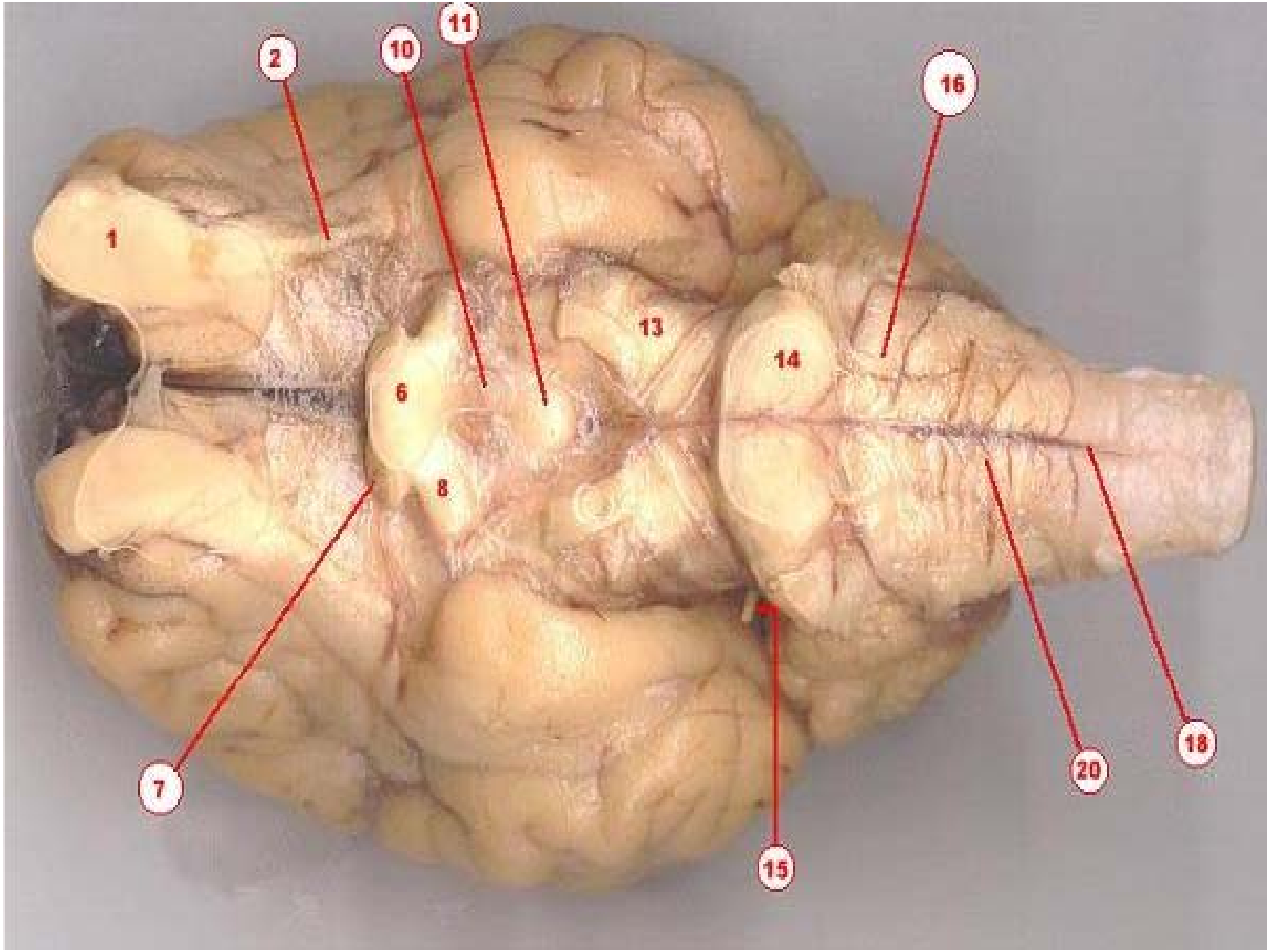
General lab review

FCC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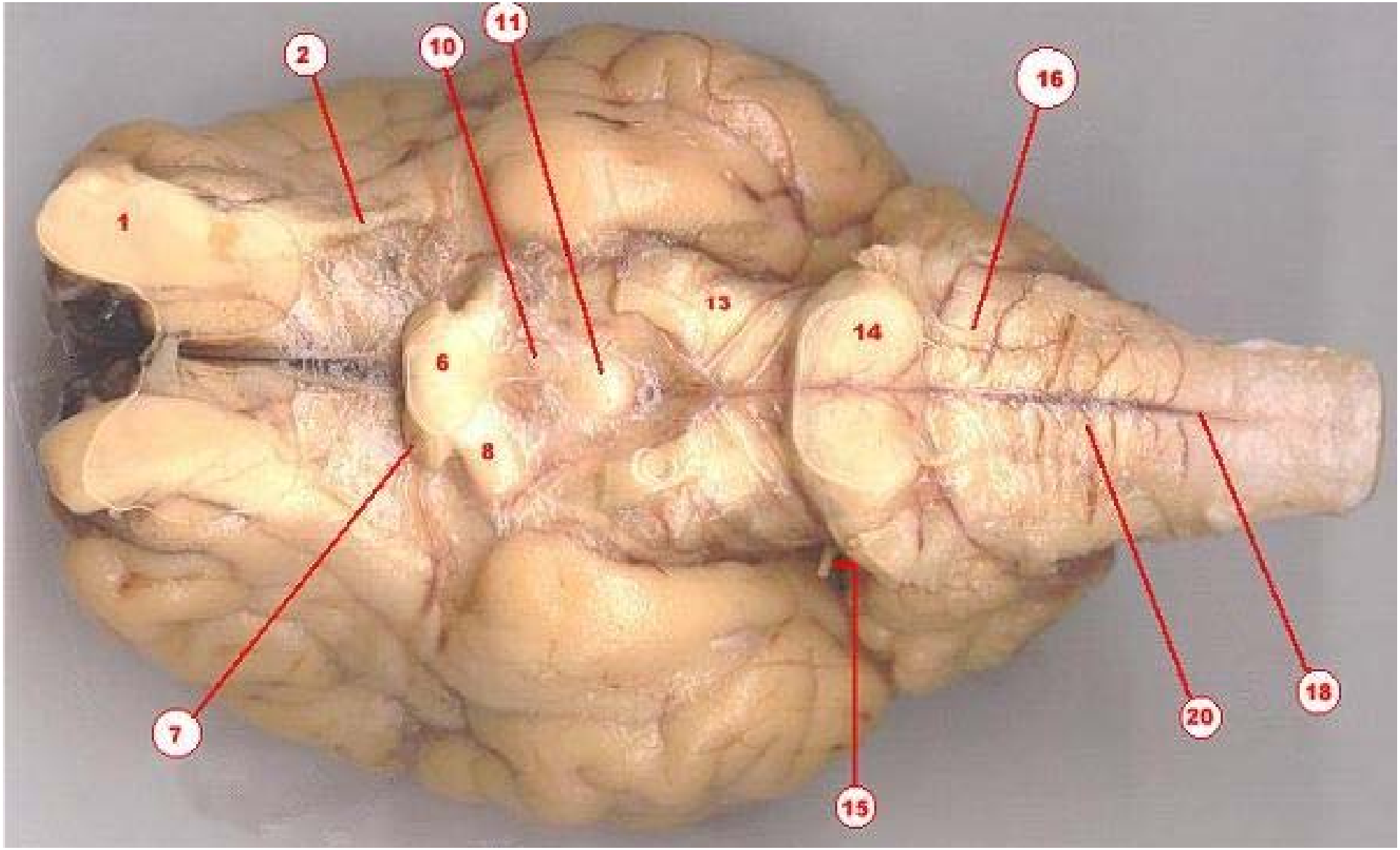
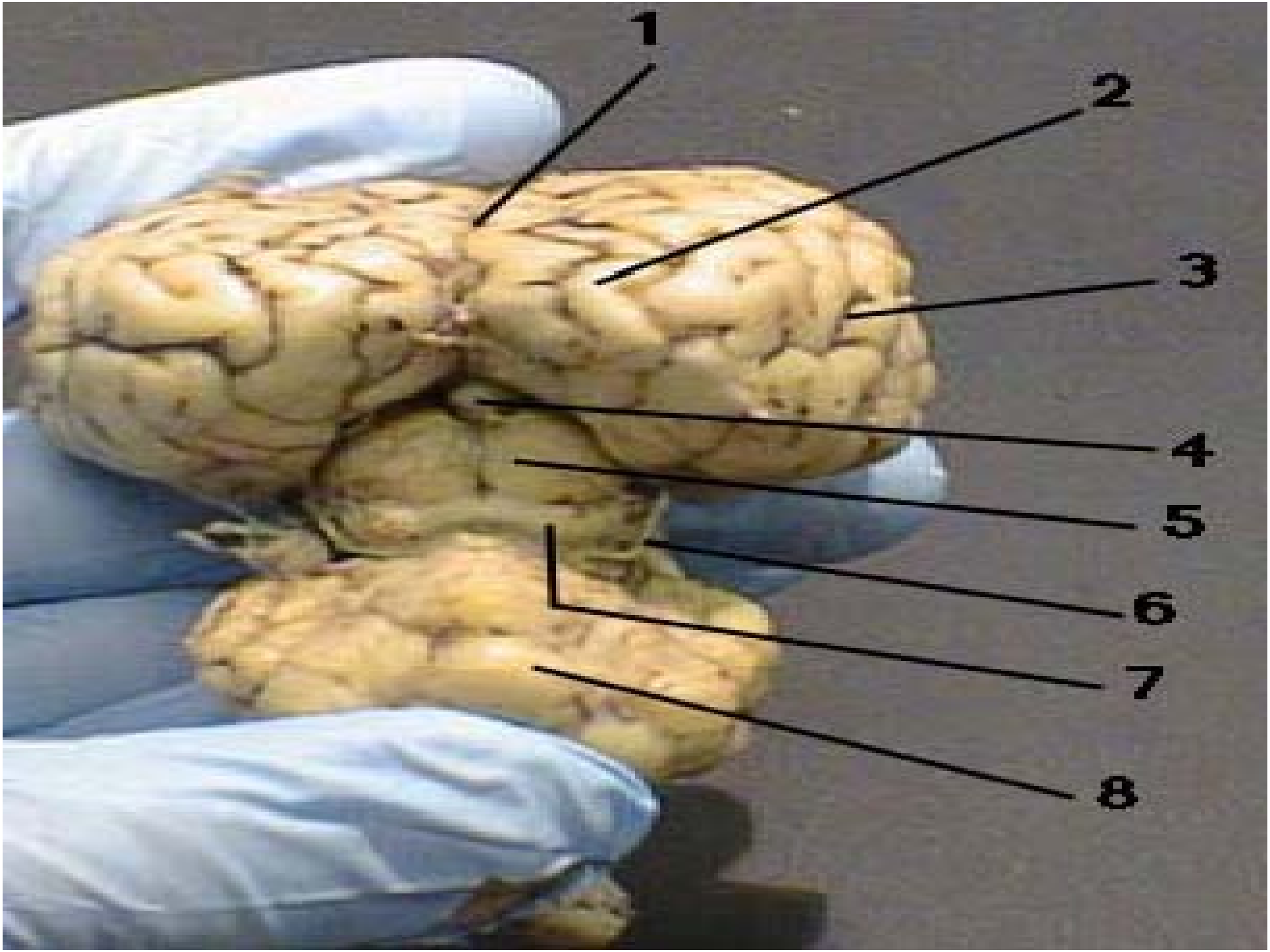


1. olfactory bulb 11. mammilary body 2. olfactory tract 13. trigeminal nerve 6. optic chiasma 14. pons 7. optic nerve 15. trochlear nerve 8. optic tract 16. abducens nerve 10. opening where the infundibulum attaches 18. spinal cord . 20. medulla oblongata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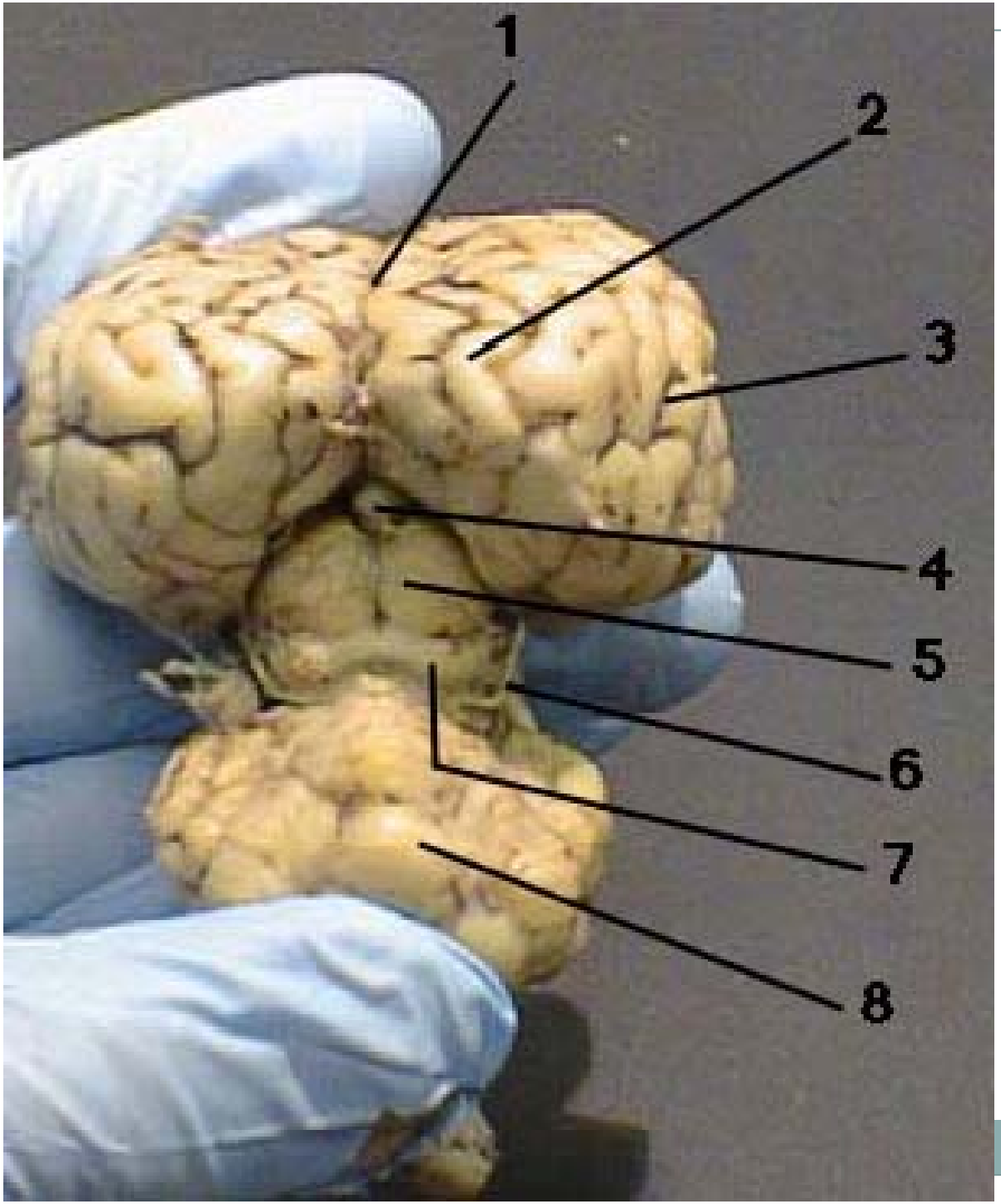
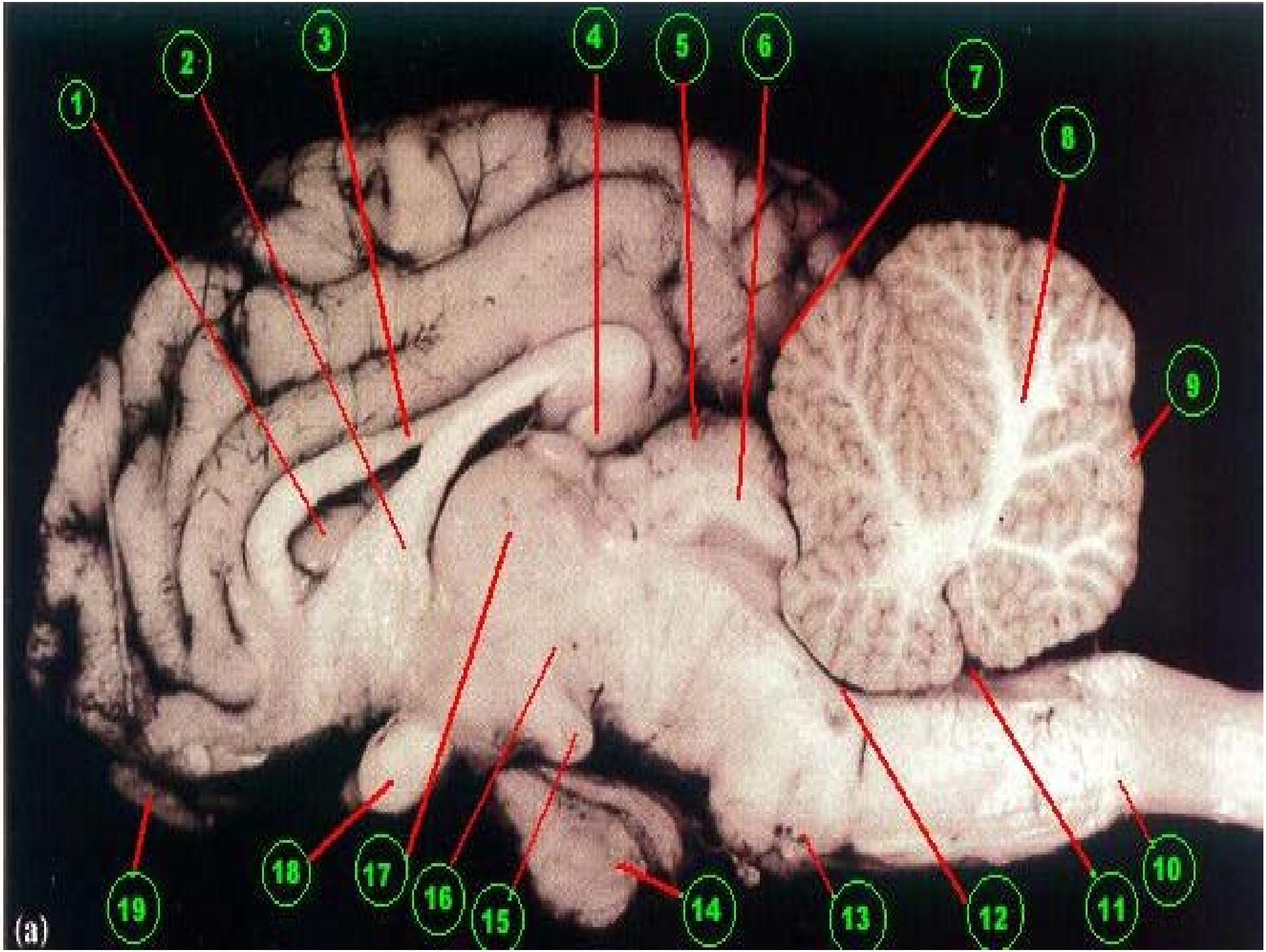


1. Longitudinal Cerebral Fissure 2. Cerebral Gyrus 3. Cerebral Sulcus 4. Pineal Gland 5. Superior Colliculus 6. Trochlear Nerve (IV) 7. Inferior Colliculus 8. Cerebellum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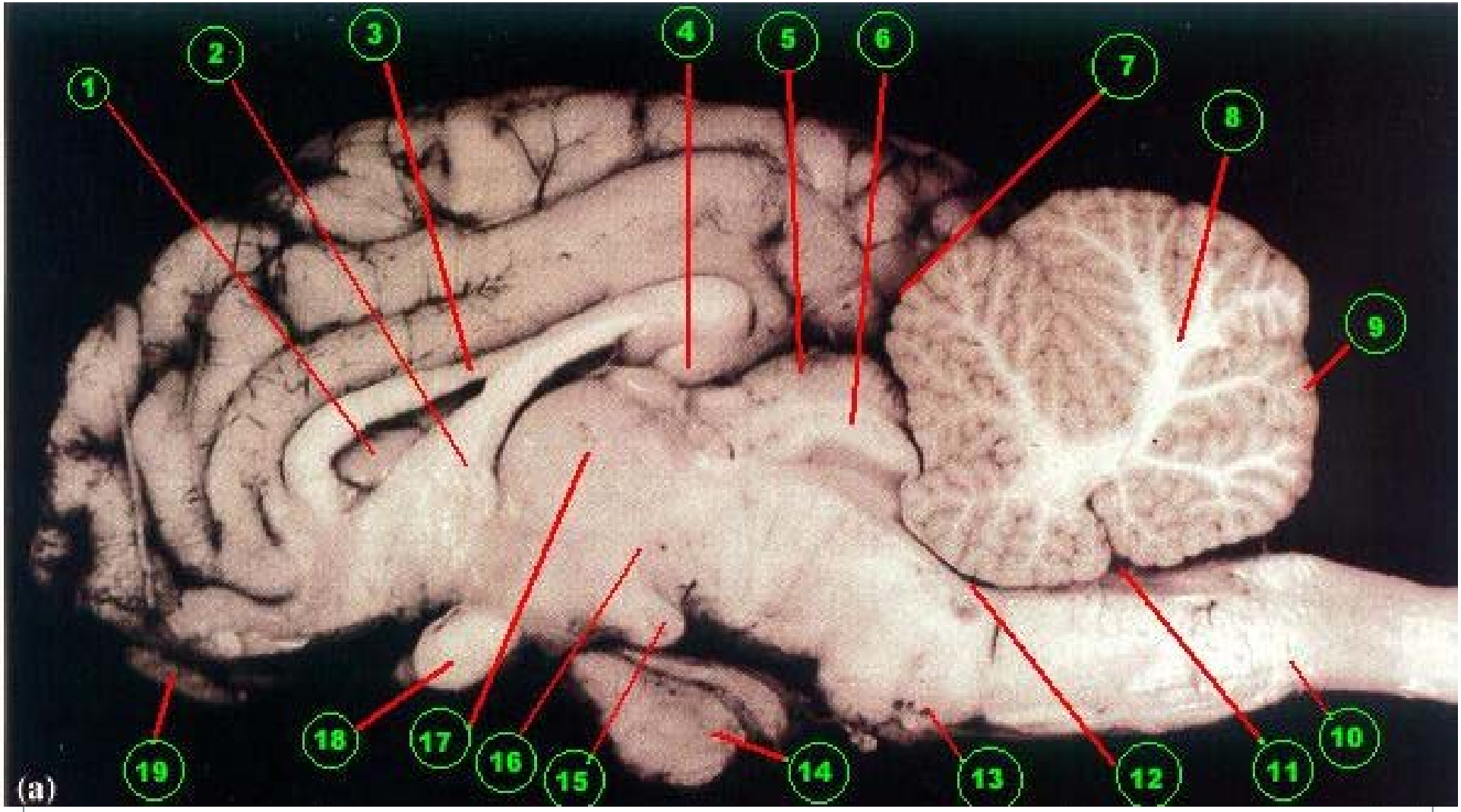
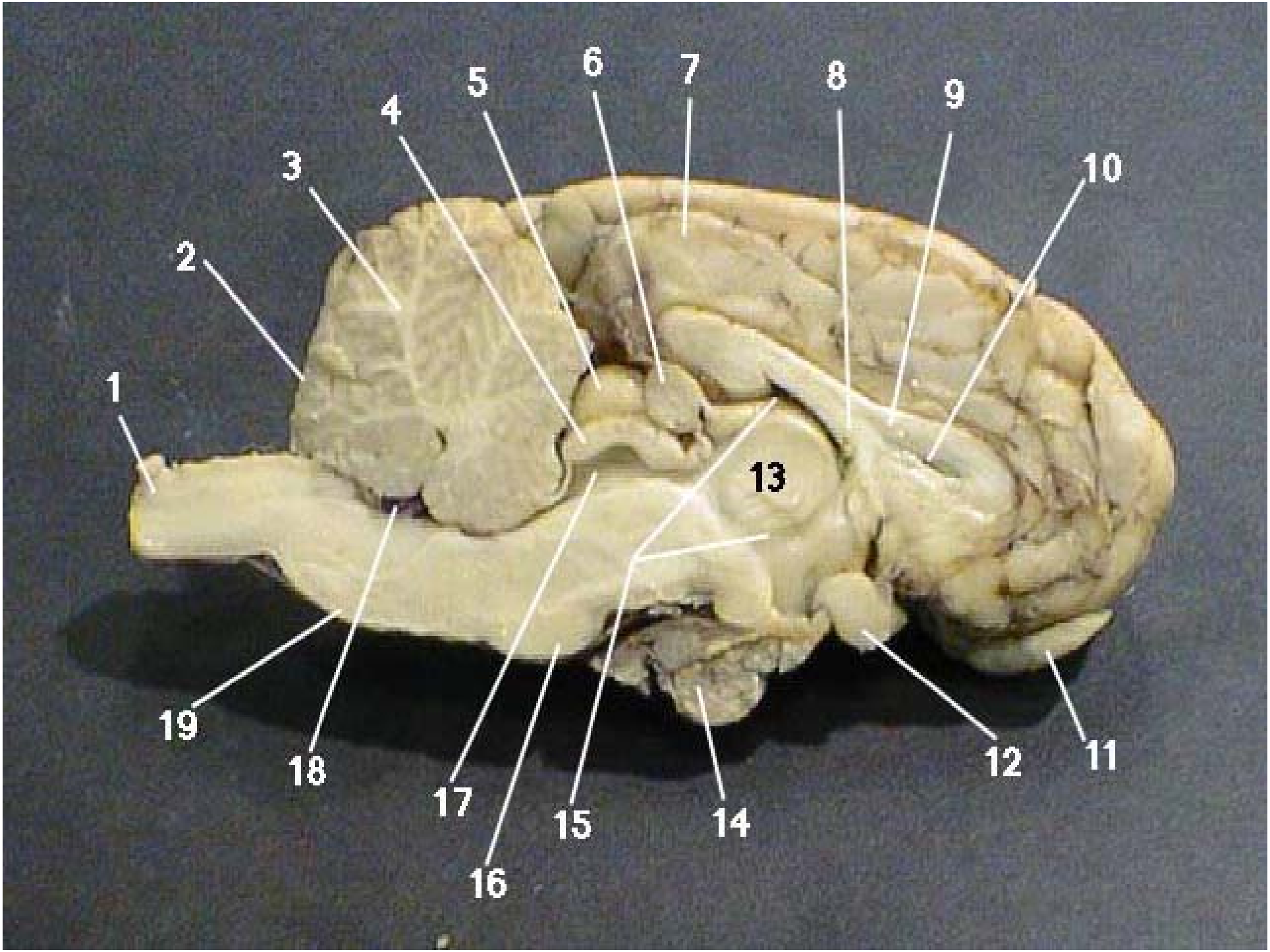


1. lateral ventricle 11. fourth venticle 2. fornix 12. aqueduct 3. corpus callosum 13. pons 4. pineal body 14. pituitary gland 5. superior colliculi 15. mammillary body 6. inferior colliculi 16. hypothalamus 7. transverse fissure 17. thalamus 8. arbor vitae 18. optic chiasma 9. cerebellar cortex (grey matter) 19. olfactory bulb 10. medulla oblongata .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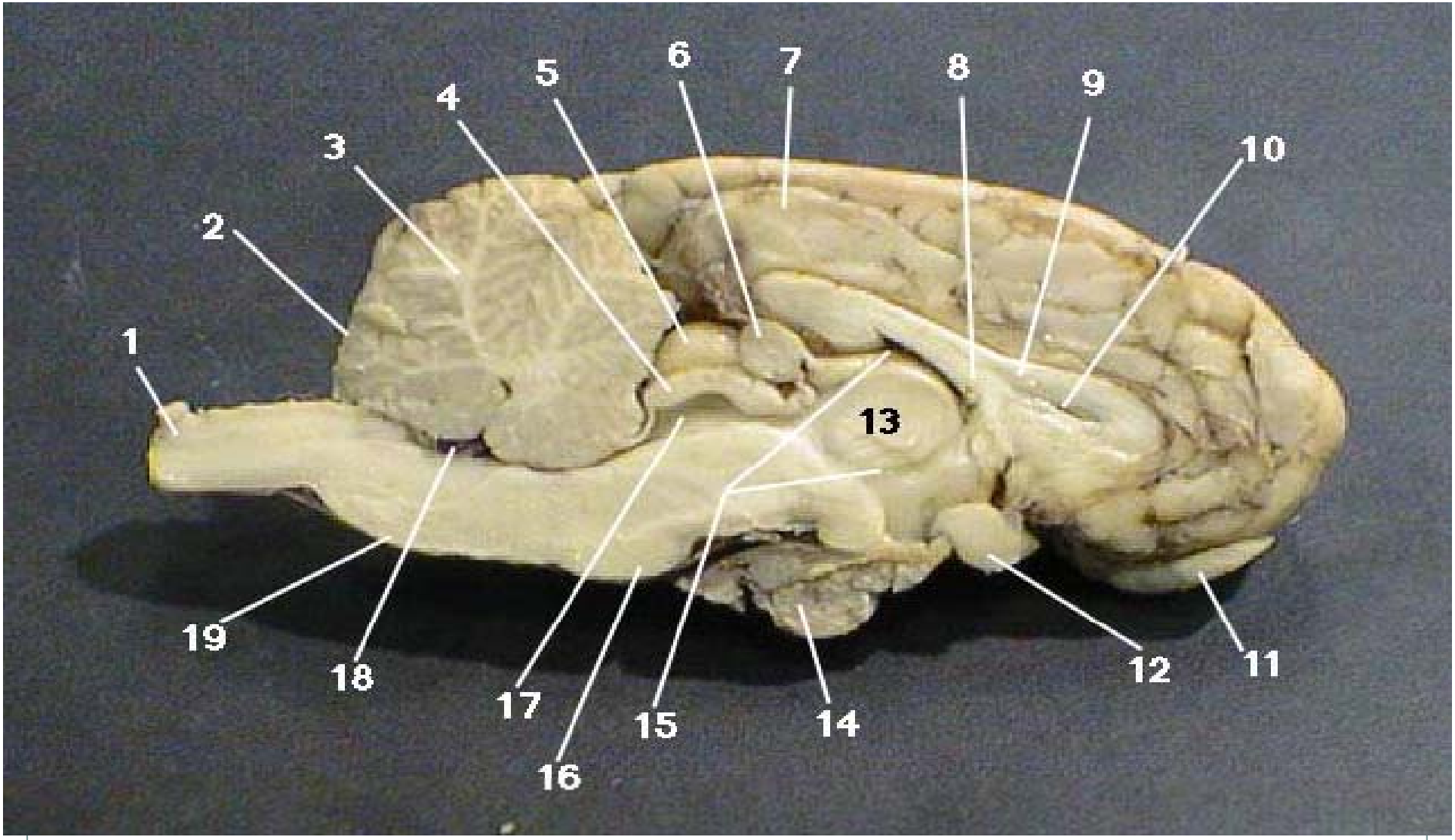
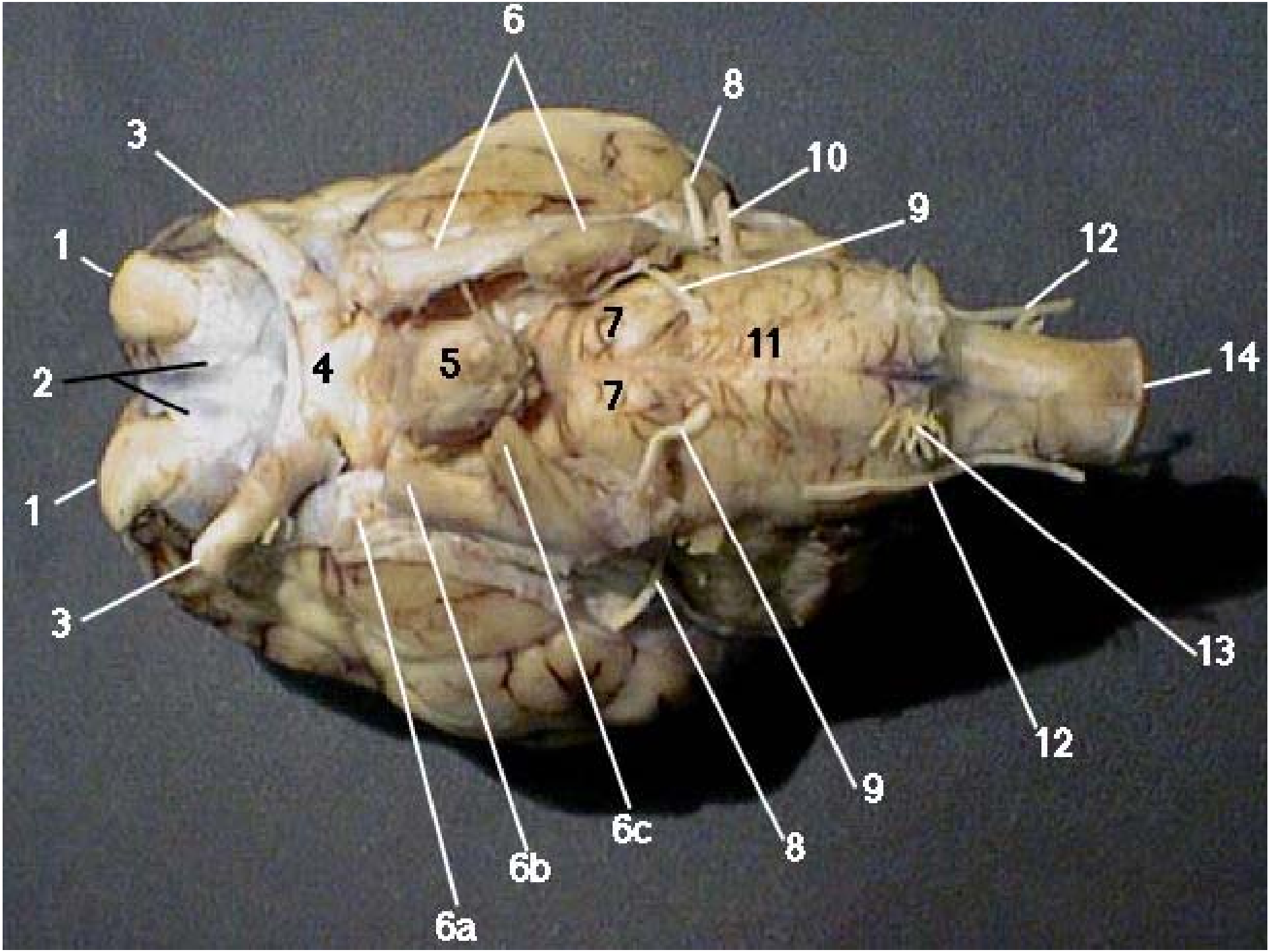


