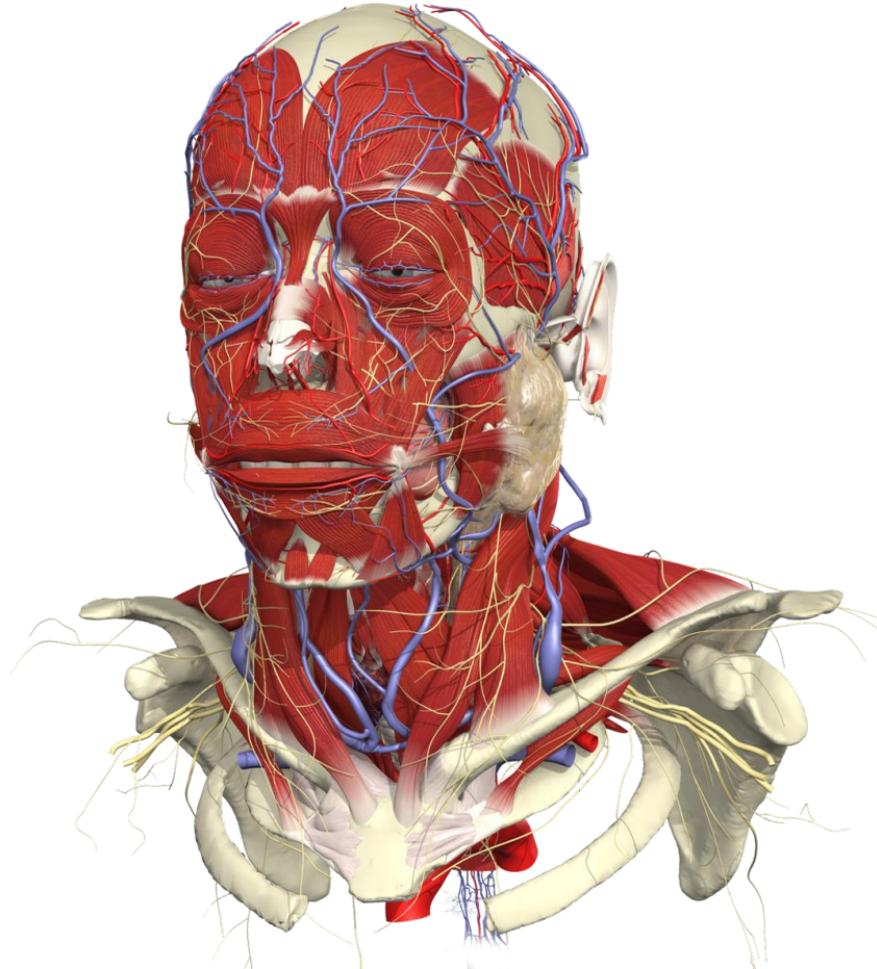
About Primal Pictures

- Established in 1991, we create and publish the world's most medically accurate and detailed 3D graphic rendering of human anatomy based on real scan data.
- Favoured by over 1,500+ academic institutions globally
- Trusted in Practice & Healthcare environments across the World (including the NHS and US Veterans Administration)
- Preferred by commercial organisations to communicate internally and externally more credibly and drive differentiation to optimize brand impact



Why Primal Pictures?

- Best in class accuracy
- Breadth of content
- Relevance across multiple disciplines
- Quality of content - curated and maintained by our in-house team of anatomist and network of MD and PhD professionals.
- Pioneers in revolutionizing the teaching of the human anatomy



Primal Pictures for Academia

We offer positive outcomes to all

Librarians

Budget

Supply learning resources that will impact outcomes

Meet the needs of all stakeholders
(Faculty & Students)

Utilise LMS/VLE platforms

Remote learning resources

Faculty

Achieve increased student outcomes

Teach more, in less time

Guide students to relevant content

Meet the expectations of new students – principally around new and innovative learning technologies

Assessment tools

Remote teaching tools

Students

Blended learning tools – slides, handouts, animations, voice overs, diagrams and quizzes

