Cranial Patterns Decoded

Michal Niedzielski, PT, PRC

Goals

- To provide participants a widened view on the information given.
- To deconstruct the current mind's opinion, and allow for a new perception without the effect of siloed insularity. Since the siloed perceptual effect is prevalent in today's treatment philosophy, it may be challenging to see that this is all one unified field.

Goals

- These concepts below, regarding body structure, allow for an altered flow of valuable information, and a coherent understanding of bodily function.
- When the importance of these concepts is understood, you can appreciate how horizontal integration of physiological systems, each with its own complex structure and mechanisms of regulation, leads to global behavior and distinct physiologic functions at the organism level.

Why is this a functional container?

Clay is formed into a vessel.
It is because of its emptiness
that the vessel is useful.

-Lao-tzu

What Shapes Us?

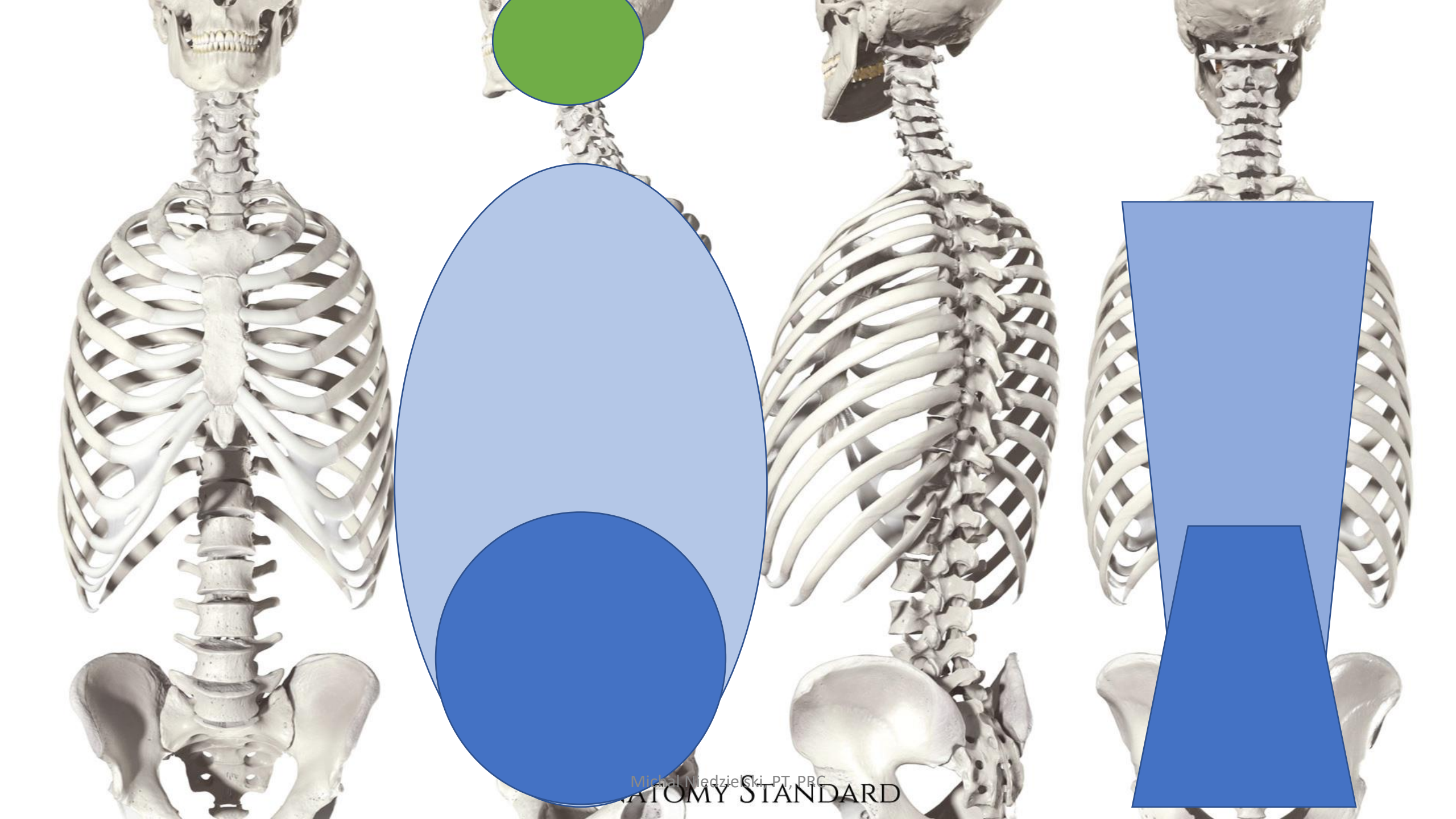
- Gravity together with atmospheric and hydrostatic pressures and fluctuating air and fluid flow.
- Every second of our life, we’re constantly “lifting weight”, being filled up or deflated by gas or fluid, this constant change evokes movement.
- The body constantly adapts to the environment.
- Only here on our planet we’re Earthling's, leaving the planet will make us Aliens, we may look completely different, or come back with a different function.

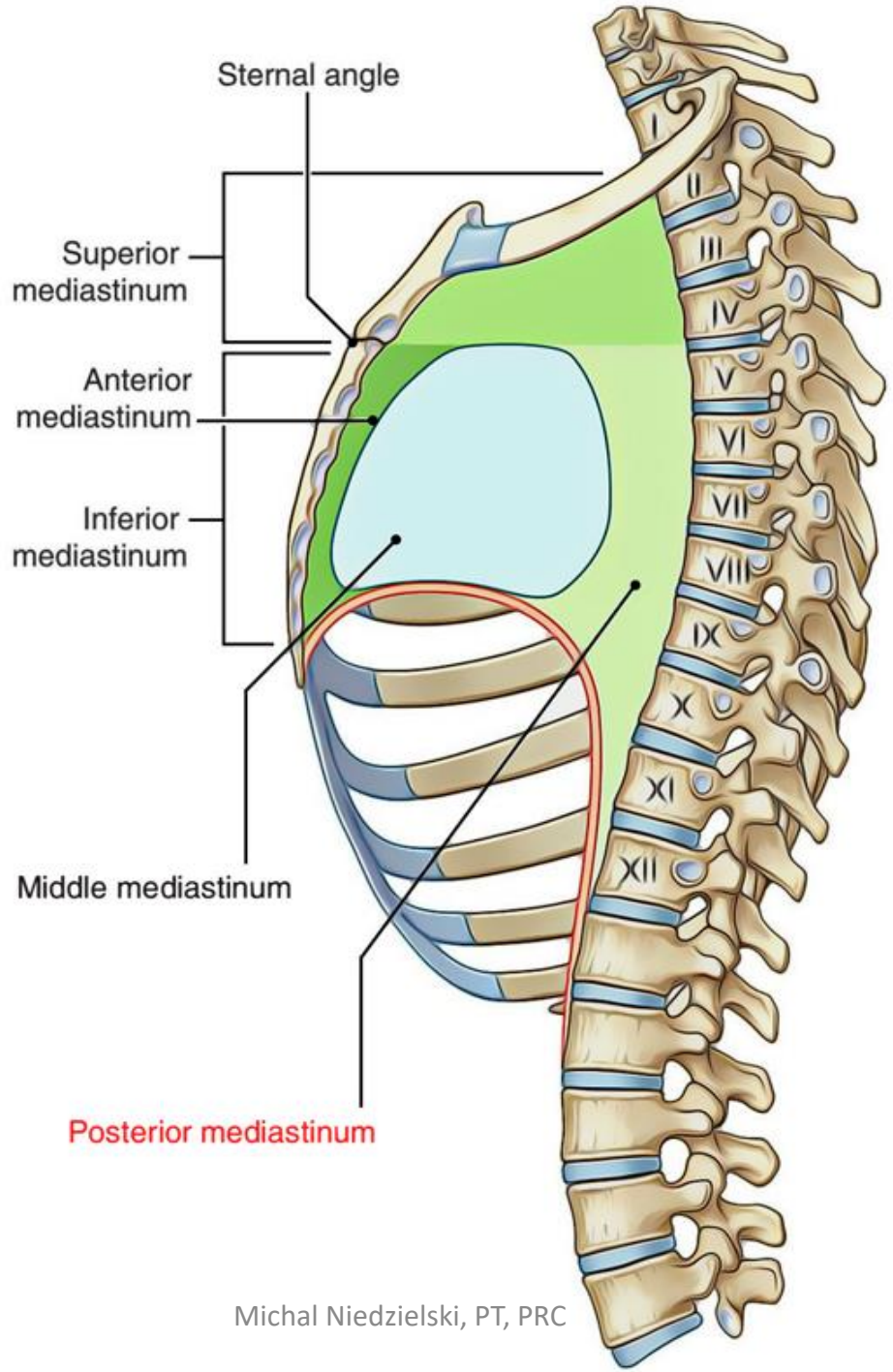
How do jellyfish sense gravity?

- When jellies turn, the crystals roll down with gravity to the bottom of the pocket, moving the cell hairs, which in turn send signals to neurons. In this way, jellies are able to sense up and down. All they need is gravity. **Humans, of course, are similarly sensitive.**

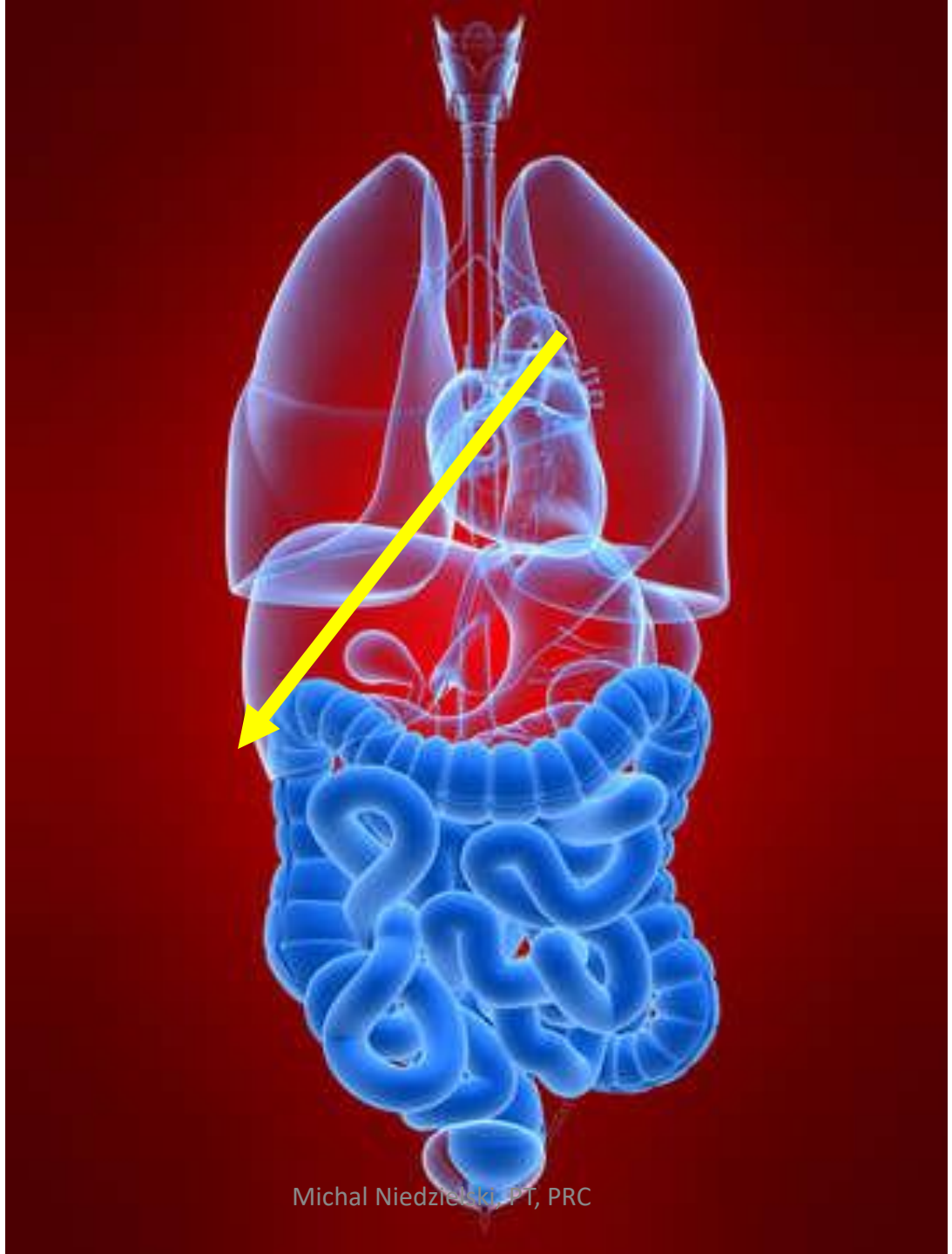
Oct 17, 2013 The Atlantic, by Megan Garber

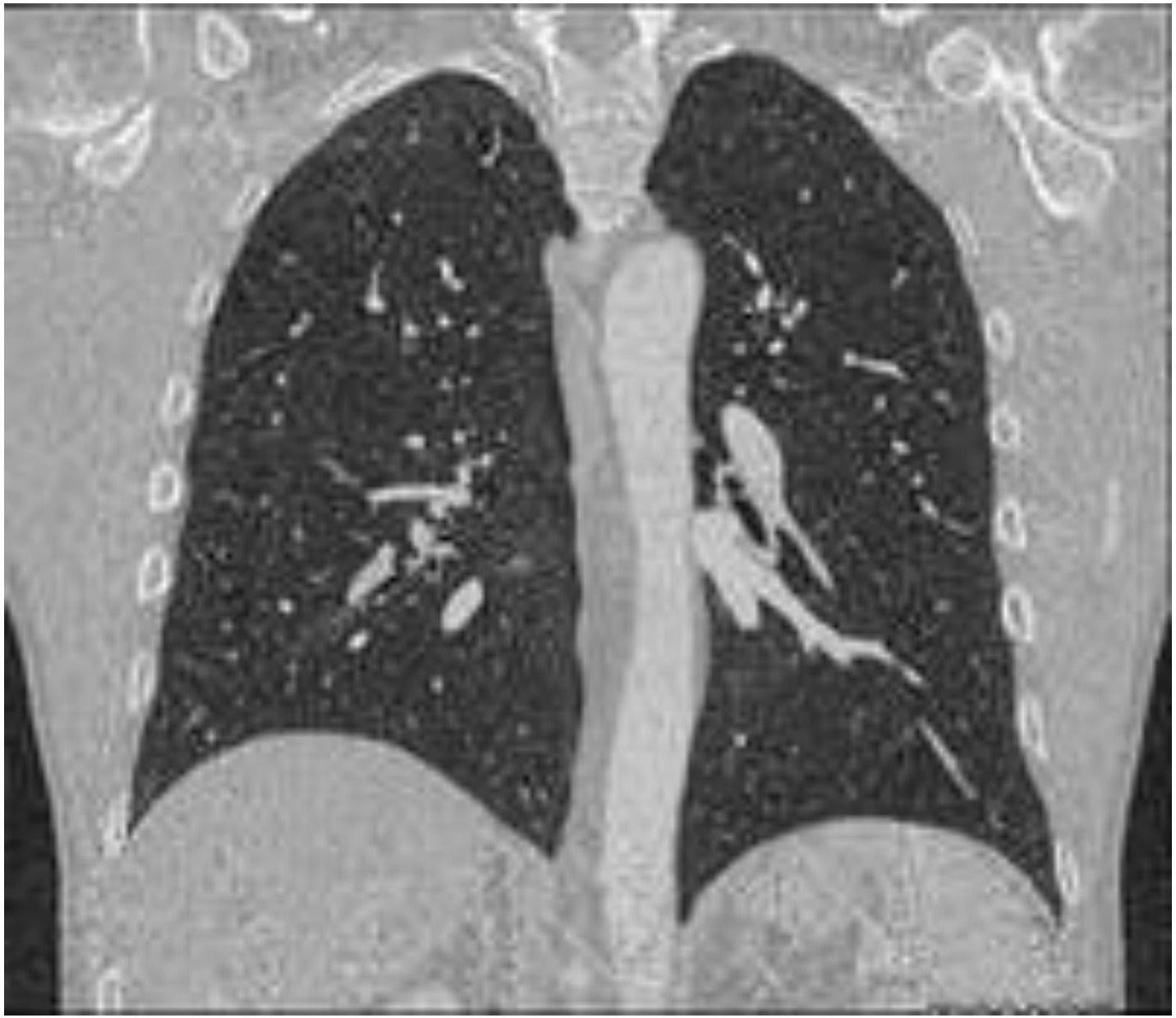
- Jellyfish simulate human ears in microgravity but can't adjust to Earth gravity after a life in space.

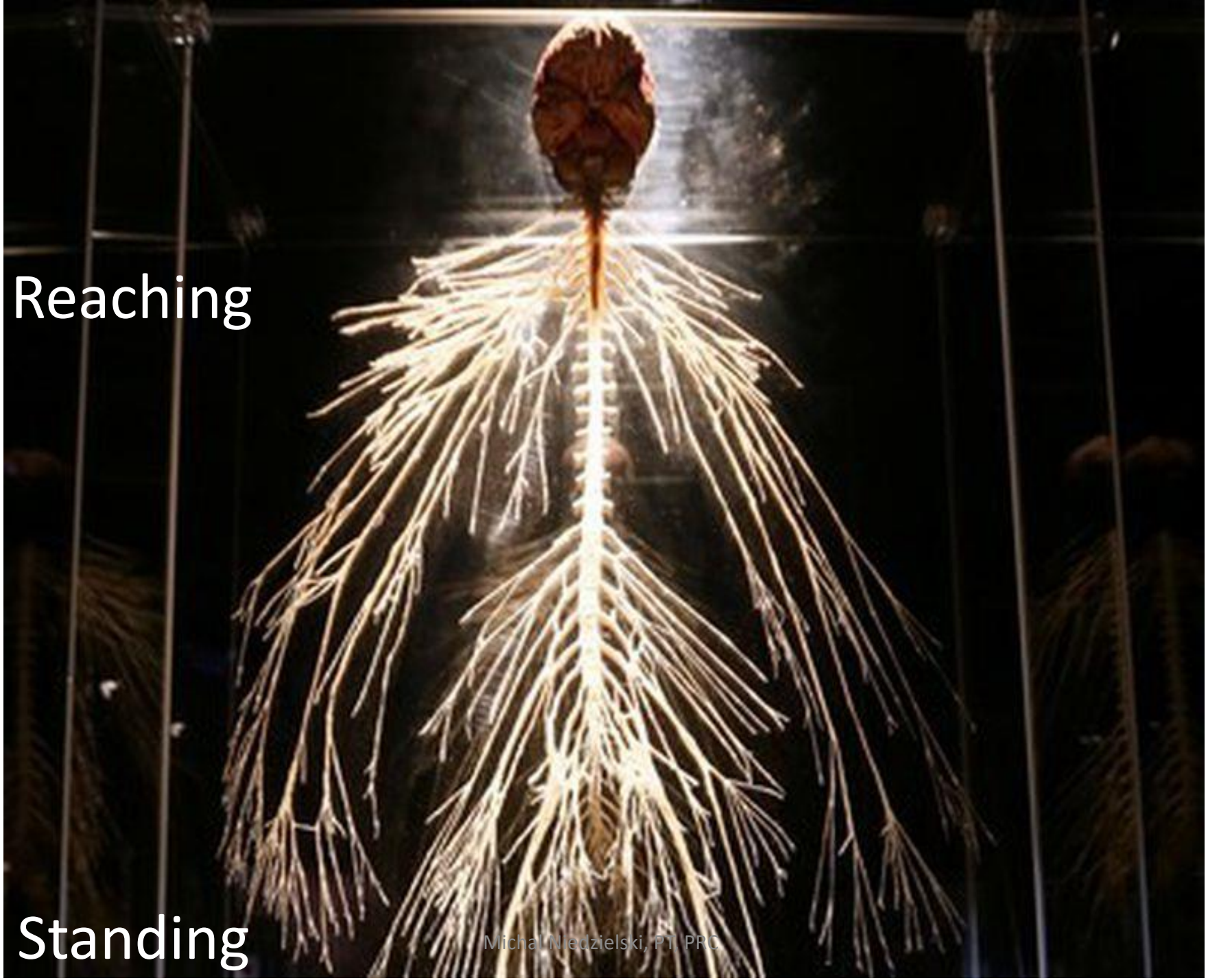

Michal Niedzielski, PT, PRC
ATOMY STANDARD

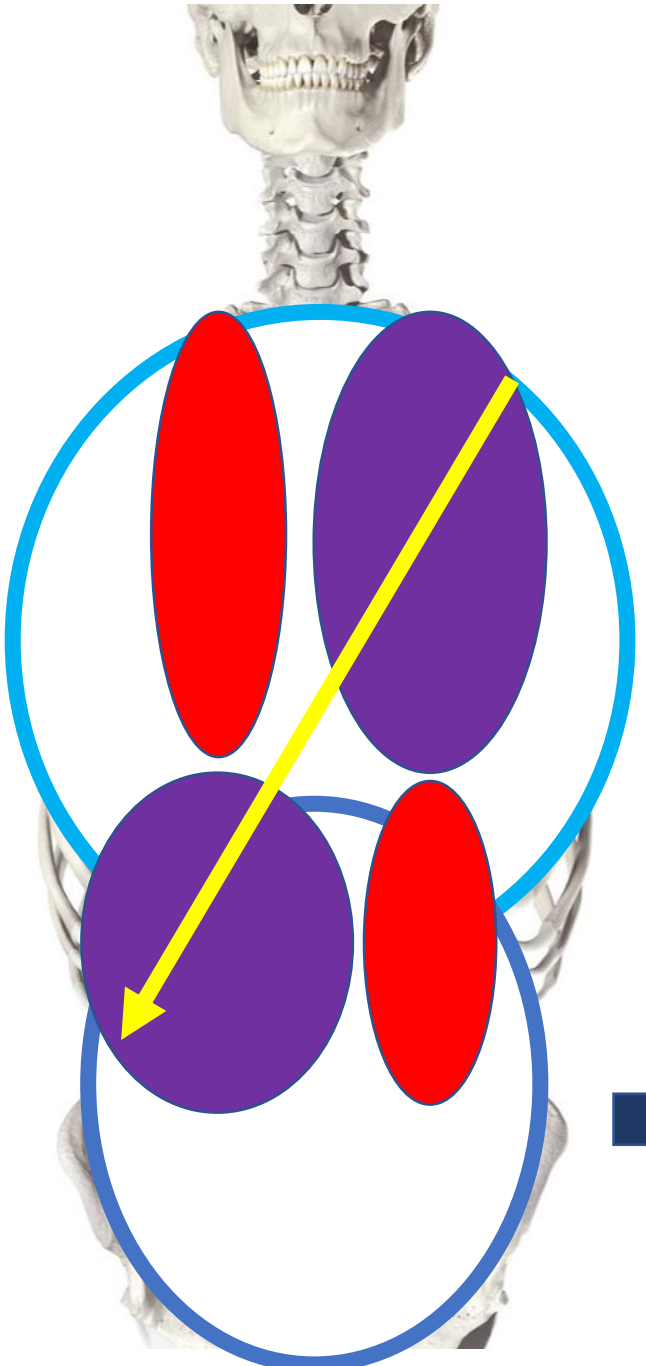

Sternal angle
Superior mediastinum
Anterior mediastinum
Inferior mediastinum
Middle mediastinum
Posterior mediastinum
I
II
III
IV
V
VI
VII
VIII
IX
X
XI
XII

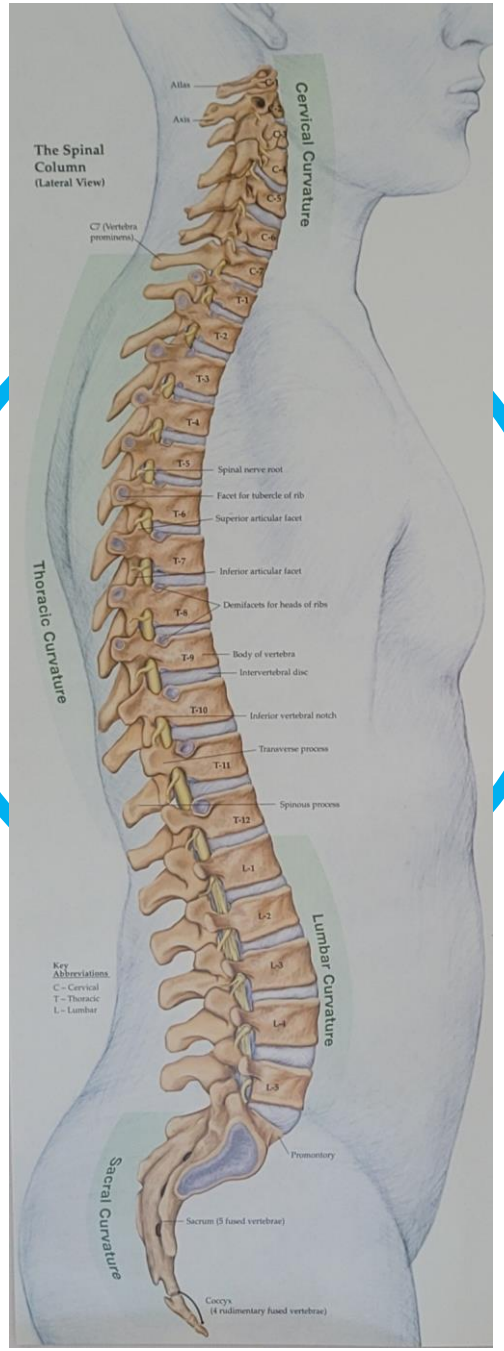
We Are Asymmetrical

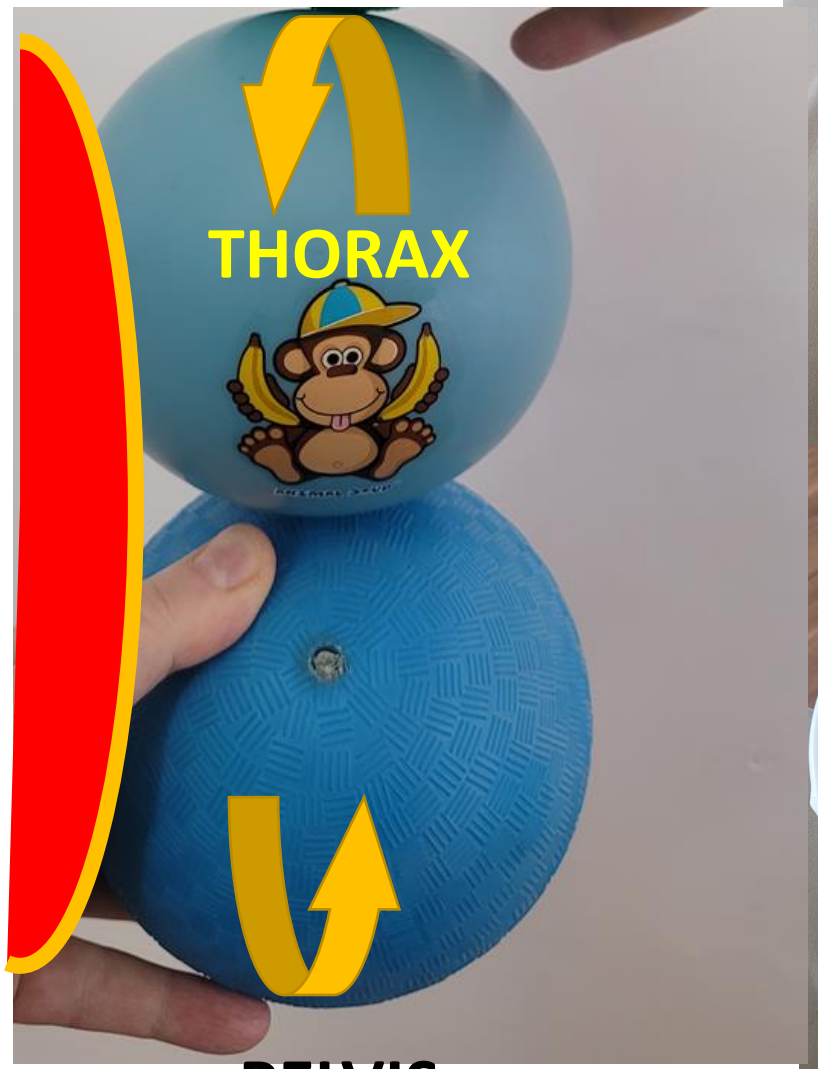

Michal Niedzielski, PT, PRC










THORAX
PELVIS


Mediastinum
Mediastinum

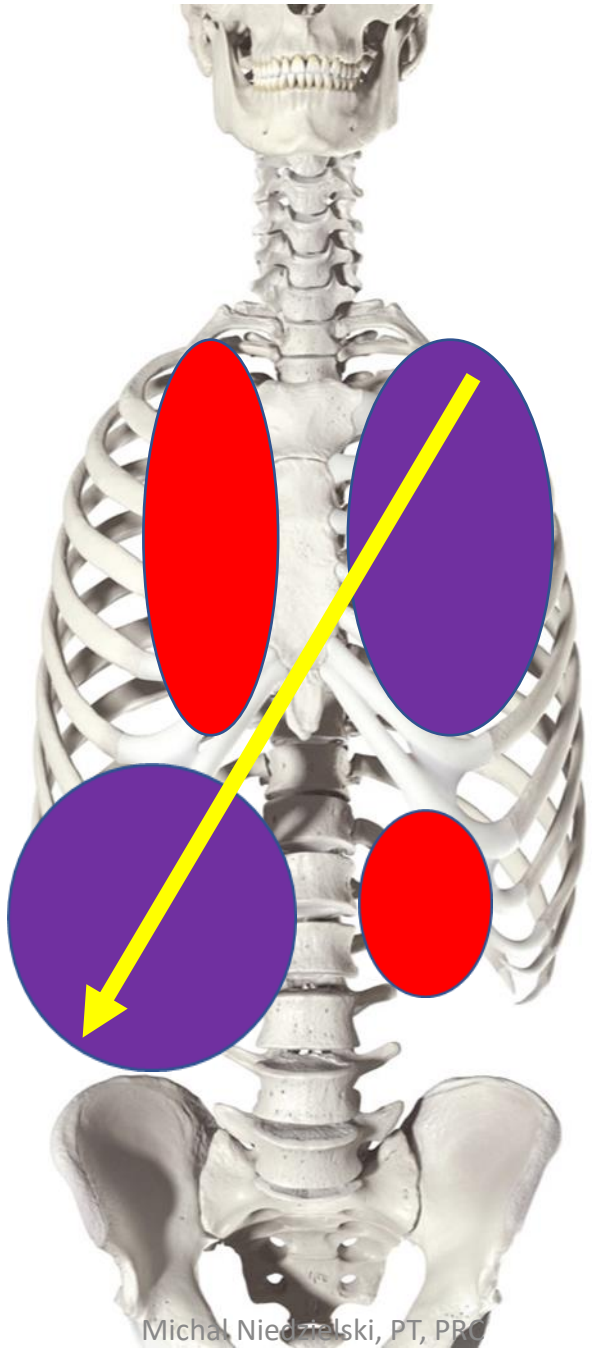

THORAX
PELVIS

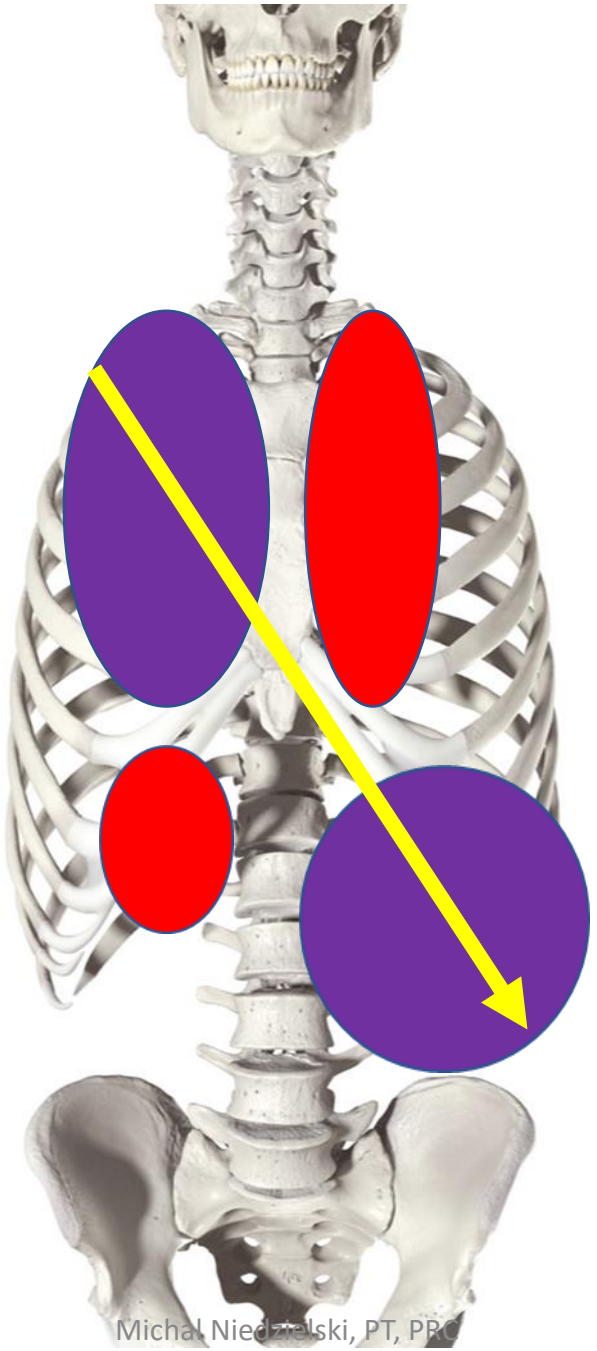
Solution

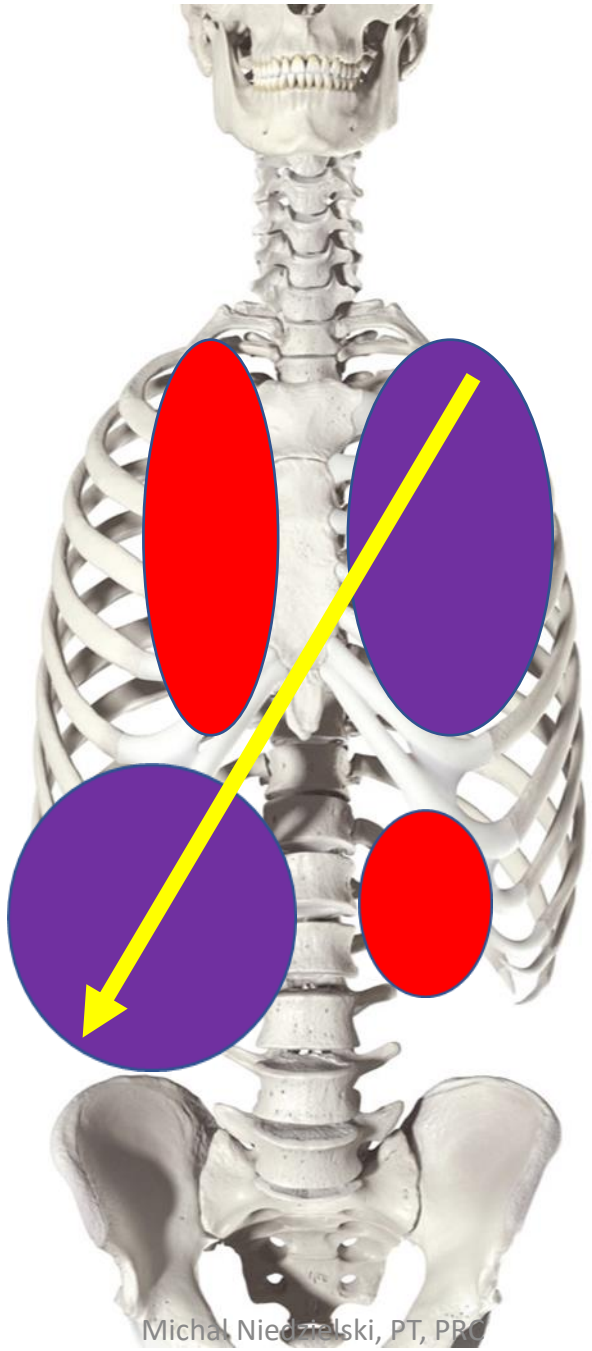
Fluctuating *Air* and *Liquid* Flow for Reciprocal Alternate Movement

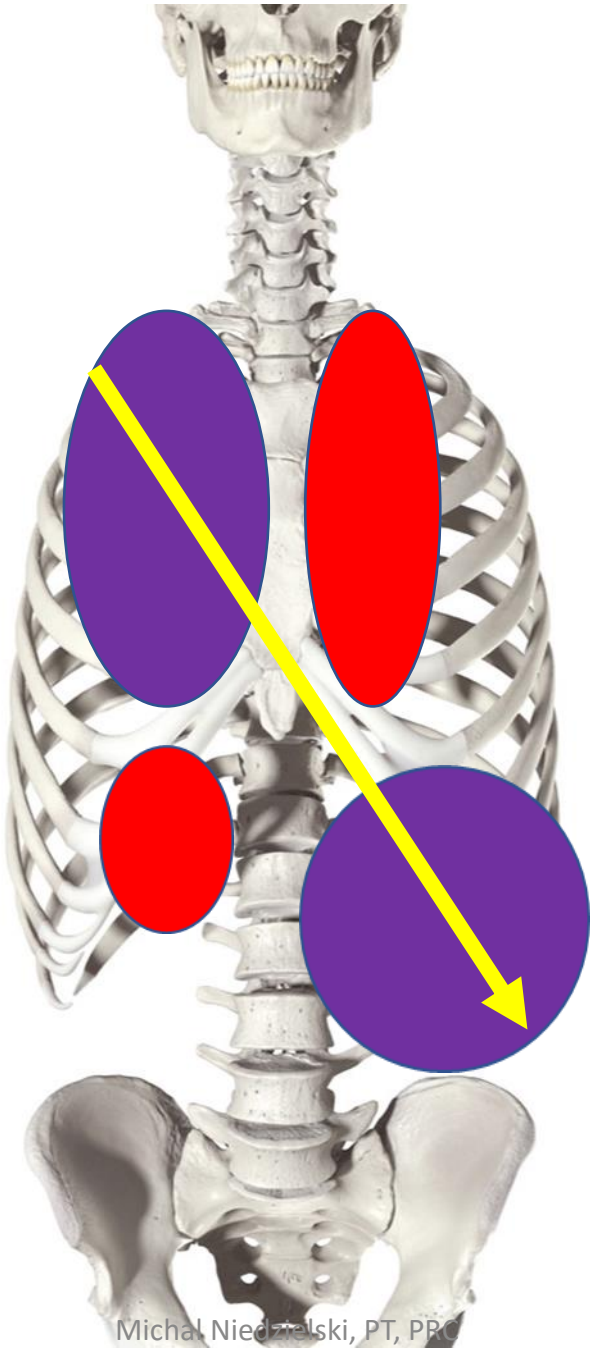
Michal Niedzielski, PT, PRC

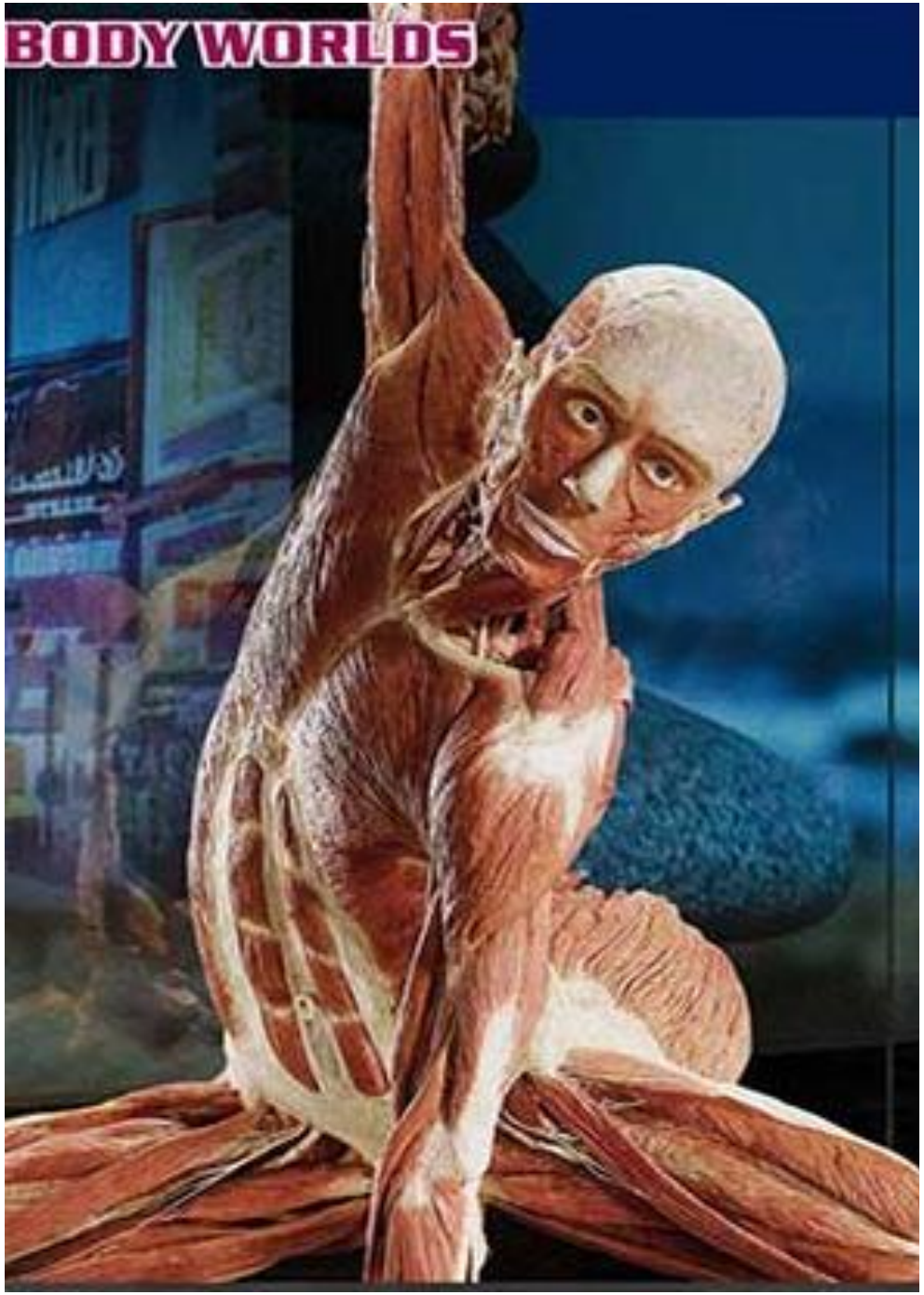
What Propels Us?







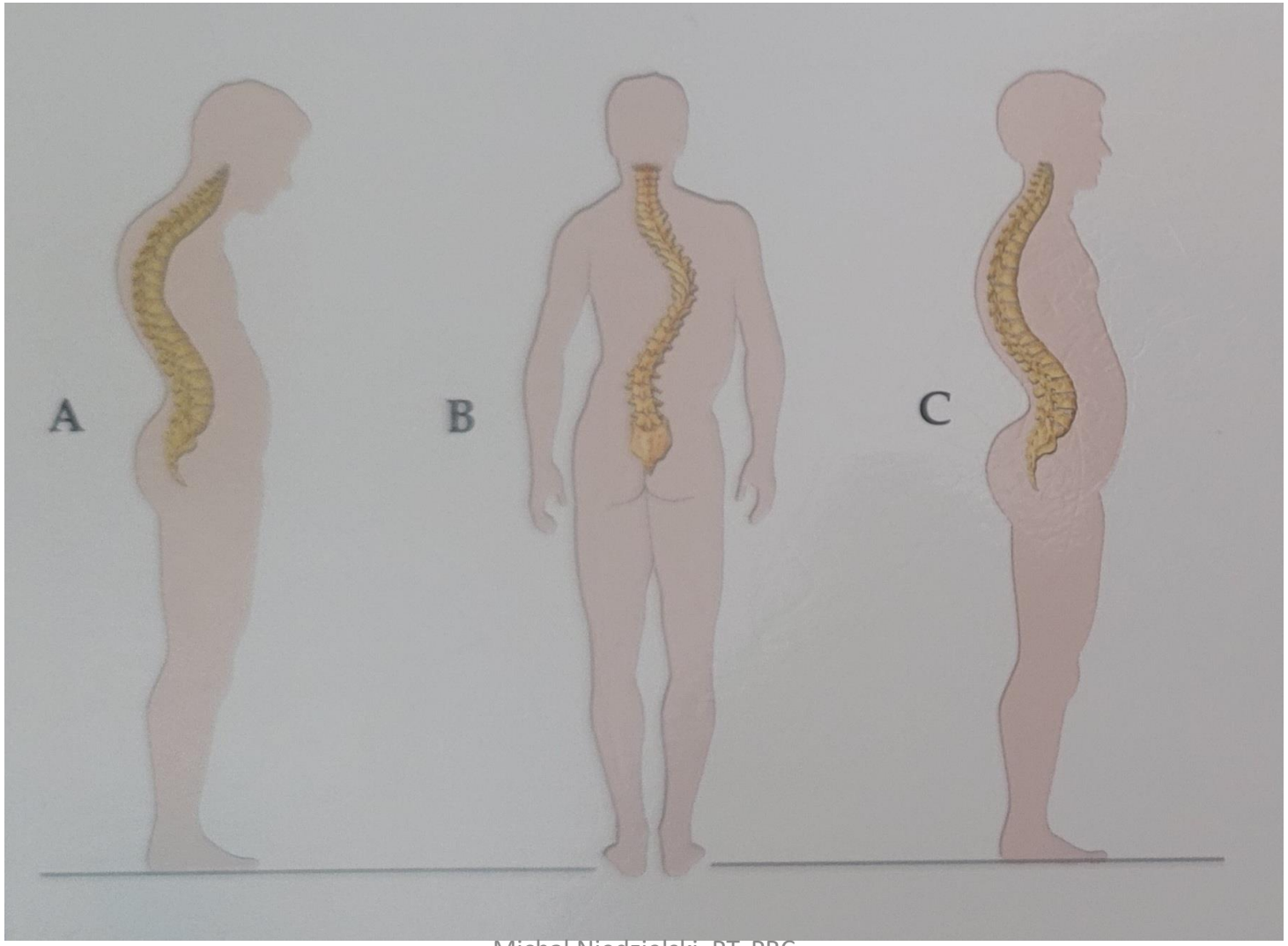


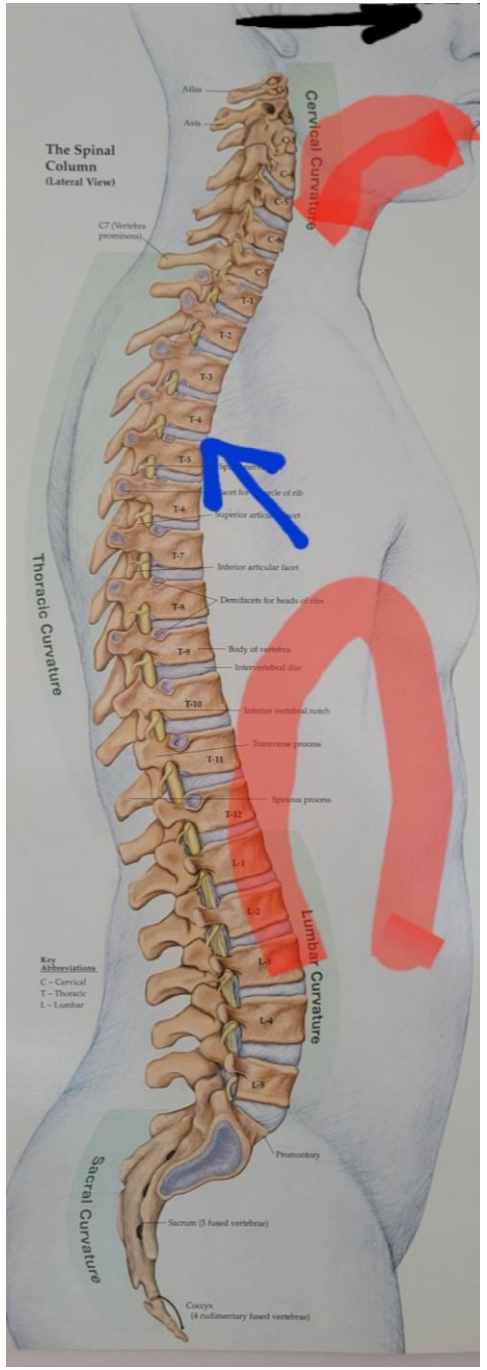


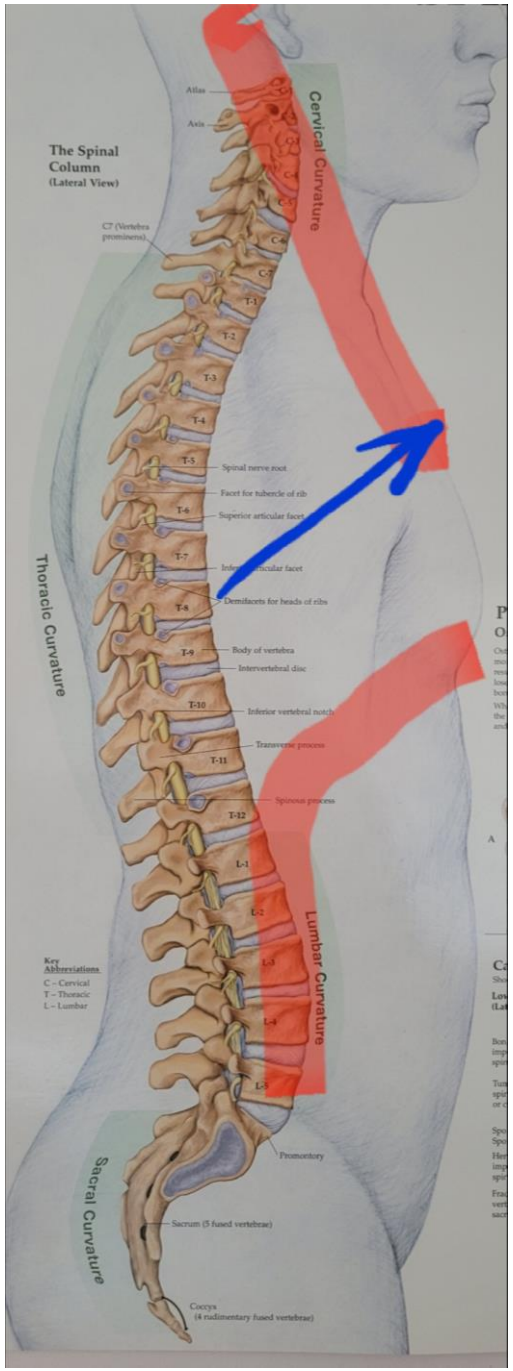
Michal Niedzielski, PT, PRC

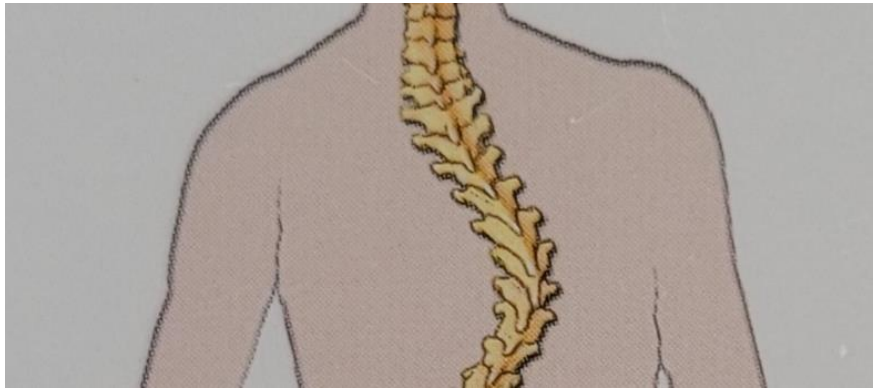

Michal Niedzielski, PT, PRC

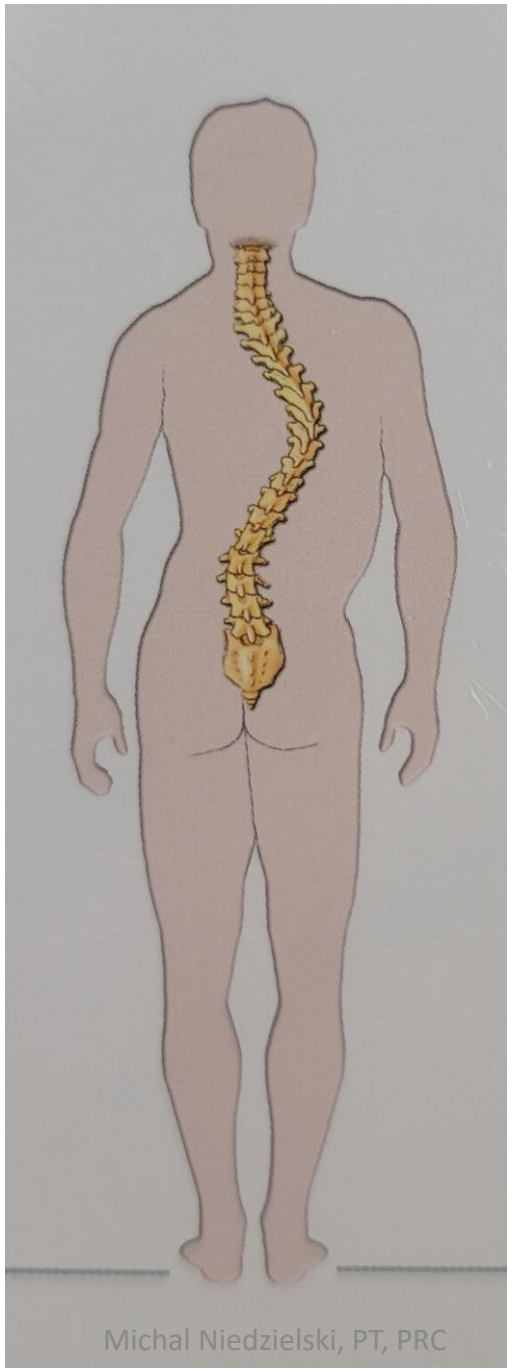
What Caused Those Changes?

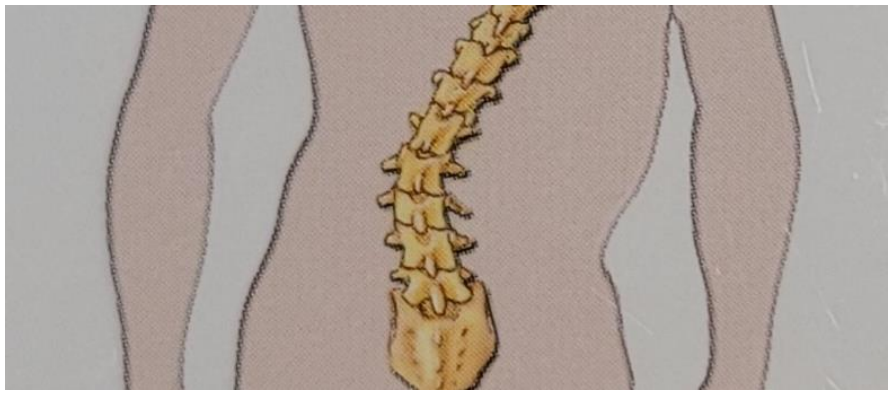



The Spinal Column
(Lateral View)
Atlas
Axis
C7 (Vertebra prominens)
T-1
T-2
T-3
T-4
T-5
T-6
T-7
T-8
T-9
T-10
T-11
T-12
L-1
L-2
L-3
L-4
L-5
Inferior articular facet
Demifacets for heads of ribs
Body of vertebra
Intervertebral disc
Inferior vertebral notch
Transverse process
Spinous process
Promontory
Sacrum (5 fused vertebrae)
Coccyx
(4 rudimentary fused vertebrae)
Key Abbreviations
C – Cervical
T – Thoracic
L – Lumbar
Cervical Curvature
Thoracic Curvature
Lumbar Curvature
Sacral Curvature

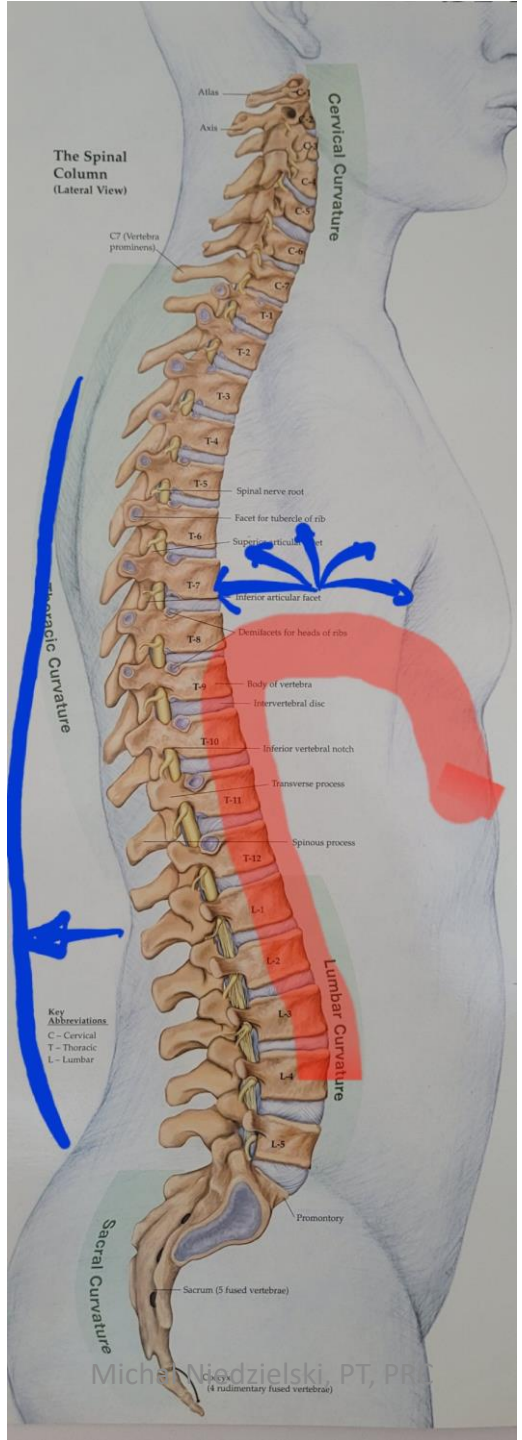

The Spinal Column
(Lateral View)
Atlas
Axis
C7 (Vertebra prominens)
Cervical Curvature
Thoracic Curvature
Lumbar Curvature
Sacral Curvature
Spinal nerve root
Facet for tubercle of rib
Superior articular facet
Demifacets for heads of ribs
Body of vertebra
Intervertebral disc
Inferior vertebral notch
Transverse process
Spinous process
Promontory
Sacrum (5 fused vertebrae)
Coccyx
(4 rudimentary fused vertebrae)
Key Abbreviations
C – Cervical
T – Thoracic
L – Lumbar