1. Spinal Cord 11. Olfactory Bulb 2. Cerebellum 12. Optic Chiasm 3. Arbor Vitae 13. Intermediate Mass (Thalamus) 4. Inferior Colliculus 14. Pituitary Gland 5. Superior Colliculus 15. Third Ventricle 6. Pineal Gland 16. Pons 7. Cerebrum 17. Cerebral Aqueduct of Sylvius 8. Fornix 18. Fourth Ventricle 9. Corpus Callosum 19. Medulla Oblongata 10. Lateral Ventricle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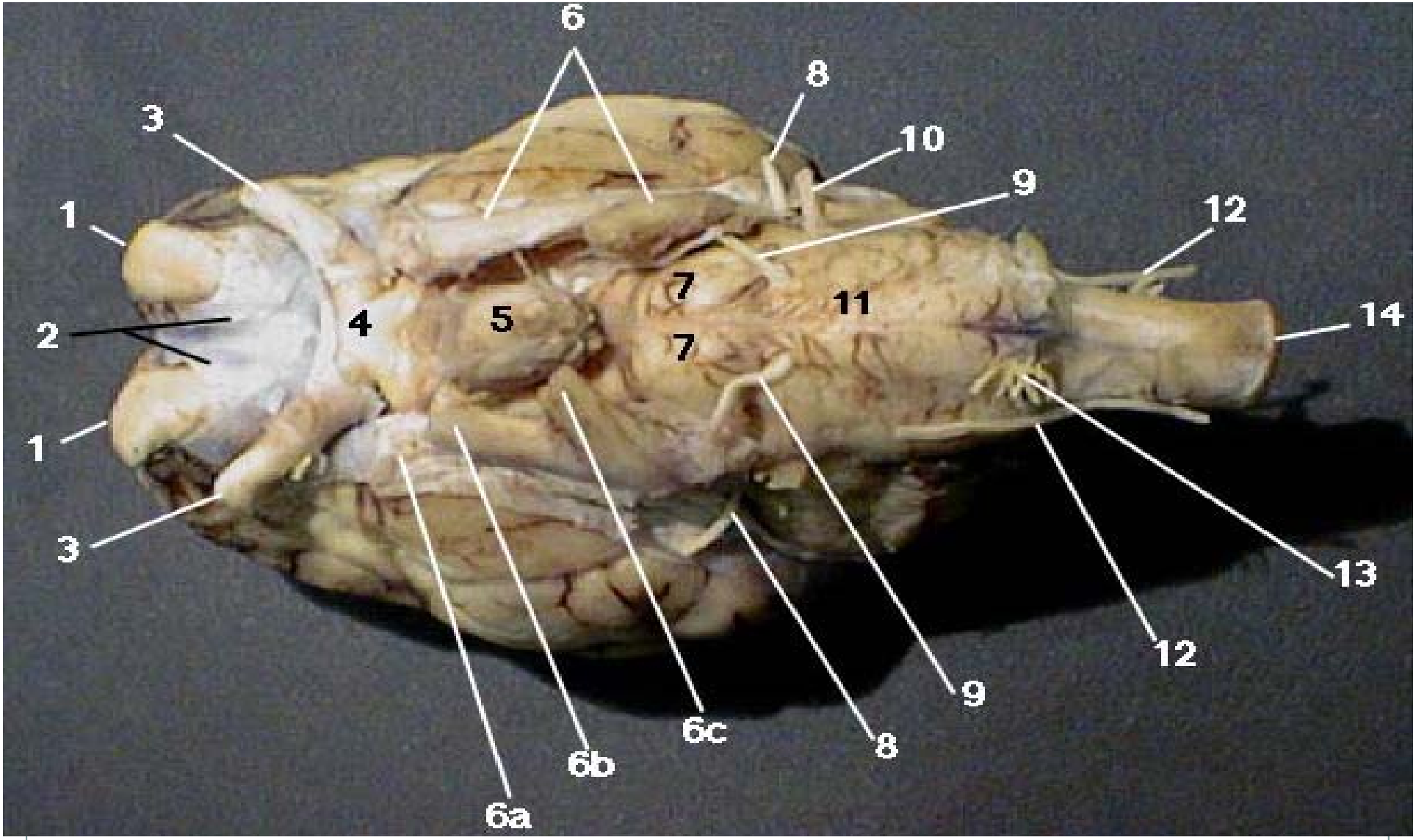
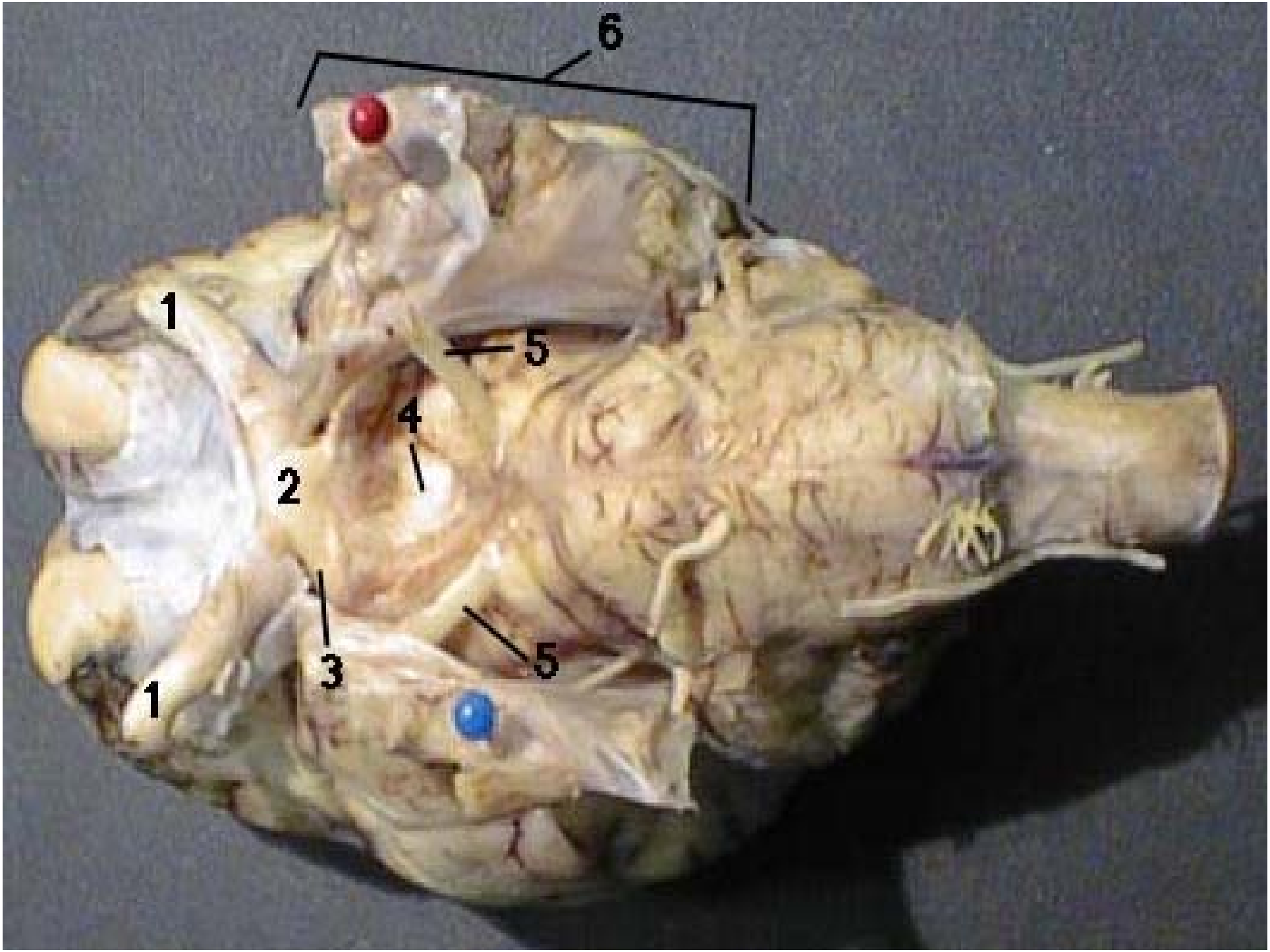


1. Olfactory Bulbs (I) 7. Pons 2. Dura Mater 8. Trochlear Nerve (IV) 3. Optic Nerve (II) 9. Abducens Nerve (VI) 4. Optic Chiasm 10. Facial Nerve (VII) 5. Pituitary Gland (Hypophysis) 11. Medulla Oblongata 6a. Trigeminal Nerve (V) - Opthalmic Branch (V) 12. Spinal Accessory Nerve (XI) 6b. Trigeminal Nerve (V) - Maxillary Branch (V) 13. Hypoglossal Nerve (XII) 6c. Trigeminal Nerve (V) - Mandibular Branch (V) 14. Spinal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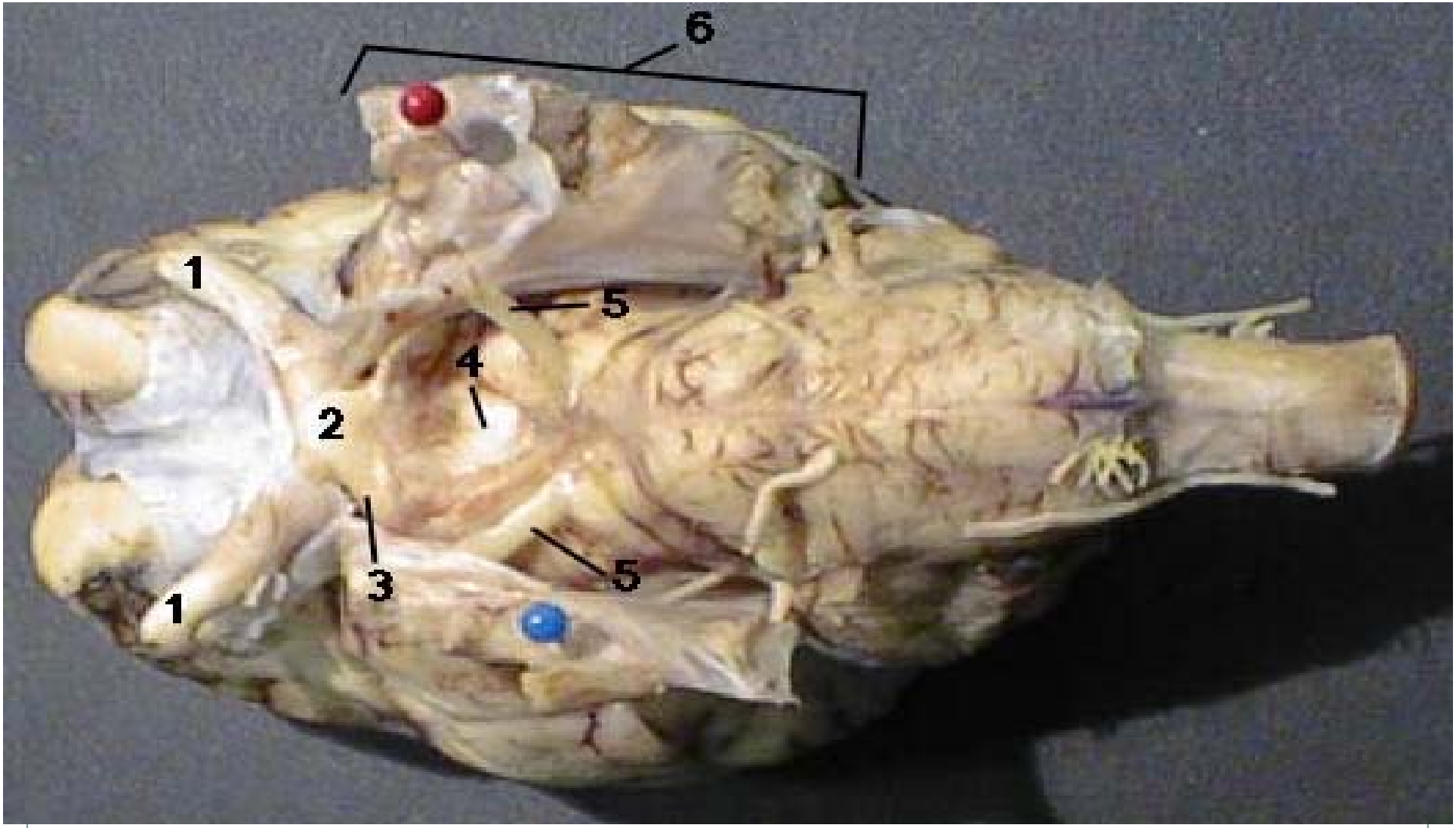
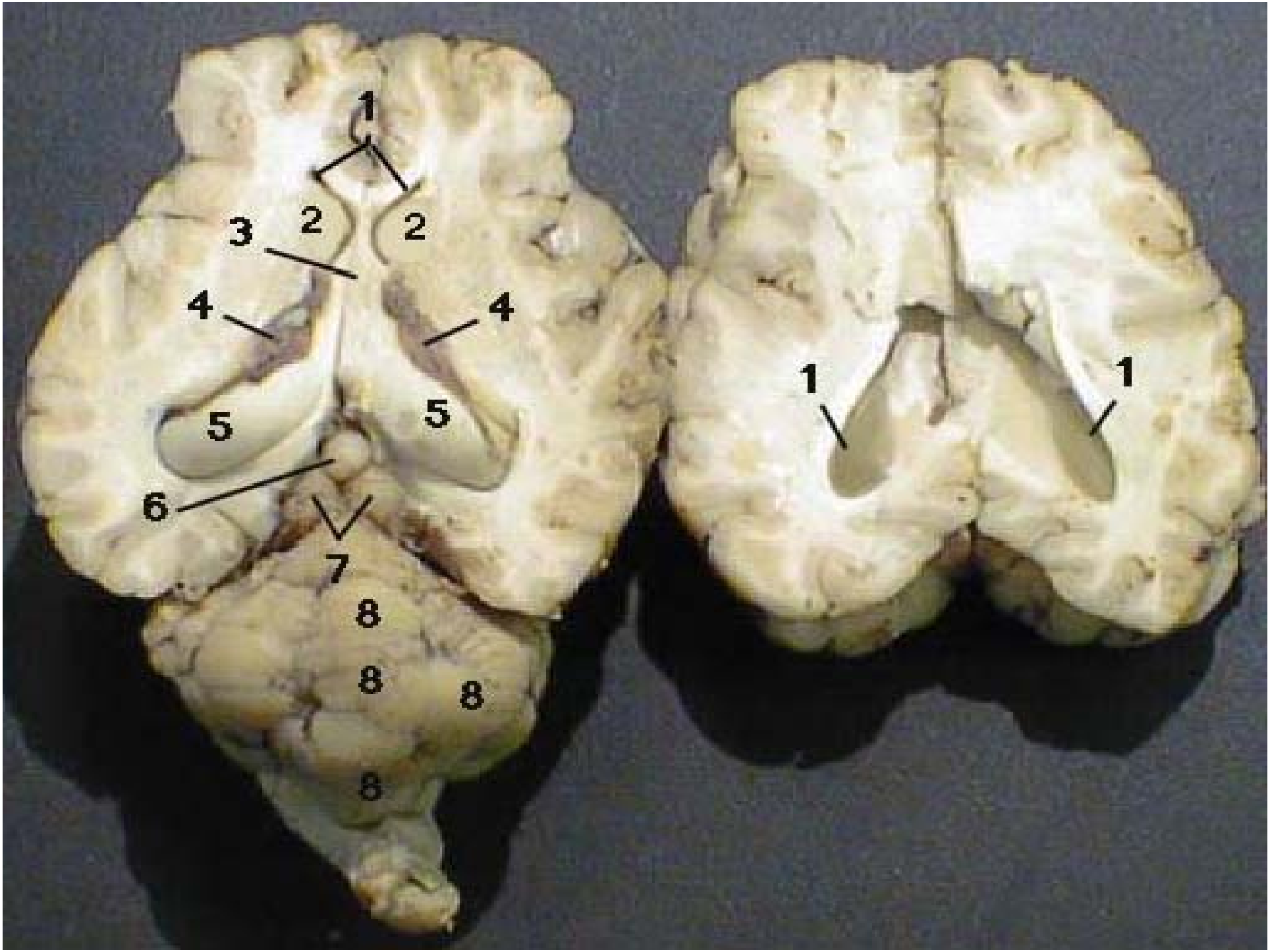


1. Optic Nerve (II) 2. Optic Chiasm 3. Optic Tract 4. Mammilary Body 5. Occulomotor Nerve (III) 6. Reflected Pituitary Gland & Trigeminal Nerve (V)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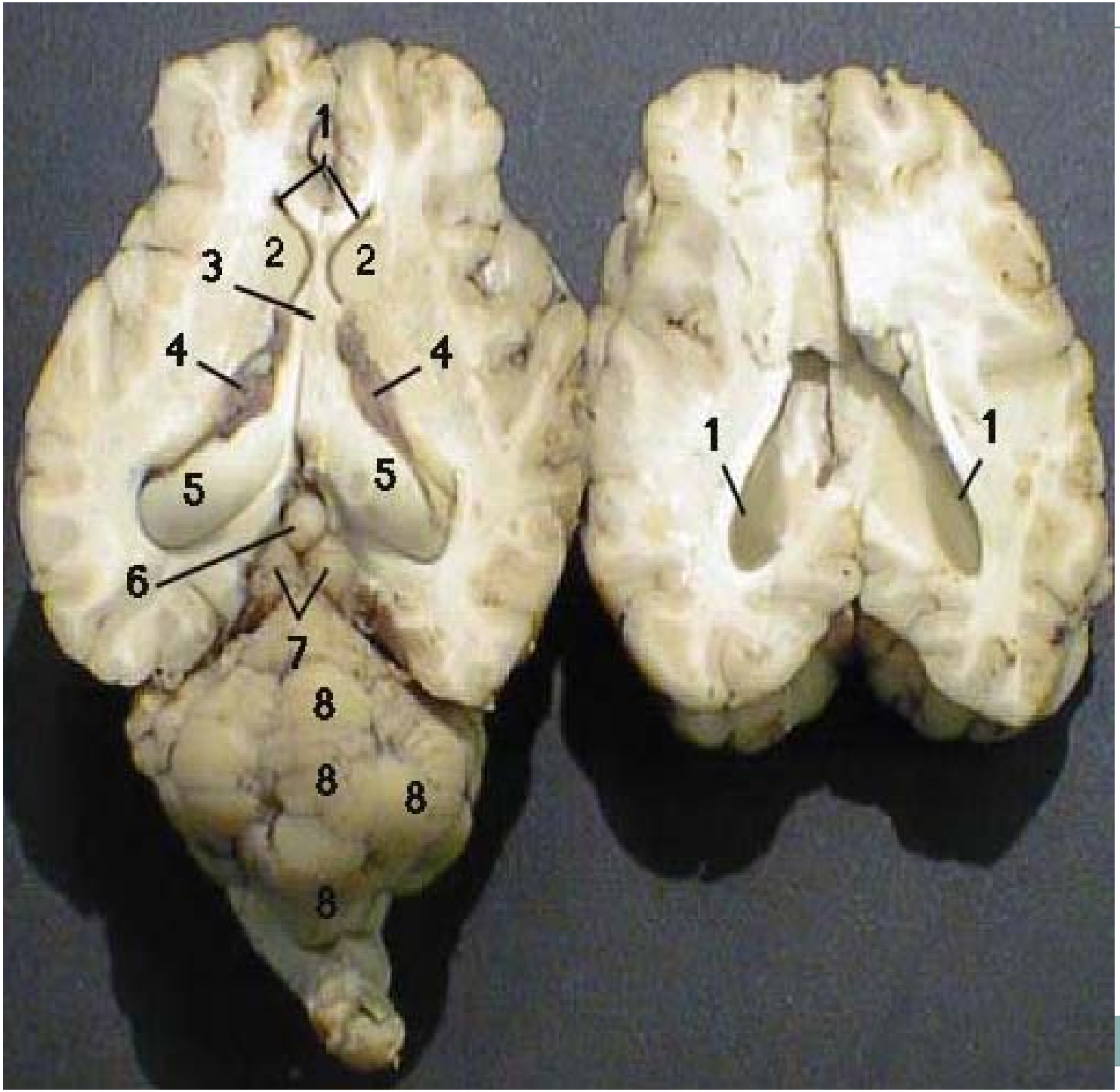
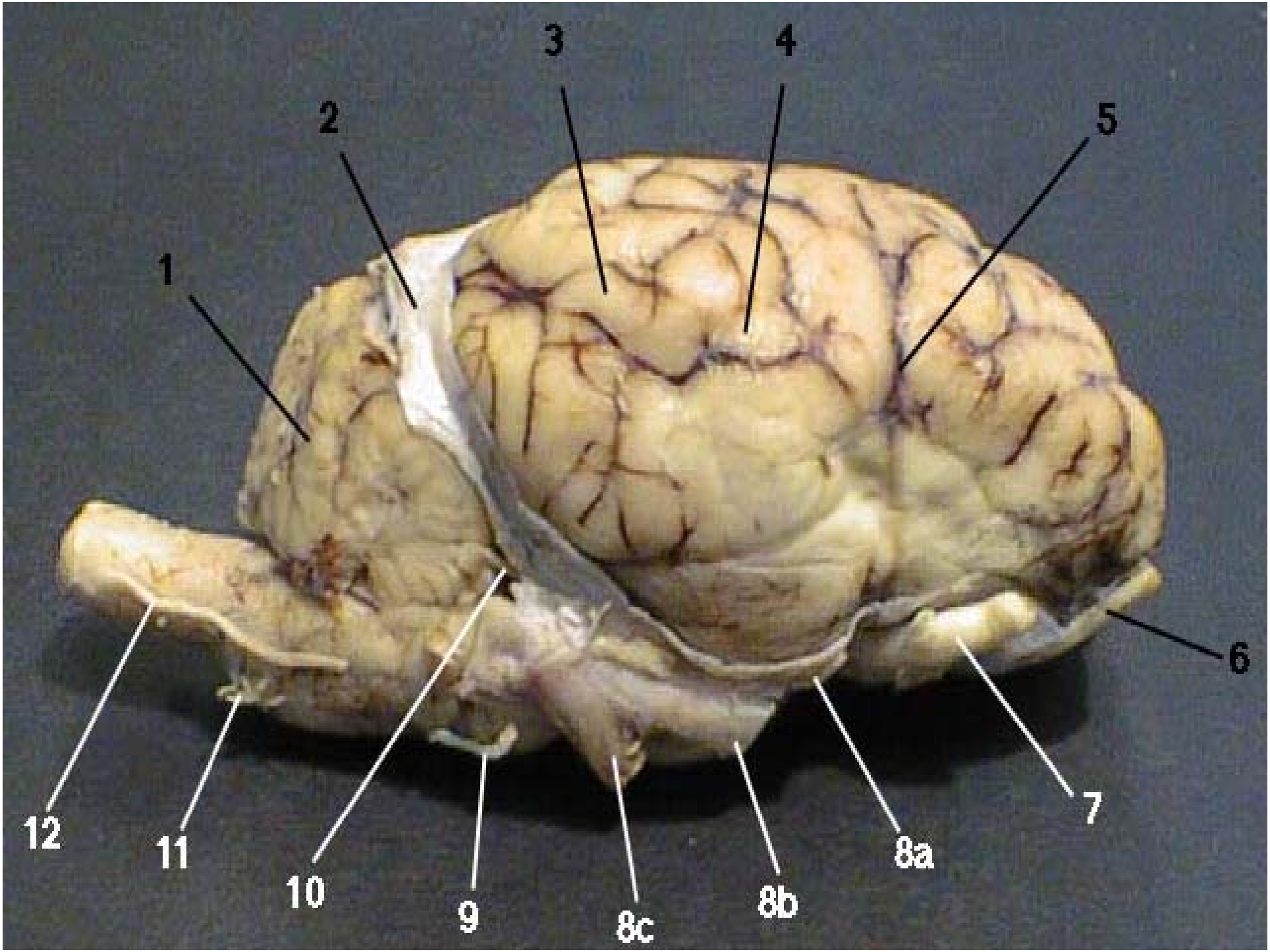


1. Lateral Ventricles 5. Hippocampus 2. Caudate Nuclei 6. Pineal Gland 3. Fornix 7. Superior Colliculi 4. Choroid Plexus 8. Vermis of Cerebellum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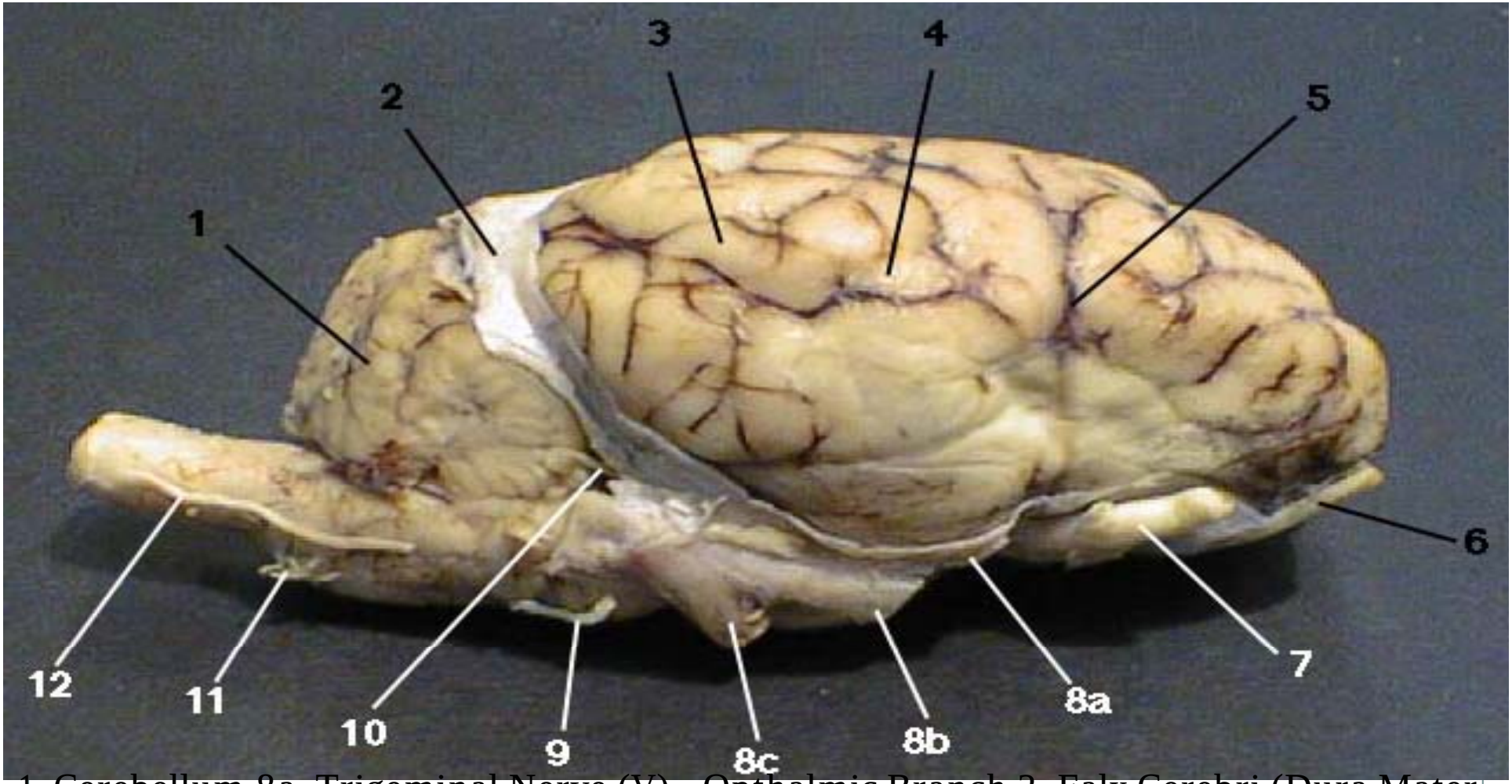
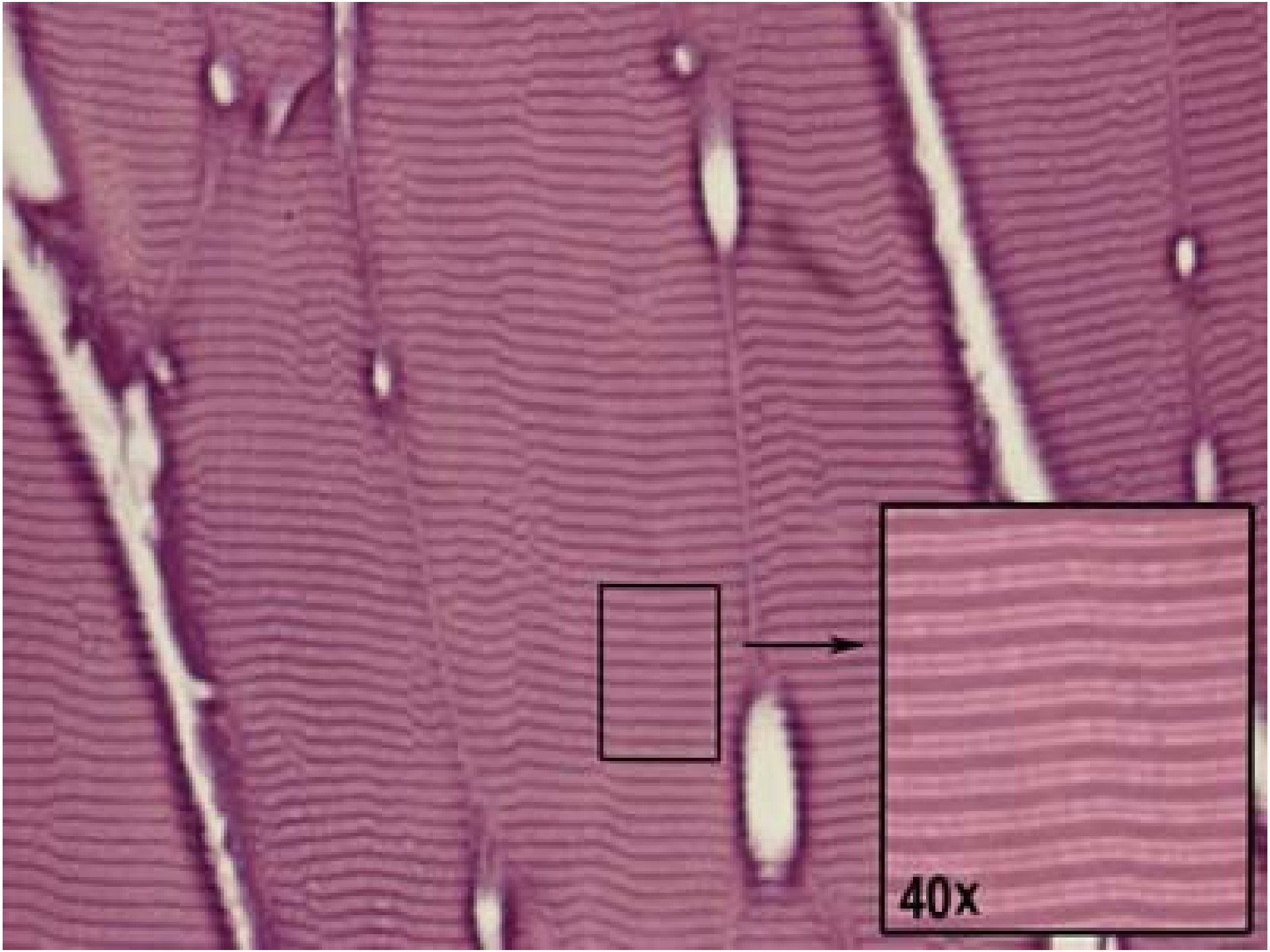
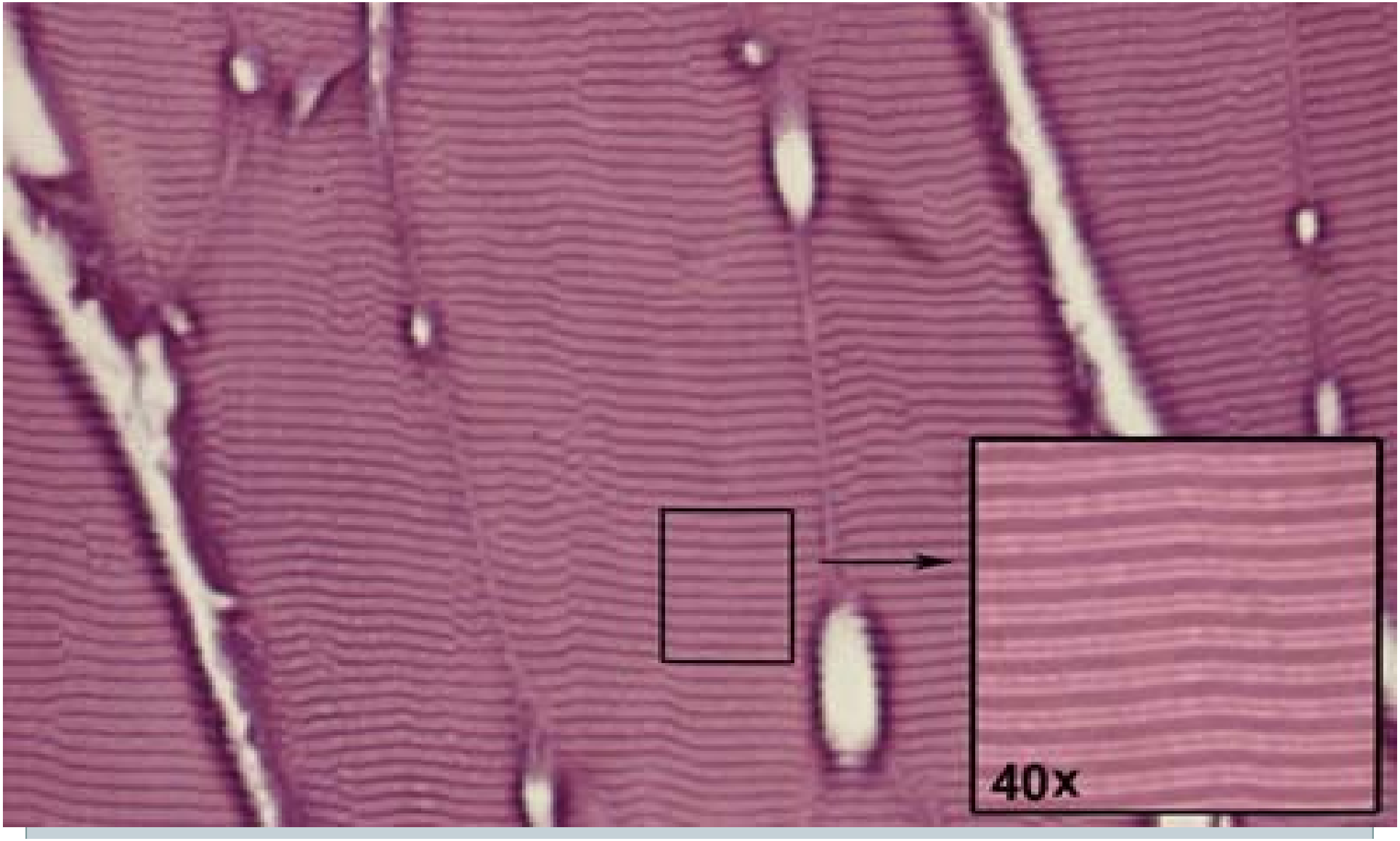


1. Cerebellum 8a. Trigeminal Nerve (V) - Opthalmic Branch 2. Falx Cerebri (Dura Mater Shield) 8b. Trigeminal Nerve (V) - Maxillary Branch 3. Cerebral Gyrus 8c. Trigeminal Nerve (V) - Mandibular Branch 4. Arachnoid Mater 9. Abducens Nerve (VI) 5. Cerebral Sulcus 10. Trochlear Nerve (IV) 6. Olfactory Bulb (I) 11. Hypoglossal Nerve (XII) 7. Optic Nerve (II) 12. Spinal Accessory Nerve (XI)


40x



At low magnification, identify both **A bands** and **I bands**. At 40x, identify **Z lines**.

Q2: What is the functional significance of each of these components?

Q3: What defines the extent of a sarcomere?

A band: thick myosin filaments.