Multiple User Interfaces – apps, mobile, PC/MAC, tablet, AR, VR

Self Assessment Revision Tools

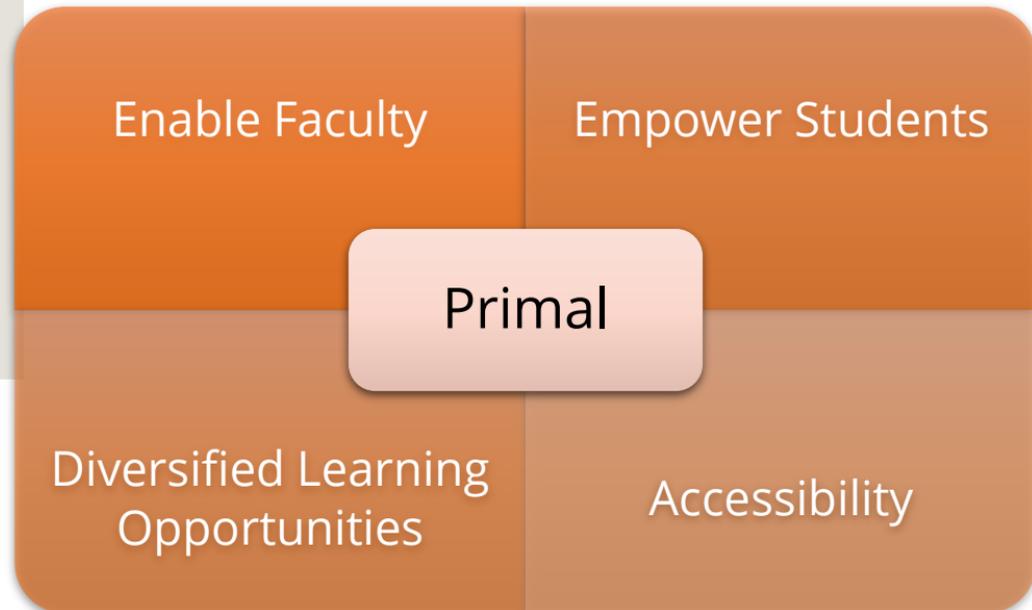
Guided learning content

Tools that will support students from year 1 of higher education into their professional careers.

Primal's Approach

"Since its (Primal Pictures) addition, exam scores have increased by nearly 12% over previous years."

Justin Miller - Professor - Carthage College, Wisconsin



Medical Education Solution

A tailored content solution, combining Primal's unique functionality with a set of content perfect for every stage of Medical School education – Enabling faculty and students with consistent, quality and always-on Anatomy, Physiology and Pathology content



Familiarisation/Overview

- Anatomy can be daunting, to start students need an easy step-by-step introduction to the anatomy they are about to study.
- Product = [Anatomy and Physiology](#)



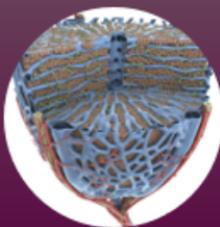
Revision & Practice

- Once they have understood the anatomy of the area, they may need to test their recall and be easily be able to identify each structure.
- Product, aside from the Quizzes already in Anatomy and Physiology, they can also use PALMS, our Perceptual, Adaptive Learning Modules
- Product = [Real-time \(Labelled\)](#)
- Product = [Real-time \(colouring\)](#)



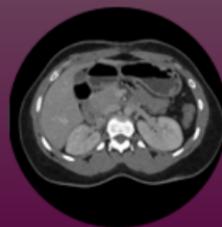
Structure & Context

- Now the student needs to understand the anatomy in context, and prepare for the cadaver lab.
- Product = [Real-time](#)
- Product = [Atlas](#)



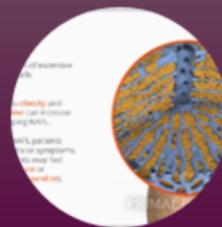
Function

- Once the student understands this in more detail, they may need to understand the microanatomy and function of the anatomy. Here, they can jump back to:
- Product = [Anatomy and Physiology](#)



Imaging

- The ability to apply their anatomical learning to imaging and cross-sectional anatomy is key to their understand of clinical
- Product = [Cross-sectional anatomy of the trunk](#)
- Product = [Atlas](#)



Clinical

- Once the anatomy and physiology has been understood in depth, our disease and conditions movies will help them to understand the pathologies that may affect that anatomy
- Product = [Disease and Conditions](#)

Search, Extract, Embed, Share, Assess, Guide

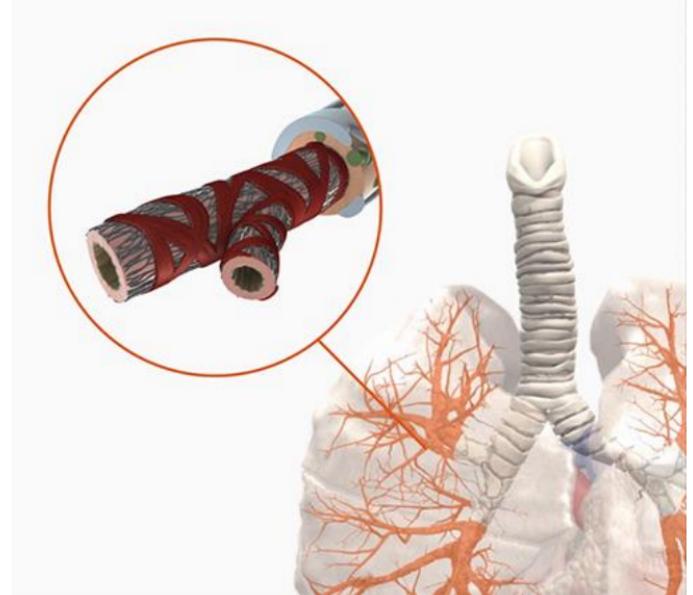
Medical Education Solutions

Essential Solutions for Medical, Nursing and Dentistry Programmes

- 3D Atlas of Human Anatomy
- 3D Real Time Human Anatomy
- Human Anatomy & Physiology
- Human Functional Anatomy
- Human Anatomy for Ultrasound: Upper & Lower
- Cross Sectional Human Anatomy for CT & MRI

Optional Add Ons

- Disease and Conditions
- Perceptual and Adaptive Learning Modules (PALMs)
- Primal VR



3D Atlas of Human Anatomy

Atlas of Human Anatomy is Primal Pictures' premier flagship product - and the only anatomy atlas you will ever need. Covering the entire body with unparalleled detail and accuracy, Primal Pictures' Atlas is the perfect companion for students, educators and healthcare practitioners. With content ranging from normal to abnormal, imaging, movement and comprehensive text for every structure; the Atlas can be used at all levels - from year 1 higher education to reference in a healthcare environment. And with the ability to save out content, share links and even embed in institutional environments this content can be used for all your requirements.