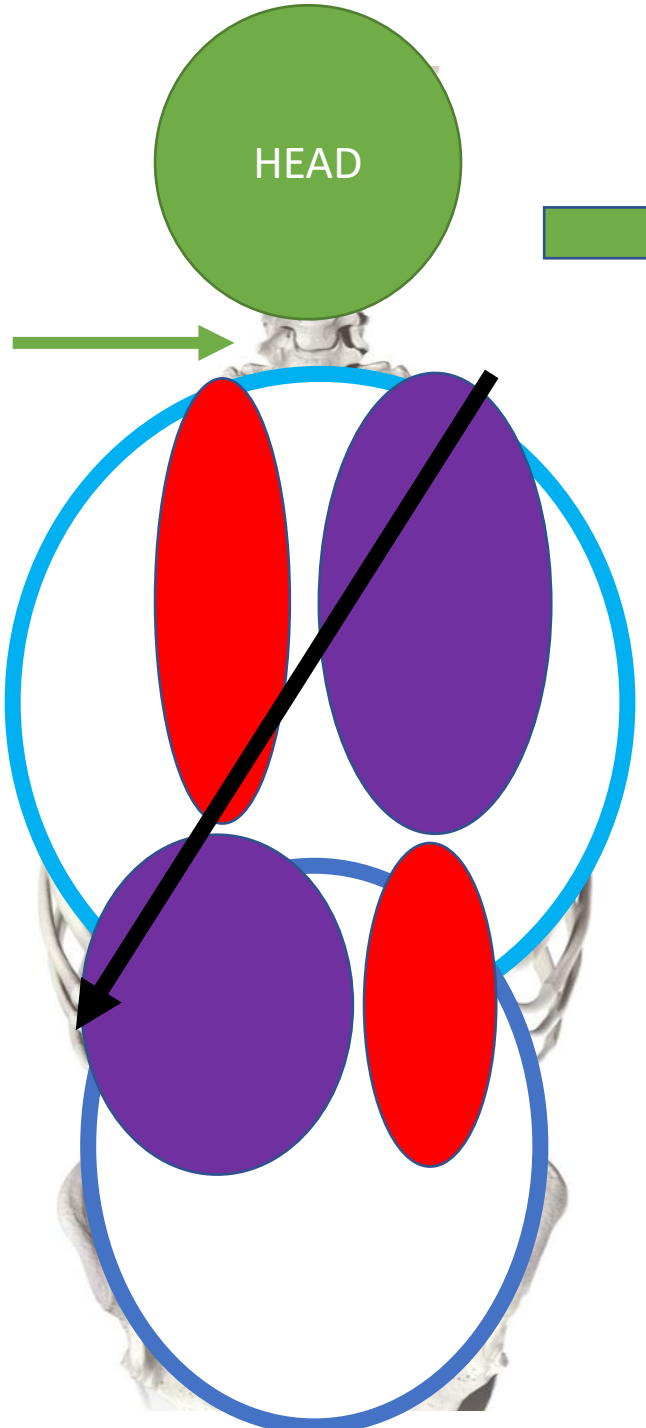

Michal Niedzielski, PT, PRC

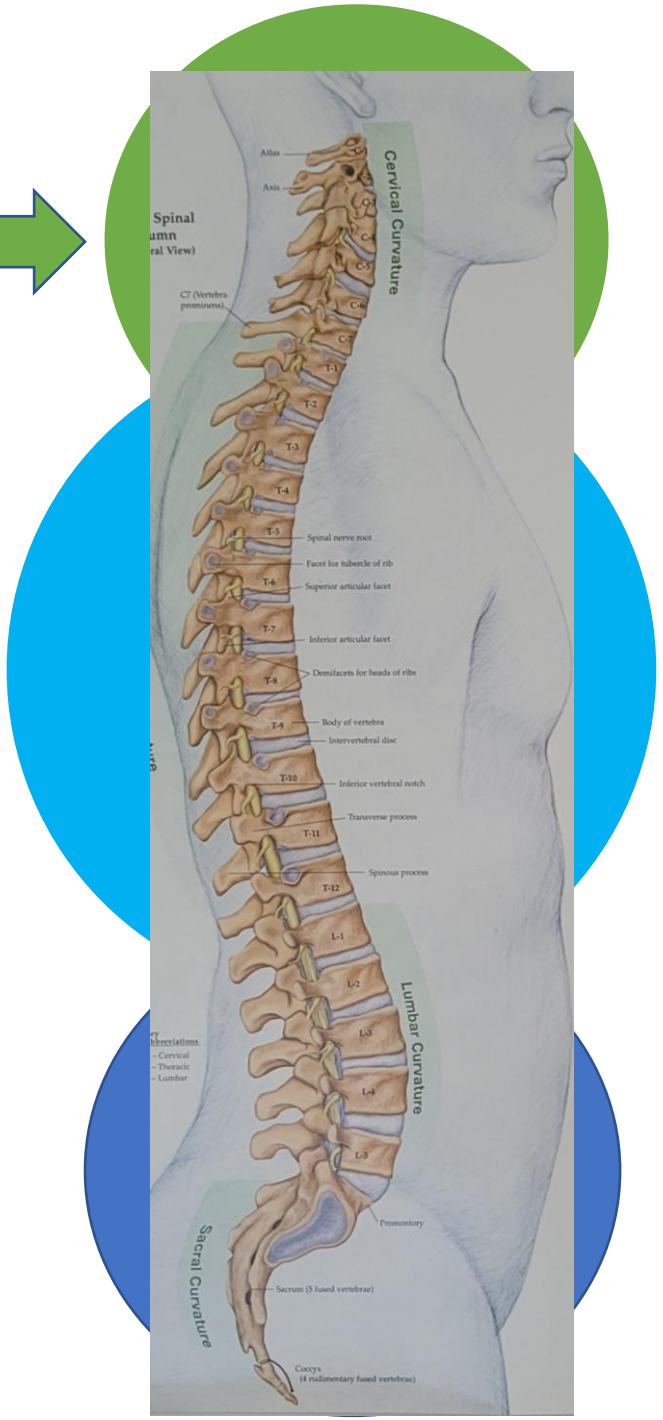


Neutral



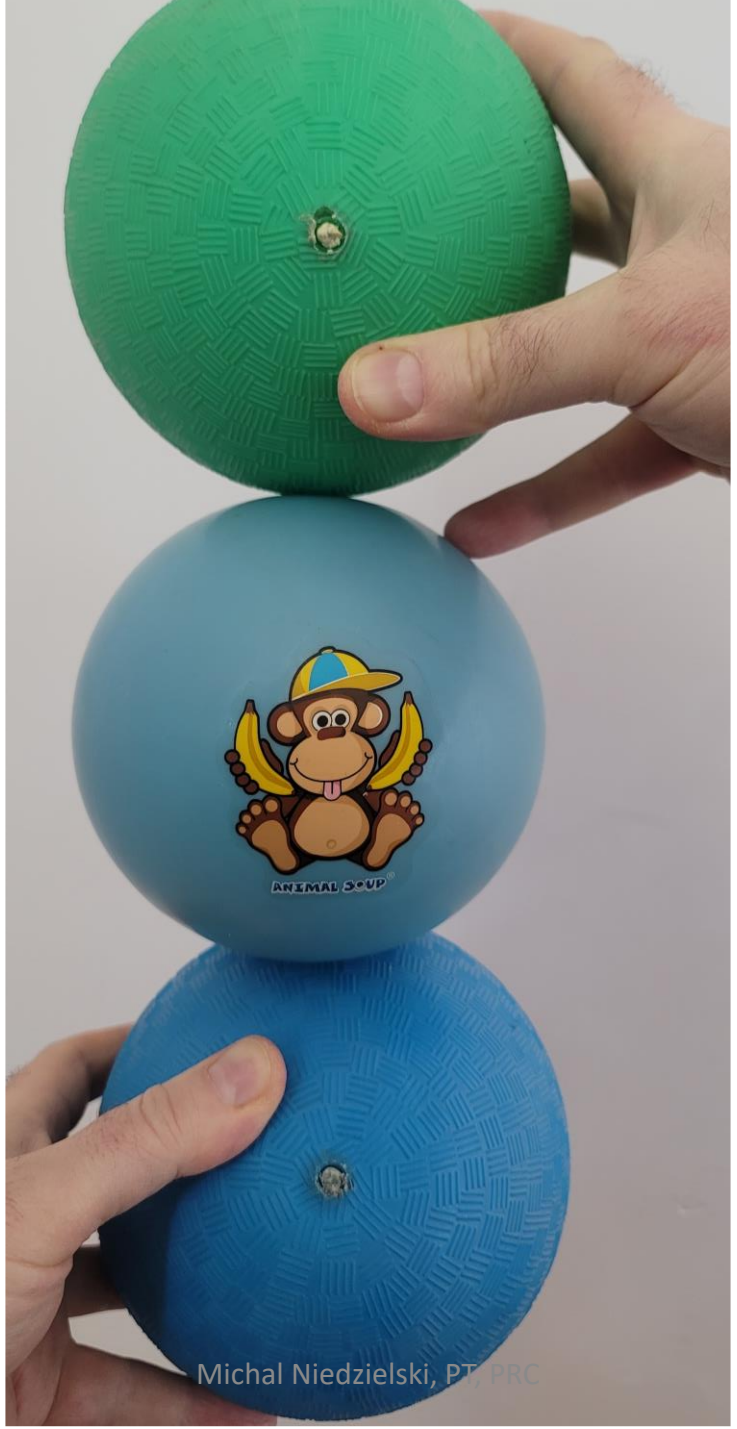
Head – The Command Hub

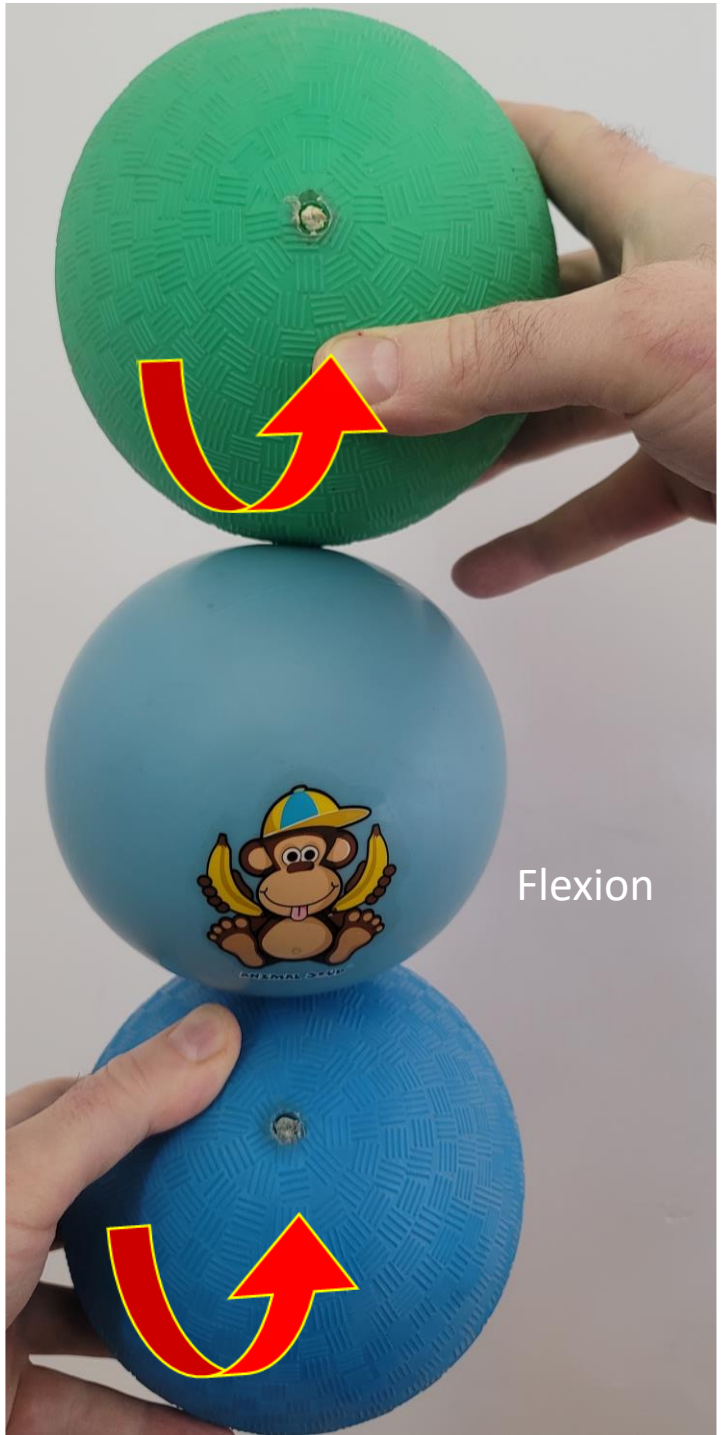




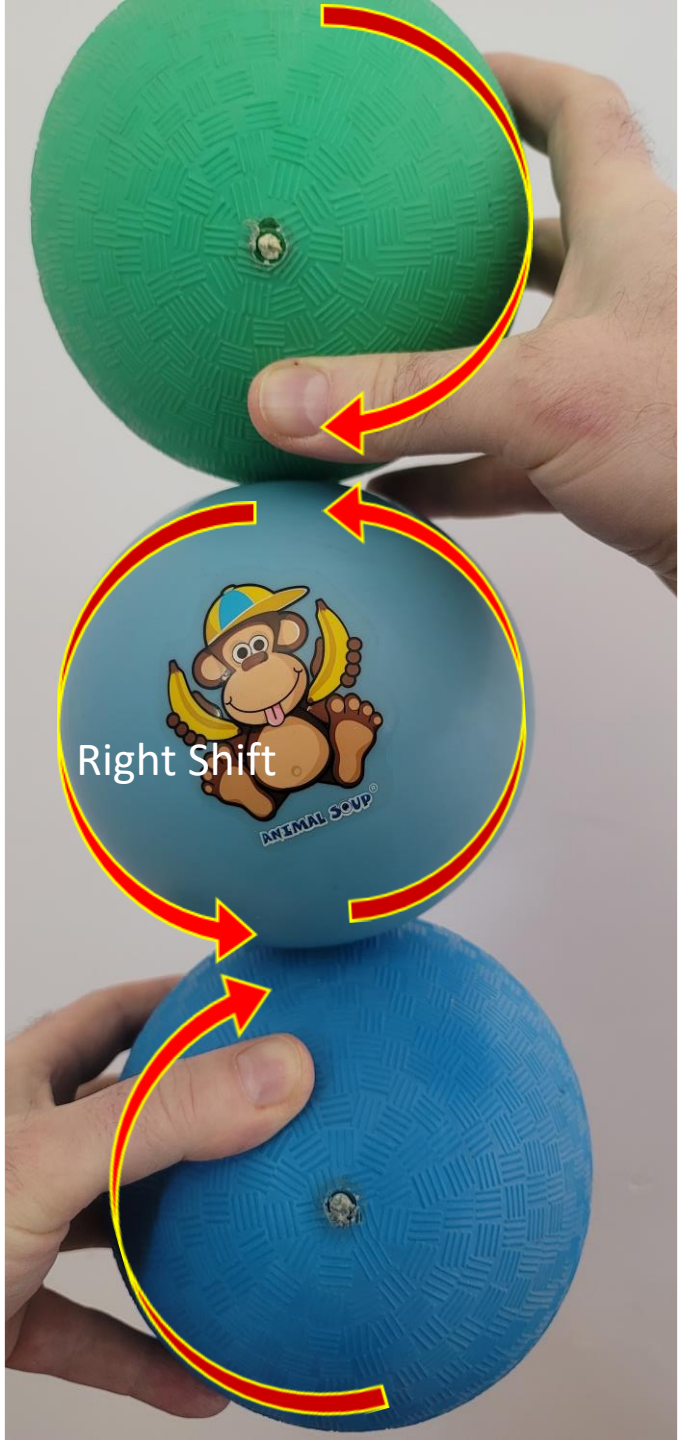
Sagittal Plane Movement

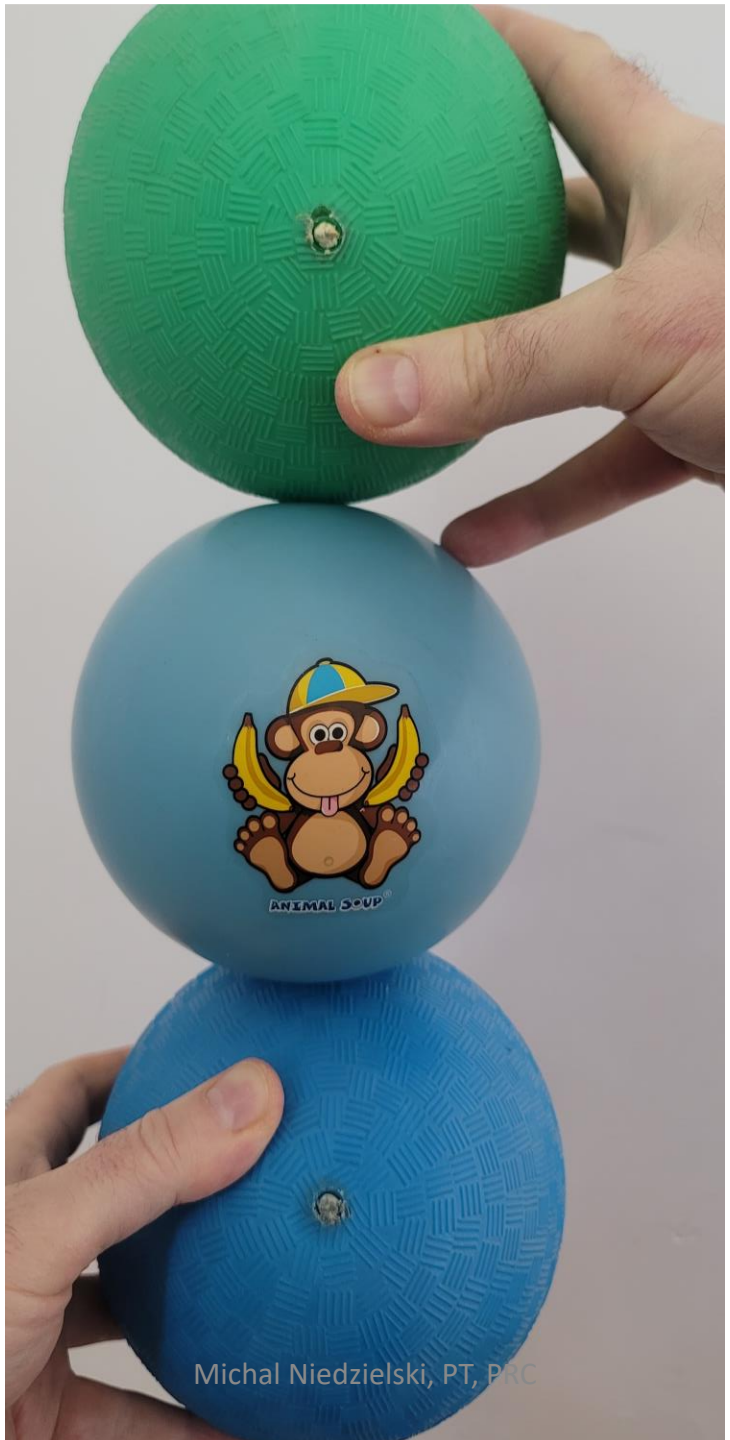

Extension

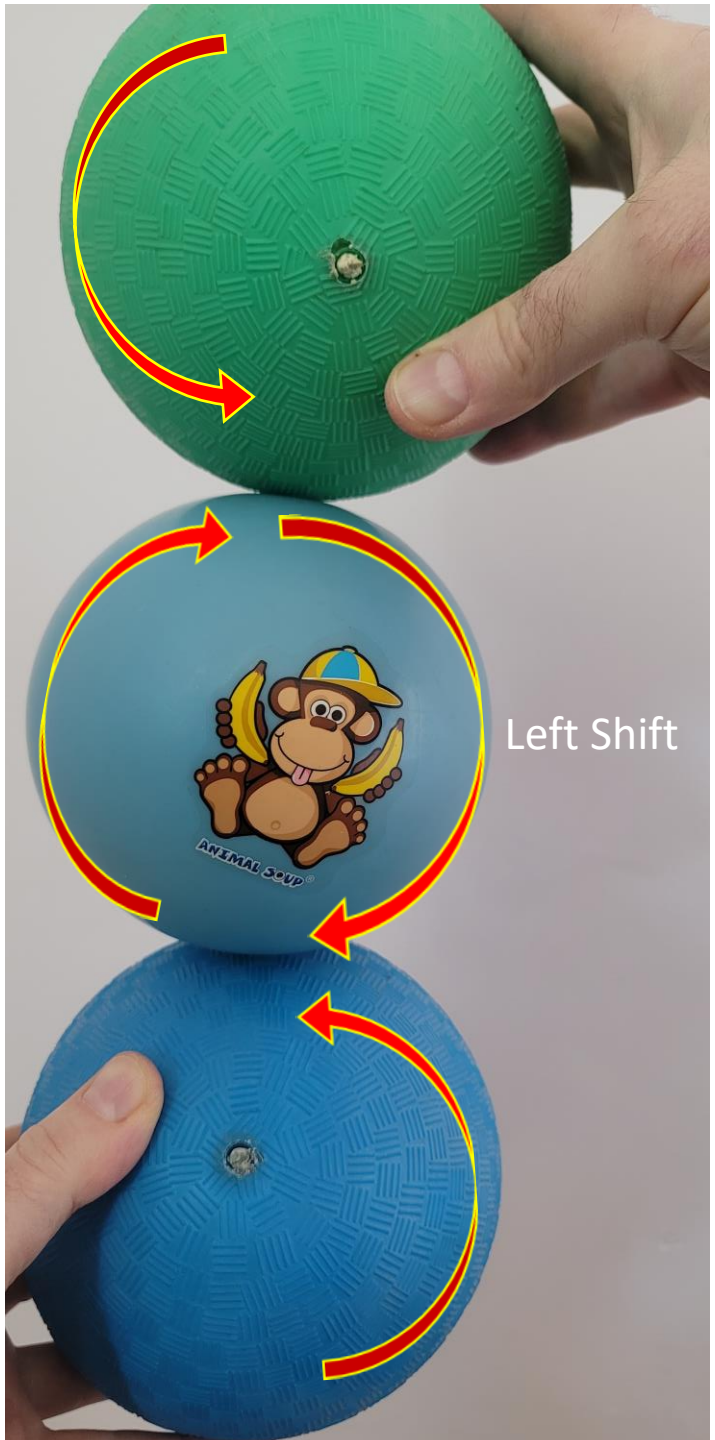

Michal Niedzielski, PT, PRC


Flexion

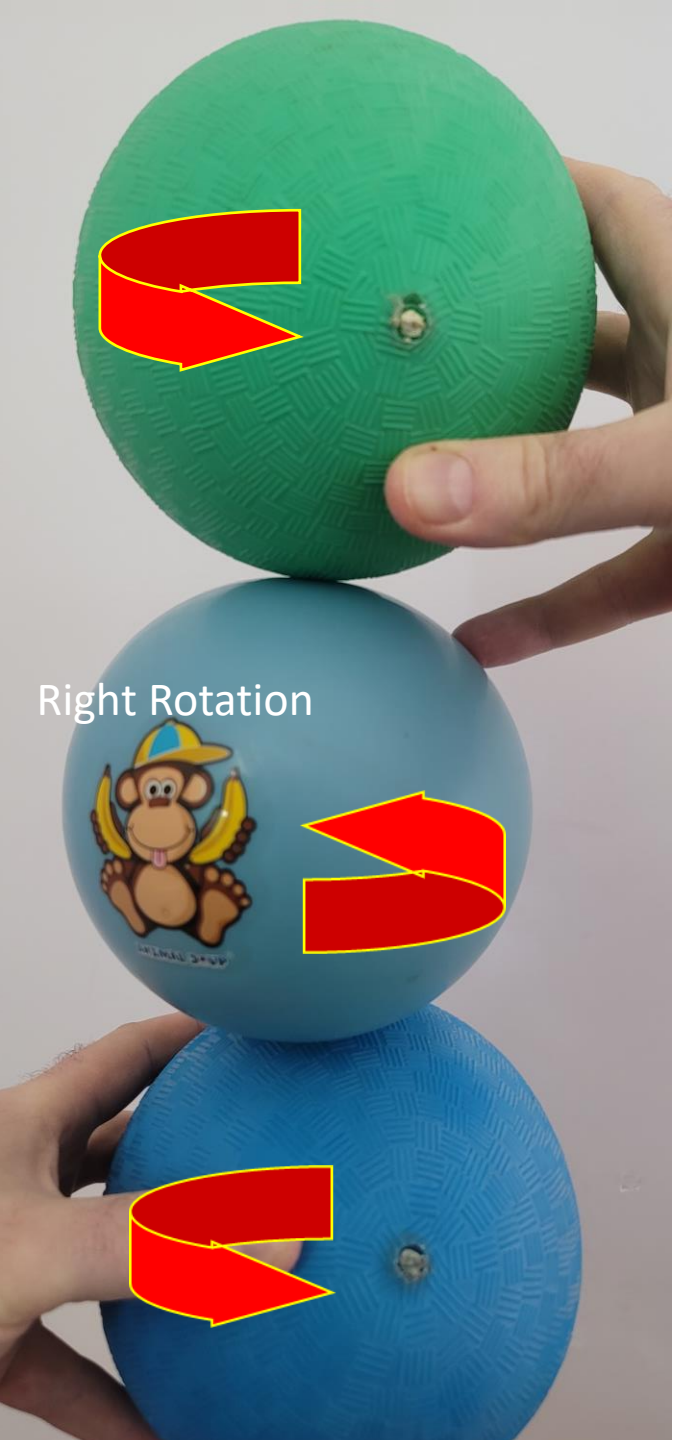
Frontal Plane Movement

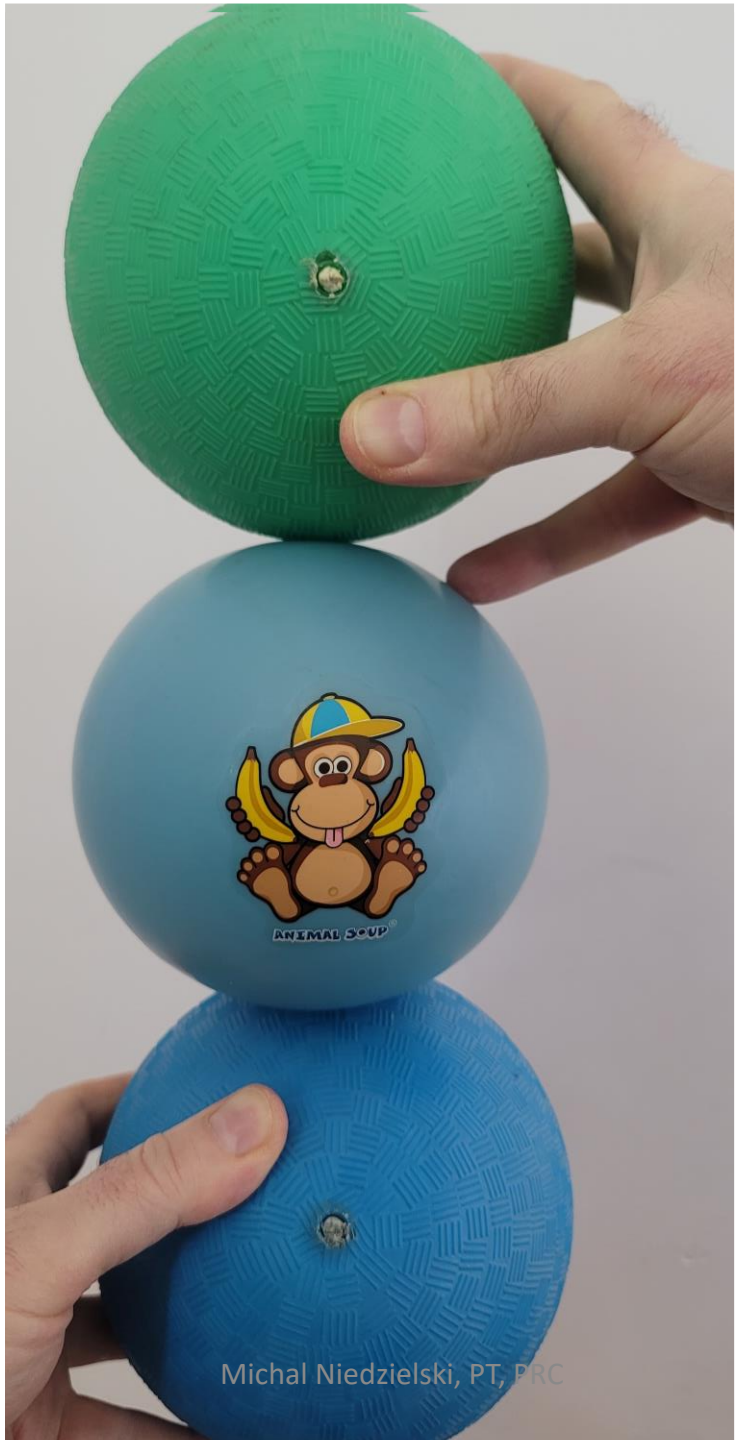

Right Shift


Michal Niedzielski, PT, PRC


Left Shift

Transverse Plane Movement


Right Rotation


ANIMAL SOUP
Michal Niedzielski, PT, PRC


ANIMAL SOUP
Left Rotation

Sensory Foundation

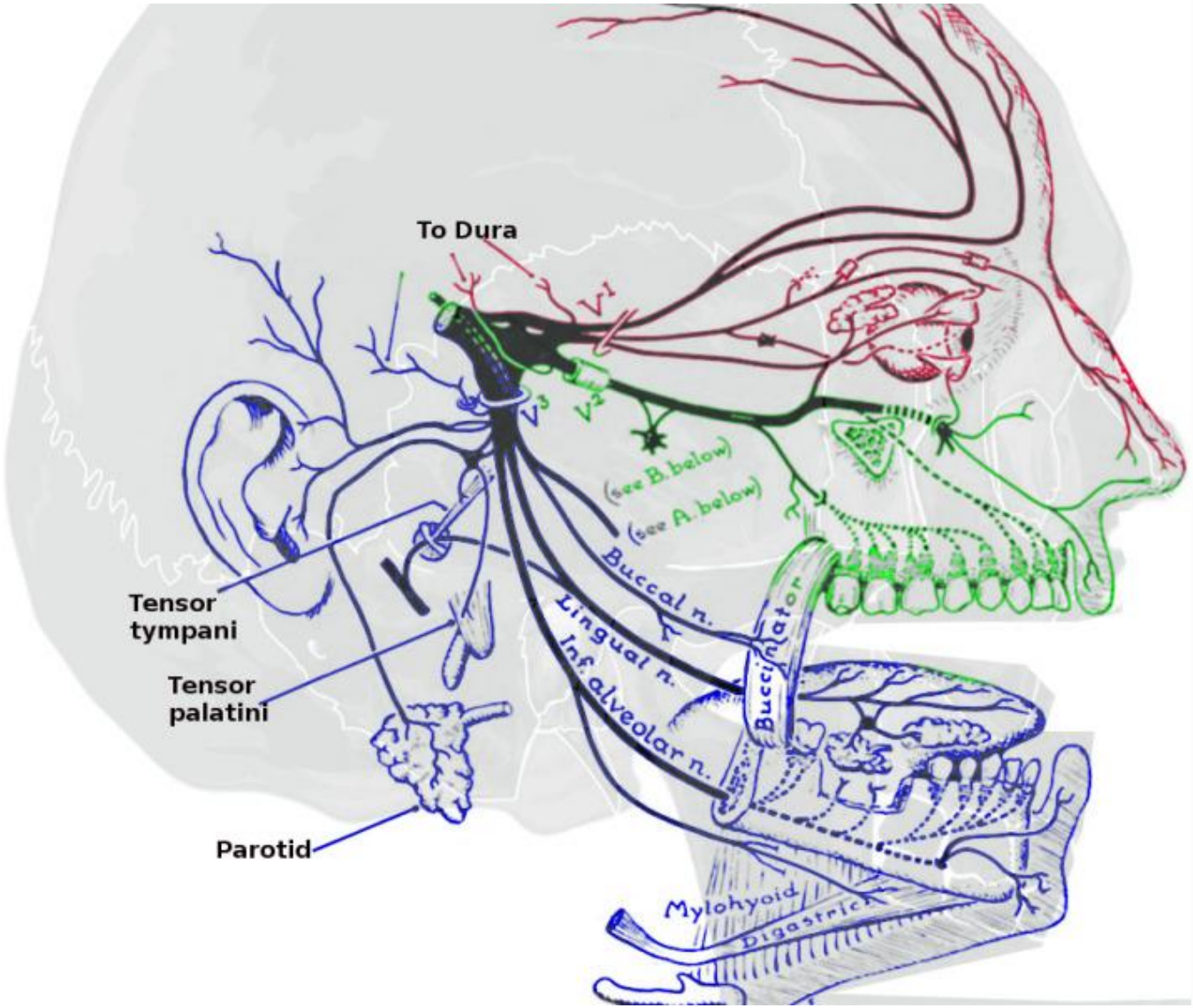
Sensory inefficiencies alter the coherence of incoming information to our senses. The resulting effect is compensation which leads to overuse, discomfort, or pain. This emanates in a constant search for a better position and balance to improve function i.e. *cranial strains*.

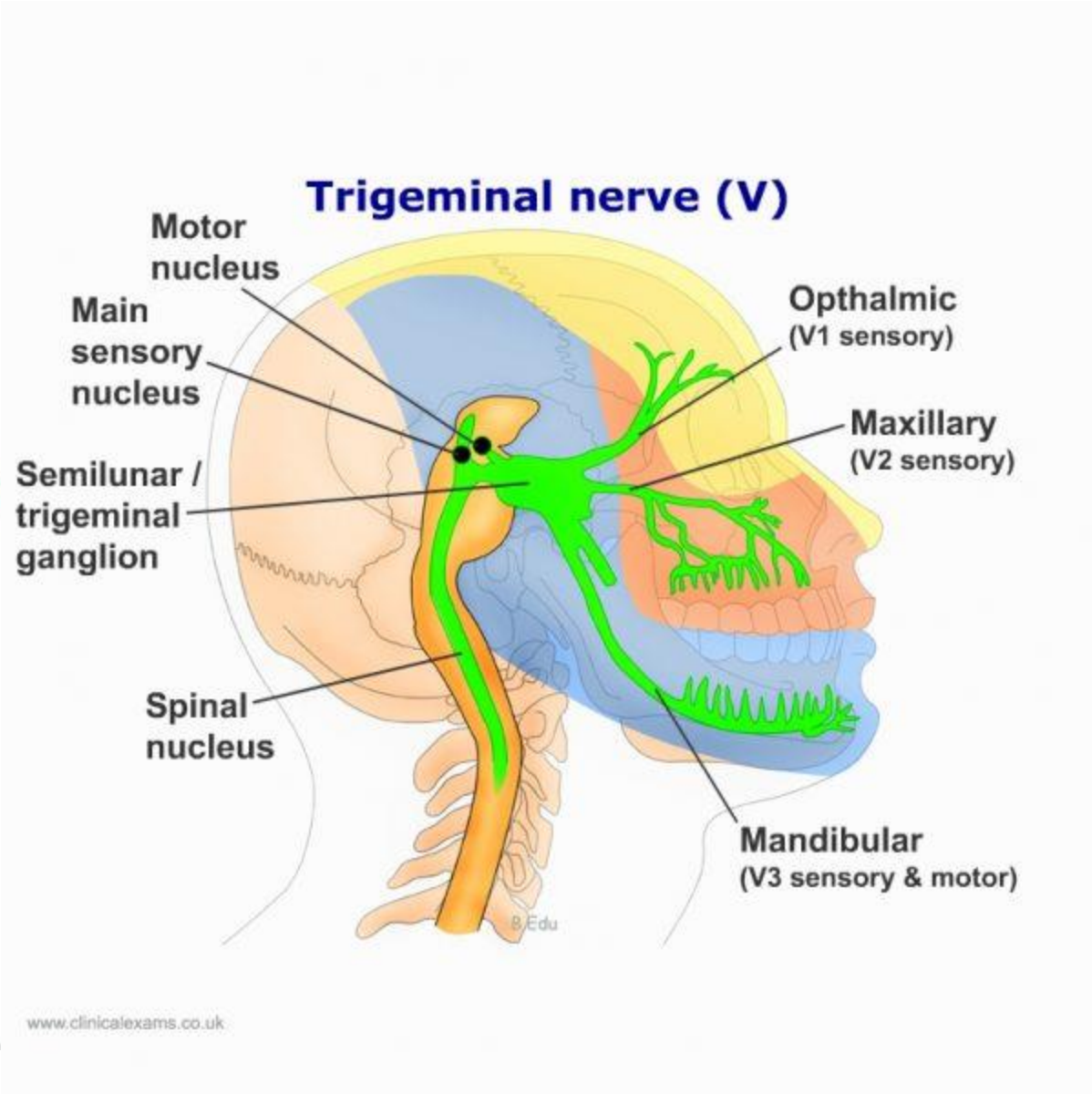
Ocular-Trigeminal Convergence

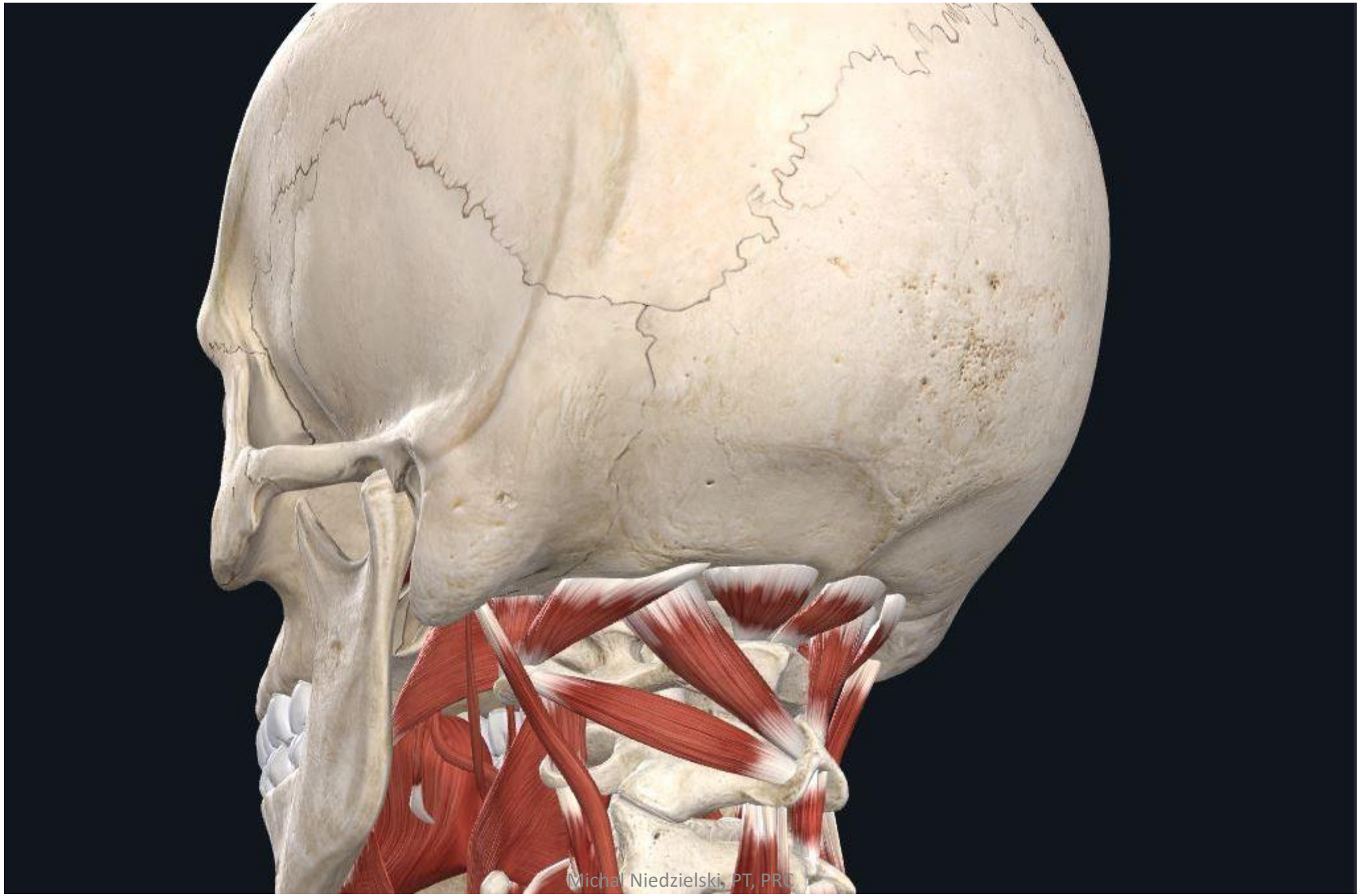
- The trigeminal nerve represents the *common innervation pathway* between the visual receptors, the masticatory receptors, the cranial base, and the upper cervical spine (O-A)
- The relationship between the visual system and the stomatognathic system should be considered parallel between the trigeminal cranial nerve and the cranial nerves supplying eye extra ocular muscles (V and III, IV, VI CN), known as the Ocular-Trigeminal Convergence. There is a synaptic connection, between these nerves [(Wühr) M. Friedrich].

Ocular- Respiratory viaTrigeminal Convergence

- Through these connections, we can explain the intense interaction between the function of the visual and upper respiratory network's feedback; whereas a TMJ tension through a collapsed midface (Dibbet) can involve functional visual discomforts, these include: accommodative and binocular dysfunctions, constricted visual fields, dry eyes, and intra ocular headaches. The same will be true in reverse (M. Friedrich).

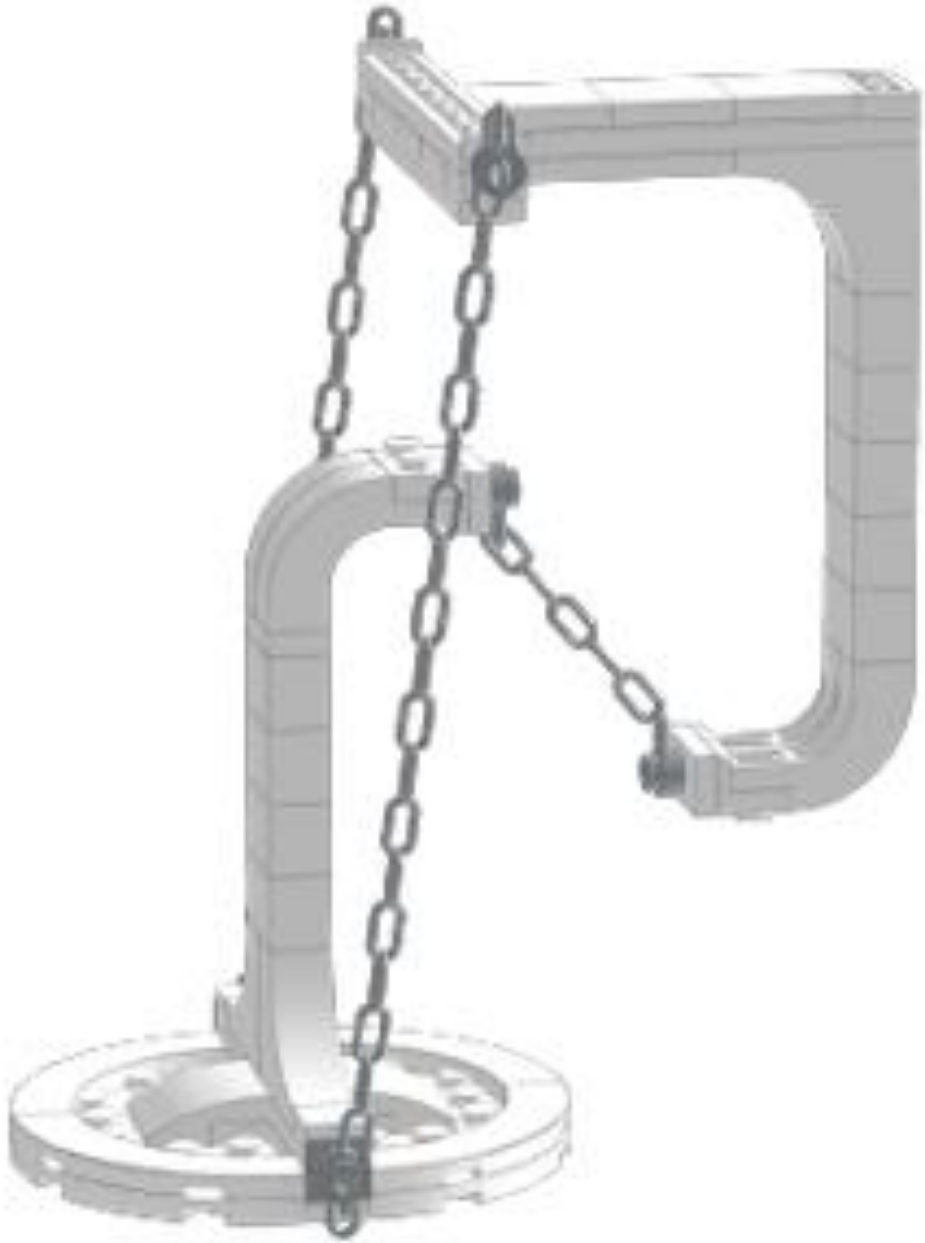

To Dura
V1
V2
V3
(see B. below)
(see A. below)
Buccal n.
Lingual n.
Inf. alveolar n.
Buccinator
Tensor tympani
Tensor palatini
Parotid
Mylohyoid
Digastric


Trigeminal nerve (V)
Motor nucleus
Main sensory nucleus
Semilunar / trigeminal ganglion
Spinal nucleus
Opthalmic (V1 sensory)
Maxillary (V2 sensory)
Mandibular (V3 sensory & motor)
www.clinicalexams.co.uk


Michal Niedzielski, PT, PRC

Michal Niedzielski, PT, PRC

Michal Niedzielski, PT, PRC

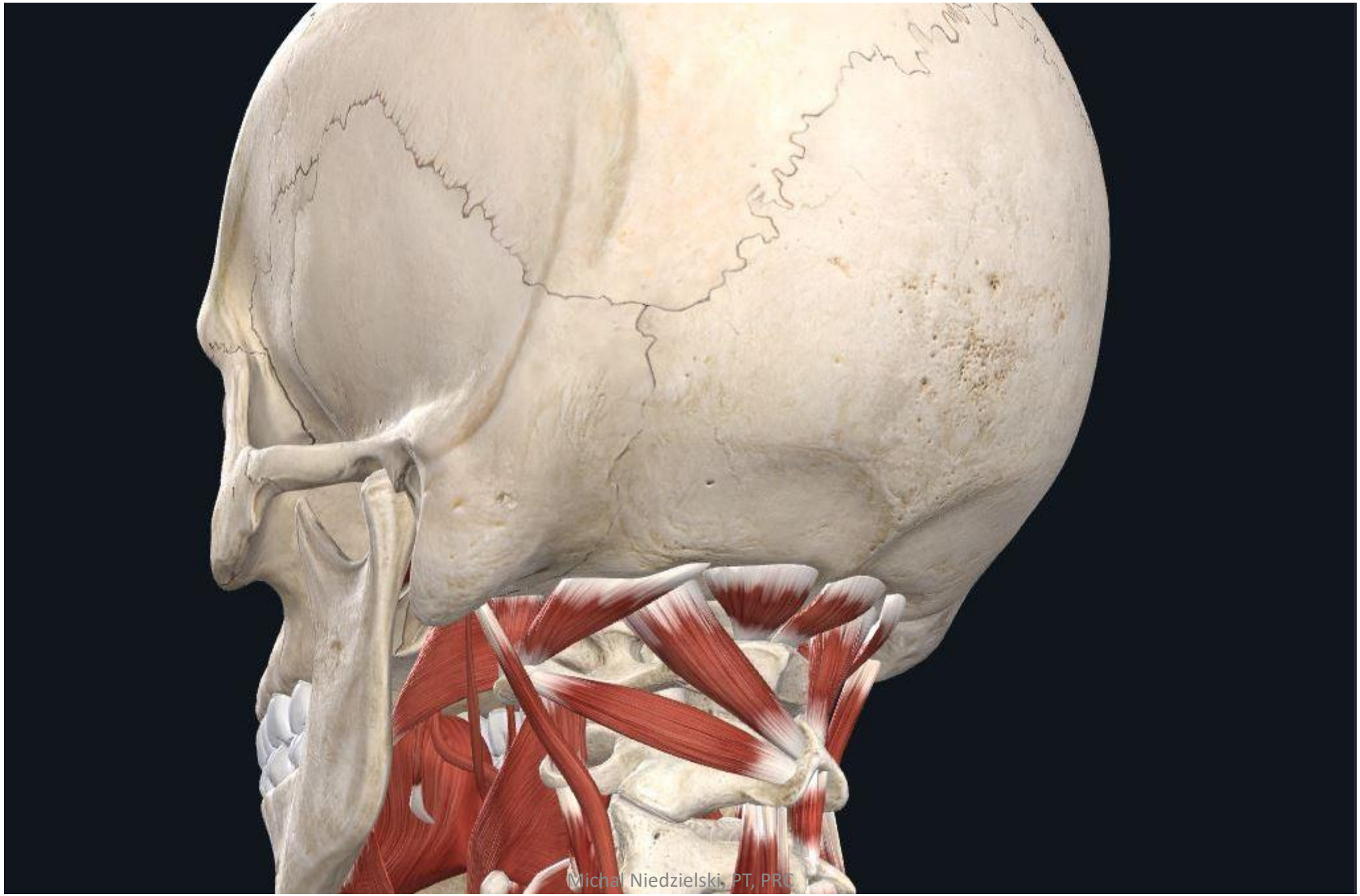


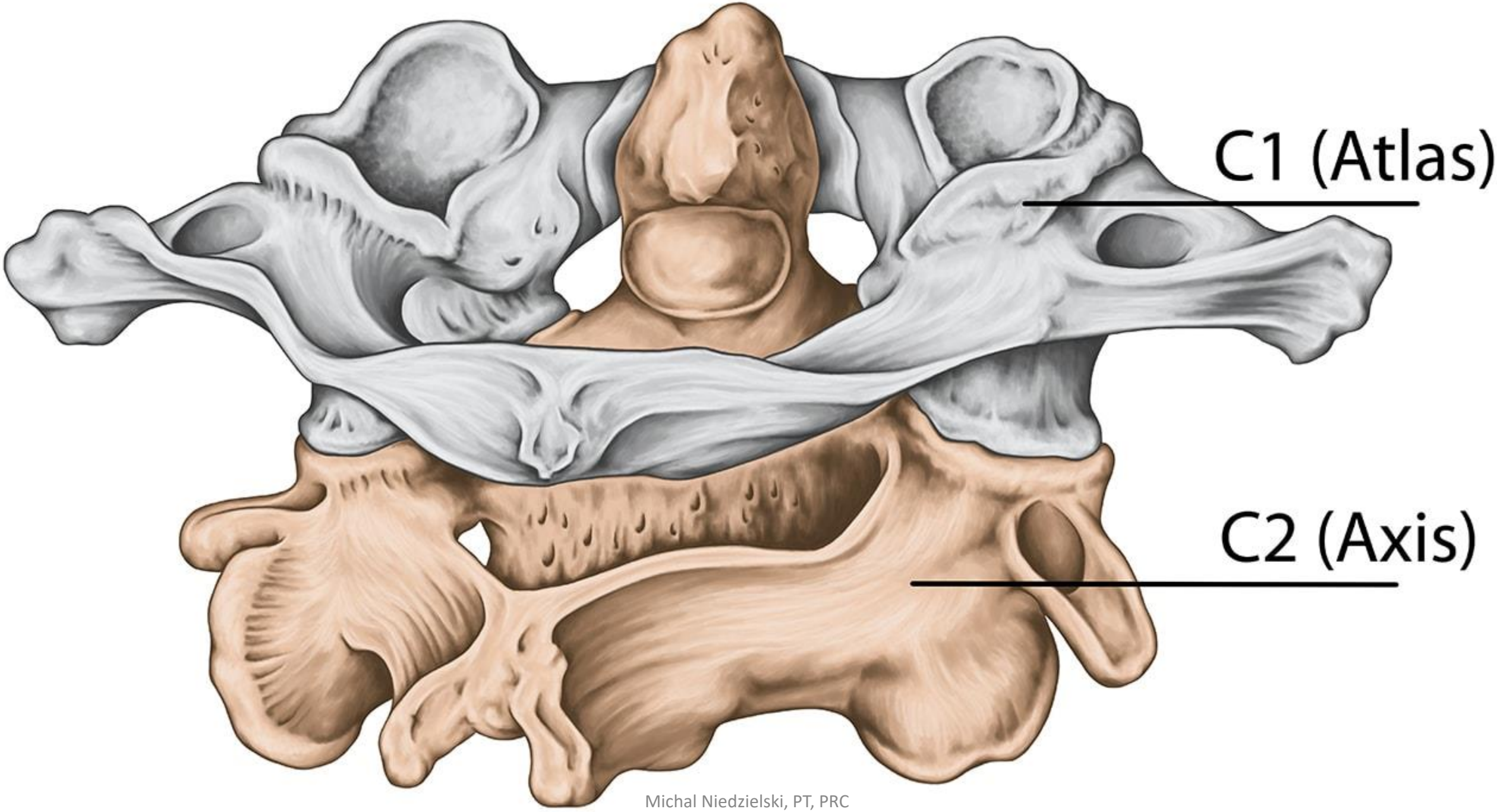
Michal Niedzielski, PT, PRC


Miona Nieduelski - PT, PRC


Michal Niedzielski, PT, PRC

Occiput - The Balancer


Michal Niedzielski, PT, PRC

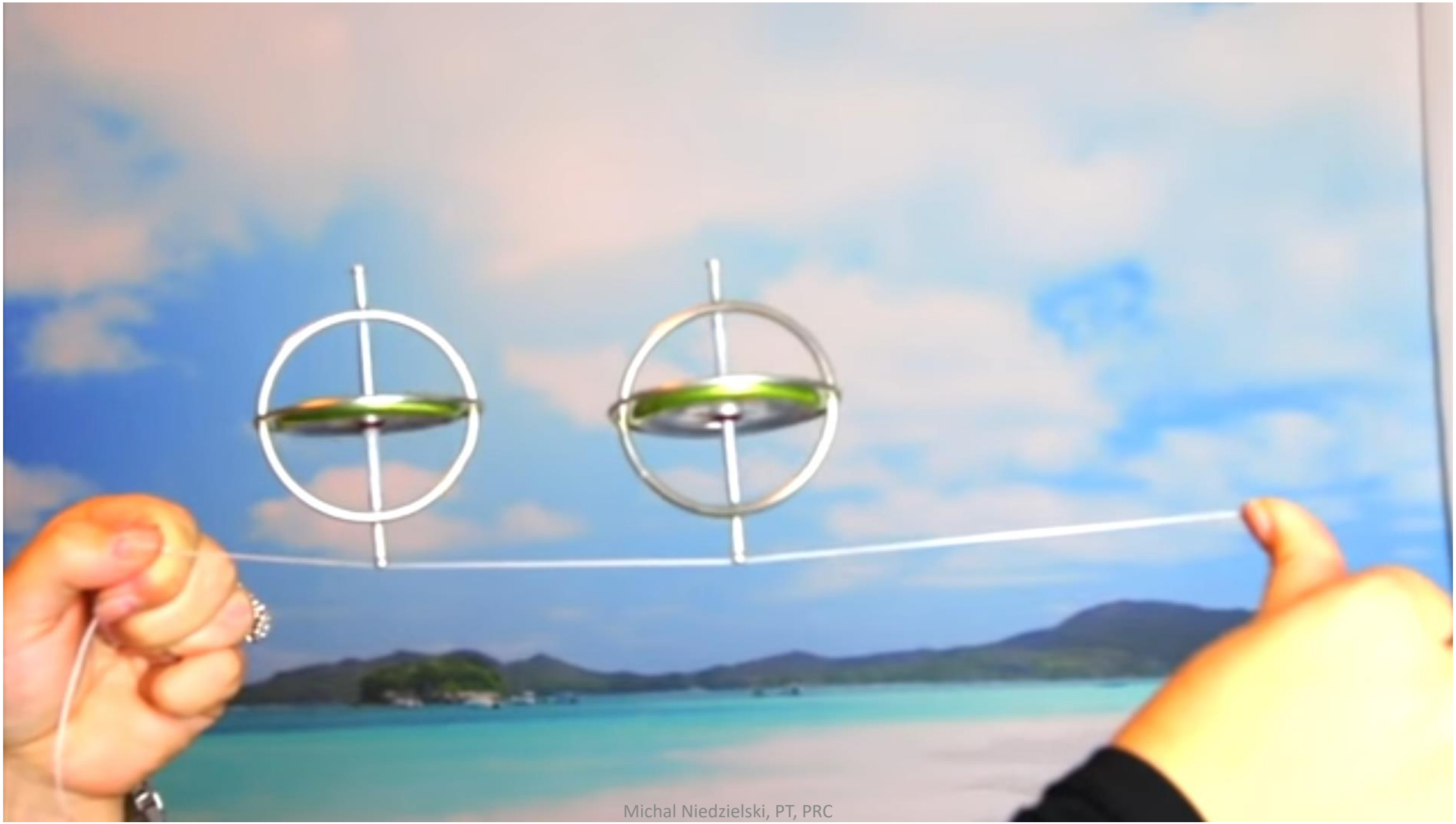

C1 (Atlas)
C2 (Axis)

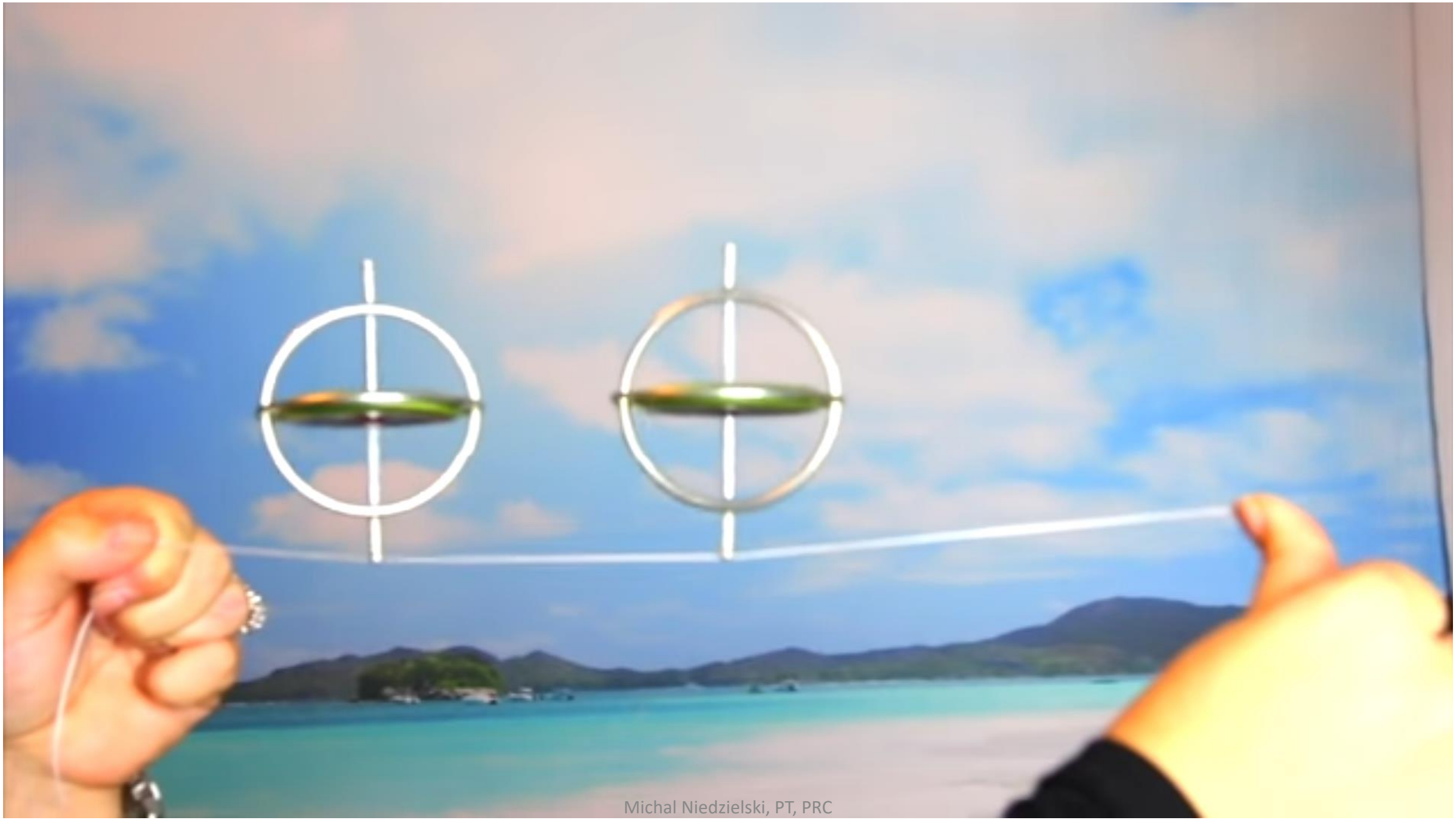

Michal Niedzielski, PT, PRC

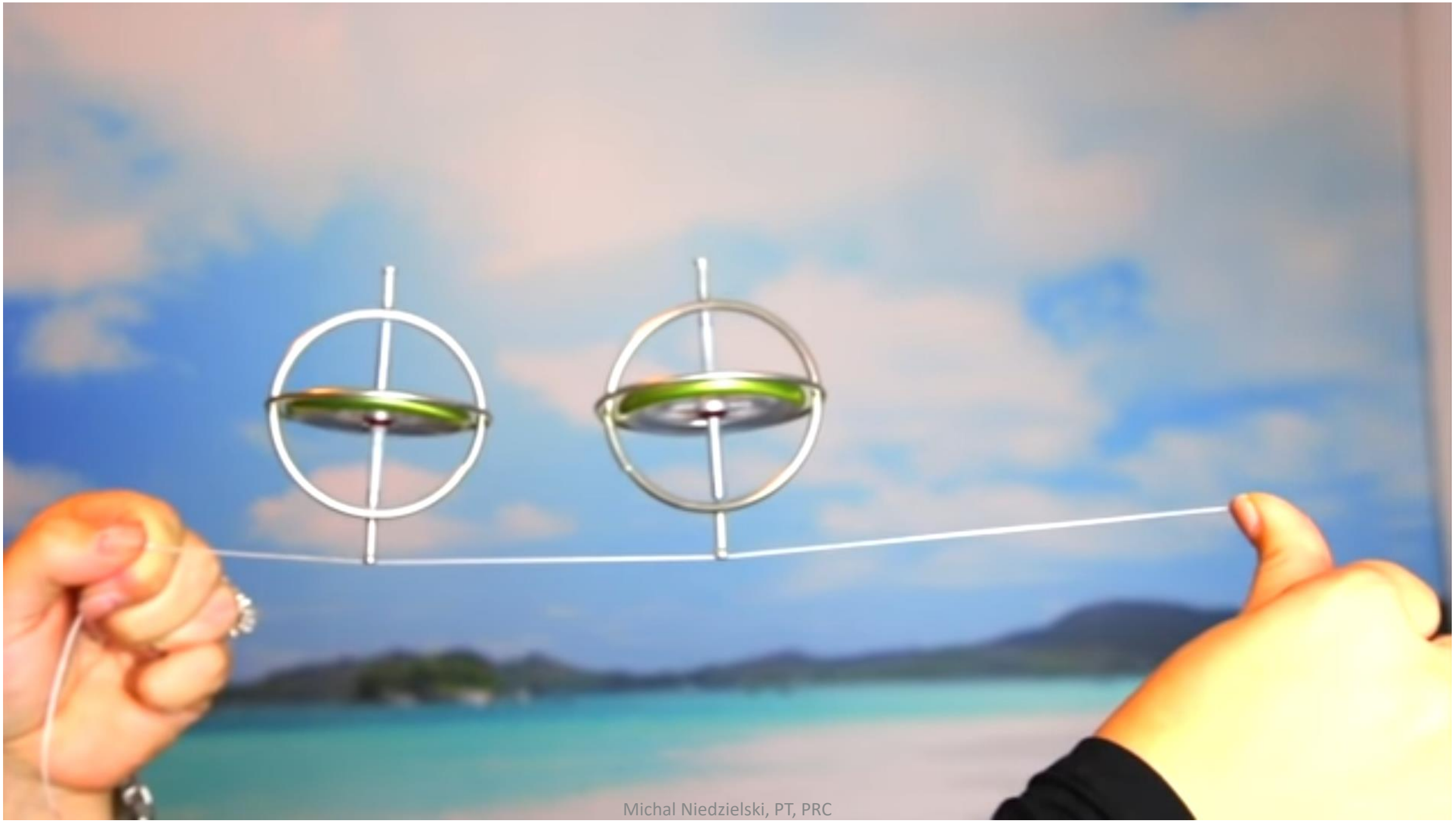

Michal Niedzielski, PT, PRC


Michal Niedzielski, PT, PRC


Michal Niedzielski, PT, PRC


Michal Niedzielski, PT, PRC


Michal Niedzielski, PT, PRC


Michal Niedzielski, PT, PRC


Michal Niedzielski, PT, PRC


Michal Niedzielski, PT, PRC


Michał Niedzielski, PT, PRC


Michal Niedzielski, PT, PRC

Michal Niedzielski, PT, PRC

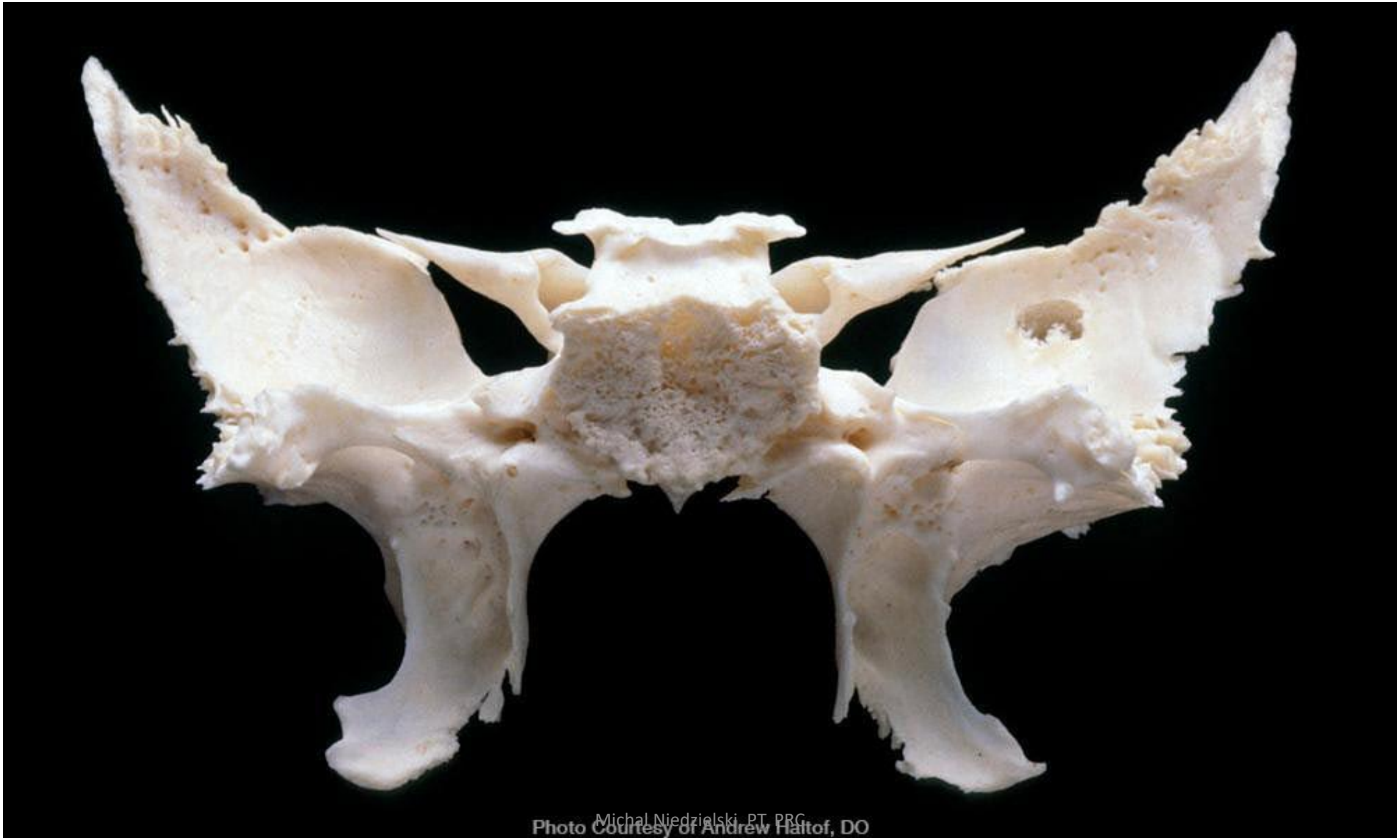
Michal Niedzielski, PT, PRC

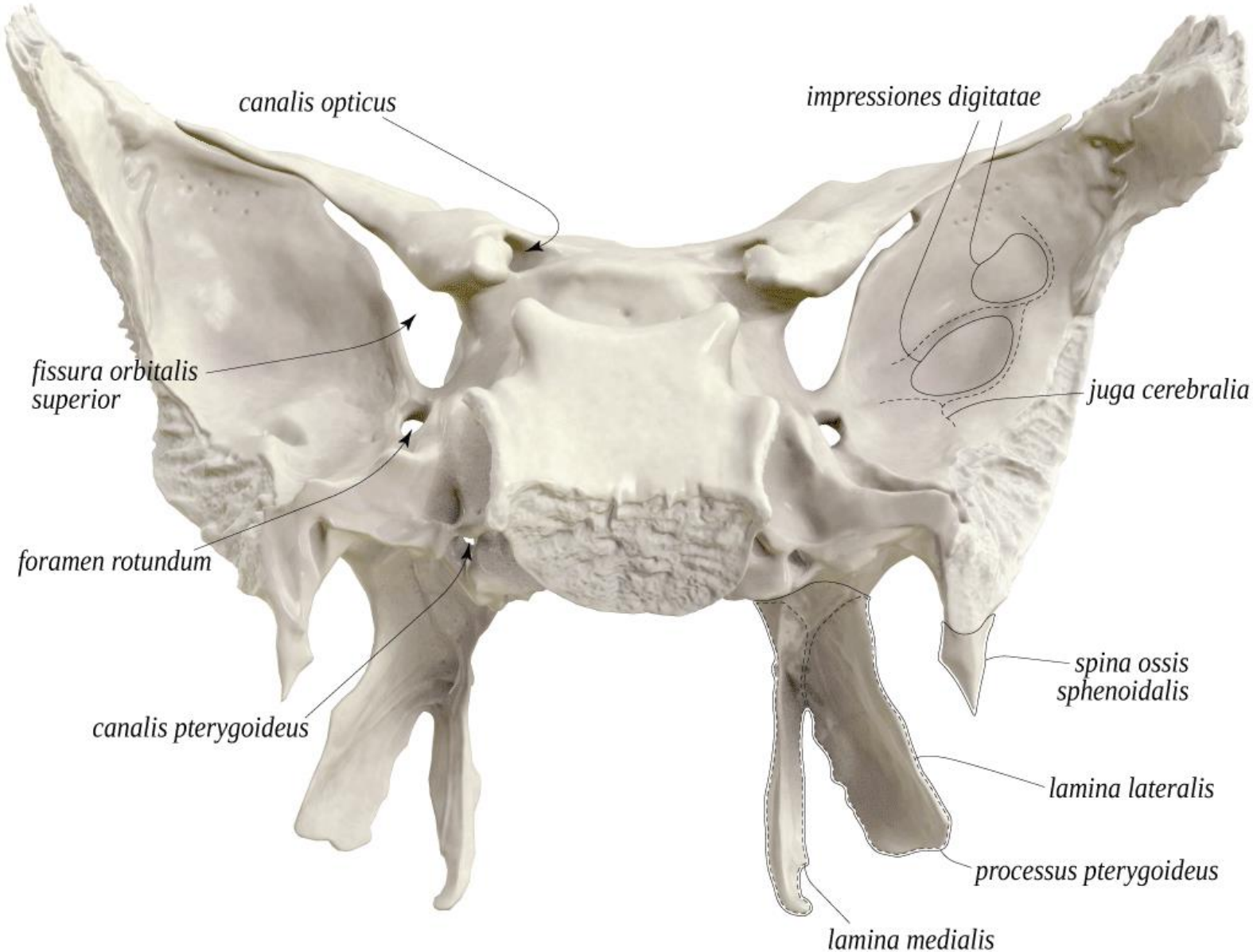

BOAT
www.sailaboat.tv

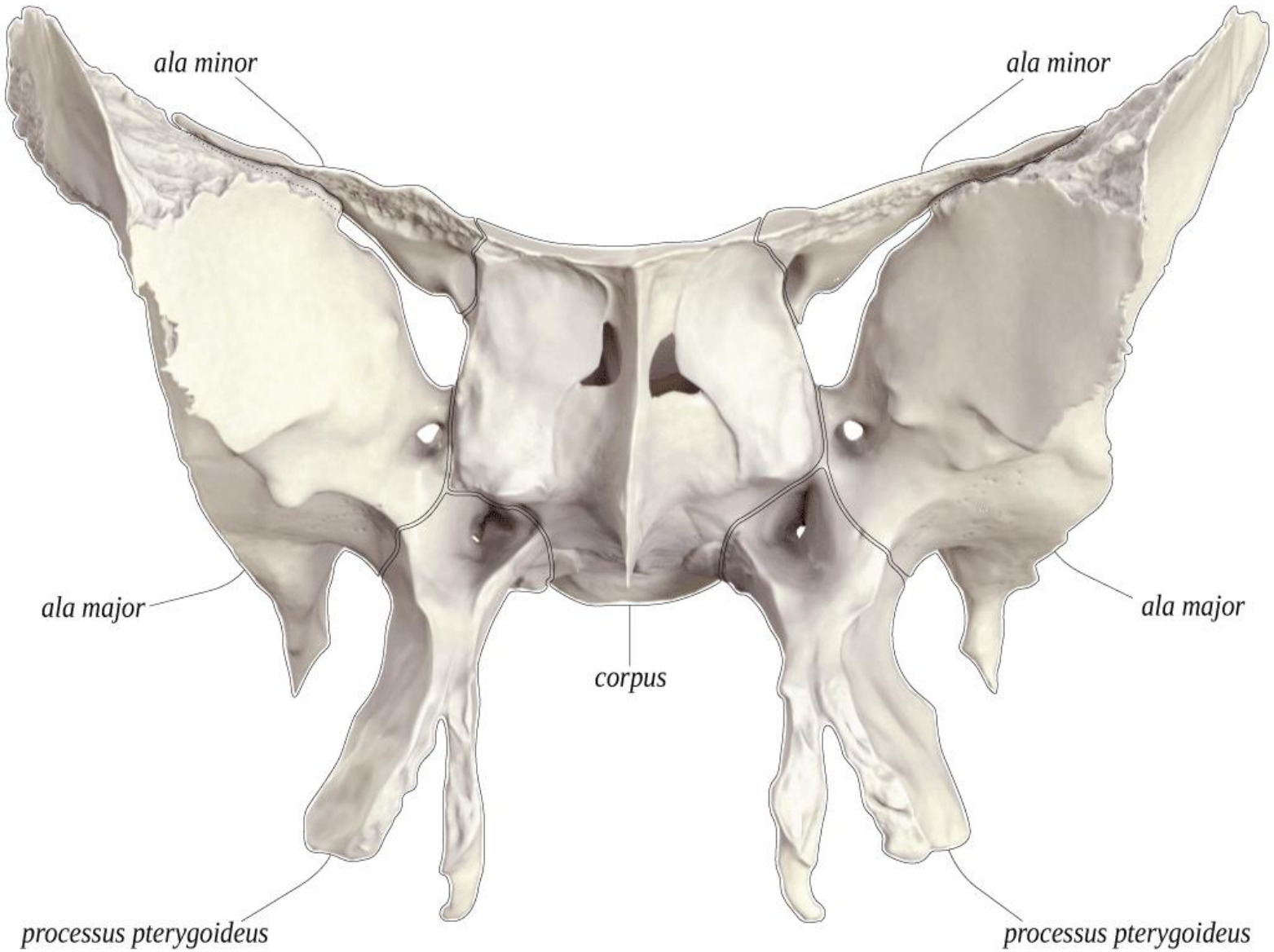

www.sailaboat.tv


www.sailaboat.tv

Sphenoid – The Associate, “Spinnaker”