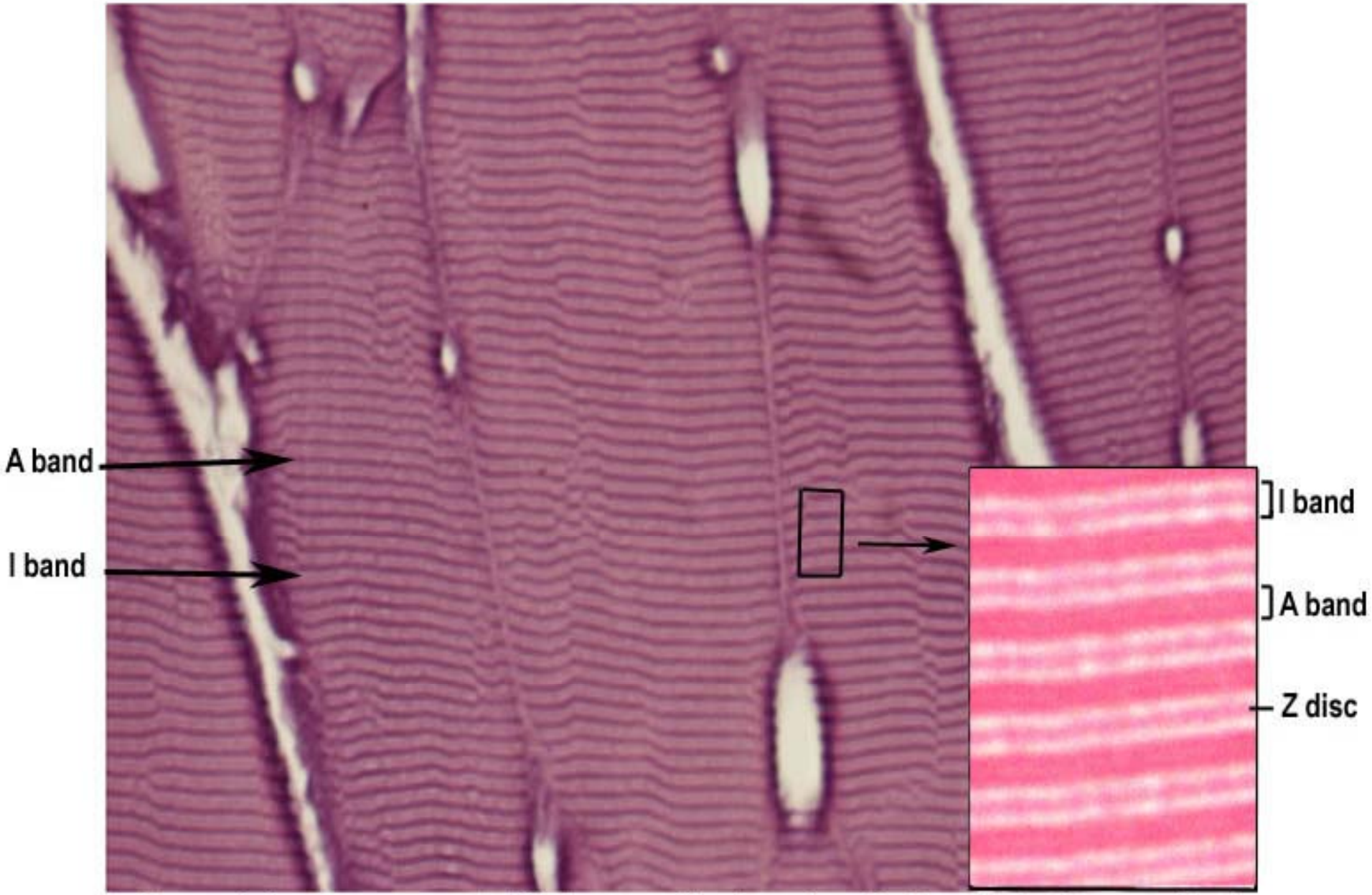
I band: thin actin filaments.

Z band: a-actinin and vinculin.

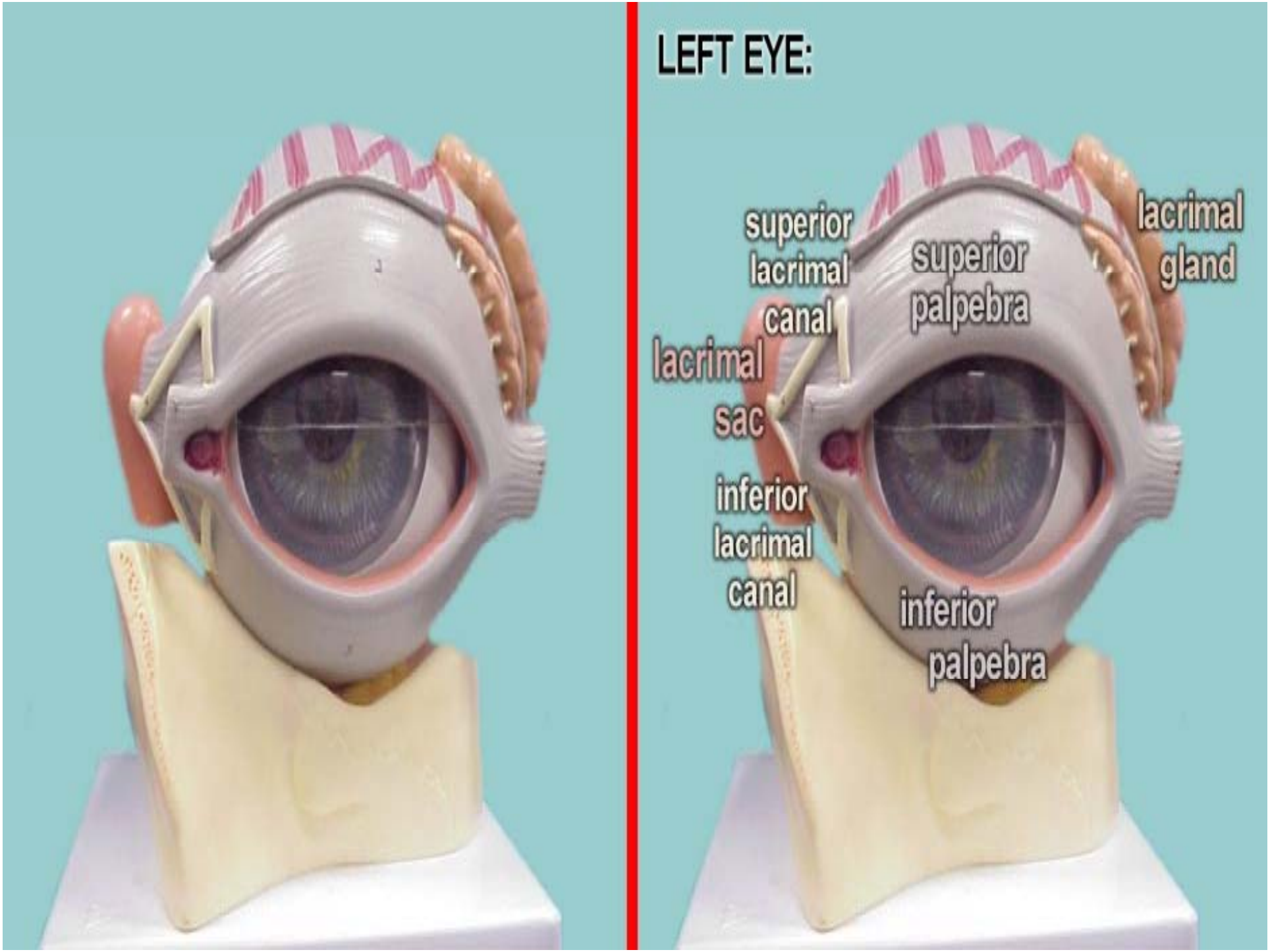
Myosin and actin filaments overlap at the margins of the A band during contraction; the components at the Z band anchor the actin filaments.

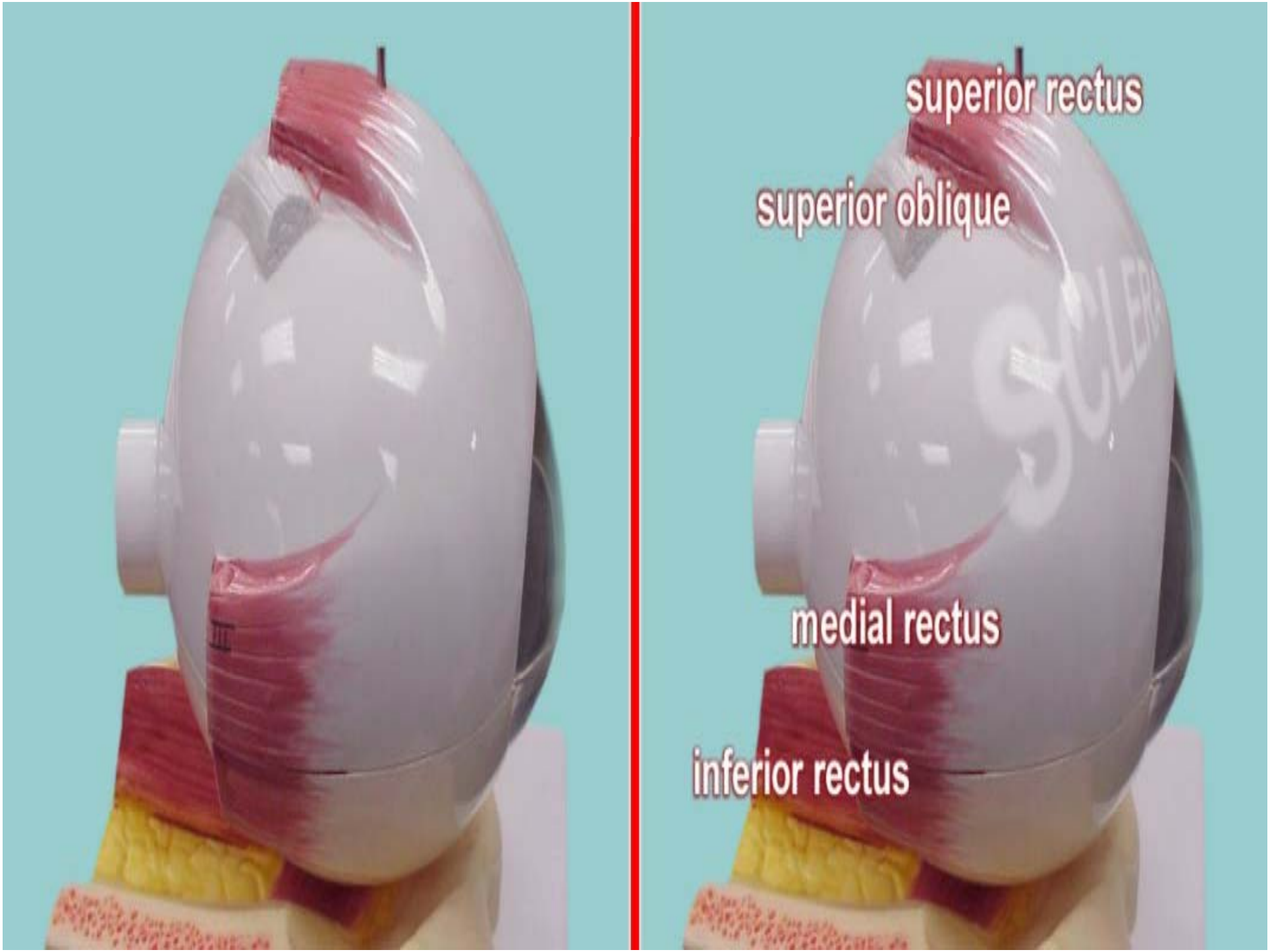
The sarcomere is defined by sequential Z bands.

Slide 118/skeletal muscle/ 20x

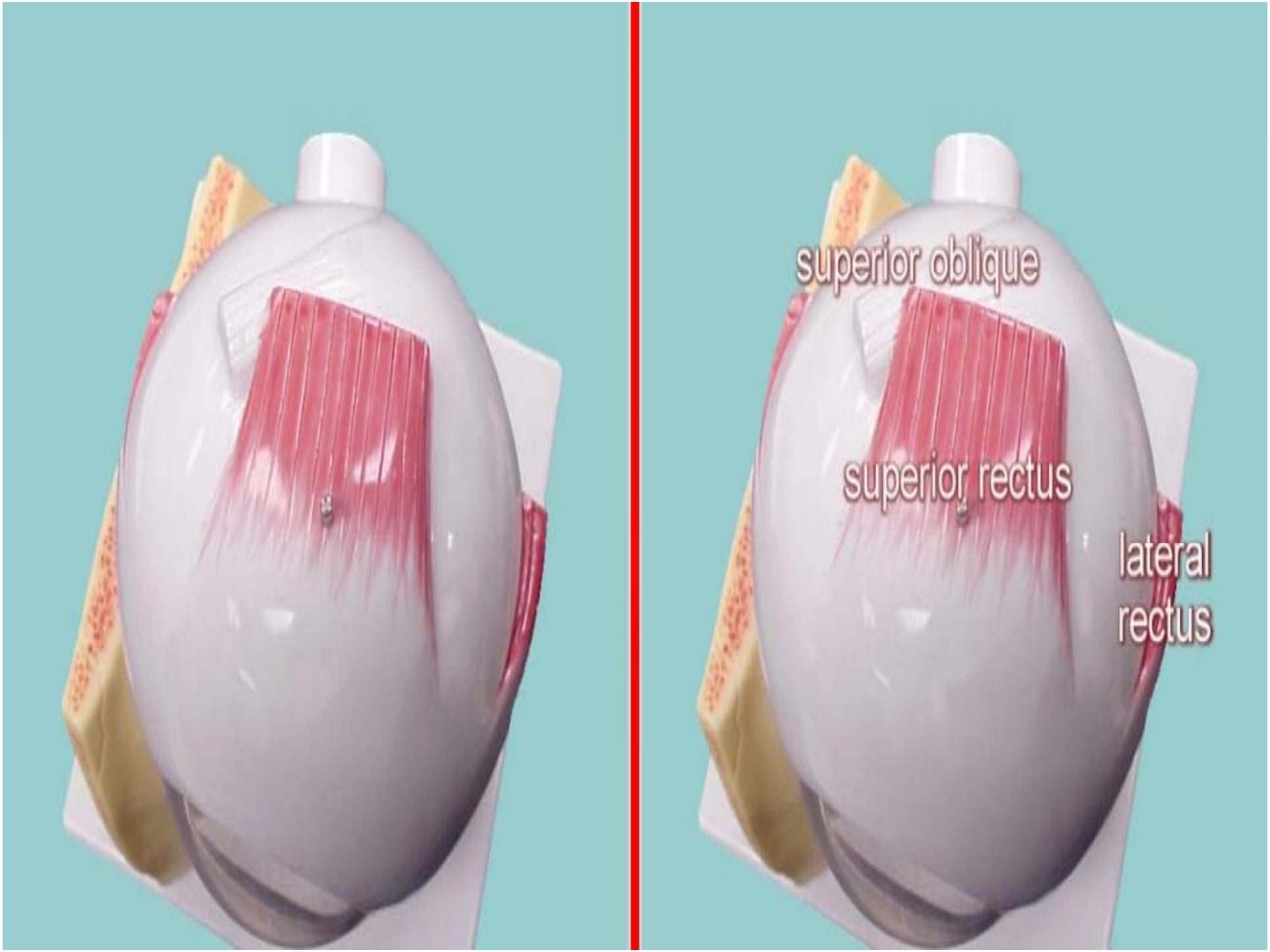


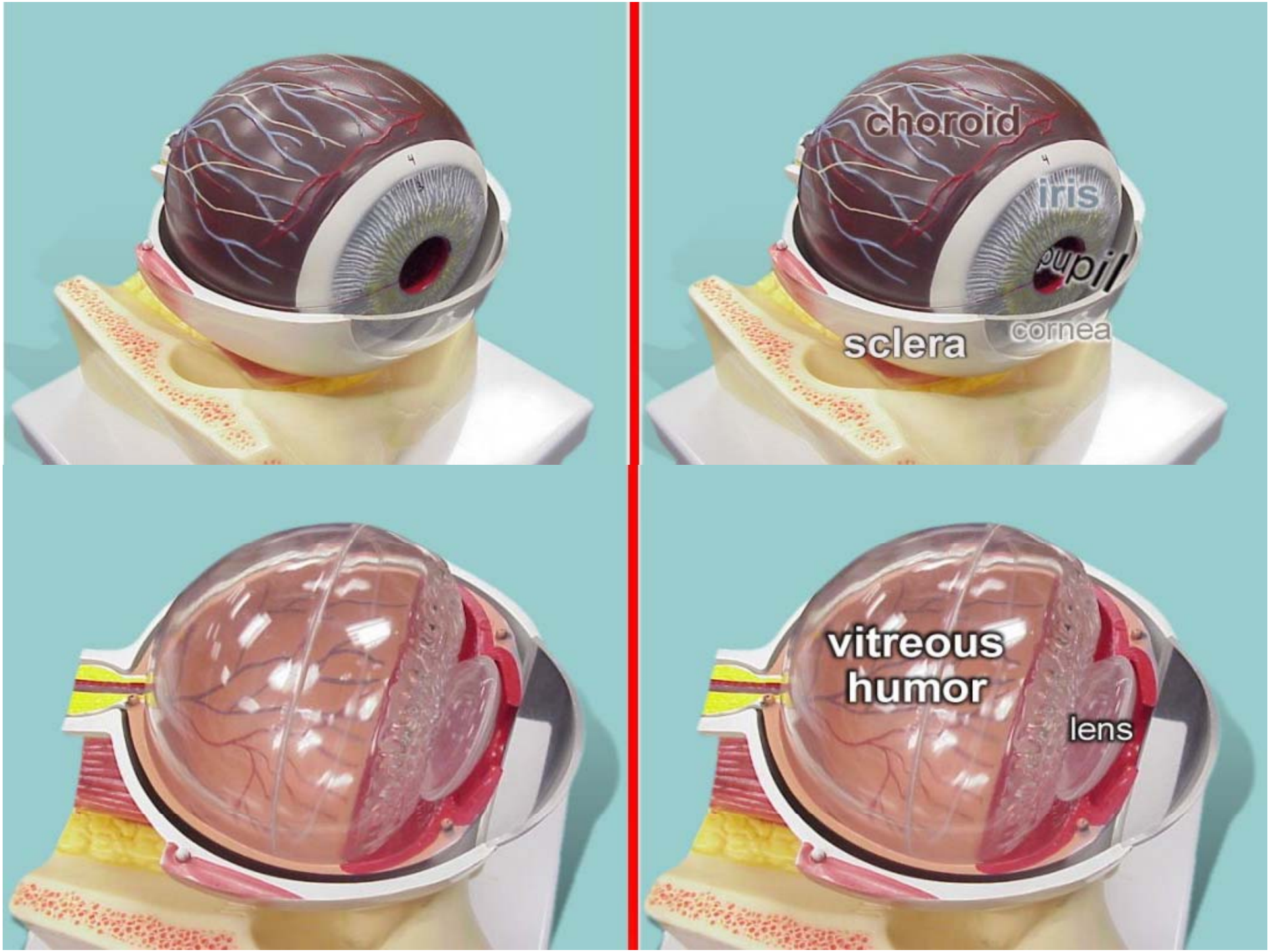
Z discs only become apparent at higher magnifications (see 40x insert). At 20x magnification, dark bands are the A bands, and the light bands are I bands (see *Wheater's p. 102*).

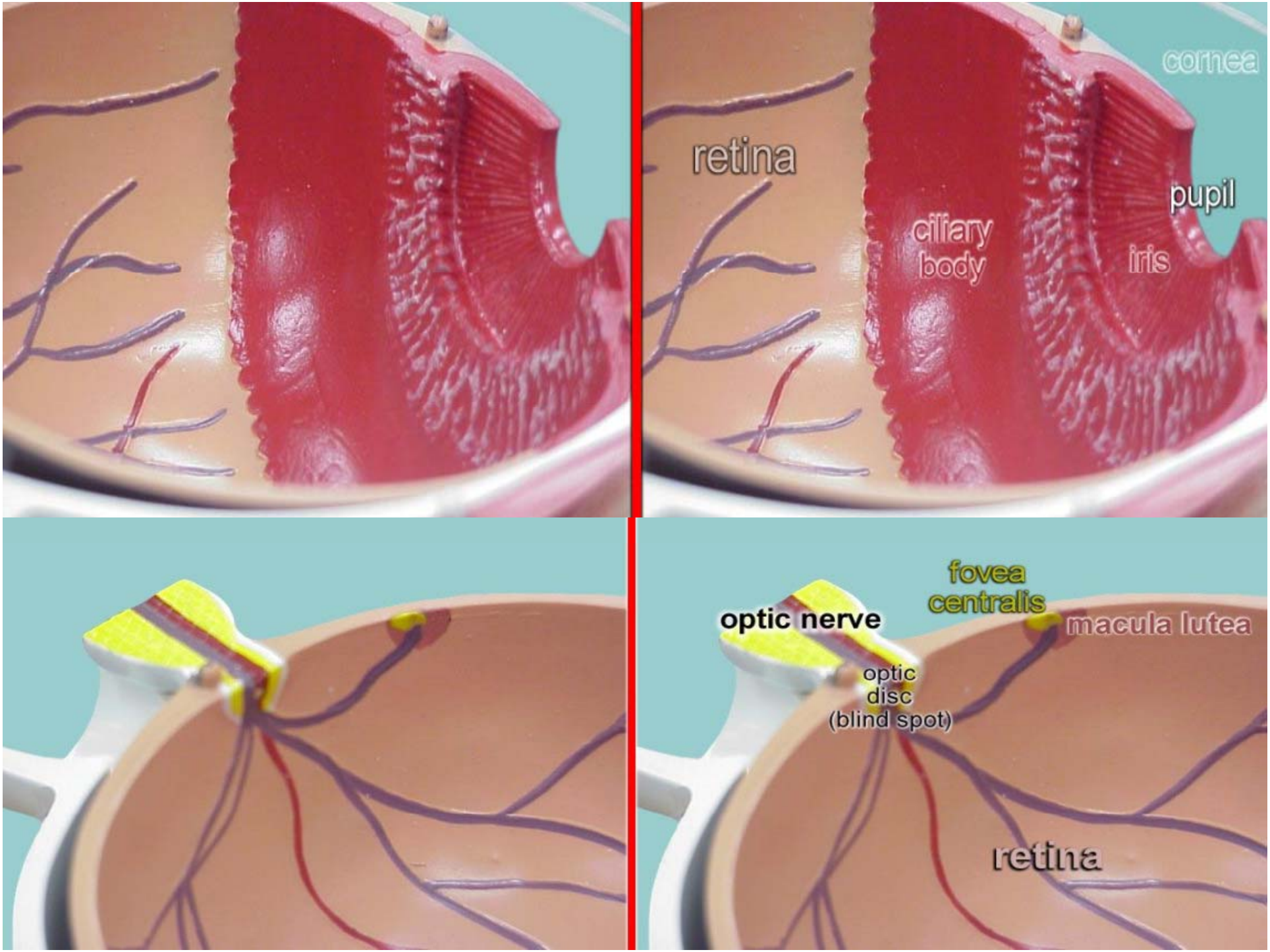

LEFT EYE:
superior lacrimal canal
lacrimal sac
inferior lacrimal canal
superior palpebra
lacrimal gland
inferior palpebra

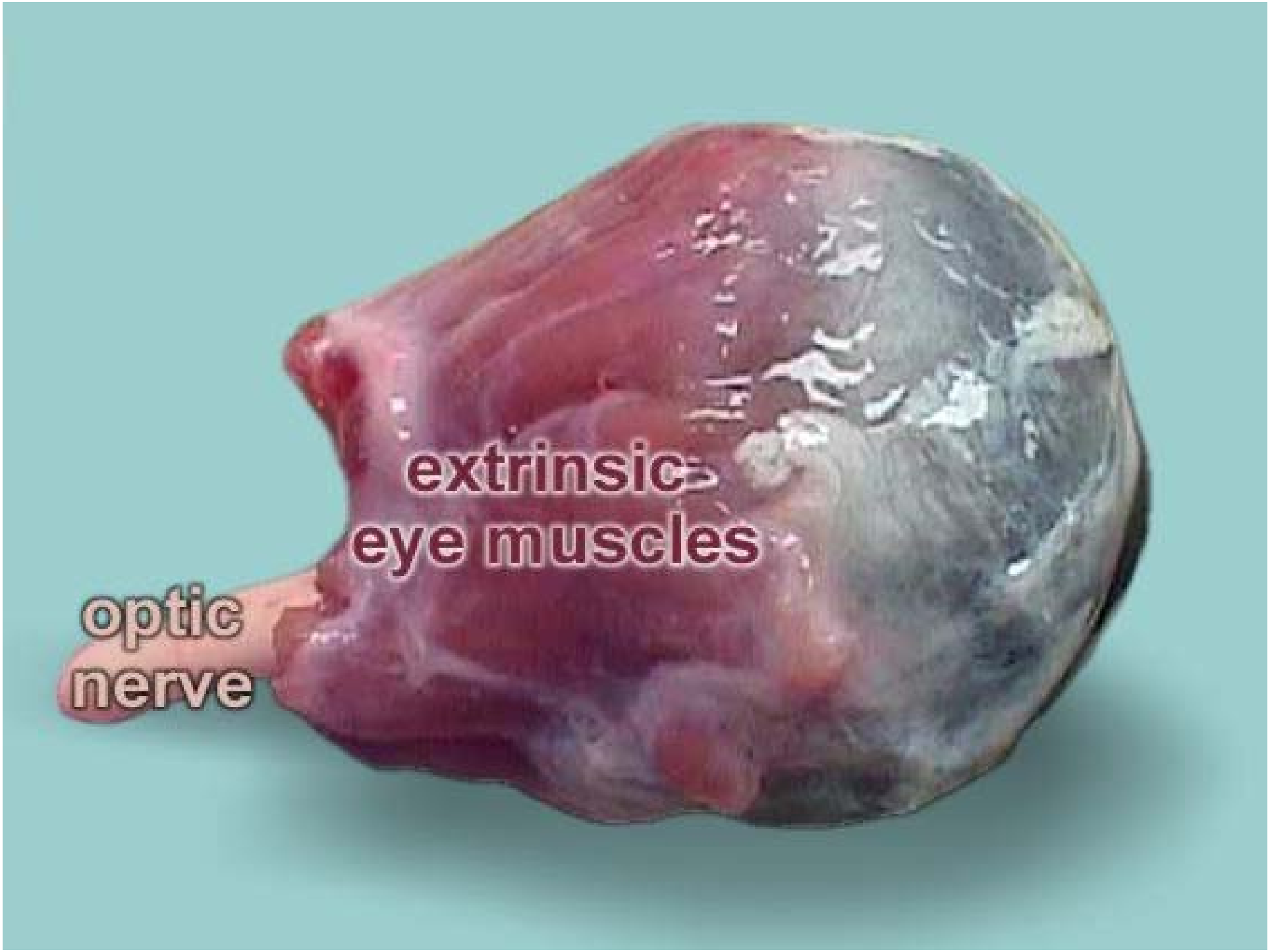

superior rectus
superior oblique
medial rectus
inferior rectus

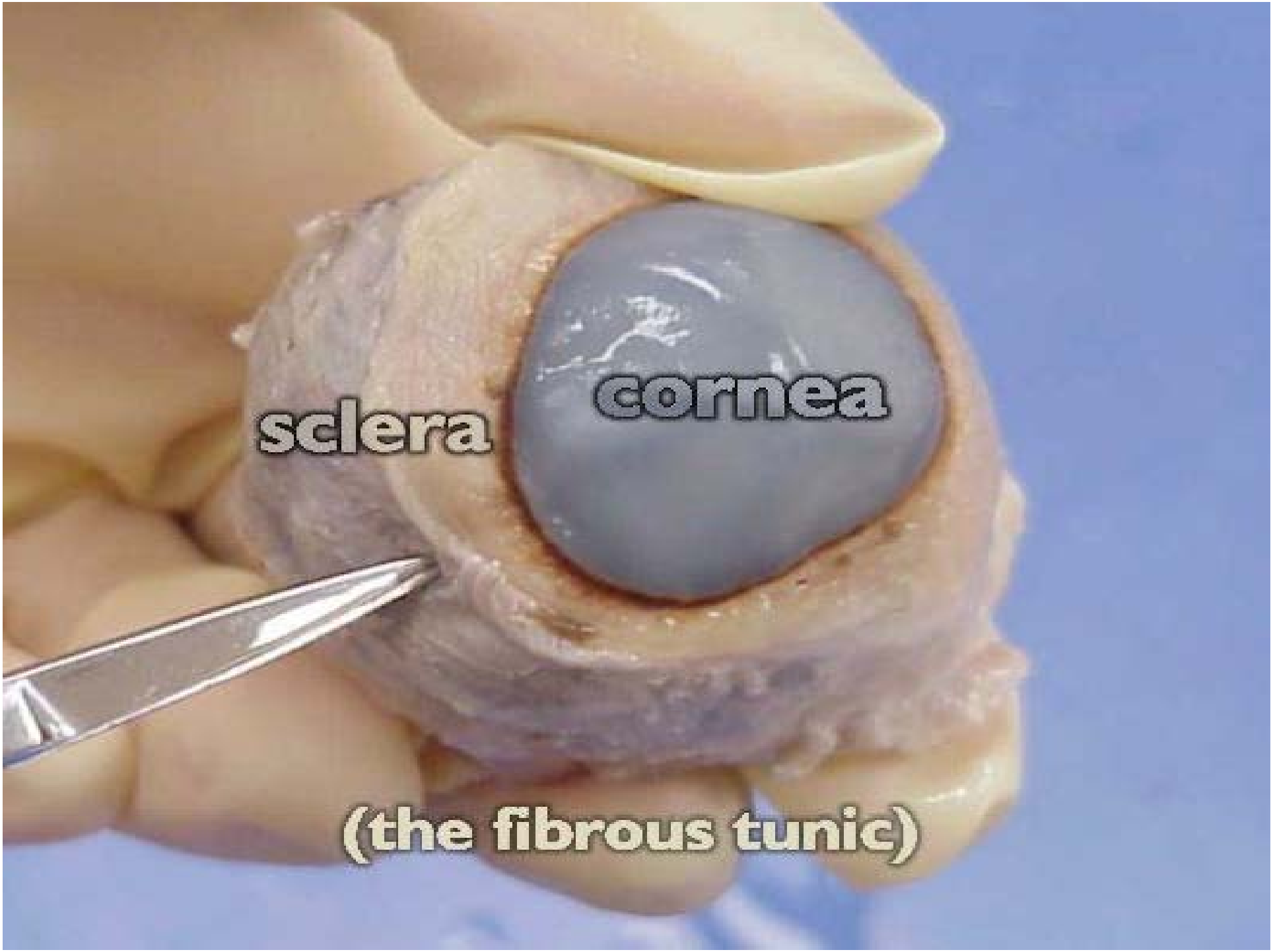

optic nerve
medial rectus
lateral rectus
inferior oblique
inferior rectus


superior oblique
superior rectus
lateral
rectus

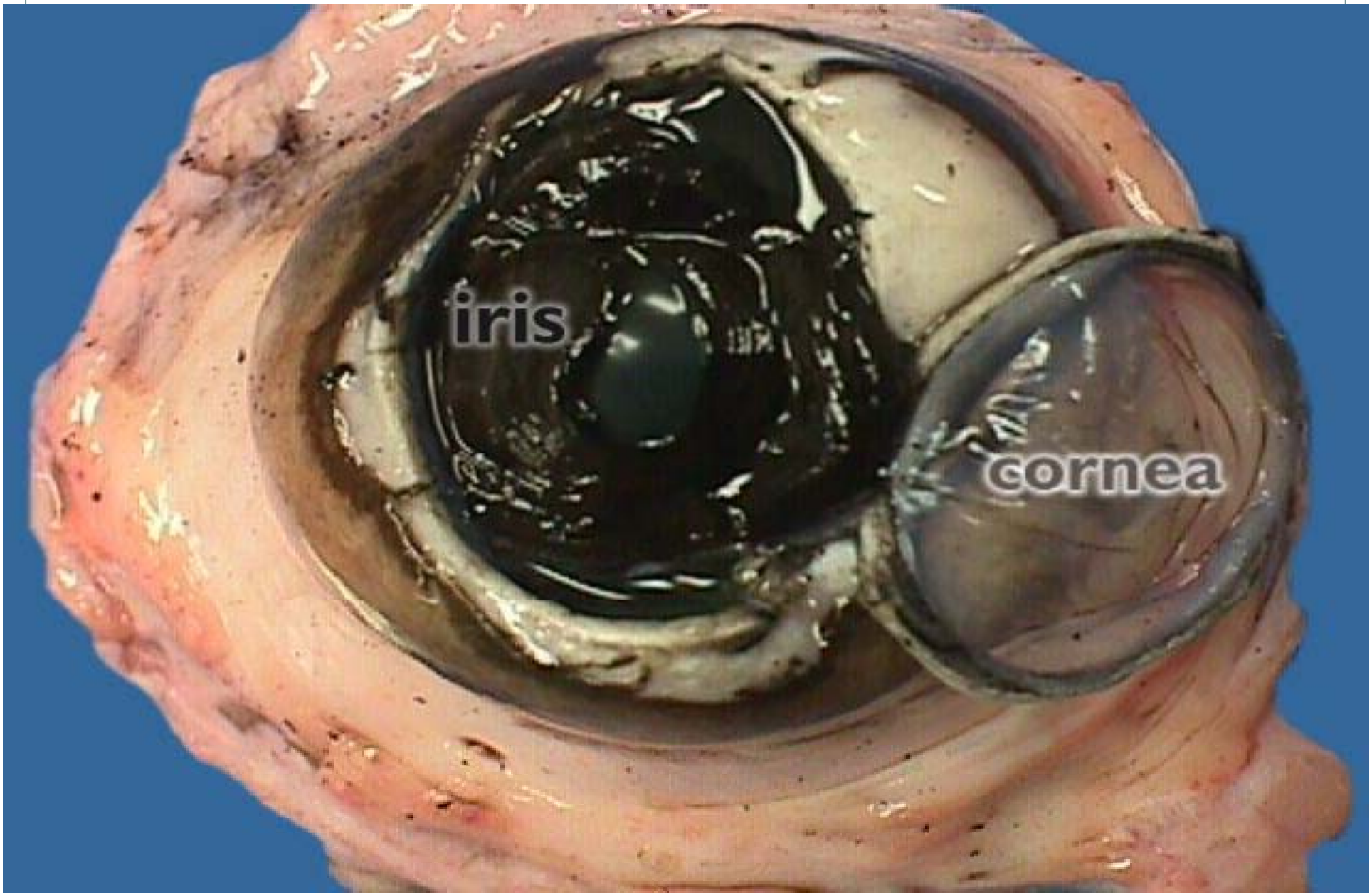

choroid
iris
pupil
sclera
cornea
vitreous
humor
lens


cornea
retina
pupil
ciliary body
iris
fovea centralis
optic nerve
macula lutea
optic disc (blind spot)
retina

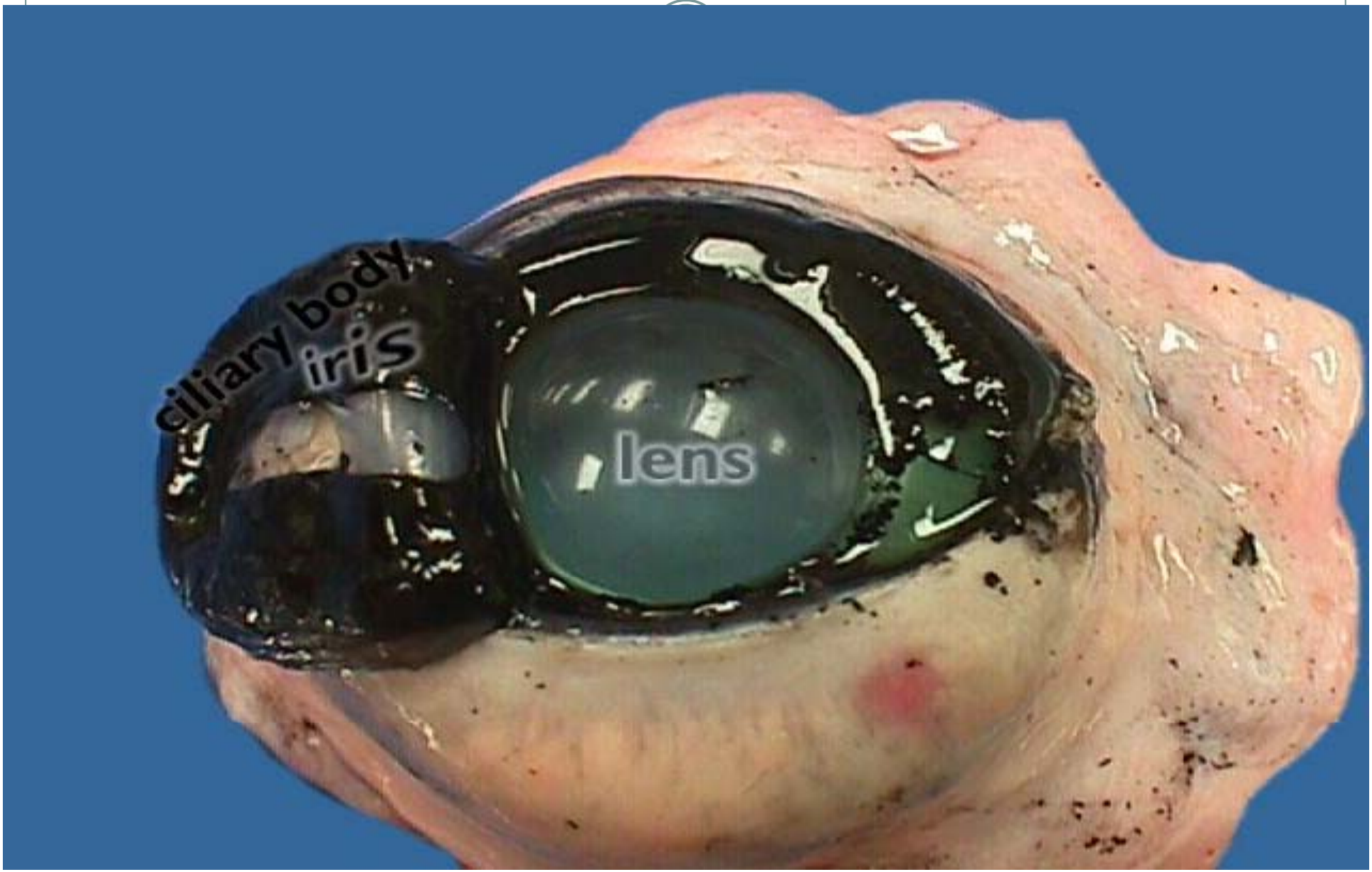

extrinsic
eye muscles
optic
nerve


sclera
cornea
(the fibrous tunic)

