A Virtual 3-Dimensional Tour of the Human Skull

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Introduction

• Advance in computer graphics modeling has permitted the development of increasingly immersive learning environments and models.

• This is particularly valuable for understanding the complex microsurgical anatomy present within the human skull and when navigating cranial bony anatomy and neurovascular structures during tumor surgery.

• Combining literature, cadaveric, and radiographic data, these virtual models provide an unparalleled learning environment for skull/brain anatomy.
Methods

• Each model was computationally constructed using meticulous collaboration between neurosurgeons and 3D graphic artists.

• The immersive detail was achieved by comparing the models with cadaveric microdissections for accuracy and image quality achieved using advanced computational modeling.

• Slide titles link to interactive 3D models.
External Skull
Osteological Anatomy
Ethmoid Bone
Sphenoid Bone
Temporal Bone