Michal Niedzielski, PT, PRC
Photo Courtesy of Andrew Haltof, DO

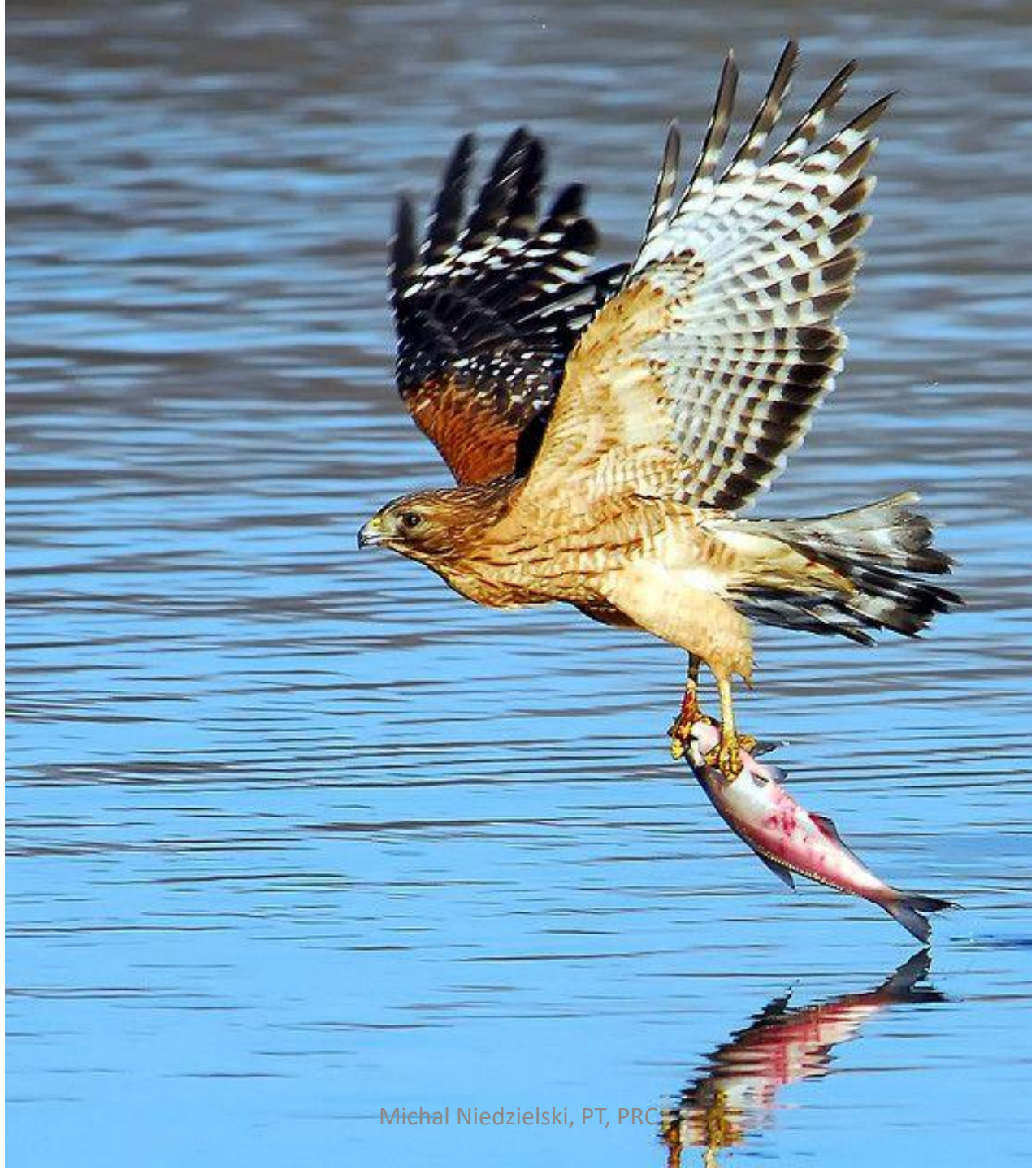


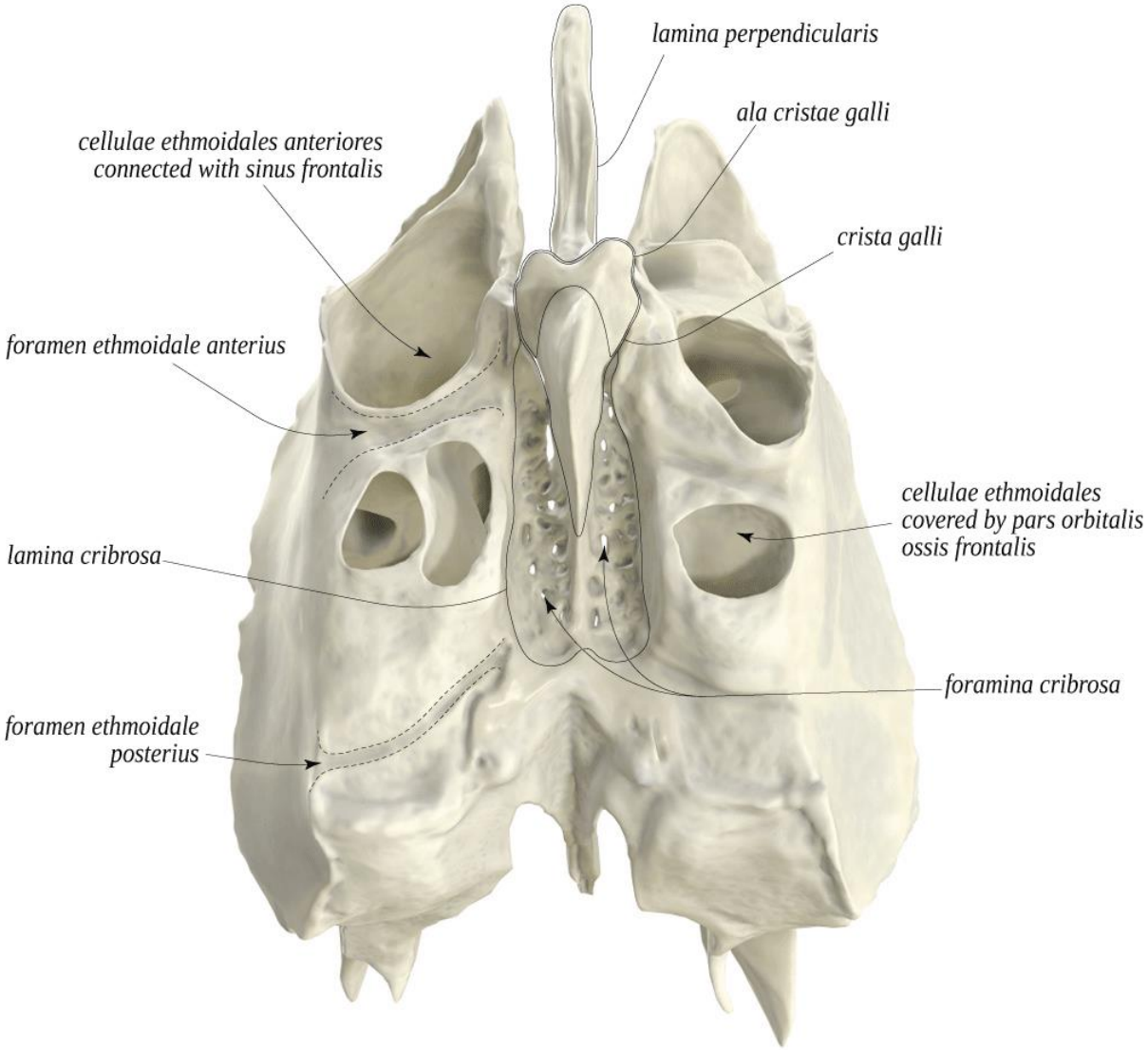


ANATOMY STANDARD

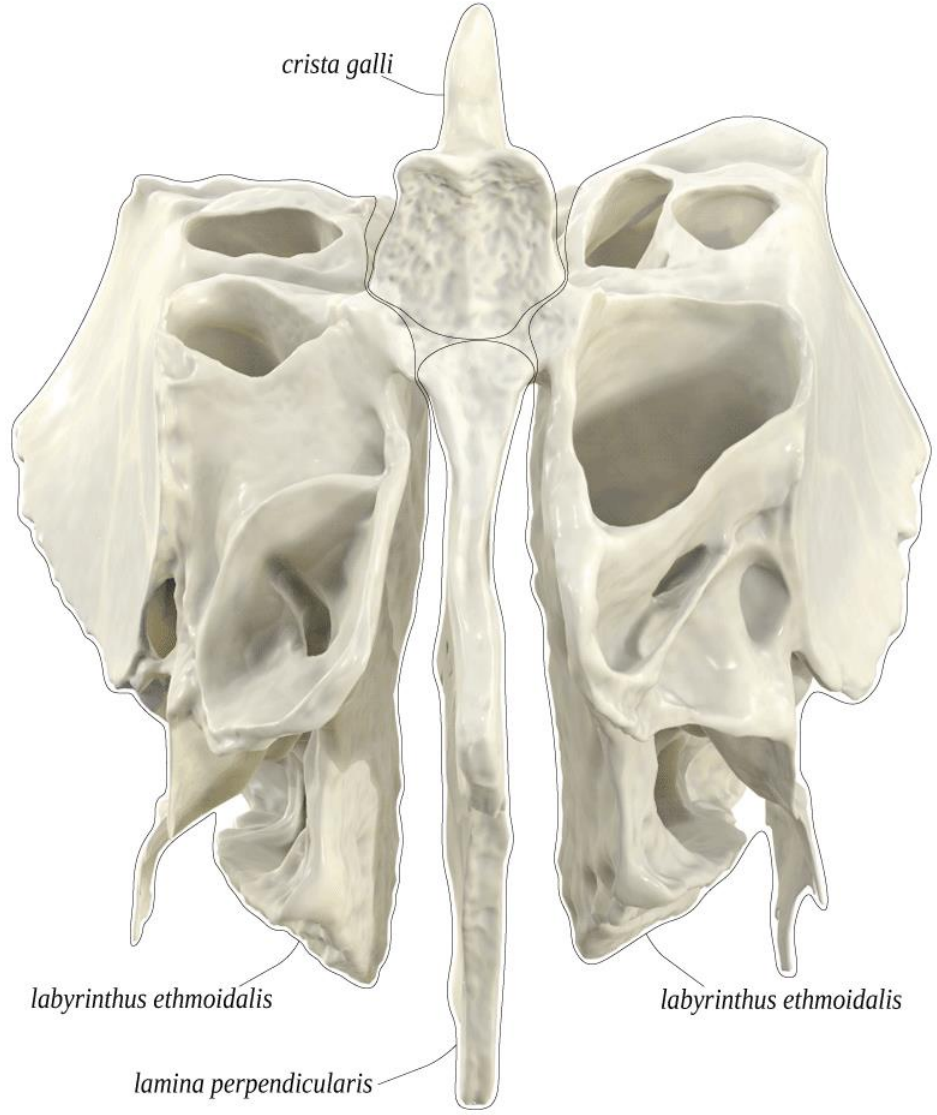

Michal Niedzielski, PT, PRC


Michal Niedzielski, PT, PRC





ANATOMY STANDARD



ANATOMY STANDARD

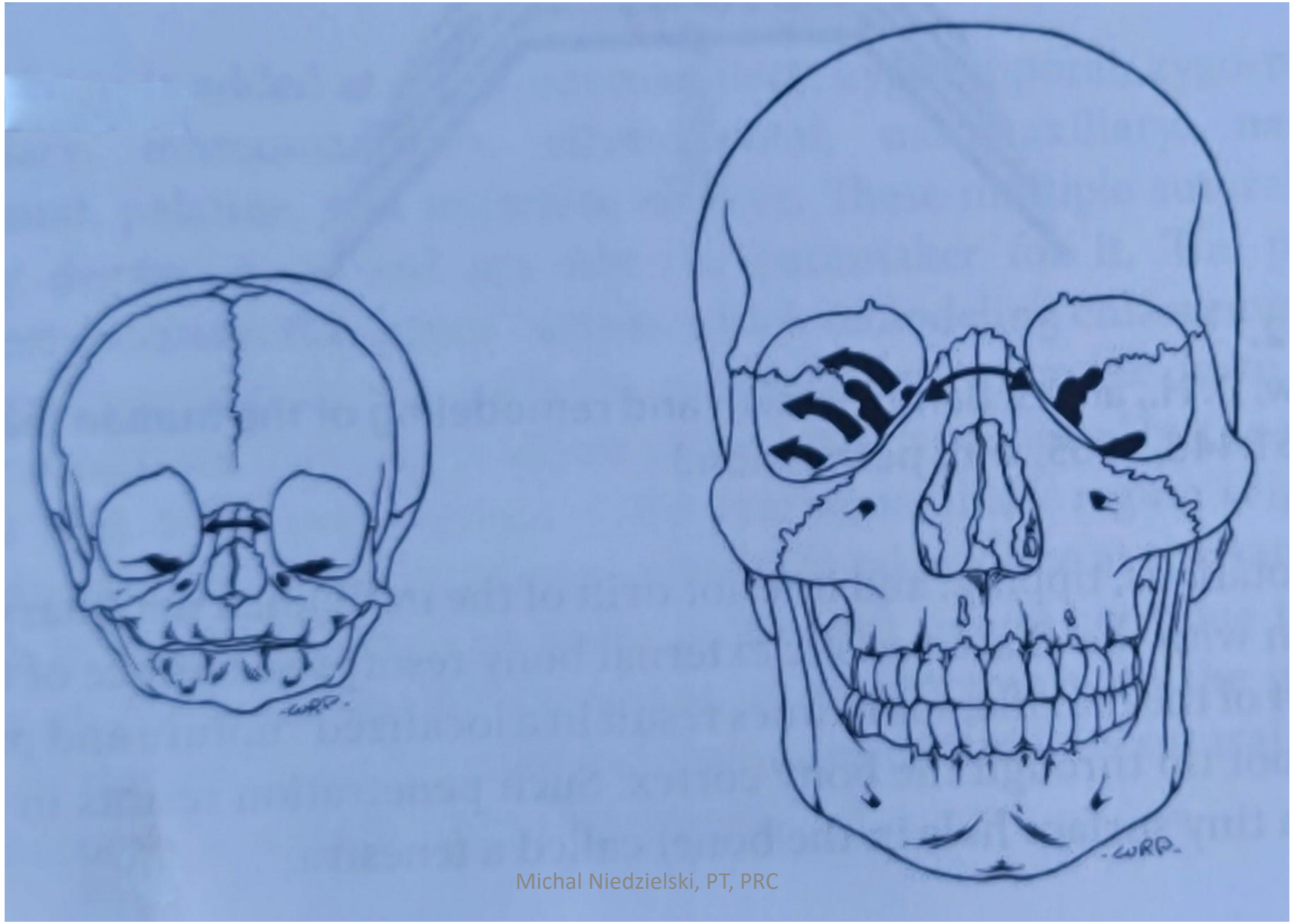

Michal Niedzielski, PT, PRC

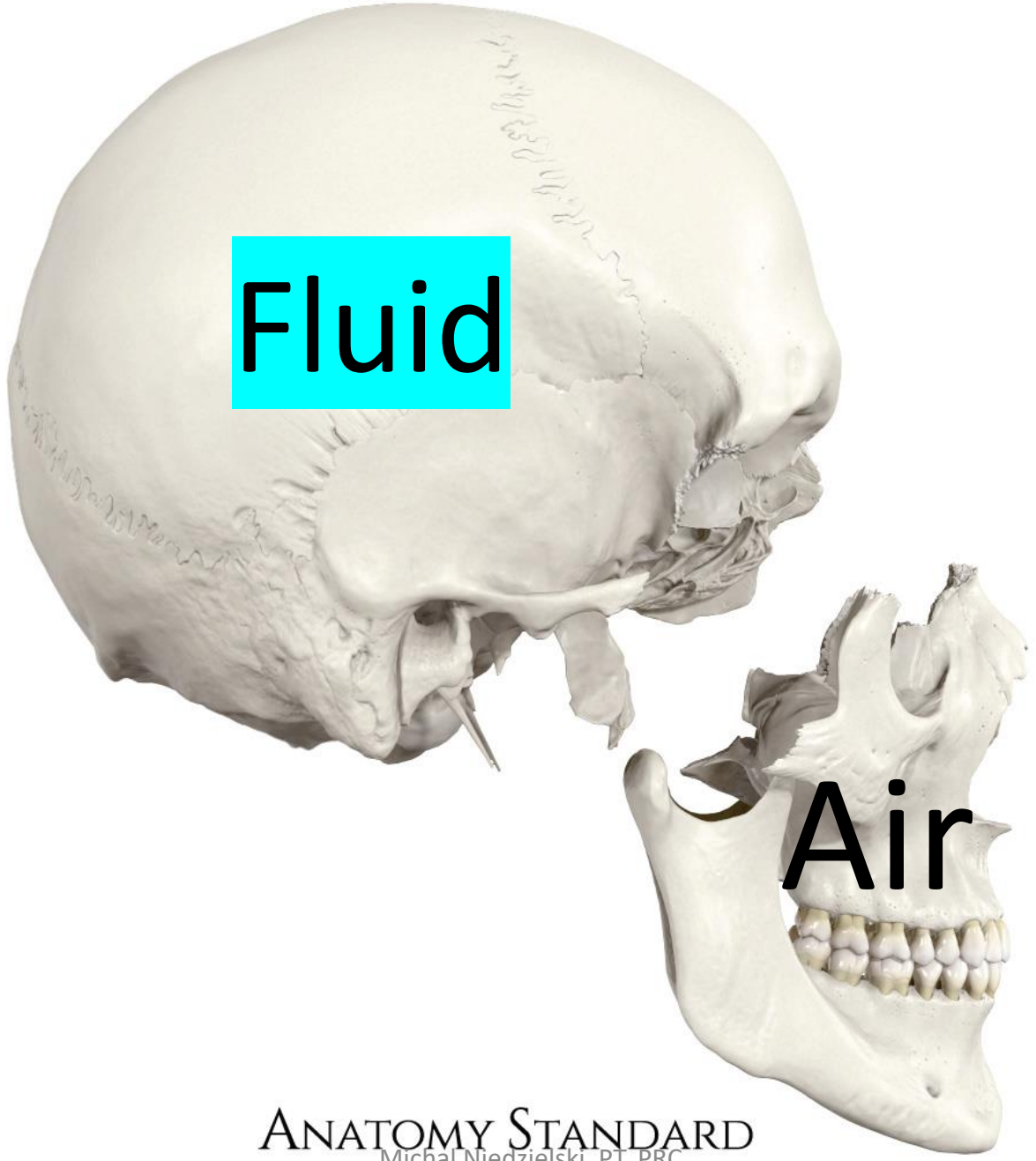

2189
www.sailboat.tv


G368
RYAN
CARLISLE
THOMAS

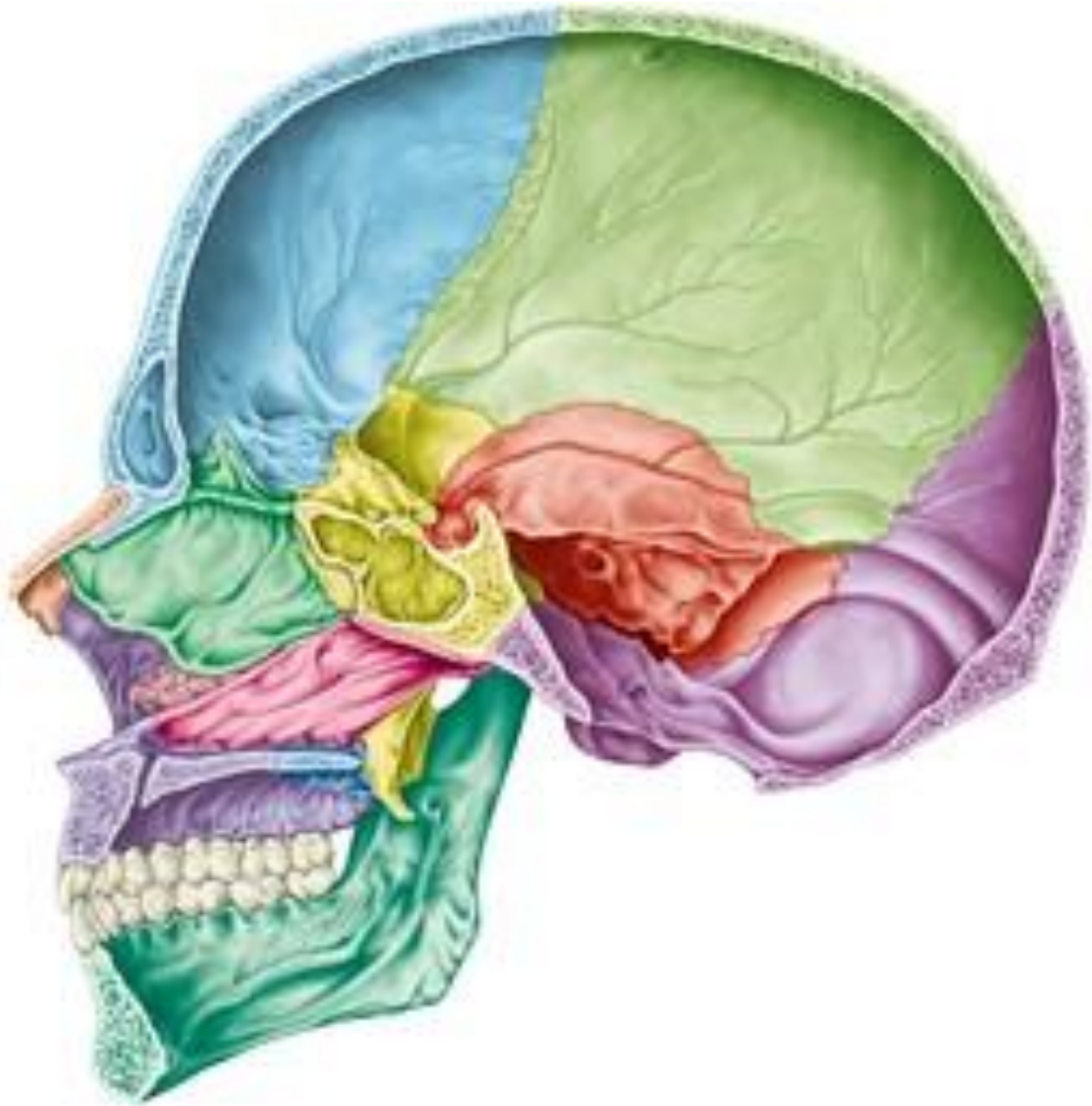

SAIL GP
AUS
SAIL GP
FRA
ORACLE
ROLEX
USA

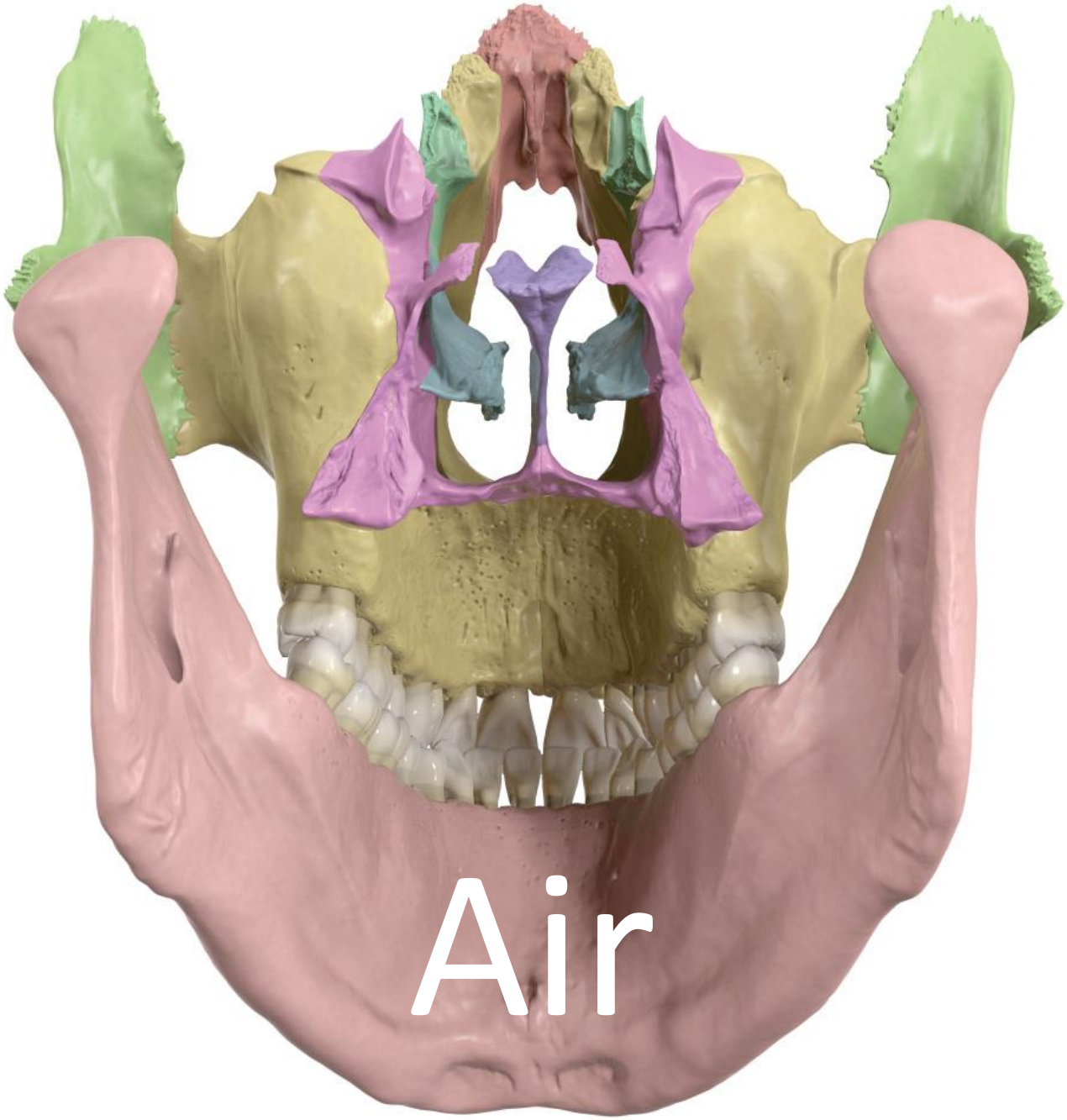
How Do We Enlarge This Empty Space?



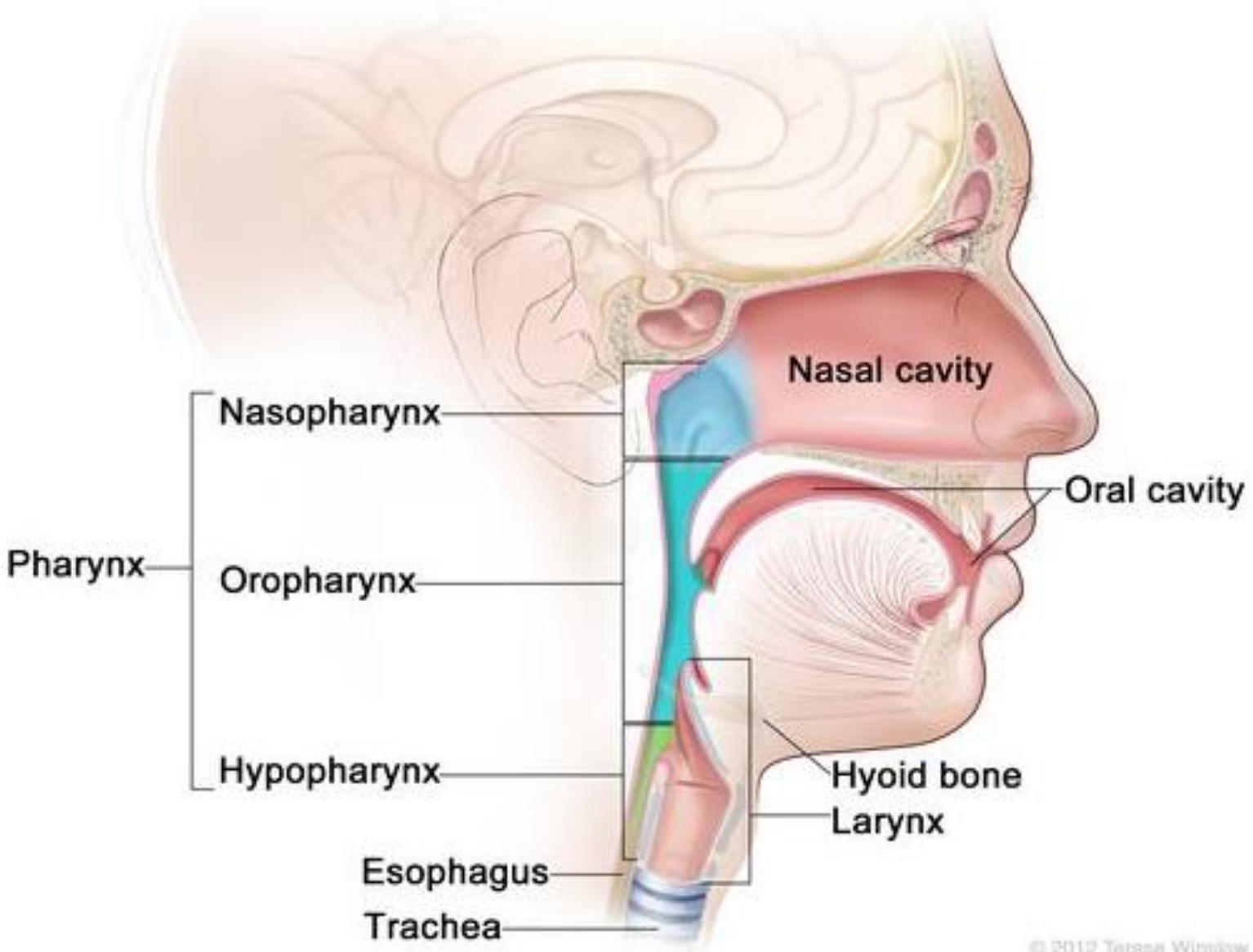


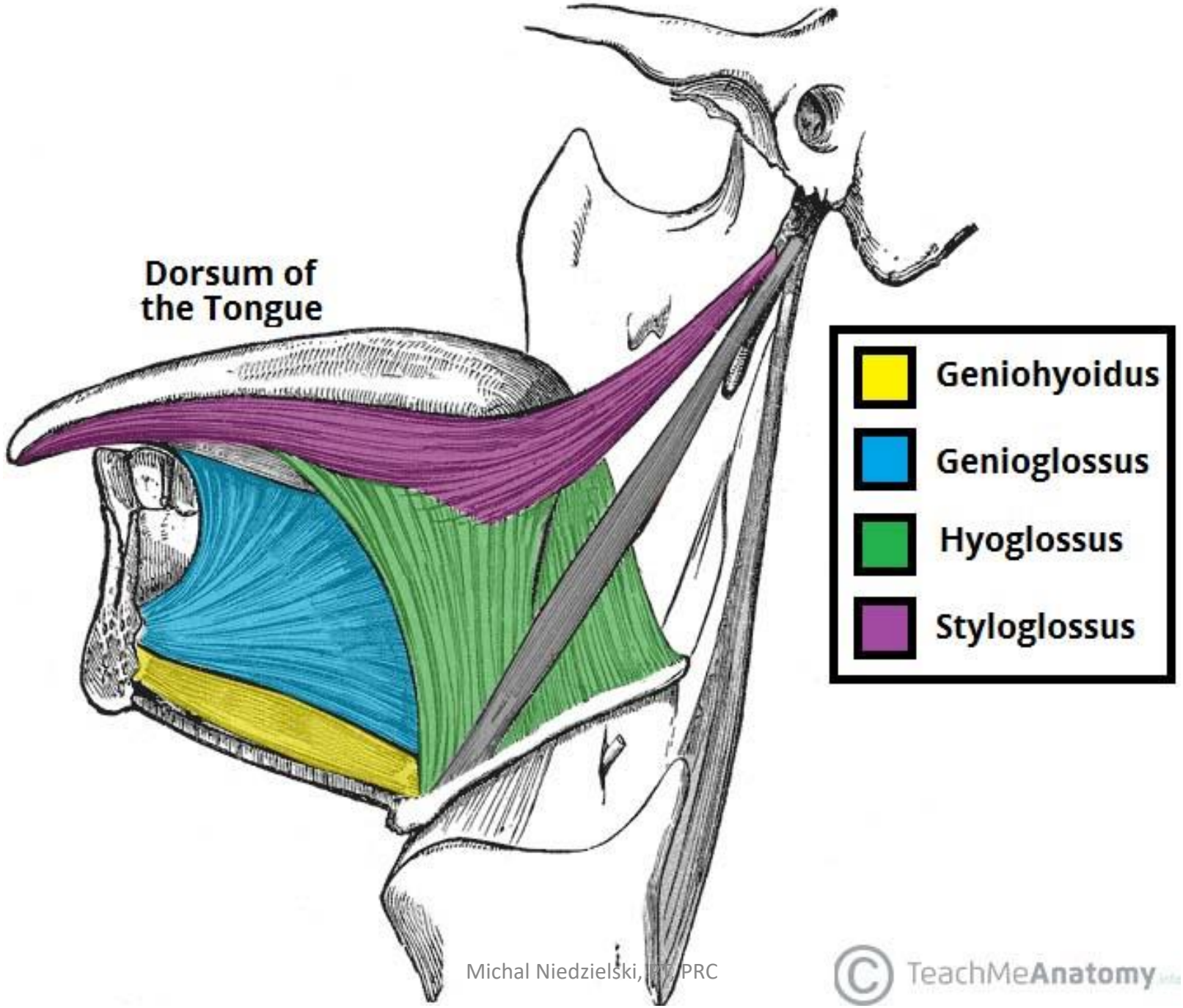
ANATOMY STANDARD


shutterstock.com · 1022262370

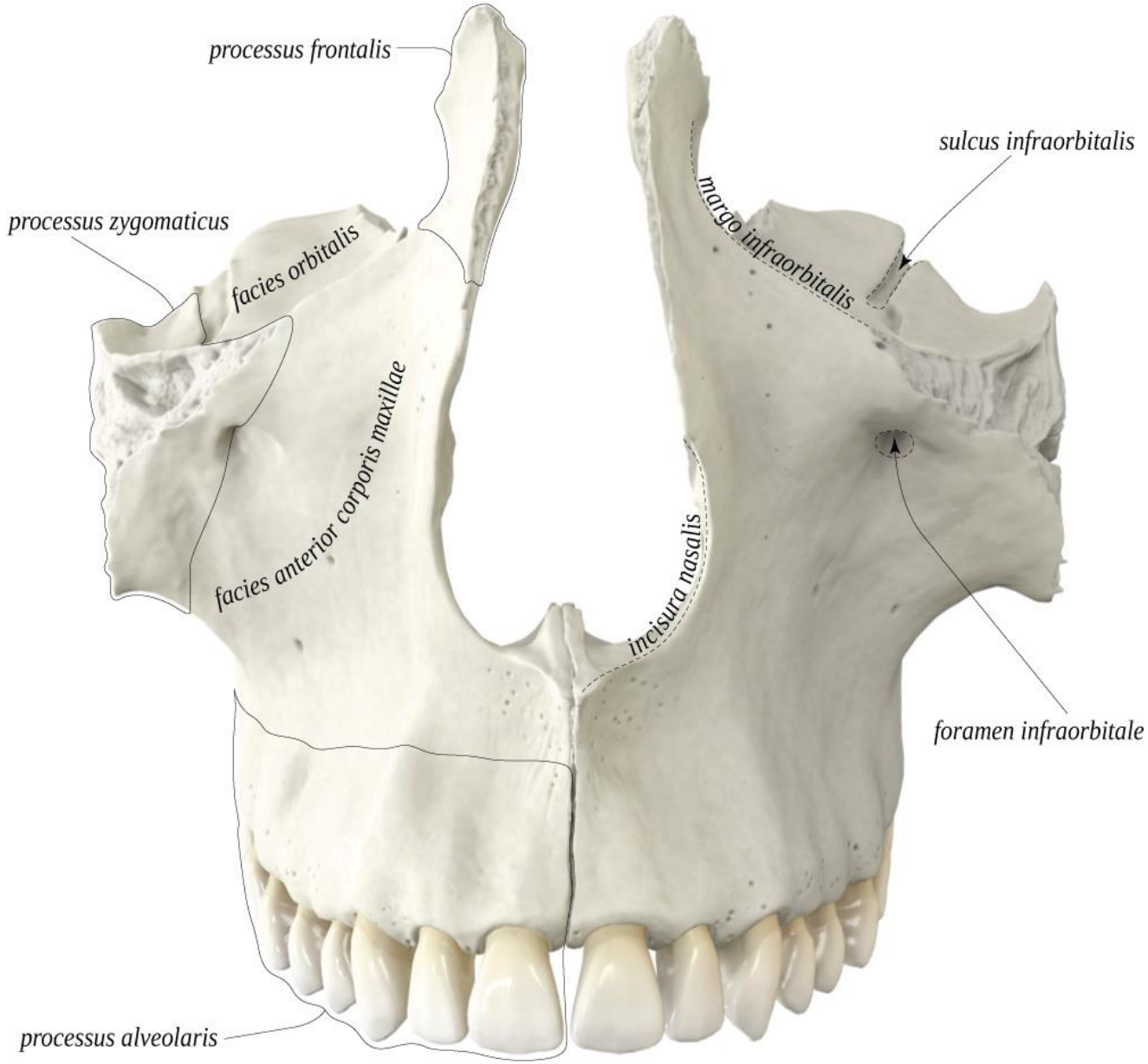


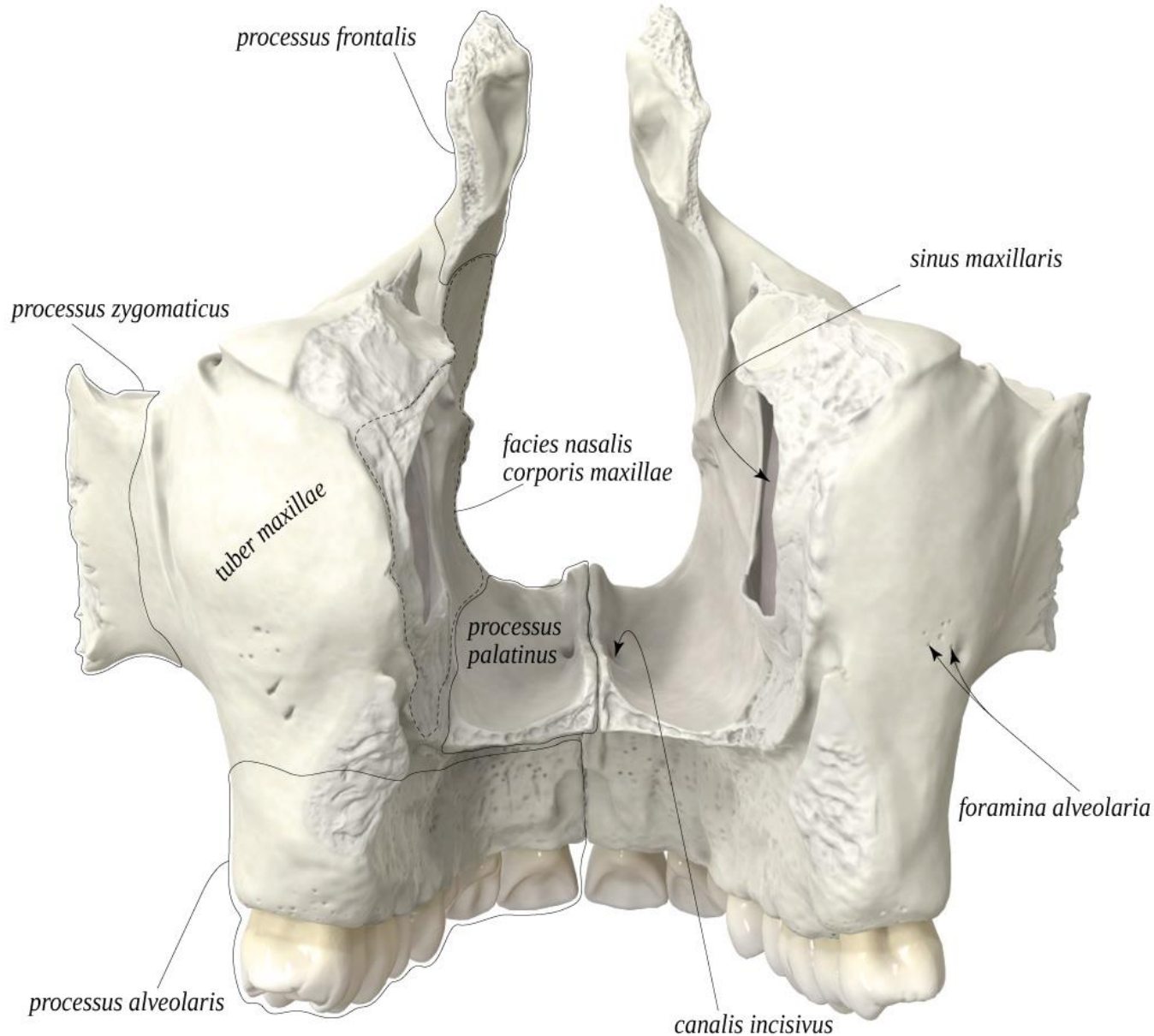
Anatomy of the Pharynx

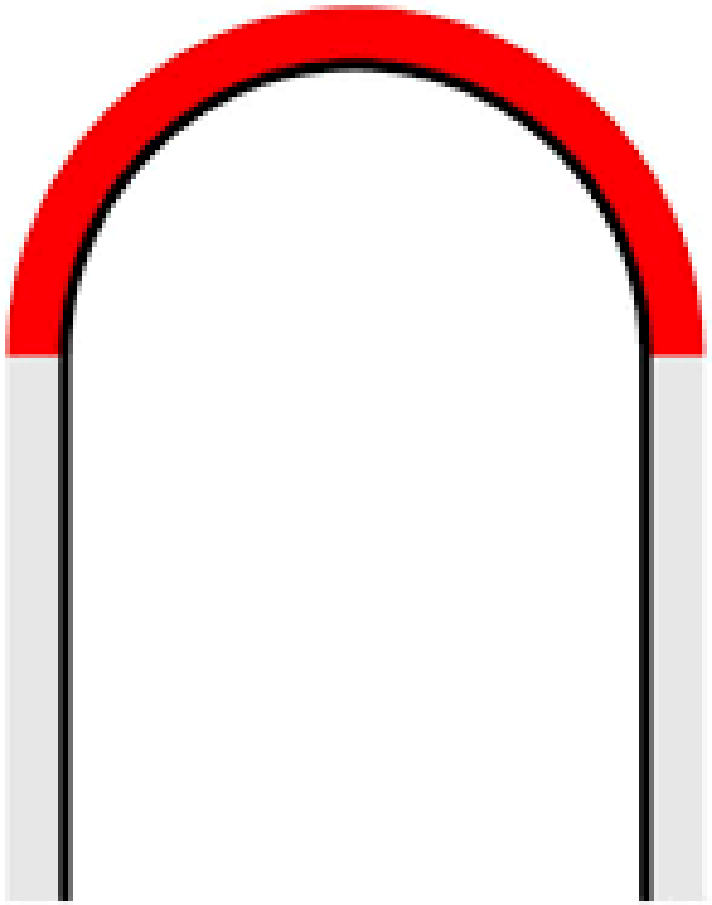




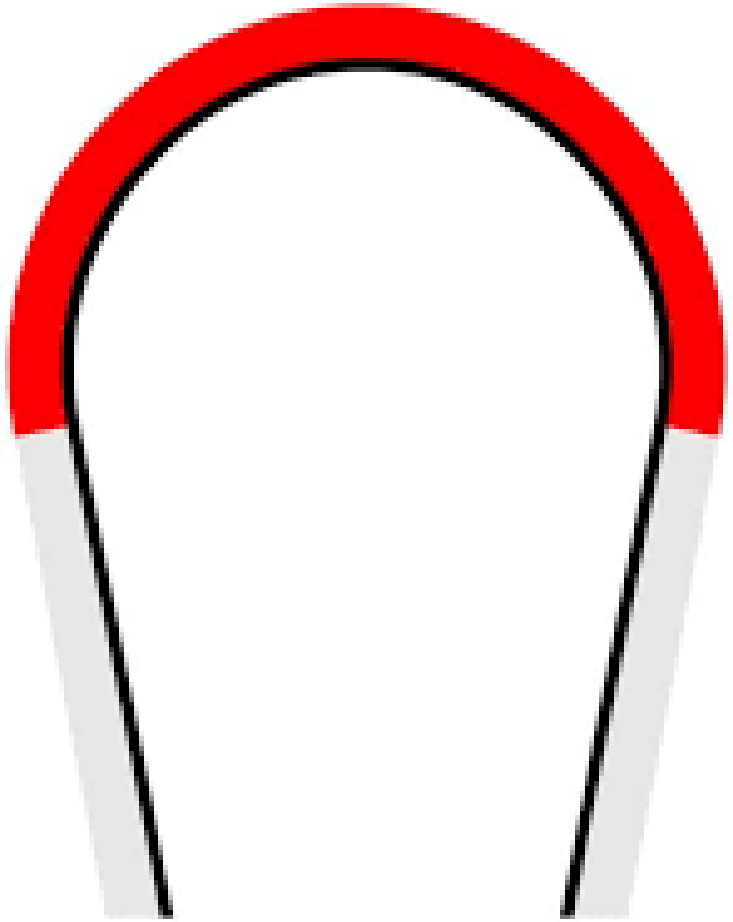
Maxilla – The Foundation



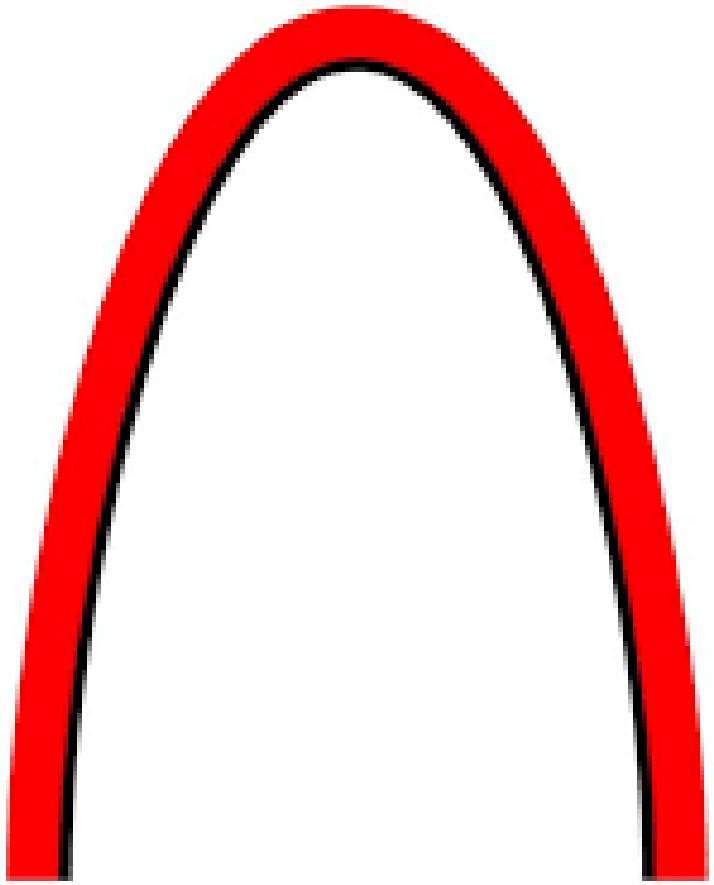




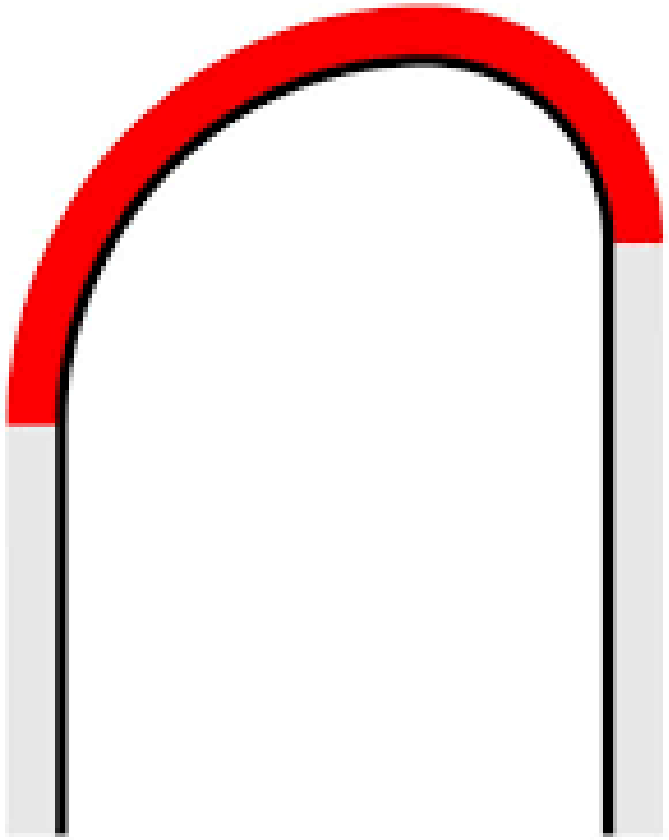
Round Arch



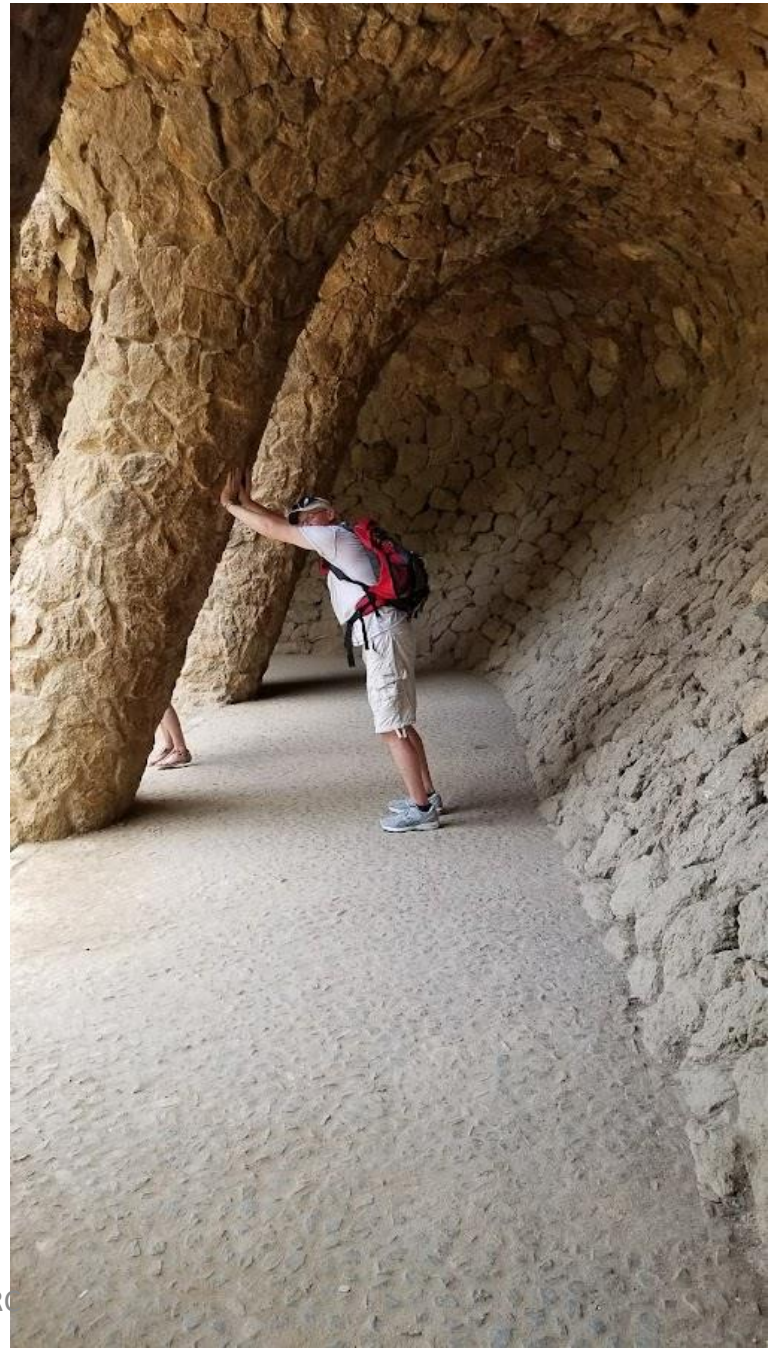
Horseshoe Arch

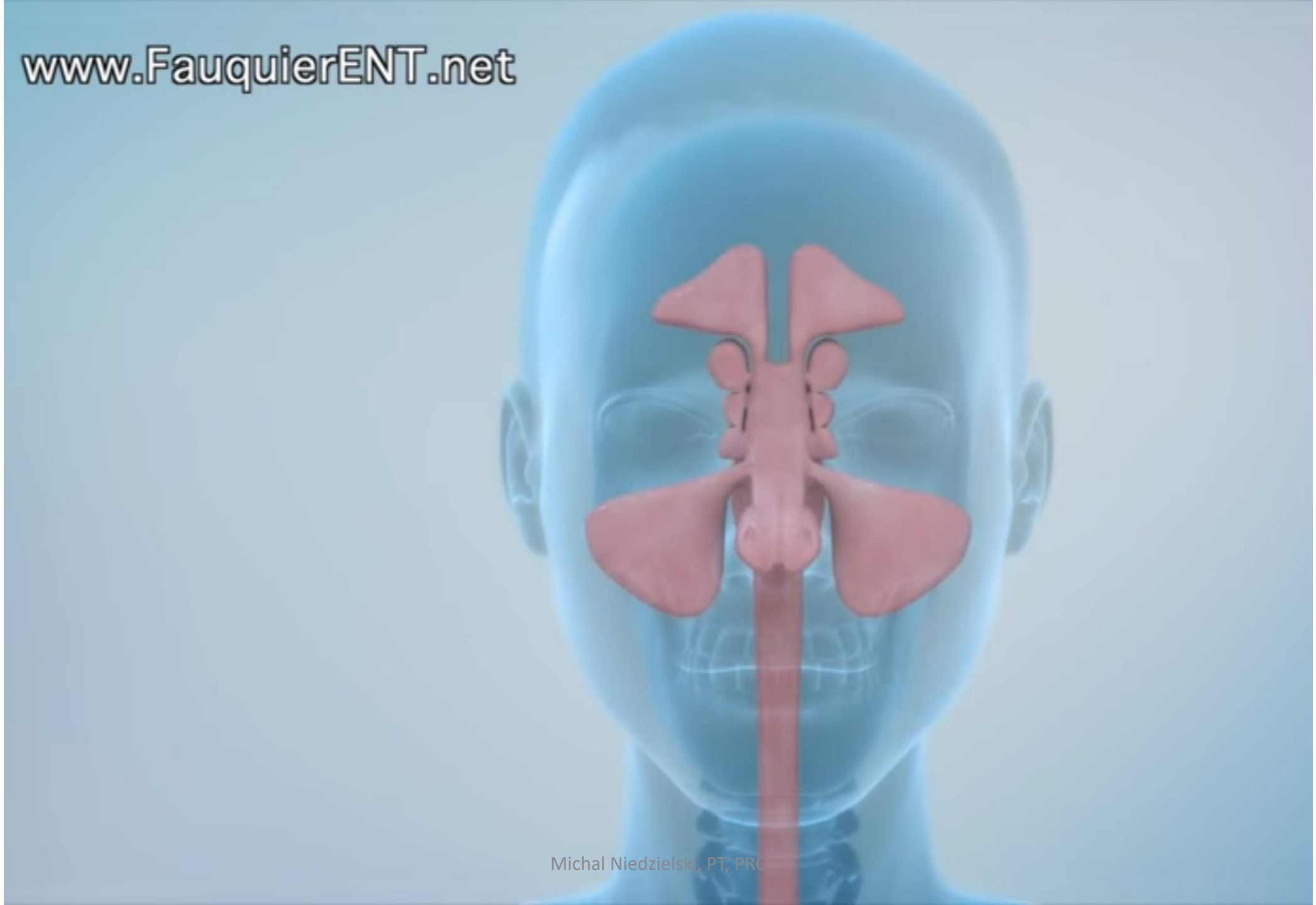


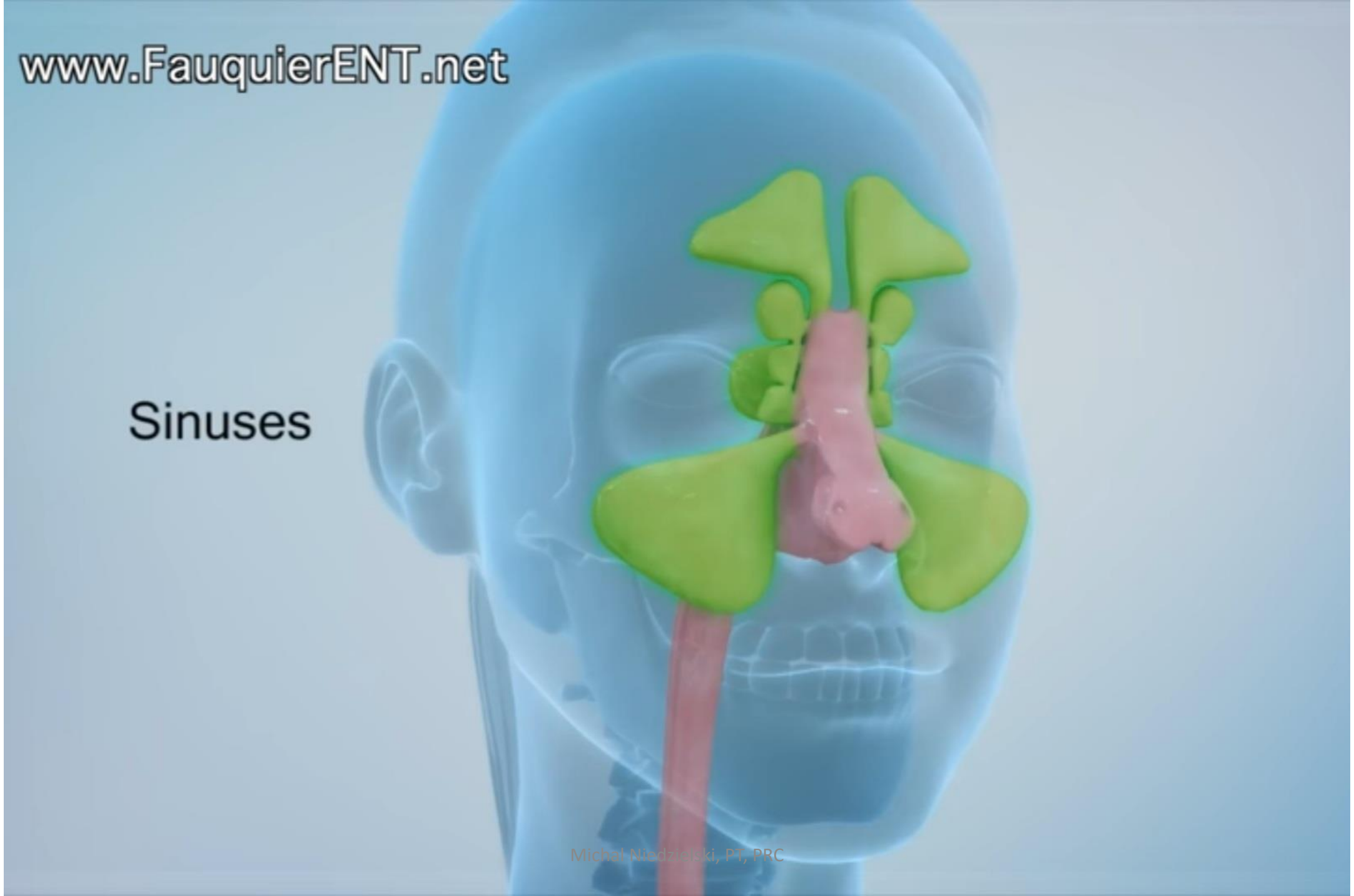
Parabolic Arch

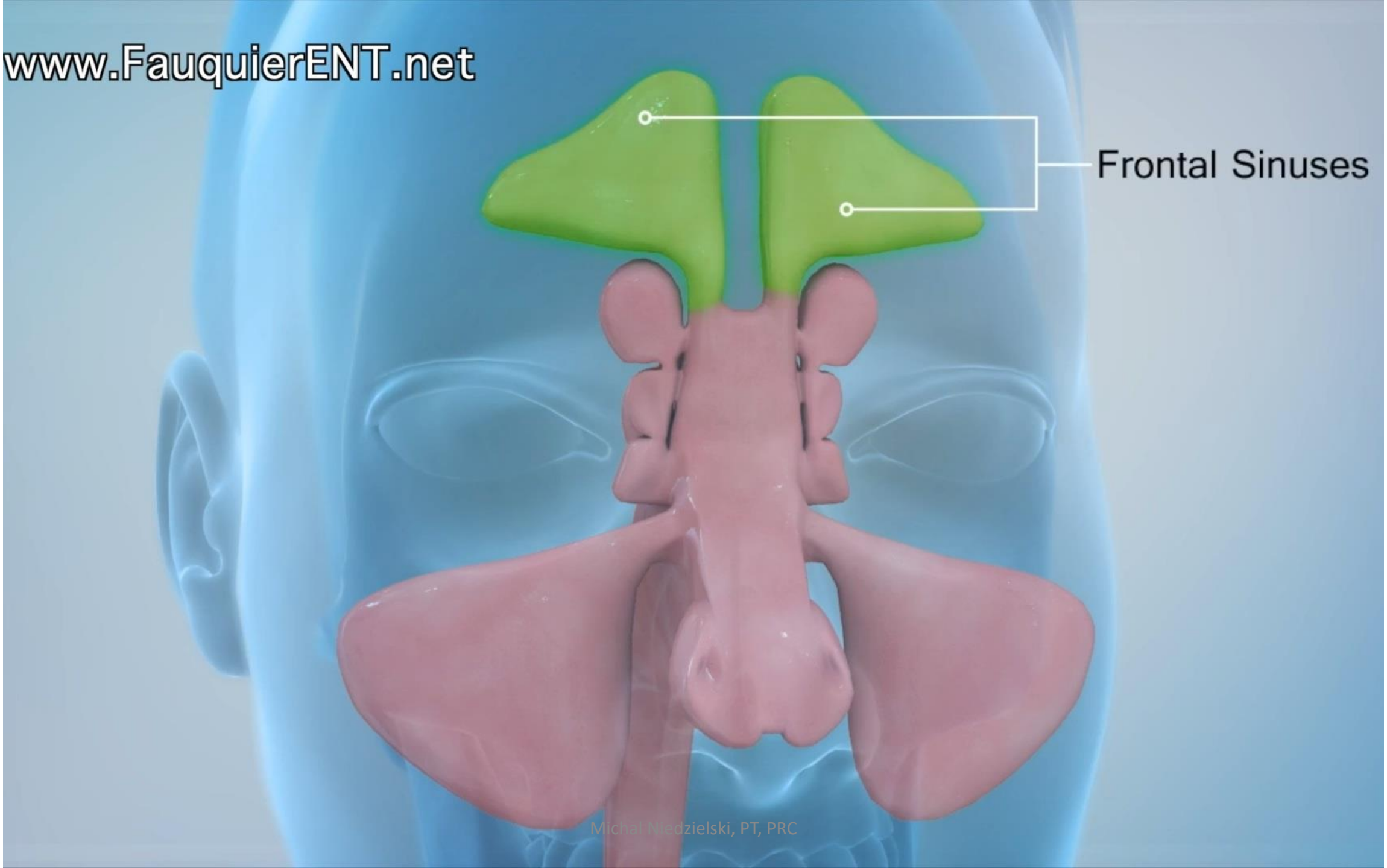


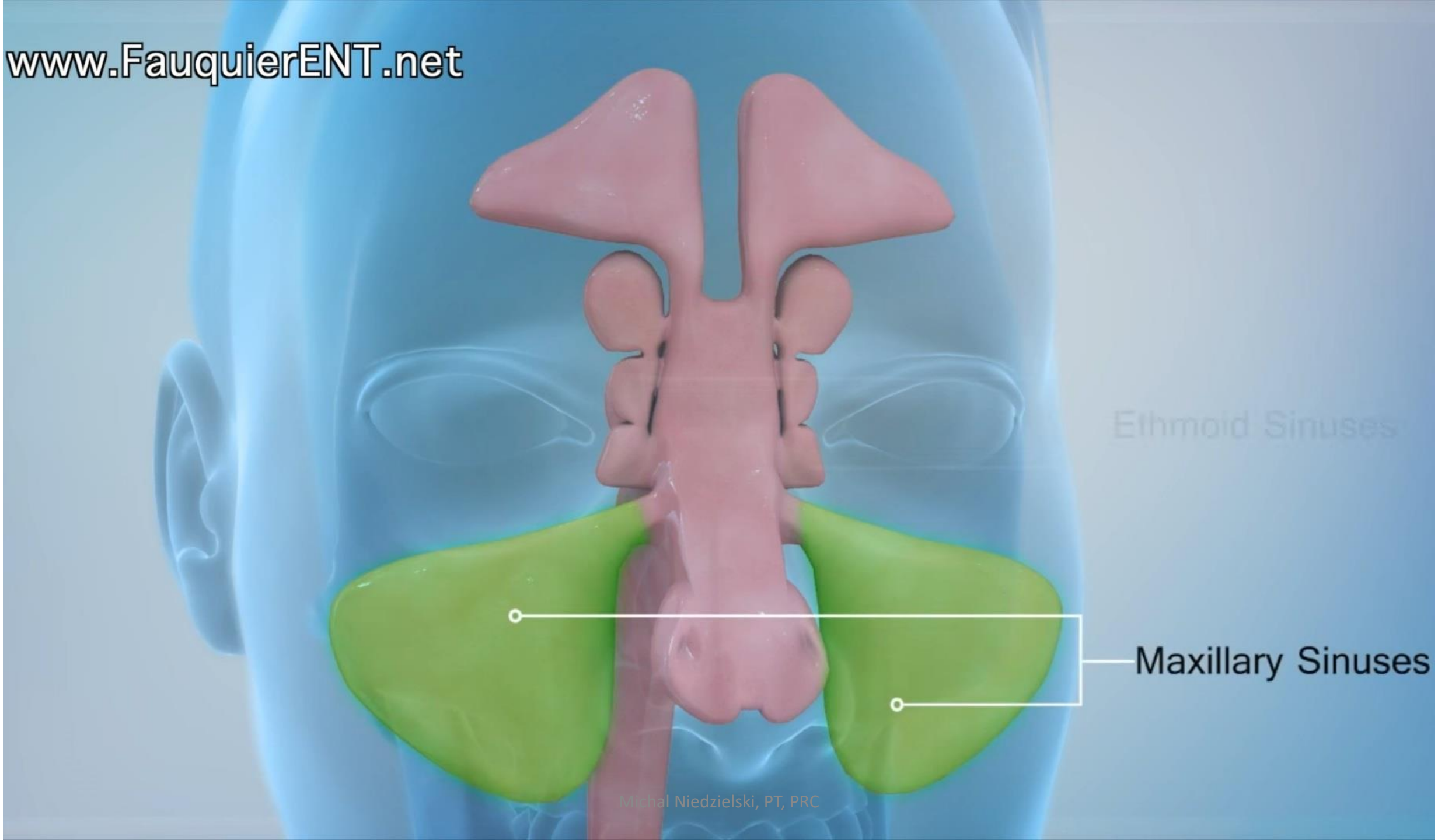
Round
Rampant Arch

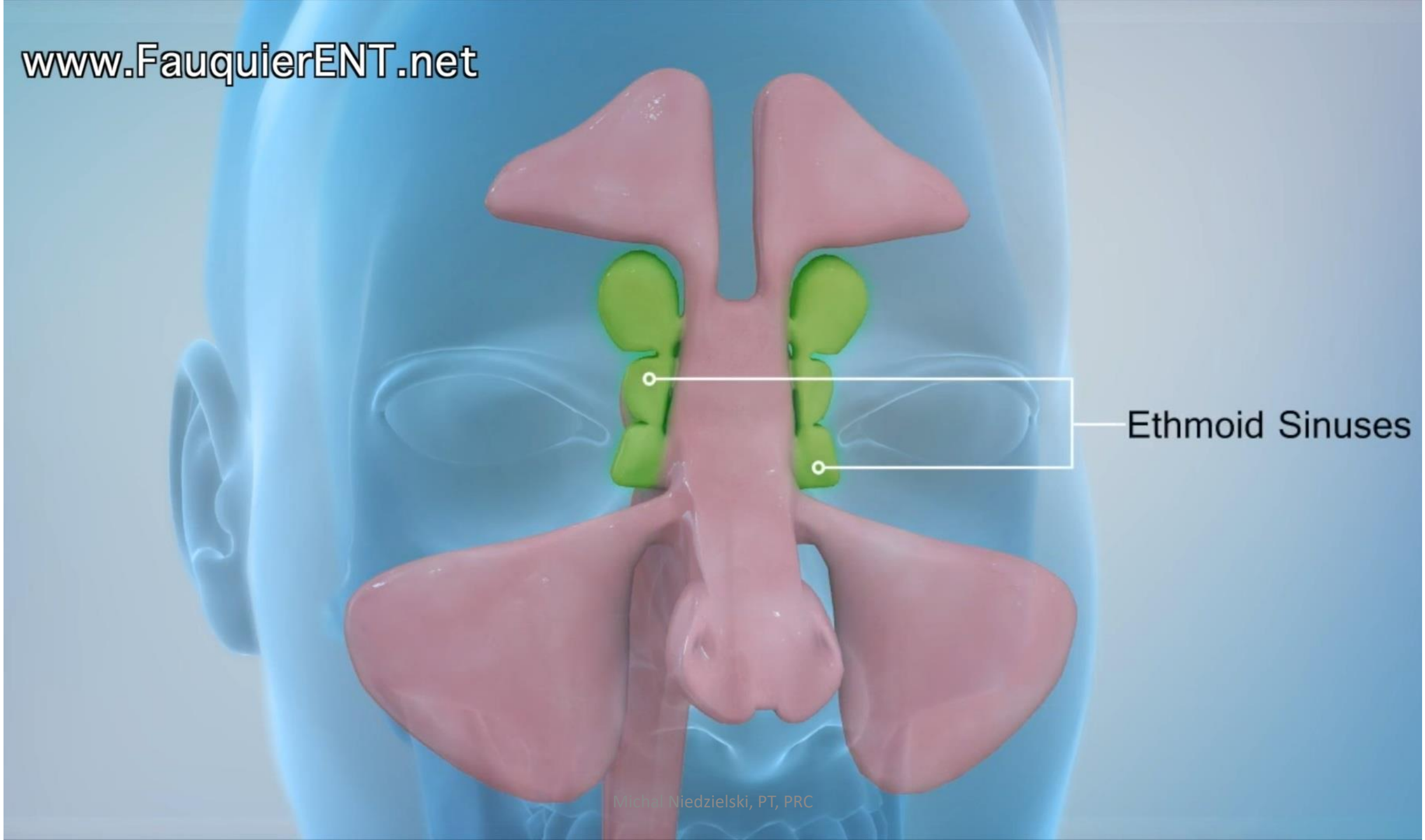


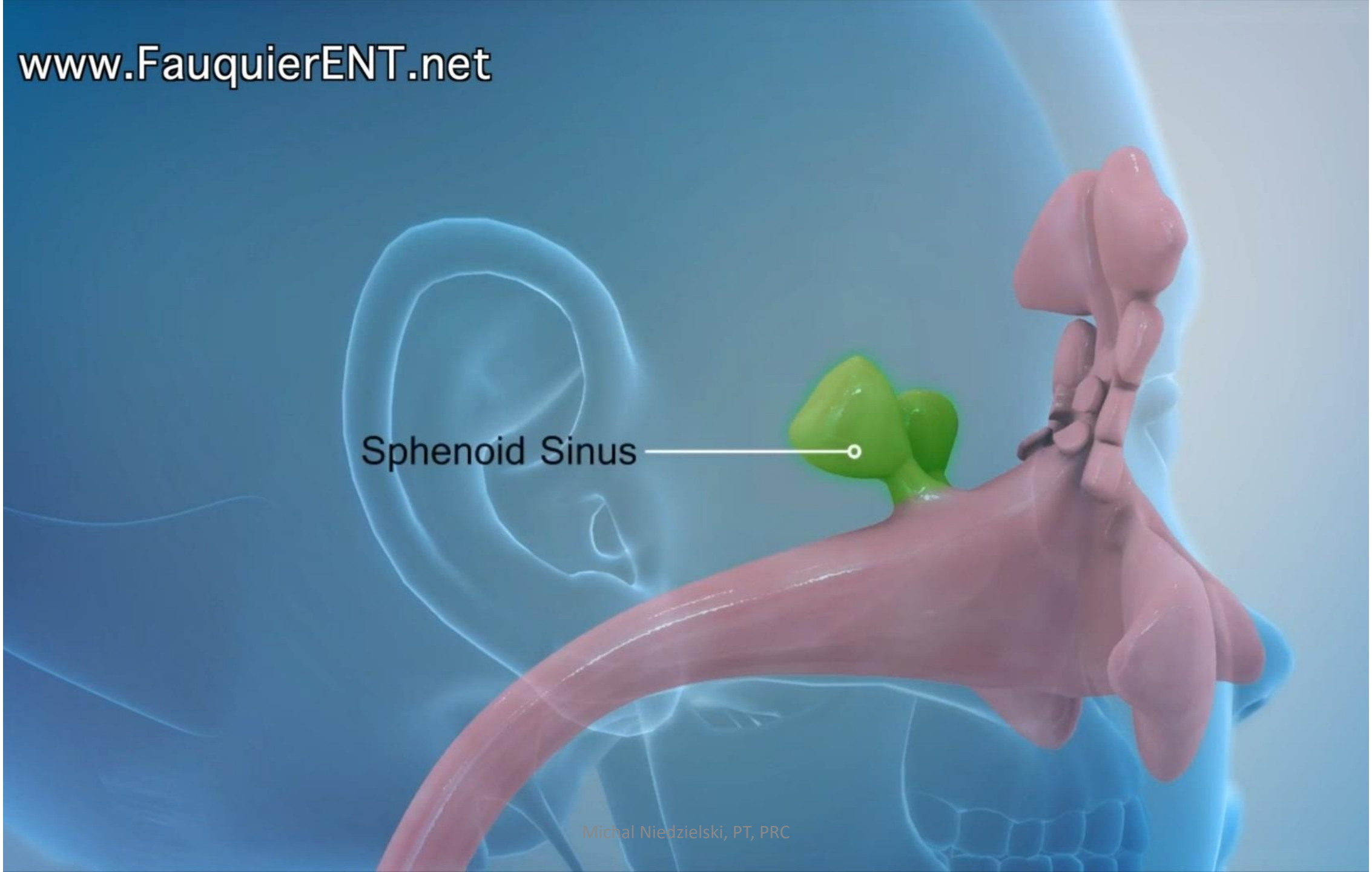

www.FauquierENT.net

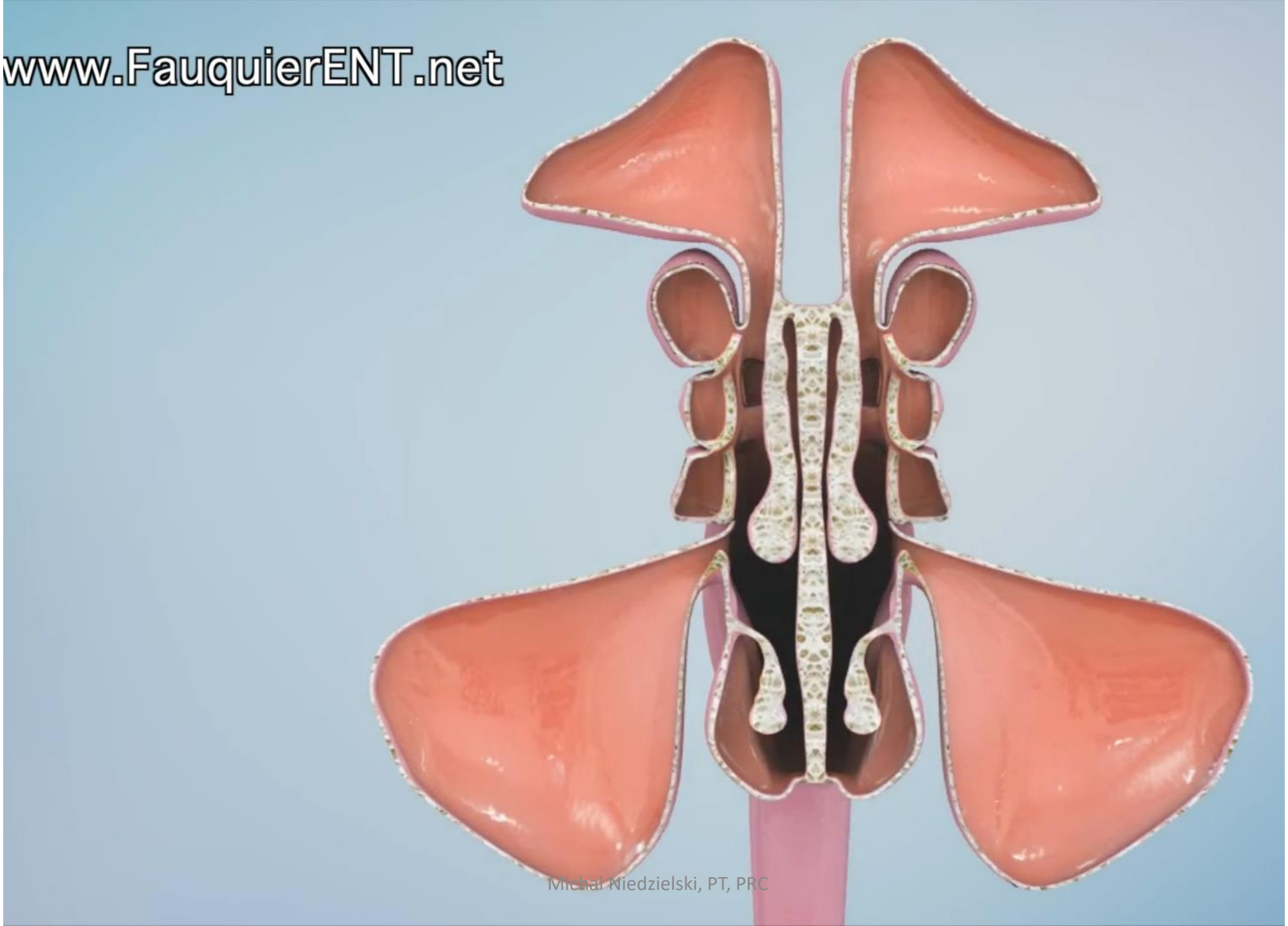


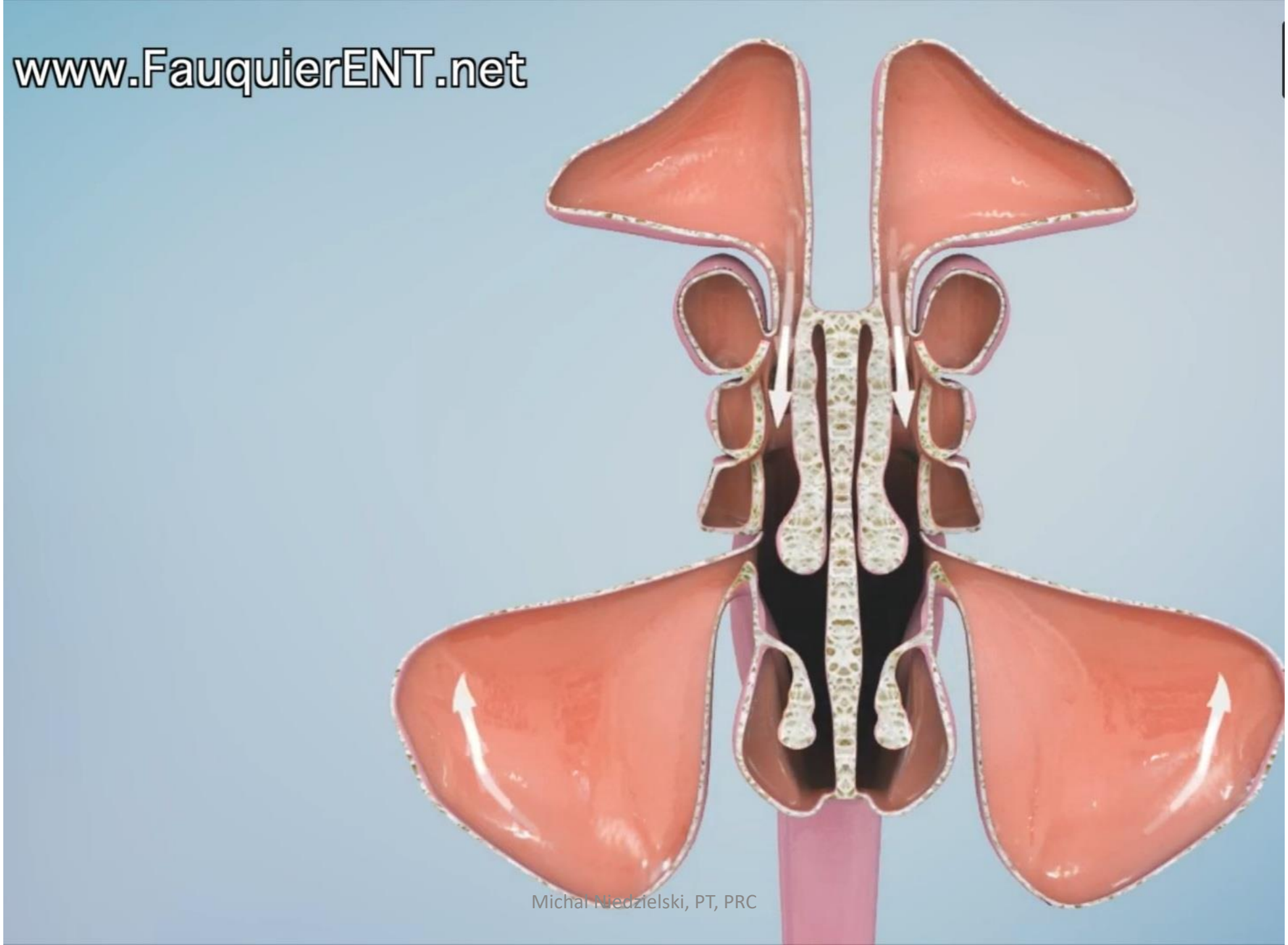

www.FauquierENT.net
Frontal Sinuses
Michal Niedzielski, PT, PRC


www.FauquierENT.net
Ethmoid Sinuses
Maxillary Sinuses
Michal Niedzielski, PT, PRC