- The most comprehensive and accurate digital gross anatomy resource; with specially curated views covering the entire body, enriched with detailed, peer-reviewed anatomical text for every structure.
- Unparalleled flexibility with options to save, share and embed interactive content in your own presentations and online environments.
- MRI to 3D anatomy comparisons covering the whole body - making Imaging comprehension far more intuitive for students, practitioners and patients.

3D Real Time Human Anatomy

Real-Time is the ultimate 3D interactive anatomy experience. Providing you with complete control of which structures you want to include and at what angle, rotation or level of zoom you view them from. Real-Time combines Primal Pictures' signature accuracy with the flexibility needed to perfectly represent the anatomy you want to demonstrate. Moreover, with a focus on cadaveric dissection and labelling tools, Real-Time is the perfect tool to create custom images, show anatomical relationships and is fantastic as a companion resource when preparing for surgery.

- The most flexible digital anatomy platform available - control the model structure-by-structure and create the exact view you need to learn or educate.
- Interactive dissection images that relate to bespoke 3D models ensures that this is the best tool for students to prepare for cadaver labs or surgery simulation.
- Unique Augmented Reality features allow you to view our digital anatomy in the real World
- A fully comprehensive audio pronunciation guide supports learning and education
- Tools which enable labelling and assessments, bespoke colouring book images, and cadaveric colours further enhance the product for education

Human Anatomy & Physiology

Visualize functions of cells to systems like never before with Anatomy & Physiology. Structured more like a textbook than our other resources, A&P is the ultimate 3D digital education resource. Providing comprehensive foundations in function from gross to microanatomy, explore this 20-topic systemic resource filled with interactive models and animations, as well as case studies, clinical content and quizzing. Suitable across a variety of courses and levels, Primal's 3D Human Anatomy & Physiology is presented in a guided learning format that builds your knowledge and confidence along a structured journey, further supported by narrated animations and a variety of learning objectives and activities.

- A fully comprehensive anatomy & physiology resource which links interactive guided learning text with a vast array of engaging multimedia content.
- Content ranges from static slides, dissection images and photomicrographs to interactive 3D objects and also includes narrated descriptions of concepts, videos and animated visualizations - all crafted to convey a complete understanding of a given topic.
- A host of ancillary content includes; quizzes, case studies, colour and label exercises and many others.
- Tools to share links, extract images & PDFs and embed interactive content make this the most easily shareable digital anatomy resource available - perfect for guided learning or flipped classroom environments.
- Covering extensive range of topics: histology, embryology, regional/systemic anatomy, neuroanatomy, and clinically relevant radiology

Human Functional Anatomy

Primal Pictures' Functional Anatomy brings musculoskeletal (MSK) anatomy to life. It is an engaging tool that helps you expand your MSK and functional movement understanding and truly excel with; interactive animations demonstrating key muscle function movements, comprehensive 3D interactive anatomy views and interactive dissection images. Examine the musculoskeletal system alongside detailed explanatory text to fully understand its form and function. Learn with confidence using our highly detailed and accurate 3D model – peer reviewed and verified by experts.

- Visualize and understand muscle function with interactive, engaging and
- rotatable 3D animations of muscle movement - all built on Primal's best-in
- class anatomical model
- Understand structure and function in-depth - with comprehensive, detailed
- explanatory text
- Use trigger point images and 3D views to identify pain points
- Customize blood supply and innervation (neurovascular in any combination)
- Save and embed both static and animated content in your own environments

Human Anatomy for Ultrasound: Upper & Lower

See ultrasound data sets next to Primal Pictures' world renowned anatomically accurate 3D models. Improve, refine, and refresh your understanding of cross-sectional anatomy and imaging for the lower limb, with interactive labelled Ultrasounds and MR images. With bespoke 3D models specially created to show transducer placement, as well as clinical articles and movies authored by experts, easily translate what you see in practice to the 3D anatomy. Beneficial for anyone wanting to translate 2D imaging concepts into 3D, no medical education is complete without this product.