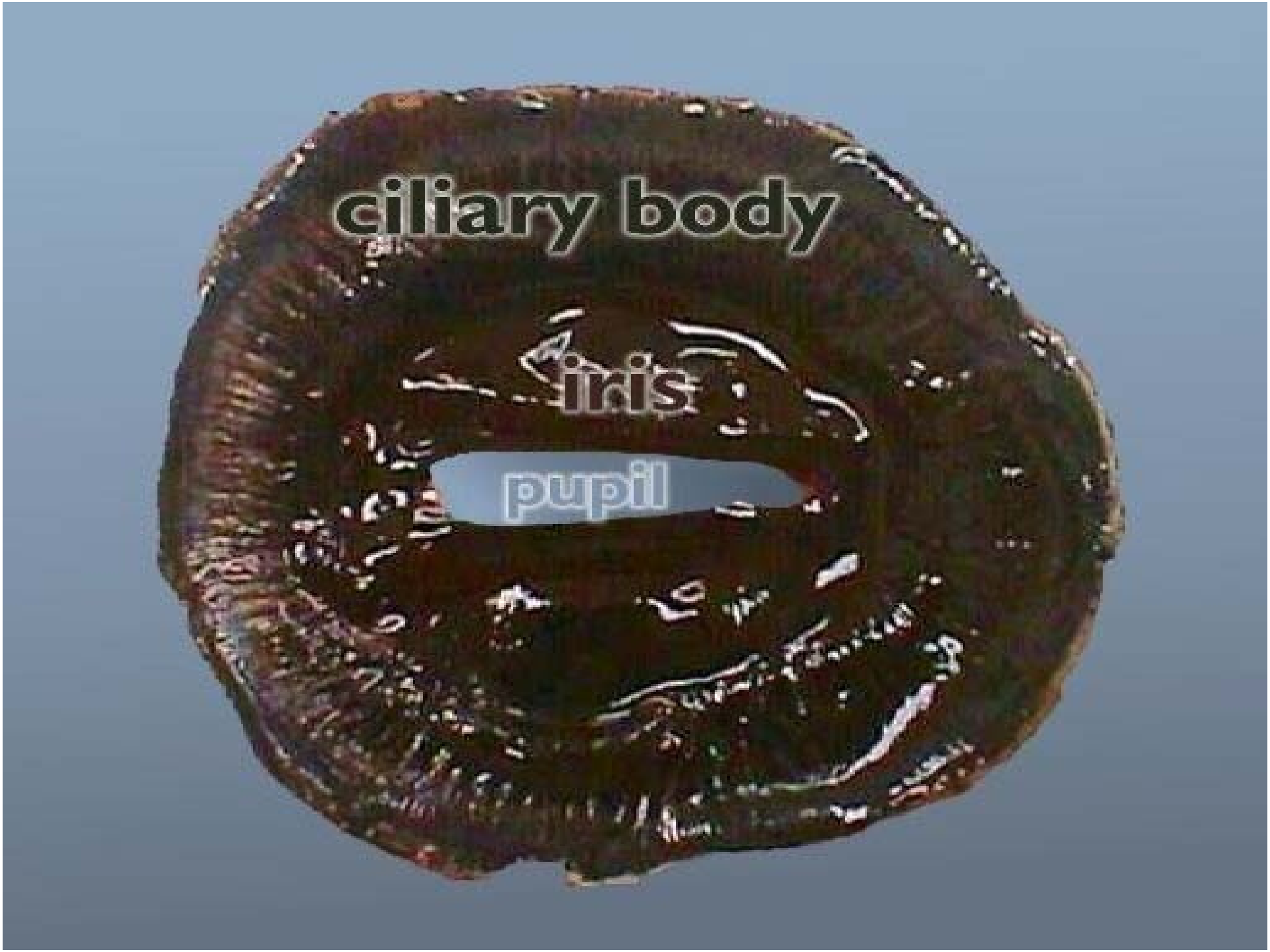
ANTERIOR CHAMBER



POSTERIOR CHAMBER

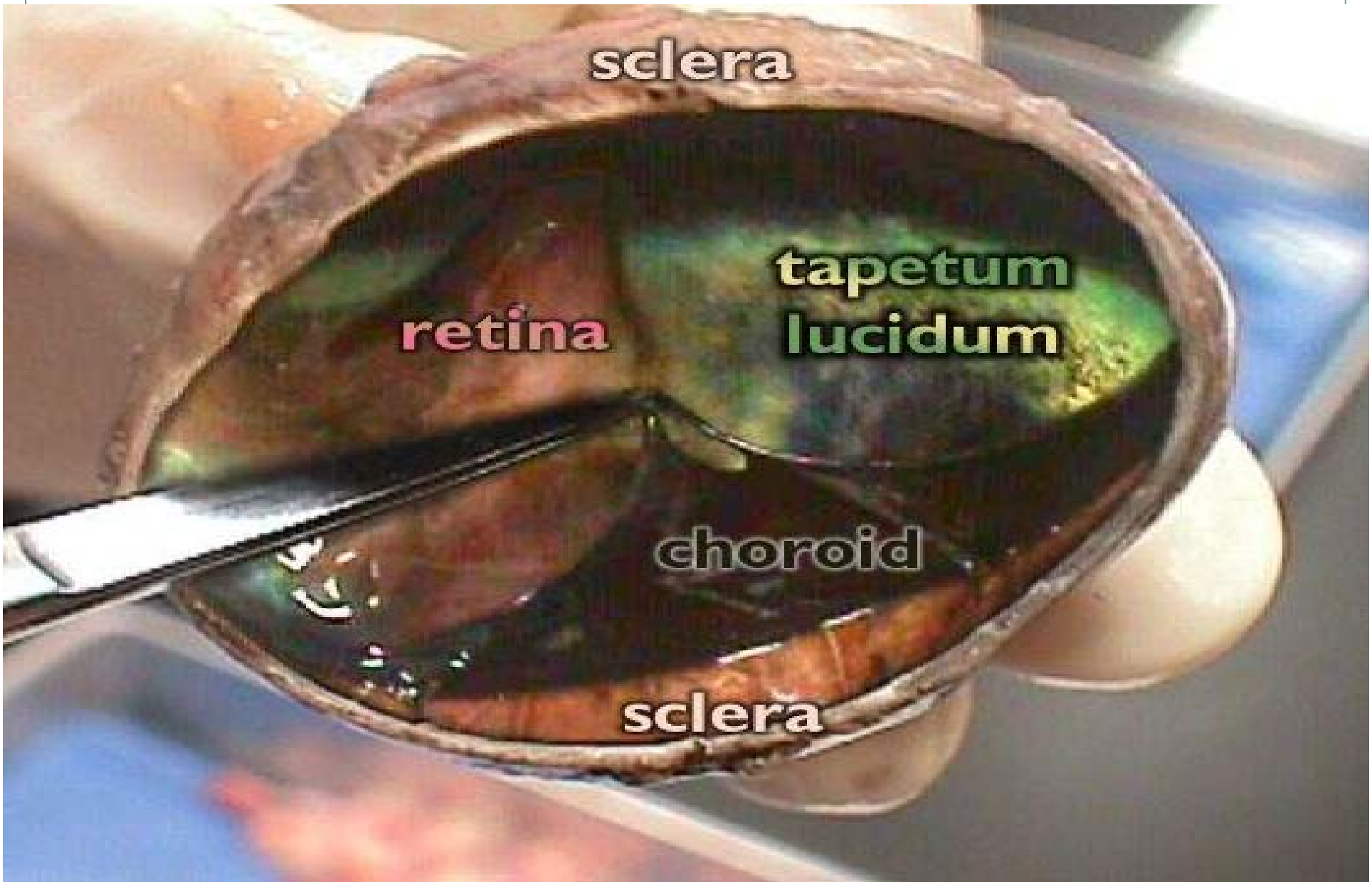



ciliary body
pupil
lens, in place
behind iris

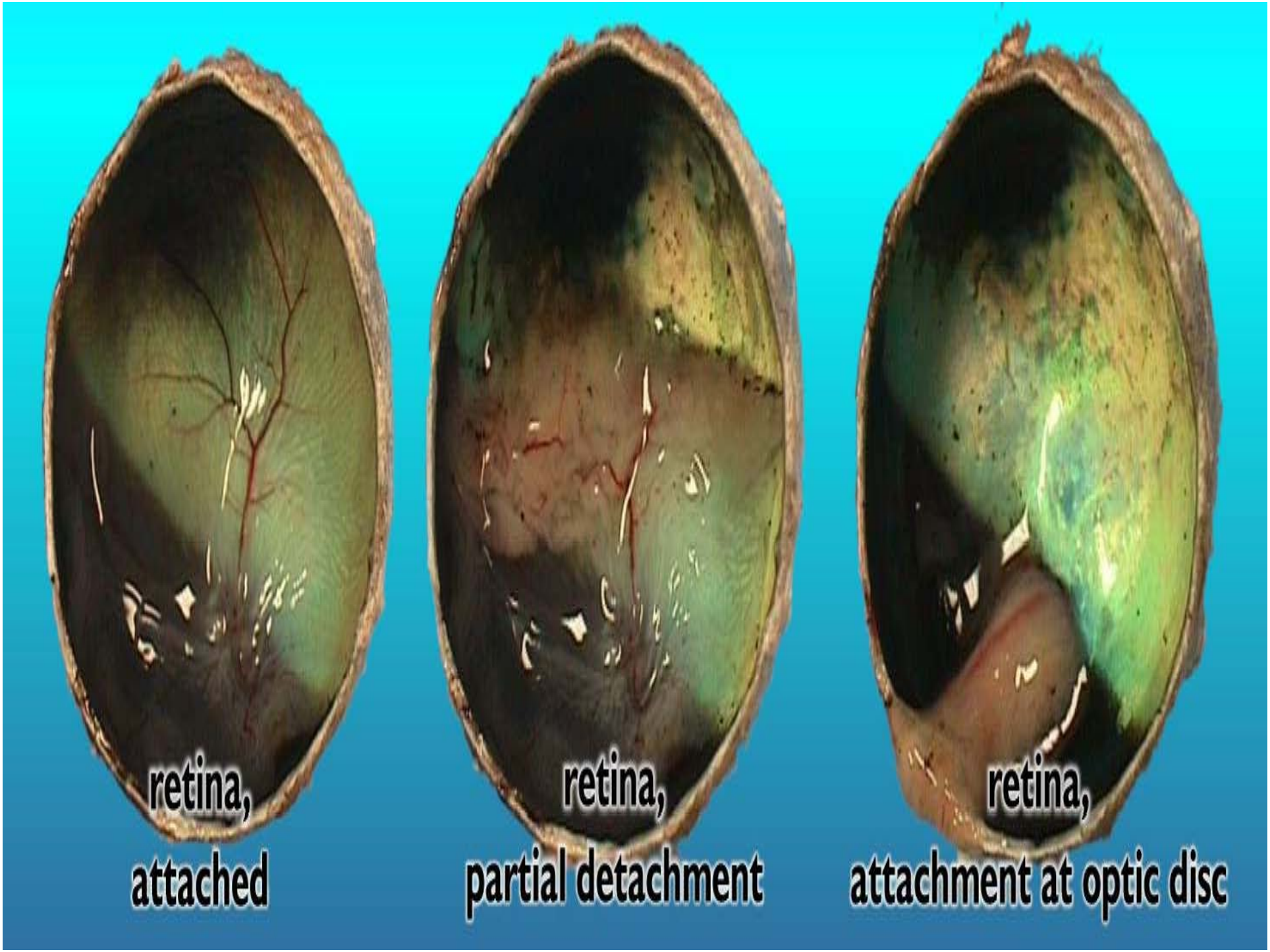

ciliary body
iris
pupil

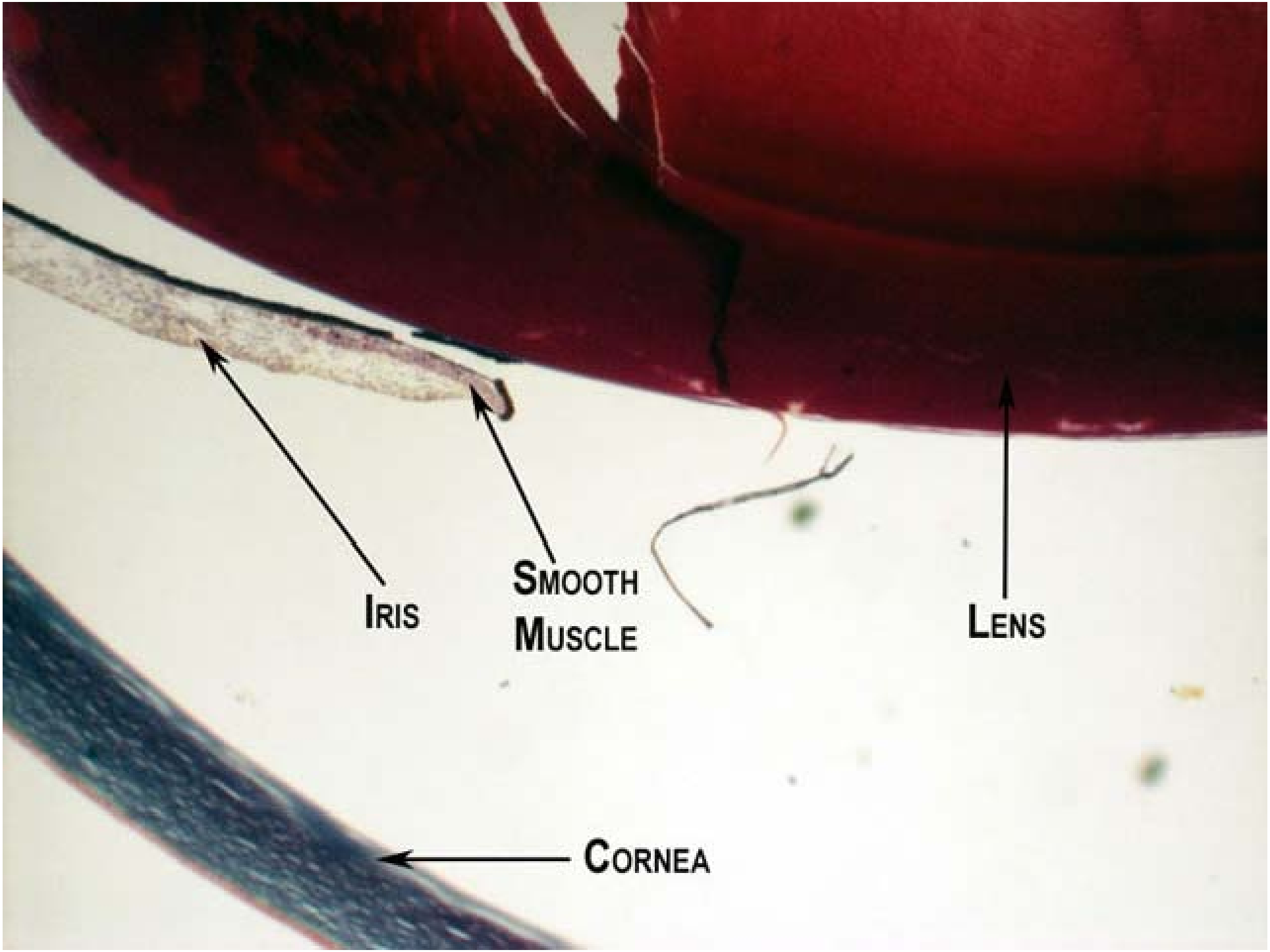

cornea
lens
vitreous humor

POSTERIOR CAVITY

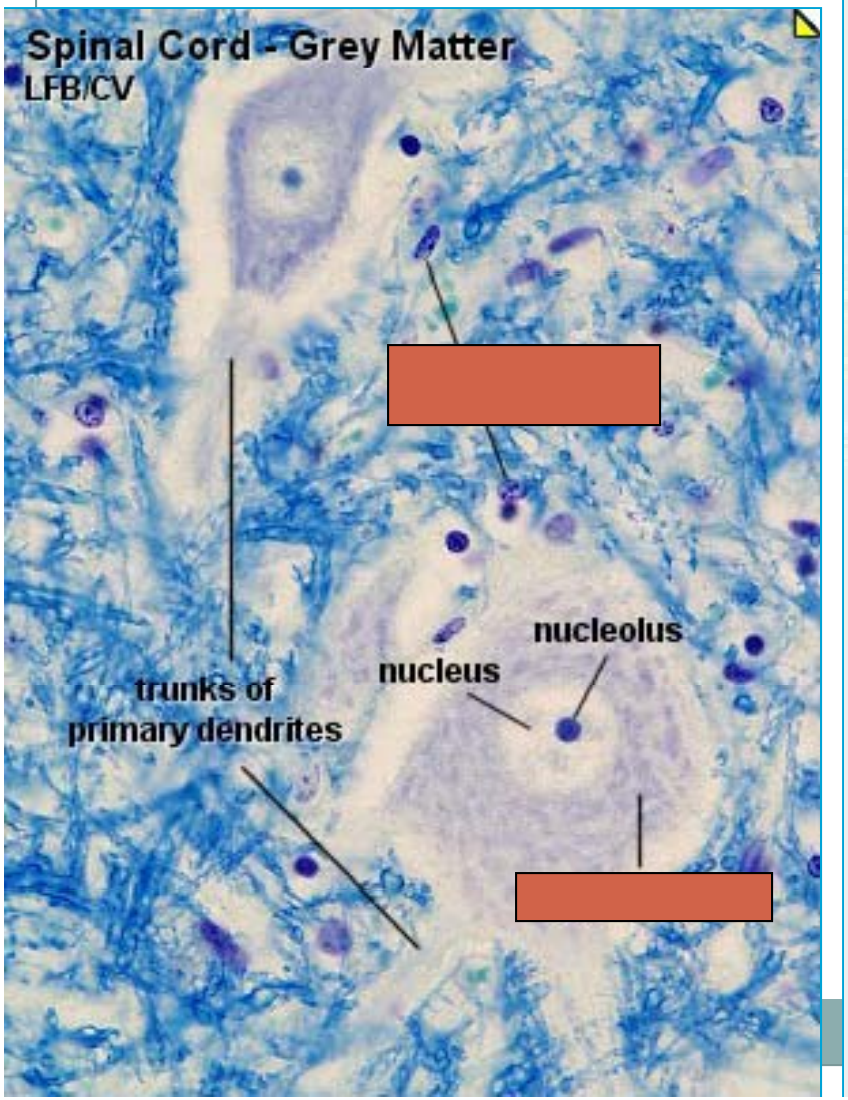


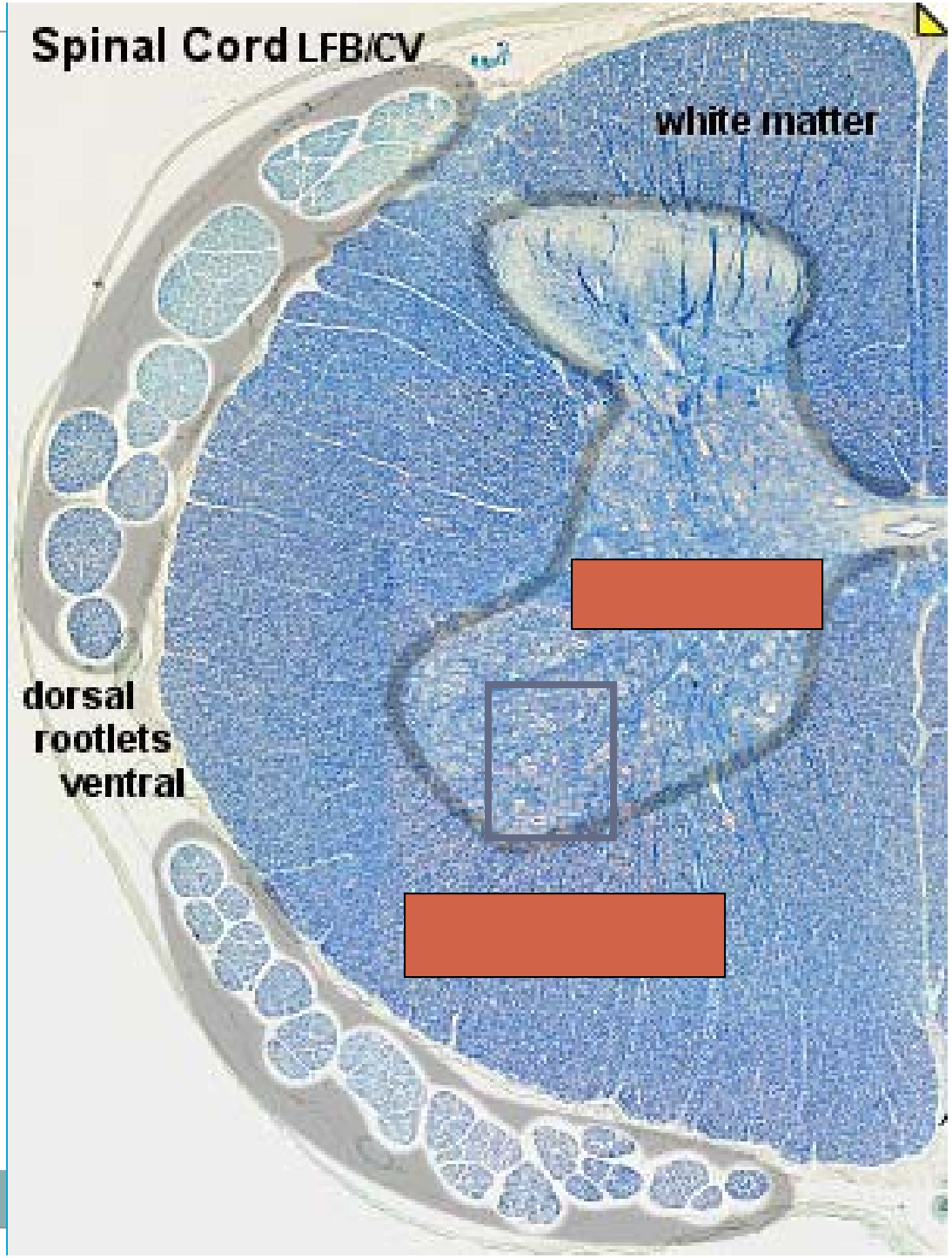
Tapetum lucidum


retina,
attached
retina,
partial detachment
retina,
attachment at optic disc

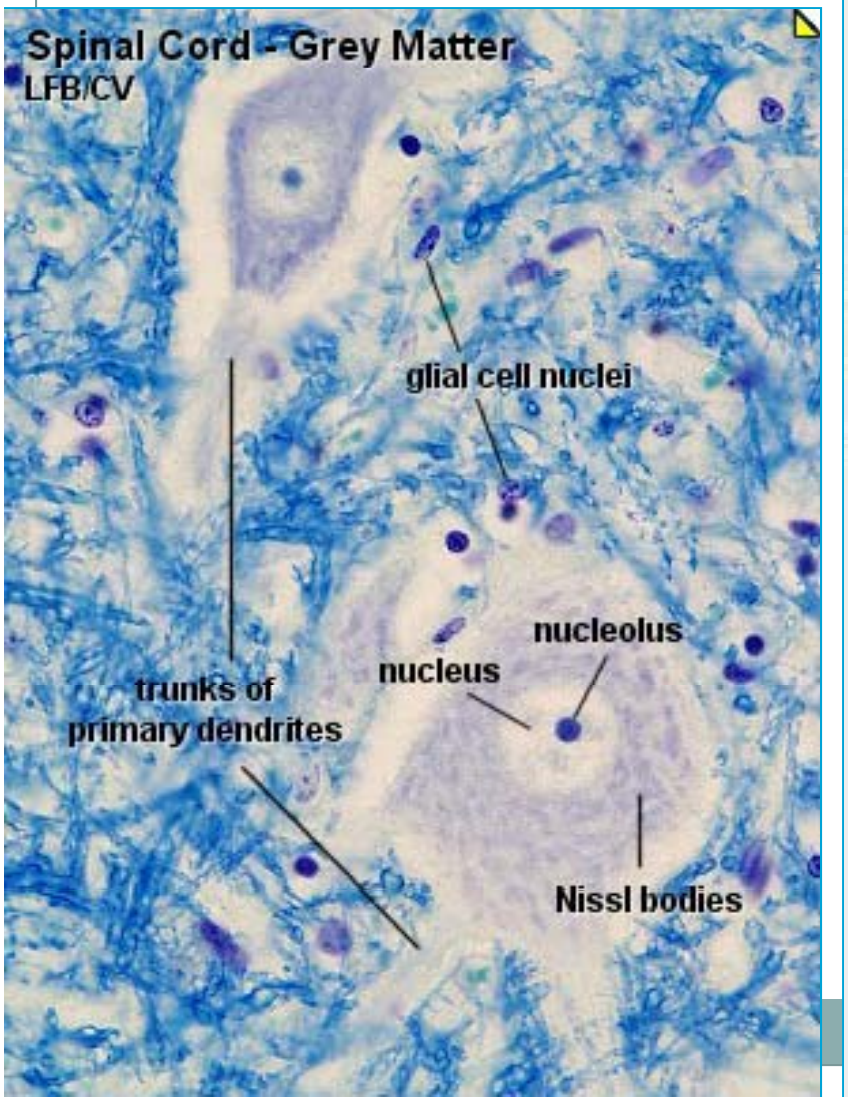

IRIS
SMOOTH
MUSCLE
LENS
CORNEA

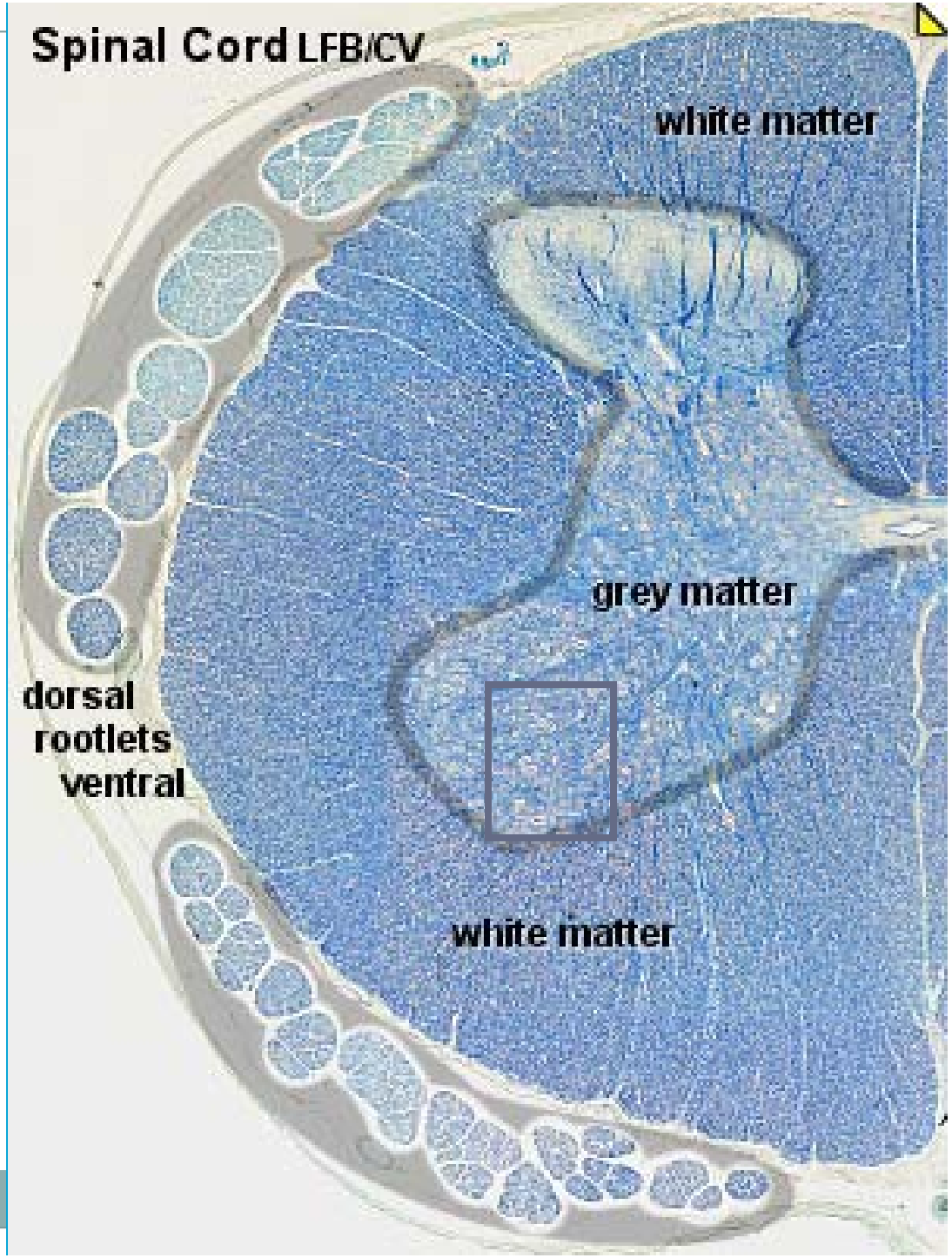
Neuronal Structure



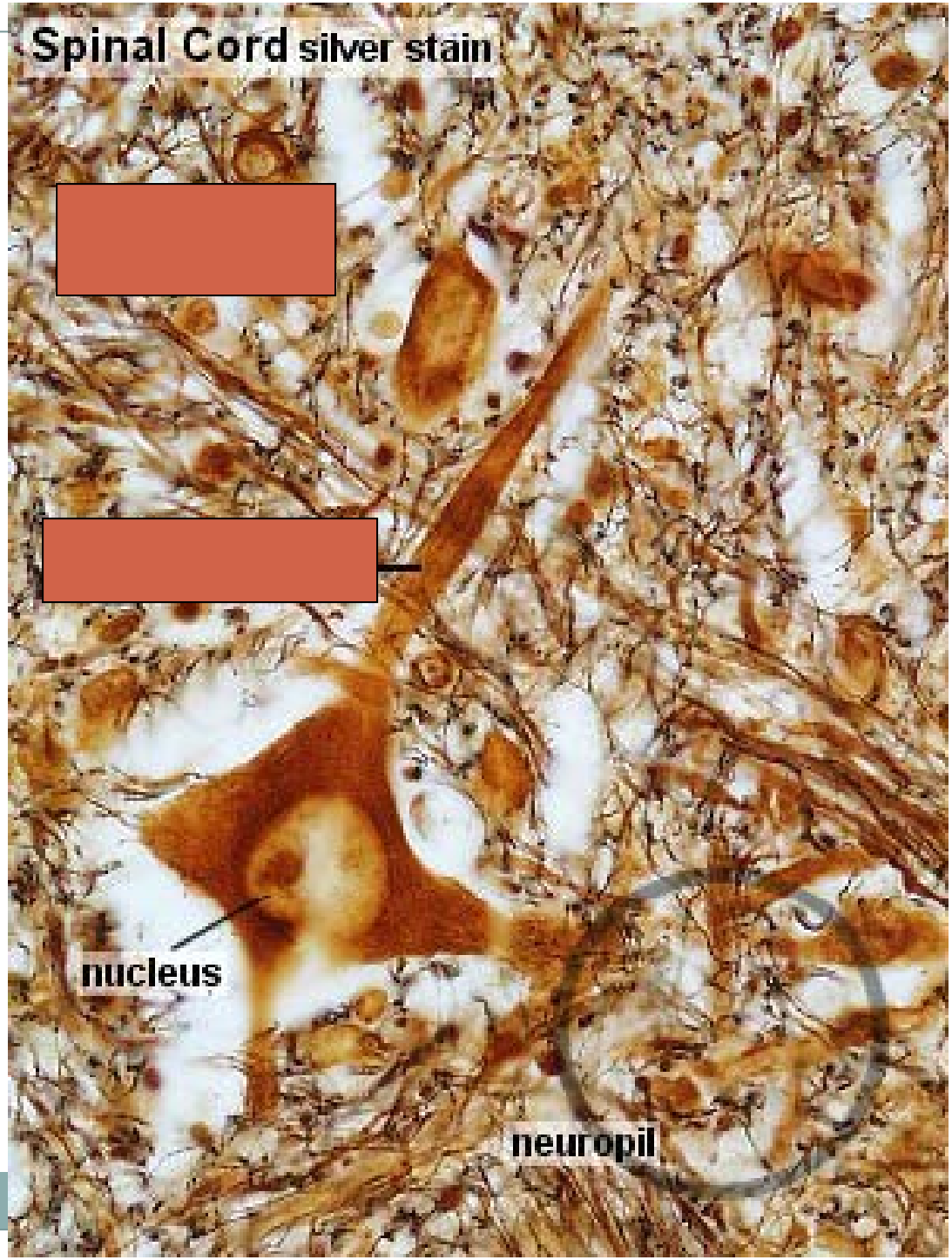


Neuronal Structure

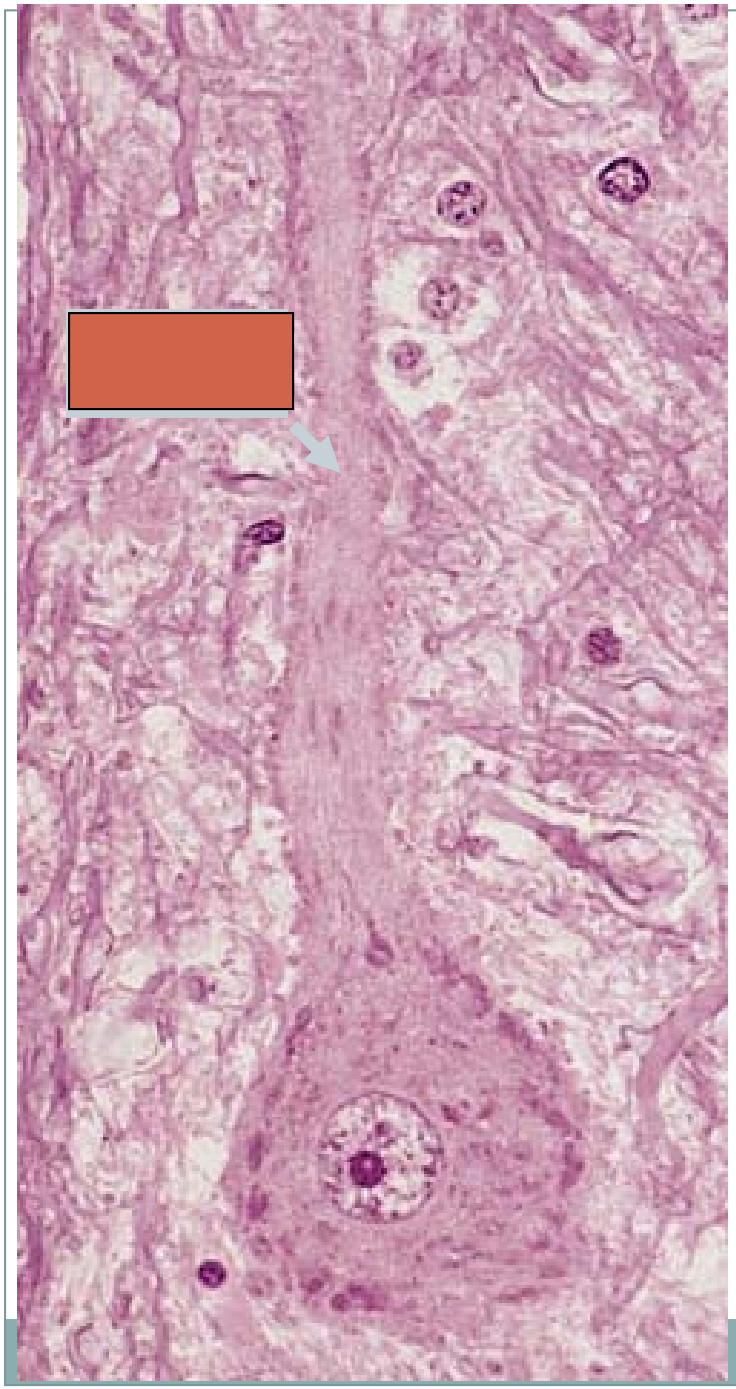




Specialized to receive & integrate stimuli



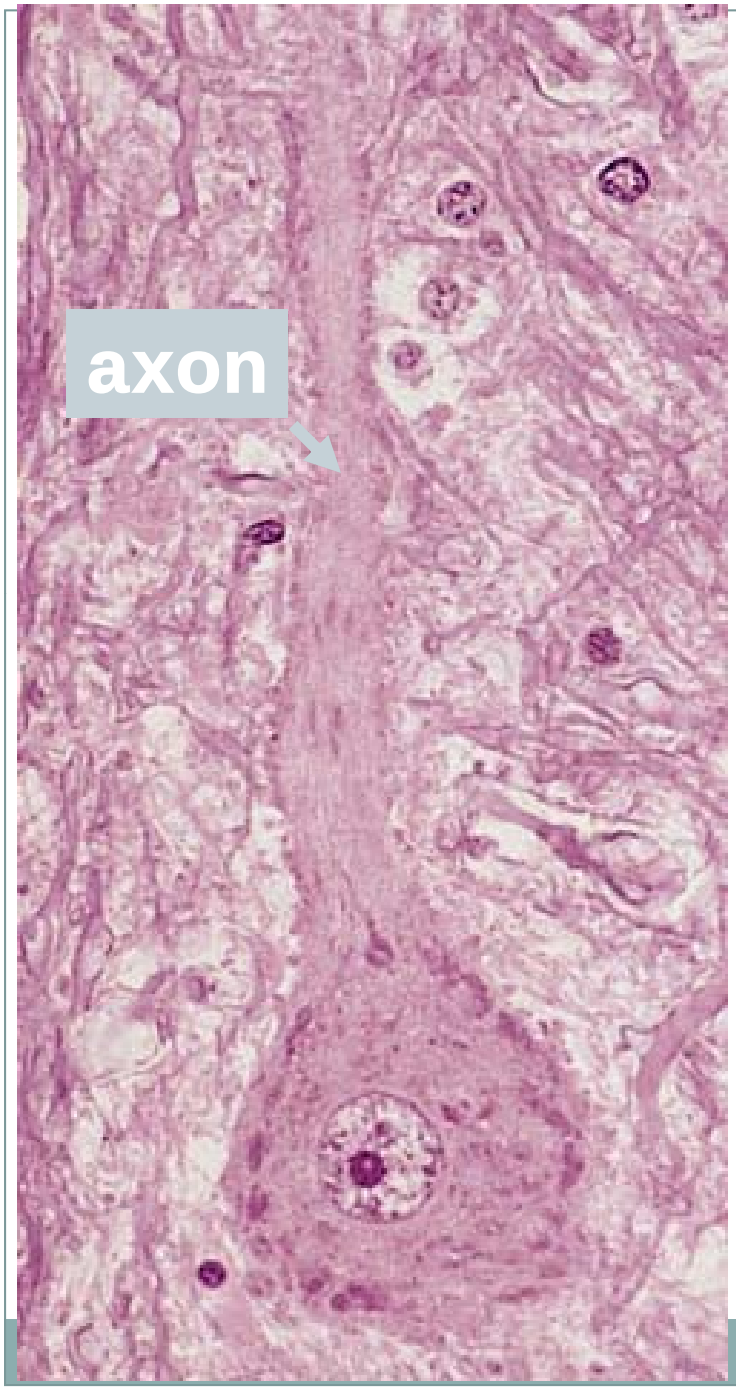
Specialized to receive & integrate stimuli