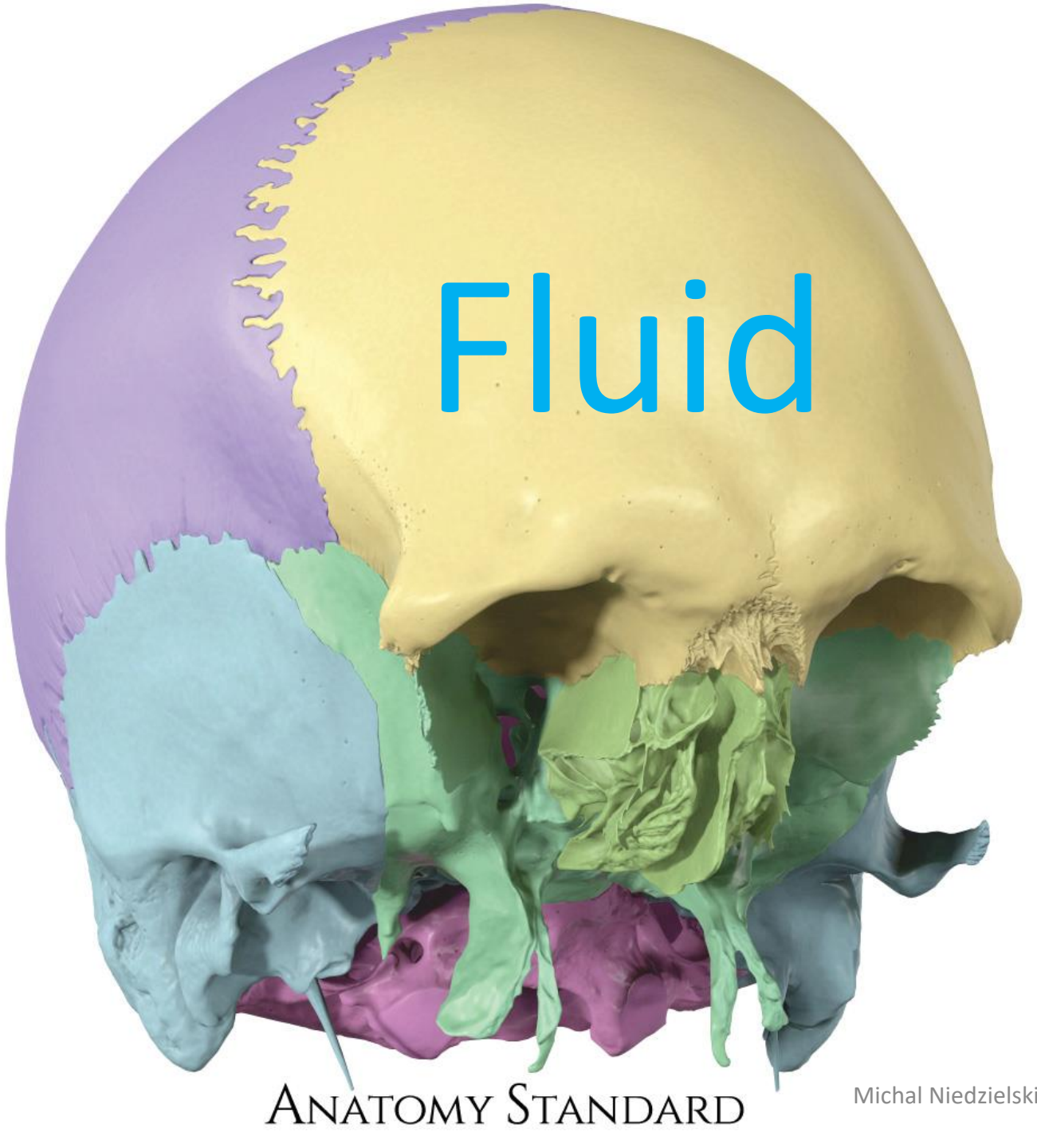

www.FauquierENT.net
Ethmoid Sinuses
Michal Niedzielski, PT, PRC


www.FauquierENT.net
Sphenoid Sinus

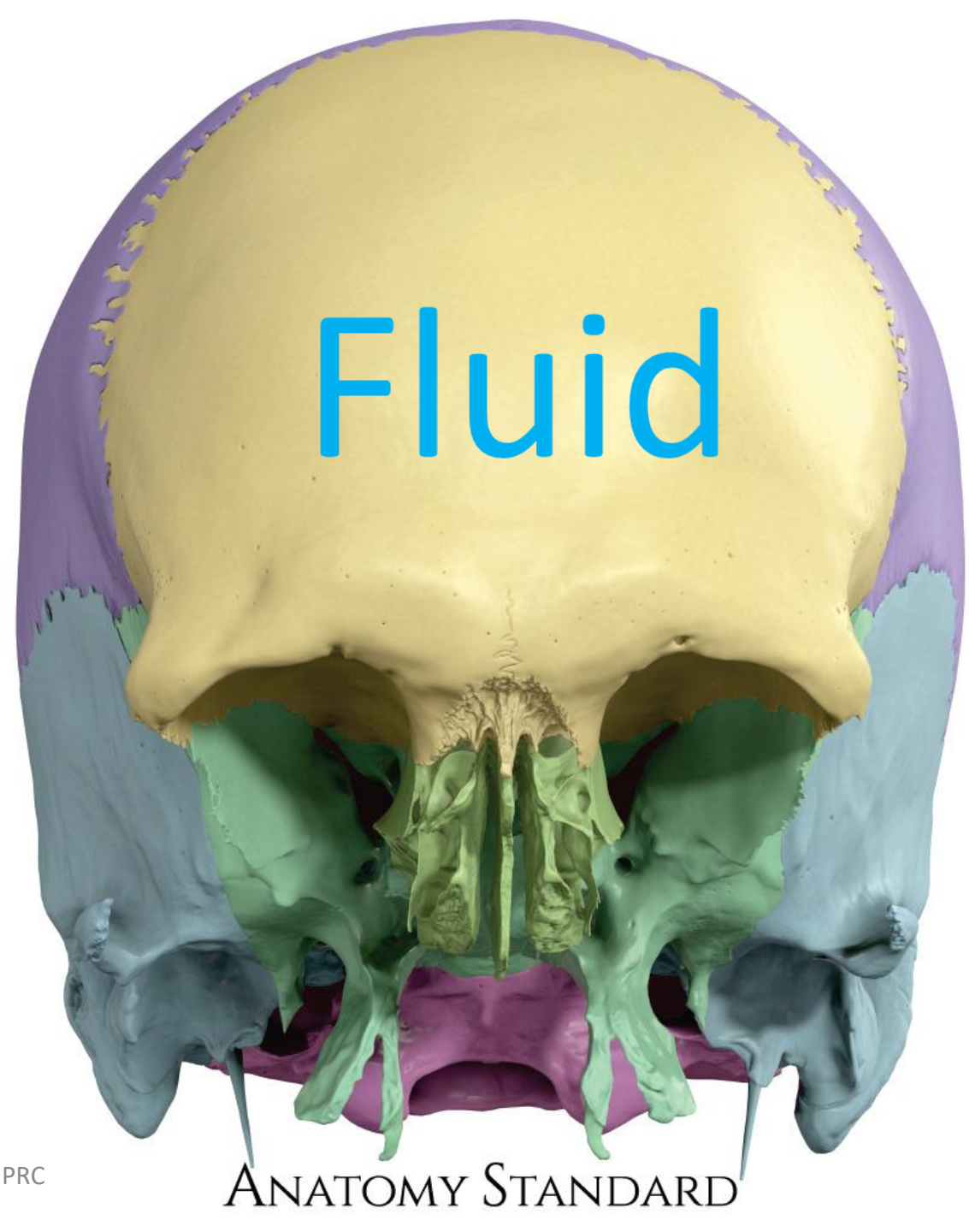

www.FauquierENT.net



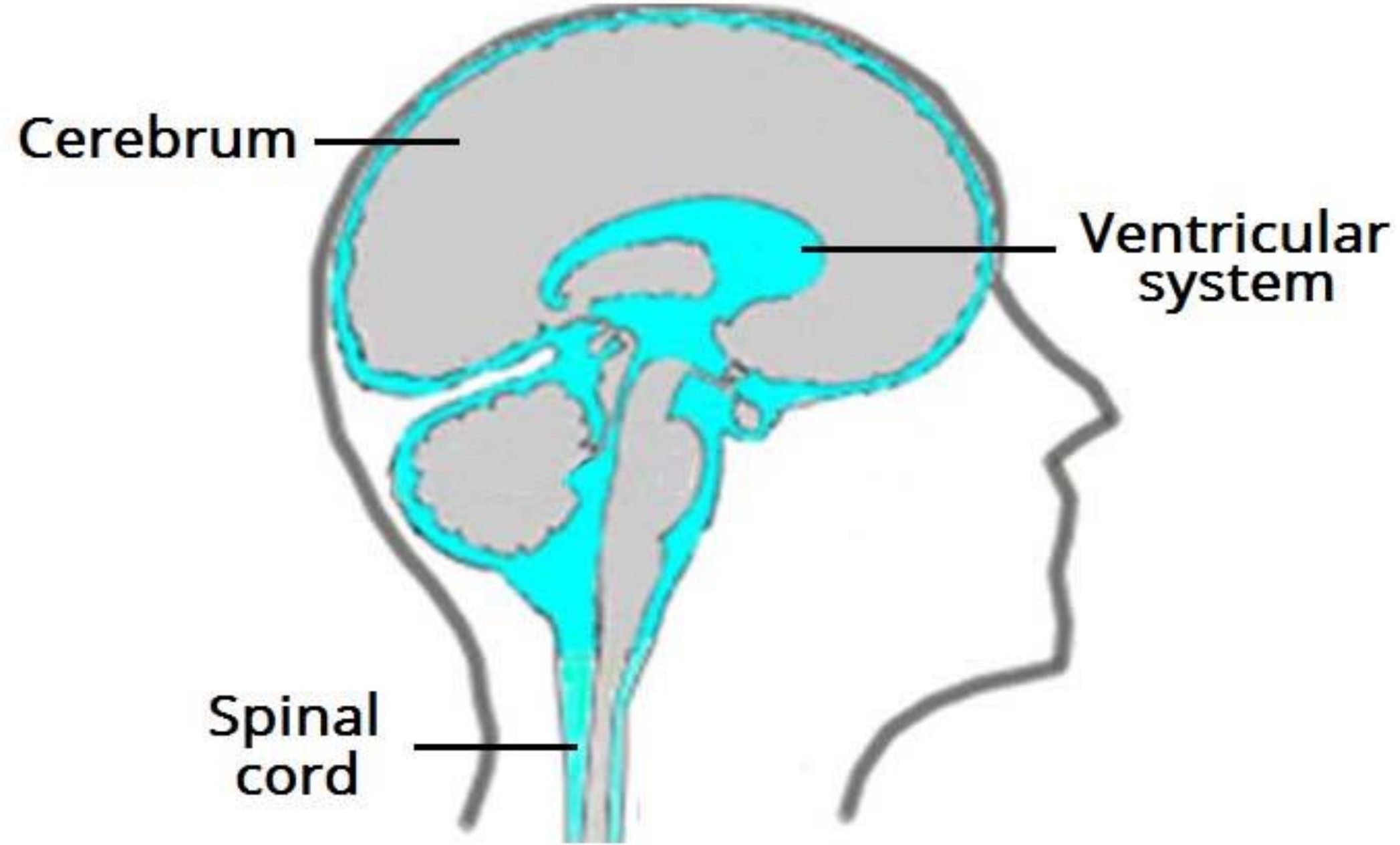
Michal Niedzielski, PT, PRC

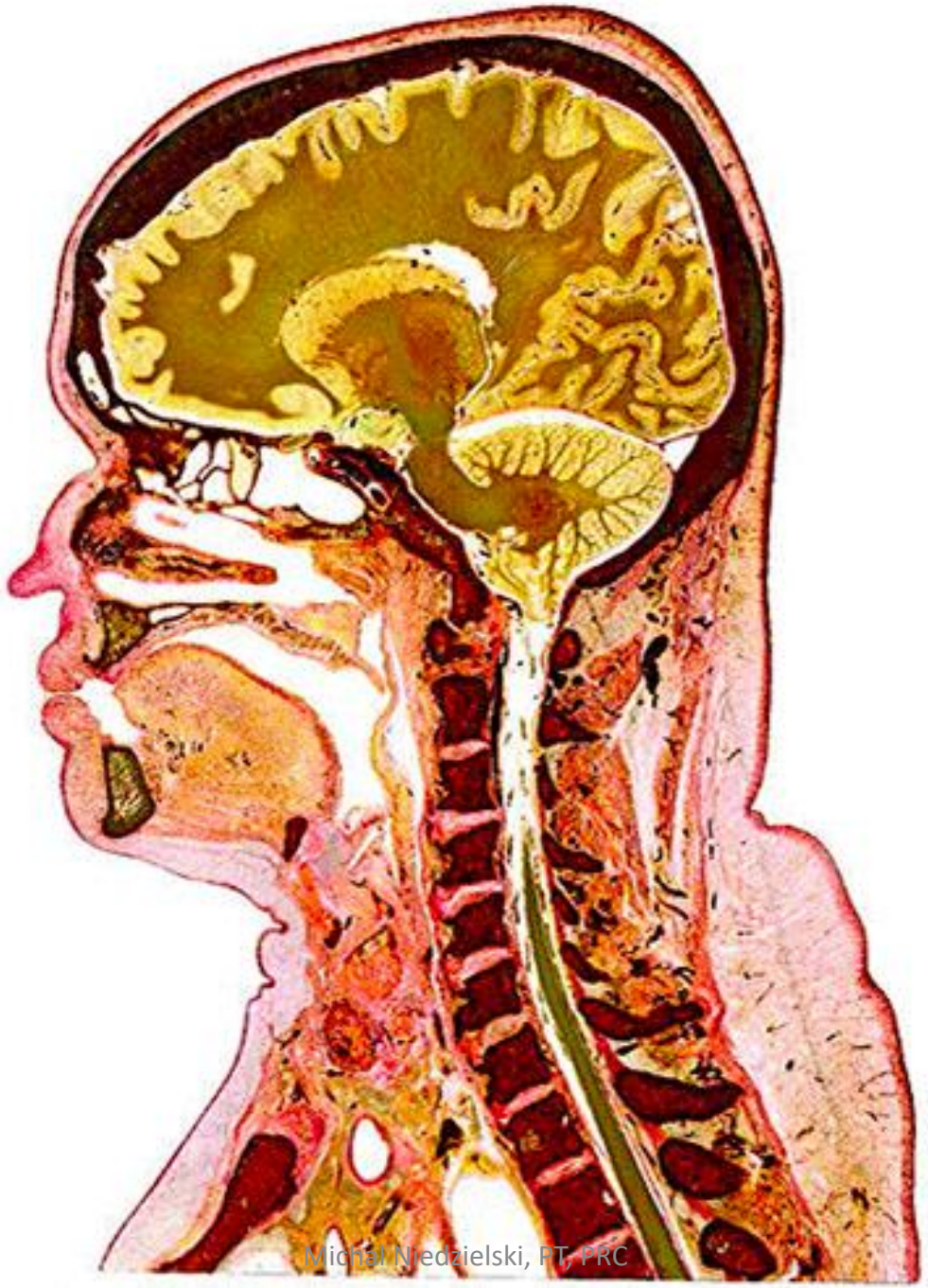


Michal Niedzielski, PT, PRC



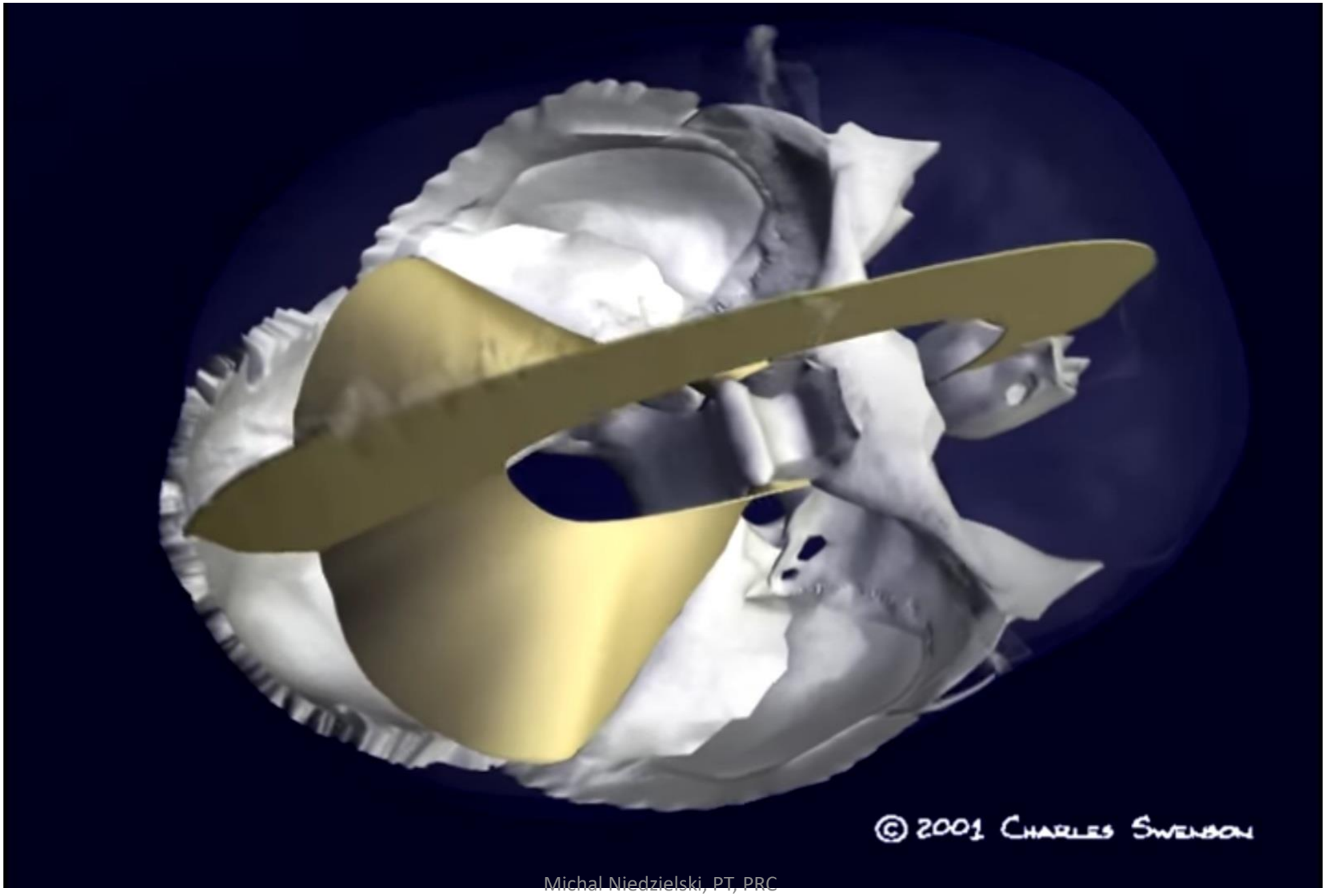
CSF

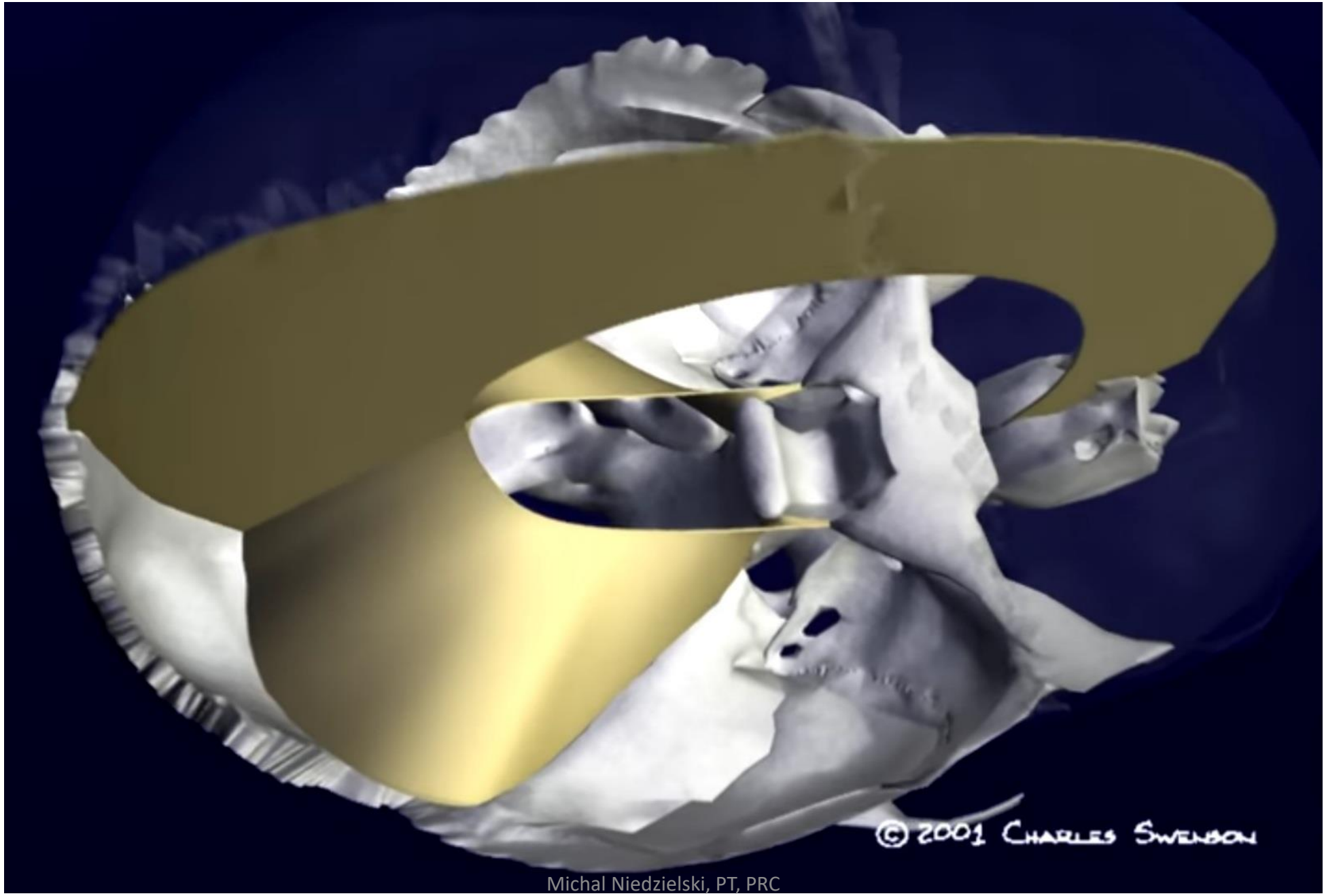


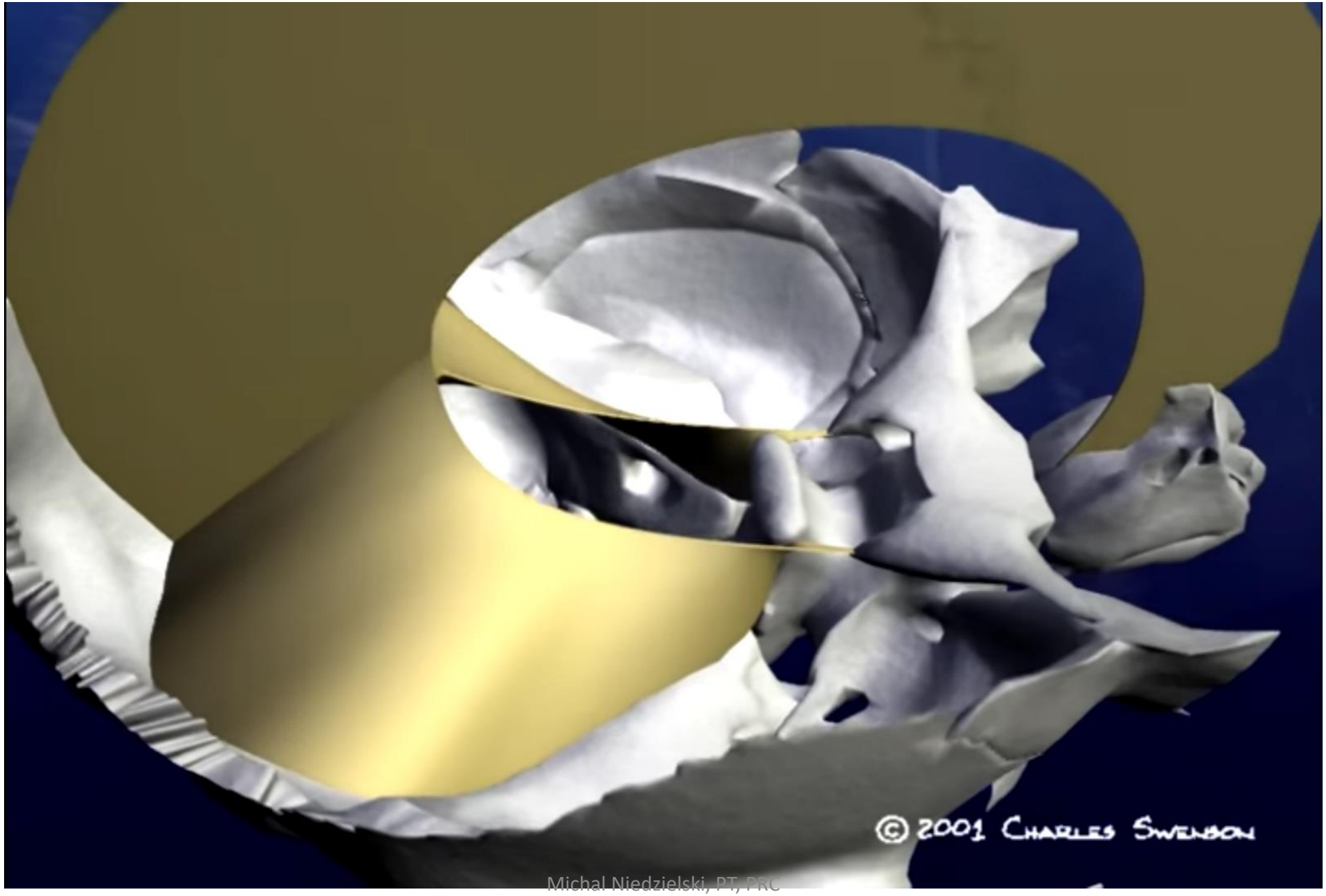


Blood Circulation

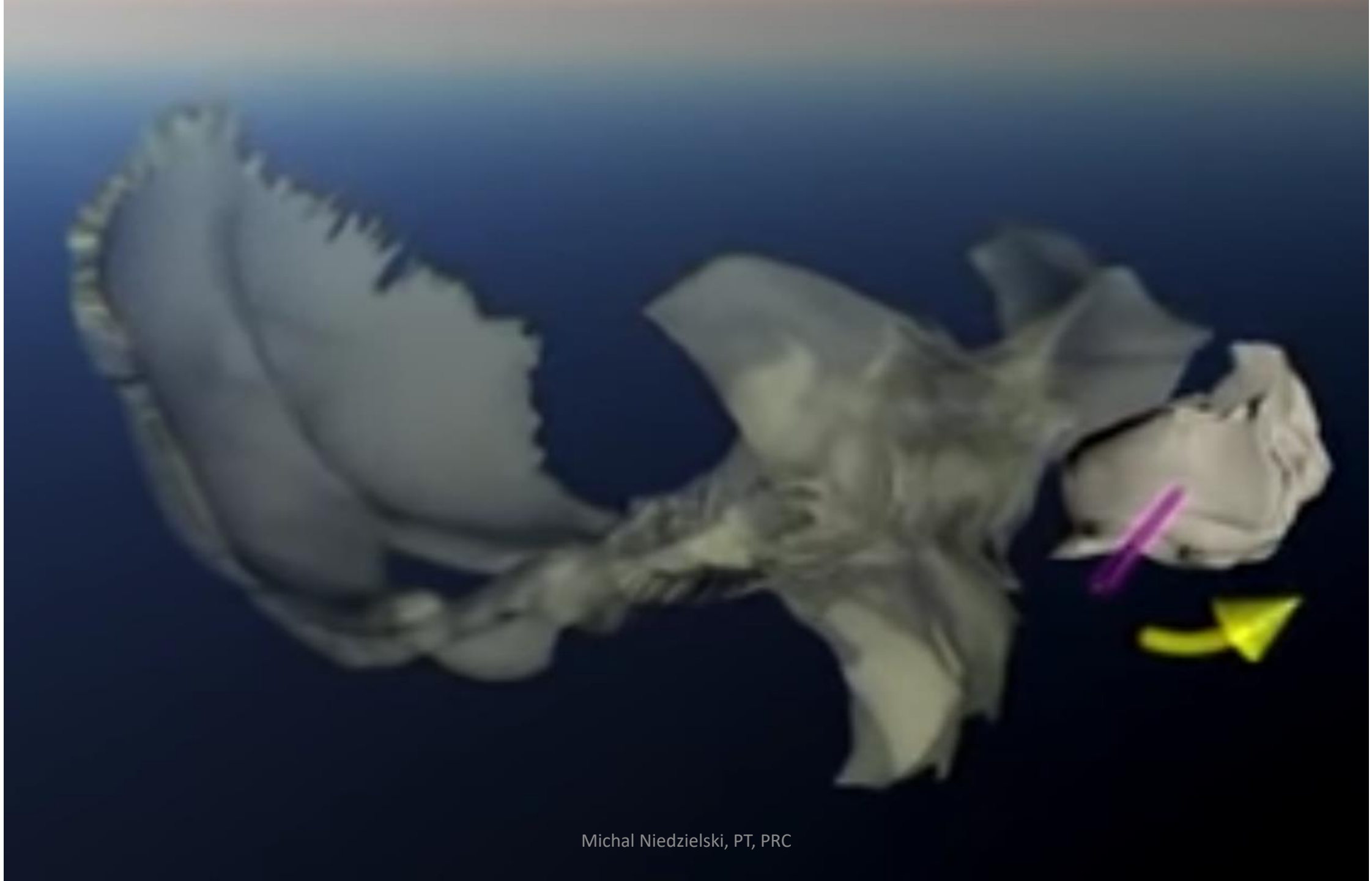
What Holds It Together?


