

## **PRIMAL PICTURES**

The World's best digital human anatomy & physiology content for education

### Who is Primal?

- 30+ years of experience
- Only model built from the ground up, using real scan data
- Supporting over 1,500 institutions globally
- Used in Practice & Healthcare environments across the World (including the NHS and US Veterans Administration)
- Enable commercial organisations to communicate internally and externally more credibly and drive differentiation
- Our users dictate our strategy!



# **The Primal Approach**

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

Justin Miller – Professor – Carthage College, Wisconsin

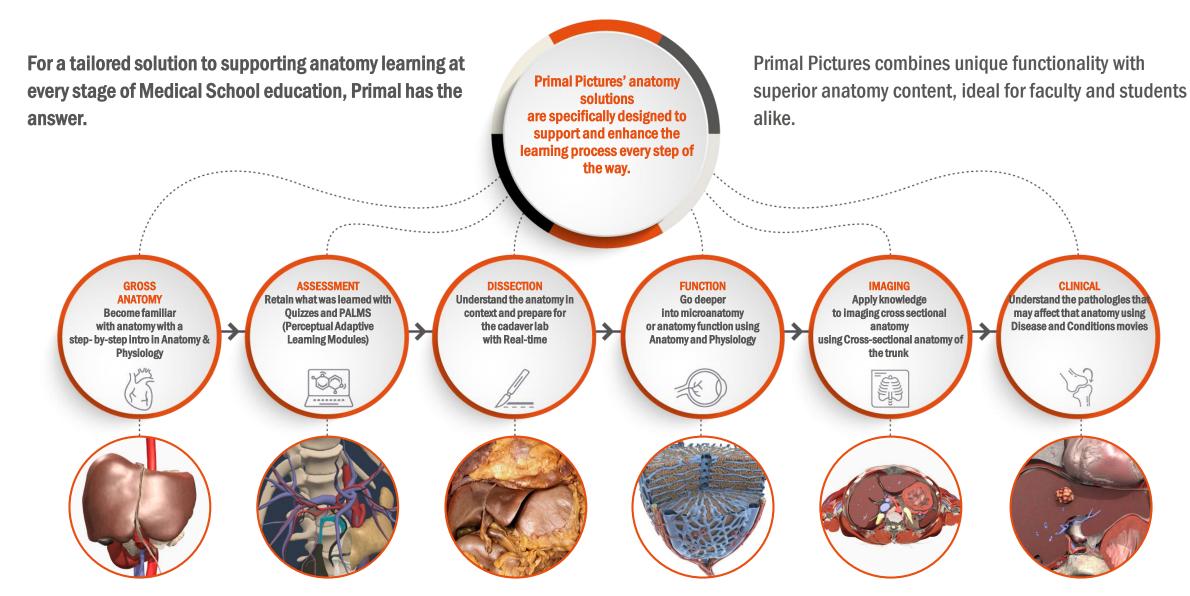
Enable Faculty

**Empower Students** 

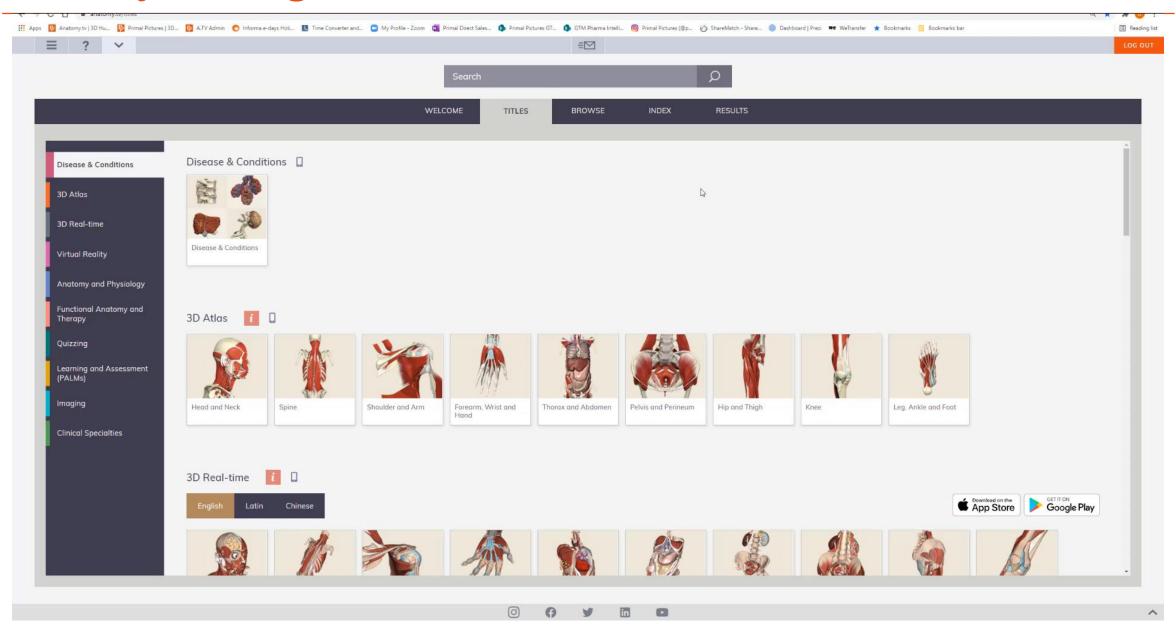
Diverse Learning Opportunities

Accessibility

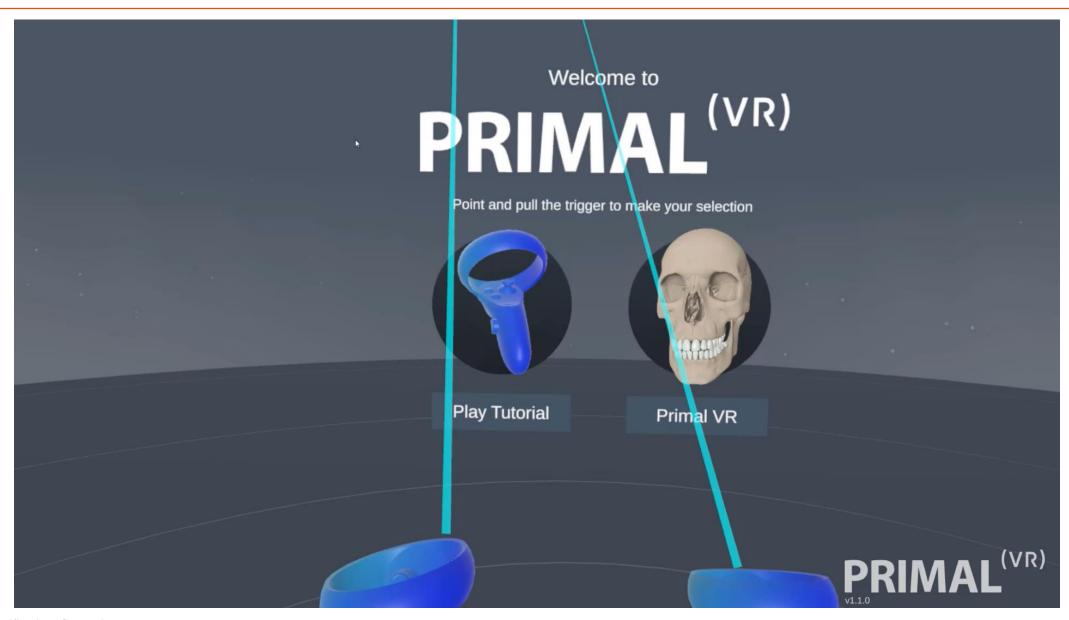
# Tailored solutions for superior learning



# **Flexibility and Integration**



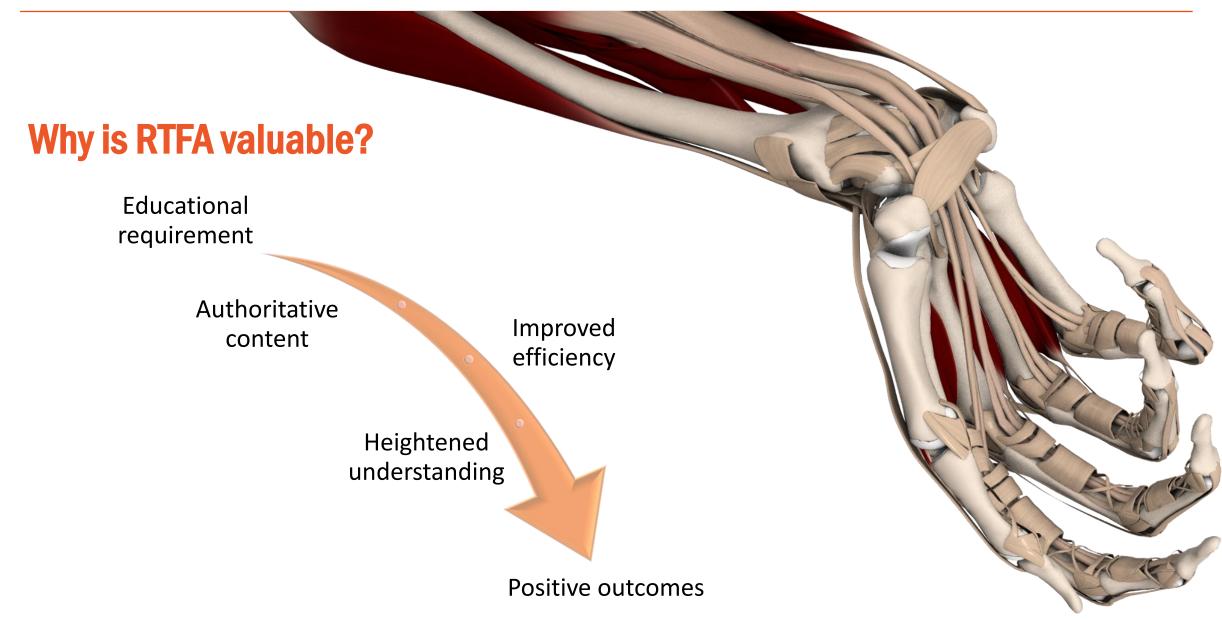
### **Primal VR**



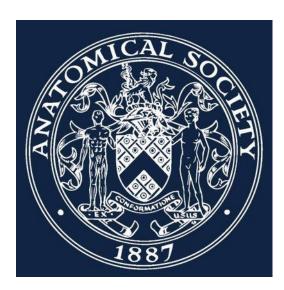
# **Real-time Functional Anatomy**



# **Real-time Functional Anatomy**



## **Primal's Anatomy Learning Outcomes for Medicine**





### 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.

- 6. 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.
- 8. 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.
- 10. 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.
- 11. 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.
- 14. 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.
- 15. 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.
- 16. 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.
- 17. 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
- 18. Describe the anatomy of the temporomandibular joint. Explain the movements that occur during mastication and describe the muscles involved and their innervation.
- 19. 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.
- 20. Describe the anatomy of the sensory and motor components of the trigeminal nerve, including how their integrity is tested clinically.