Single process

Specialized to conduct impulses to other cells. Speed of impulse conduction is related to axon diameter

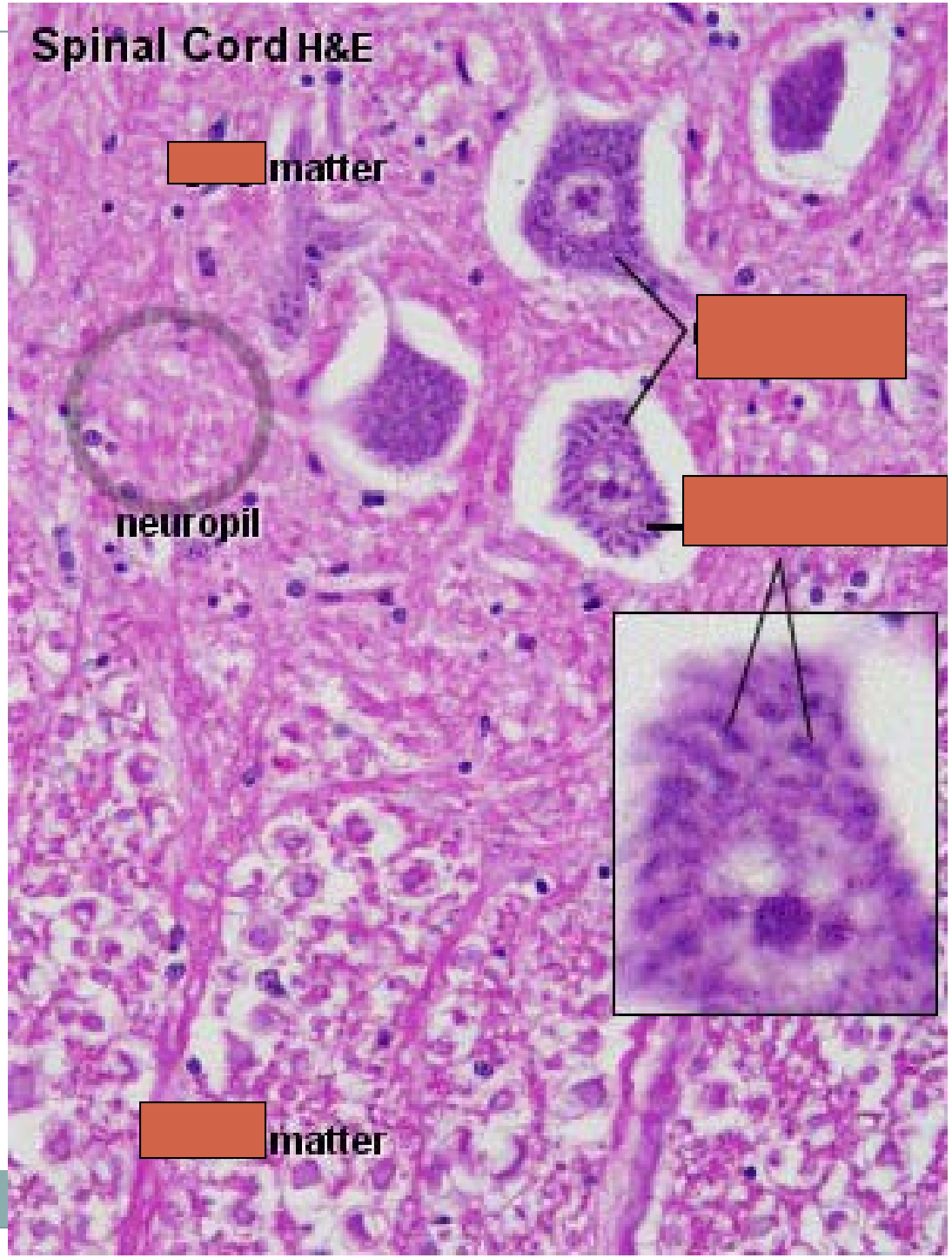
May receive excitatory or inhibitory stimuli from other neurons

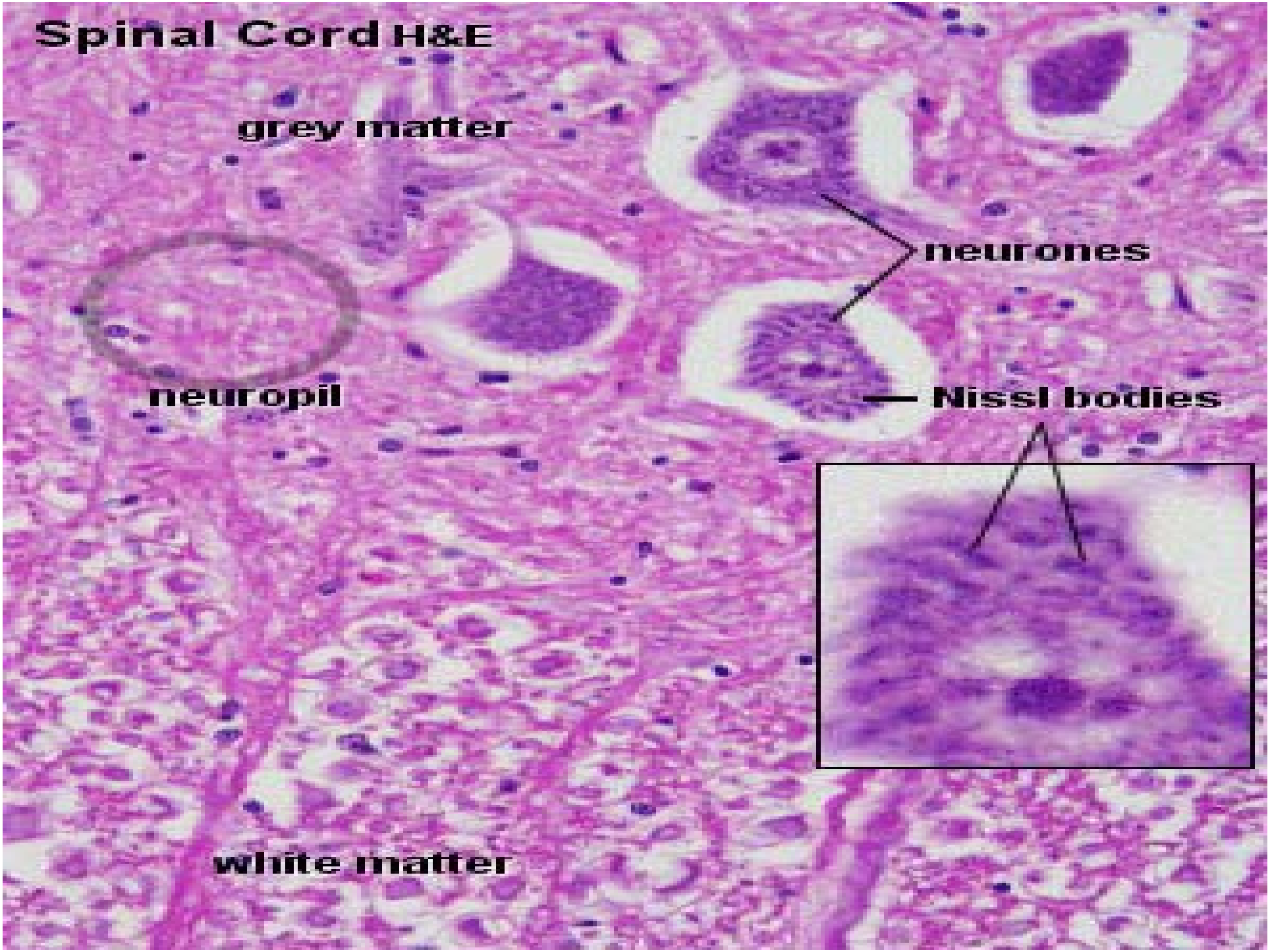


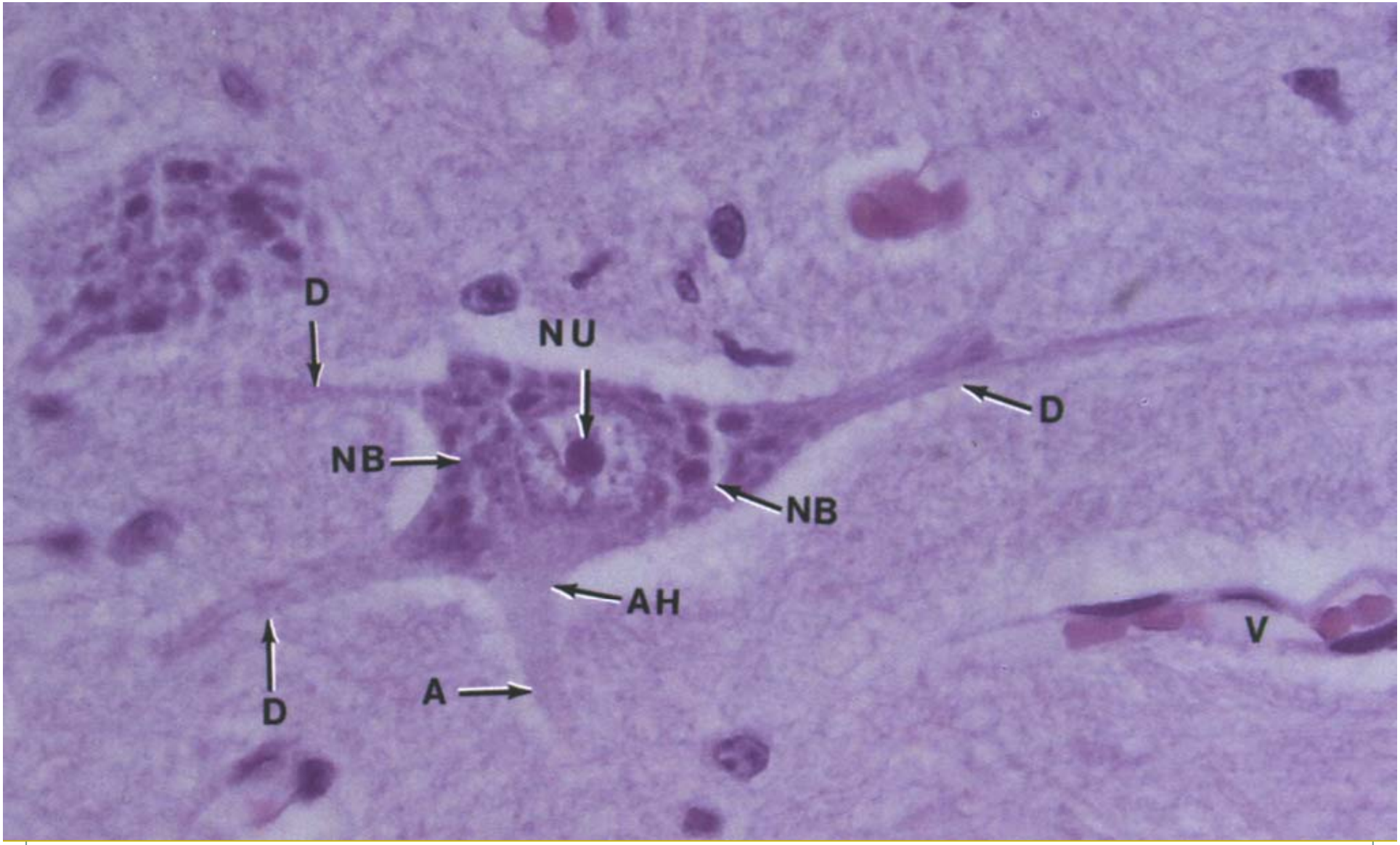
Single process

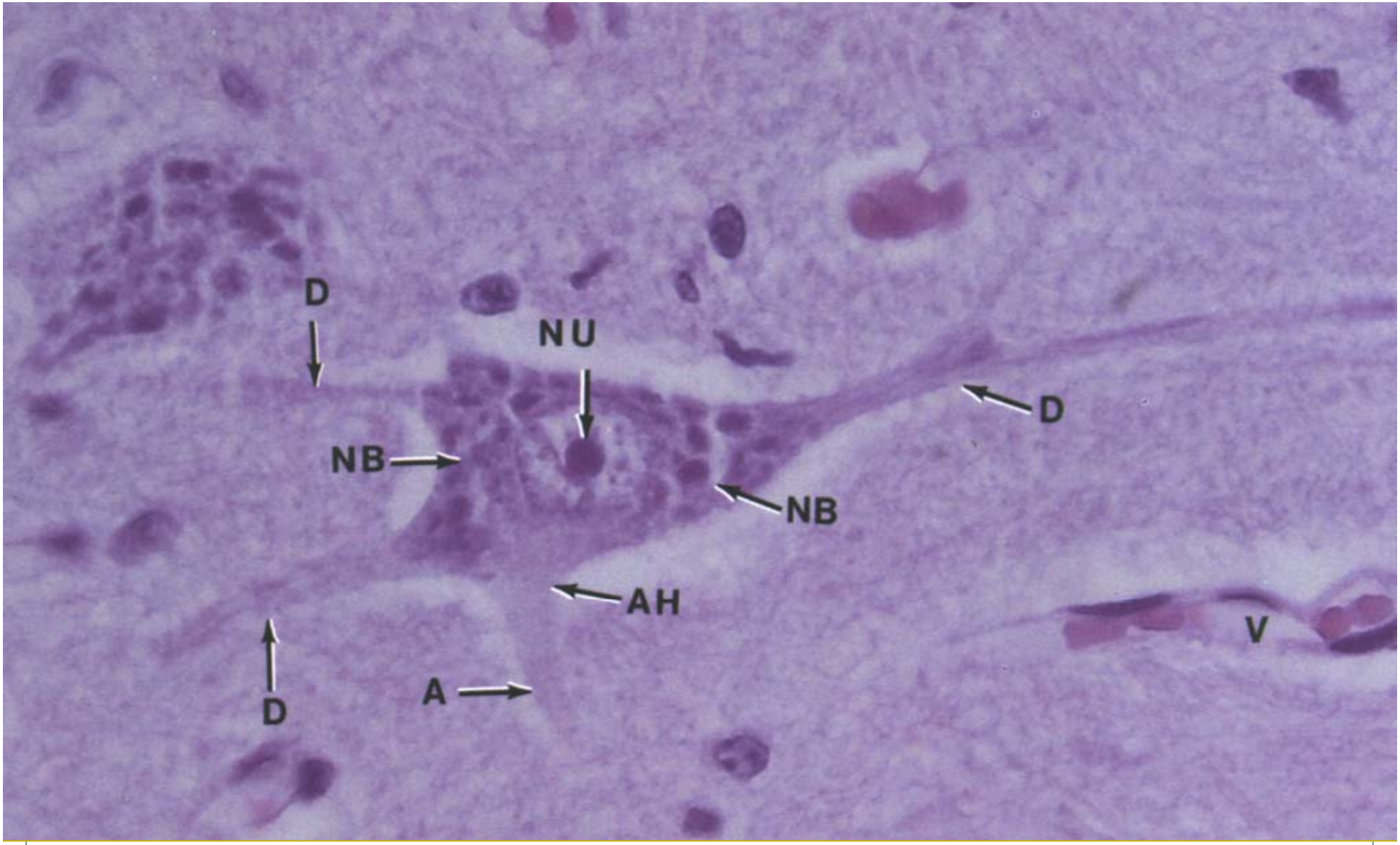
Specialized to conduct impulses to other cells. Speed of impulse conduction is related to axon diameter