© 2001 Charles Swenson

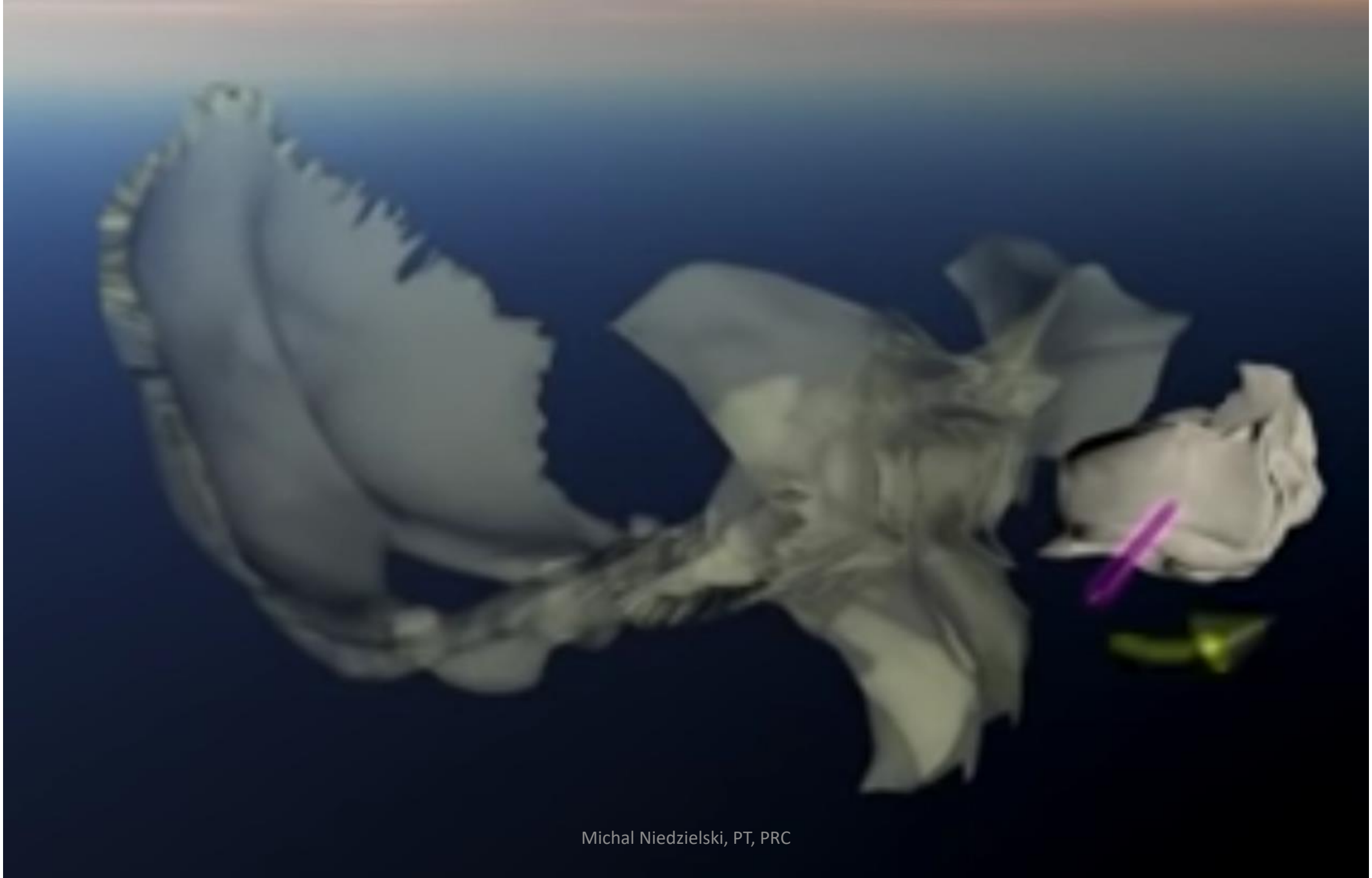

© 2001 Charles Swenson


© 2001 CHARLES SWENSON

Michal Niedzielski, PT, PRC



Michal Niedzielski, PT, PRC



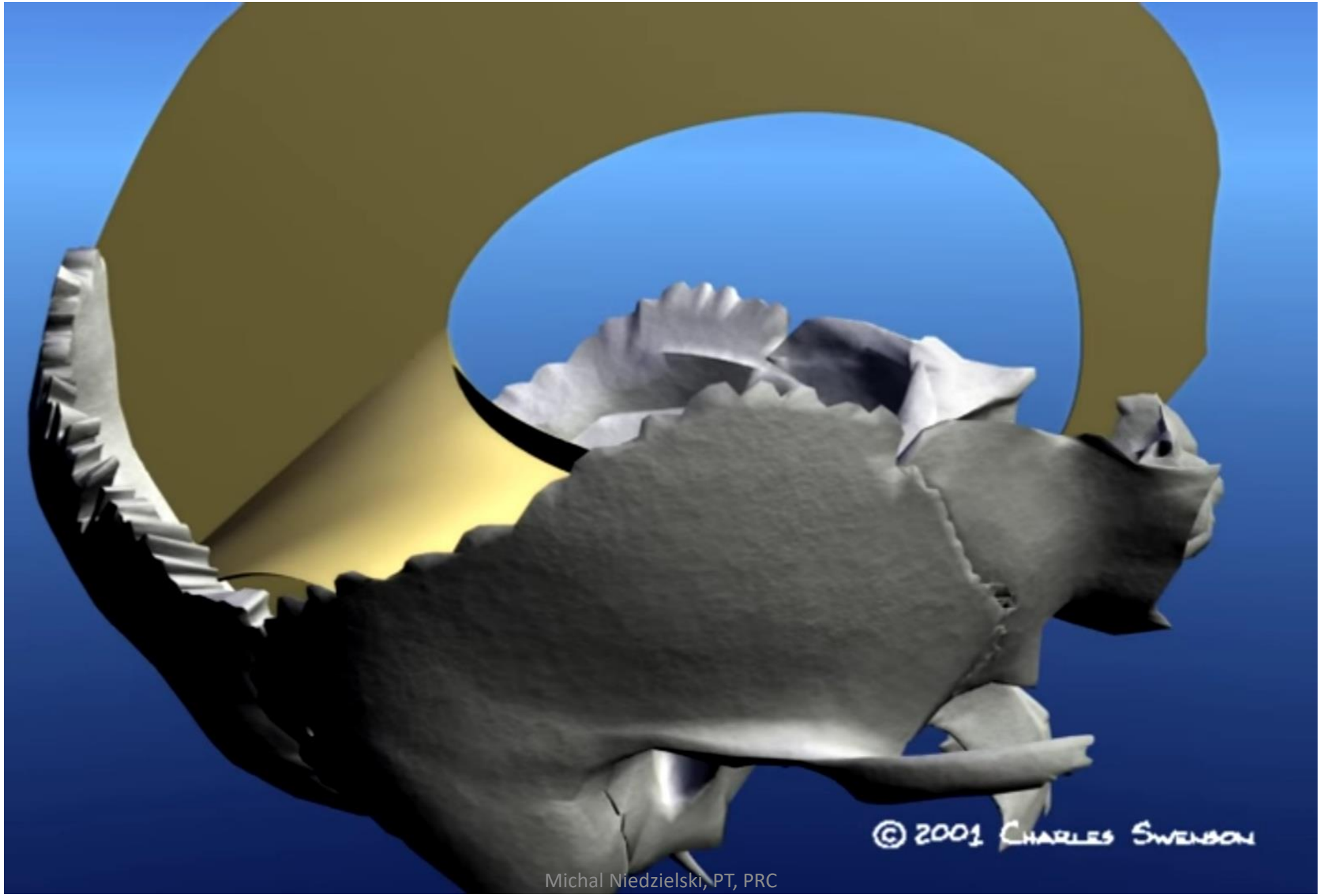
Michal Niedzielski, PT, PRC

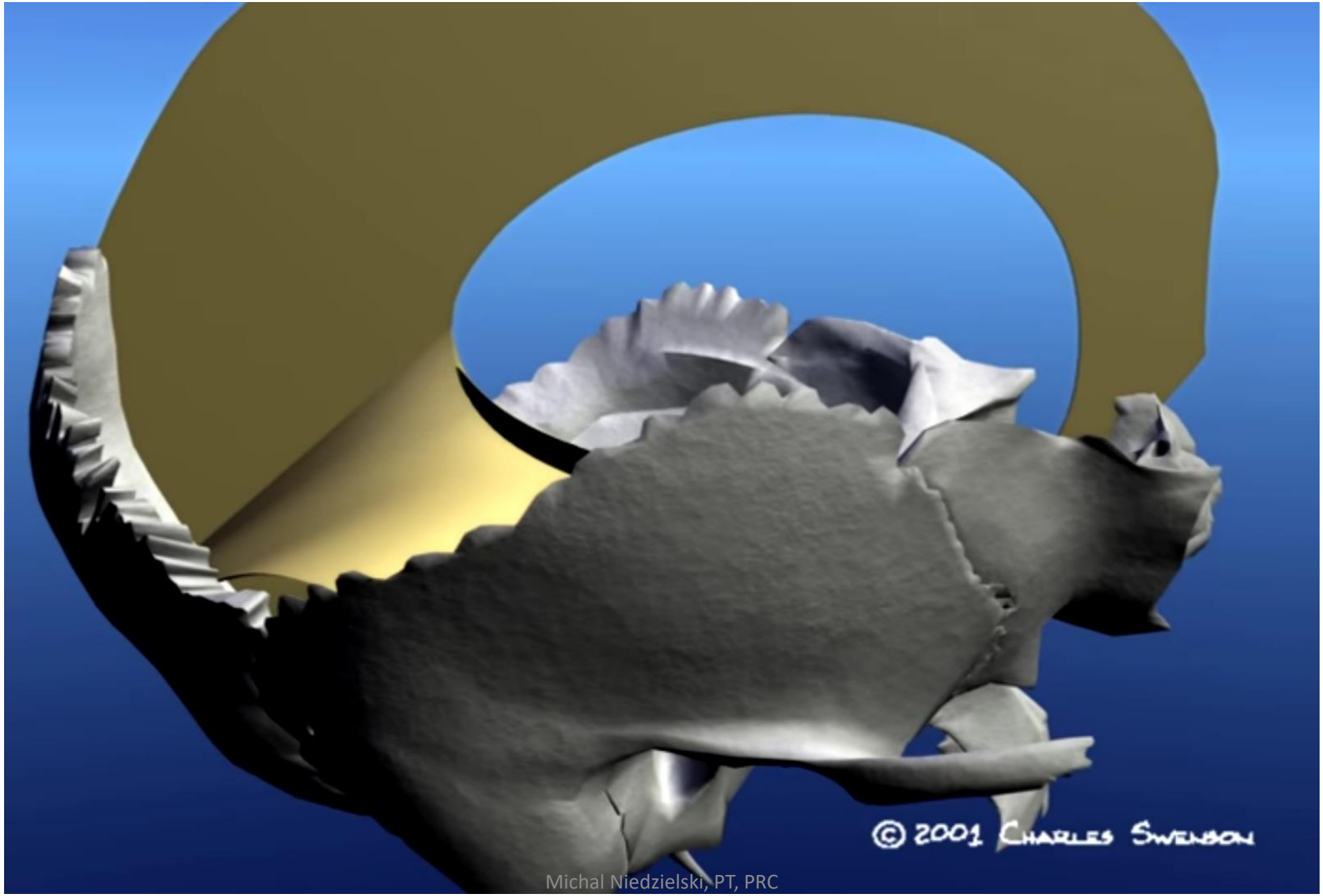

Michał Niedzielski, PT, PRC

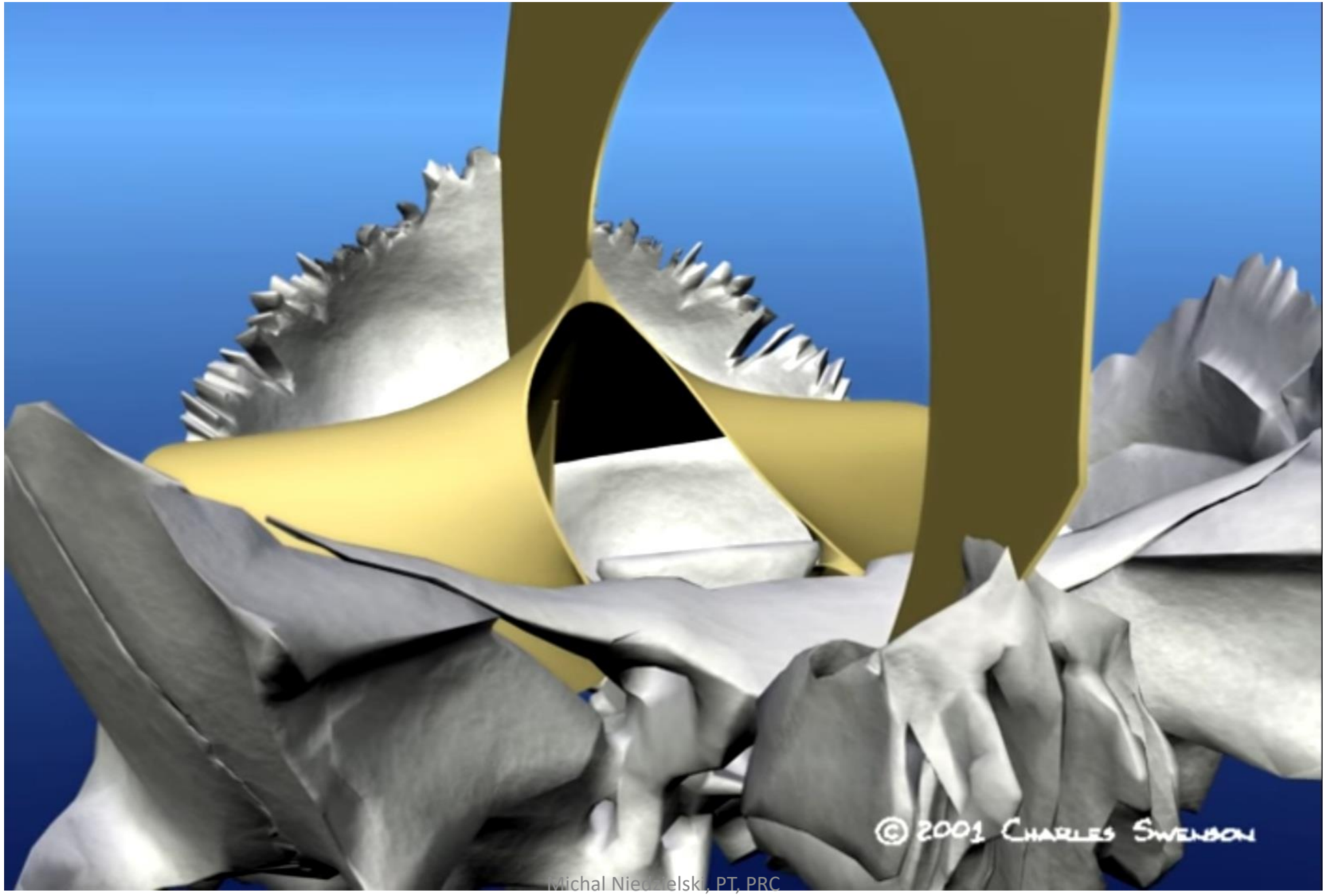
Michal Niedzielski, PT, PRC

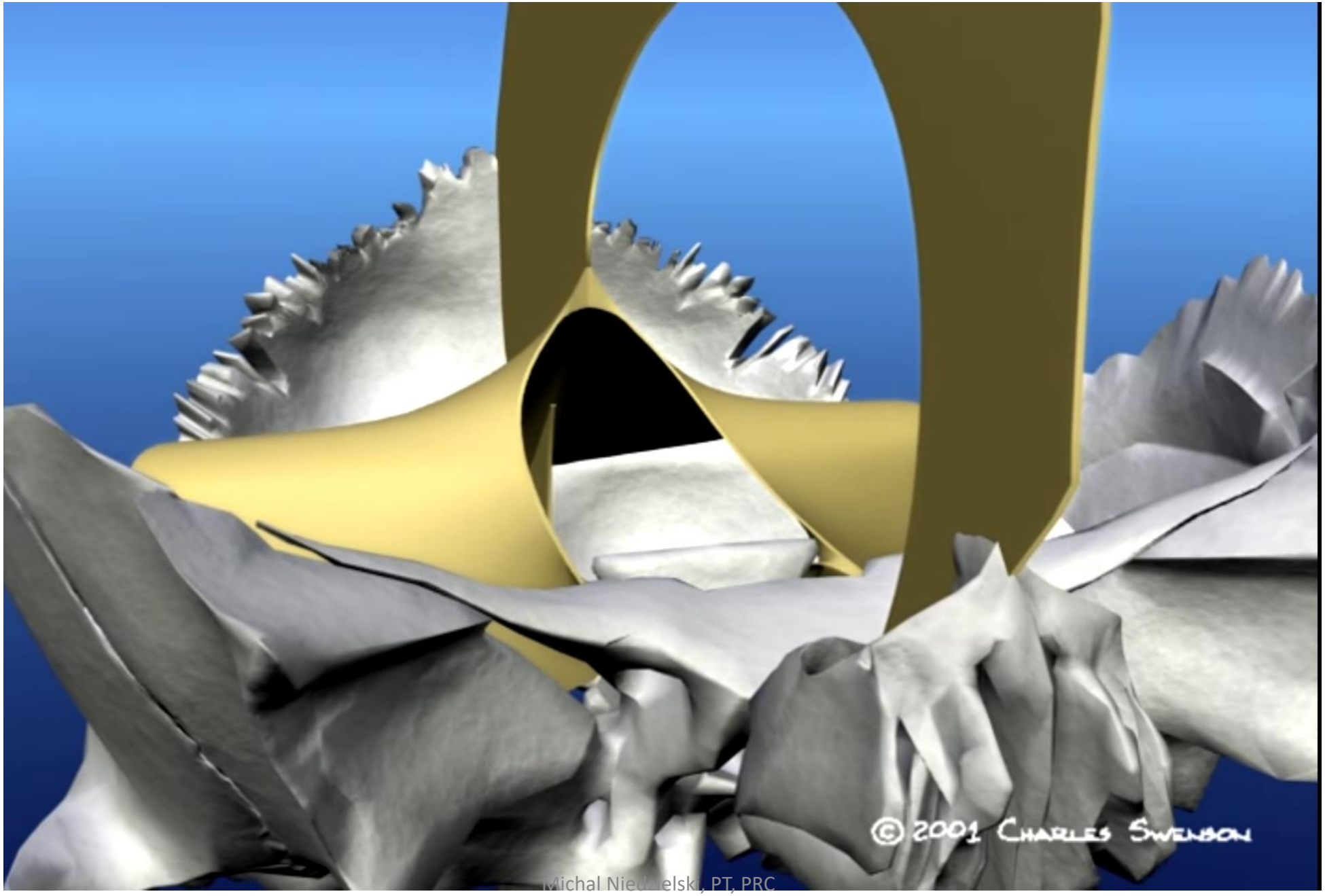
Michal Niedzielski, PT, PRC

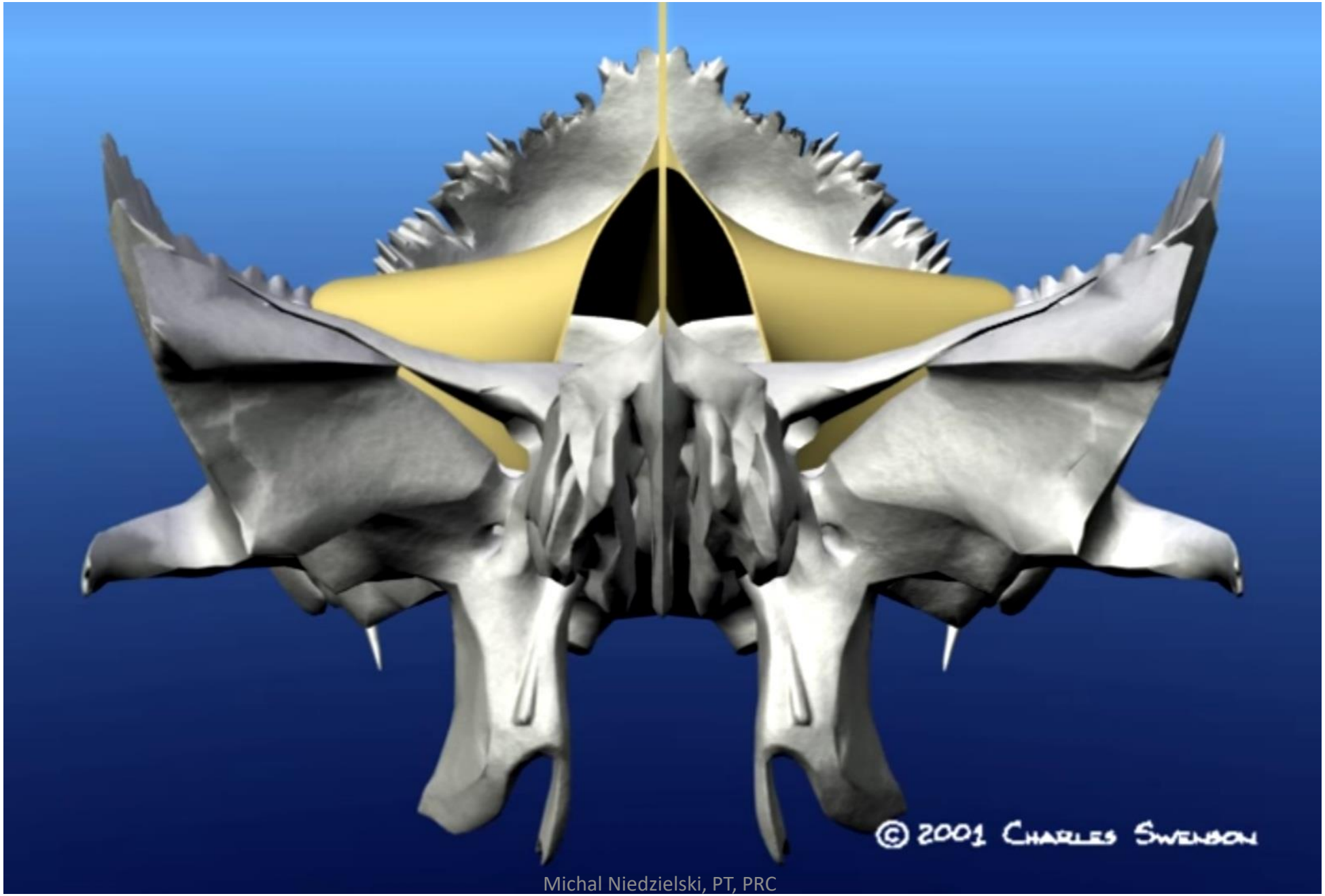
Michal Niedzielski, PT, PRC

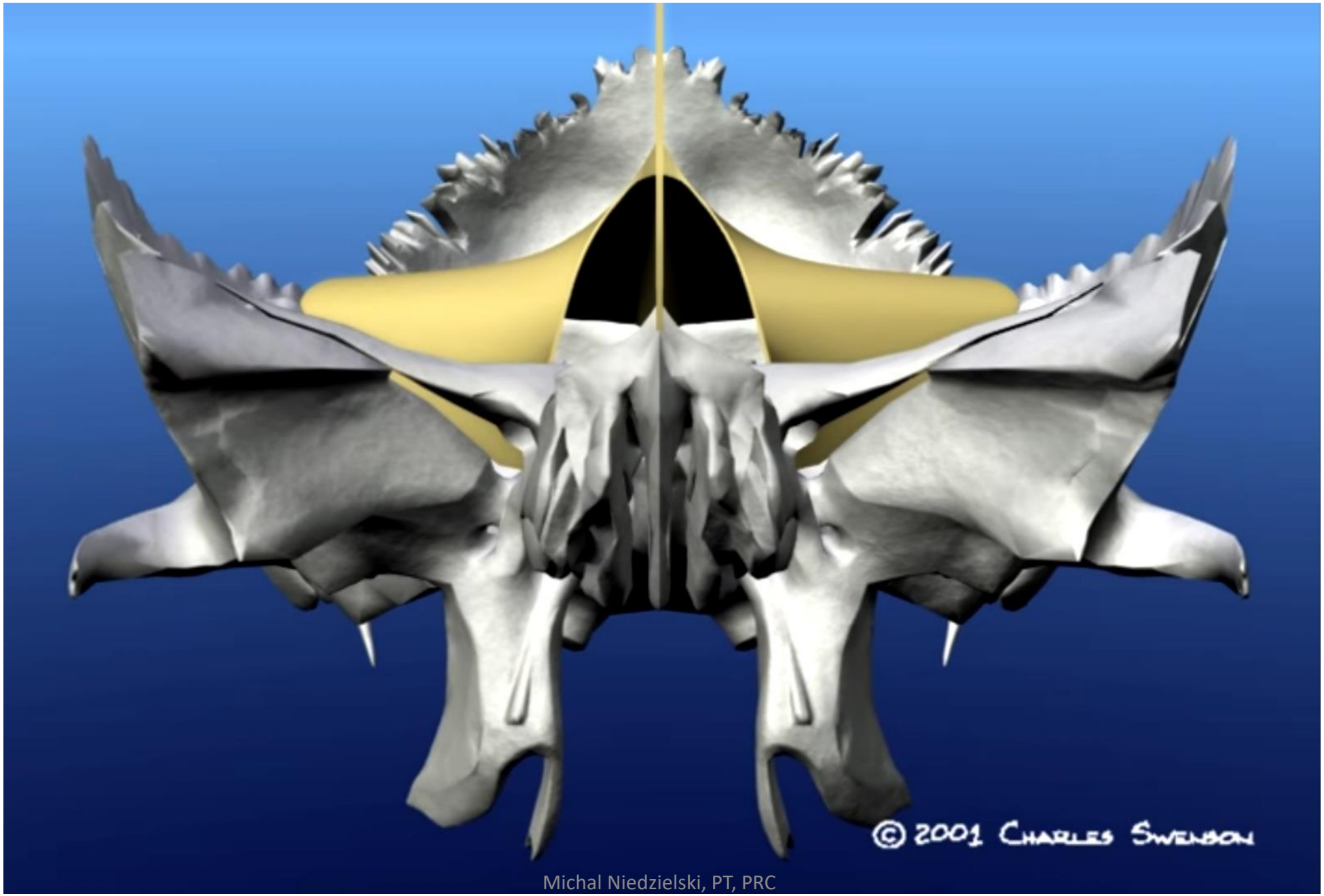

© 2001 Charles Swenson

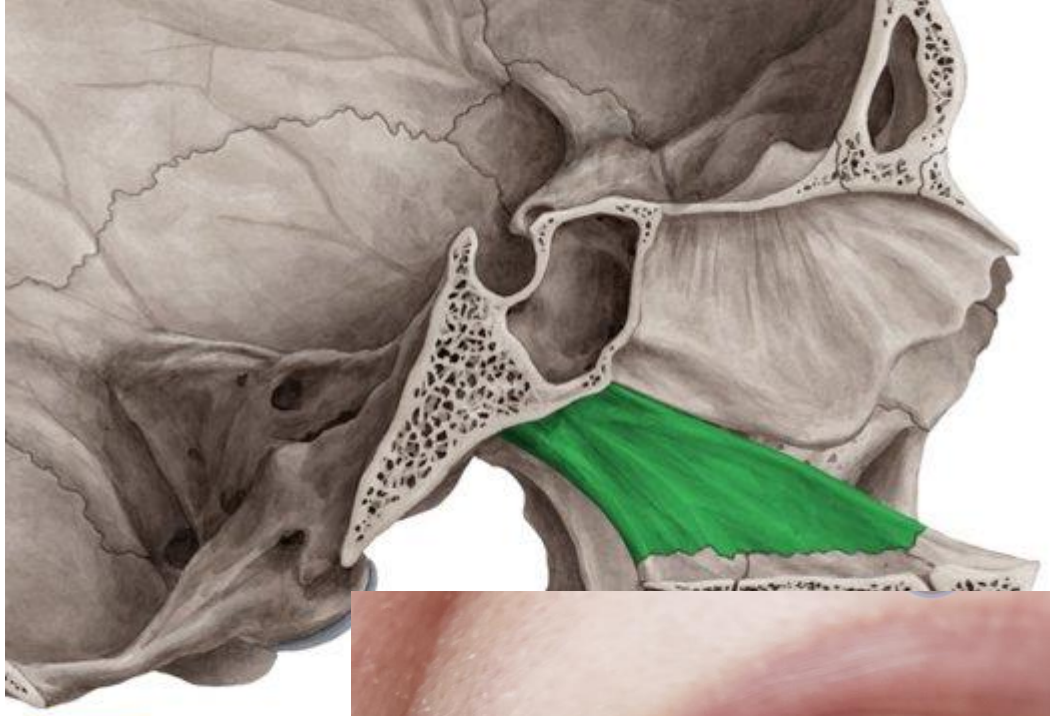

© 2001 Charles Swenson

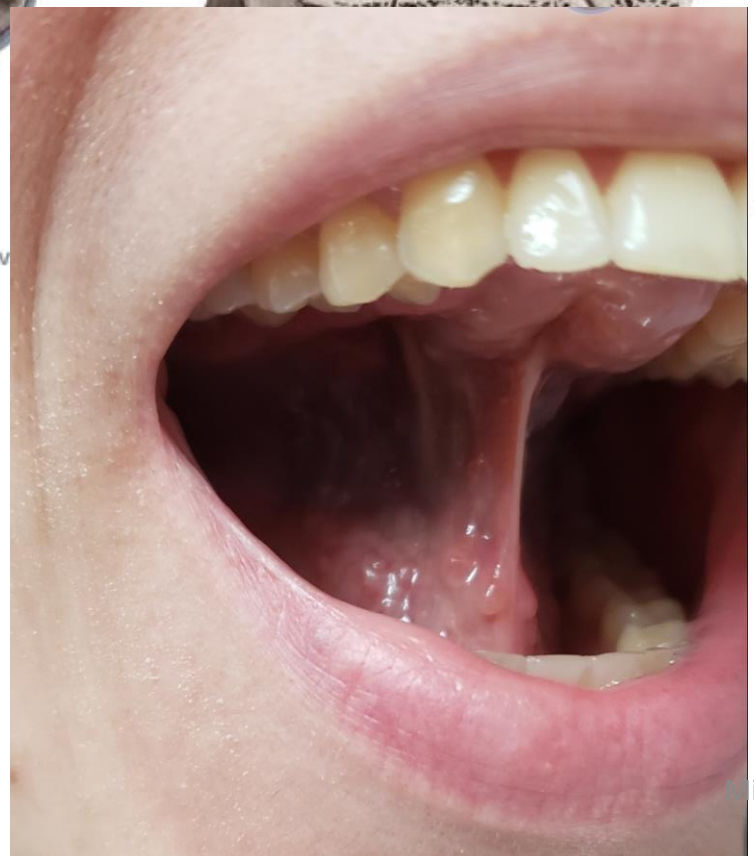

© 2001 Charles Swenson

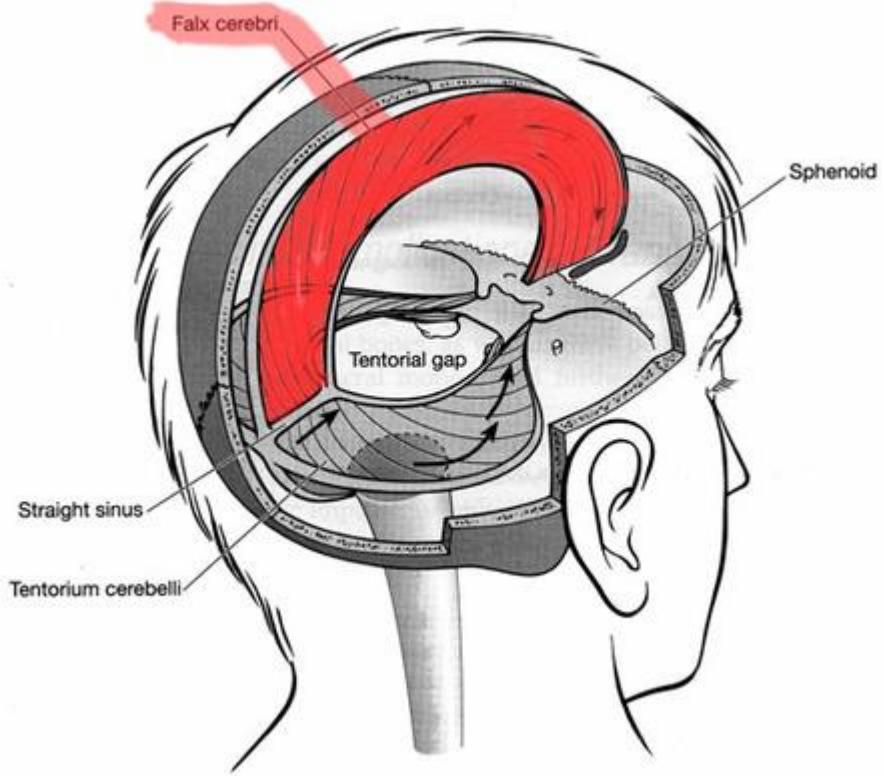

© 2001 Charles Swenson

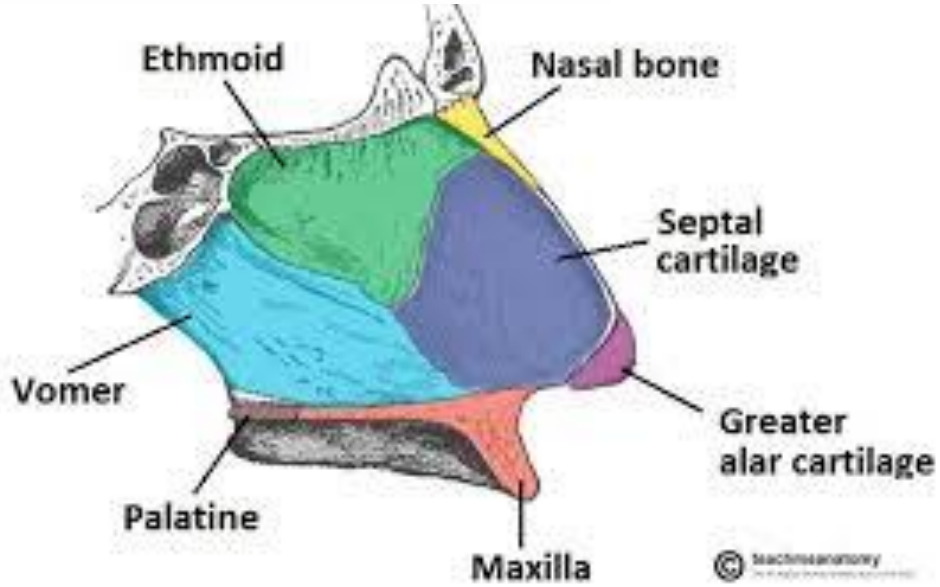

© 2001 Charles Swenson

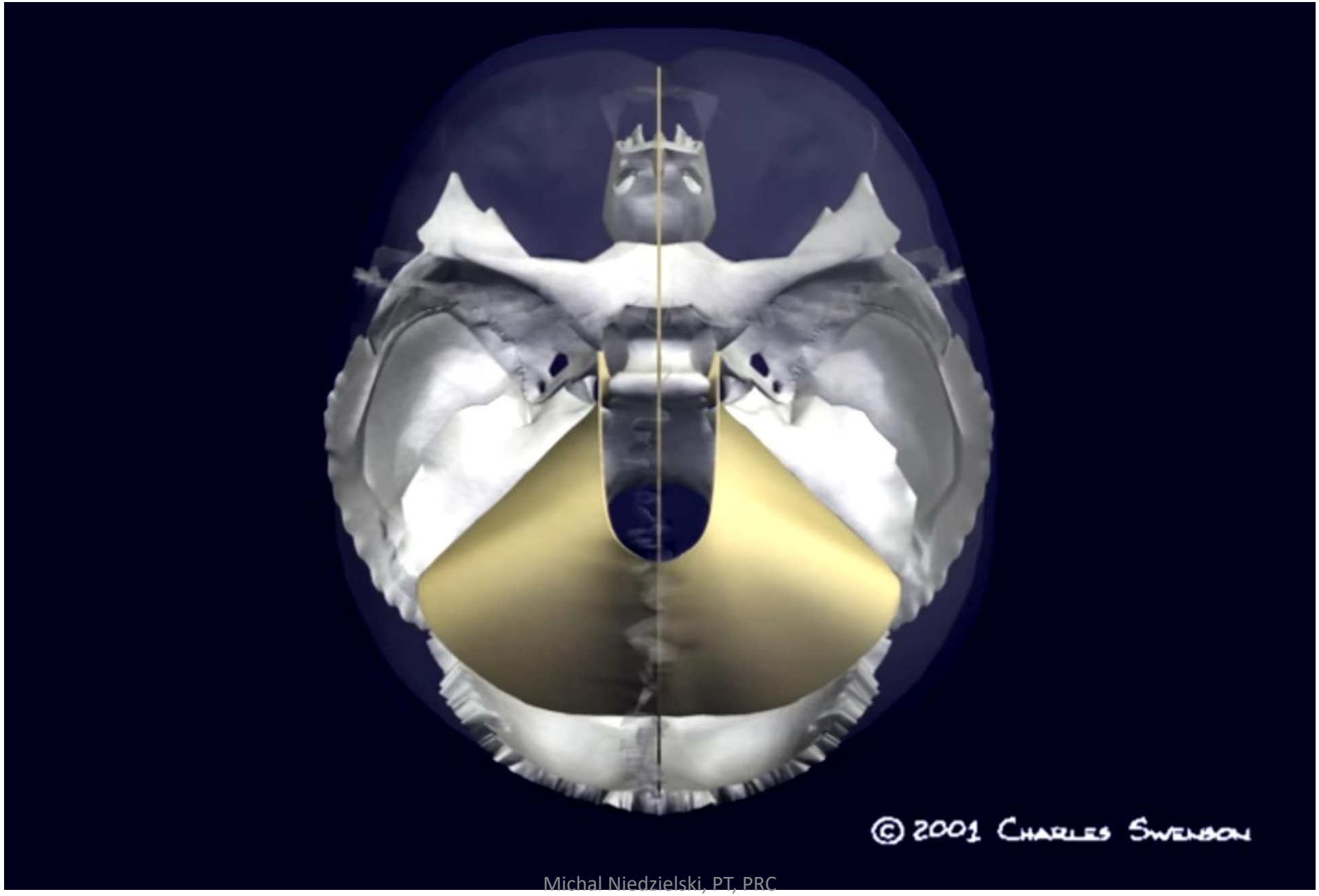

© 2001 Charles Swenson

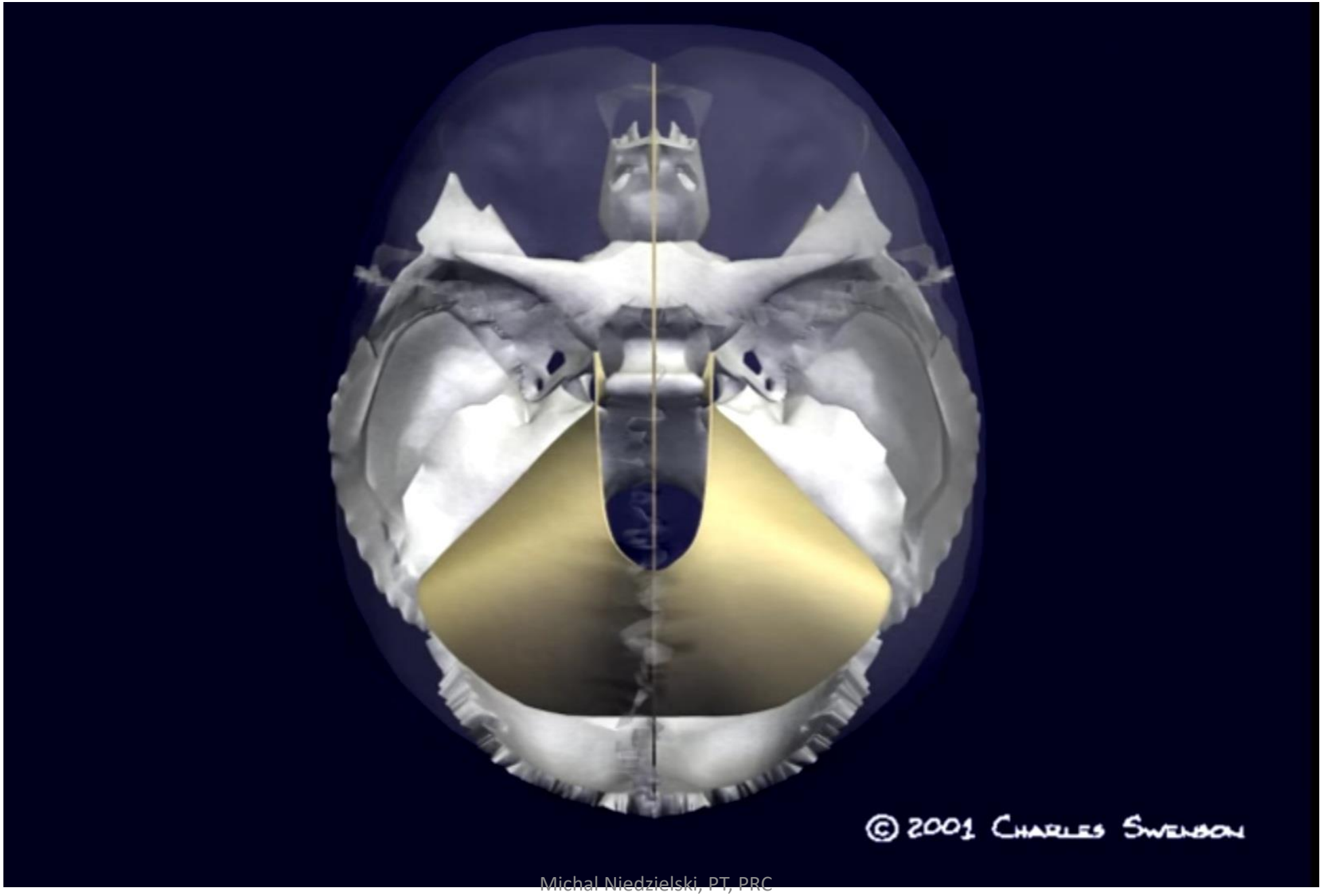


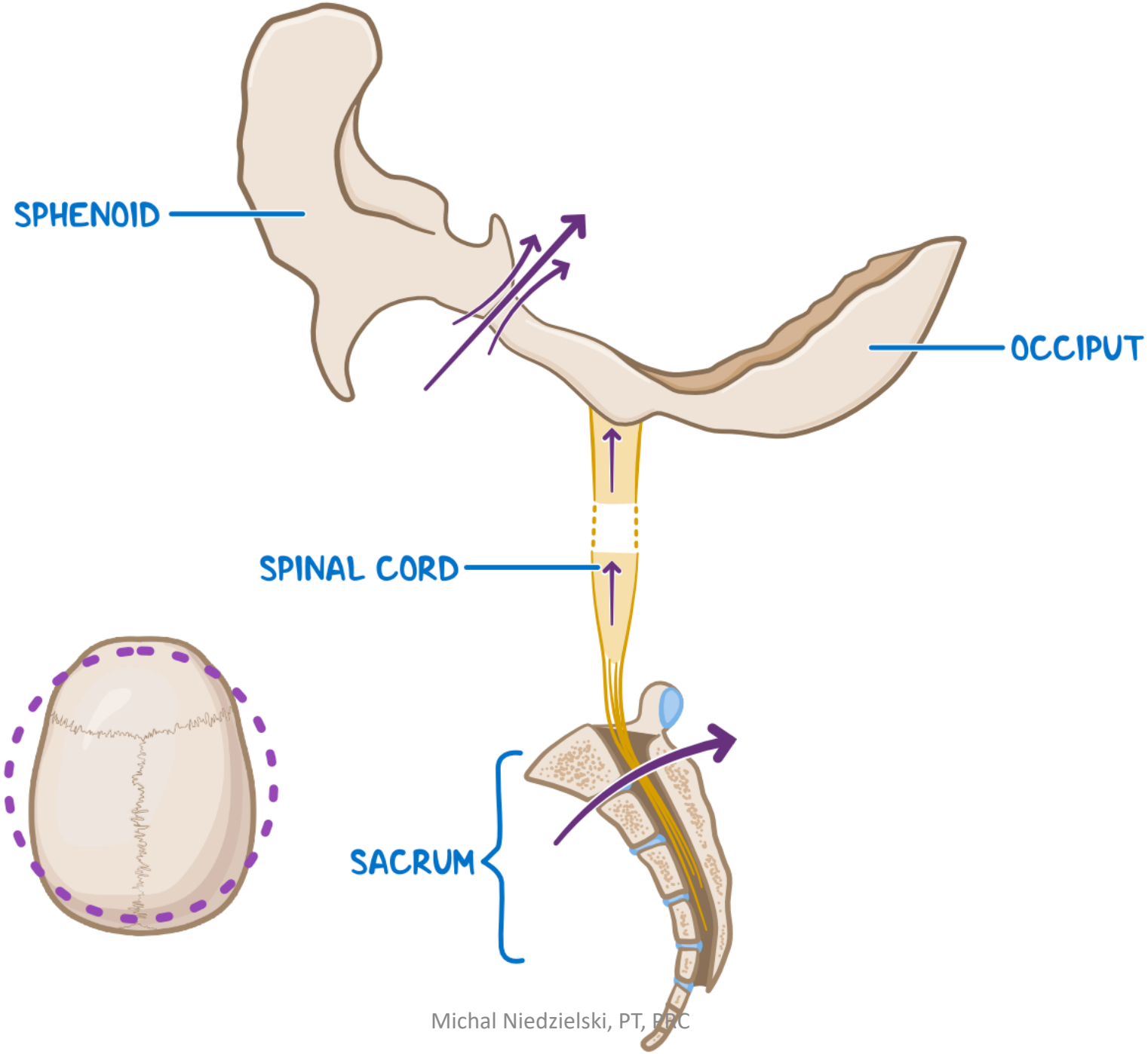



Falx cerebri
Sphenoid
Tentorial gap
Straight sinus
Tentorium cerebelli

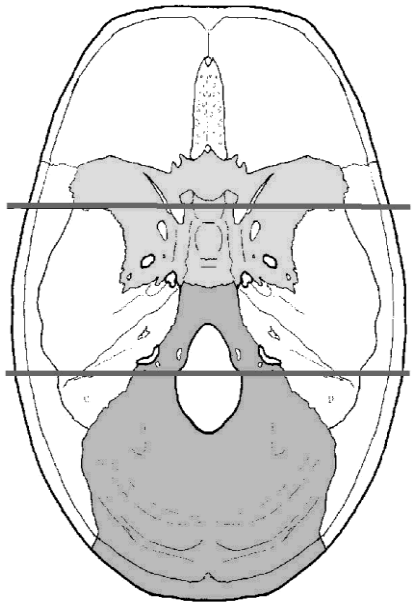

Ethmoid
Nasal bone
Septal cartilage
Vomer
Greater alar cartilage
Palatine
Maxilla


© 2001 Charles Swenson

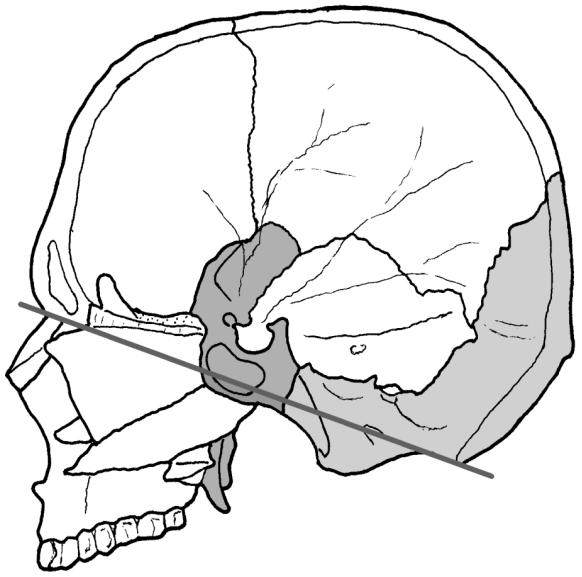

© 2001 Charles Swenson


SPHENOID
OCCIPUT
SPINAL CORD
SACRUM

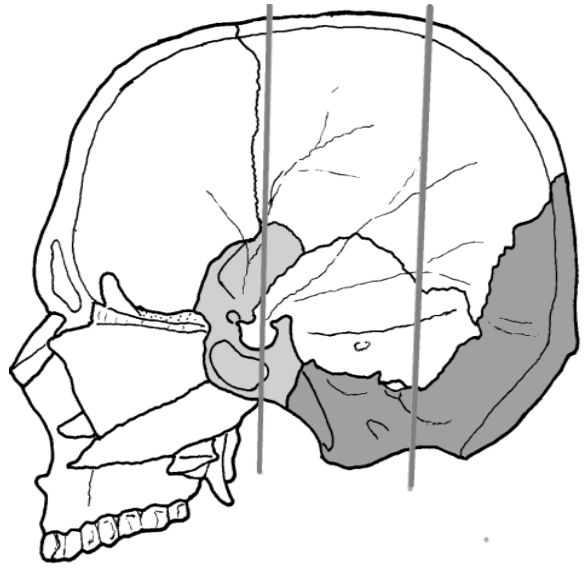
SB Axes and Movements



SB Transverse Axes



SB A-P Axis (Inclined)



SB Vertical Axes

SB Axes and Movements

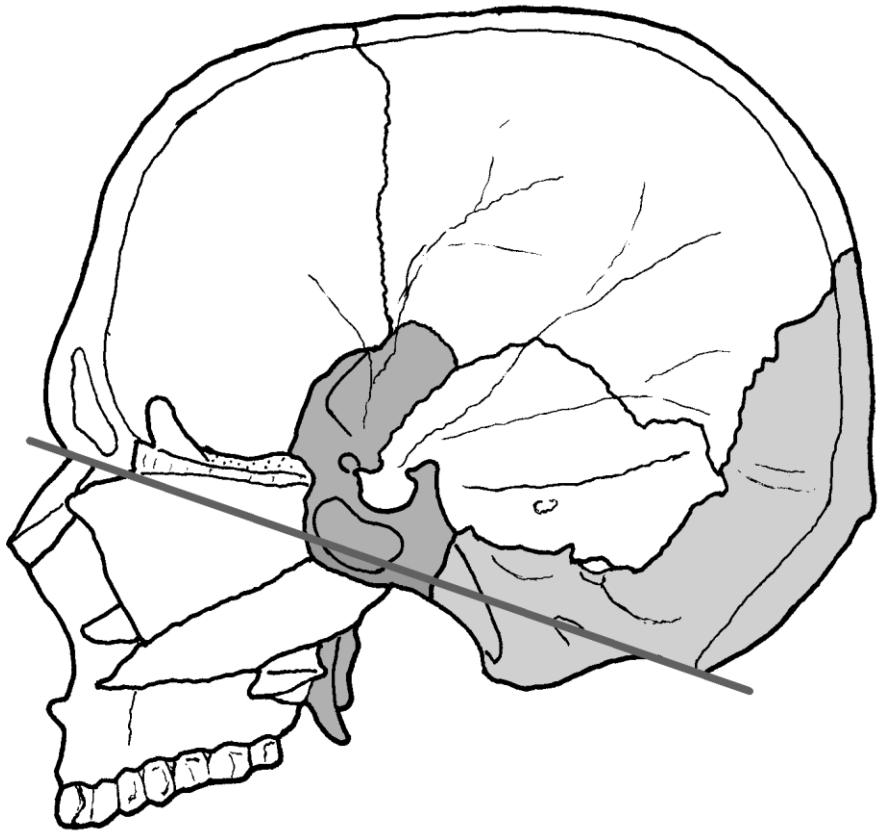
A - P AXIS (inclined)

<u>Torsions</u>

- Left Torsion
- Right Torsion

<u>(Rotations</u>

- Rotation to left
- Rotation to right)

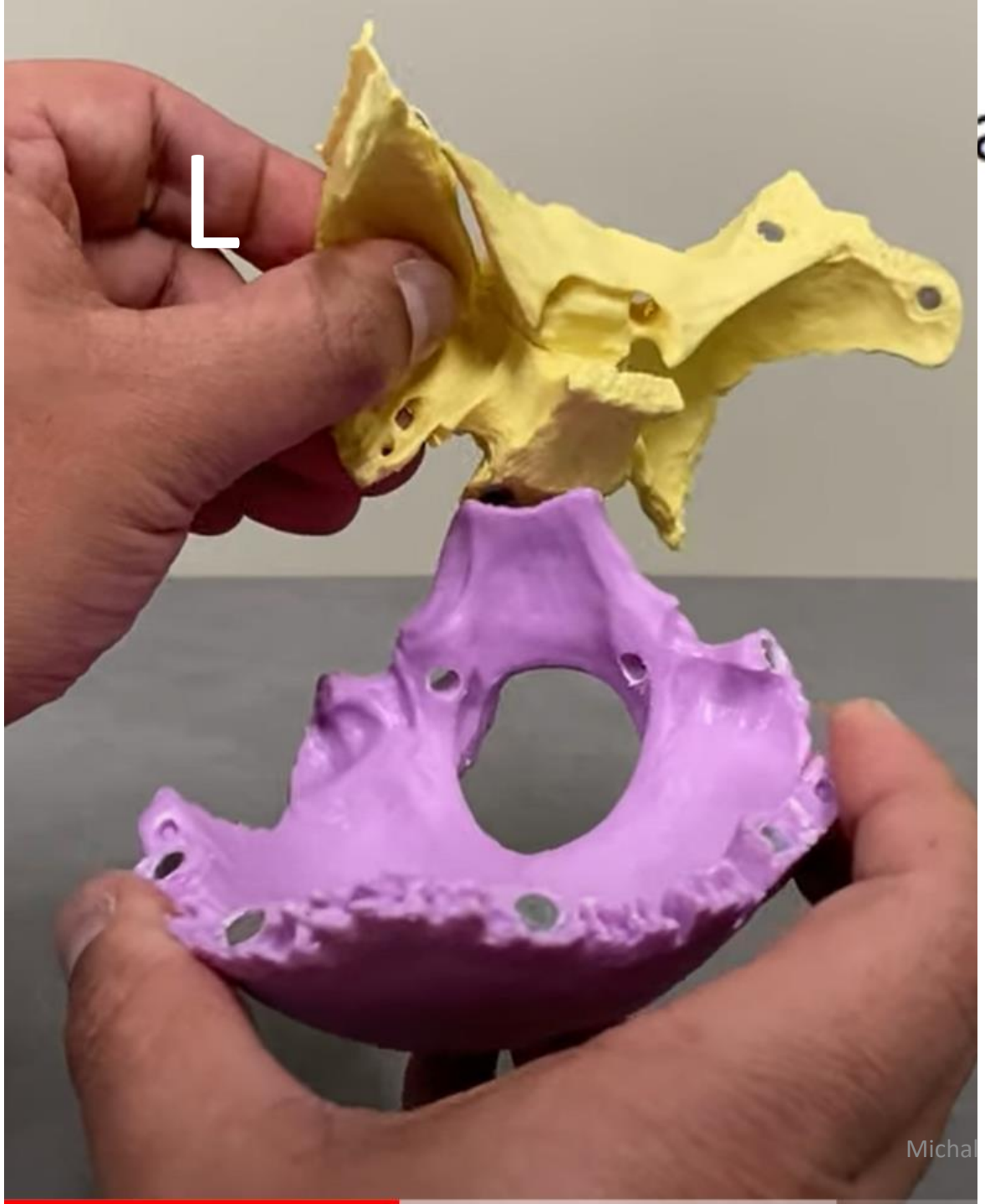


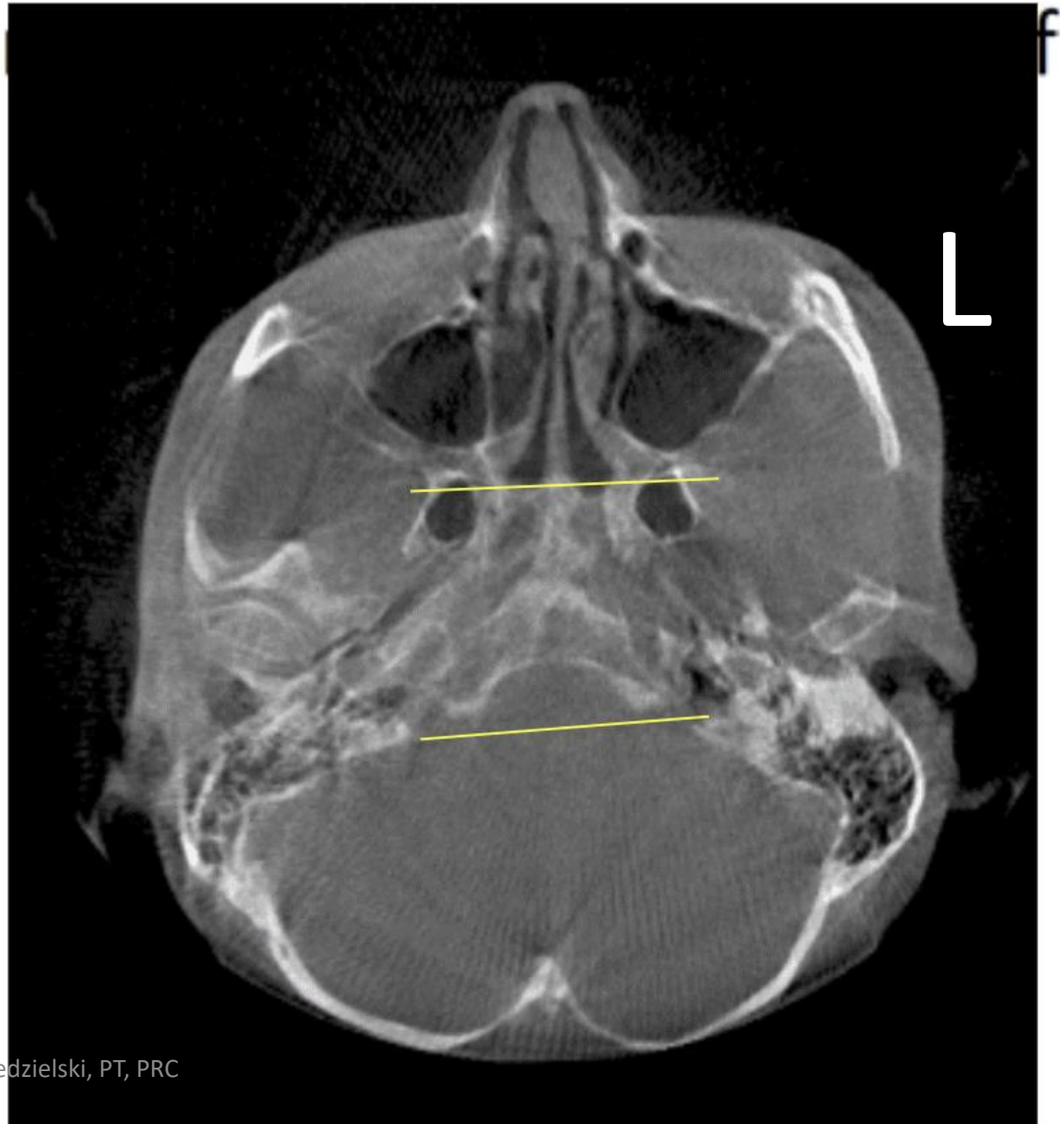
Lesioned Skull Types

- Torsion. Anteroposterior diameters on either side of the head essentially equal. On the side of elevated greater wing and low occiput, both the anterior and the posterior quadrants are in external rotation, the reverse is being true contralaterally. Rather common.

Osteopathy in the cranial field. Magoun

Left Torsion

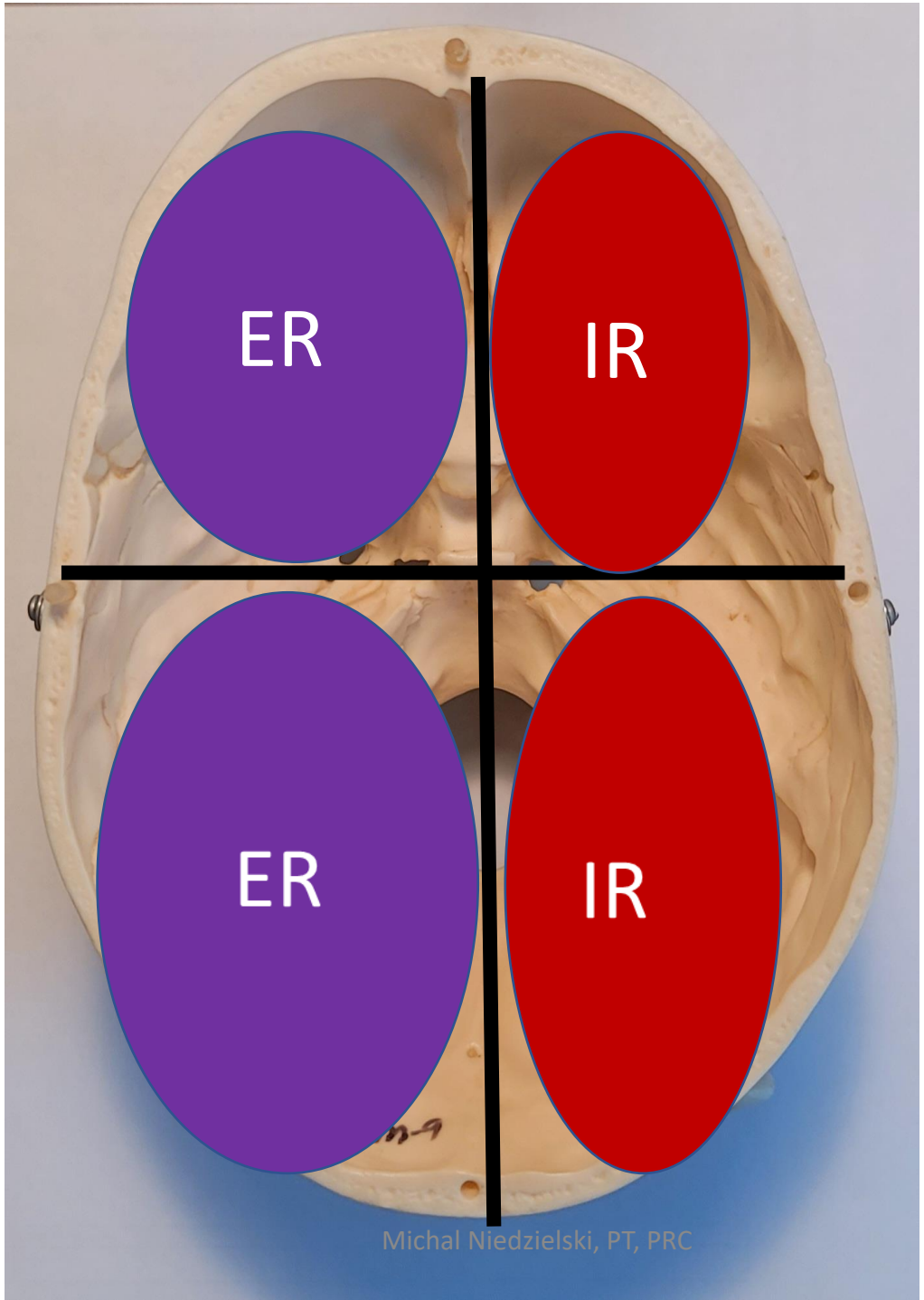

L


L

L Torsion

Left Front

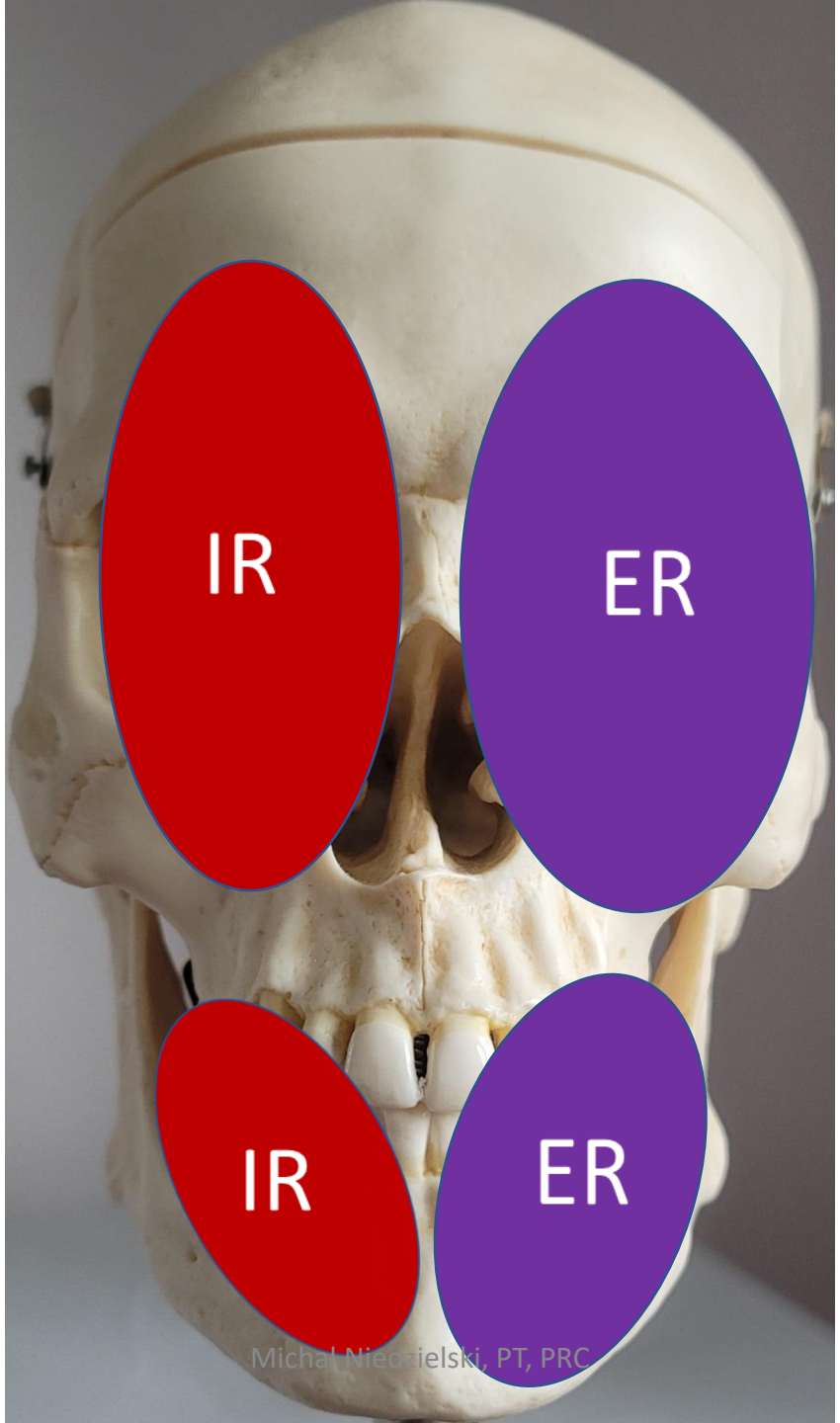
Left Back

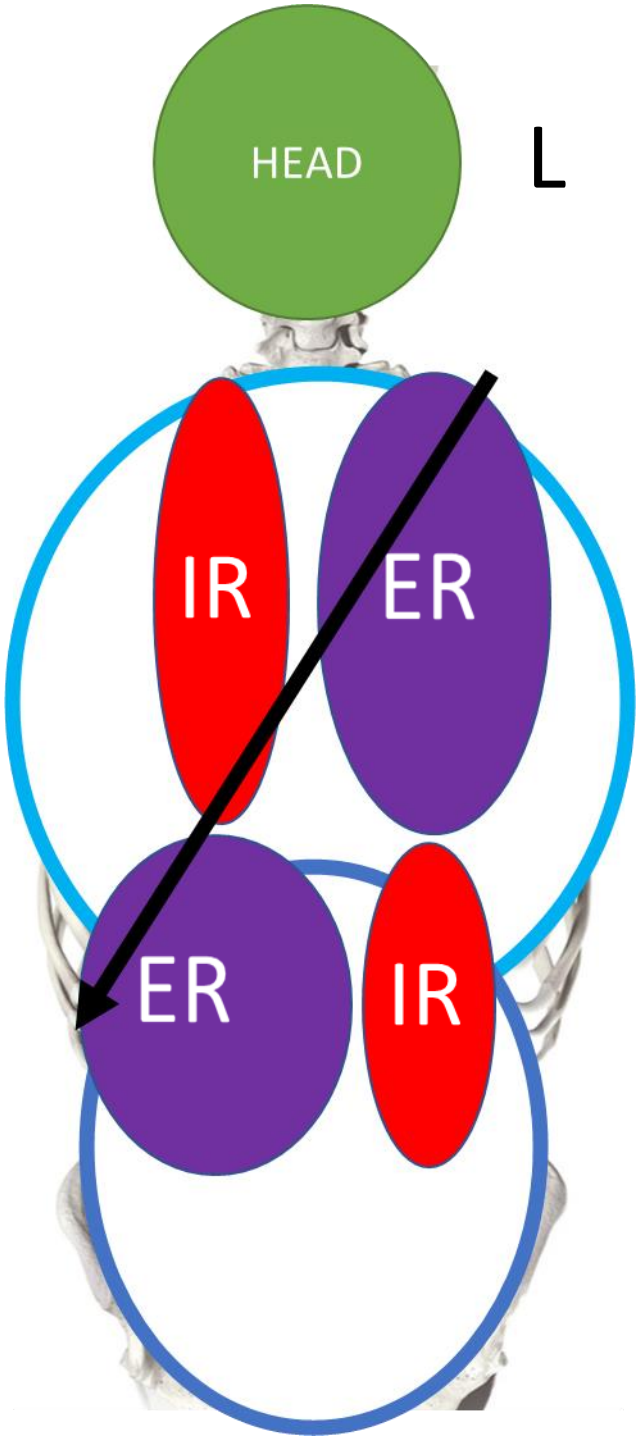


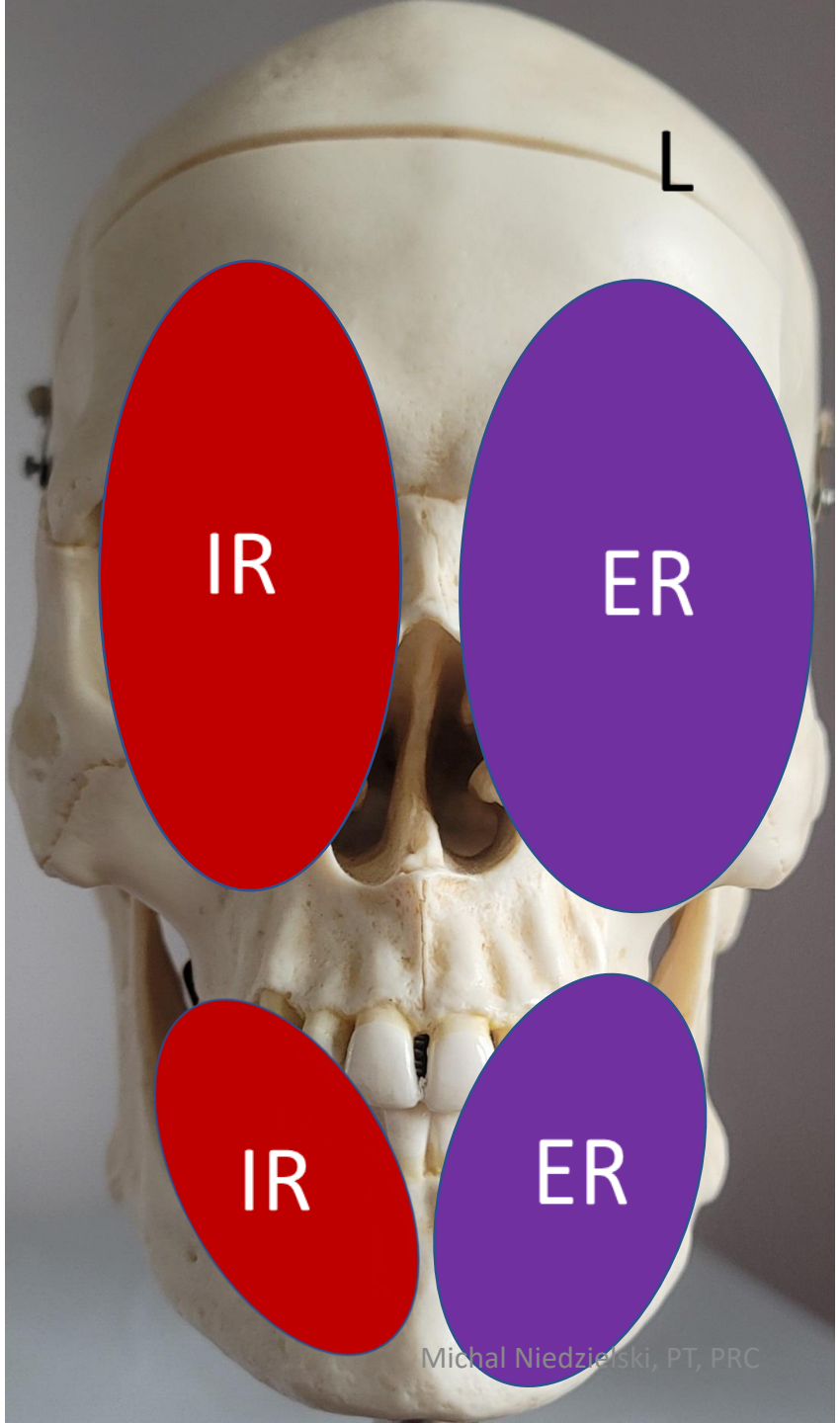
Right Front

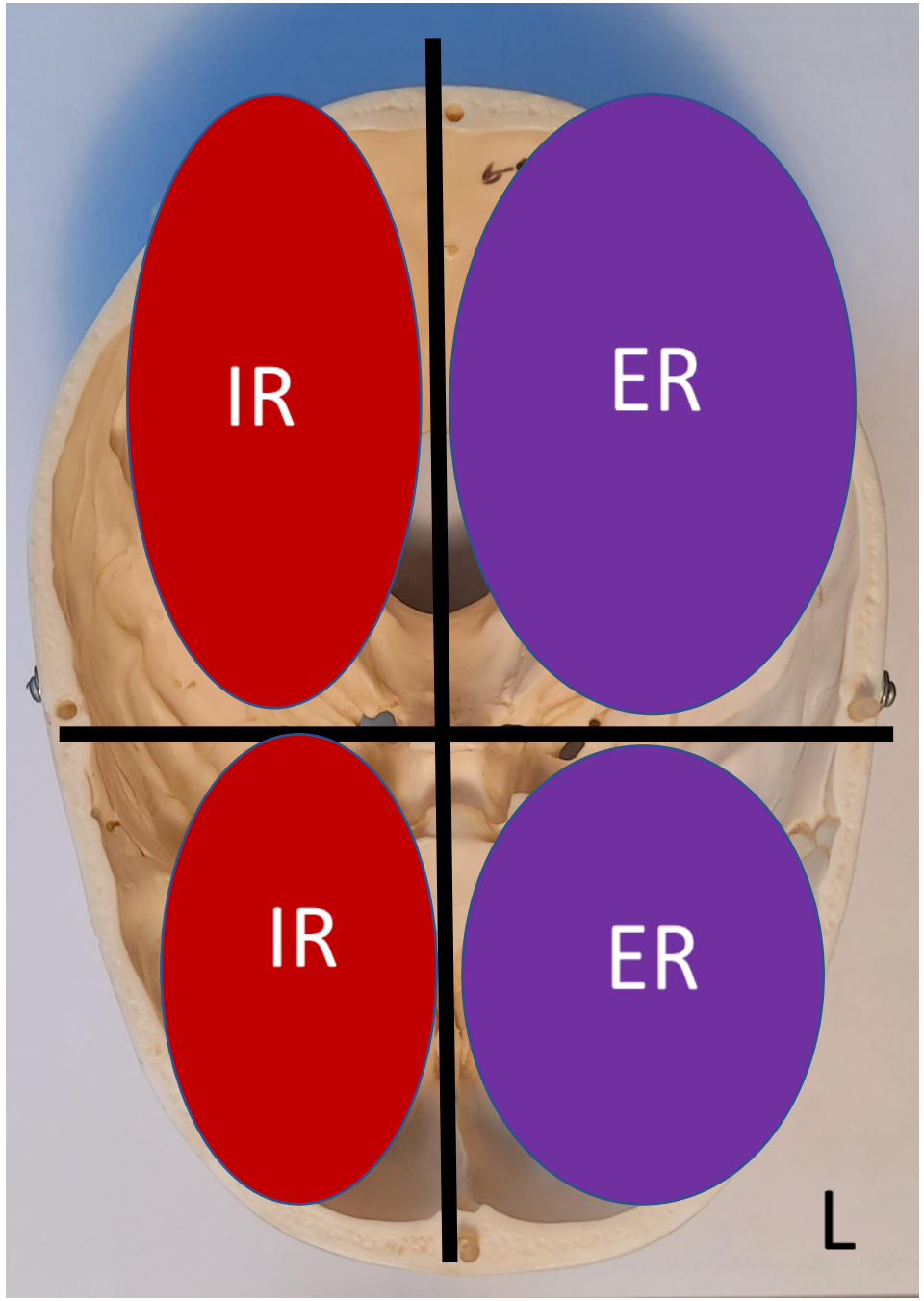
Right Back

L Torsion









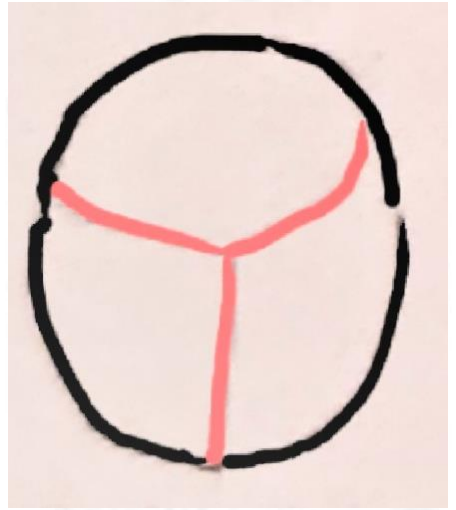
Left Torsion

Anterior Quadrants

Frontal -Eminence, prominent R side,
-Supraorbital ridge, narrower on the R and prominent on the L side, sloping forehead on the L,
Eyes -Slope up to the L side,
Zygoma -Prominent on the L side,
Nose -Slope up to the L side,
Lips -Slope up to the L side,
Nasolabial crease is deeper on the side of the ER maxilla

Posterior Quadrants

Mandible shifted to the L,
Left ear abducted,
Parietal and temporal; external bow L side

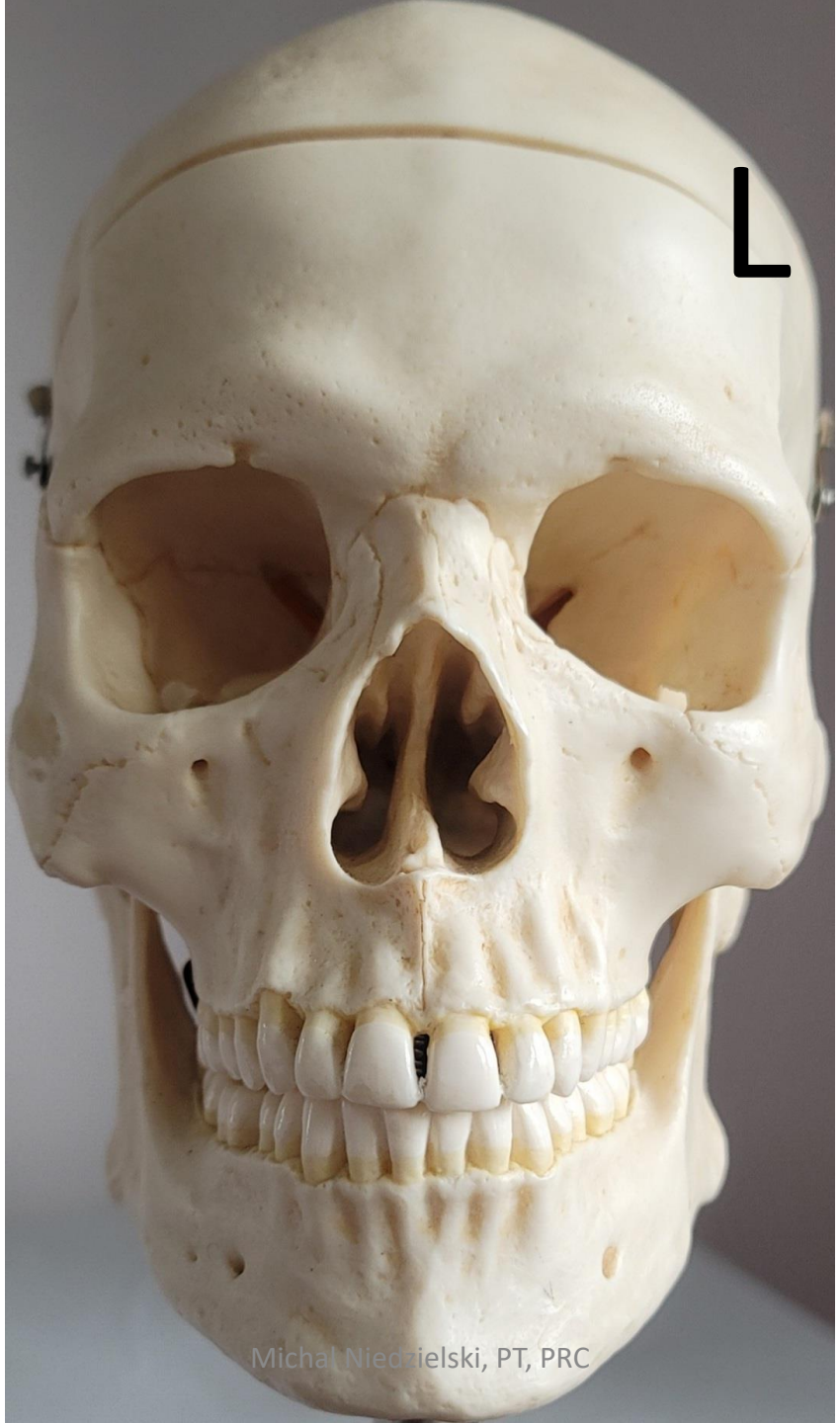


L Torsion

Anterior Quadrants

Frontal	-Eminence, prominent R side, -Supraorbital ridge, narrower on the R and prominent on the L side, -Sloping forehead on the L.
Eyes	-Slope up to the L side.
Zygoma	-Prominent on the L side.
Nose	-Slope up to the L side.
Lips	-Slope up to the L side.

Nasolabial crease is deeper on the side of the ER maxilla



Posterior Quadrants

Mandible shifted to the L.

Left ear abducted.

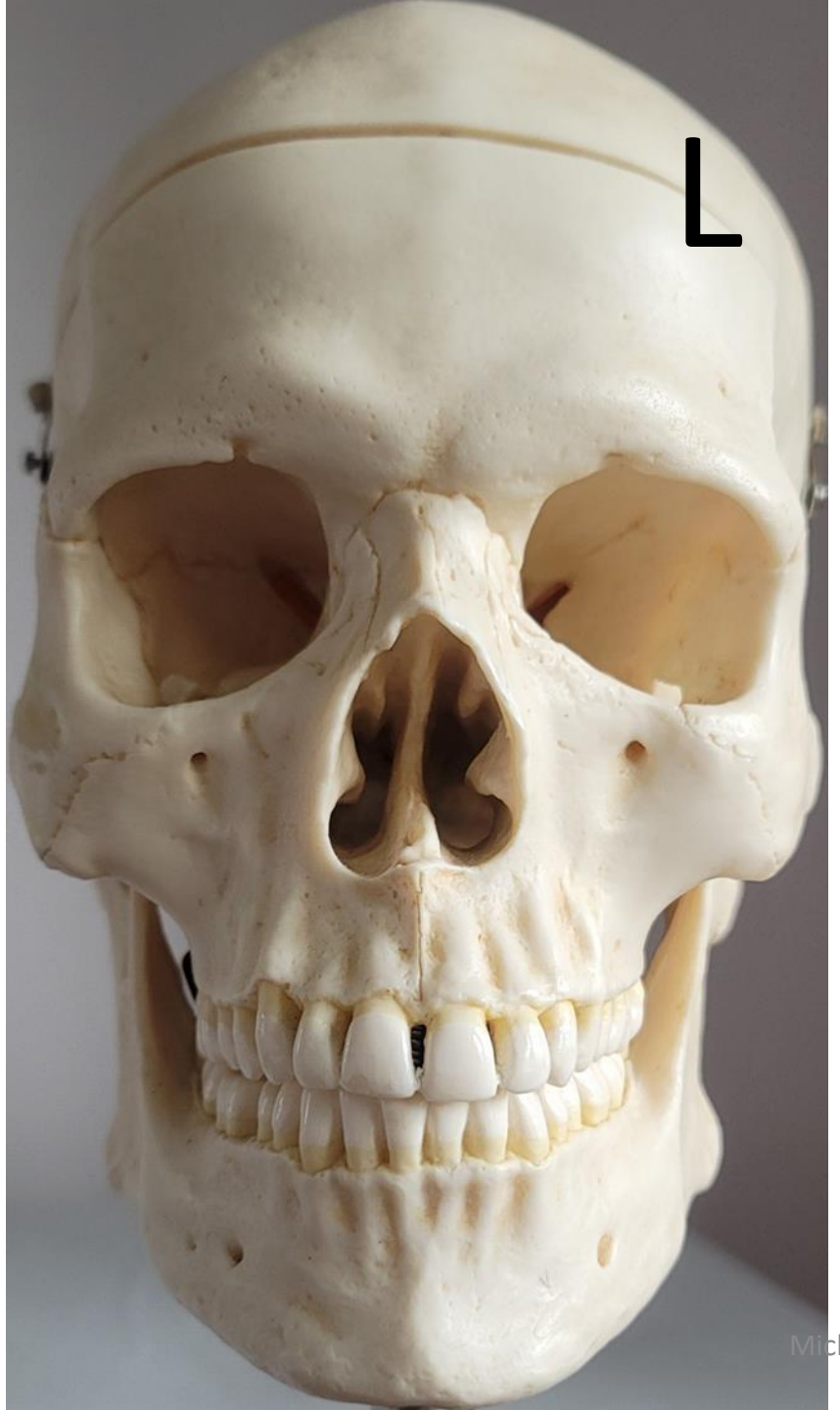
Parietal and temporal; external bow L side.