- Master cross-sectional anatomy of the lower limb with specially curated and interactive Ultrasound and MRI comparisons
- Easily relate Ultrasound and MRI to 3D anatomy
- Relate key conditions and concepts to 3D anatomy with specialist text and integrated clinical images and movies

OPTIONAL ADD ON: Perceptual and Adaptive Learning Modules (PALMs)

PALMs is a standalone, interactive, online adaptive tool that combines research-proven learning techniques with the most medically accurate 3D models of human anatomy available to measurably improve student learning. Primal Pictures has partnered with Insight Learning Technology (ILT), a leading computer-based learning company, to create PALMs. This powerful learning tool, developed using research by renowned academic cognitive psychologists, is powered by patented technology that reinforces comprehension and understanding of the essential anatomy concepts presented in Primal Pictures' 3D best-in-class human anatomy models. Proven to produce better outcomes than traditional learning methods, Anatomy PALMs:

- Optimizes student engagement with a game-like interface
- Serves content based on student's ability and needs
- Provides assessment tools allowing faculty to proactively evaluate groups or individuals
- Combines scientifically proven learning techniques with Primal Pictures' best-in-class content

Human Anatomy for Dentistry

Primal's best-in-class Dentistry solution is perfect regardless of whether you're a student of dentistry looking to excel in your studies, a lecturer looking to empower your students to get the best outcomes or a practicing dentist looking for a high quality reference and/or patient education tool. Based on the renowned 3D interactive model from Primal's 3D Atlas, engage with 3D models of head and neck anatomy and bespoke models with a particular focus on the oral cavity and dentition. Rotate and orientate teeth and injection sites before setting foot in practice; or reinforce your knowledge with clinical articles and examination techniques before a practical, this product has all the content you need for excellence in your career.

- Master head and neck anatomy with specially curated and interactive 3D views based on our best-in-class anatomy Atlas (incl. many unique views such as fully modelled intra-oral injections)
- Relate key dental conditions and concepts to 3D anatomy with comprehensive specialist dentistry text and integrated clinical images
- Visualize and understand muscle function with interactive, rotatable 3D animations of all head and neck muscle movements
- Understand structure and function in depth with detailed anatomical text and save out everything you need with Primal's flexible approach to saving and embedding

Cross Sectional Human Anatomy for CT & MRI

Get the advantage in image analysis with a product like no other with Primal Pictures' 3D Cross-sectional Human Anatomy for CT. Building on from the acclaimed imaging section in Primal Pictures' 3D Atlas of Human Anatomy, discover and compare the details of CT and MRI correlated to stunningly detailed cross-sections from our anatomically accurate 3D model. Travel through several image data sets to view hundreds of cross-sectional slices of real anatomy in relation to 3D models of the thorax, abdomen and pelvis, and strengthen your grasp of sectioned anatomy. Beneficial for anyone wanting to translate 2D imaging concepts into 3D, no training is complete without this product.

- Master cross-sectional anatomy of the trunk with highly detailed and interactive CT and MRI comparisons - only possible due to Primal Pictures' uniquely accurate anatomical model.
- Volumetric data displayed as discrete slices across 3 planes supports a smooth transition between layers and provides a uniquely powerful tool for identifying structures in the imaging data and the extent of those structures throughout the body.
- All digital, CT and MRI images fully labelled to ensure full comprehension of the structures visible in the scans.

OPTIONAL ADD ON: Diseases & Conditions

Diseases & Conditions content is the best way to learn and visualize diseases and conditions that affect the human body. Comprehensively covered and illustrated using Primal's best in class anatomy model, D&C is the perfect way for students to learn about the causes, symptoms and treatments of many commonly taught conditions. D&C also supports a consistent anatomical view when paired with our other reference products, which in turn reduces cognitive load on students and helps them achieve the very best results in their assessments. Using Primal's flexible integration tools this content can be viewed in the platform, in power points or on your LMS - ensuring that your students will be able to view this content in the most applicable environment. Primal's D&C package utilizes our best-in-class anatomy model and adjusts it to provide a unique, engaging and accurate view of how the anatomy changes when impacted by a particular disease or condition. Peer-reviewed written, narrated and visual content communicates:

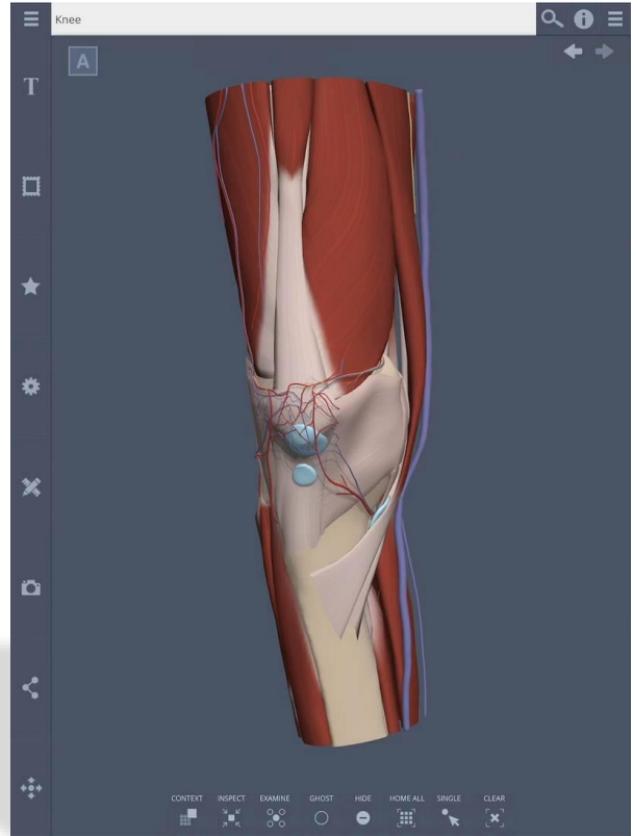
- What a condition is (an overview)
- What the causes are
- What the symptoms are
- What the treatments are