May receive excitatory or inhibitory stimuli from other neurons

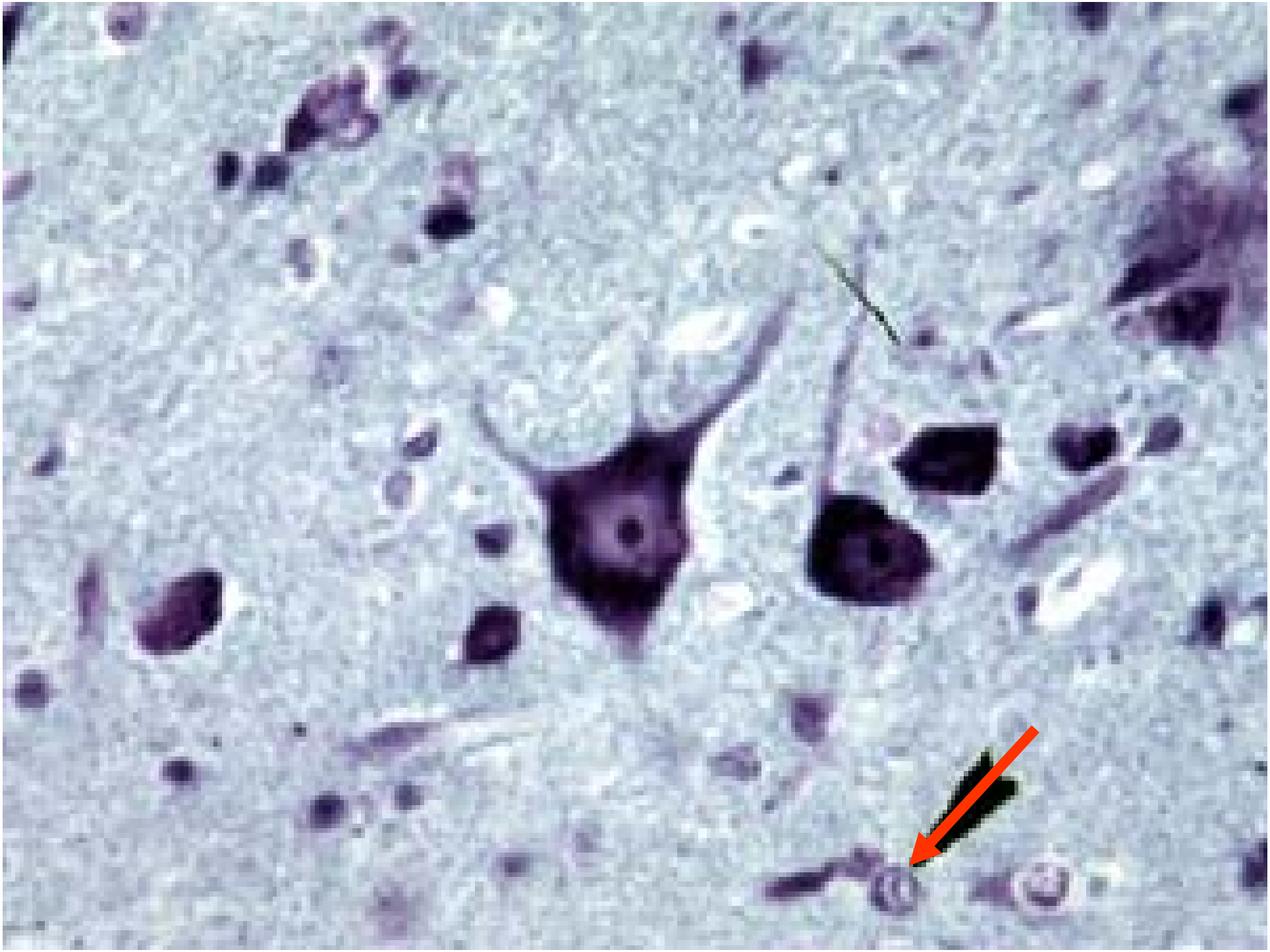

Spinal Cord H&E
matter
neuropil
matter

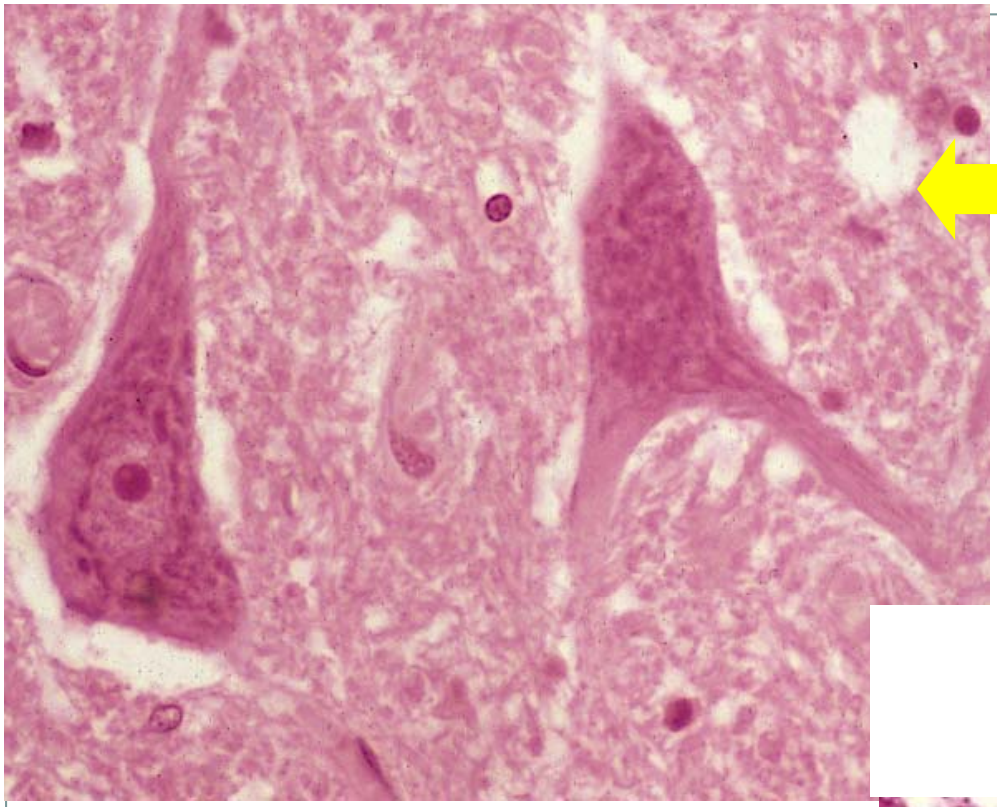

Spinal Cord H&E
grey matter
neurones
neuropil
Nissl bodies
white matter


D
NU
D
NB
NB
AH
V
D
A



A - axon, AH - axon hillock,
D - dendrite,
NB - Nissl bodies, NU - nucleolus



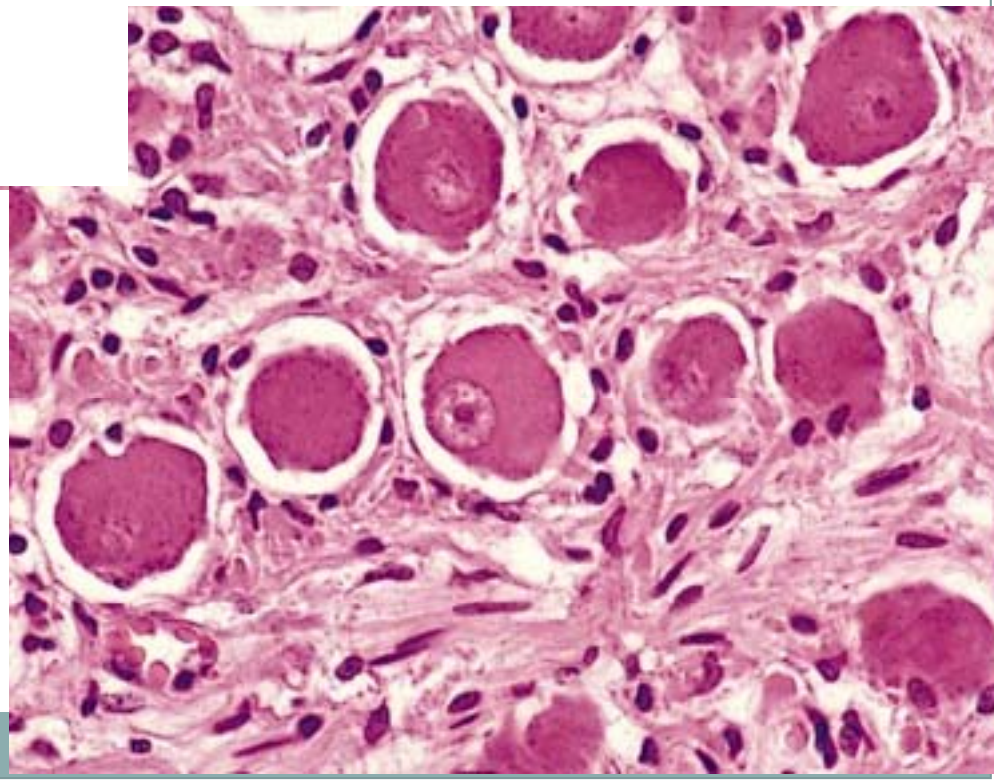


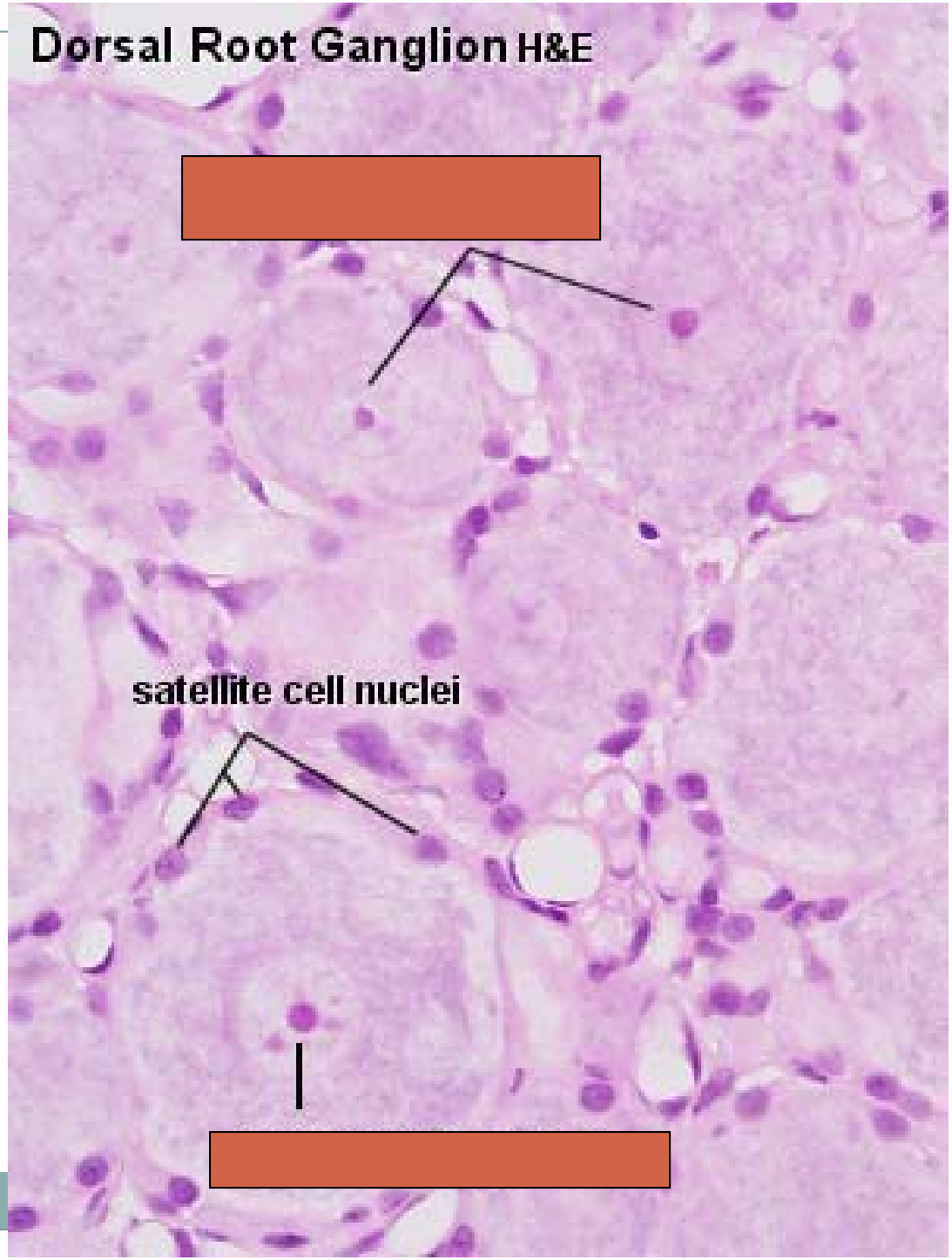
Neurons in CNS

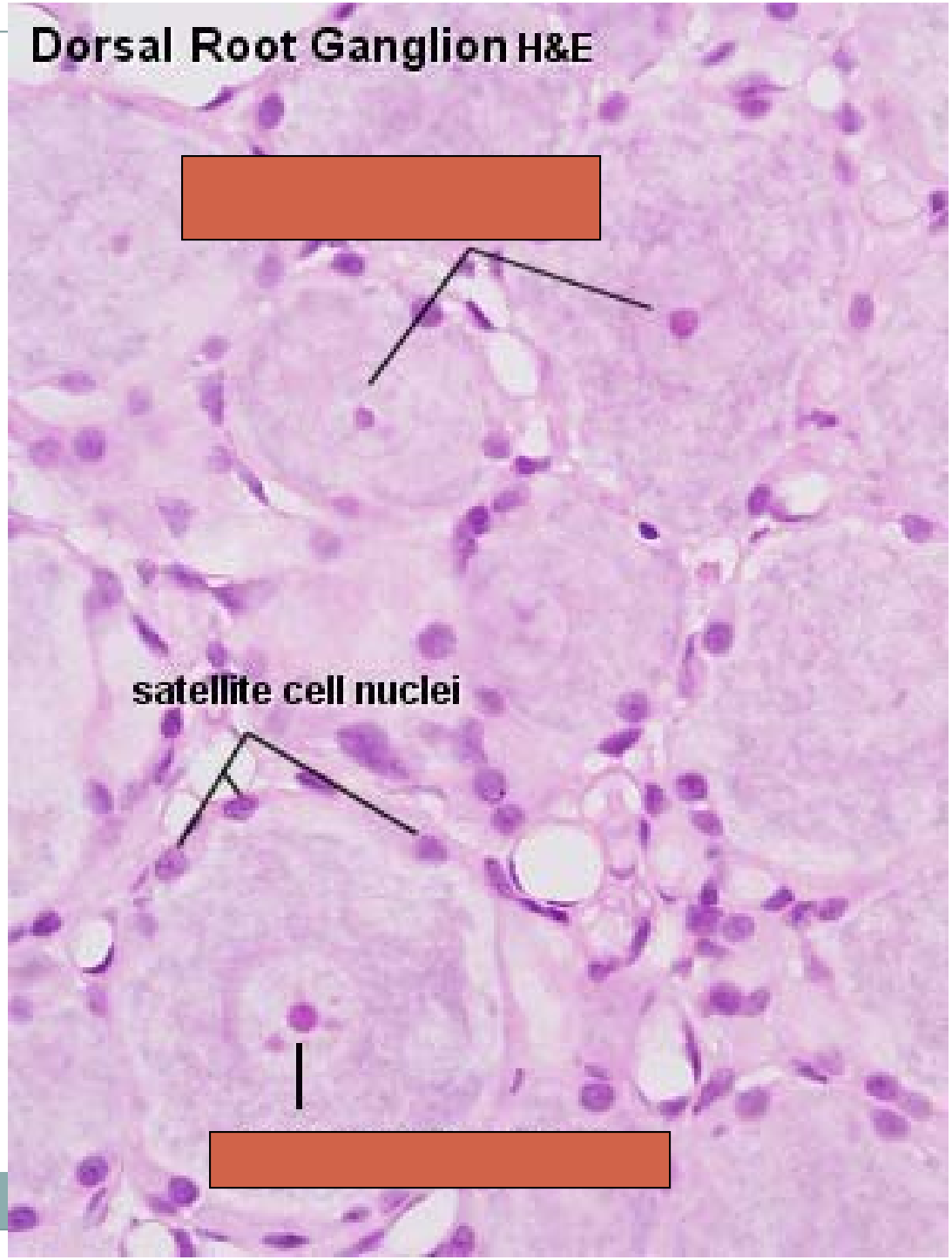
polygonal with many cell processes

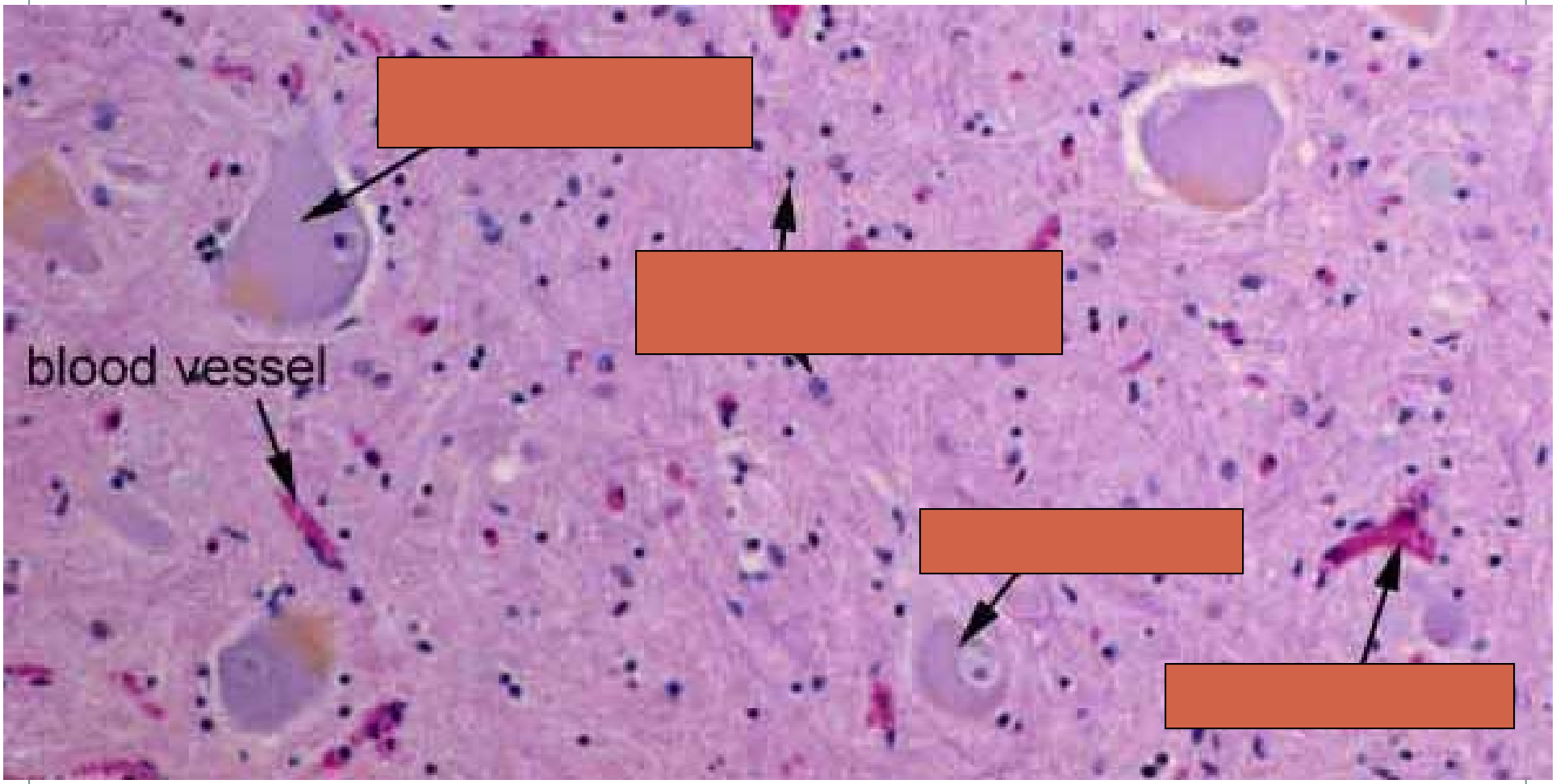
Neurons in PNS

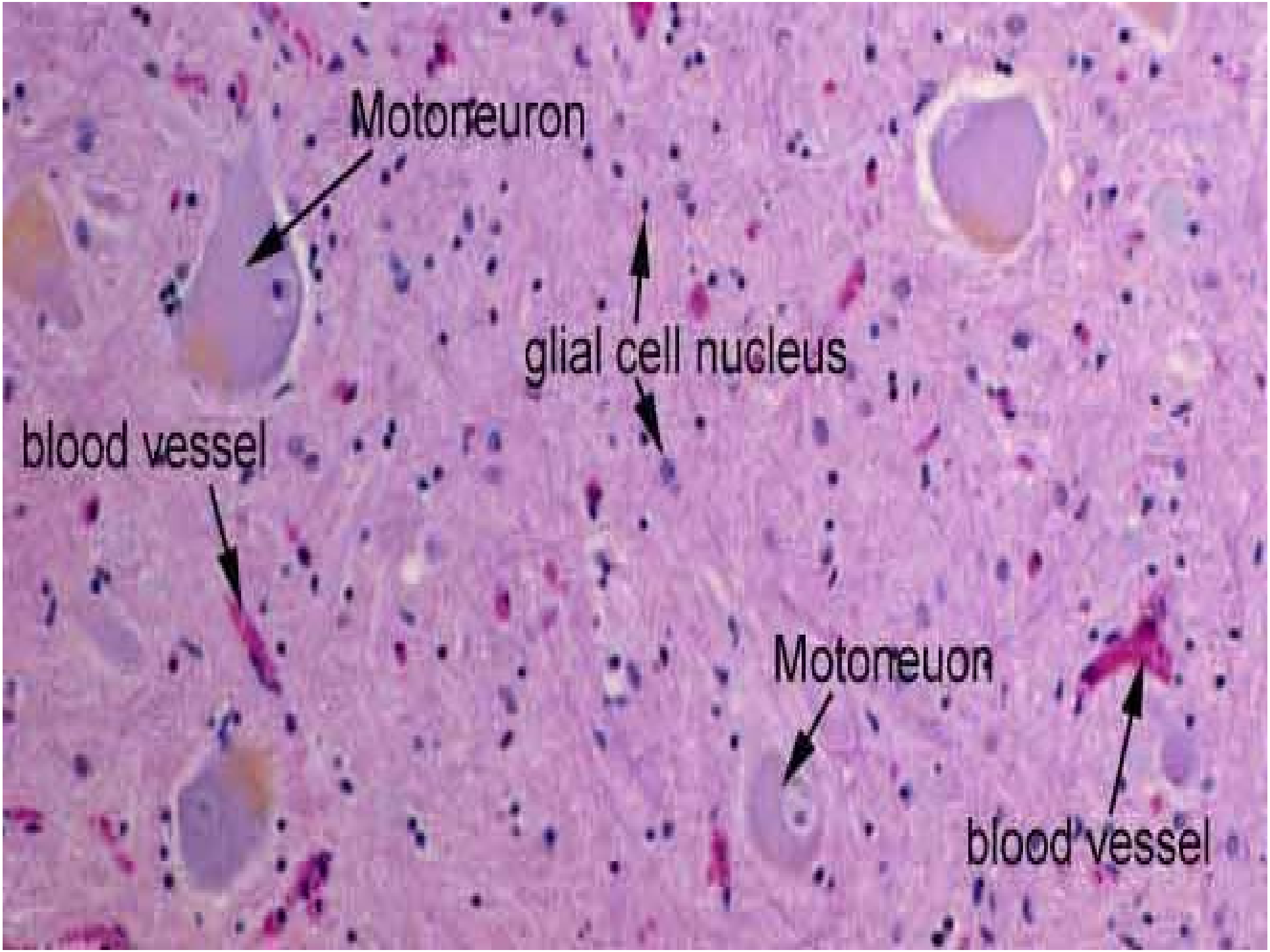
round, usually with single process

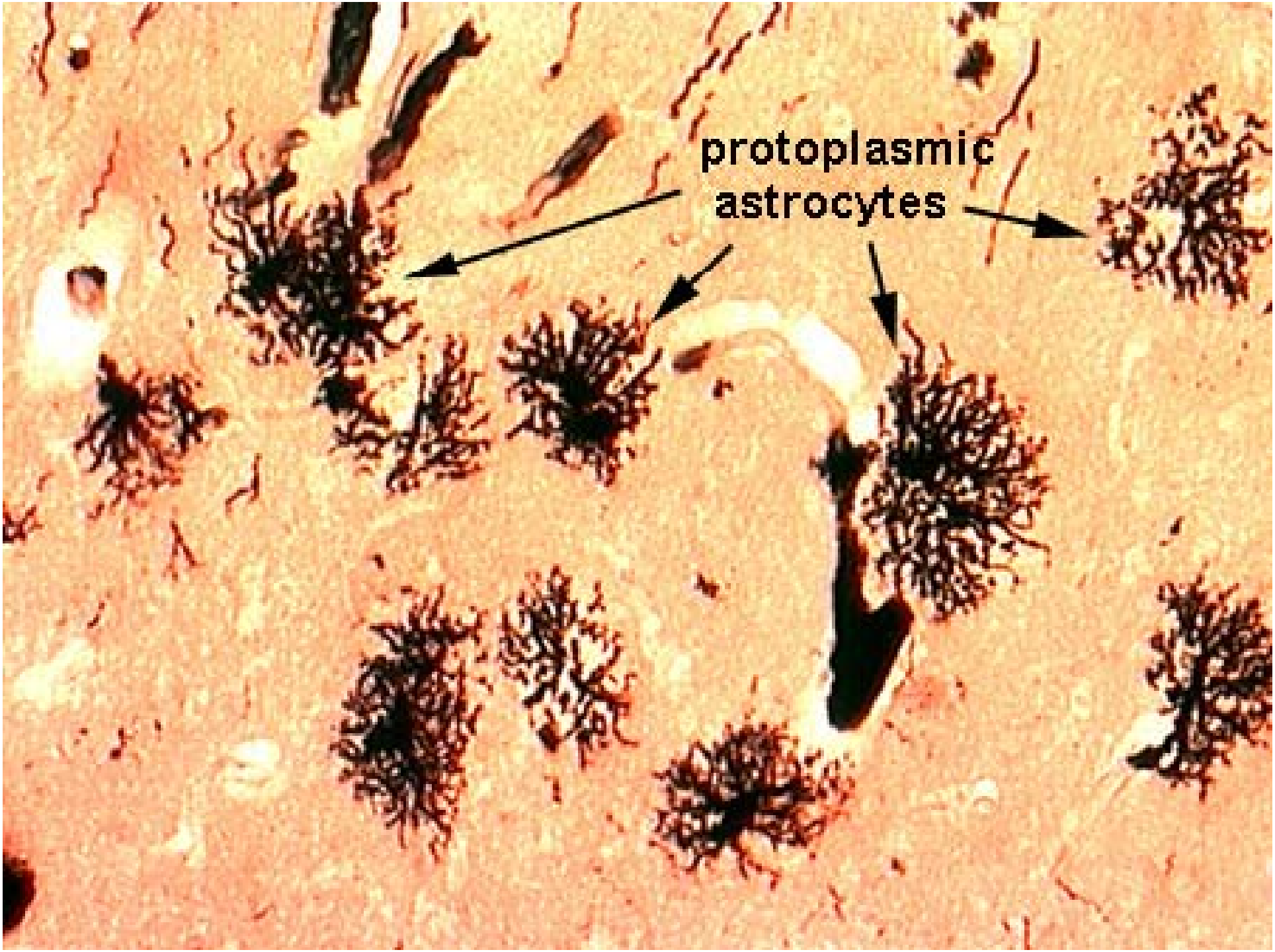


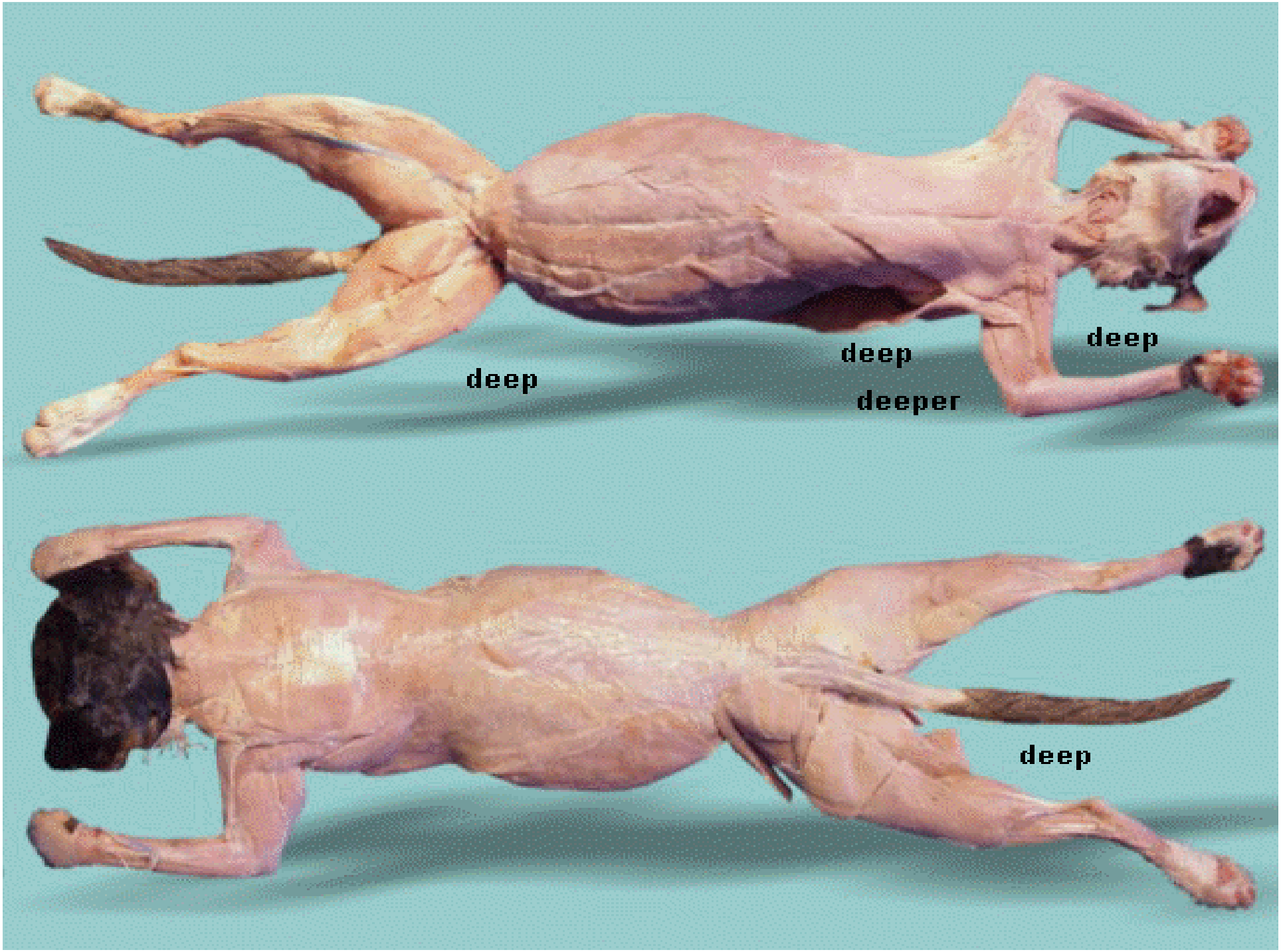

Dorsal Root Ganglion H&E
satellite cell nuclei


Dorsal Root Ganglion H&E
satellite cell nuclei


blood vessel


Motorneuron
glial cell nucleus
blood vessel
Motorneuron
blood vessel


protoplasmic
astrocytes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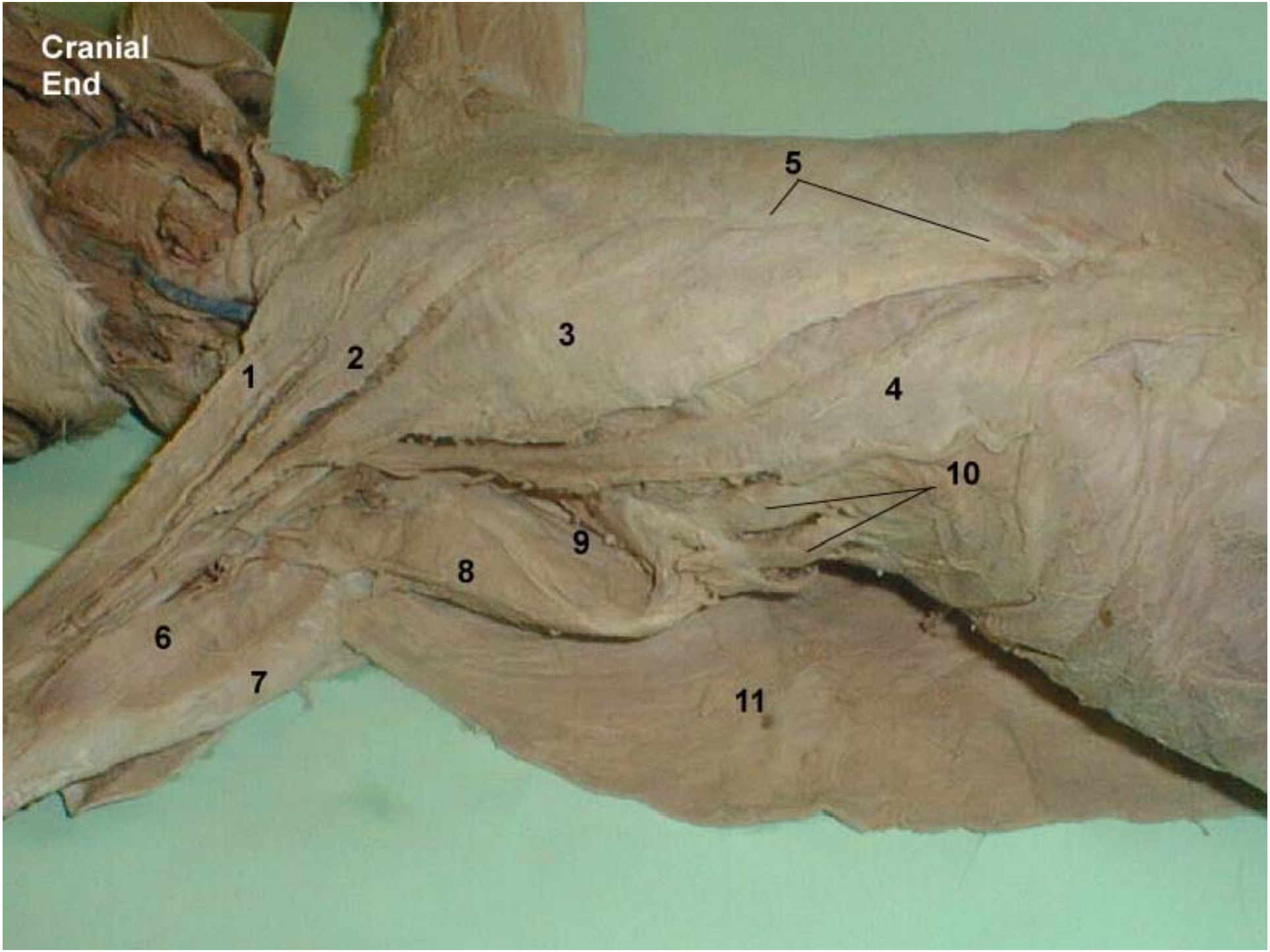
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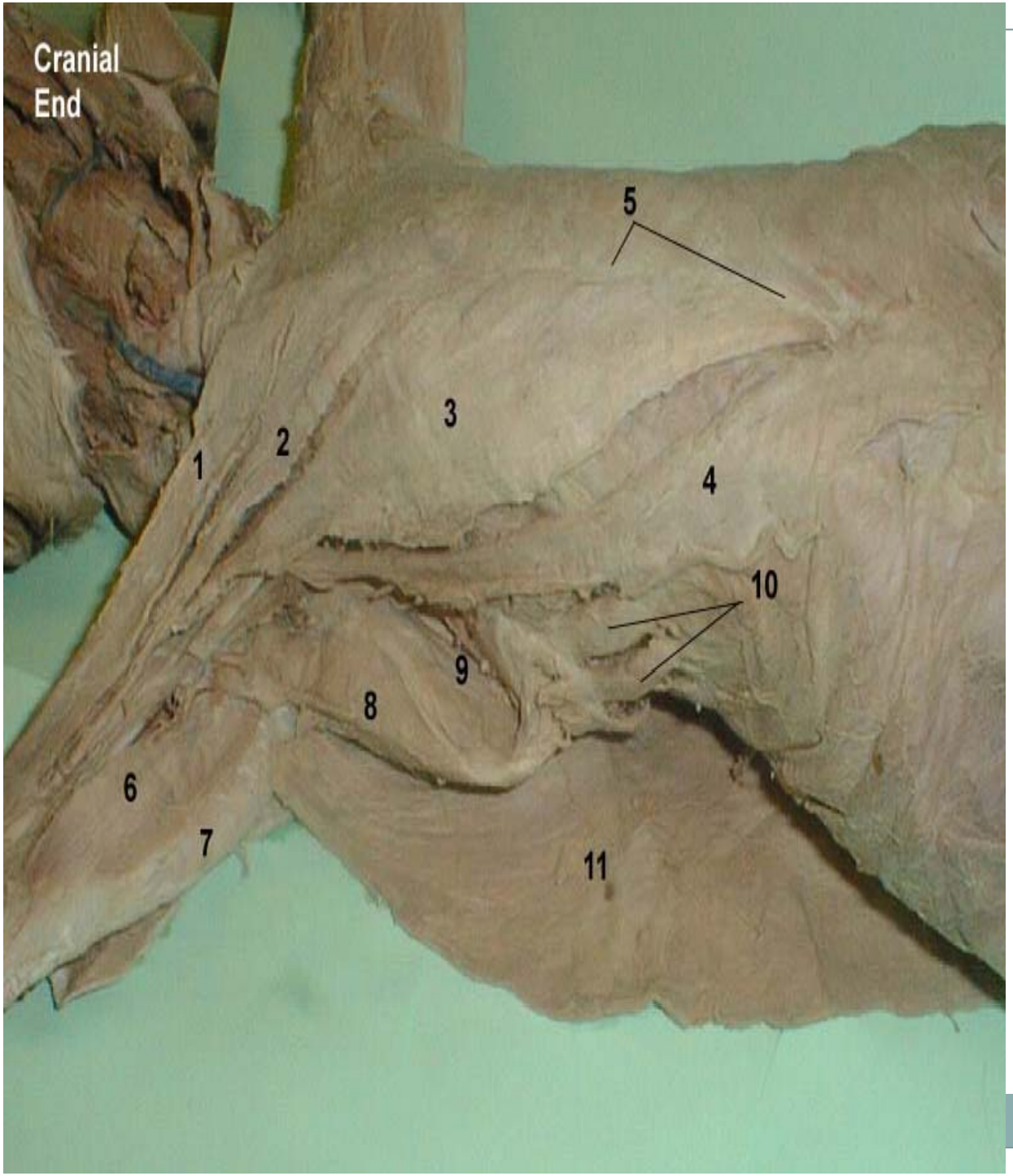
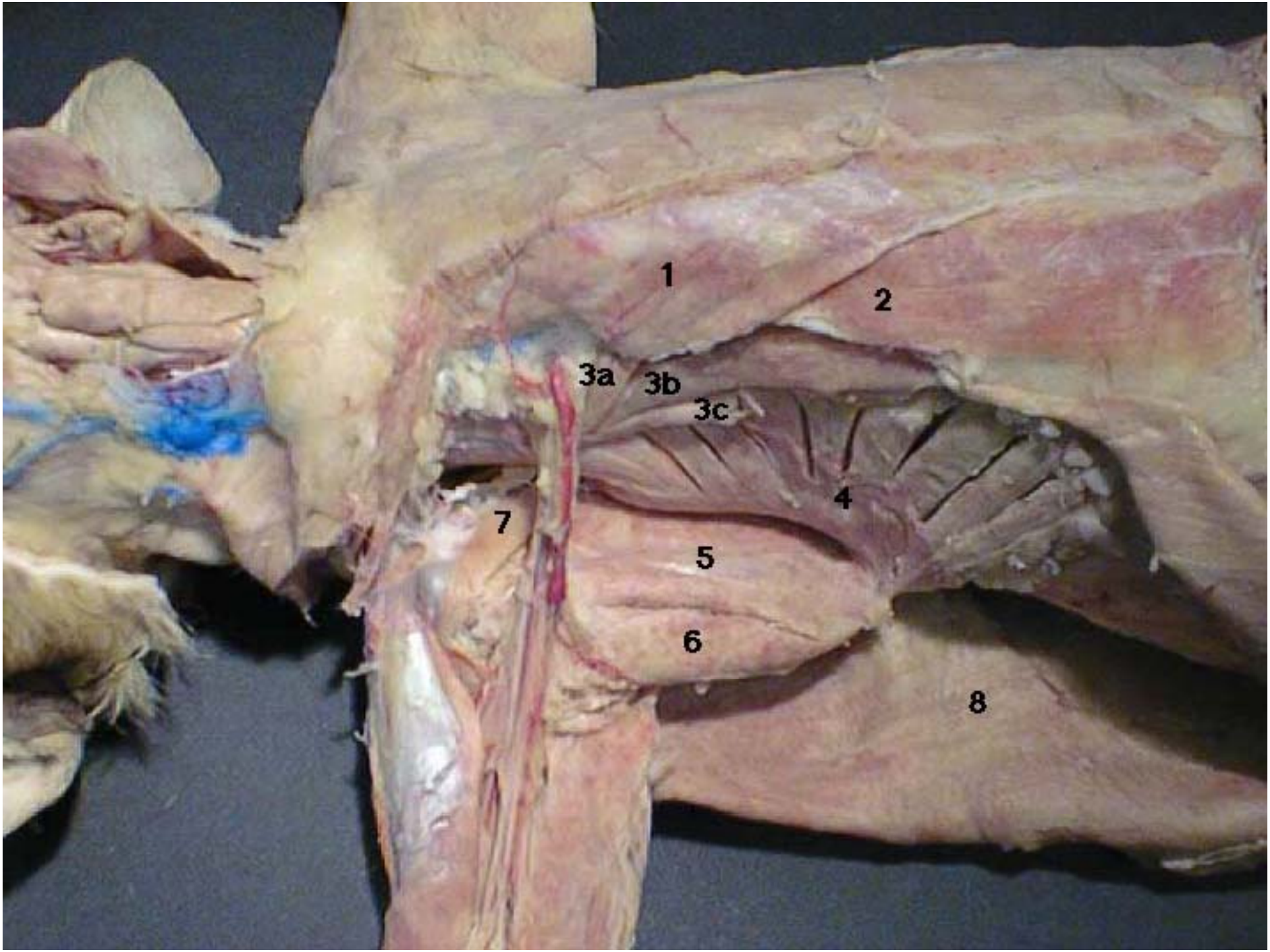


1. Pectoantebrachialis
2. Pectoralis Major
3. Pectoralis Minor
4. Xiphihumeralis
5. Linea Albea
6. Epitrochlearis
7. Triceps (Long Head)
8. Teres Major
9. Subscapularis
10. Serratus Ventralis
11. Latissimus Dorsi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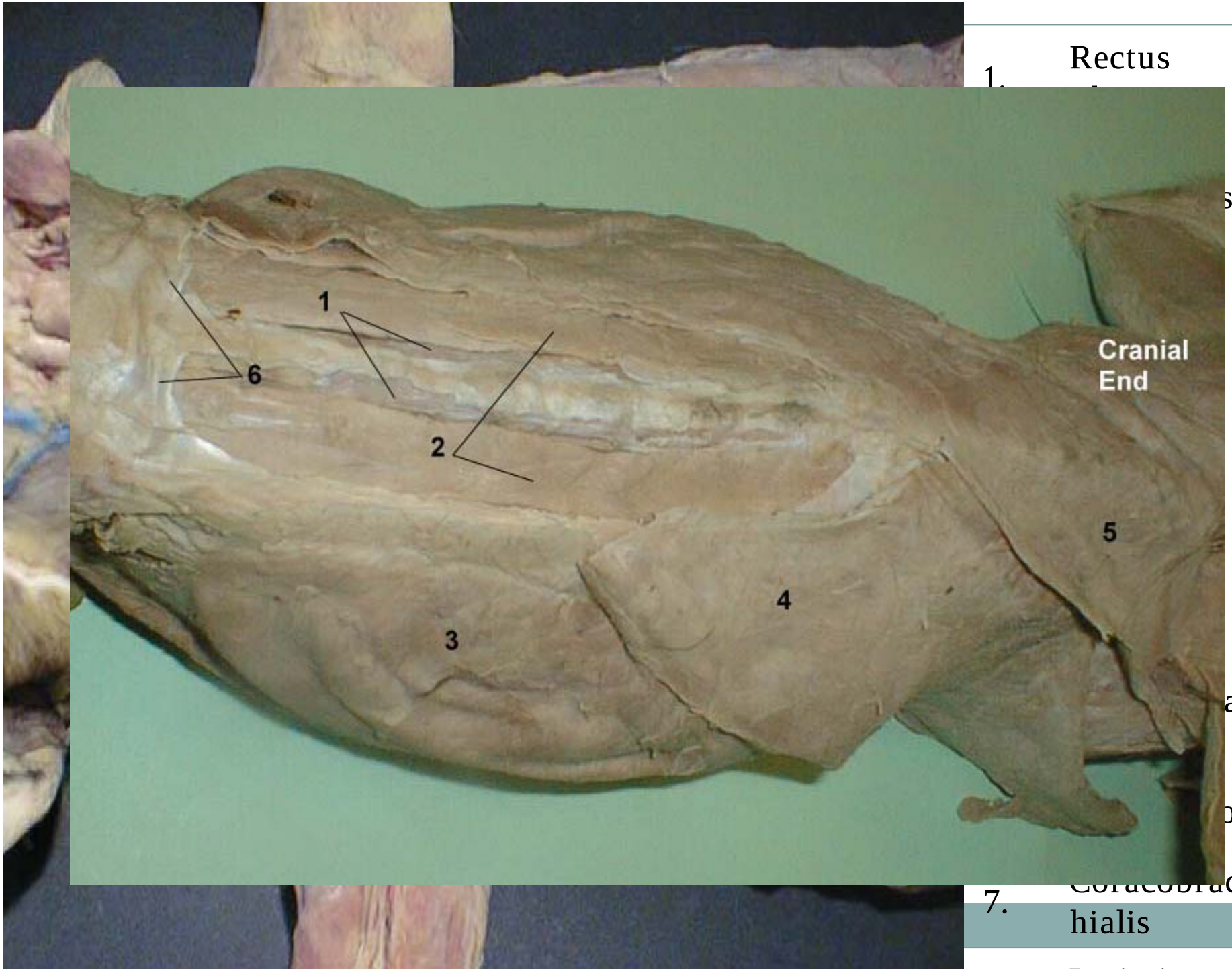

1. Rectus

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7. Coracobrac
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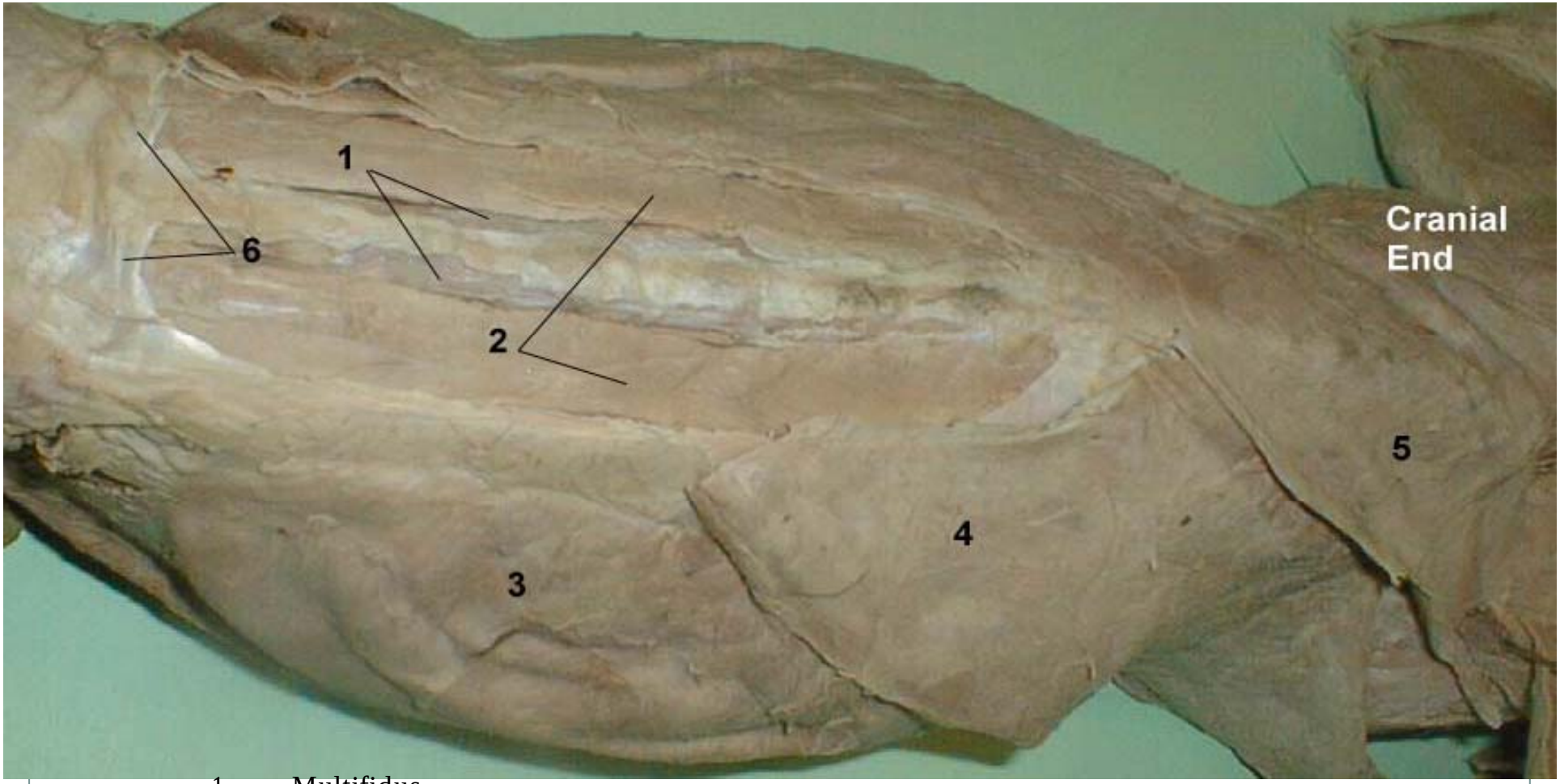
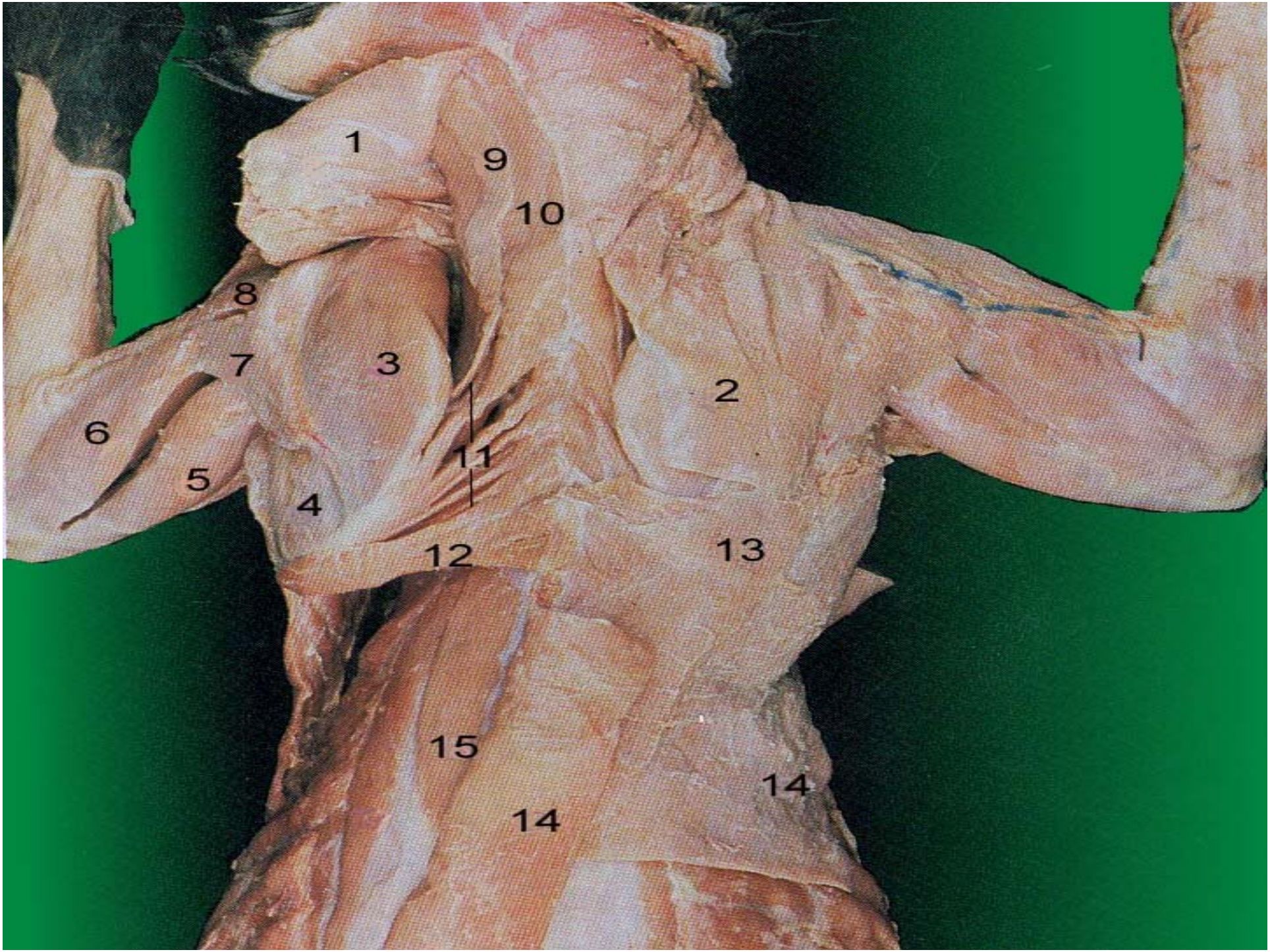