L

L

L


L

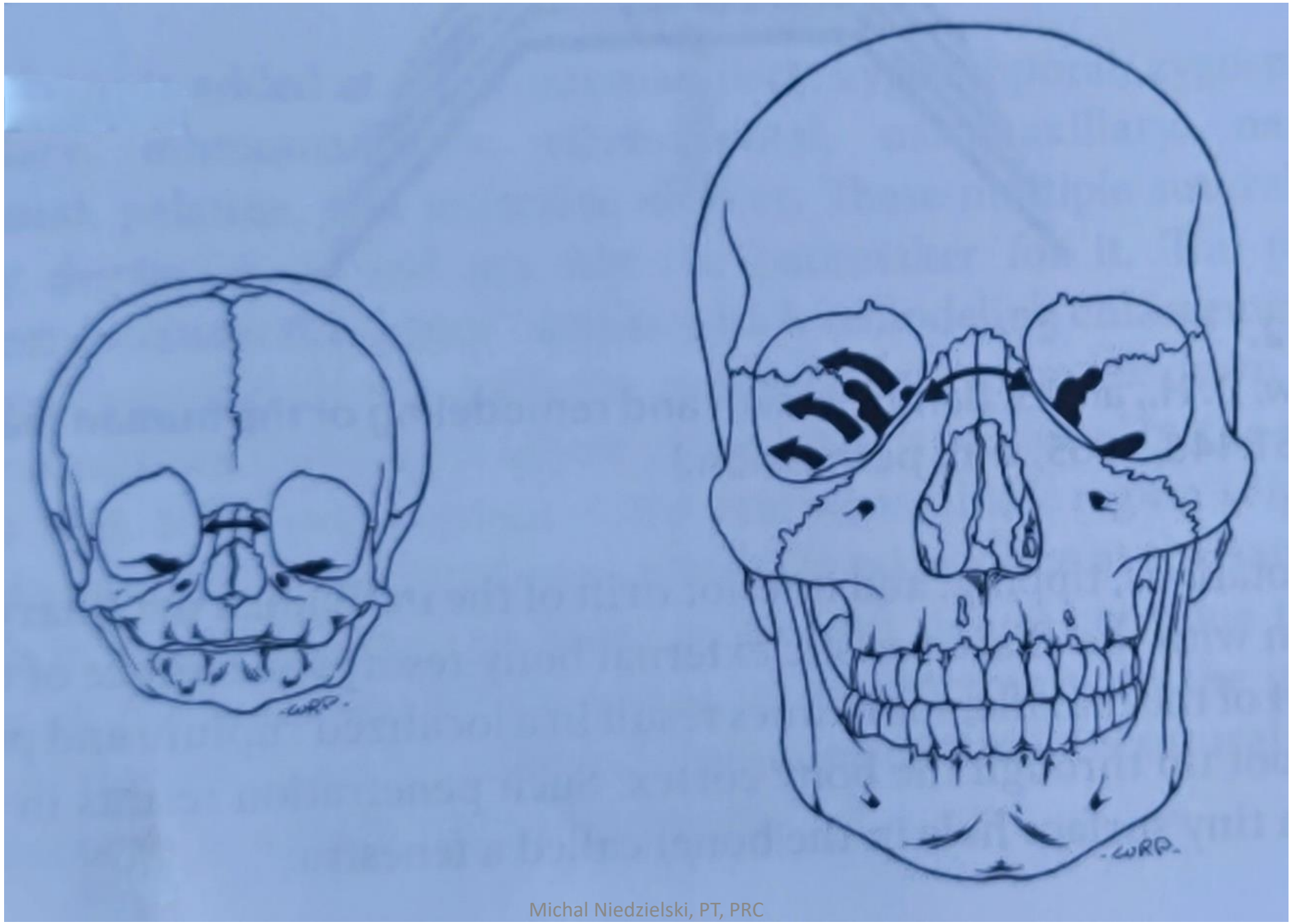


L

L

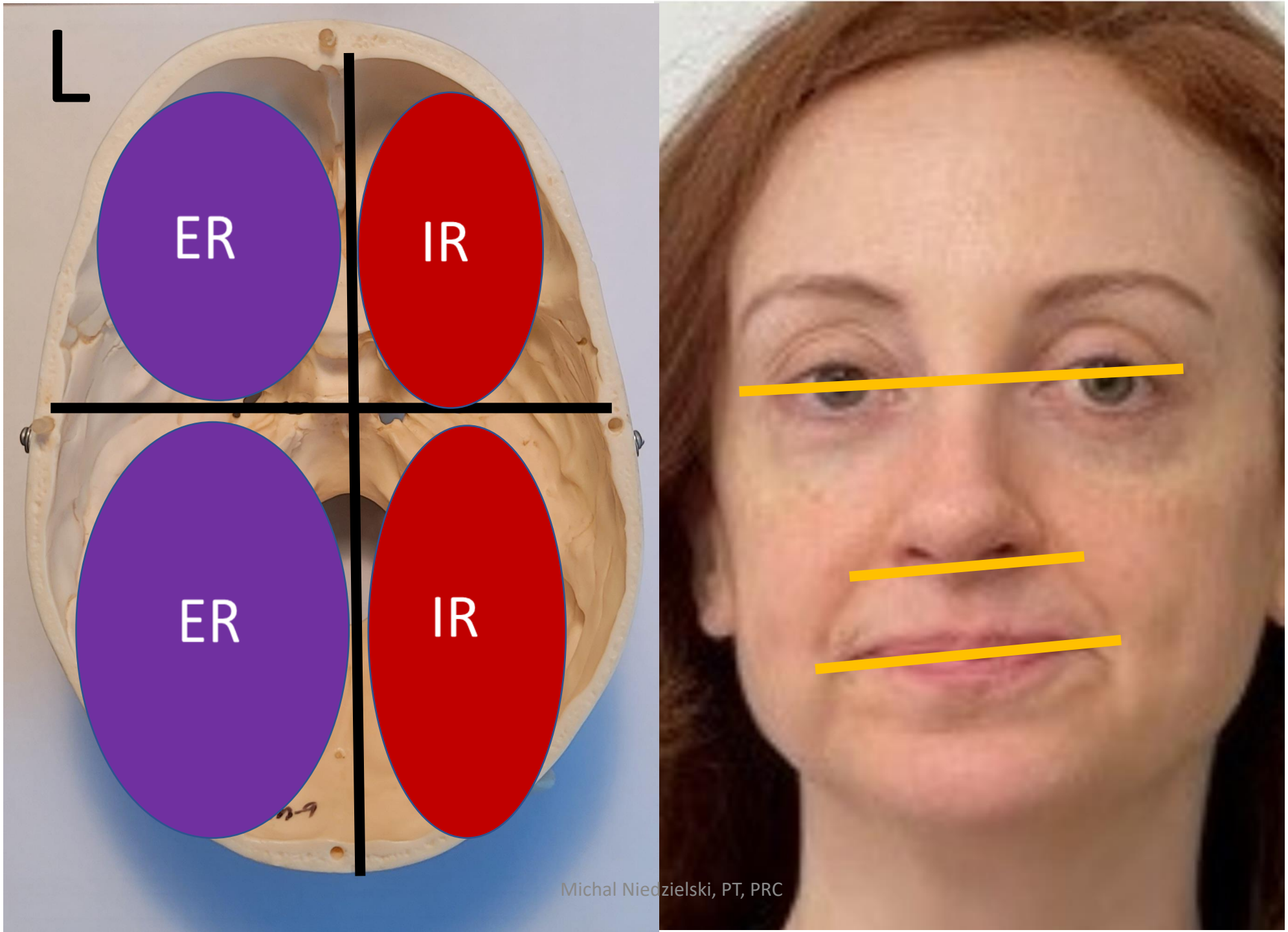
L

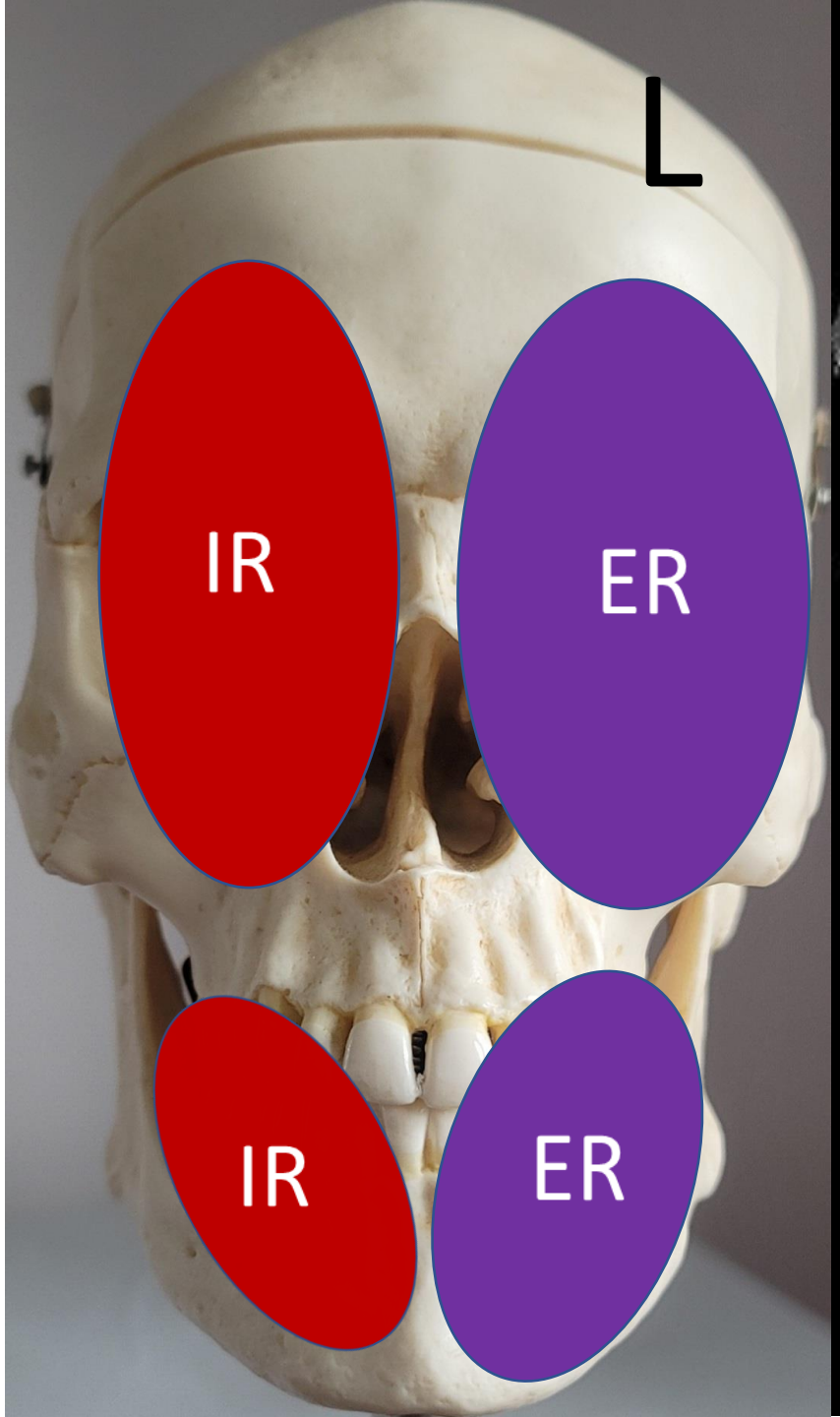
L

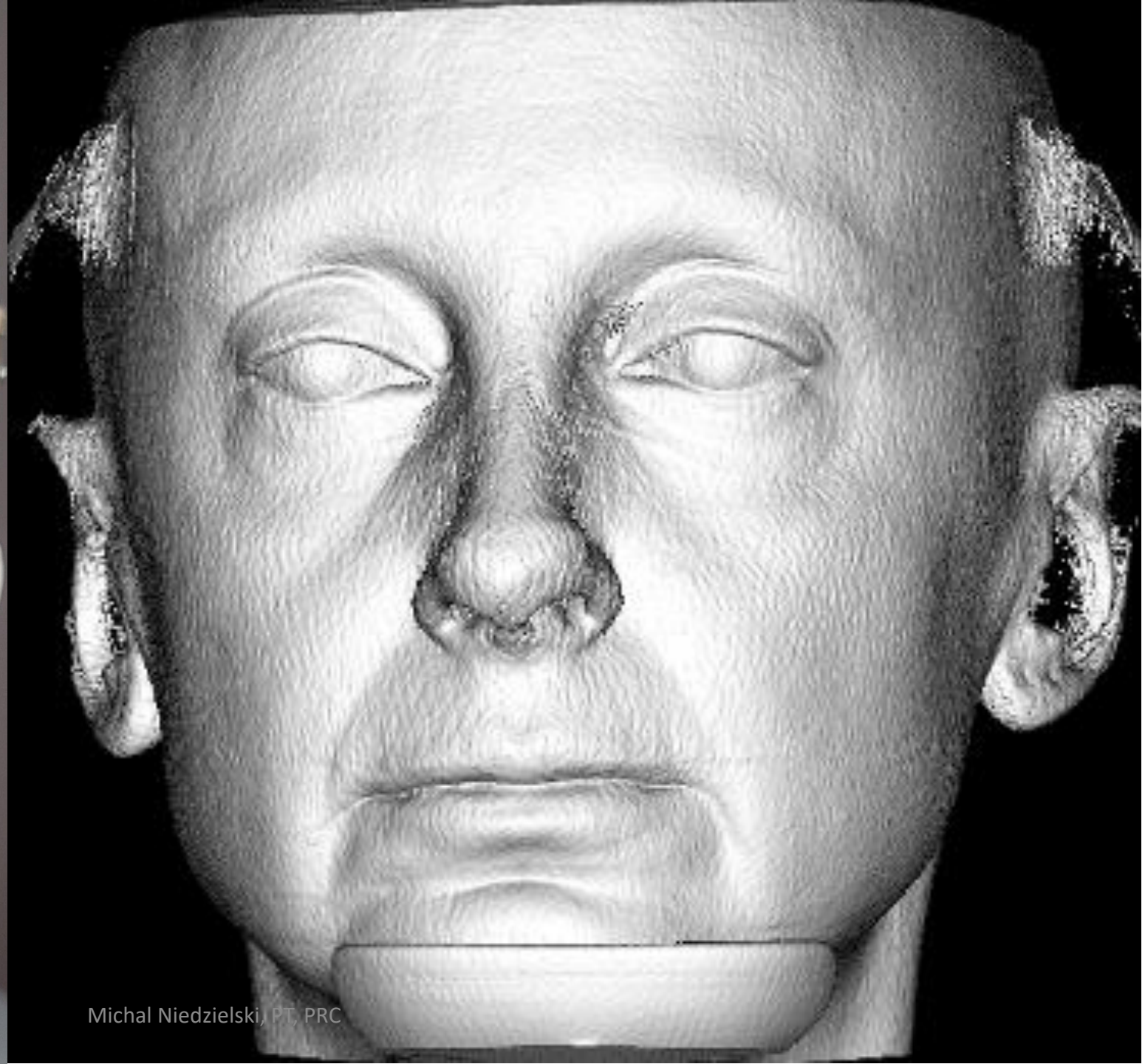


L Torsion & IVS

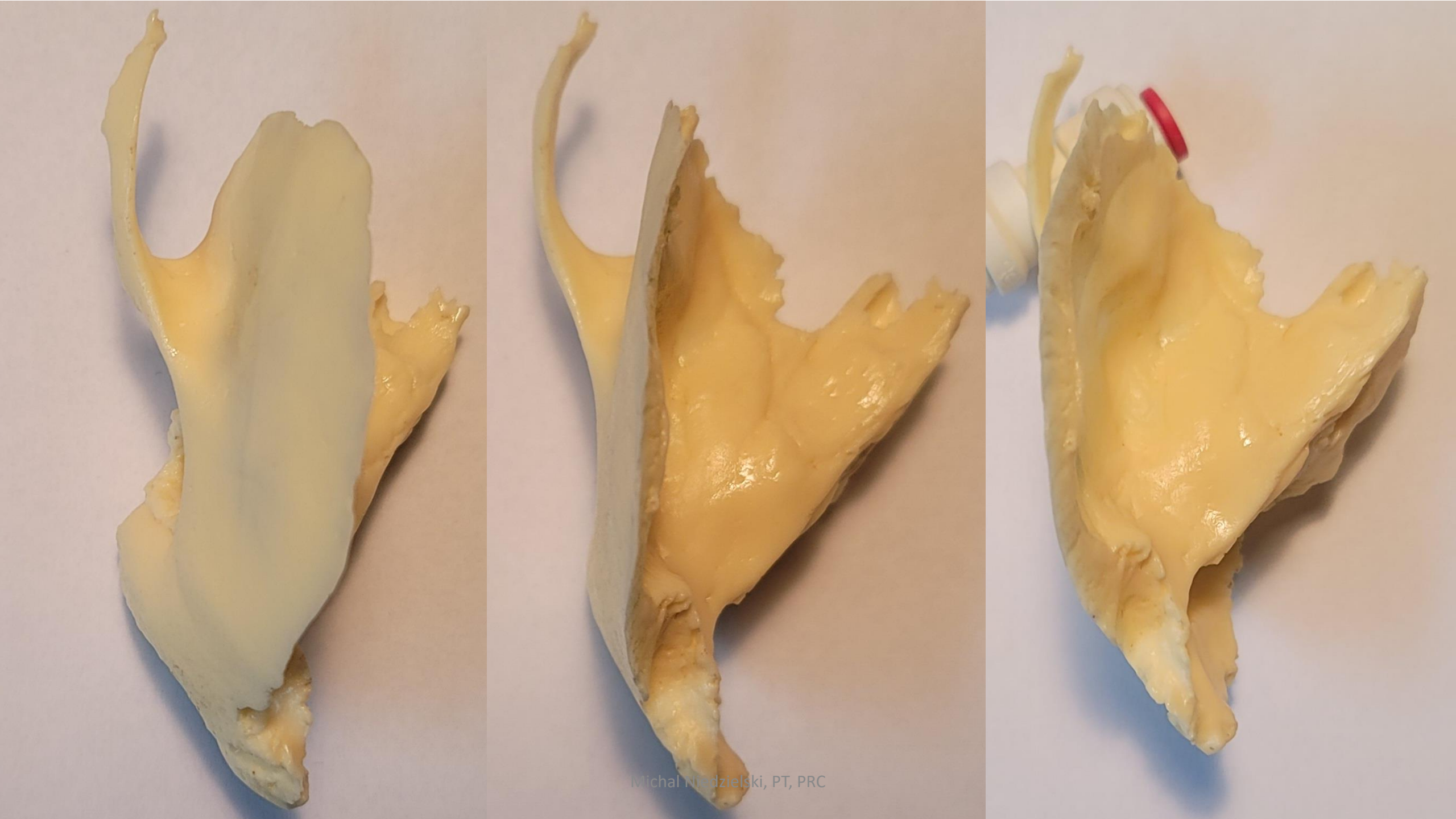
Michal Niedzielski, PT, PRC



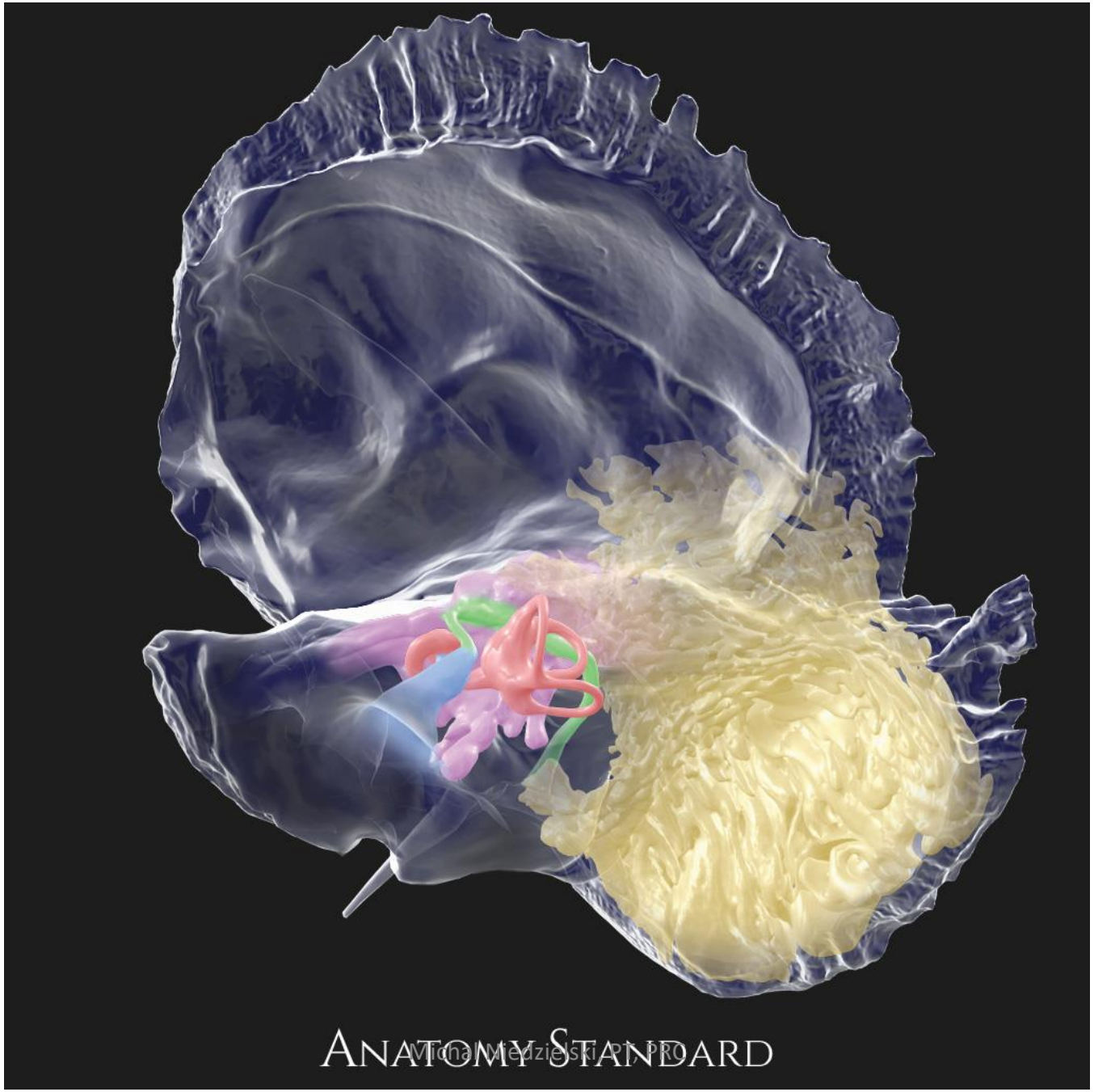

L
IR
ER
IR
ER


Michal Niedzielski, P.T. PRC

Temporal Bone - The Sail


Michał Niedzielski, PT, PRC

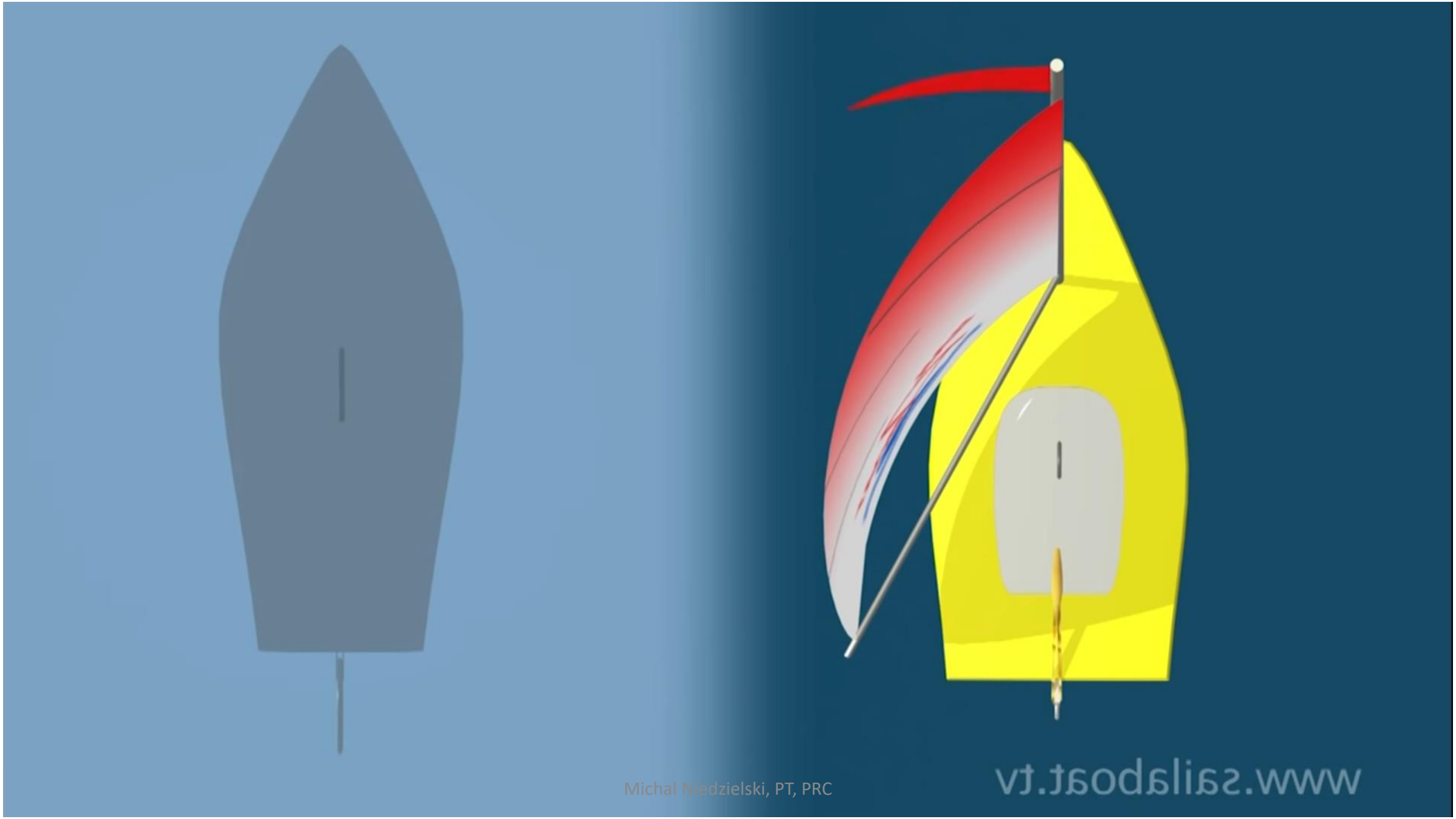
The complex view of some major internal structures of the temporal bone, including mastoid cells (yellow), the facial canal (green), labyrinth (red), tympanic cavity with *canalis musculotubarius* (magenta), and *meatus acusticus internus* (blue).

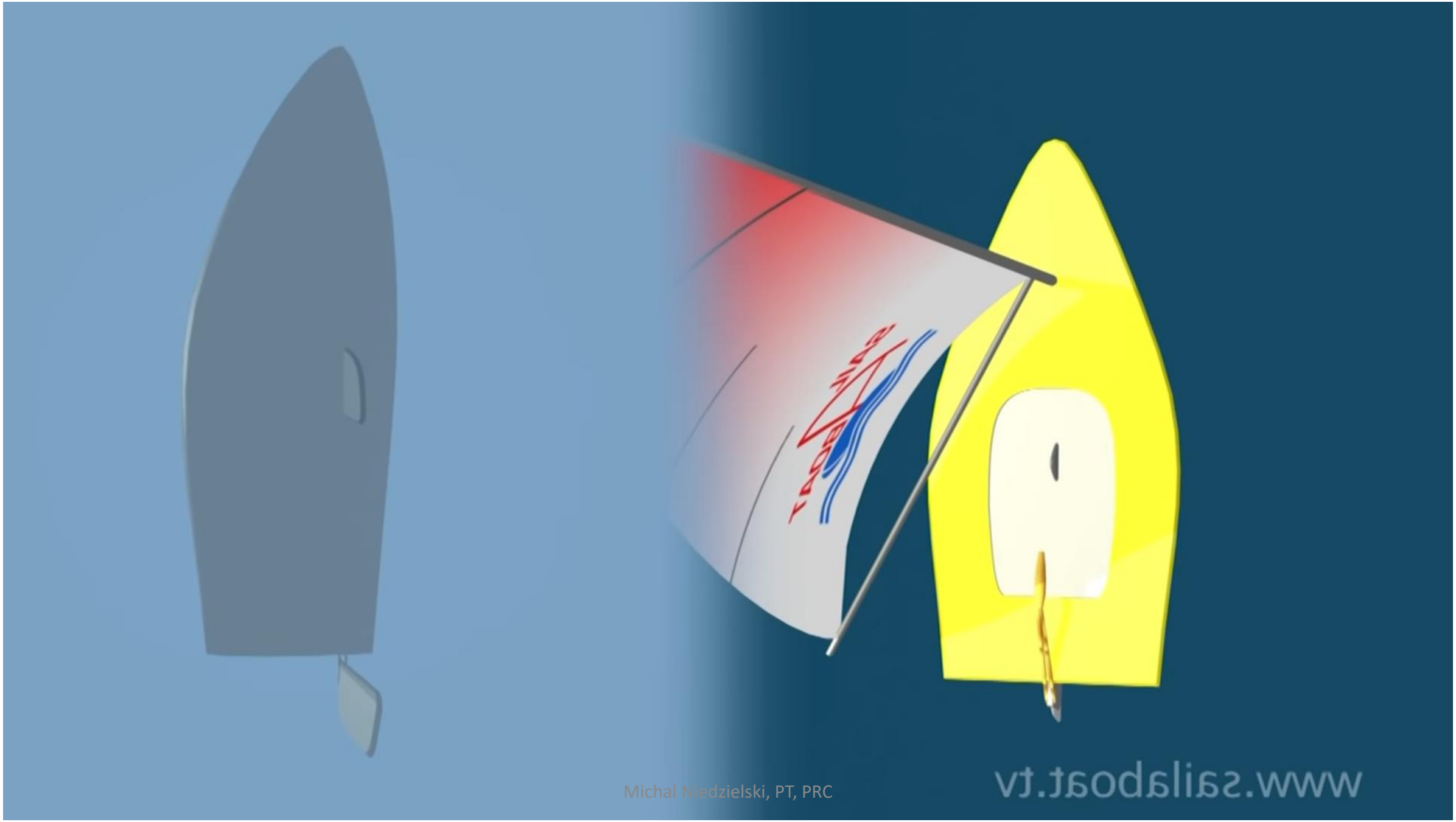


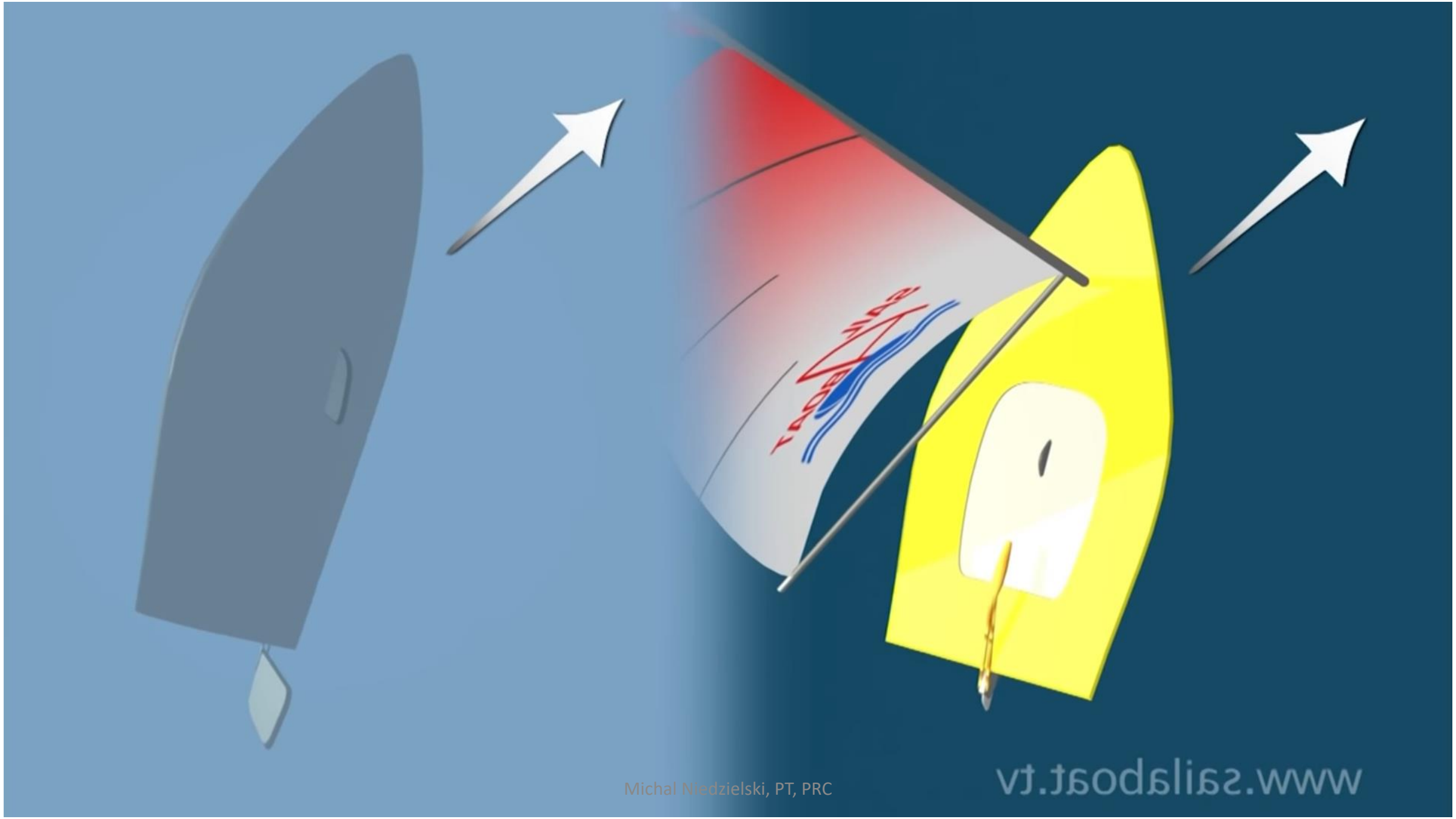

www.sailaboat.tv
3

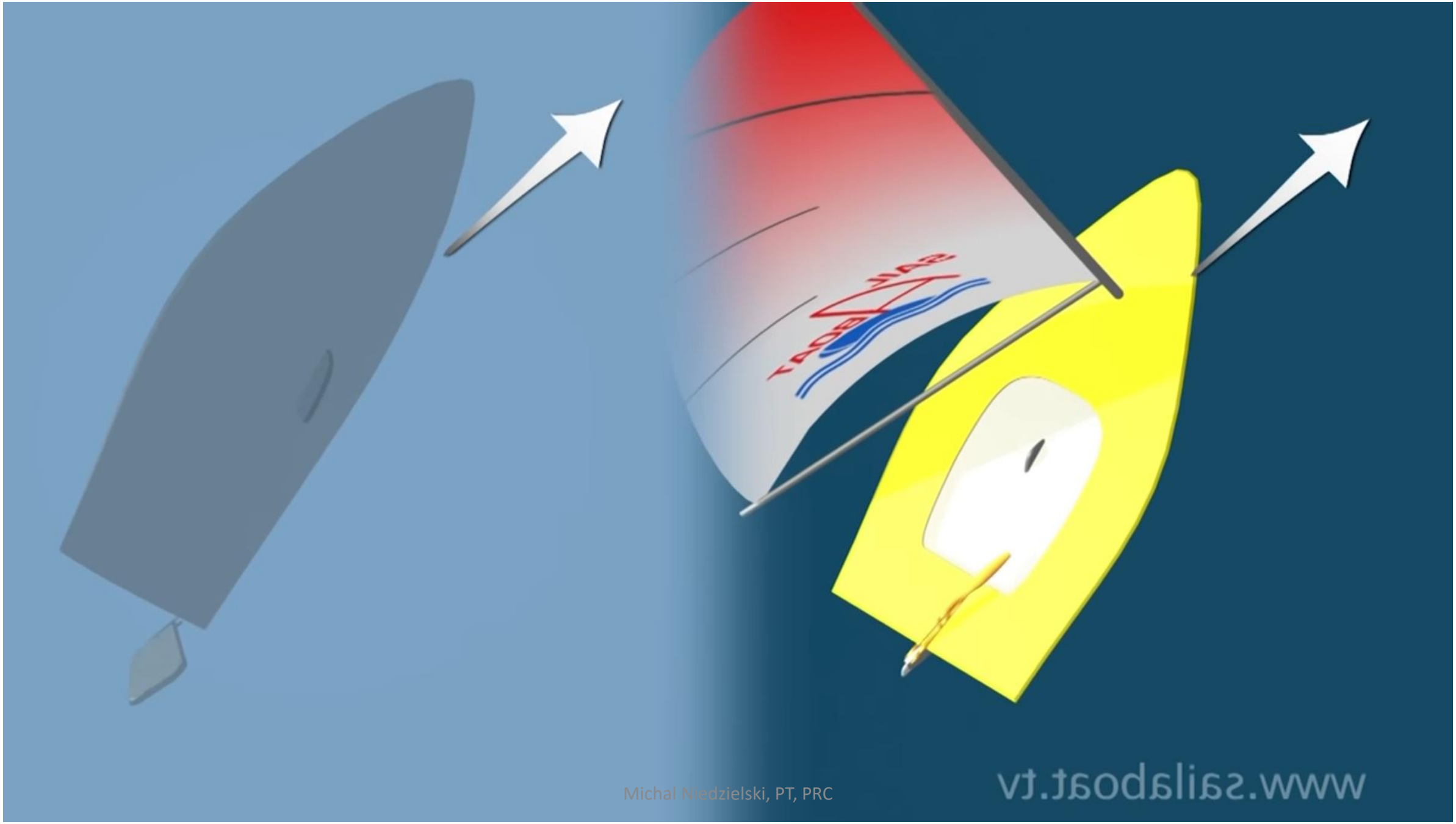
Michał Niedzielski, PT, PRC


Michal Niedzielski, PT, PRC

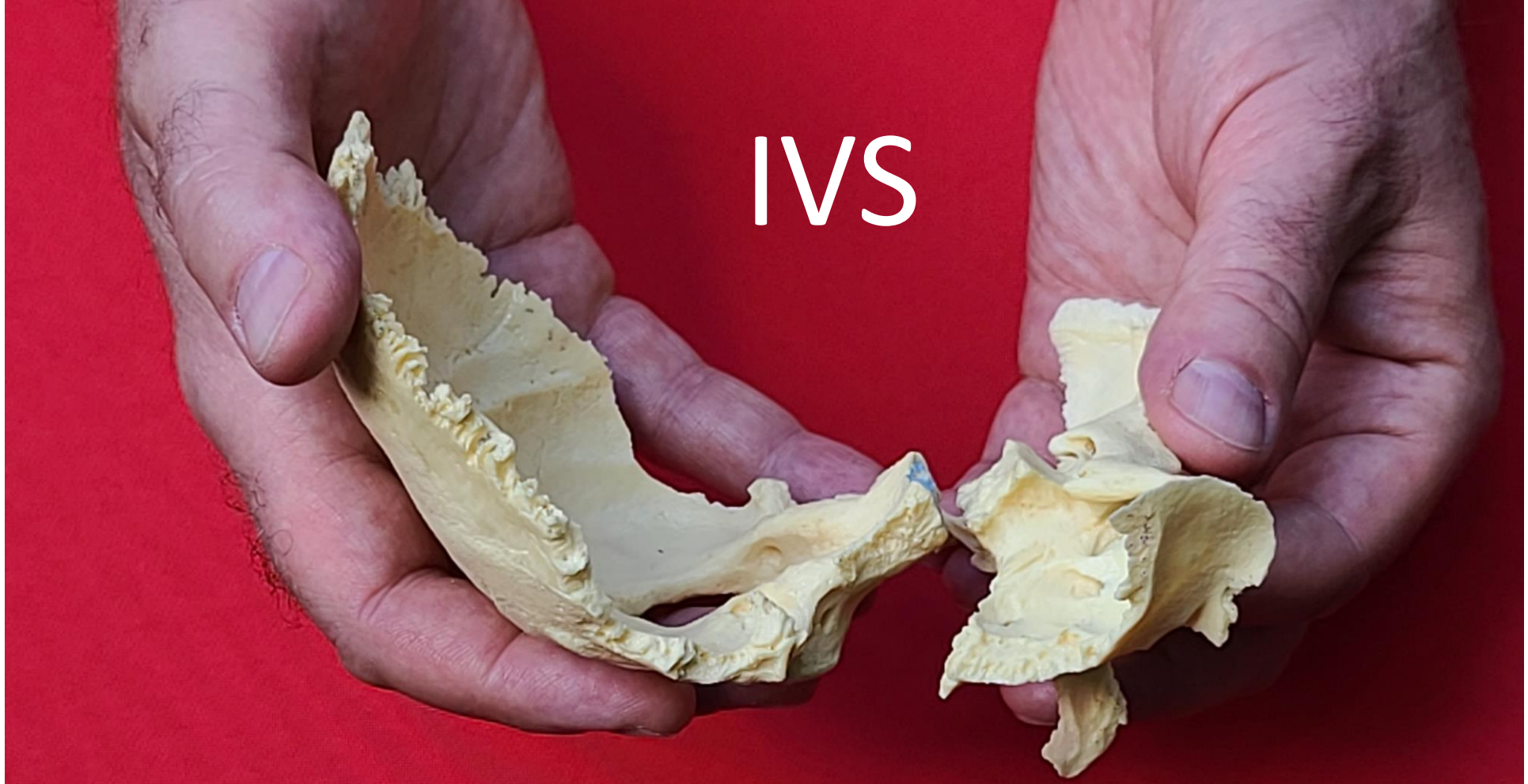

www.sailaboat.tv


Michal Niedzielski, PT, PRC
www.sailaboat.tv

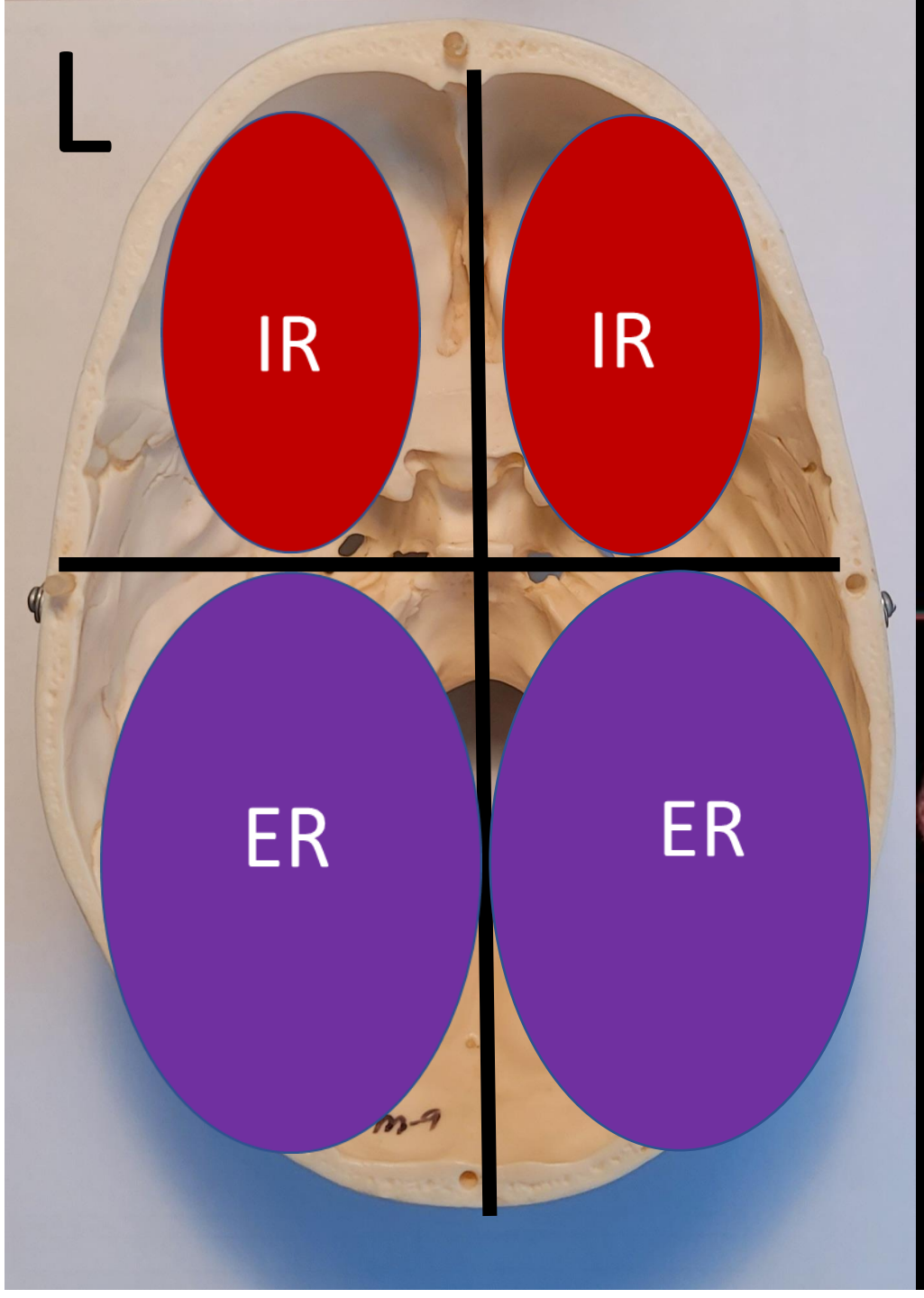

www.sailaboat.tv

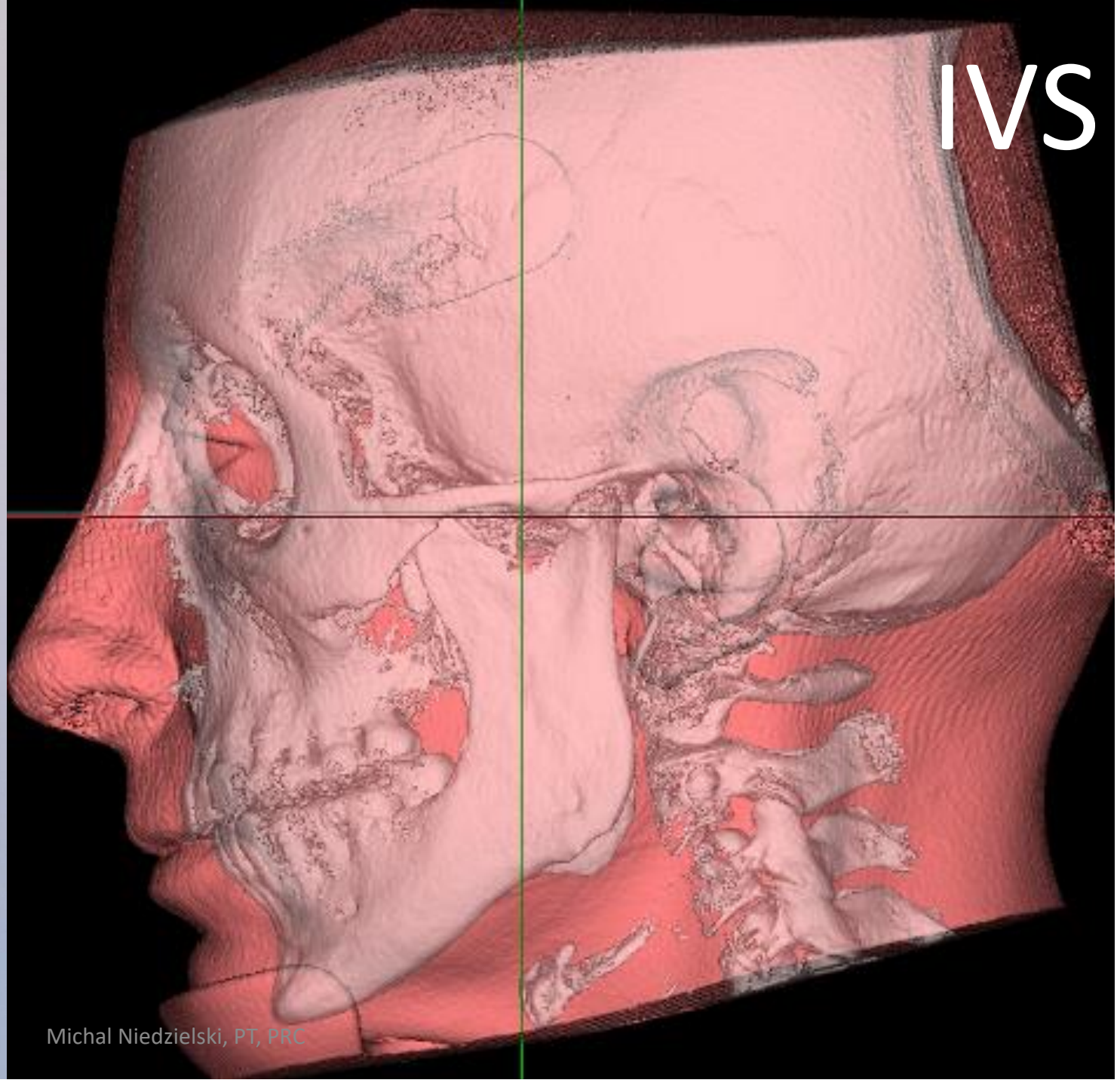

www.sailaboat.tv

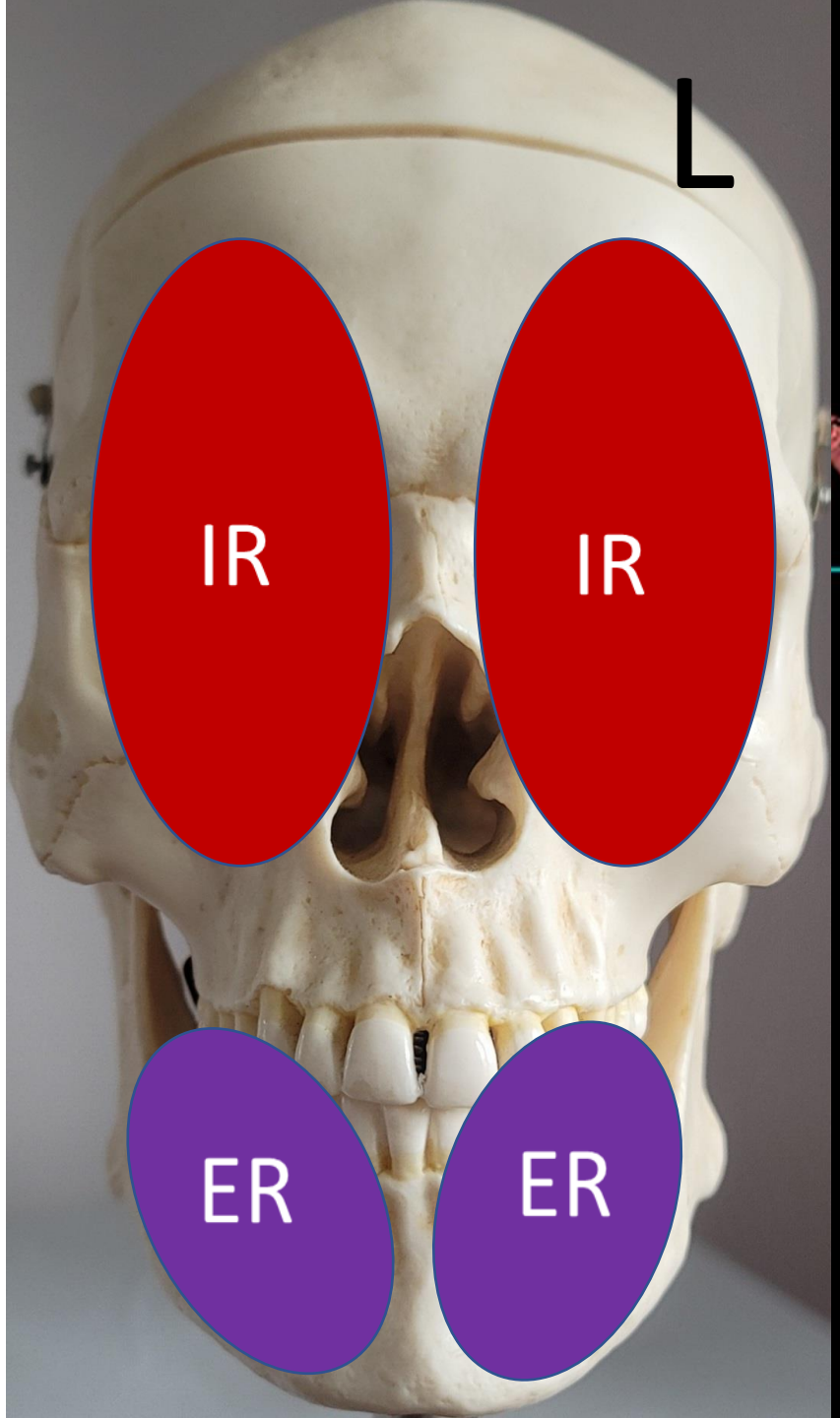
IVS

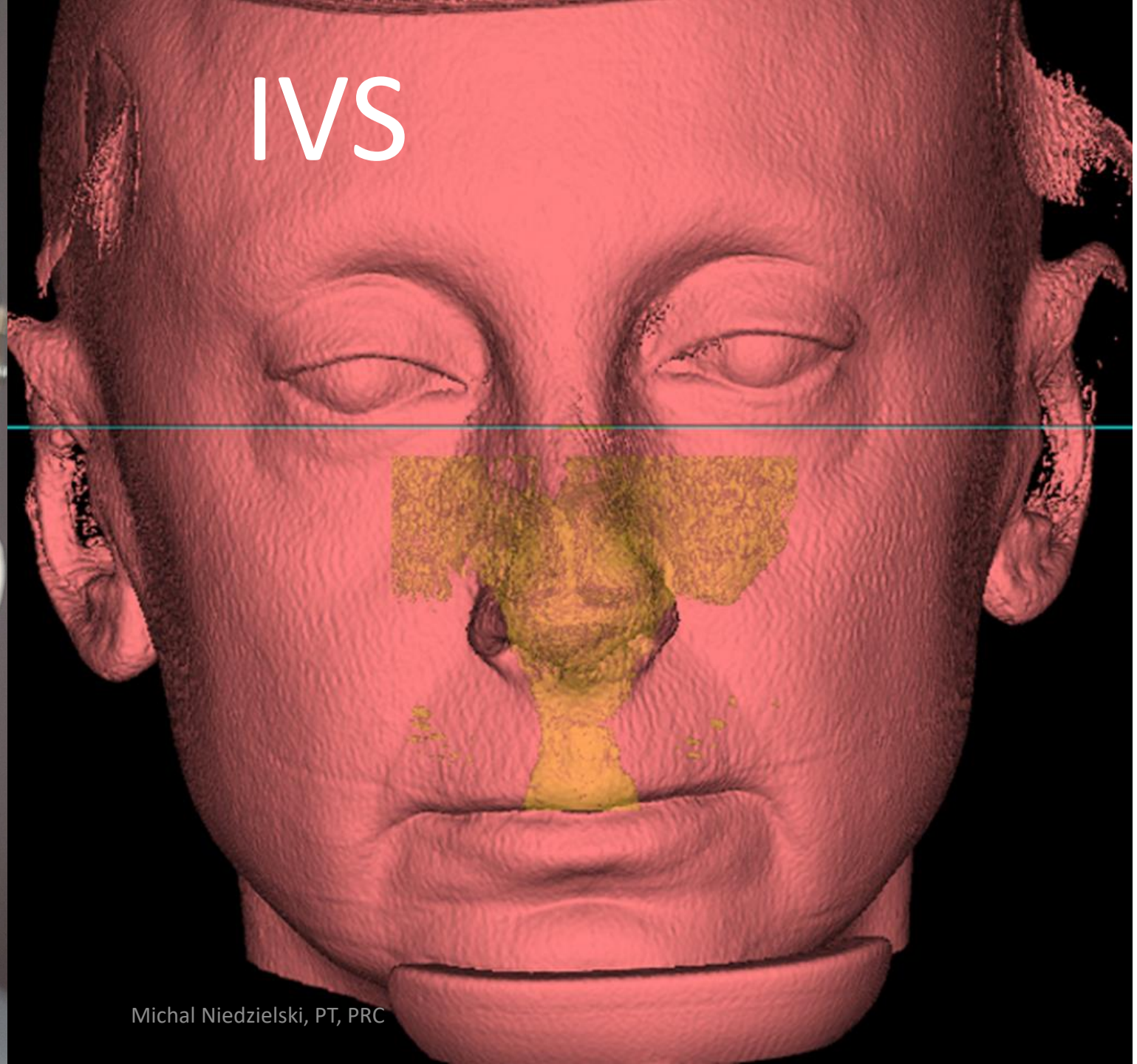


Michal Niedzielski, PT, PRC


L
IR
IR
ER
ER

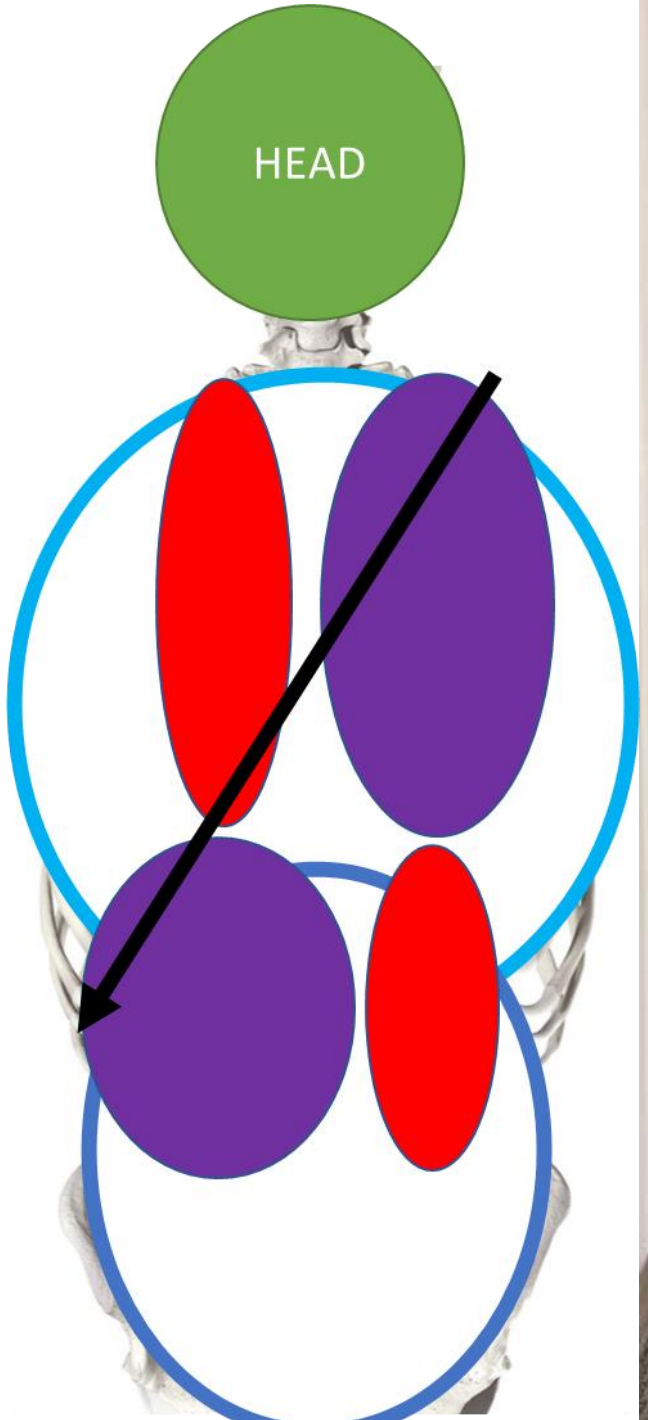

IVS
Michal Niedzielski, PT, PRC


L
IR
IR
ER
ER


IVS

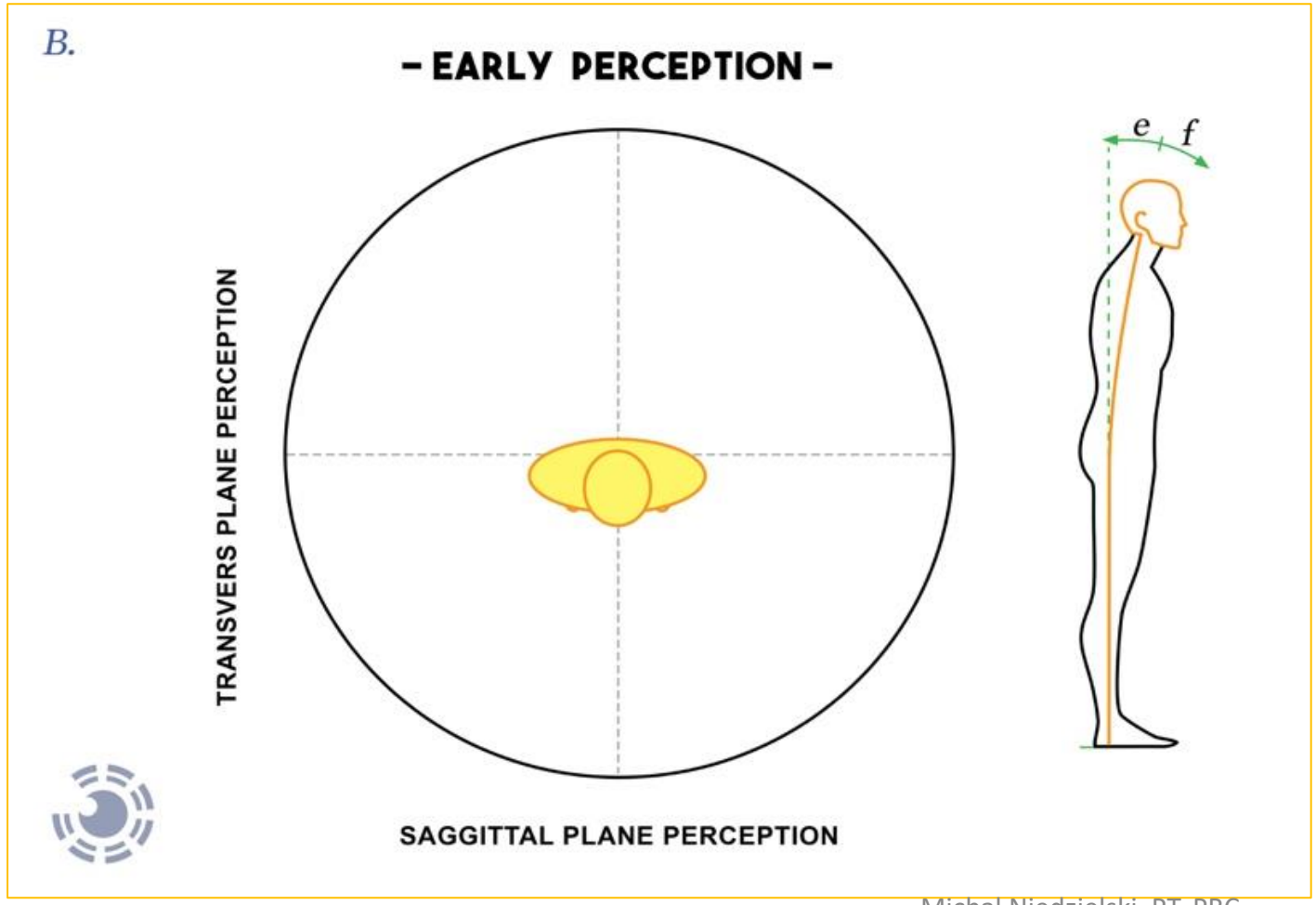

EXTREME
SAILING SERIES
GROUPE
EDMOND DE ROTHSCHILD
VILLE DE NICE
www.gitana-team.com

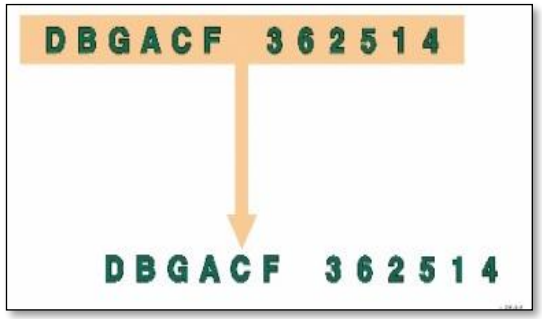

HYT
SWISS
SAP
extreme


HEAD


Michal Niedzielski, PT, PRC

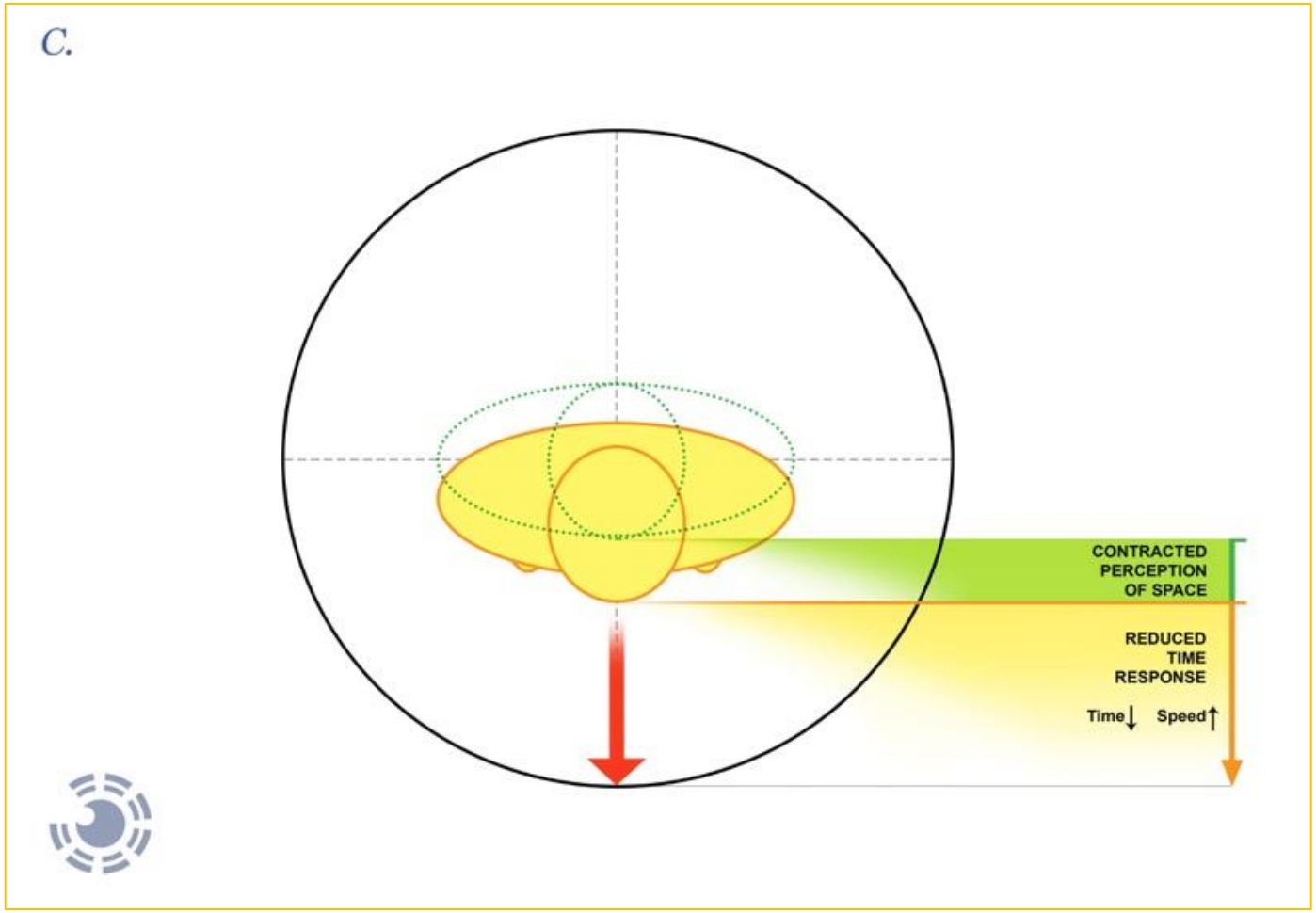
Spatial Perception Challenge Test





Spatial Perception Challenge Test

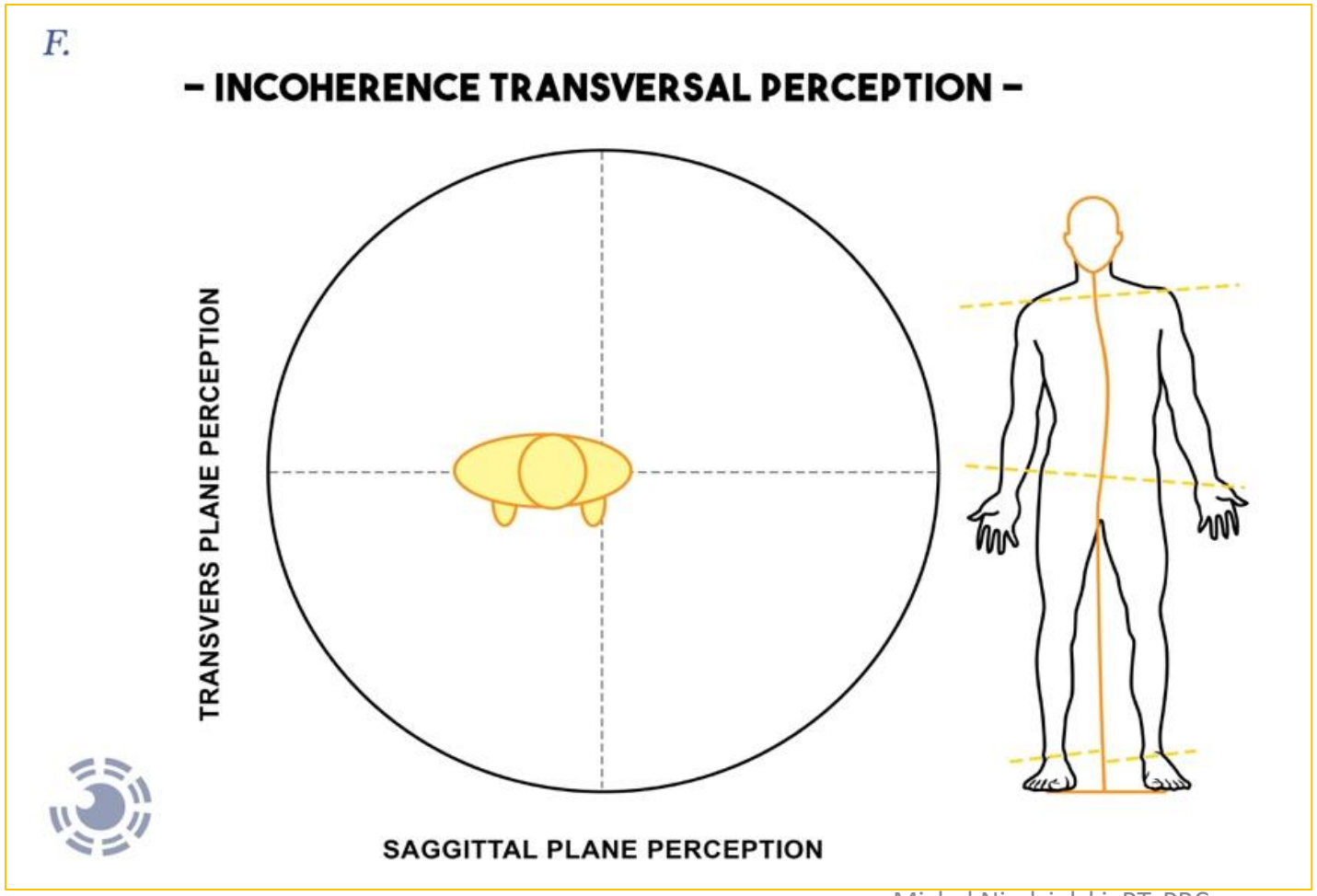
- *The subject has to change the input-output mode. This will reduce the response time for a contracted perception of the space (Space = Speed x Time). The advance ratio decreases when the arrow moves from F towards D, system is not coherent (fig. C).*

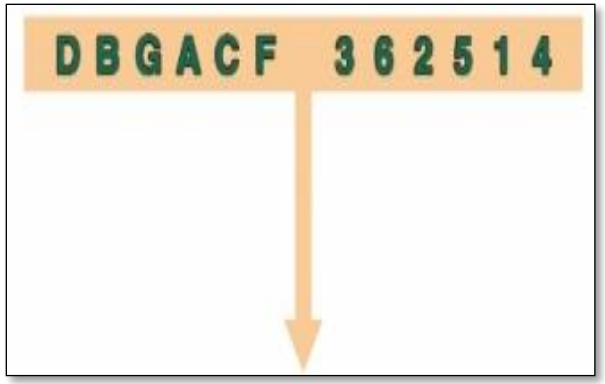


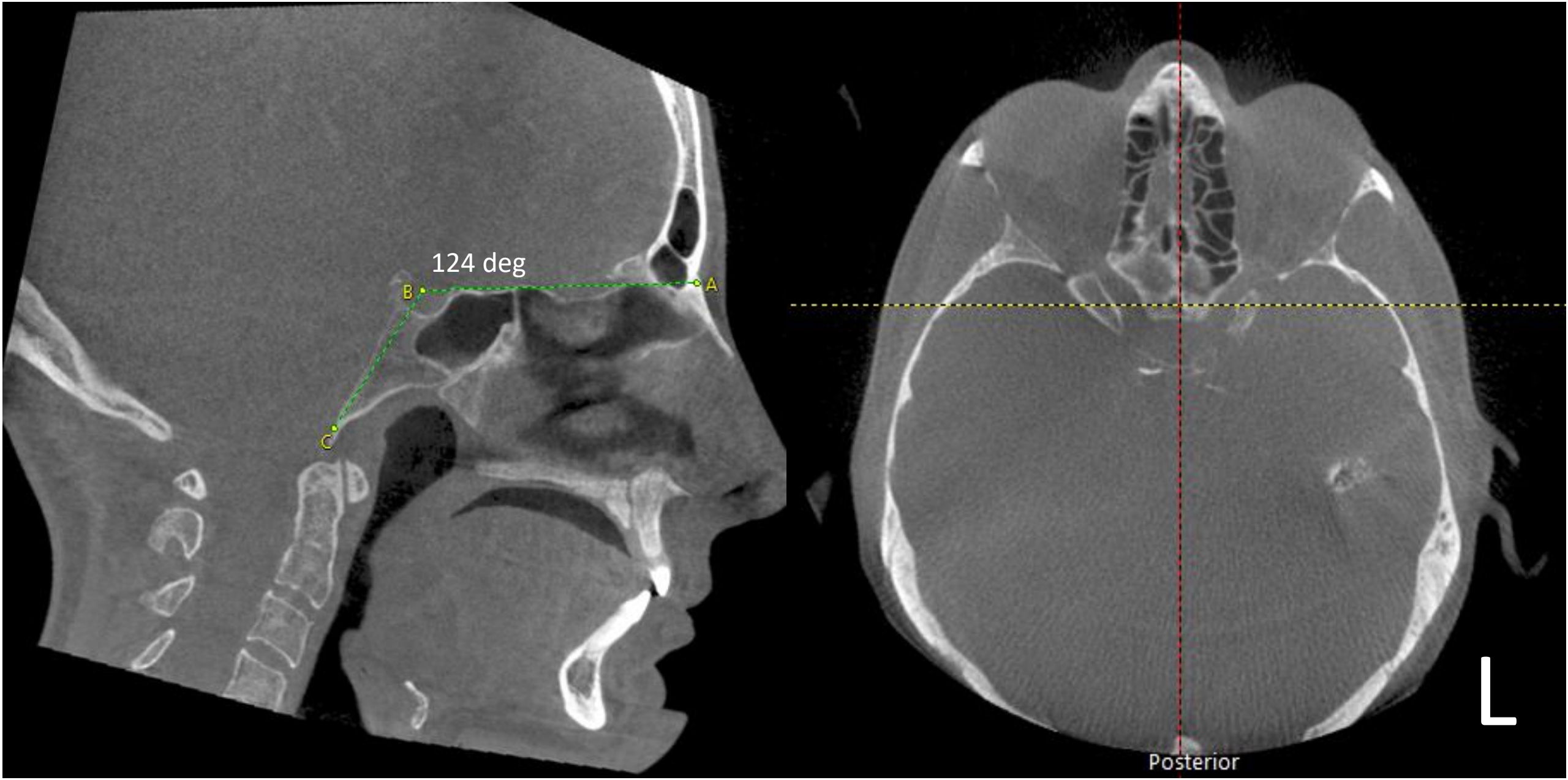
Coherence Protocol - Vision

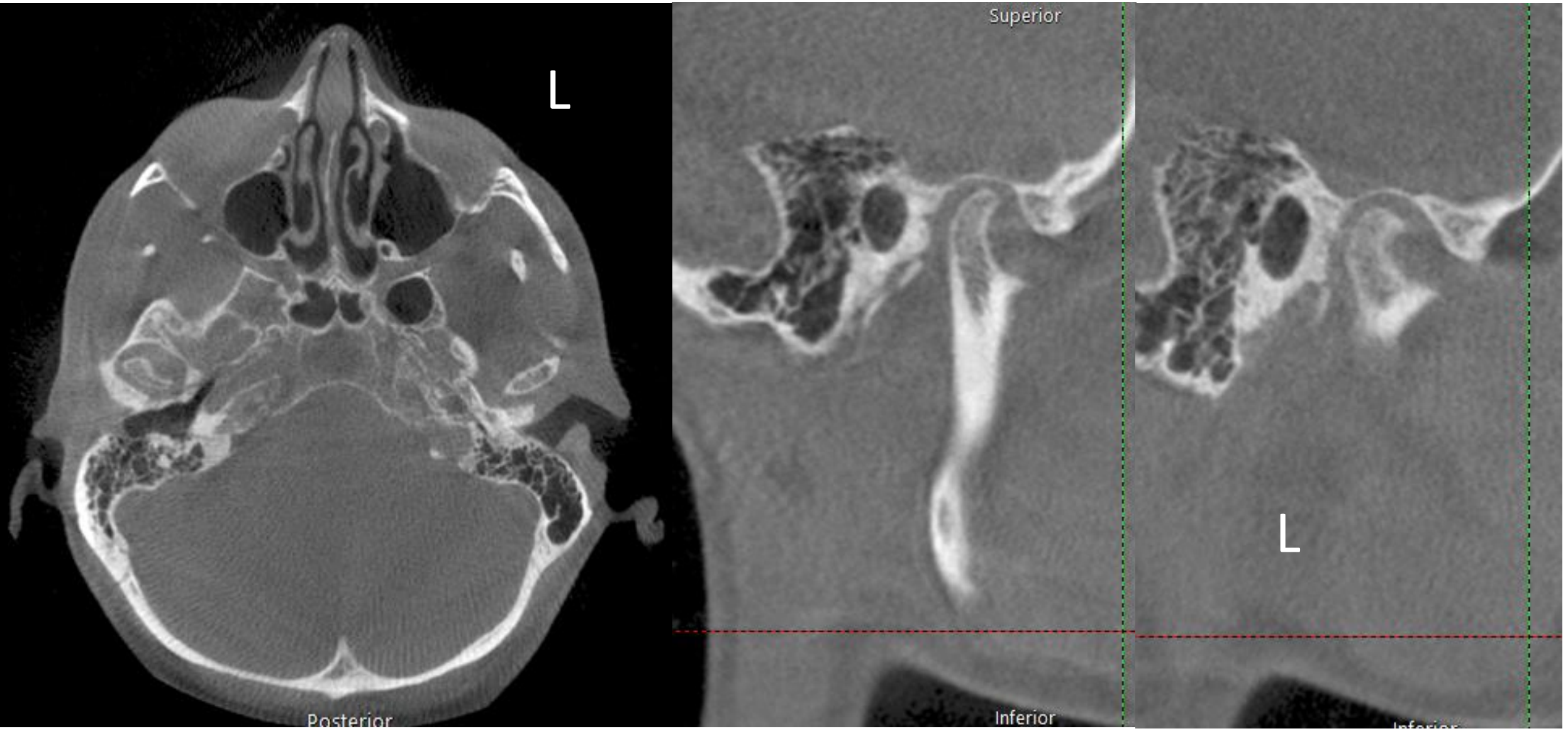
- ***Spatial Perception Challenge Test*** *informs us about the position of the system in space and possible deficiency, mismatch of the information between space (ambient) and how the subject relates to it. Based on challenged fusion in the* ***sagittal*** *plane this test describes adaptation and indicates resilience of body self-organization. We are not testing eye alignment (esophoria or exophoria) but information coordination and comprehension (early or late), behavior and direction of challenge (trend indicator).*