Our approach with this product facilitates, and contributes to, a student centered 'Problem-Based Learning' approach where students are tasked with learning a subject through the experience of solving an open-ended problem found in trigger material

Augmented Reality – Included with Atlas

Enhance & Advance User Experience

- Innovate your anatomy learning environment
- Heighten contextual understanding
- Reimagine and optimize group learning
- Experiment to drive engagement
- Deploy in current mobile environment (no additional equipment needed)



Real-time Functional Anatomy – NEW

Why is RTFA valuable?

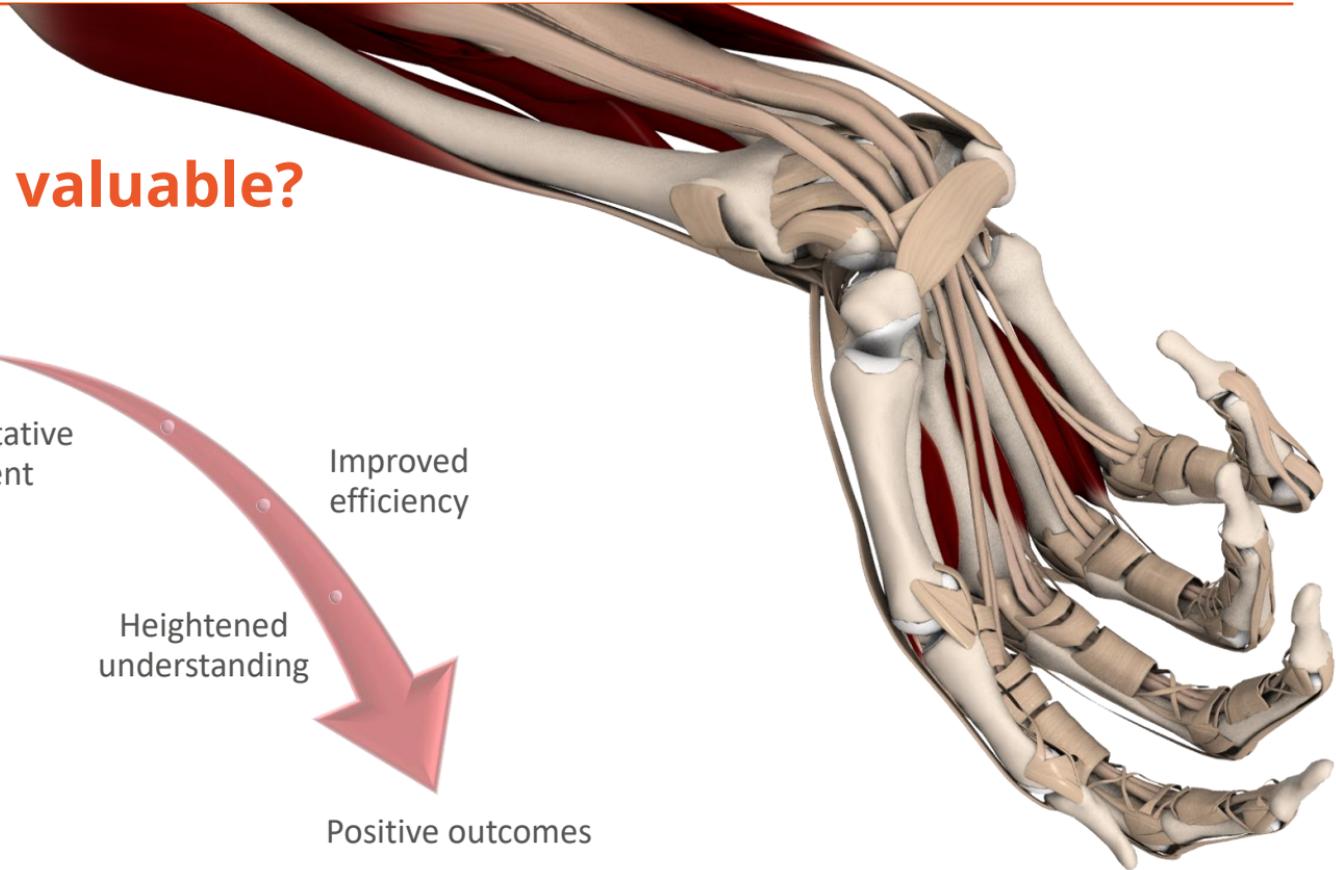
Educational
requirement

Authoritative
content

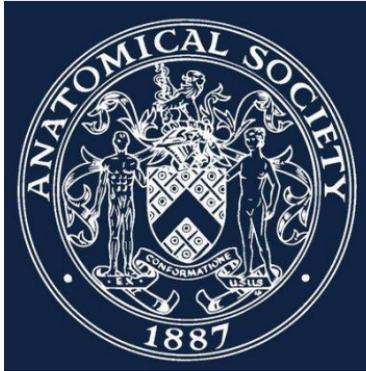
Improved
efficiency

Heightened
understanding

Positive outcomes



Primal's Anatomy Learning Outcomes for Medicine - NEW



Head and neck

Overview

Medical graduates should be able to demonstrate the position of the palpable and imaging landmarks of the major bones of the skull, including the frontal, parietal, temporal, occipital, maxilla, mandible, nasal, sphenoid, zygoma and ethmoid bones. Demonstrate the palpable position of the hyoid bone, thyroid and cricoid cartilages, lateral mass of the atlas and the spine of C7. Demonstrate the major sutural joints of the skull and describe the fontanelles of the neonatal skull.

- Describe the boundaries, walls and floors of the cranial fossae.
- Describe the relationships between the structures of the brain and the anterior, middle and posterior cranial fossae.
- Identify the major foramina of the skull, both internally and externally, and list the structure(s) that each transmits.
- Describe the arrangement of the pia, arachnoid and dura mater within the cranial cavity and in relation to the brain. Describe the reflections of the dura mater and the formation of the venous sinuses.
- Describe the anatomy of the dural venous sinuses. Explain the entrance of cerebral veins into the superior sagittal sinus in relation to subdural haemorrhage. Explain how connections between sinuses and extracranial veins may permit intracranial infection.
- Describe the anatomy of the individual layers of the scalp. Describe the significance of its blood supply, particularly in relation to laceration injuries.