1. Multifidus
2. Erector Spinae
3. External Oblique
4. Latissimus Dorsi
5. Spinotrapezius
6. Thoracolumbar Fascia (Cut)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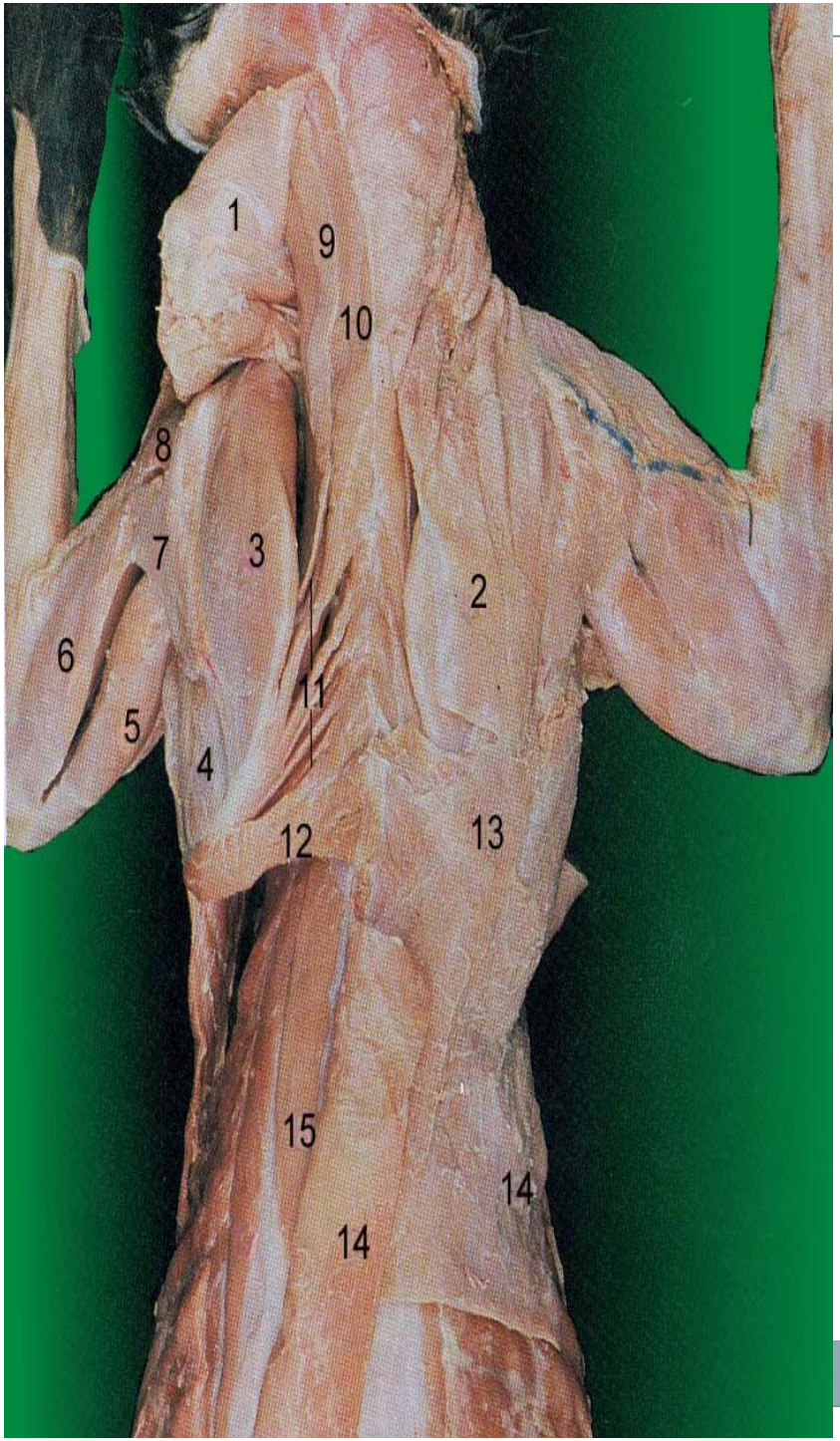
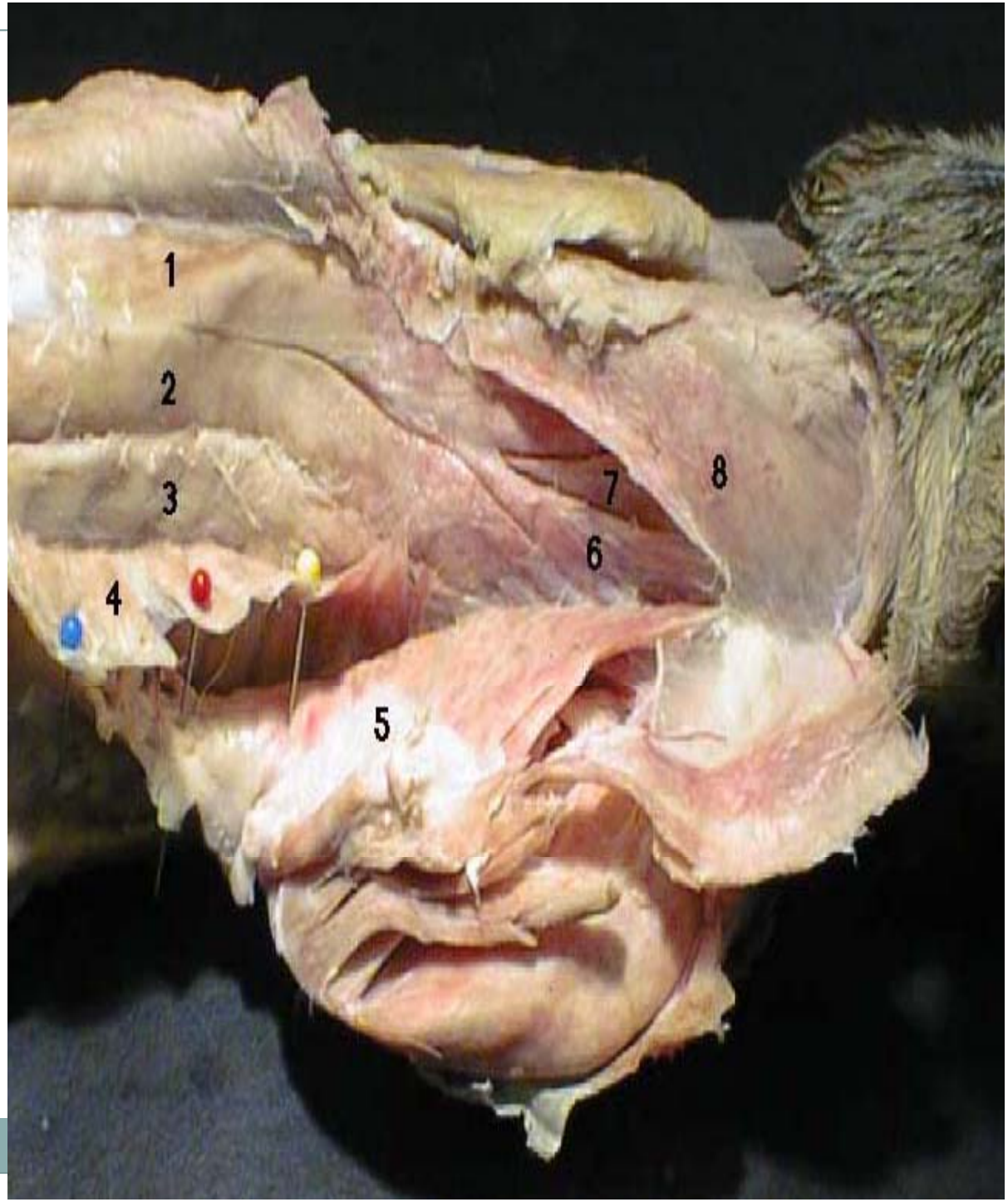
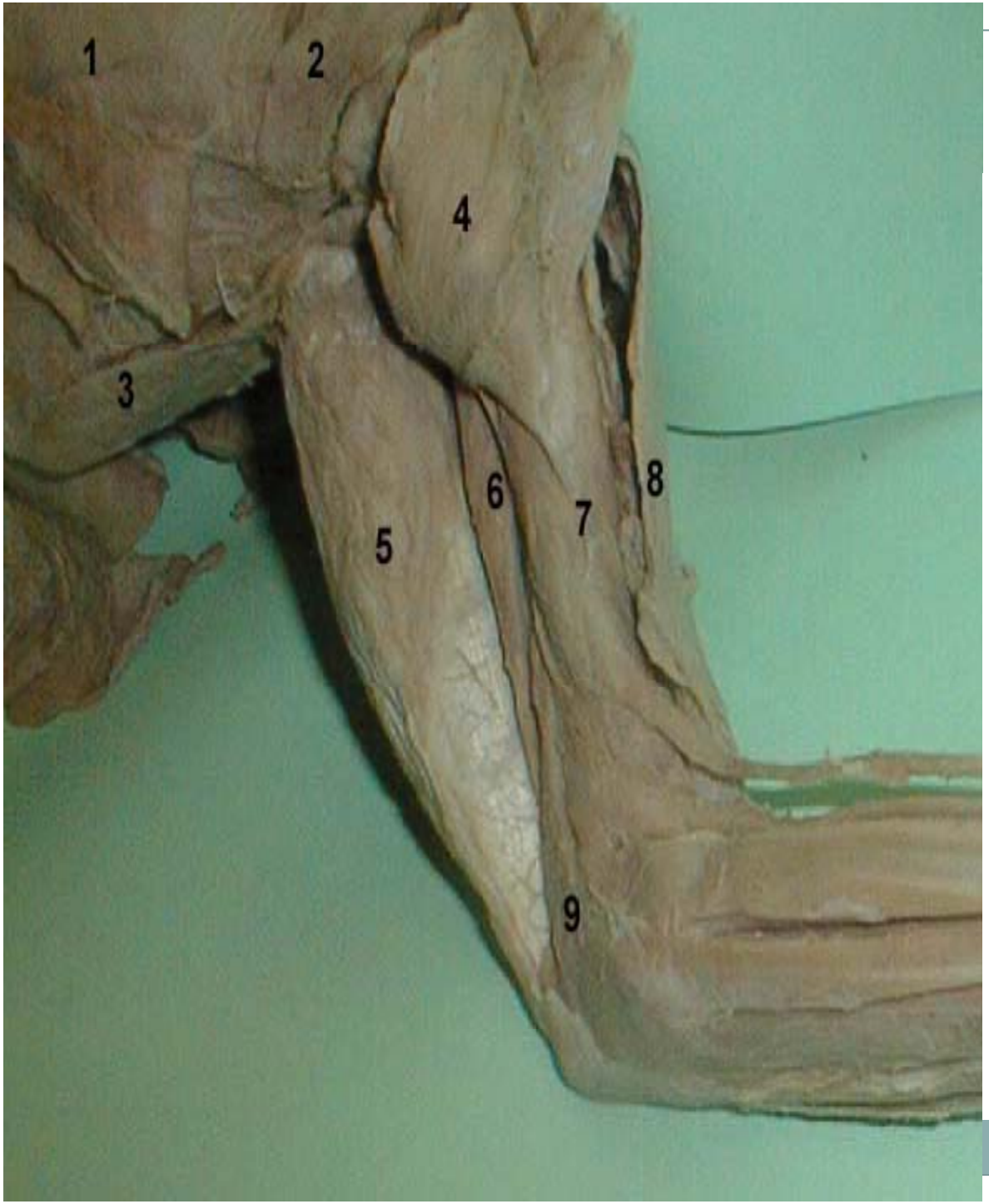


1. Clavotrapezius (Reflected)
2. Acromiotrapezius
3. Supraspinatus
4. Infraspinatus
5. Triceps (Long Head)
6. Triceps (Lateral Head)
7. Acromiodeltoid
8. Clavodeltoid
9. Rhomboideus Capitis
10. Splenius Capitis
11. Rhomboideus Minor
12. Rhomboideus Major
13. Spinotrapezius
14. Latissimus Dorsi
15. Longissimus

1. Spinalis Dorsi
2. Longissimus (Thoracis)
3. Iliocostalis
4. Serratus Dorsalis (Reflected)
5. Serratus Ventralis
6. Longissimus (Cervicus)
7. Longissimus (Capitis)
8. Splenius

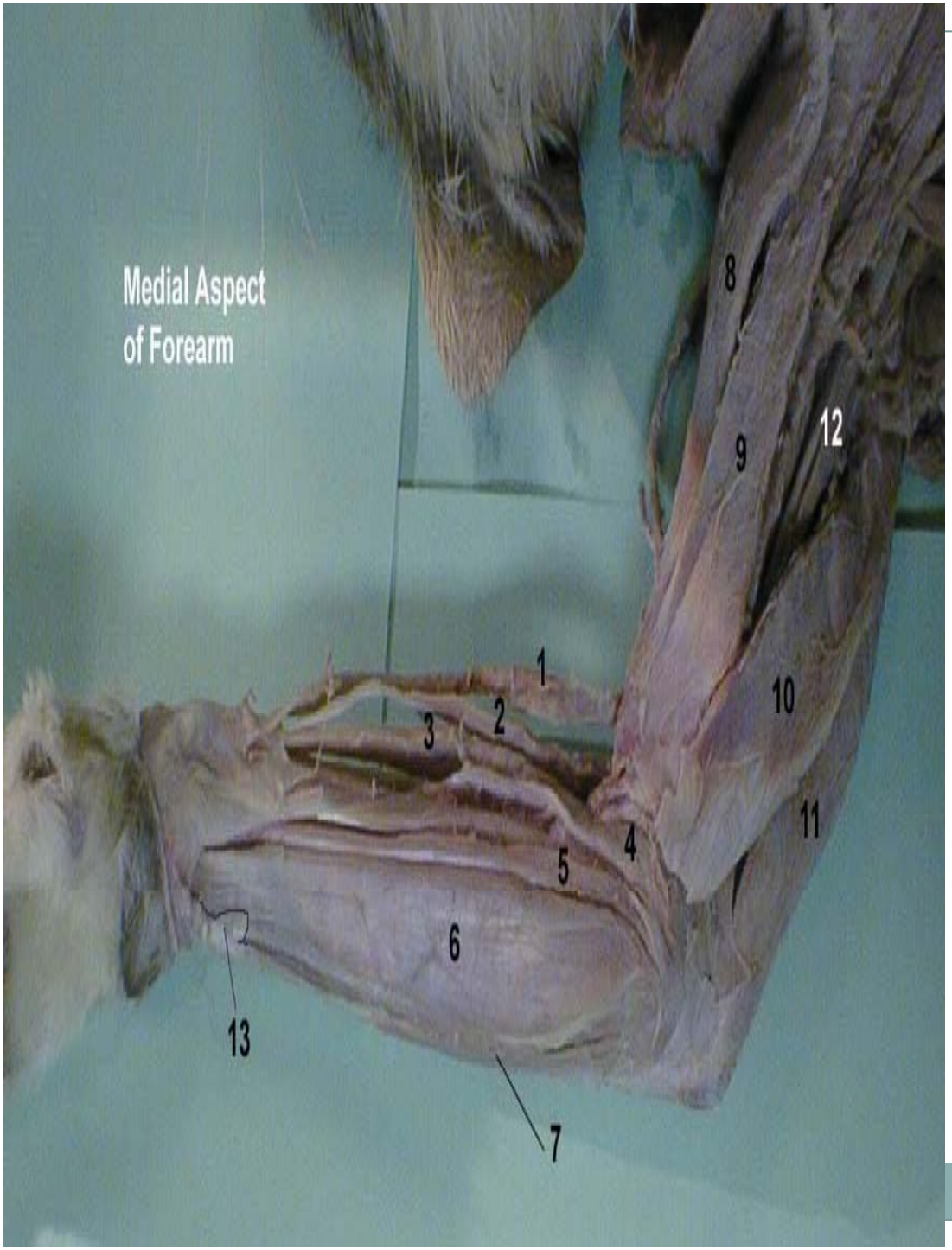




1. Acromiotrapezius
2. Levator Scapulae Ventralis
3. Teres Major
4. Triceps Lateral Head (Reflected)
5. Triceps Long Head
6. Triceps Medial Head
7. Brachialis
8. Clavodeltoid
9. Anconeus

1. Clavodeltoid
2. Biceps Brachii
3. Triceps Medial Head
4. Epitrochlearis
5. Triceps Long Head

1. Long Head of Triceps
2. Lateral Head of Triceps
3. Brachialis
4. Brachioradialis
5. Extensor Carpi Radialis Longus
6. Extensor Carpi Radialis Brevis
7. Extensor Digitorum Communis
8. Extensor Digitorum Lateralis
9. Extensor Carpi Ulnaris
10. Flexor Carpi Ulnaris
11. Anconeus



1. Brachioradialis
2. Extensor Carpi Radialis Longus
3. Extensor Carpi Radialis Brevis
4. Pronator Teres
5. Flexor Carpi Radialis
6. Palmaris Longus
7. Flexor Carpi Ulnaris
8. Clavodeltoid
9. Biceps Brachii
10. Epitrochlearis
11. Long Head of Triceps
12. Medial Head of Triceps
13. Flexor Digitorum Superficialis

1. Aponeurosa
2. Rectus Abdominus
3. Transversus Abdominus
4. External Oblique
5. Internal Oblique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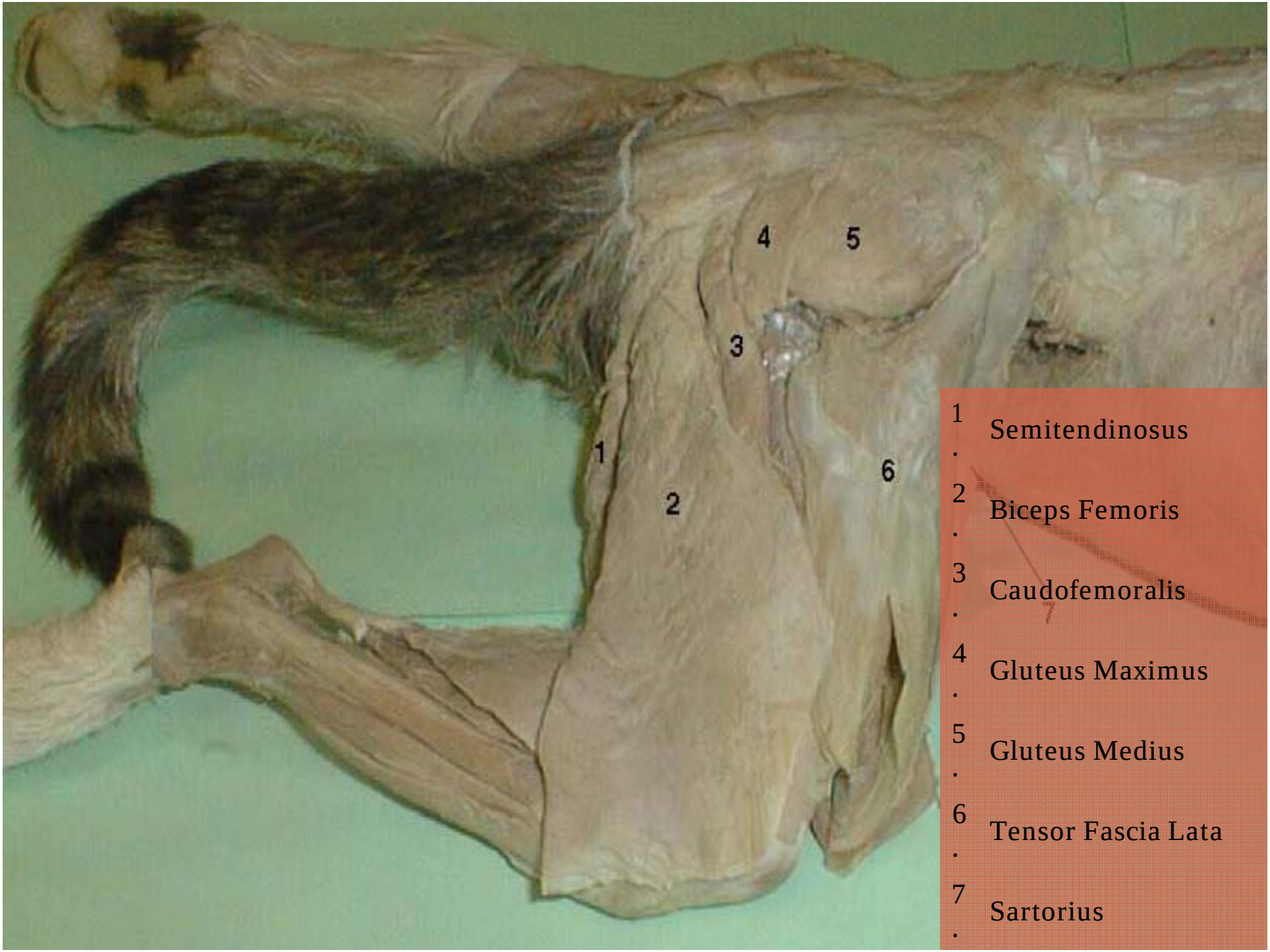

1. Semitendinosus
2. Biceps Femoris
3. Caudofemoralis
4. Gluteus Maximus
5. Gluteus Medius
6. Tensor Fascia Lata
7. Sartorius


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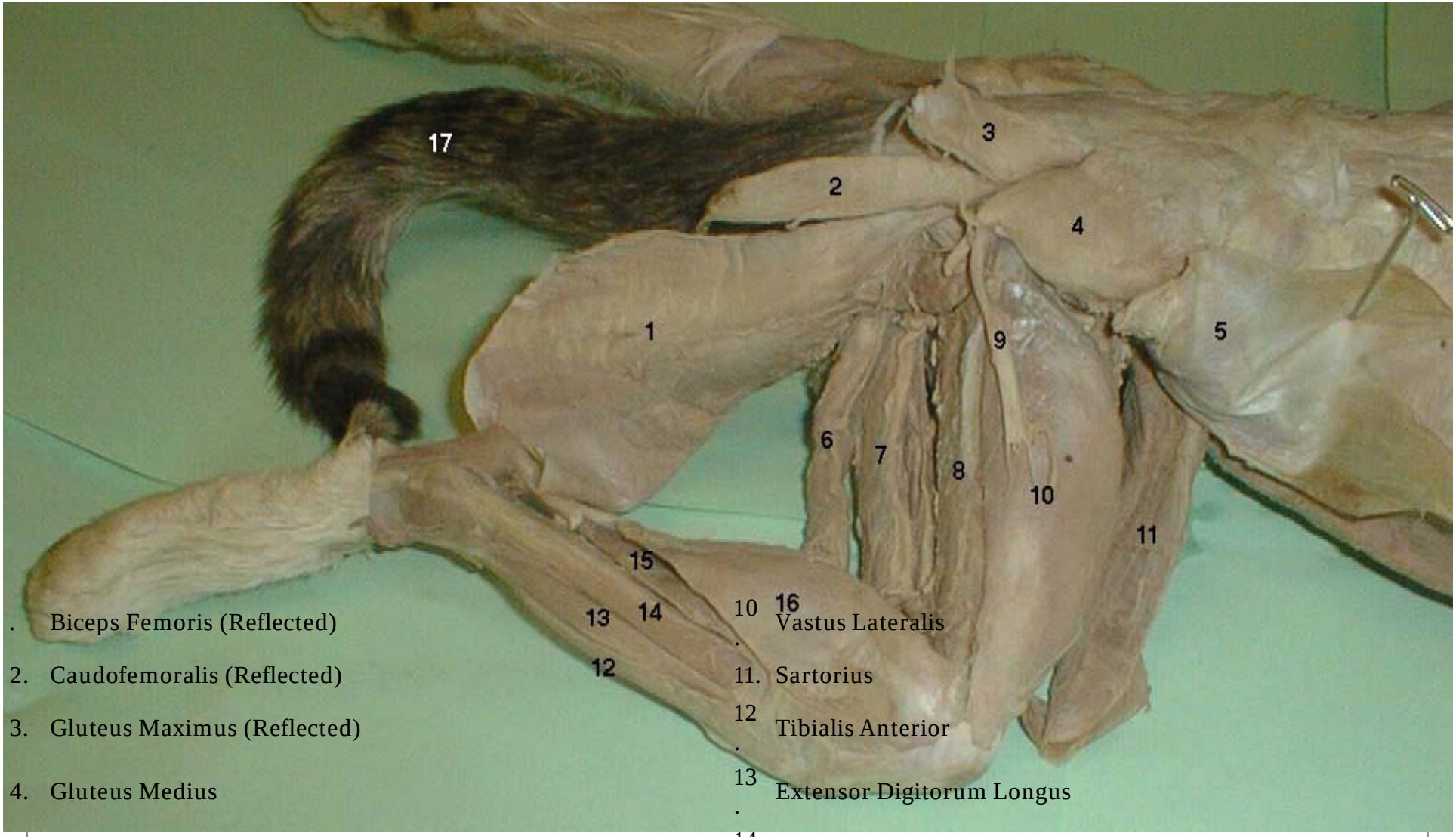
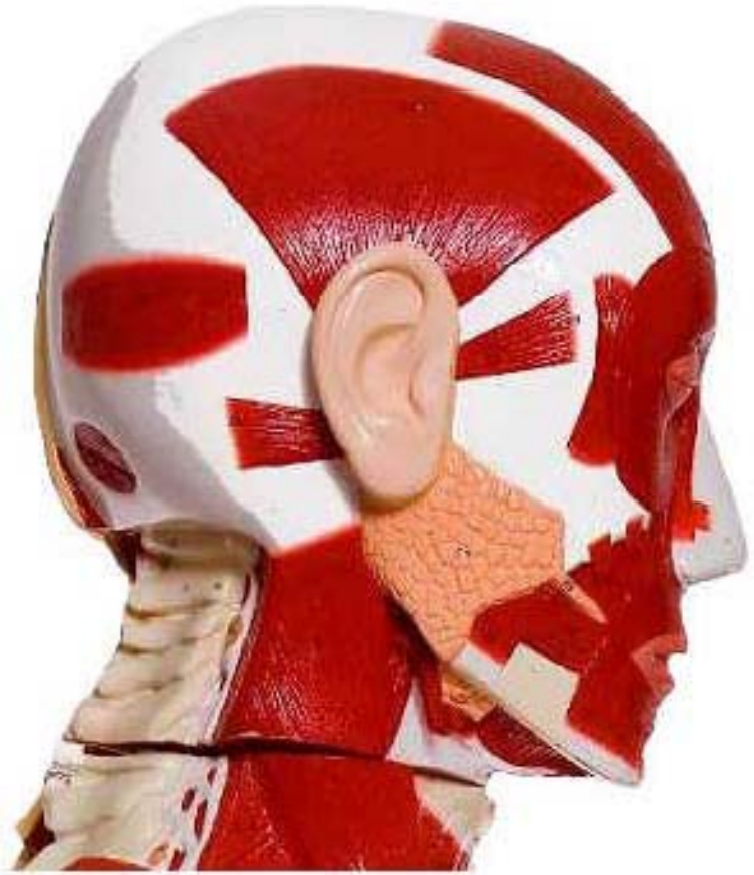


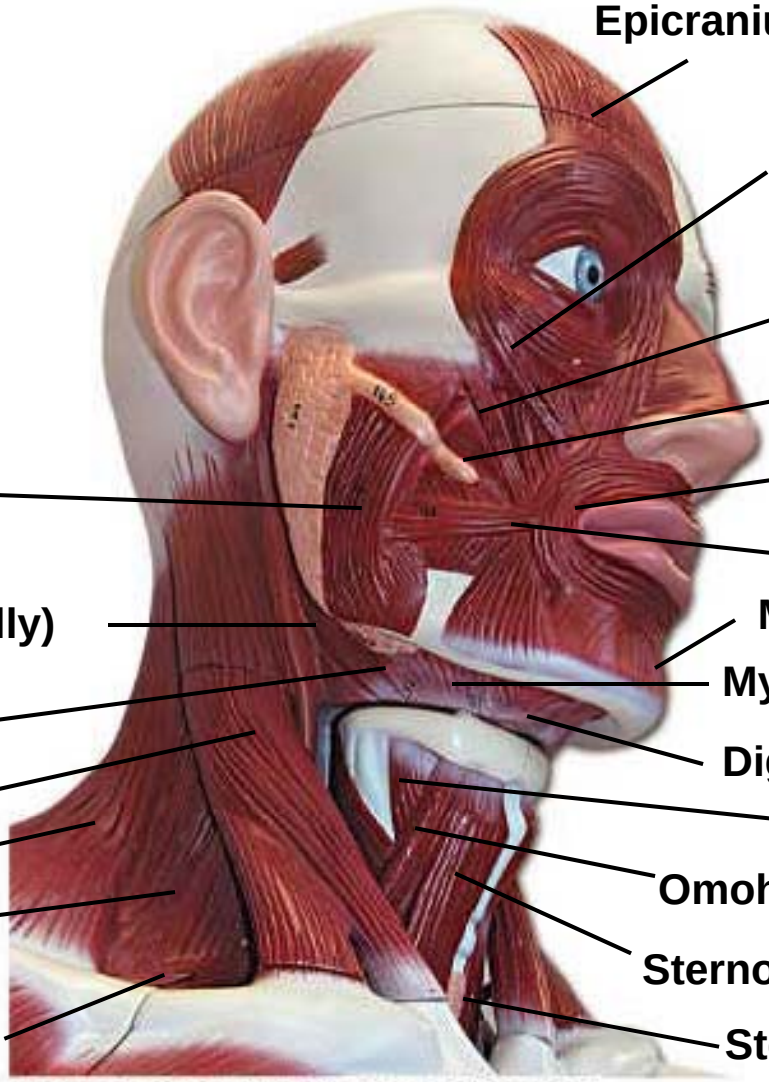
. Biceps Femoris (Reflected)
2. Caudofemoralis (Reflected)
3. Gluteus Maximus (Reflected)
4. Gluteus Medius
5. Tensor Fascia Lata (Reflected)
6. Semitendinosus
7. Semimembranosus
8. Adductor Femoris
9. Sciatic Nerve
10. Vastus Lateralis
11. Sartorius
12. Tibialis Anterior
13. Extensor Digitorum Longus
14. Peroneus Complex
15. Soleus
16. Gastrocnemius
17. Skippy's Tail

Muscles of the head and neck, anterior view

Muscles of the head, neck and trunk; lateral view

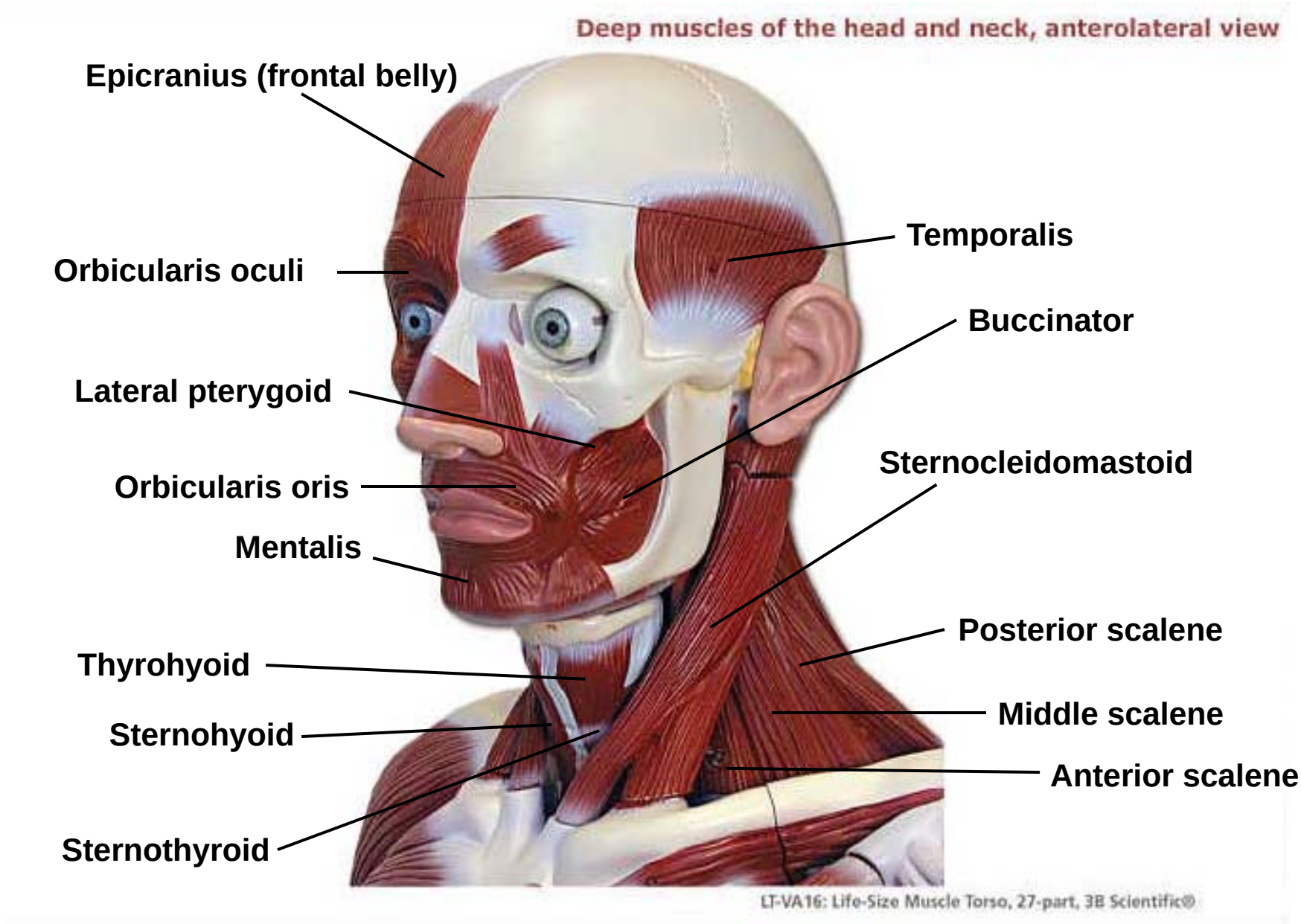


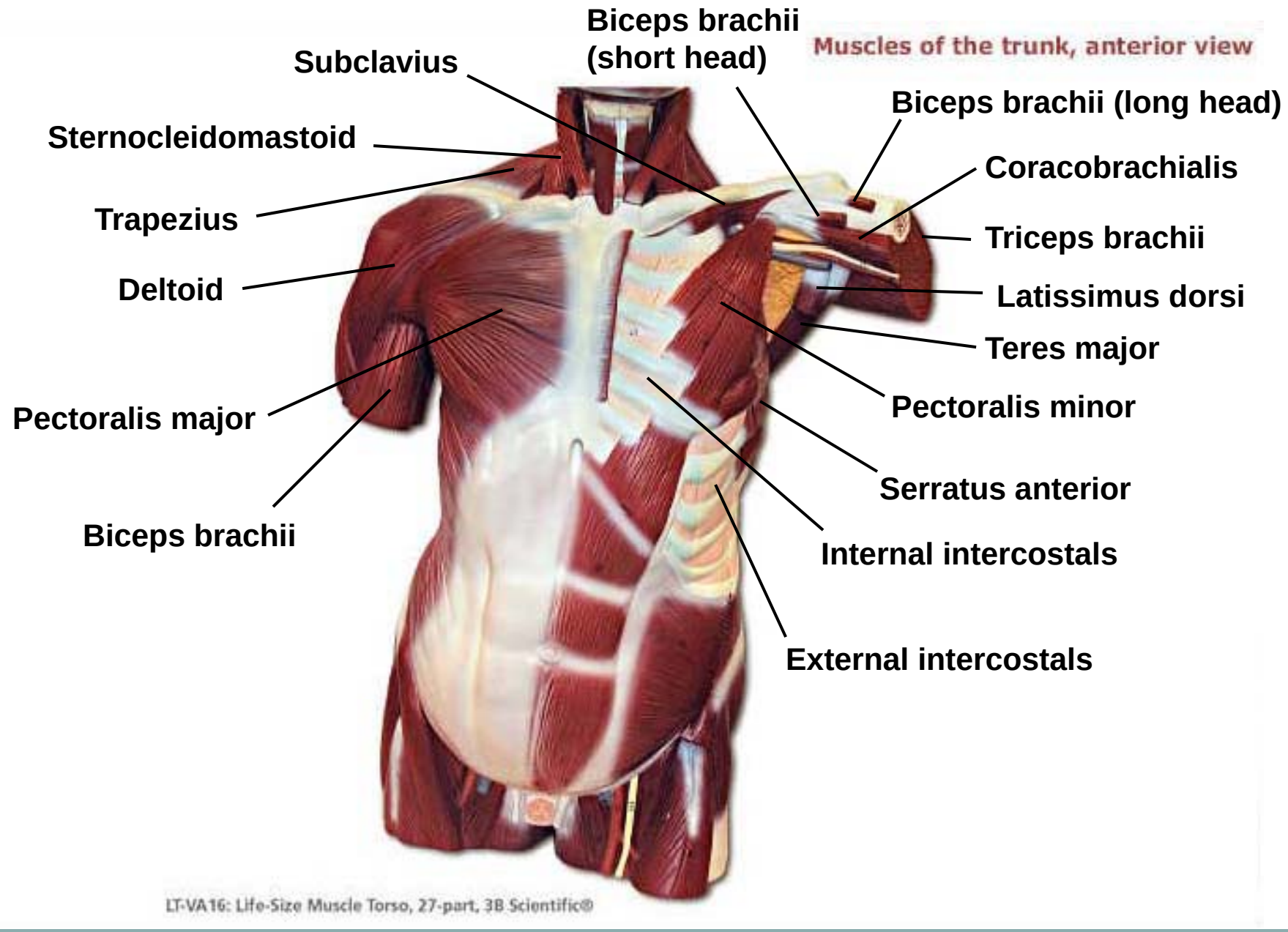
Superficial muscles of the head and neck, anterolateral view