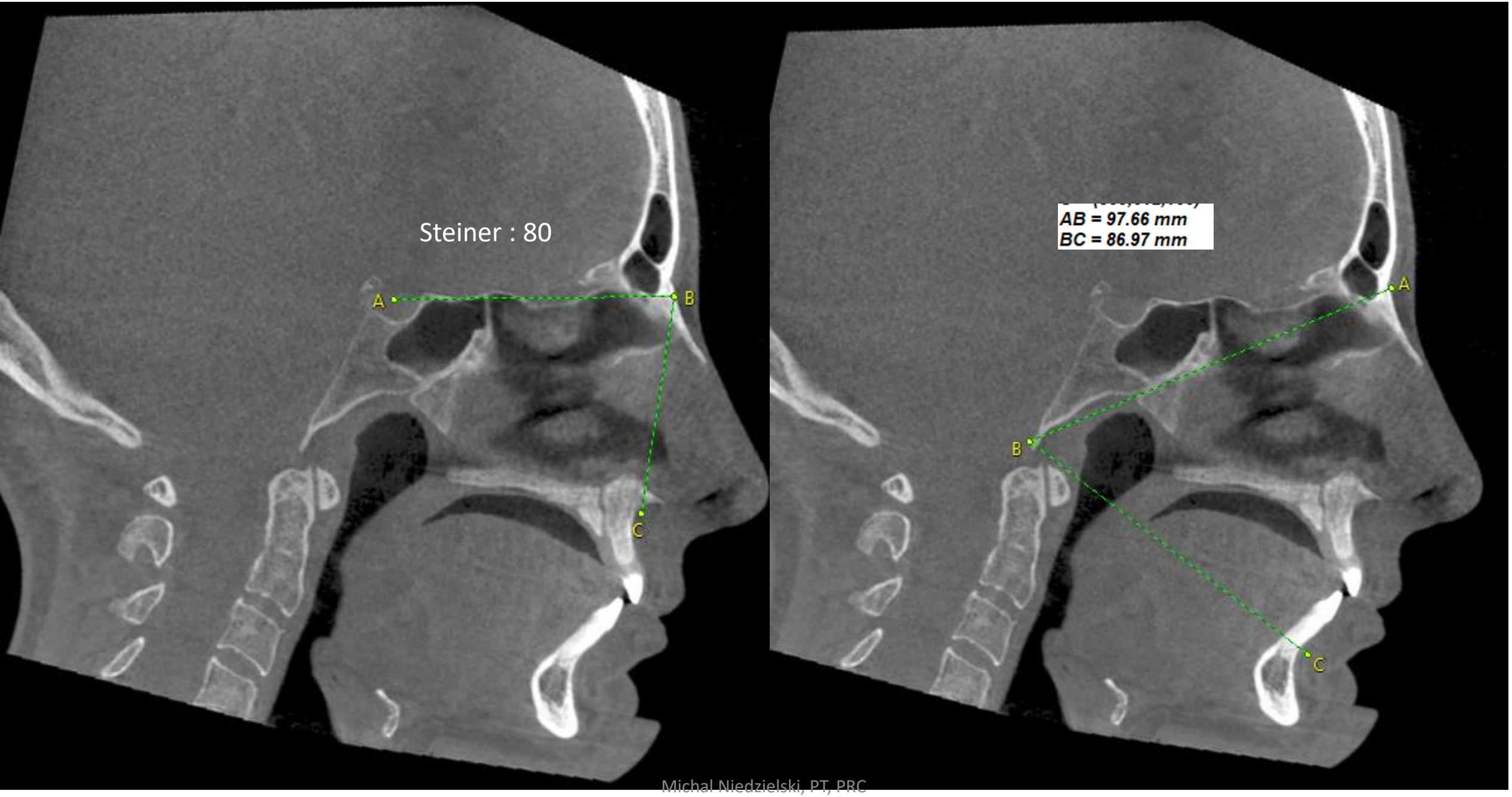
Spatial Perception Challenge Test

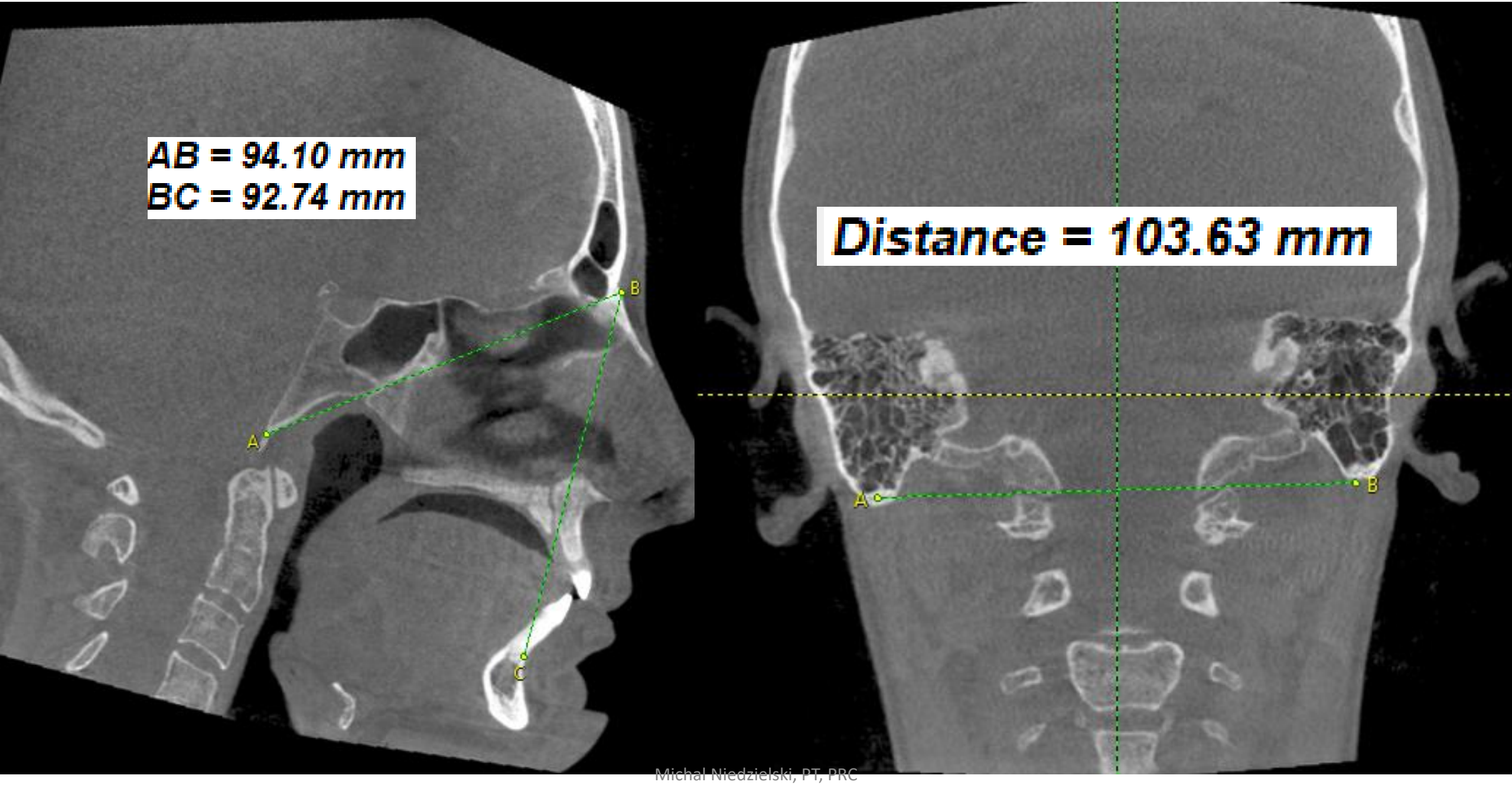


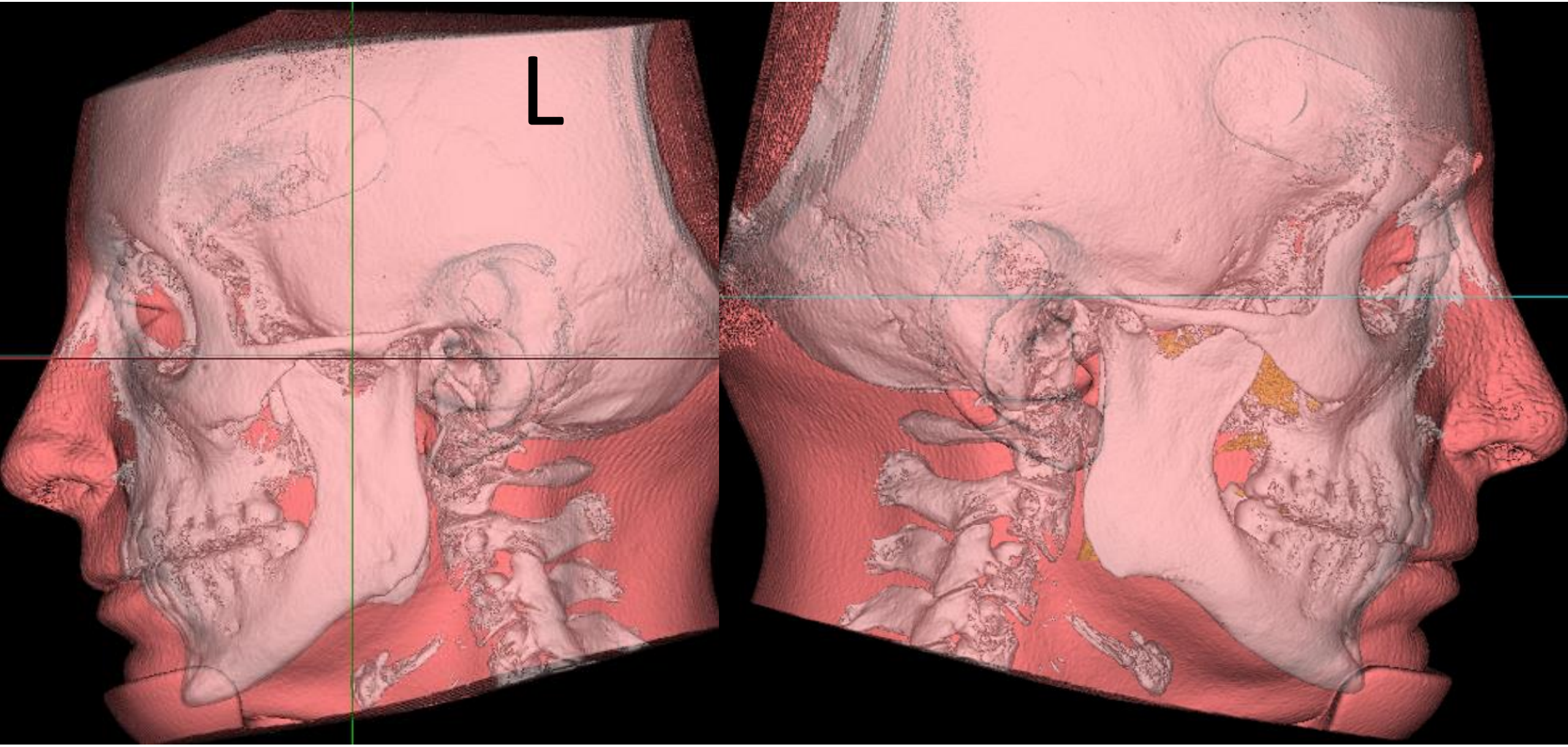


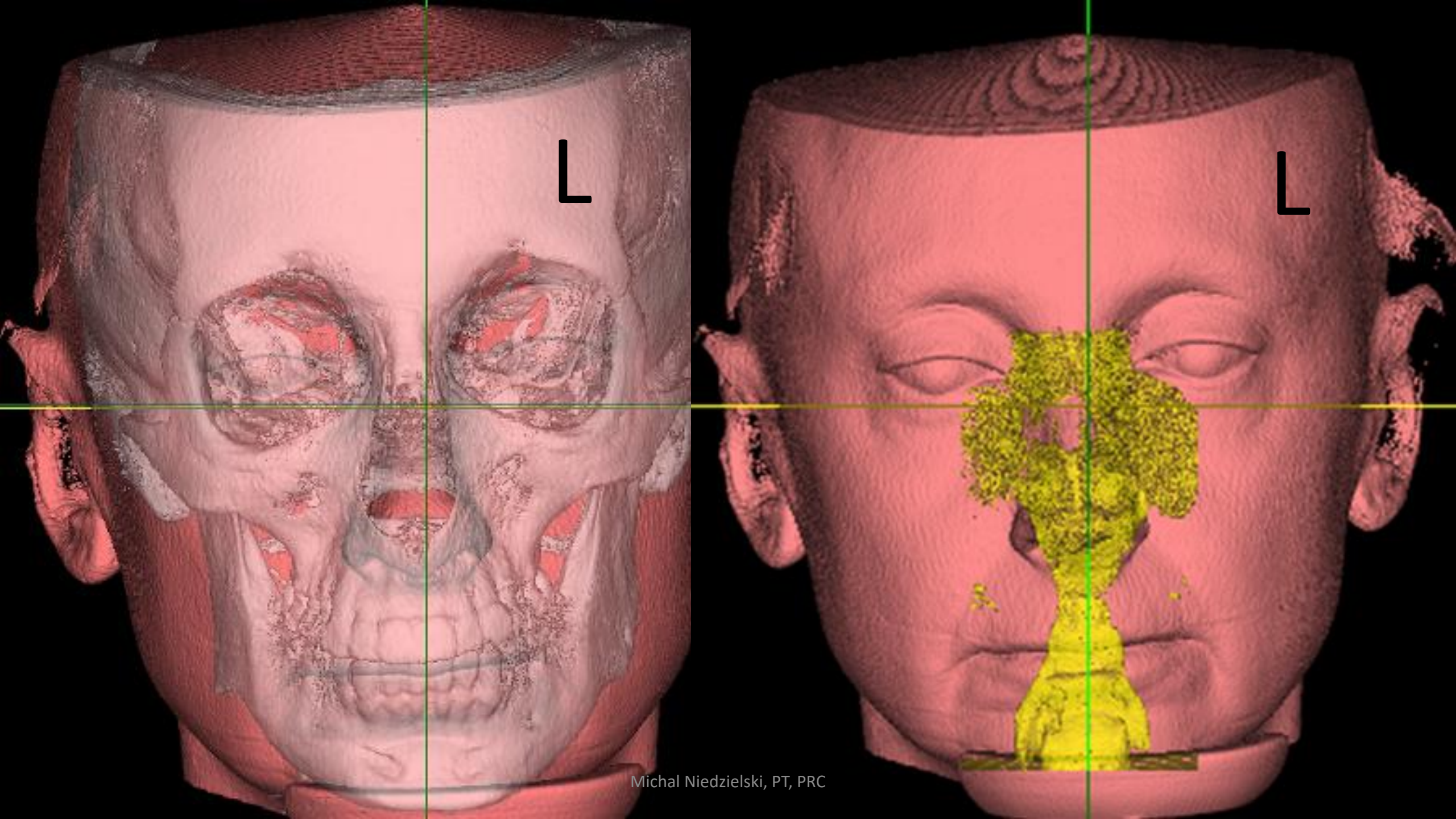

124 deg
B
A
C
Posterior
L

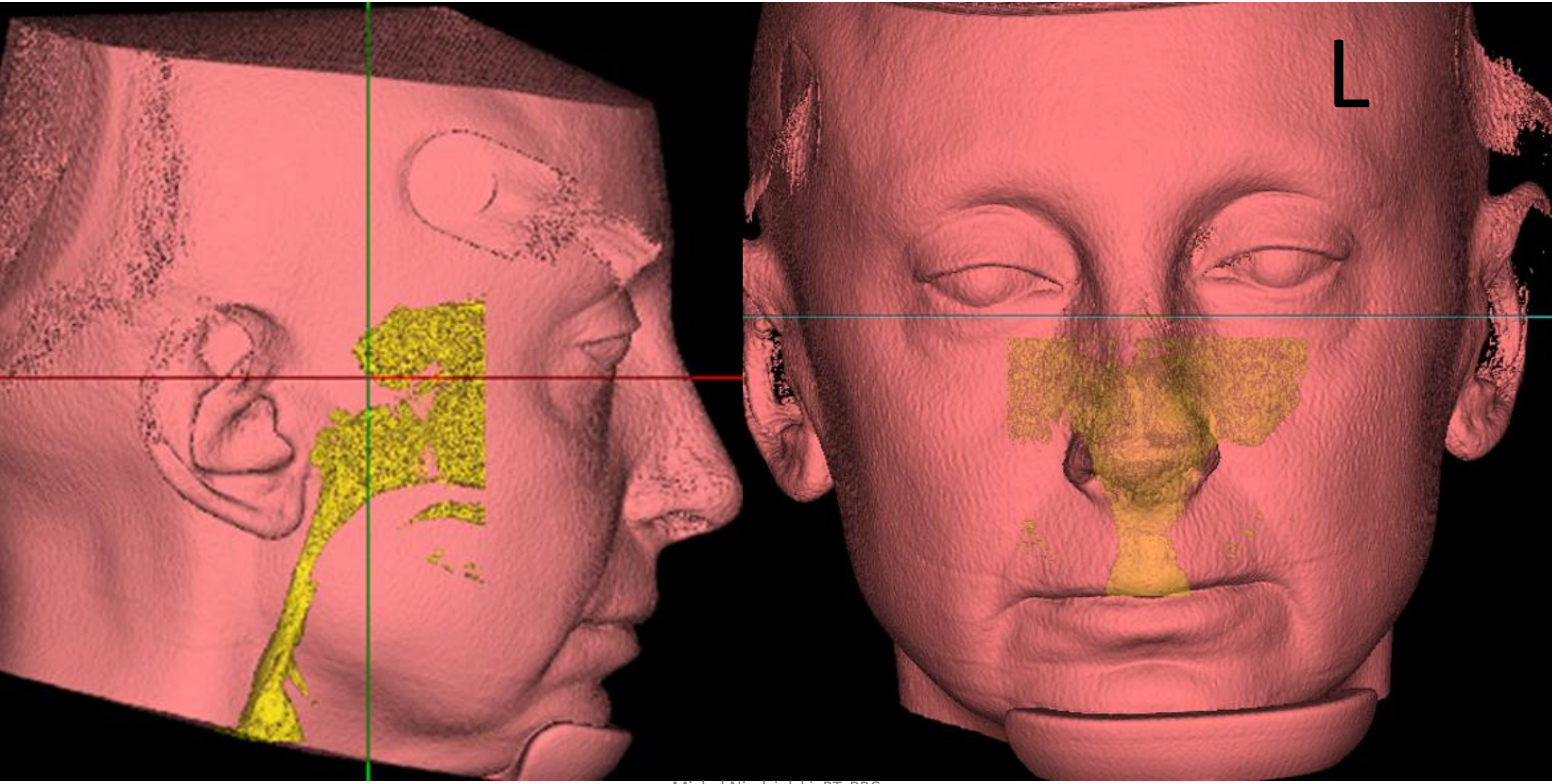

L
Posterior
Superior
Inferior
L

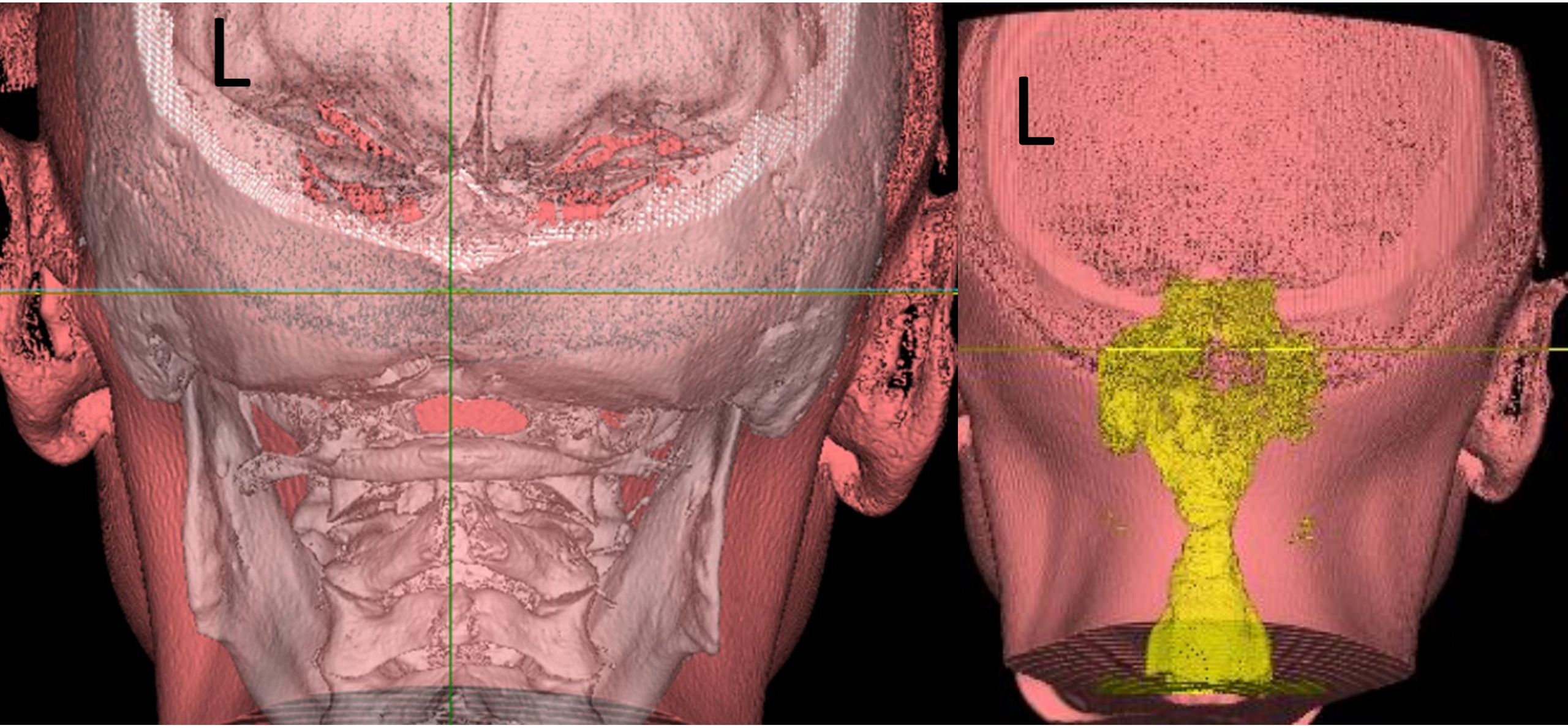

Steiner : 80
A
B
C
AB = 97.66 mm
BC = 86.97 mm
A
B
C

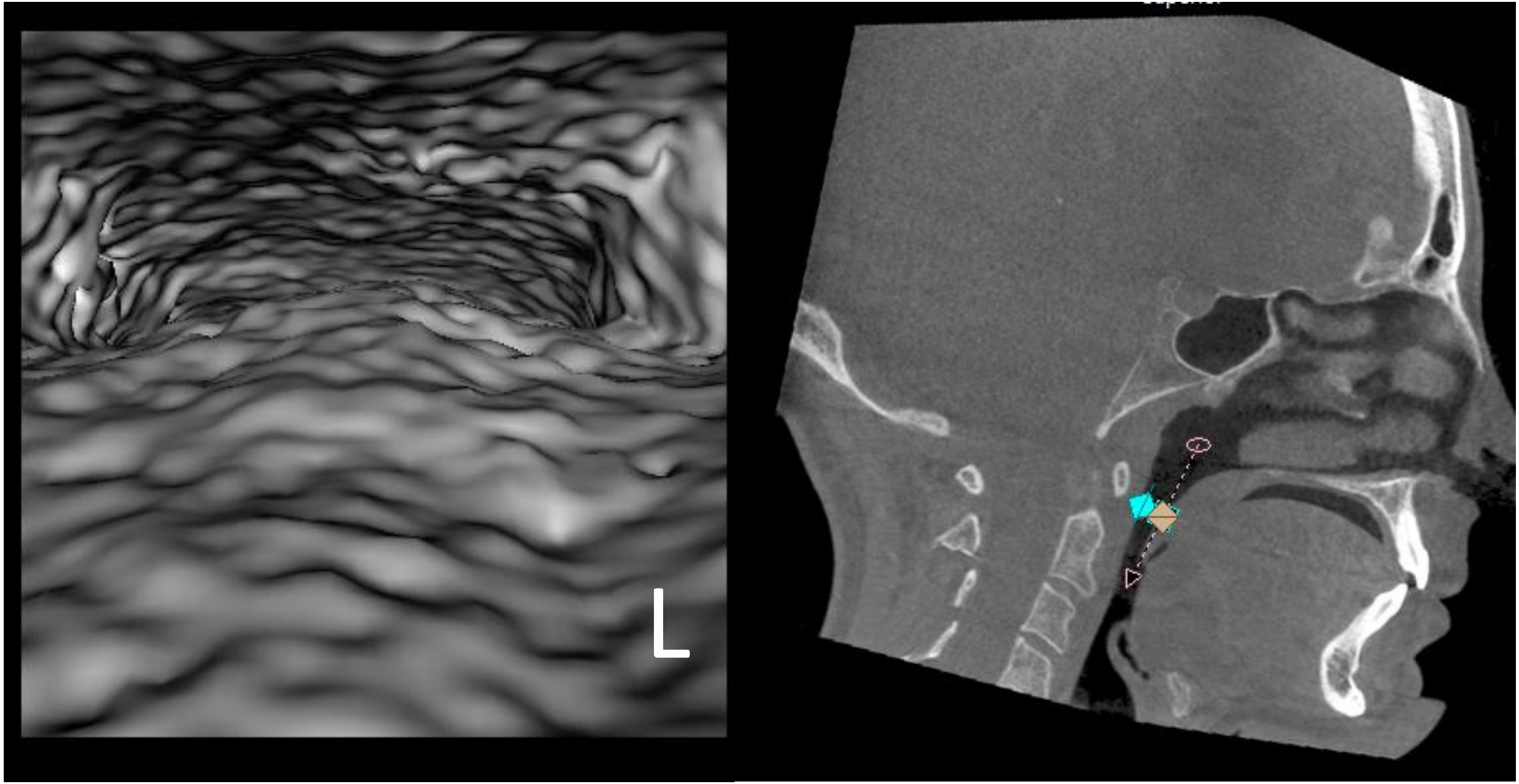

AB = 94.10 mm
BC = 92.74 mm
A
B
C
Distance = 103.63 mm
A
B


L

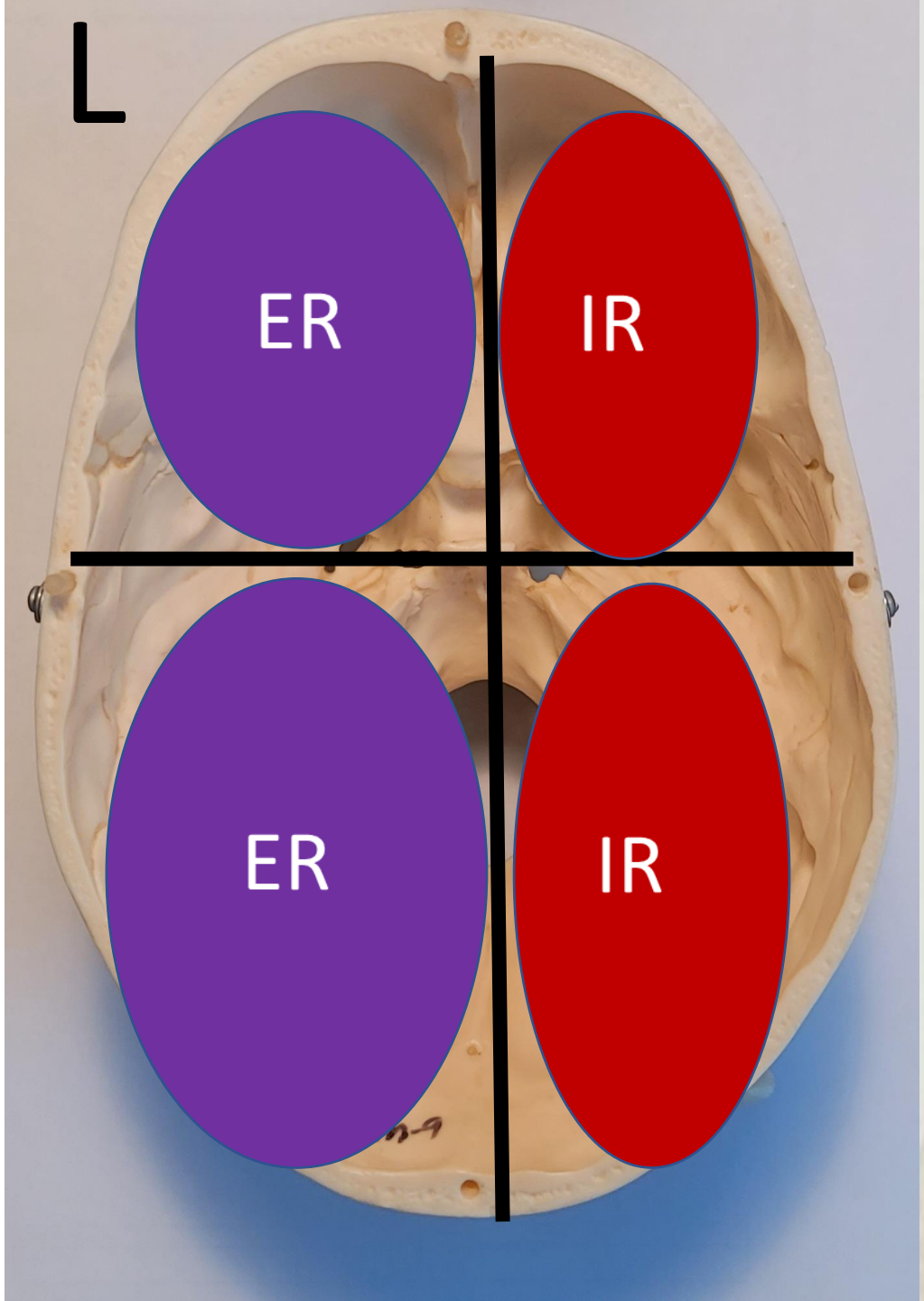

L
L

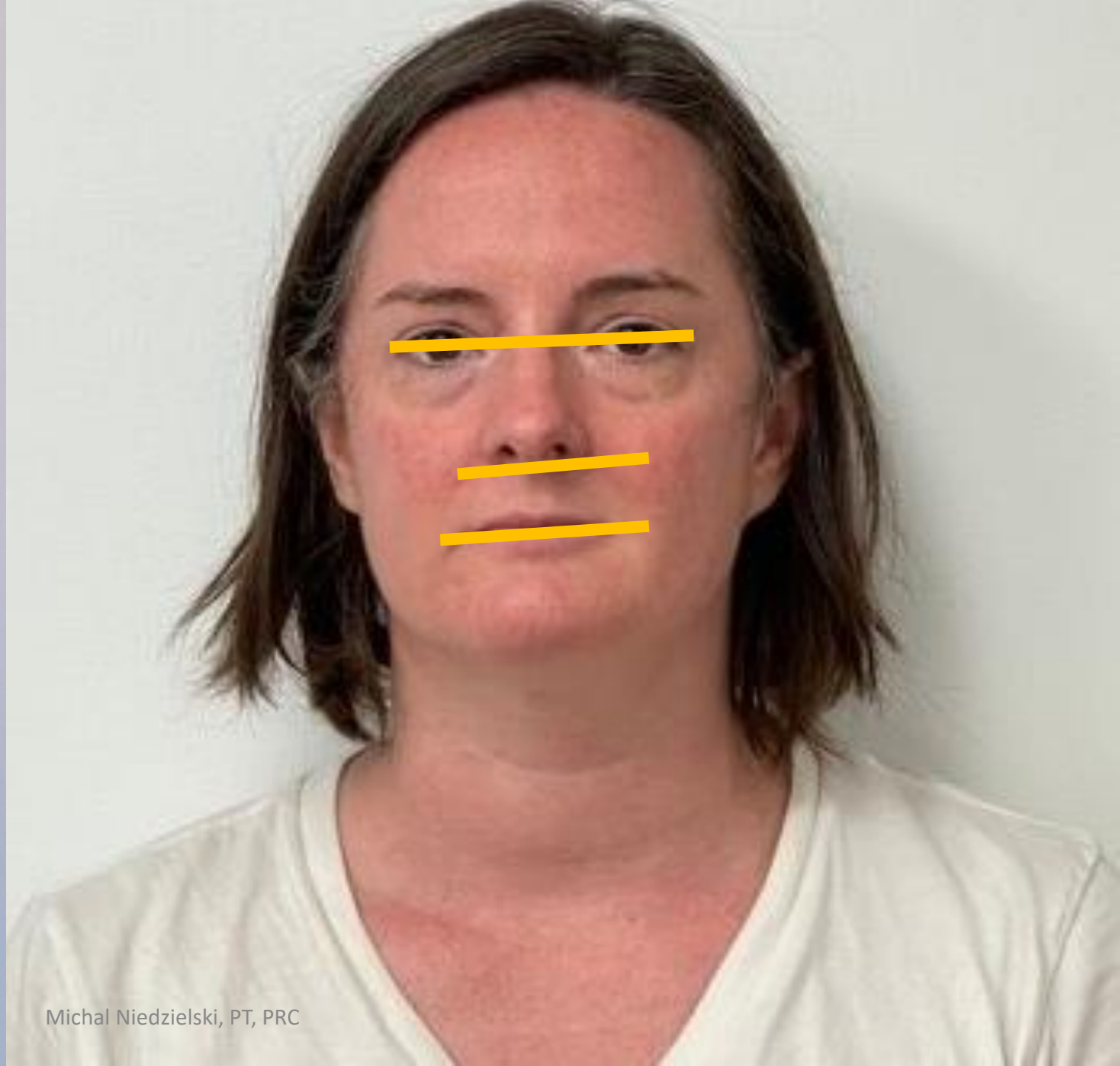

L

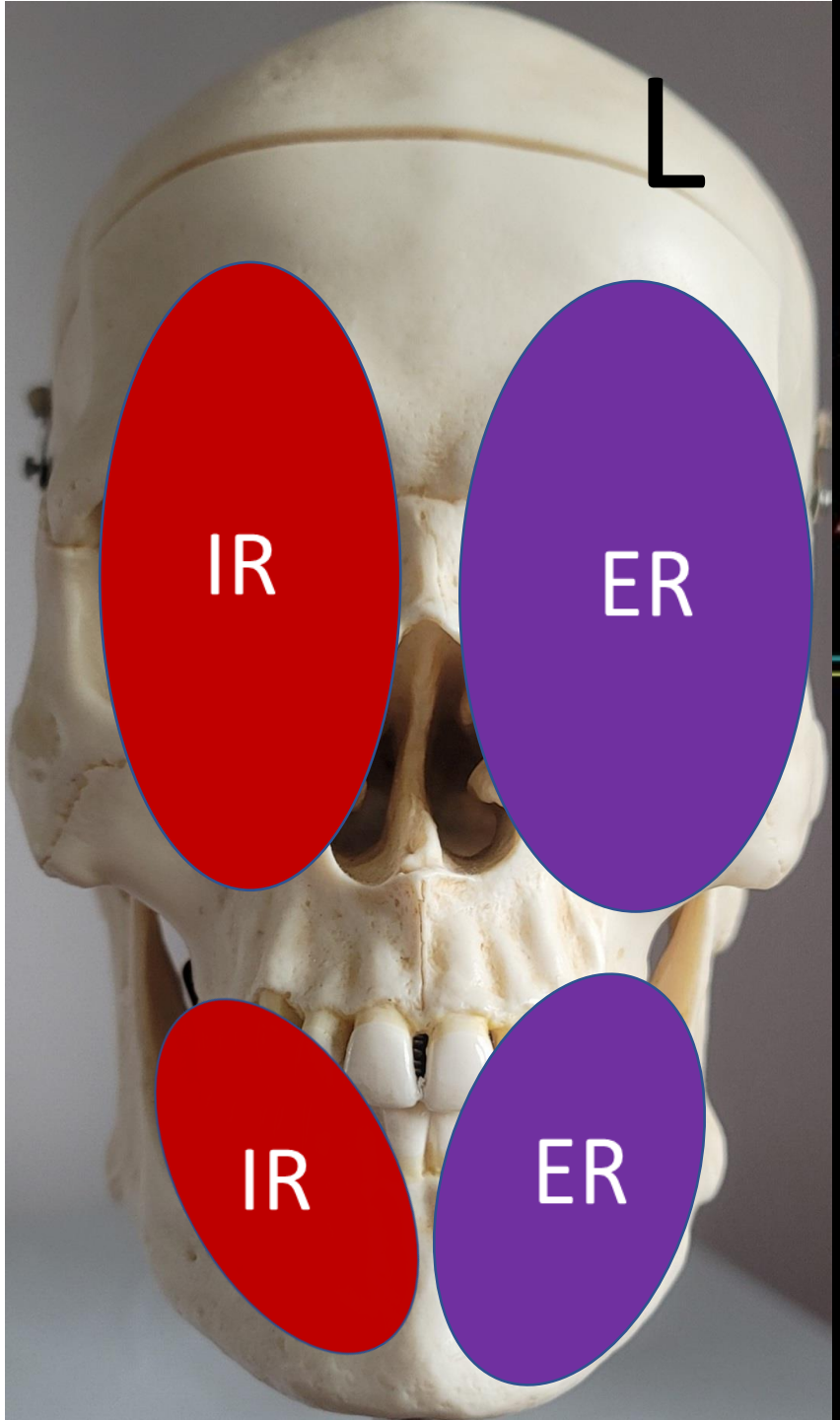

L
L

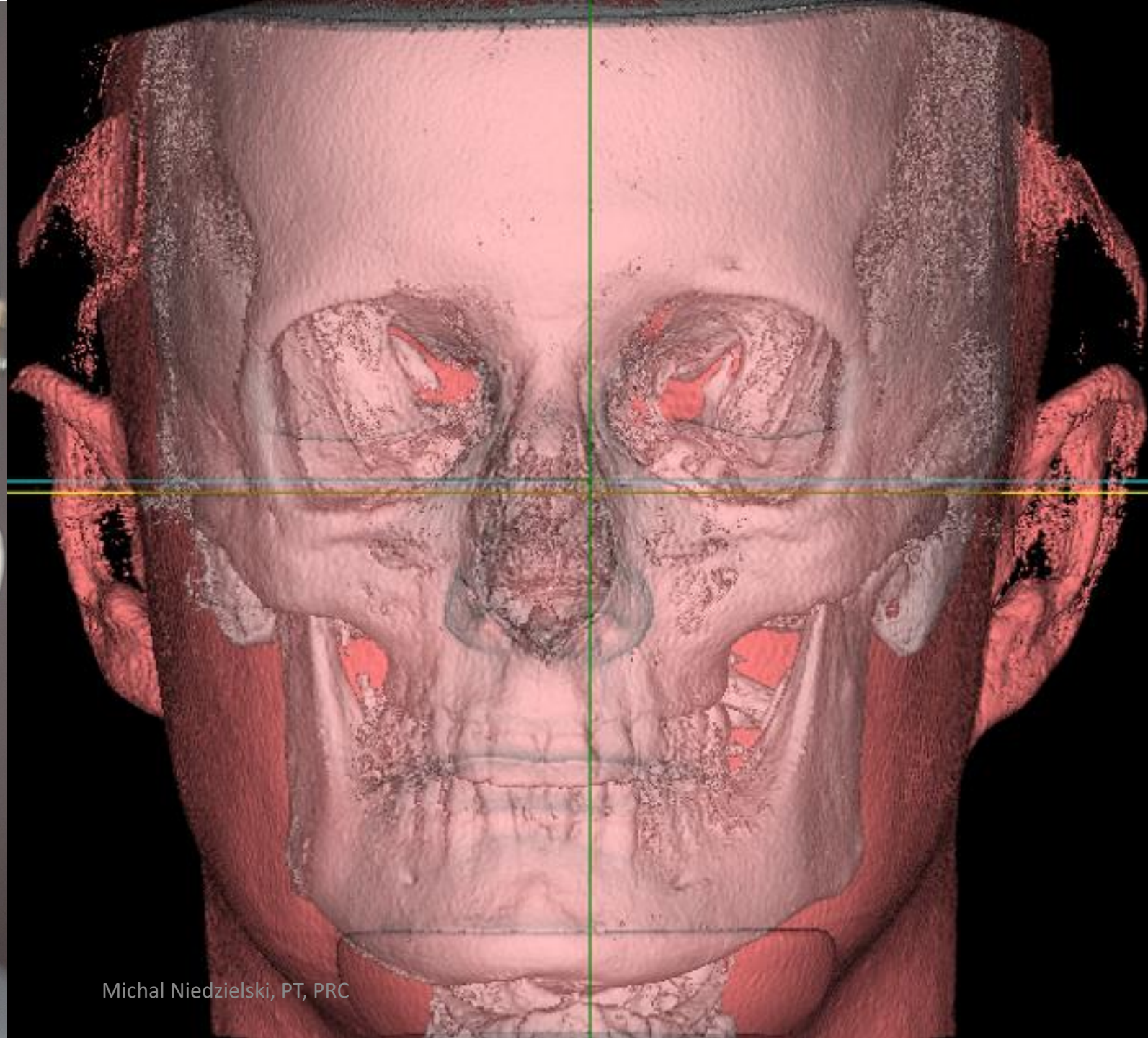

L

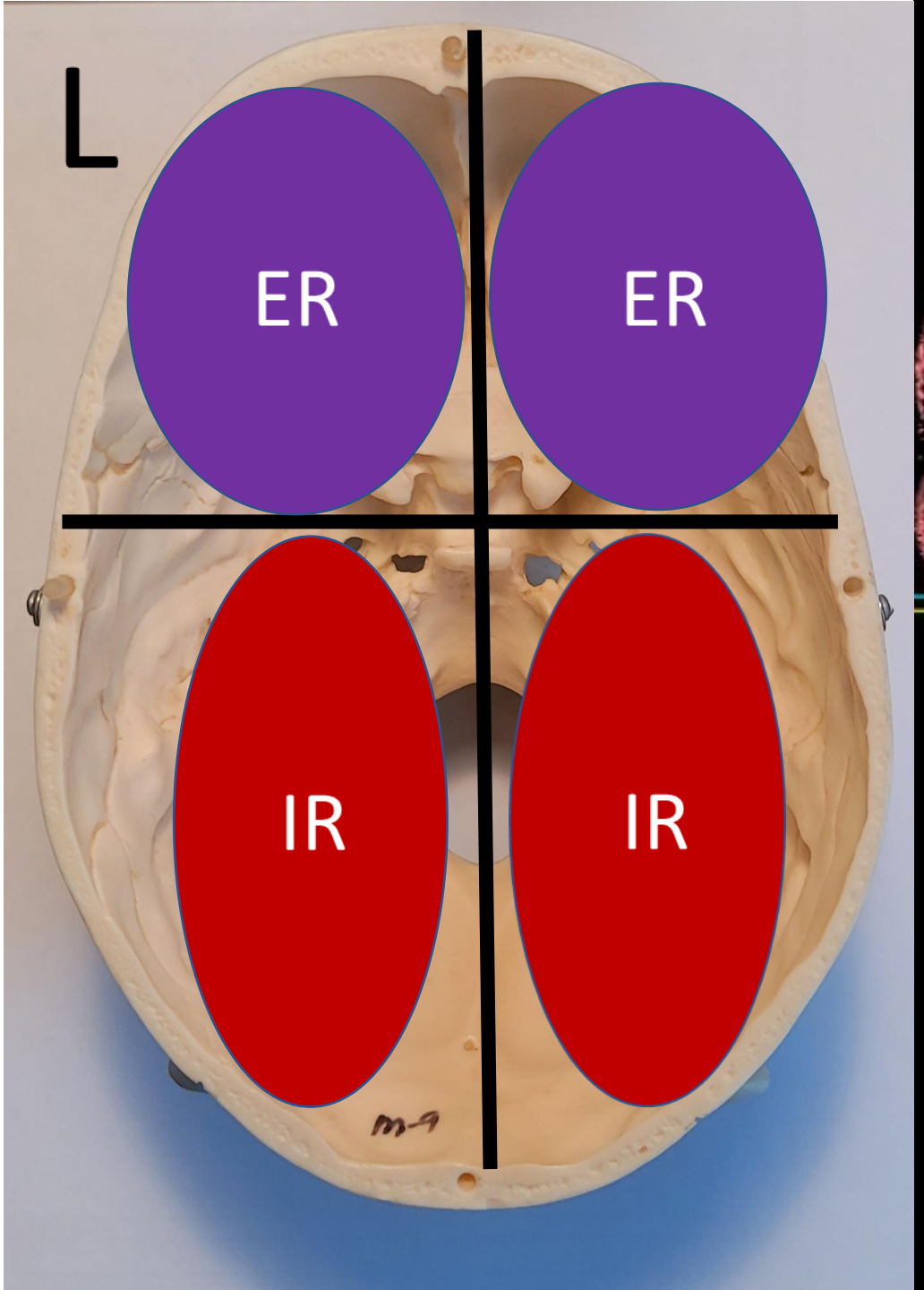
L Torsion & SVS

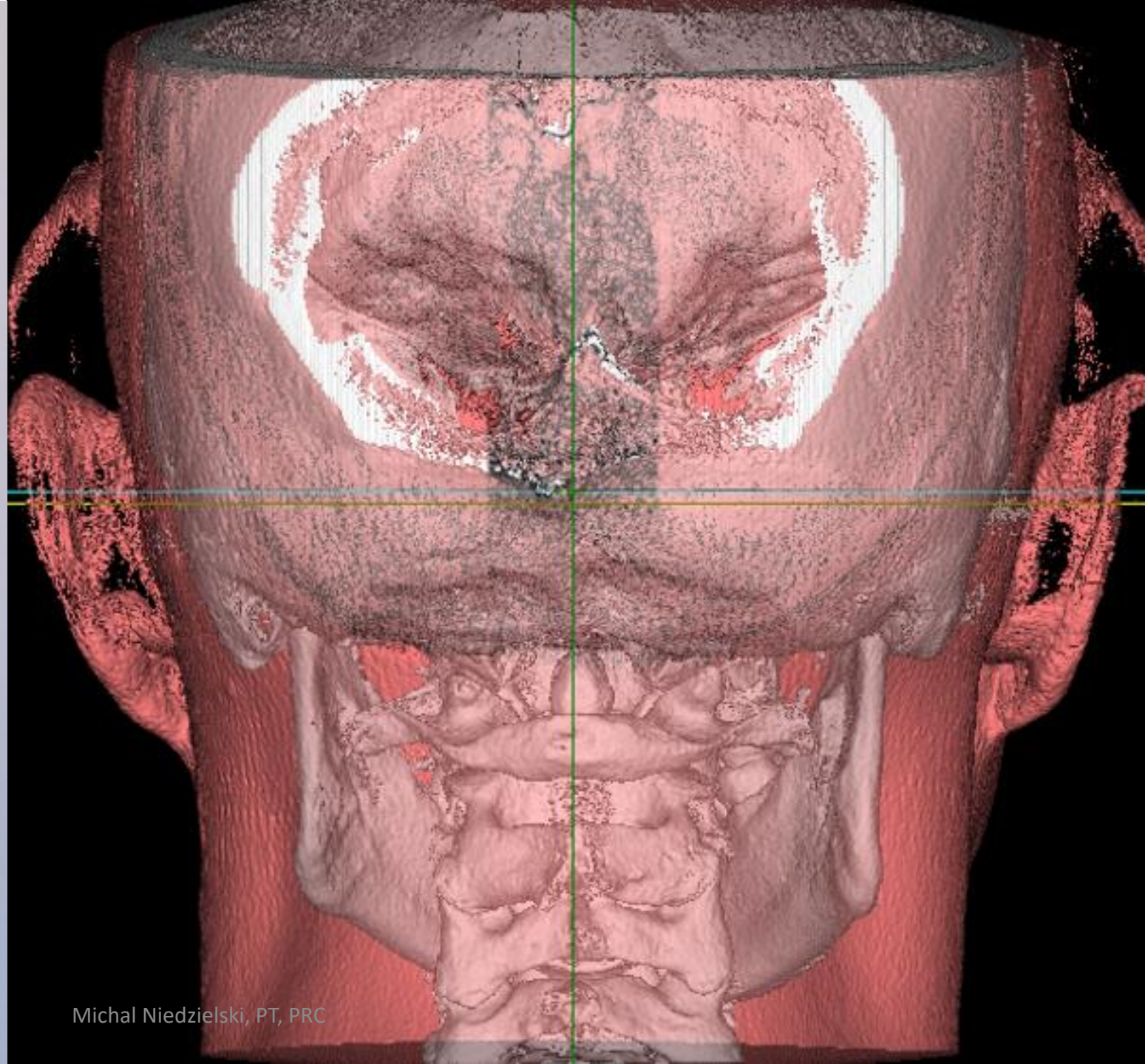

L
ER
IR
ER
IR

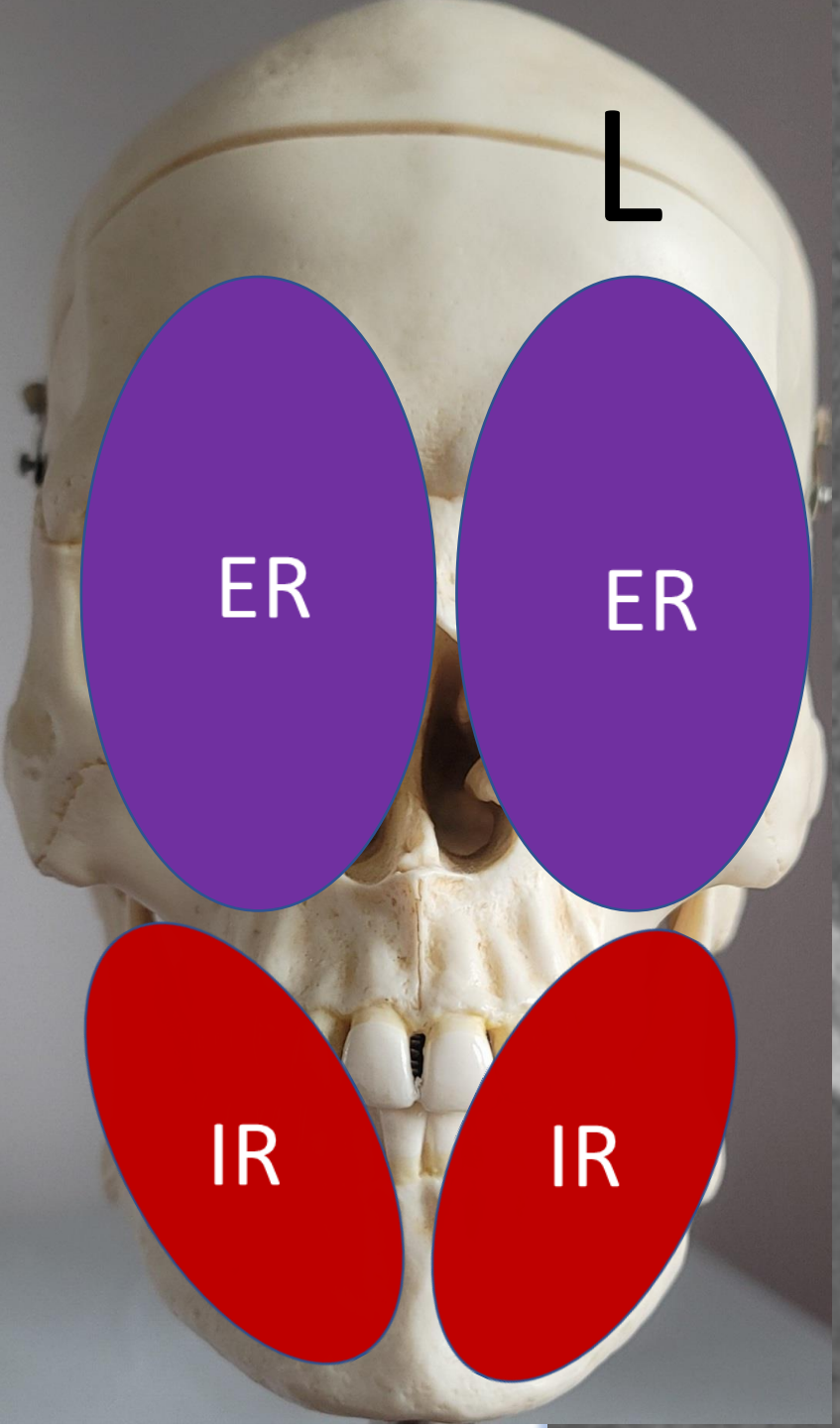

Michal Niedzielski, PT, PRC

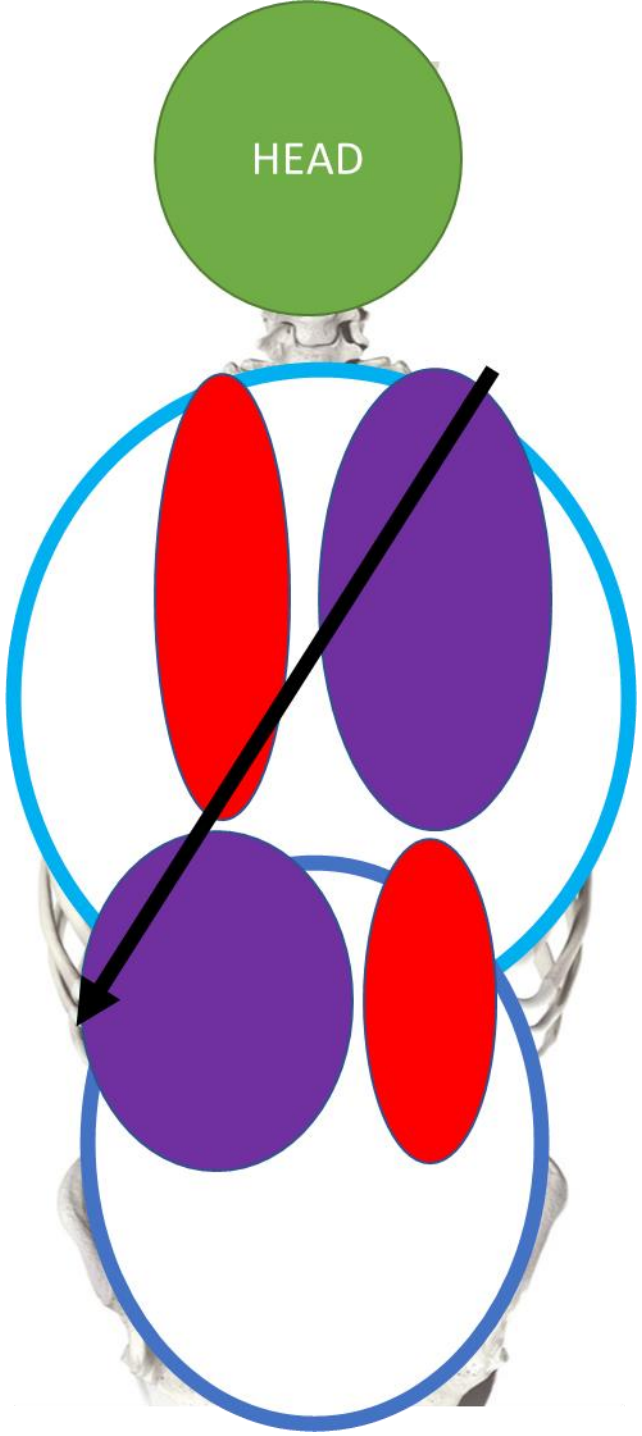


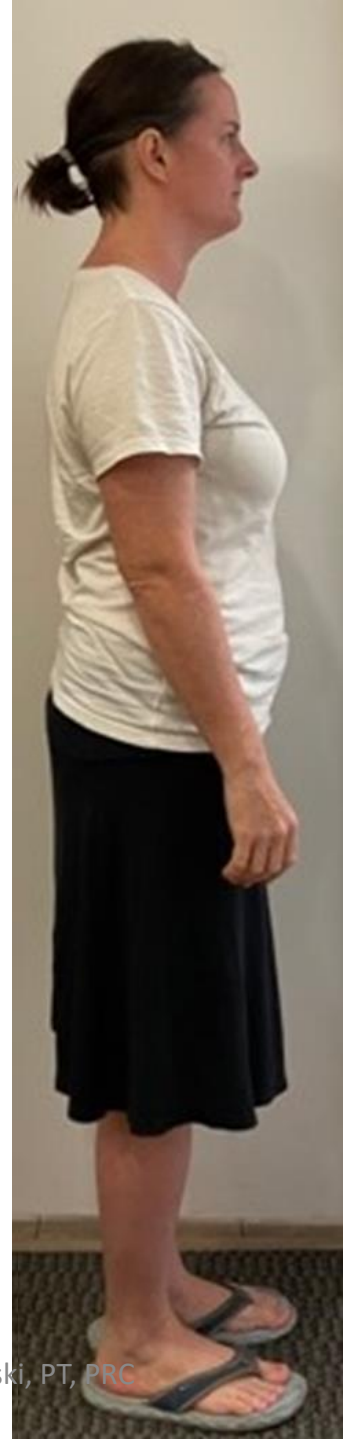



L
ER
ER
IR
IR


Michal Niedzielski, PT, PRC







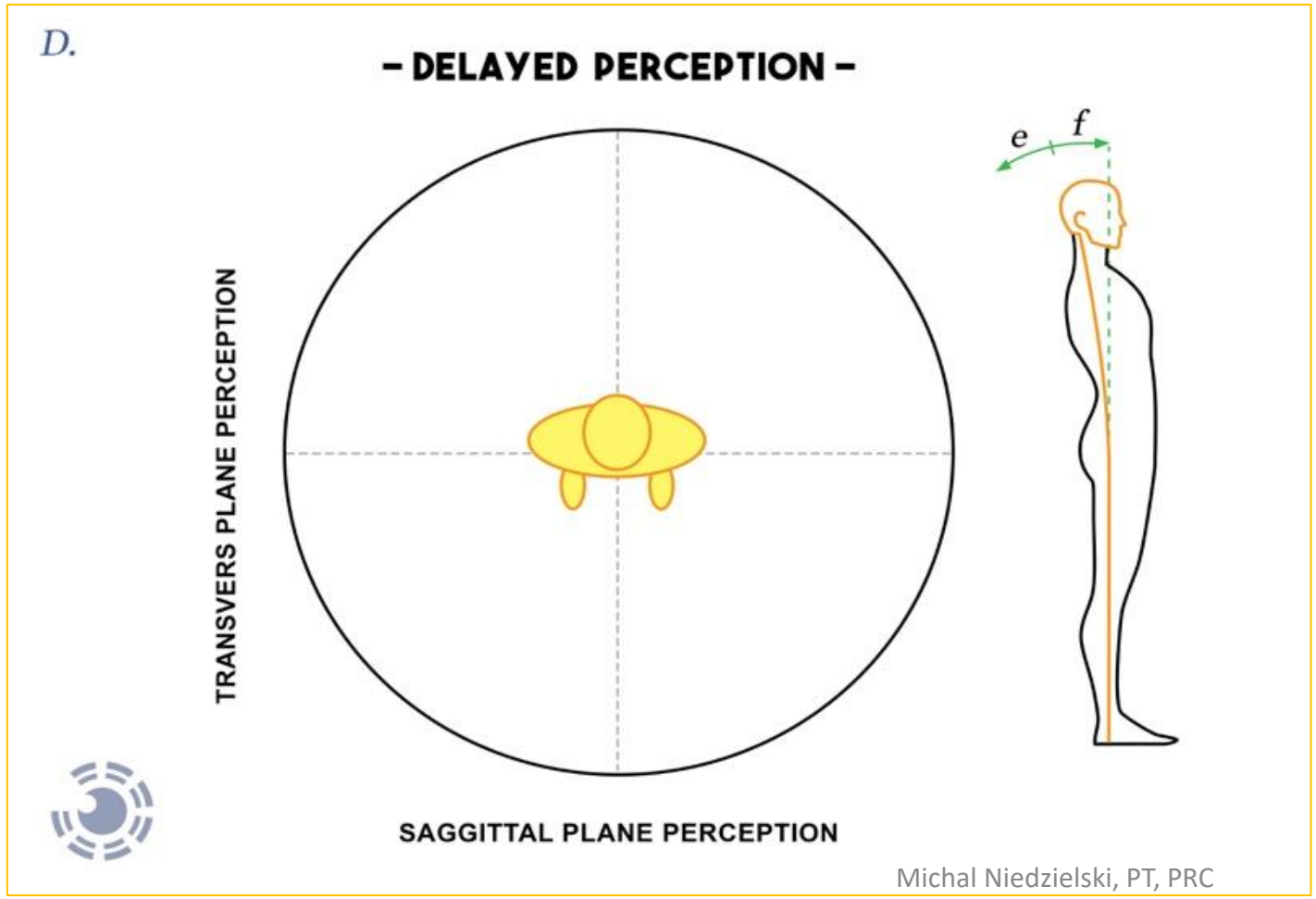
Michał Niedzielski, PT, PRC

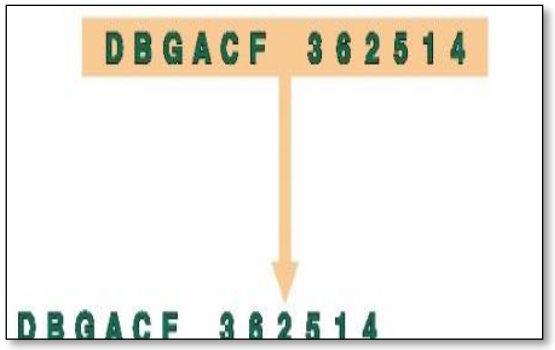
NORD STREAM RACE 2019 © Andrey Sheremetev


SCHOUTEN
GLOBAL

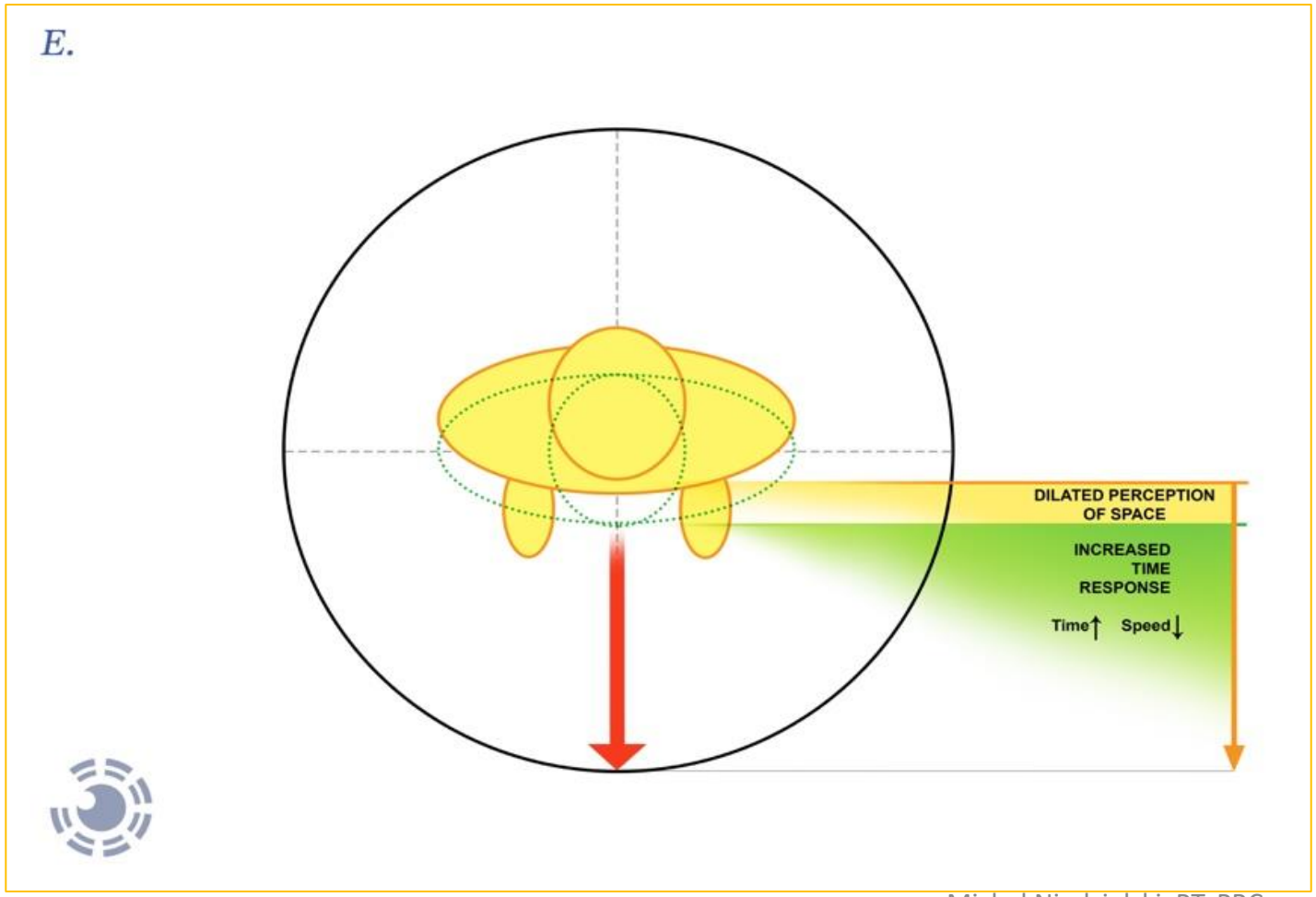
Michal Niedzielski, PT, PRC

Spatial Perception Challenge Test



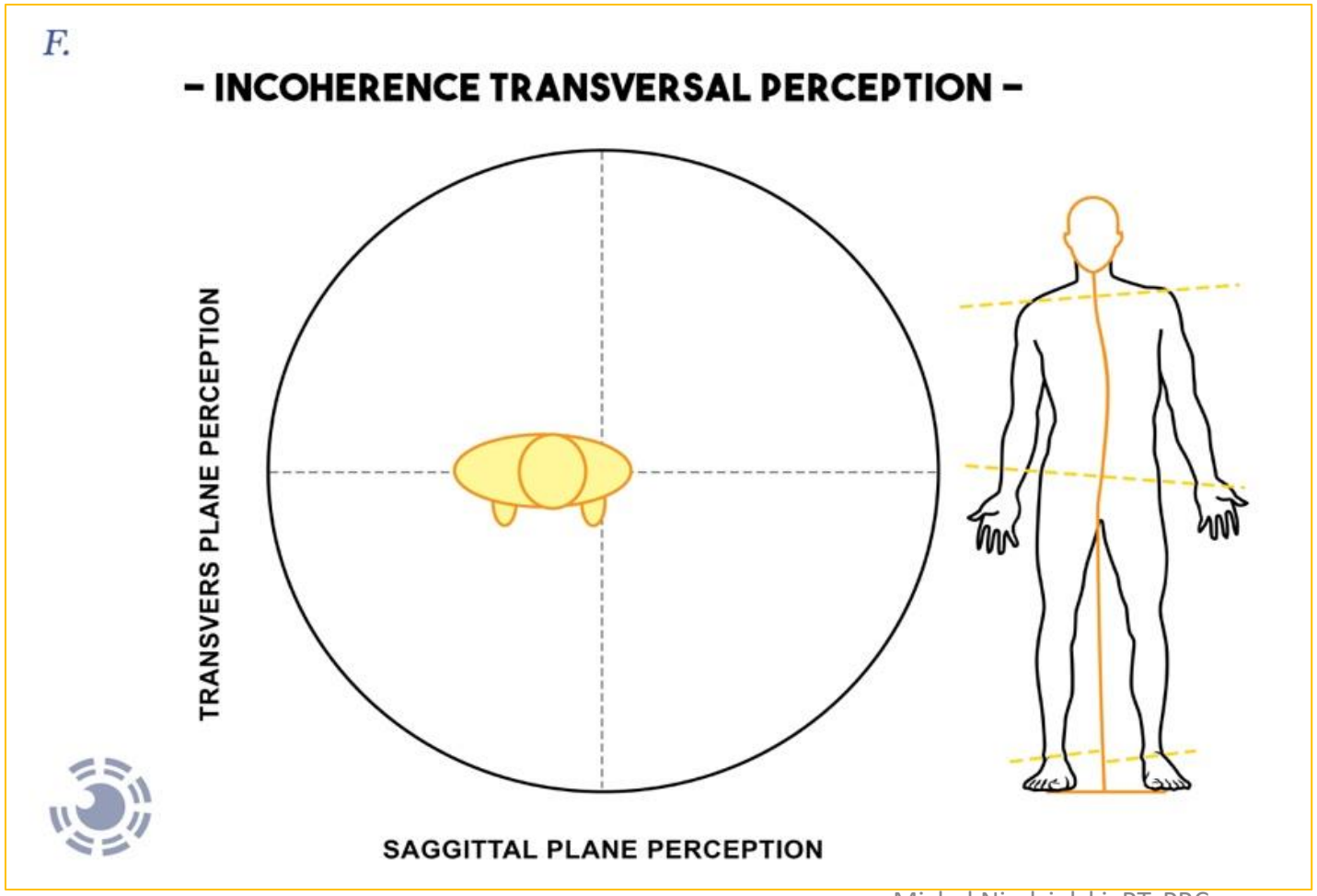


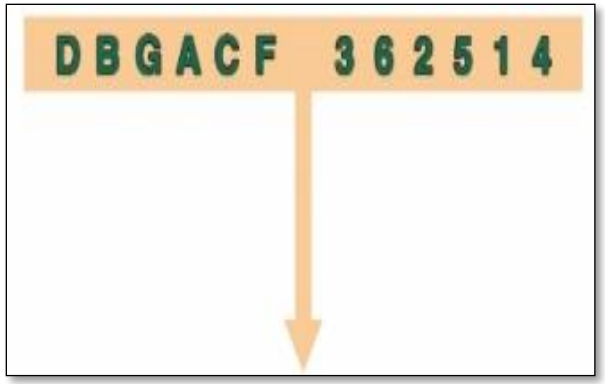
Spatial Perception Challenge Test



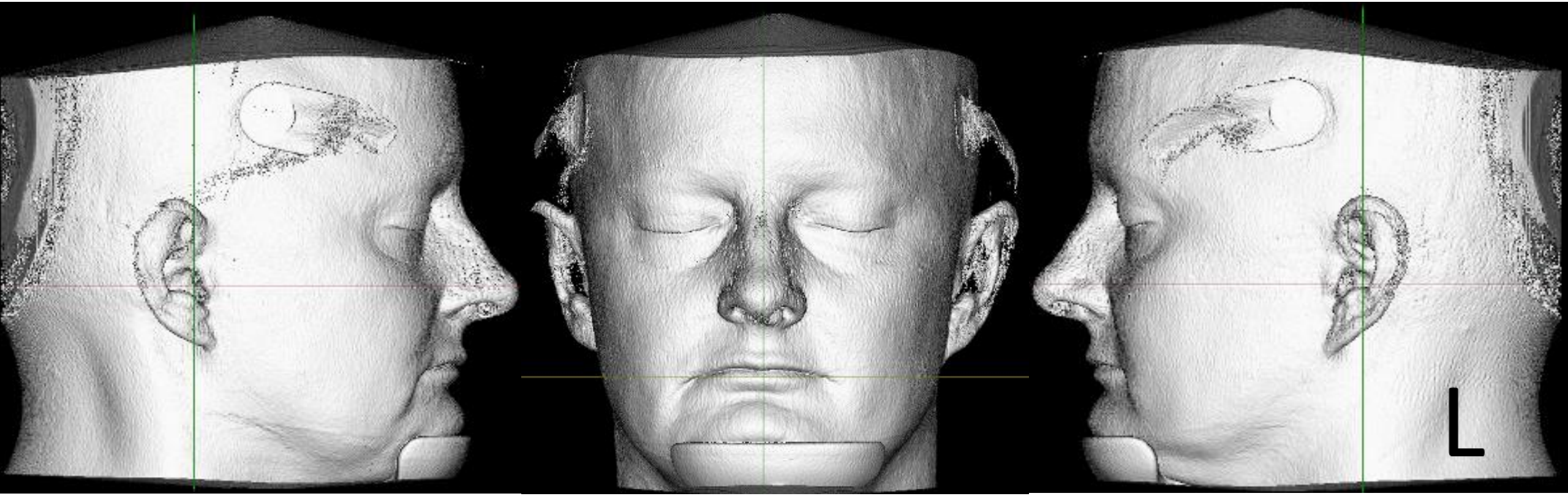
- *The subject has to change the input-output mode. This will enhance the response time for an enlarged perception of the space (Space = Speed x Time) [fig. E]. The advance ratio increases when the arrow moves from 3 towards 4, system is not coherent.*