- Describe the main muscles of the face and summarise their nerve supply and the consequences of injury to their nerve supply.
- Describe the anatomy of the eyelid, conjunctiva and lacrimal gland. Explain their importance for the maintenance of corneal integrity.
- Describe the boundaries of the orbit, the globe of the eye and the location, actions and nerve supply of the intrinsic and extraocular muscles. Explain the consequences of injury to their nerve supply.
- Describe the bones of the nasal cavity, in particular the major features of the lateral wall of the nasal cavity. Describe the arteries that supply the lateral wall and nasal septum in relation to epistaxis.
- Name the paranasal sinuses. Describe their relationship to the nasal cavity and their sites of drainage through its lateral wall. Explain their innervation in relation to referred pain.
- Describe the intracranial and intrapetrous course of the facial nerve and the relationships of its major branches to the middle ear in relation to damage of the nerve within the facial canal.
- Describe the anatomy of the temporomandibular joint. Explain the movements that occur during mastication and describe the muscles involved and their innervation.
- Describe the course and major branches of the maxillary artery, including the course and intracranial relations of the middle meningeal artery and its significance in extradural haemorrhage.
- Describe the anatomy of the sensory and motor components of the trigeminal nerve, including how their integrity is tested clinically.

Search for anything...

Course content Browse Index Results Lists

Head Upper Limb Thorax **Abdomen** Pelvis Lower Limb Contributors

105 Describe the duodenum, its parts, position, secondary retroperitoneal attachment, vascular, lymphatic and nerve supply and key relations to other abdominal organs.

Previous Next

1000 (0) 0:00 Watch supply to the duodenum 1000 (0) 0:00 Watch supply to the duodenum

Transcript: [Download transcript](#)

Firstly, on the screen in front of you, what you can see is we've...

Next videos:

- 1000 (0) 0:00 Watch supply to the duodenum
- 1000 (0) 0:00 Watch supply to the duodenum

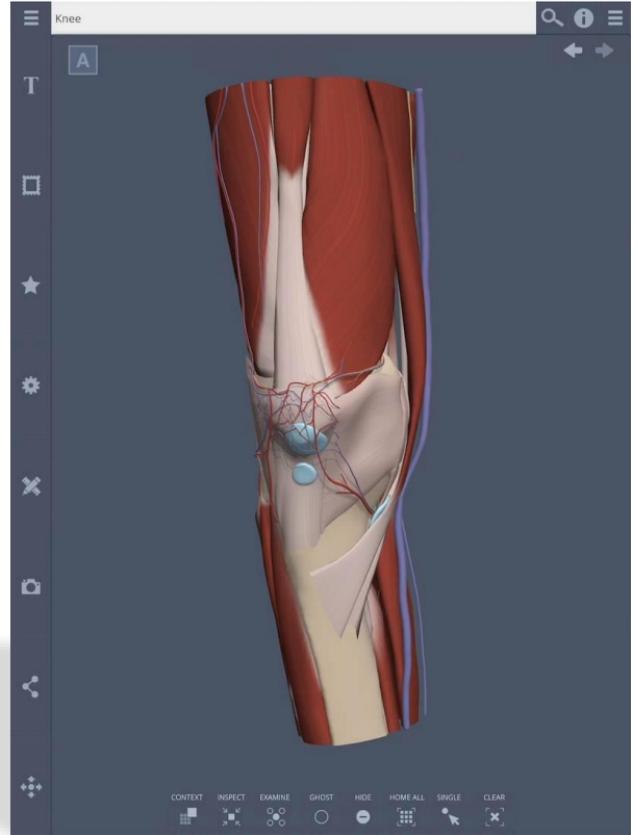
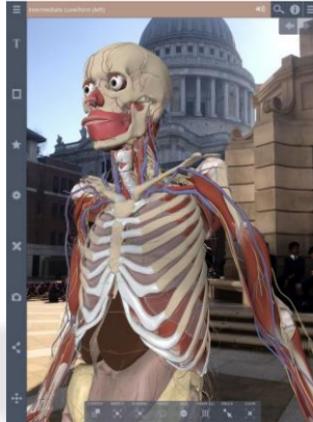
Key points