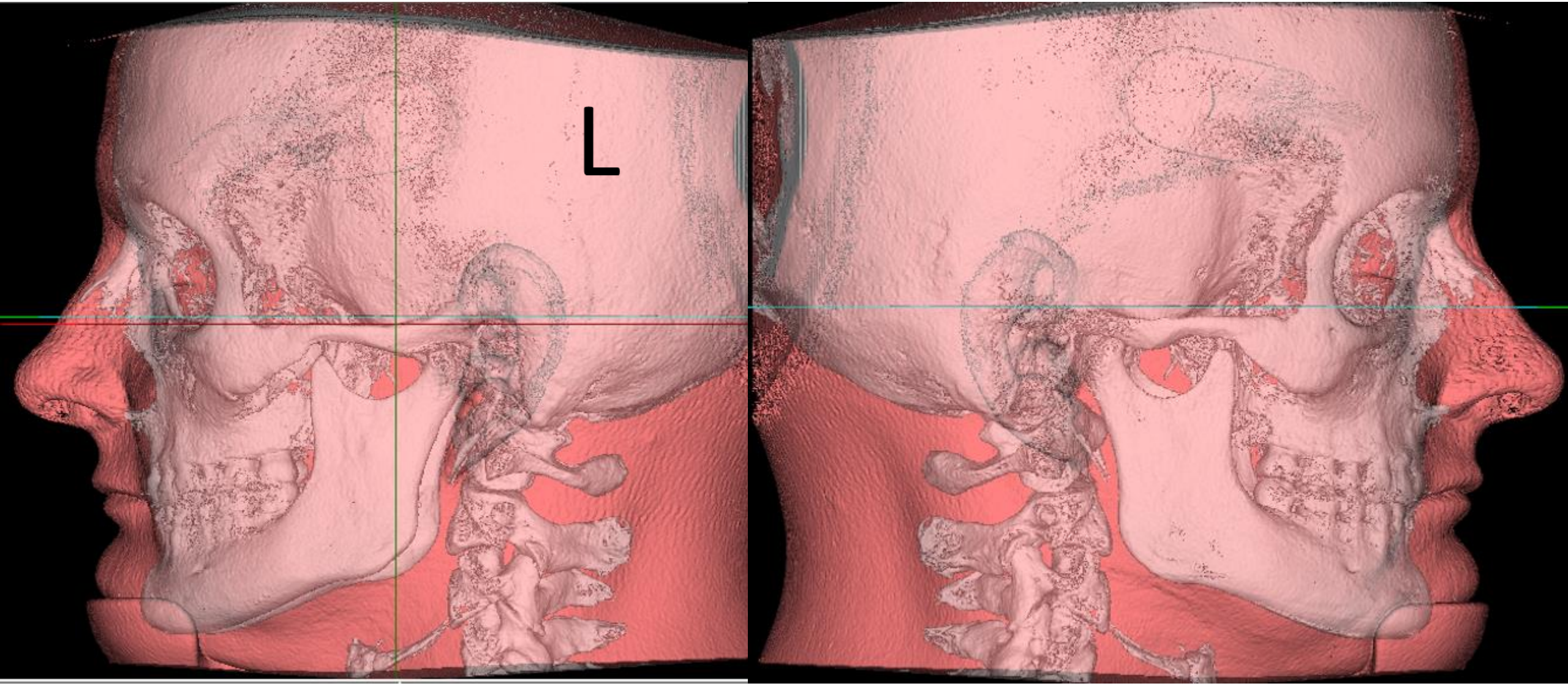
Spatial Perception Challenge Test



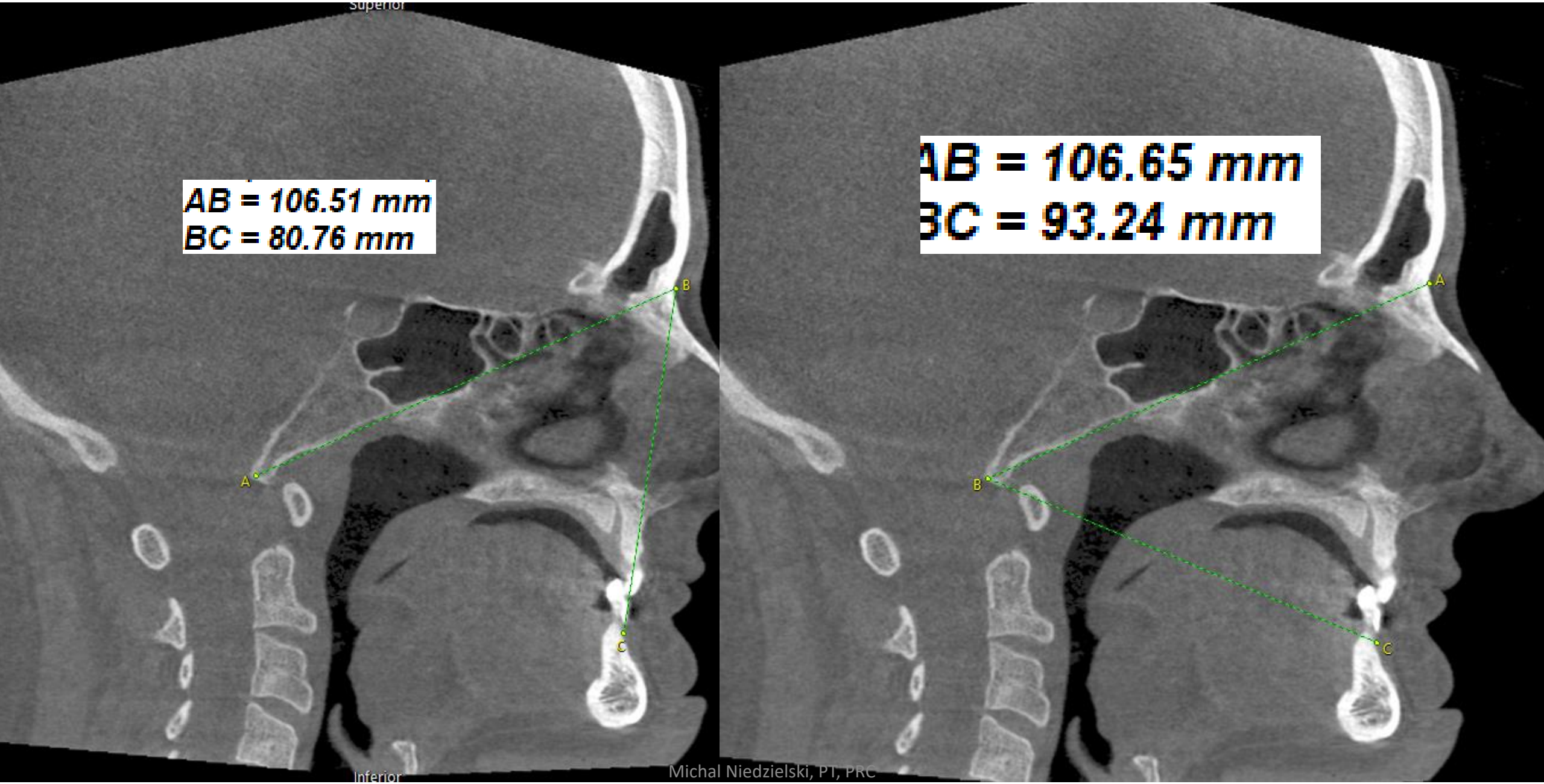


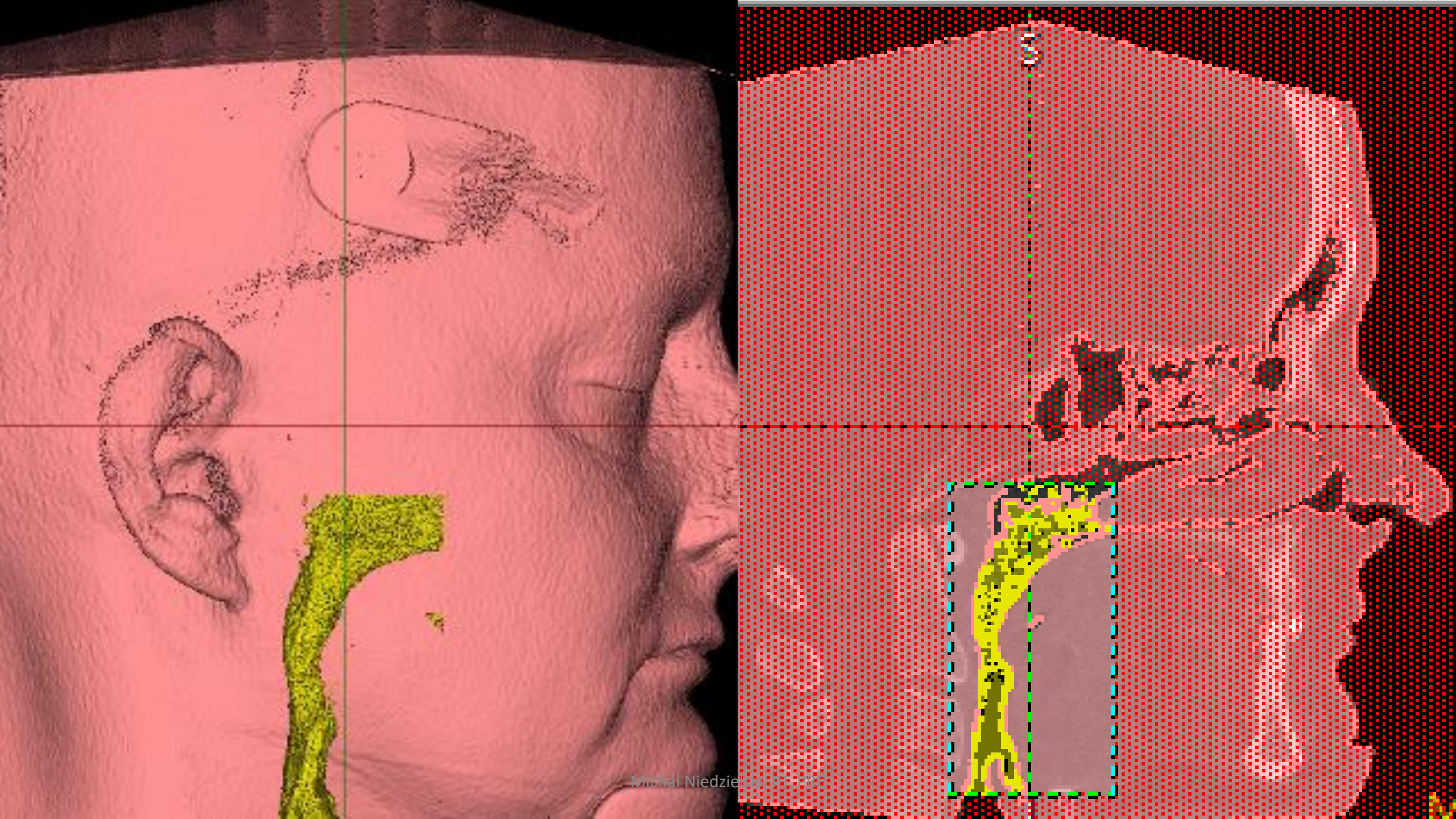

L

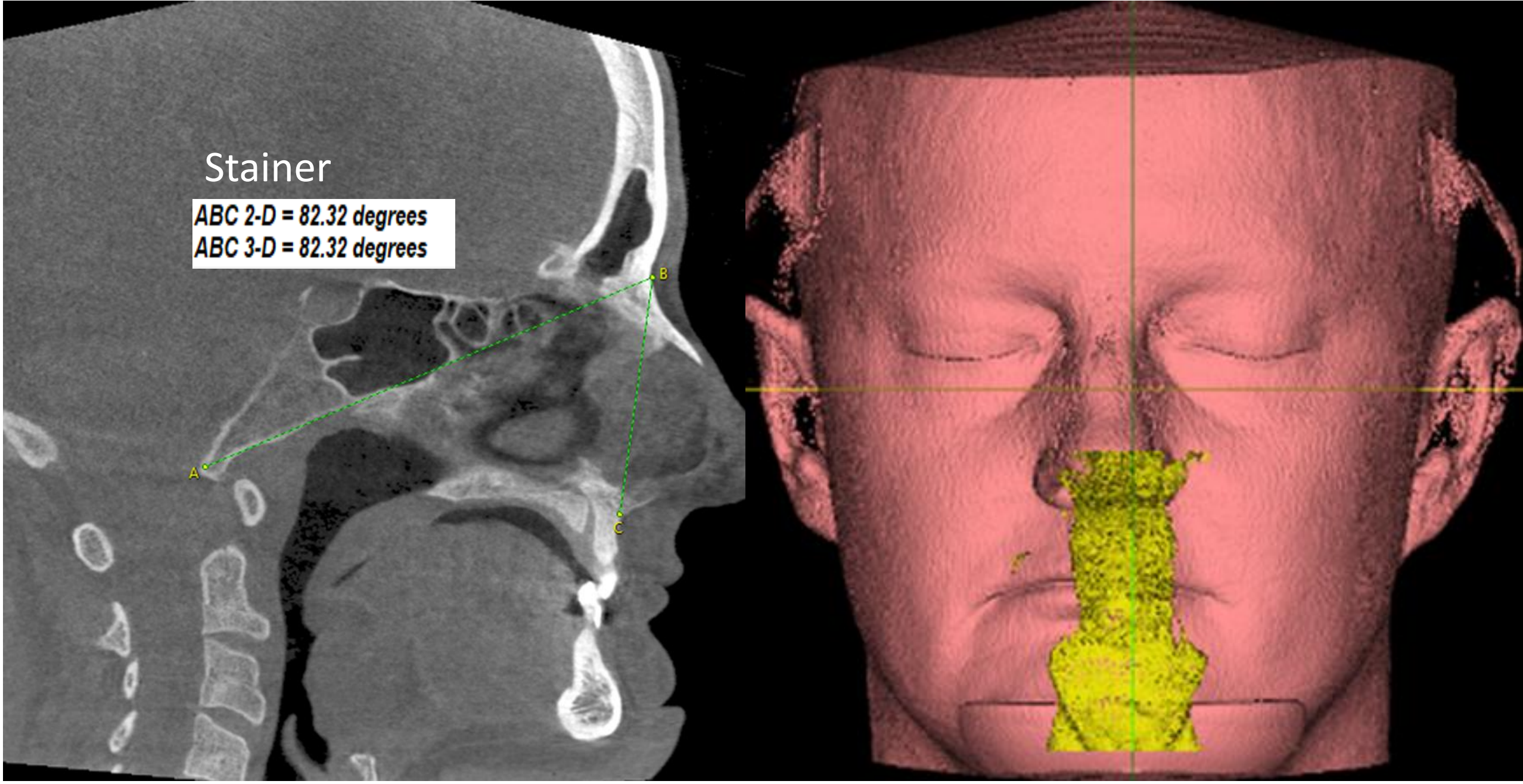

L

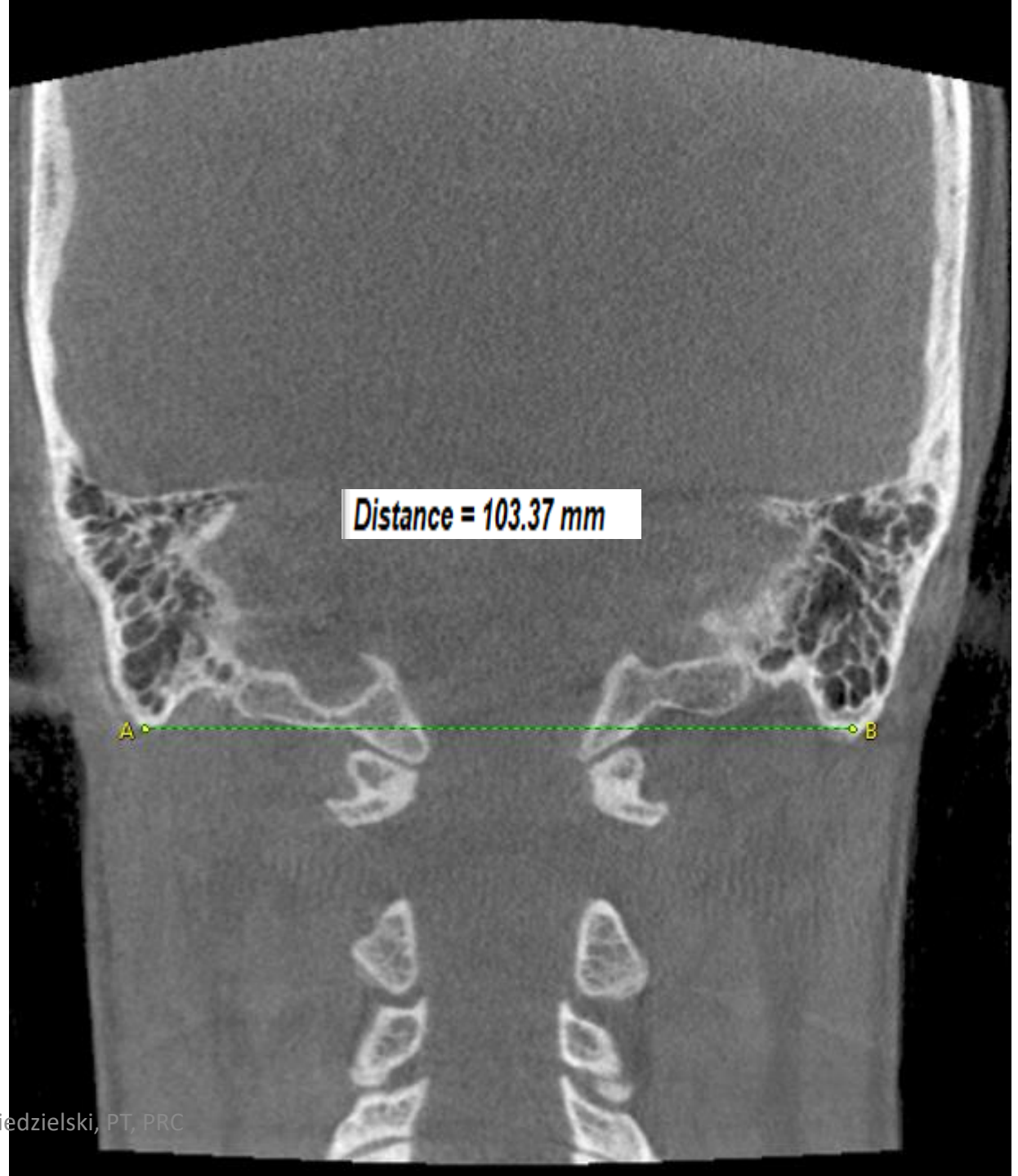

L

L

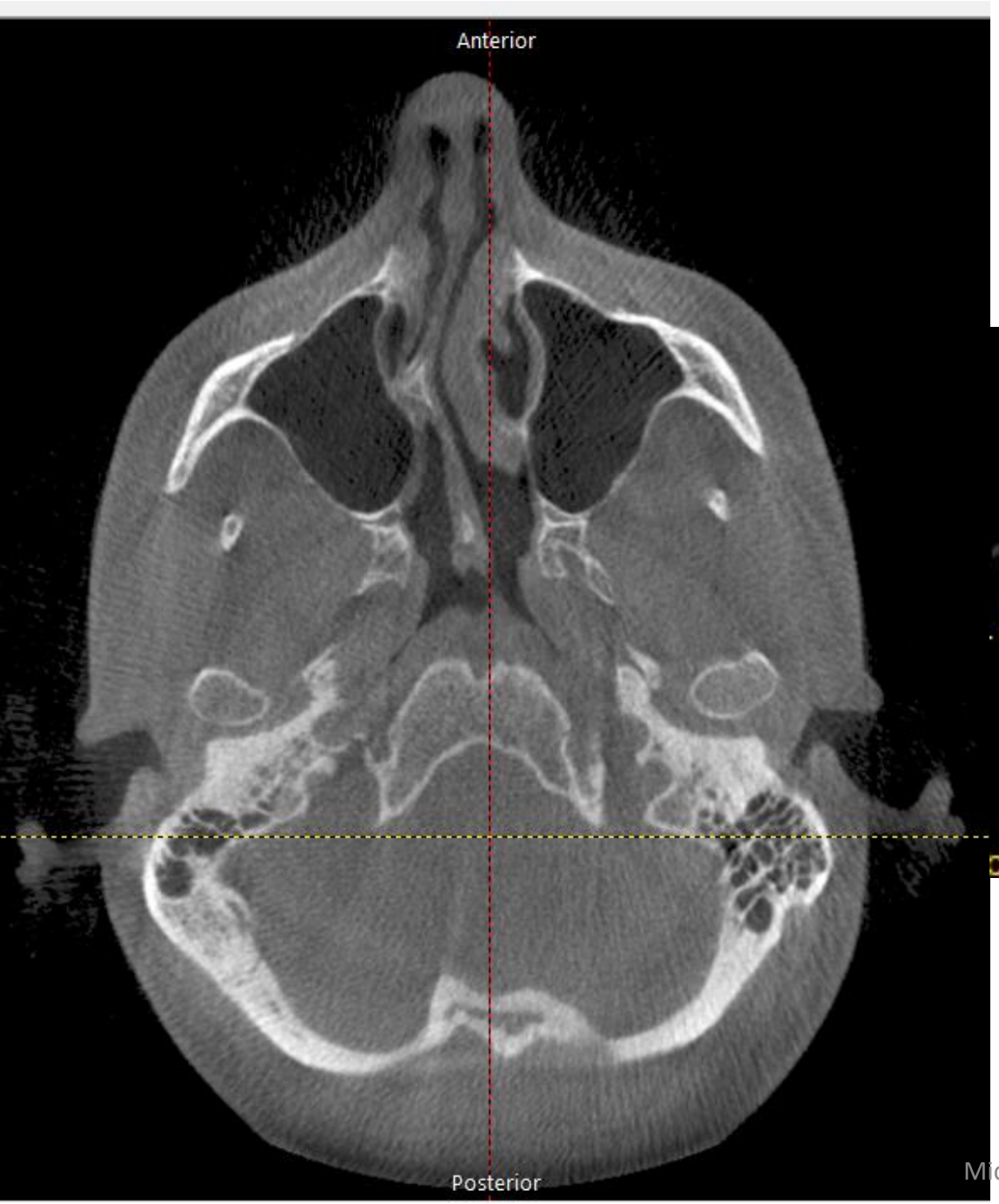


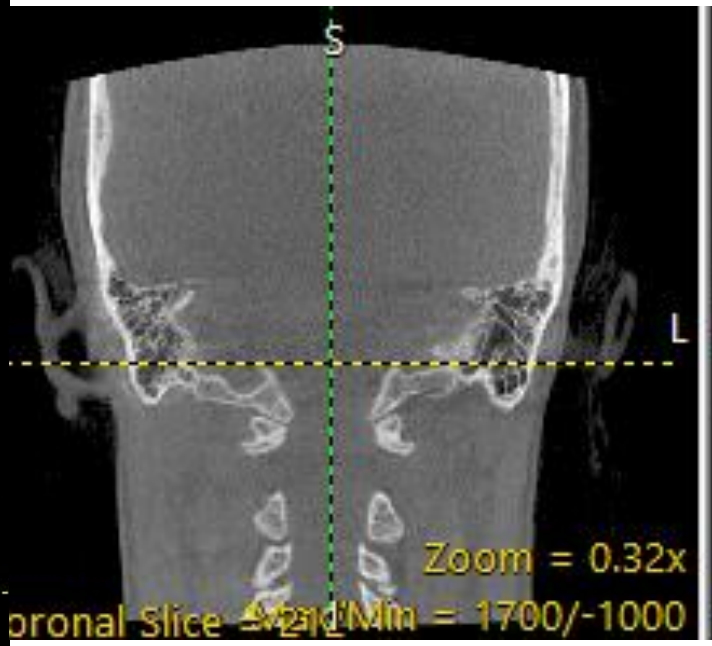


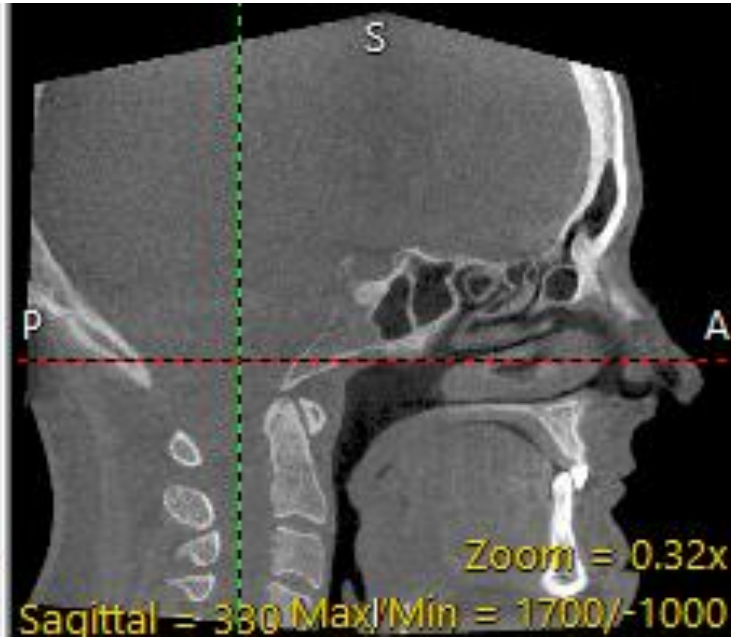

Stainer
ABC 2-D = 82.32 degrees
ABC 3-D = 82.32 degrees
A
B
C


Distance = 103.37 mm
A
B


L


Anterior
Posterior


S
L
Zoom = 0.32x
Max/Min = 1700/-1000


S
P
A
Zoom = 0.32x
Max/Min = 1700/-1000

SB Axes and Movements

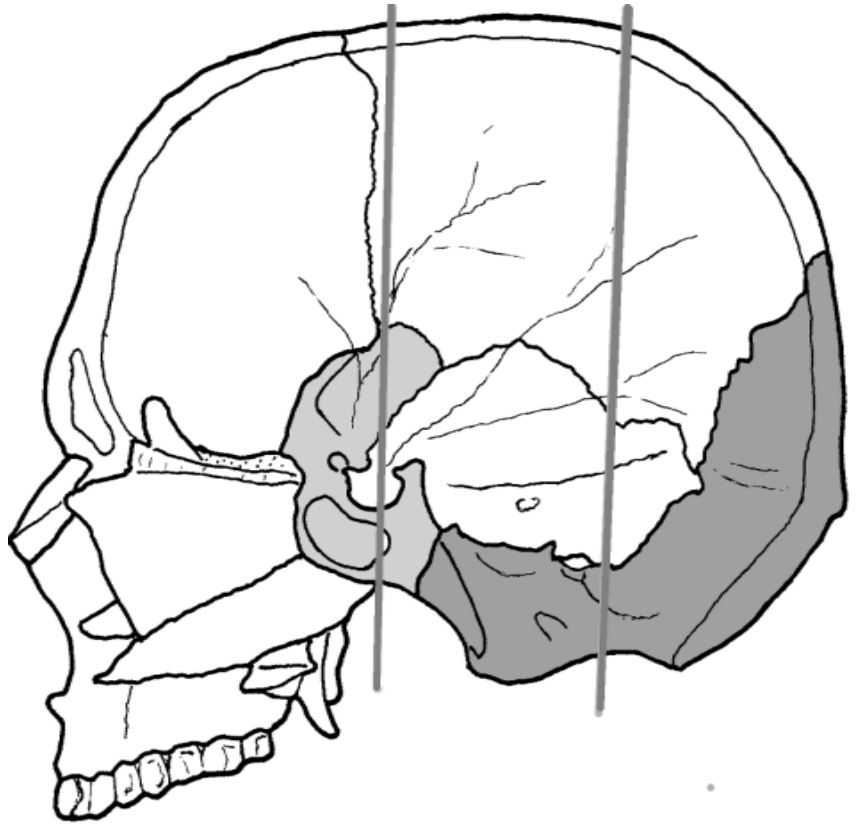
VERTICAL AXES

<u>Sidebendings</u>

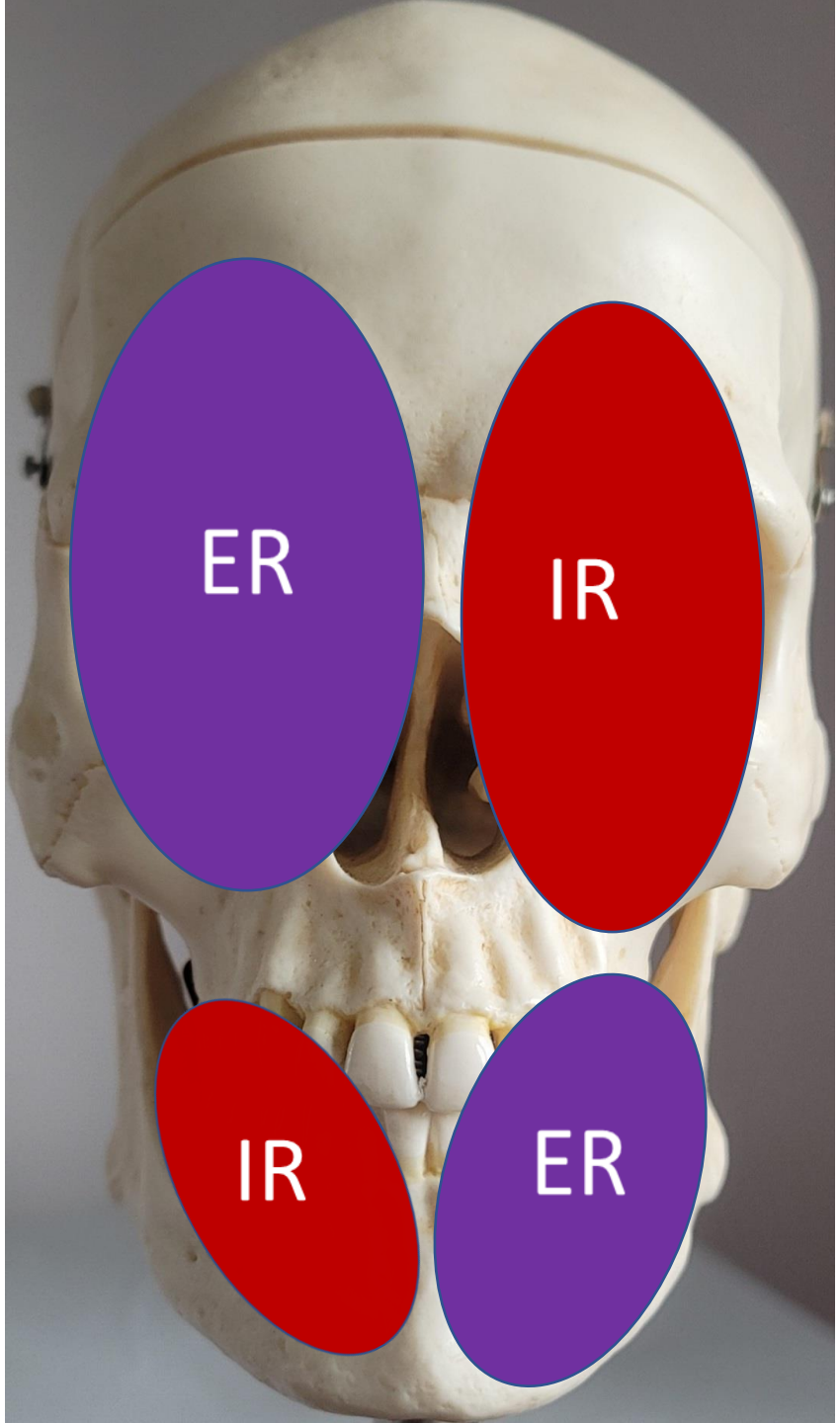
- Left Sidebending
- Right Sidebending

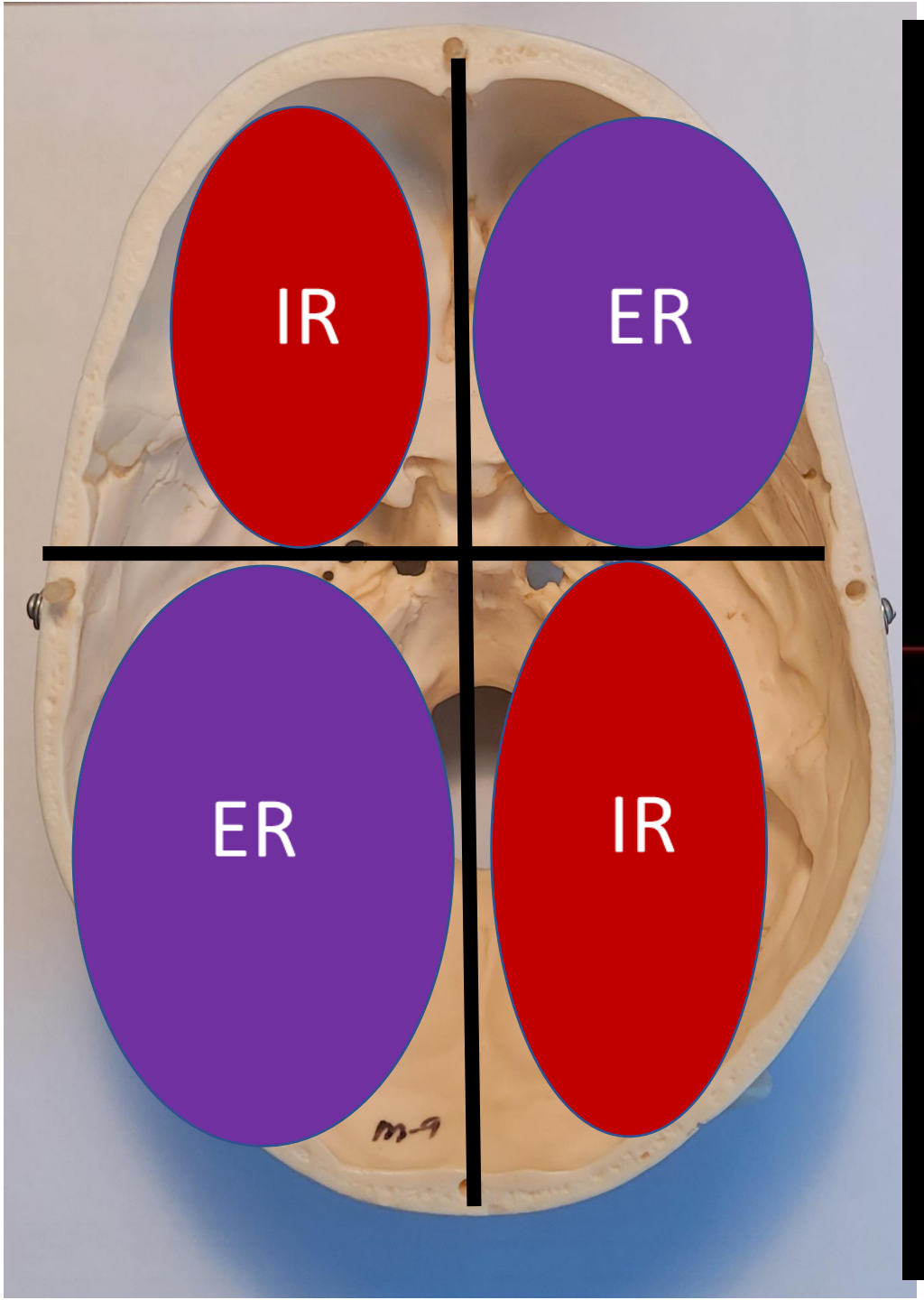
<u>(Lateral Strains</u>

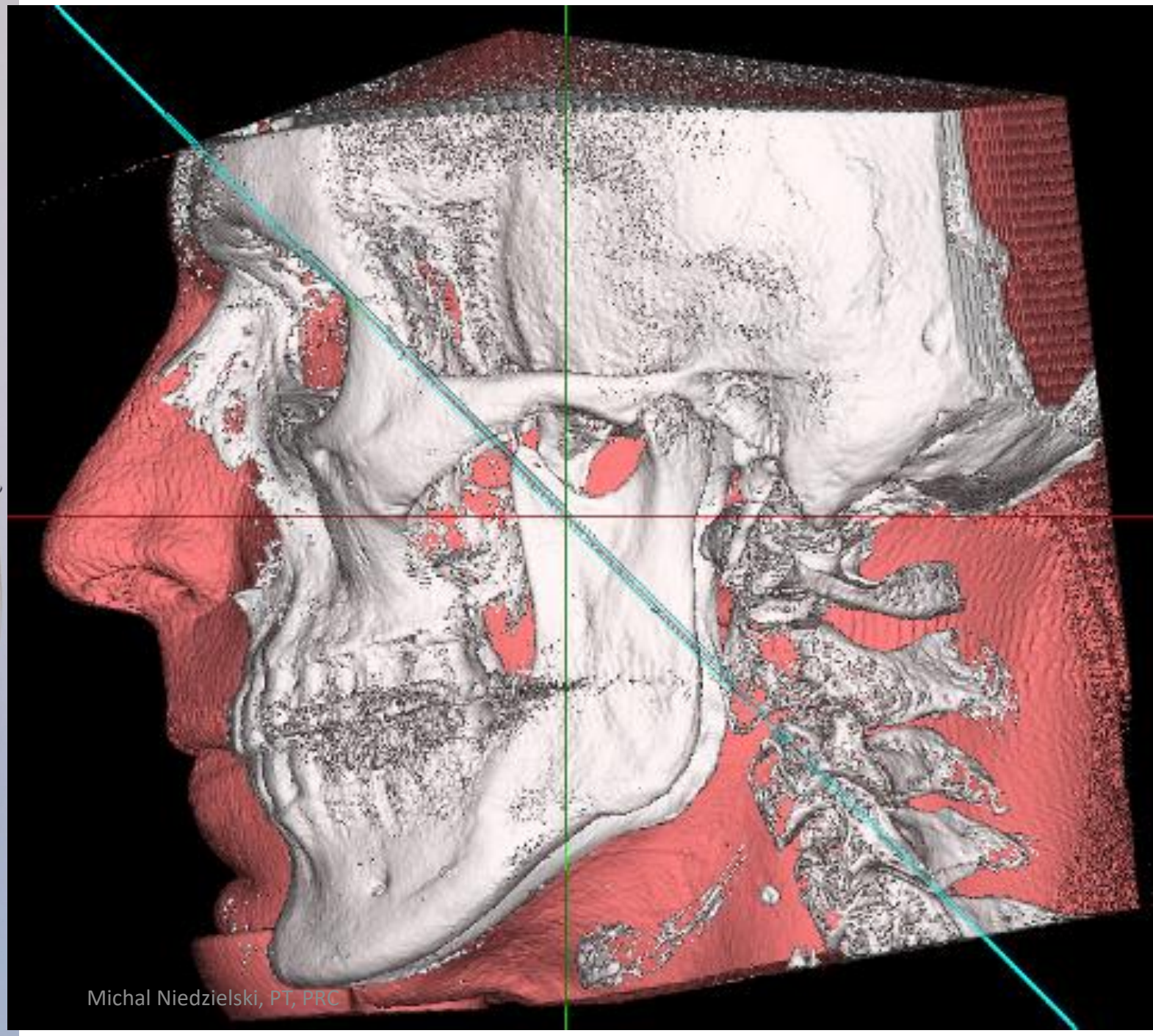
- Left Lateral Strain
- Right Lateral Strain)



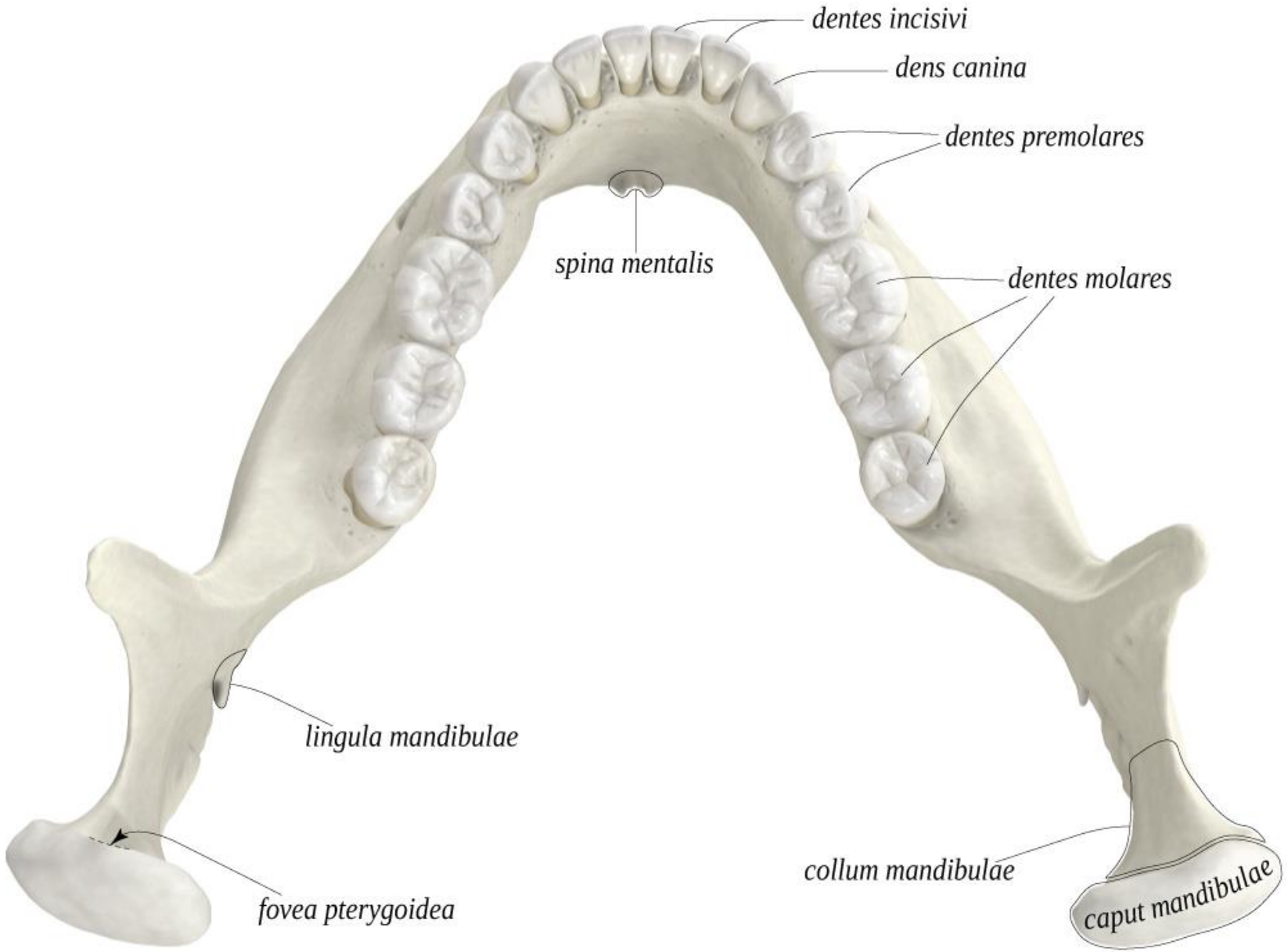
Left Sidebending Rotation + IVS


ER
IR
IR
ER

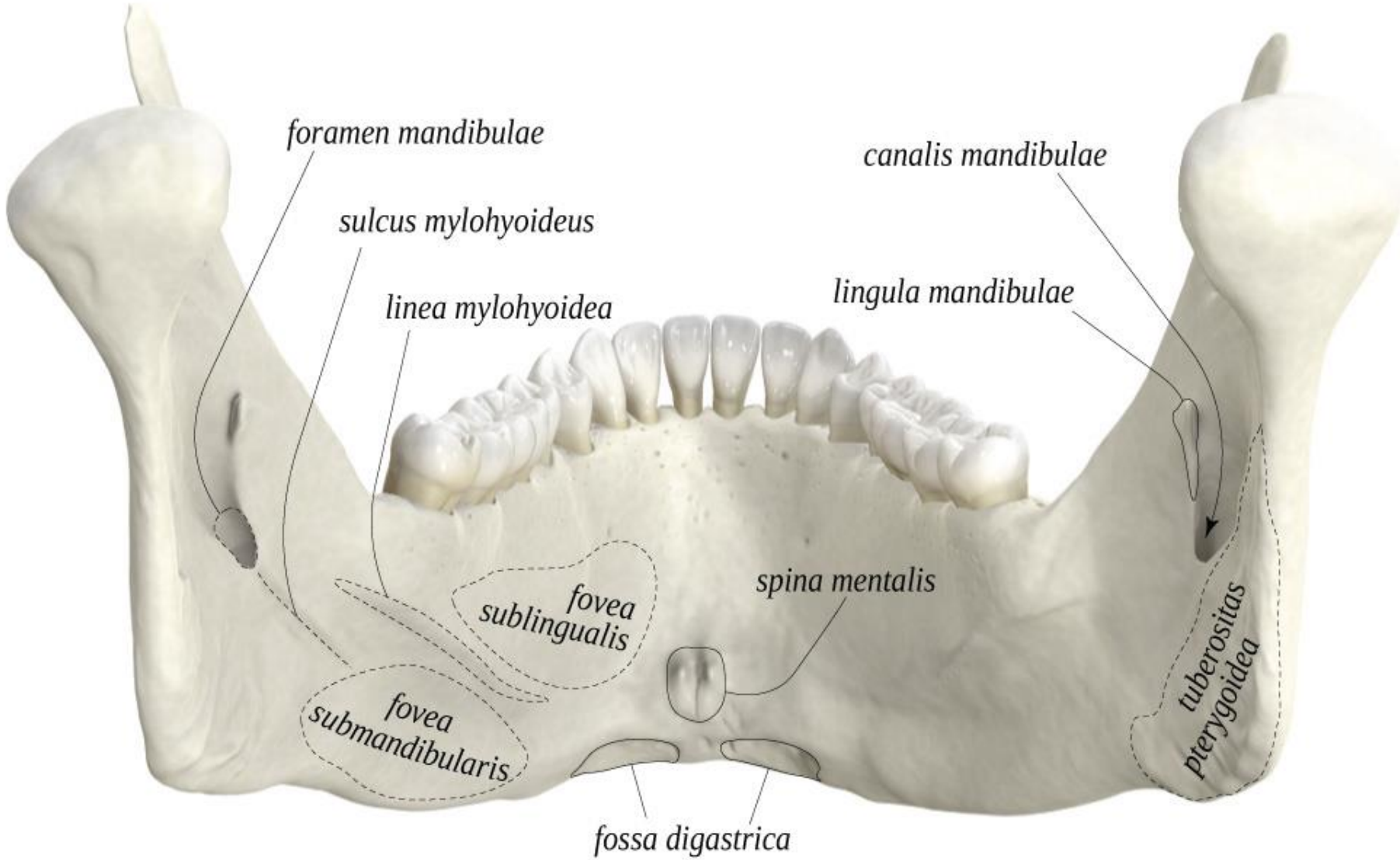

IR
ER
ER
IR


Michal Niedzielski, PT, PRC

Mandible – The Reins



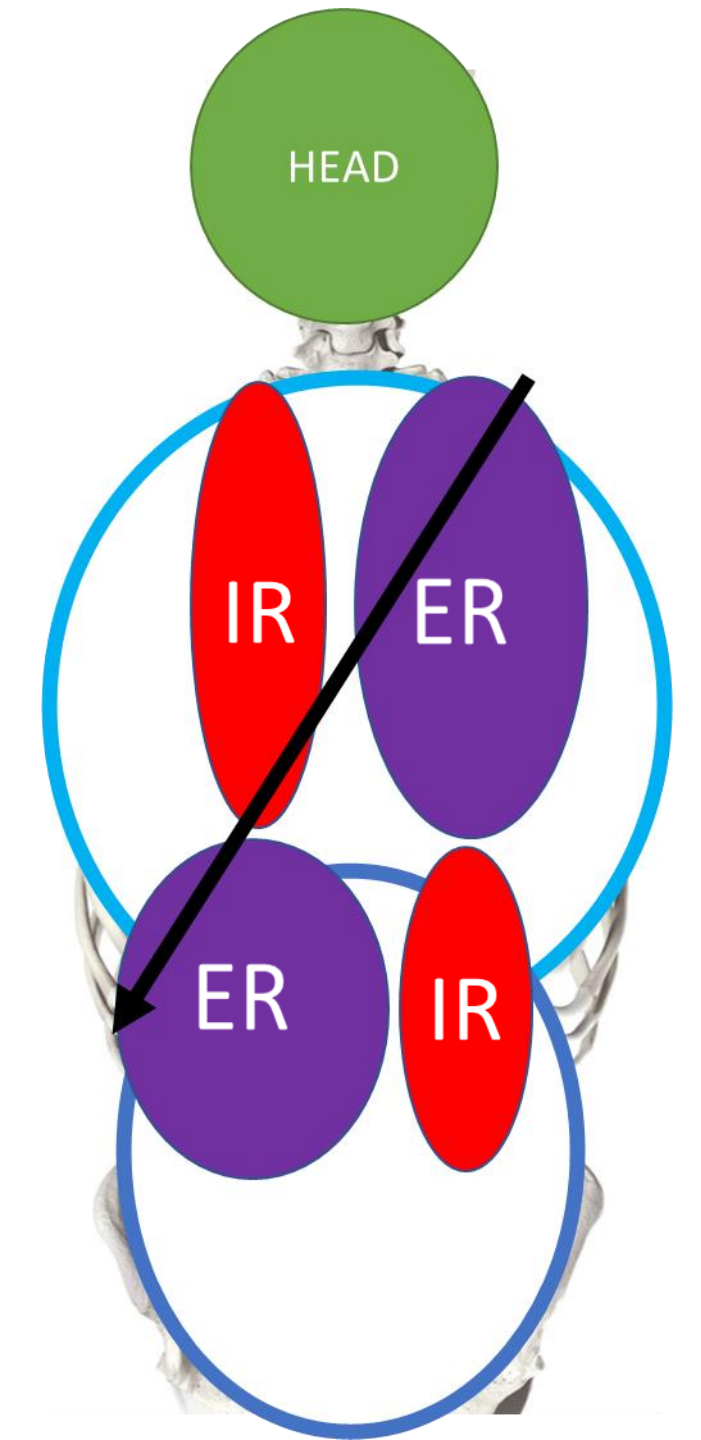
ANATOMY STANDARD

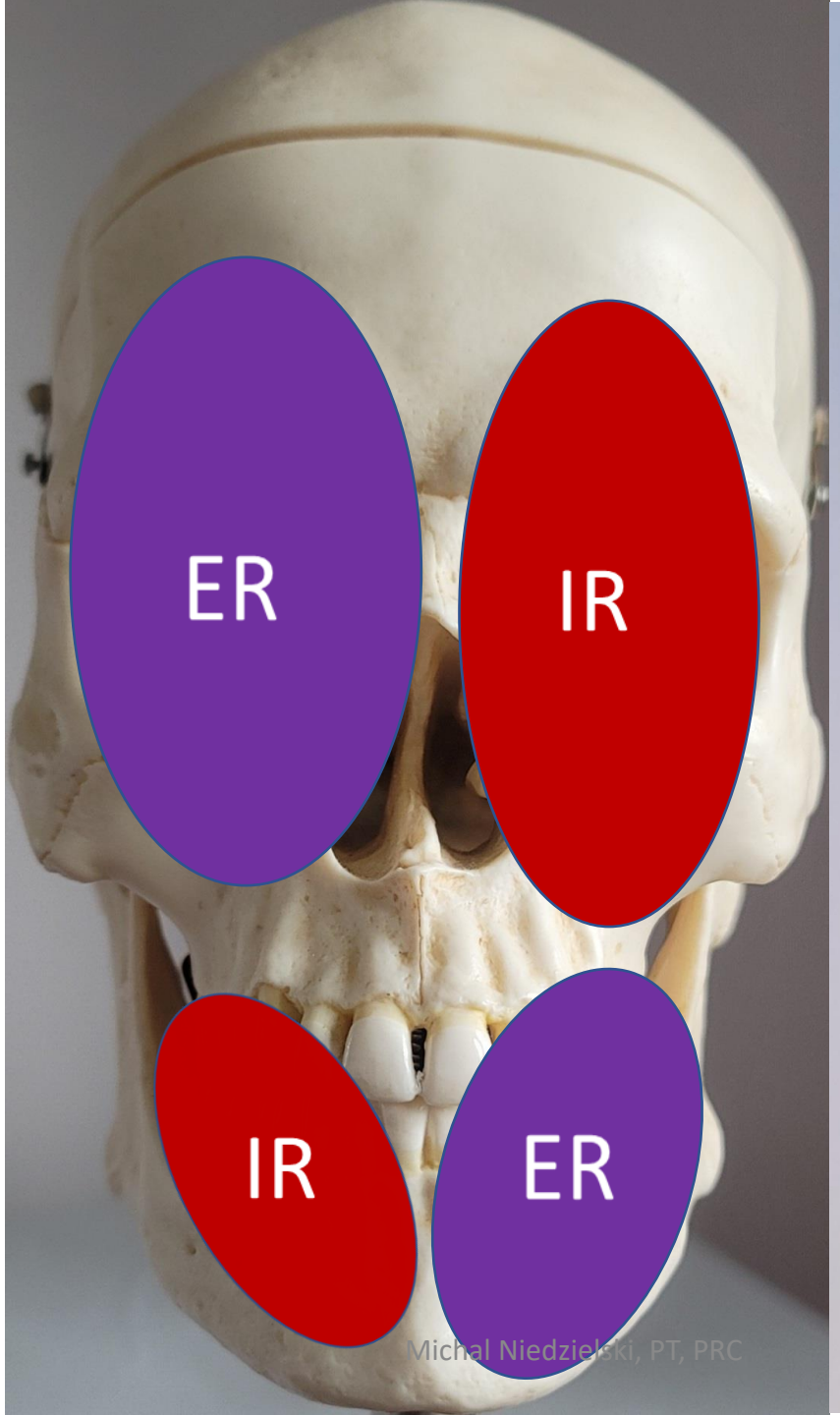


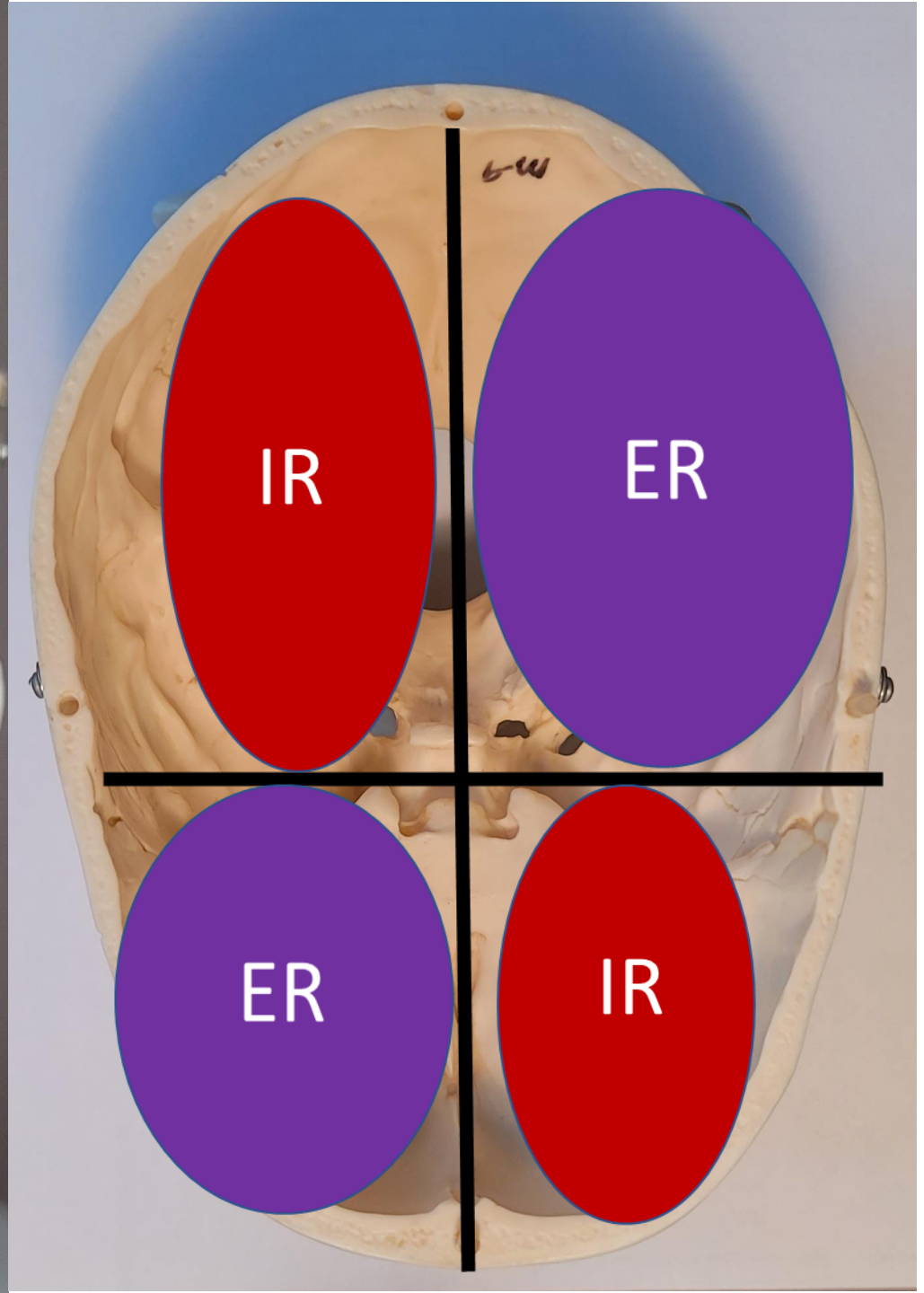
ANATOMY STANDARD

Michal Niedzielski, PT, PRC

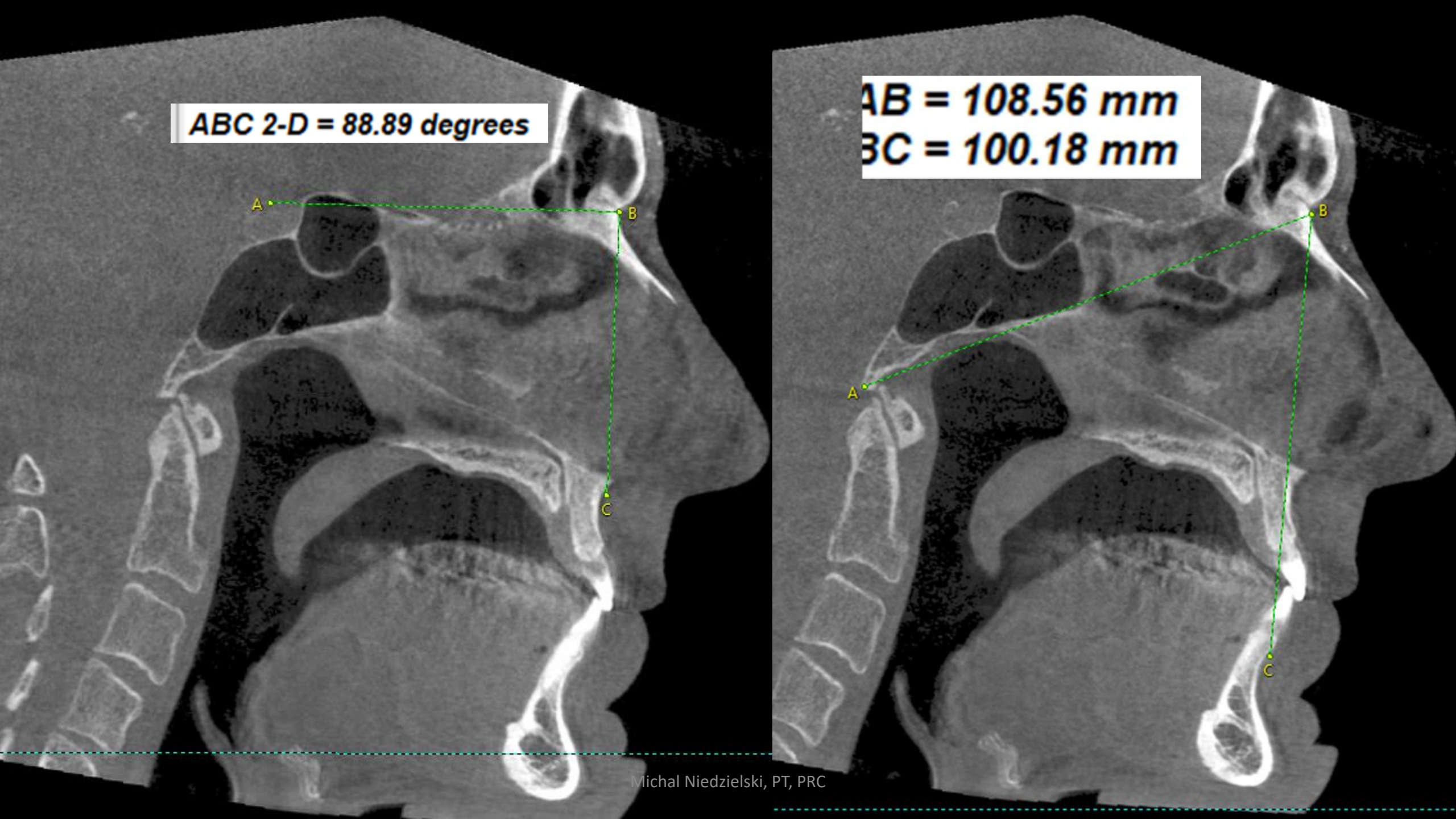

Michal Niedzielski, PT, PRC

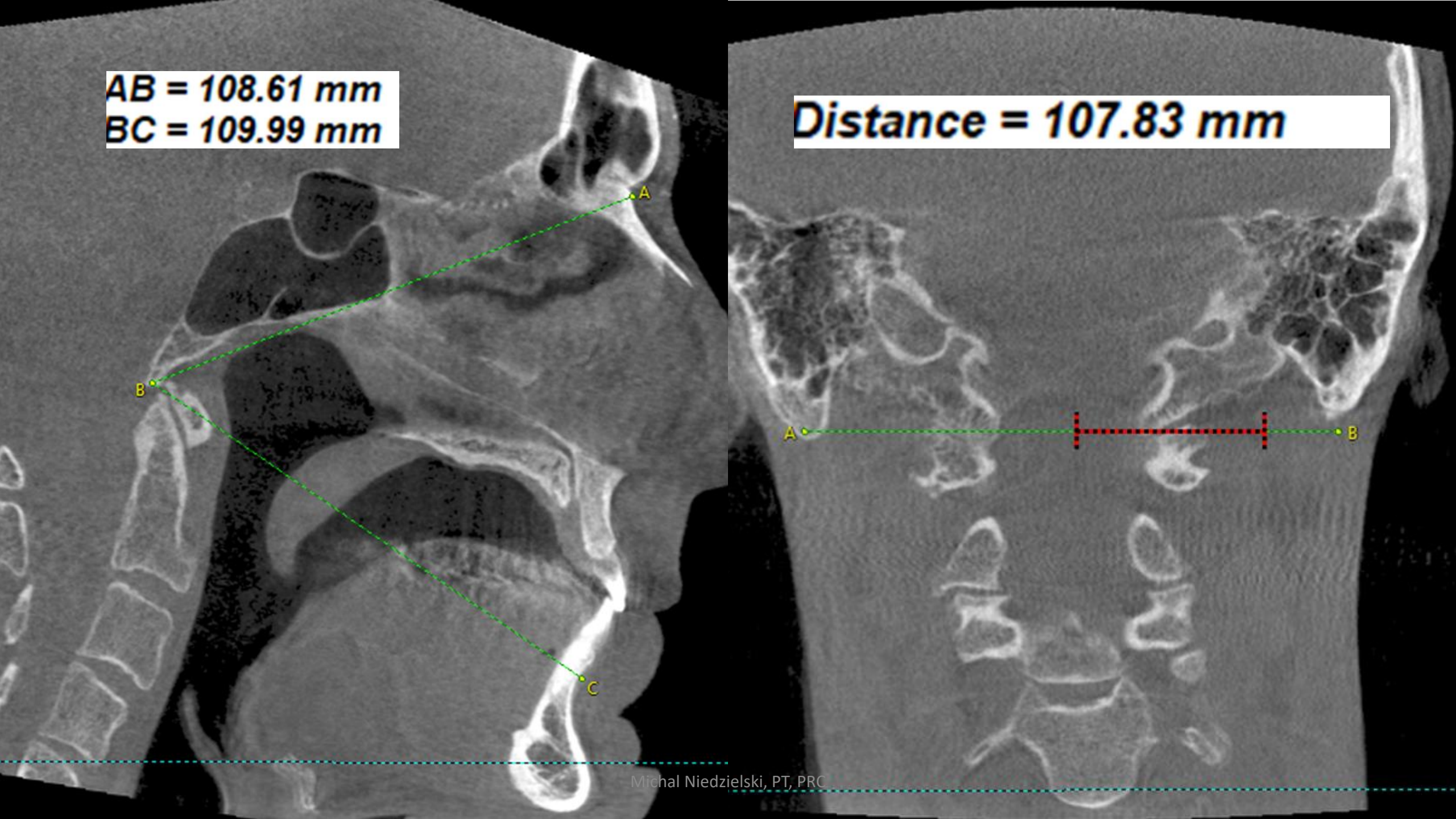

HEAD
IR
ER
ER
IR

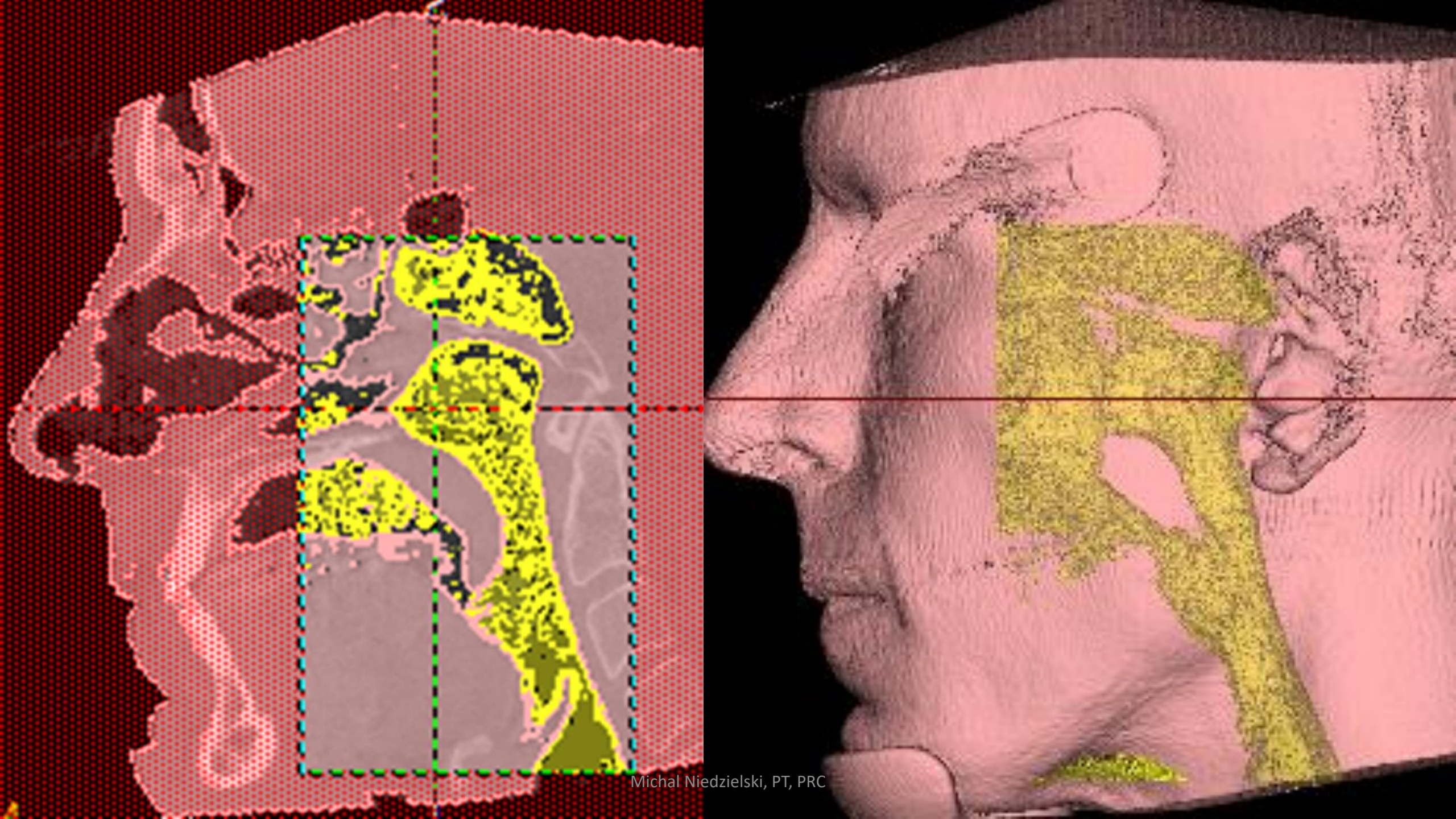

ER
IR
IR
ER
Michal Niedzielski, PT, PRC

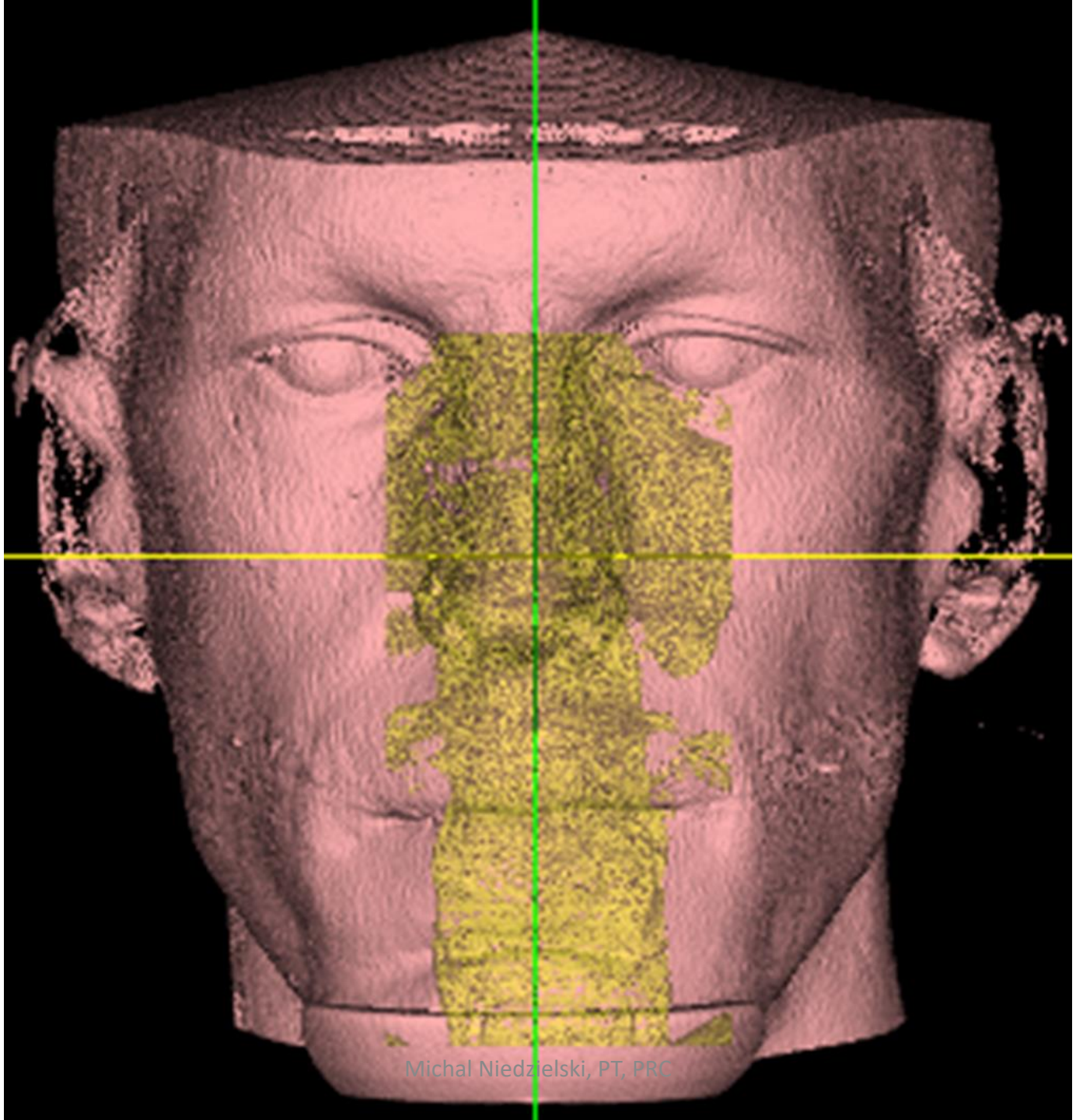

IR
ER
ER
IR


Michal Niedzielski, PT, PRC


ABC 2-D = 88.89 degrees
A
B
C
AB = 108.56 mm
BC = 100.18 mm
A
B
C




Michal Niedzielski, PT, PRC


Michal Niedzielski, PT, PRC


40
50
40

Thank you for your attention!

Contact: Michal Niedzielski, PT, PRC

horseheadspt@gmail.com