- The duodenum is part of the digestive tract and helps with the digestion of food.
- There are four parts of the duodenum: **superior, descending, inferior, ascending**.
- The superior part is **intraperitoneal** and attached to the liver by the **hepatoduodenal ligament**.
- The descending, inferior and ascending parts are **retroperitoneal**, arising after the attachment of the hepatoduodenal ligament.
- The duodenum receives enzymes from the pancreas and bile salts from the liver via the **hepatopancreatic ampulla**.

Augmented Reality

Enhance & Advance User Experience

- Innovate your anatomy learning environment
- Heighten contextual understanding
- Reimagine and optimize group learning
- Experiment to drive engagement
- Deploy in current mobile environment (no additional equipment needed)



Embeddable Viewer

Heighten Engagement and Increase Positive Outcomes

- Embed interactive anatomy content in context with proprietary resources (LMS or webpage)
- Create a dynamic user environment using embedded content
- Engage users for heightened impact
- Track interactive usage within user environment

Embeddable Viewer demo

THE EAR: AUDITORY APPARATUS

The ears are the organs responsible for our ability to hear and maintain balance. Hearing is an important special sense as it allows us to communicate and perceive sounds and speech. In terms of function, the ear can be split into two systems: the auditory and vestibular systems.

The auditory system is responsible for audition (hearing) and begins as soon as sound waves enter the ear. The auditory system is composed of the external, middle, and inner ear.

EXTERNAL EAR

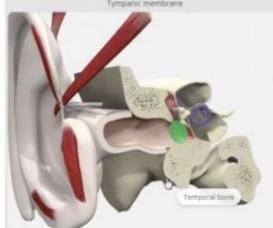
The external ear is made up of the auricle (or pinna) and the external acoustic meatus (or auditory canal). The auricle is the visible part of the ear that sits on the side of the head and directs sound into the external acoustic meatus. The external auditory meatus is an S-shaped canal that directs sound onto the tympanic membrane.

INNER EAR

The inner ear contains the sensory structures for both hearing and balance. It consists of a network of bony canals contained deep within the temporal bone. The parts of the bony labyrinth are the cochlea and the semicircular canals, which are connected together by a centrally-placed vestibule. Only the cochlea is involved with hearing.

EXTERNAL EAR
Interactive — rotate and select to identify structures

ANATOMY.TV
External, middle, and inner ear

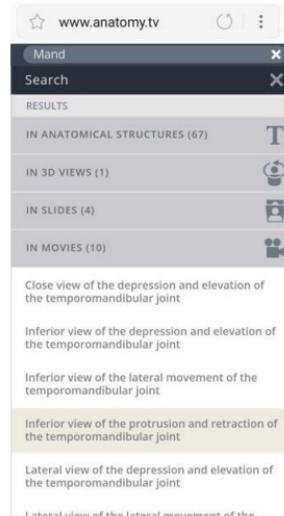
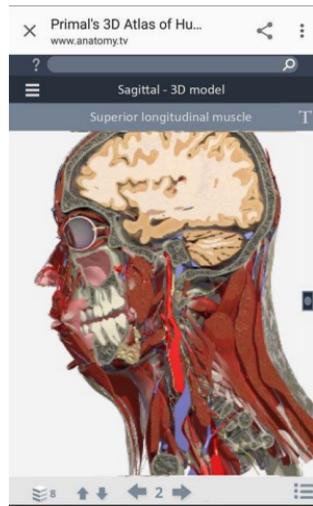
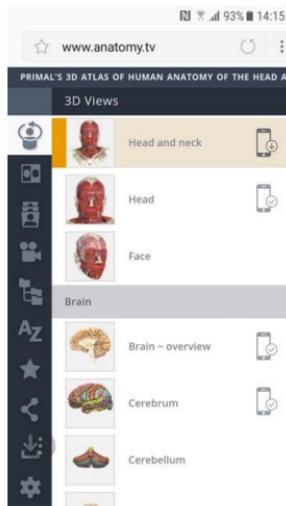


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POWERED BY PRIMAL PICTURES

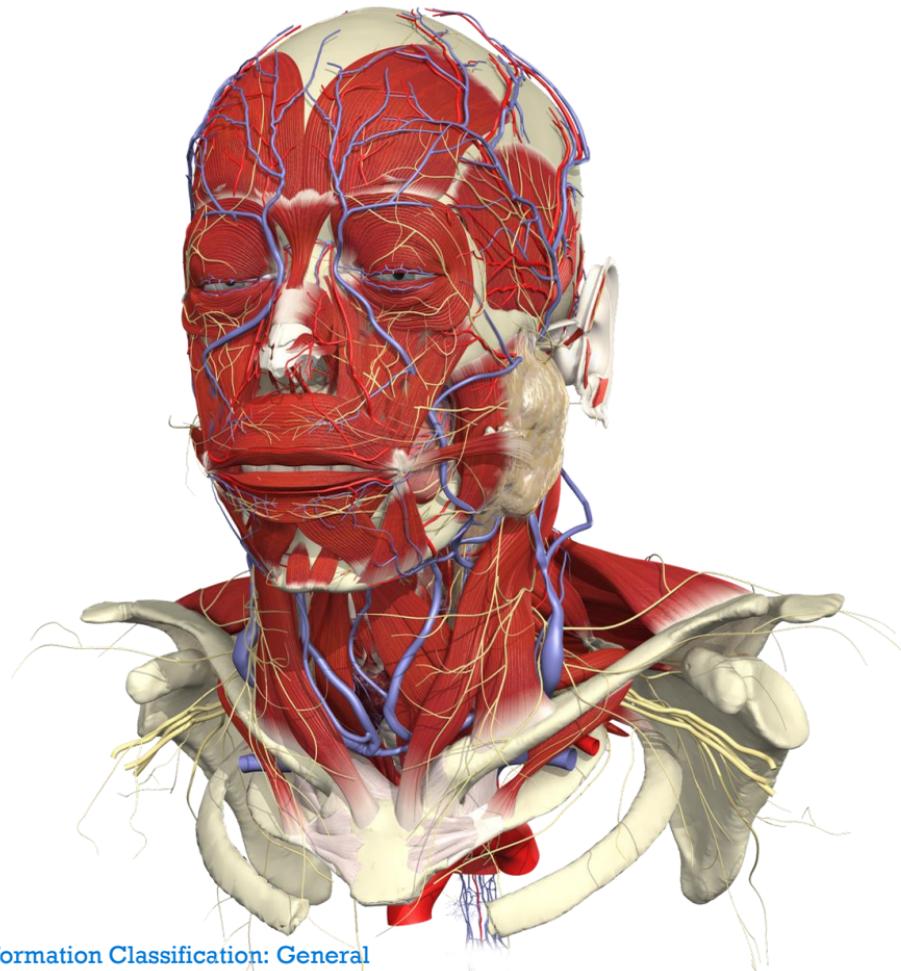
Mobile Compatibility & Apps

- Mobile Compatibility of 3D Atlas
- Friendly interface to facilitate study, reference and blended learning
- Available Now as part of your subscription
- 3D Real Time App – Available on the Apple and Google Store as part of your subscription



Packages Comparisons

MODULE	MEDICAL EDUCATION SOLUTION	PREMIER PACKAGE 2022	3D HUMAN ANATOMY, FUNCTIONAL & PHYSIOLOGY PACKAGE	3D HUMAN ANATOMY PACKAGE 2022
Primal's 3D Atlas	✓	✓	✓	✓
Primal's 3D Real-Time	✓	✓	✓	✓
Human Anatomy & Physiology	✓	✓	✓	
Disease & Conditions	✓	✓		
Primal's 3D Real-Time Functional Anatomy (Full Release in H2)		✓		
Primal's VR				
Primal's 3D Cross-sectional Human Anatomy for CT and MRI: Thorax, Abdomen and Pelvis	✓	✓		
Primal's 3D Human Anatomy for Dental Hygiene		✓		
Primals 3D Real-Time Dentistry		✓		
Primals 3D Functional Anatomy		✓	✓	✓
Primal's 3D Human Anatomy for Resistance Training		✓		
Primal's 3D Human Anatomy & Physiology for Audiology		✓		
Primal's 3D Human Anatomy for Speech Language Pathology		✓		
Primal's 3D Human Anatomy for Ultrasound: Upper Limb	✓	✓		
Primal's 3D Human Anatomy for Ultrasound: Lower Limb	✓	✓		
PALMs Anatomy Learning and Assessment Modules (partnership with Insight Technologies)		✓		
Primal's 3D Human Anatomy for Head and Neck: Basic Neuroanatomy		✓		
Primal's 3D Human Anatomy for Dentistry		✓		
Primal's 3D Human Anatomy for Exercise		✓		
Primal's 3D Human Anatomy for Dental Hygiene		✓		
Primal's 3D Human Anatomy for Otolaryngology		✓		
Primal's 3D Human Anatomy Trains		✓		
Primal's 3D Human Anatomy for Yoga		✓		
Primal's 3D Human Anatomy for Massage and Manual Therapies		✓		
Primal's 3D Human Anatomy for Pilates		✓		
Primal's 3D Human Anatomy for Chiropractic		✓		
Primal's 3D Human Anatomy for Pelvic Floor Disorders		✓		
Primal's 3D Human Anatomy for Urology		✓		
Primal's Medical Learning Outcomes (release in H2)	✓	✓		



THANK YOU

For more information on anything related to Primal – please contact Semih Bakar

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raymond.ta@informa.com
semih@libedge.com