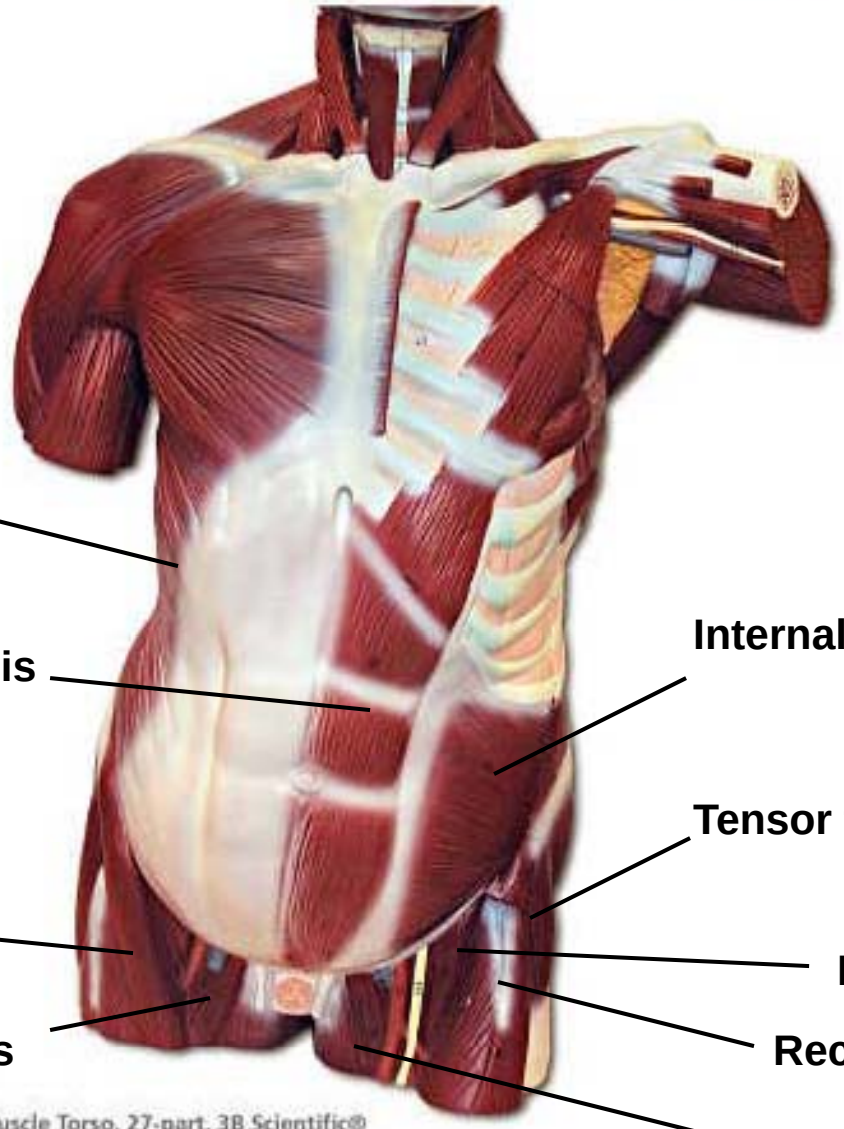
Epicranius (frontal belly)
Zygomaticus minor
Zygomaticus major
Buccinator
Orbicularis oris
Risorius
Mentalis
Mylohyoid
Digastric (anterior belly)
Thyrohyoid
Omohyoid (superior belly)
Sternohyoid
Sternothyroid
Masseter
Digastric (posterior belly)
Stylohyoid
Sternocleidomastoid
Trapezius
Scalenus
Omohyoid (inferior belly)

LT-VA16: Life-Size Muscle Torso, 27-part, 3B Scientific®


Deep muscles of the head and neck, anterolateral view
Epicranius (frontal belly)
Orbicularis oculi
Lateral pterygoid
Orbicularis oris
Mentalis
Thyrohyoid
Sternohyoid
Sternothyroid
Temporalis
Buccinator
Sternocleidomastoid
Posterior scalene
Middle scalene
Anterior scalene
LT-VA16: Life-Size Muscle Torso, 27-part, 3B Scientific®


Muscles of the trunk, anterior view
Biceps brachii (short head)
Subclavius
Biceps brachii (long head)
Sternocleidomastoid
Coracobrachialis
Trapezius
Triceps brachii
Deltoid
Latissimus dorsi
Teres major
Pectoralis major
Pectoralis minor
Serratus anterior
Biceps brachii
Internal intercostals
External intercostals
LT-VA16: Life-Size Muscle Torso, 27-part, 3B Scientific®

Muscles of the trunk, anterior view



External obilque

Rectus abdominis

Internal obilque

Tensor fasciae latae

Sartorius

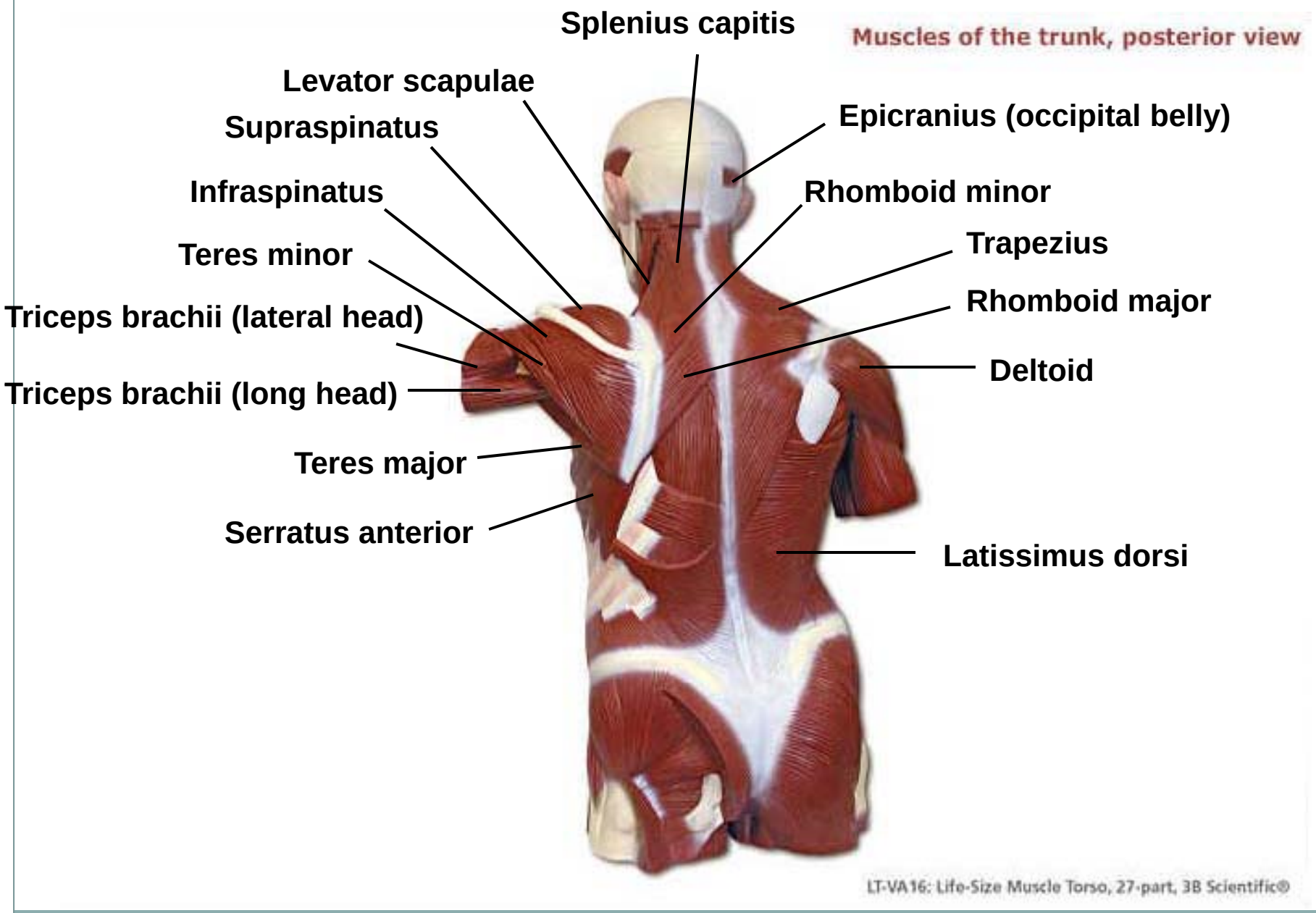
Iliopsoas

Pectineus

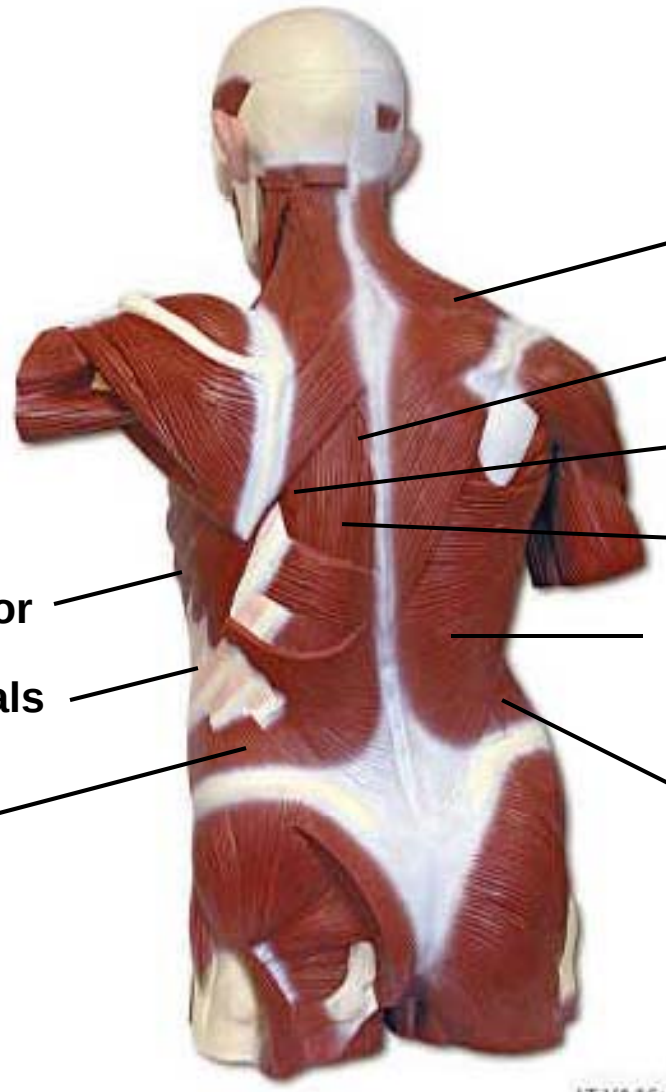
Rectus femoris

Adductor longus

LT-VA16: Life-Size Muscle Torso, 27-part, 3B Scientific®


Muscles of the trunk, posterior view
Splenius capitis
Levator scapulae
Supraspinatus
Infraspinatus
Teres minor
Triceps brachii (lateral head)
Triceps brachii (long head)
Teres major
Serratus anterior
Epicranius (occipital belly)
Rhomboid minor
Trapezius
Rhomboid major
Deltoid
Latissimus dorsi
LT-VA16: Life-Size Muscle Torso, 27-part, 3B Scientific®

Muscles of the trunk, posterior view



Trapezius

Spinalis

Iliocostalis

Longissimus

Serratus anterior

Latissimus dorsi

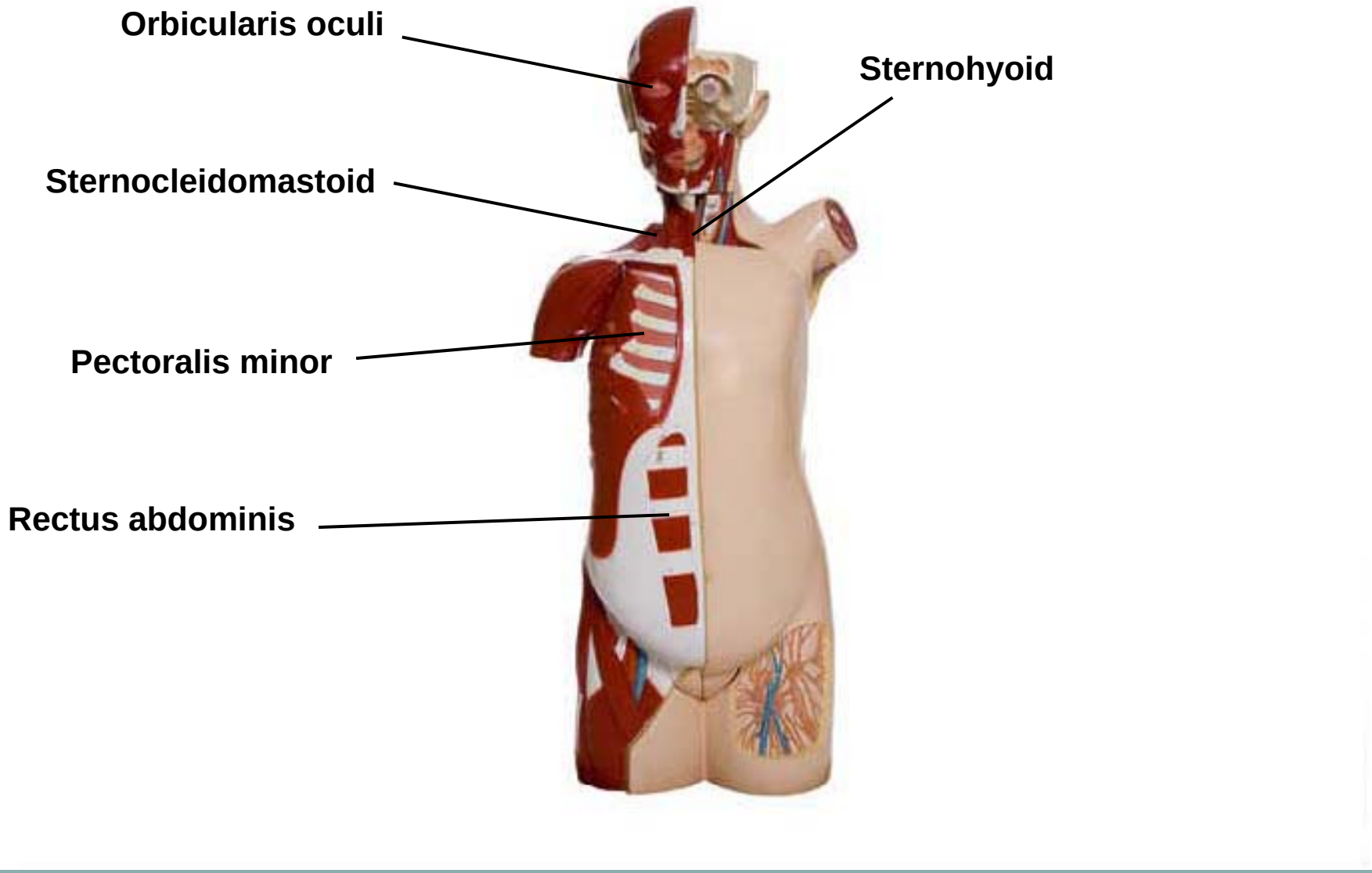
External intercostals

External oblique

Internal oblique

LT-VA16: Life-Size Muscle Torso, 27-part, 3B Scientific®

Muscles of the head, neck and trunk; anterior view

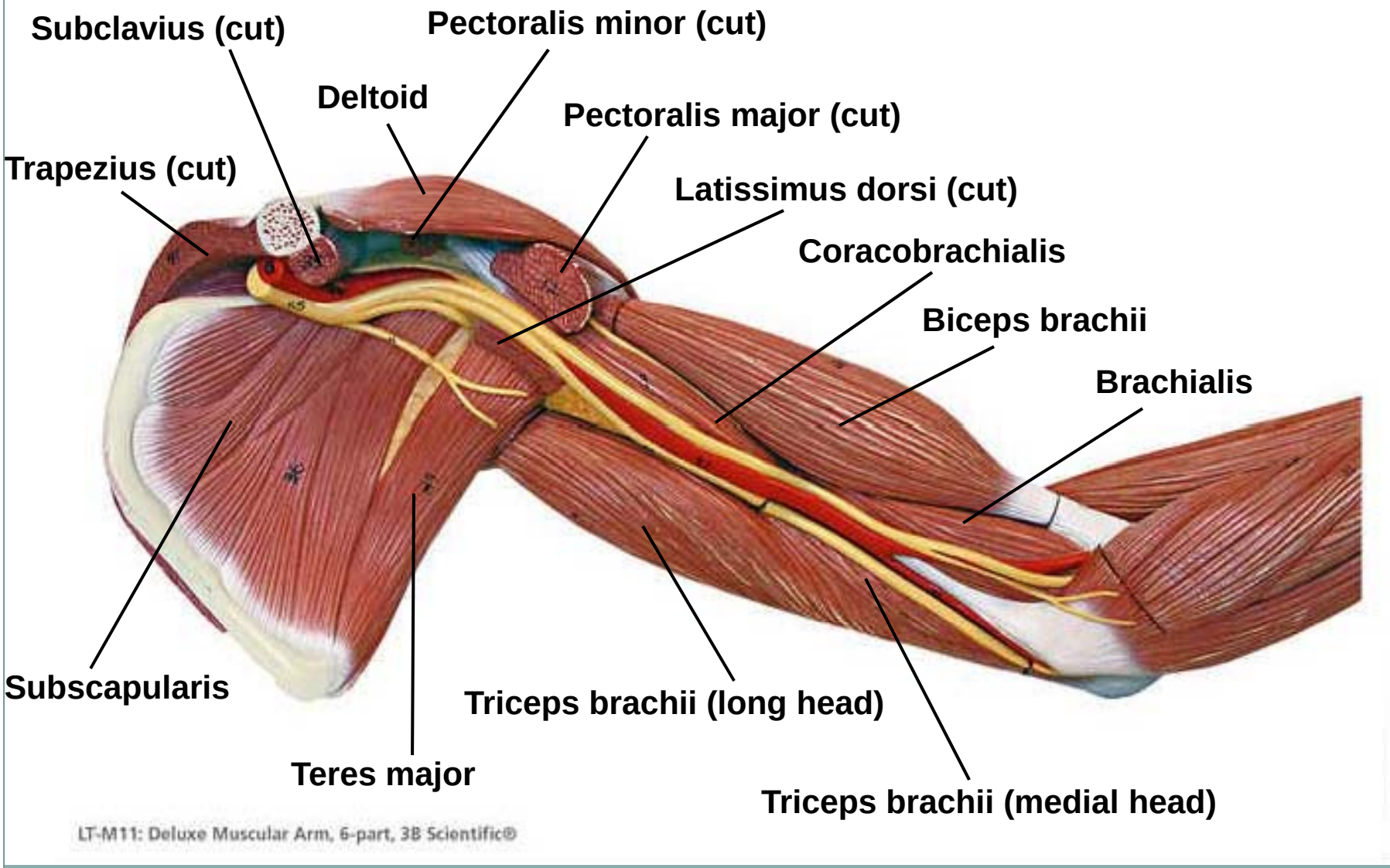


Muscles of the trunk, posterior view

Teres major

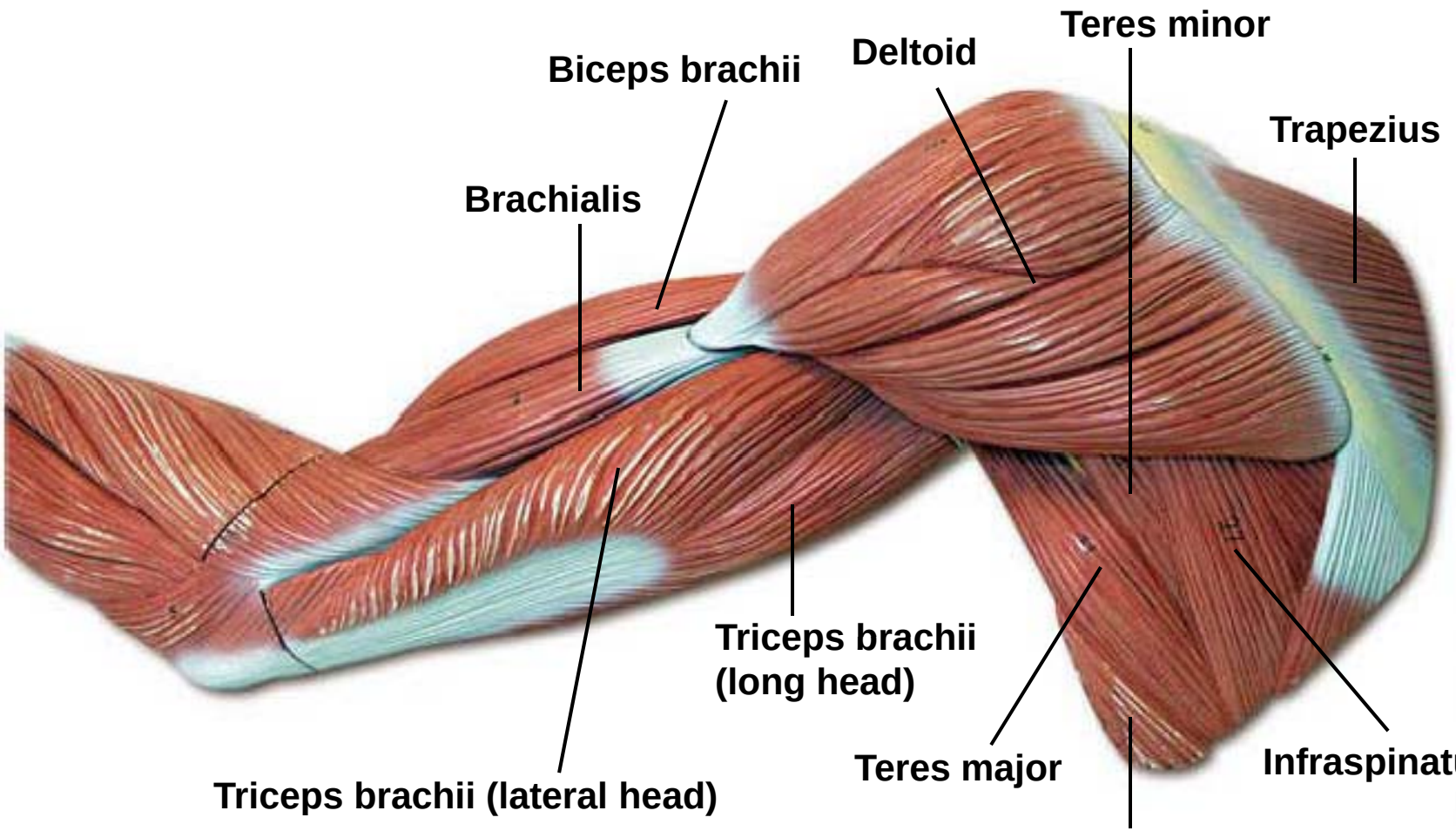
Latissimus dorsi

Muscles of the scapula, arm, and forearm, anterior view, left side



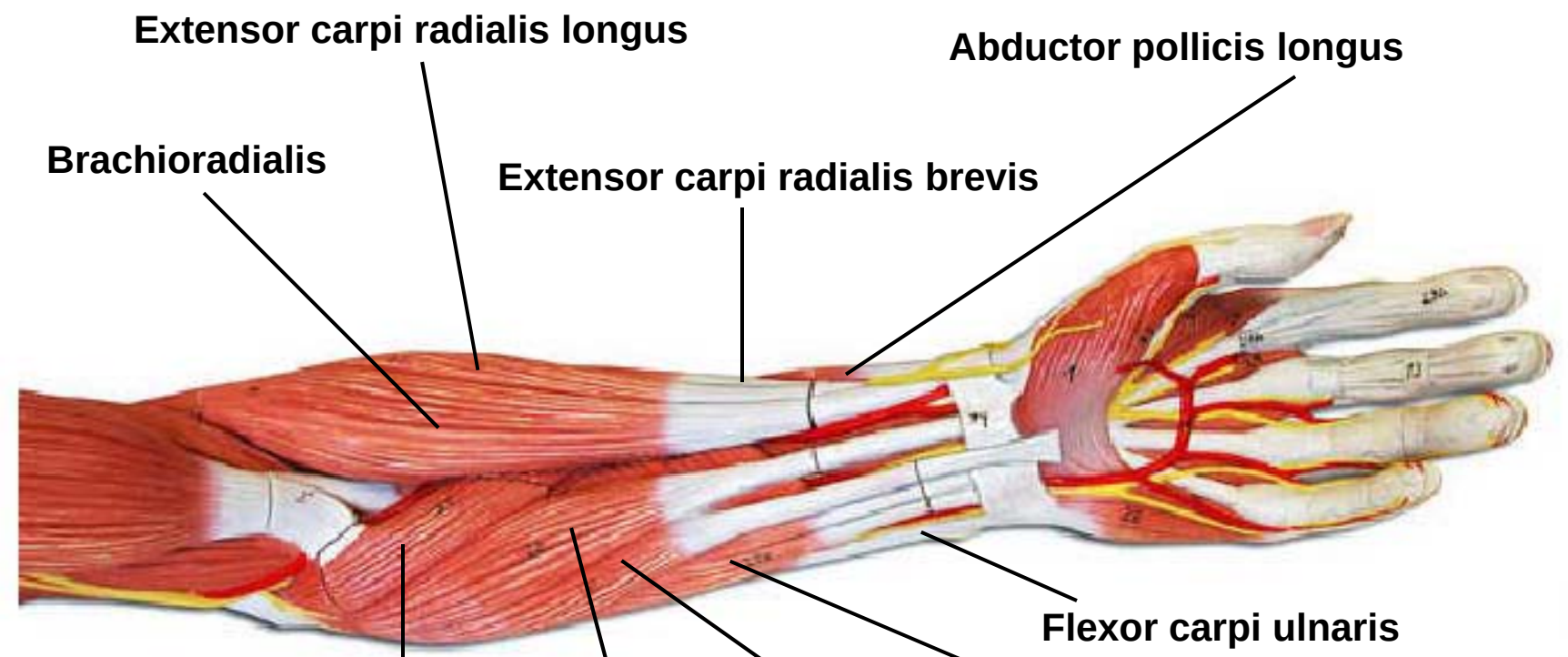
LT-M11: Deluxe Muscular Arm, 6-part, 3B Scientific®

Superficial muscles of the scapula and arm, posterior view.



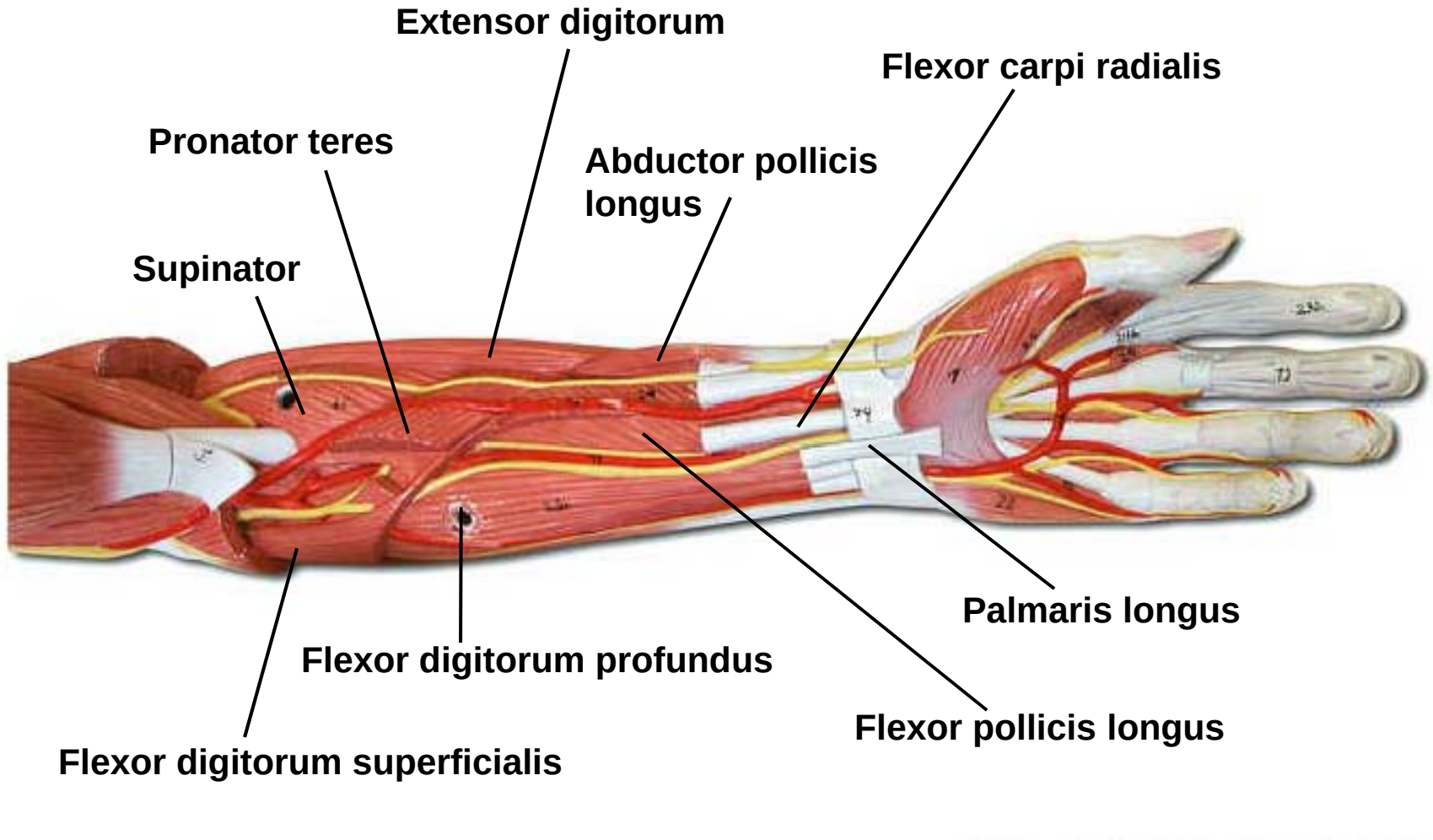
LT-M11: Deluxe Muscular Arm, 6-part, 3B Scientific®

Superficial muscles of the forearm, anterior view, left side

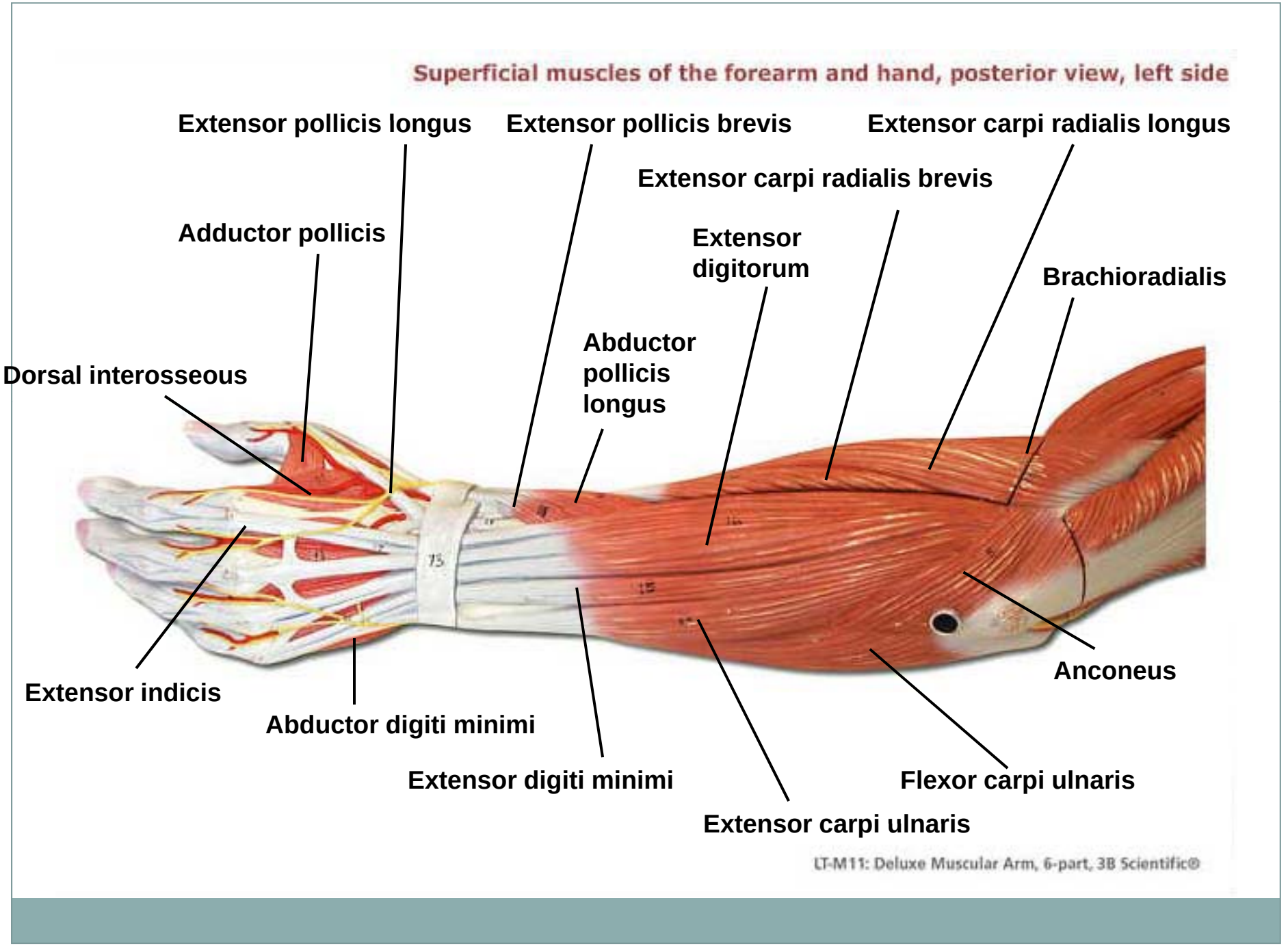


LT-M11: Deluxe Muscular Arm, 6-part, 3B Scientific®

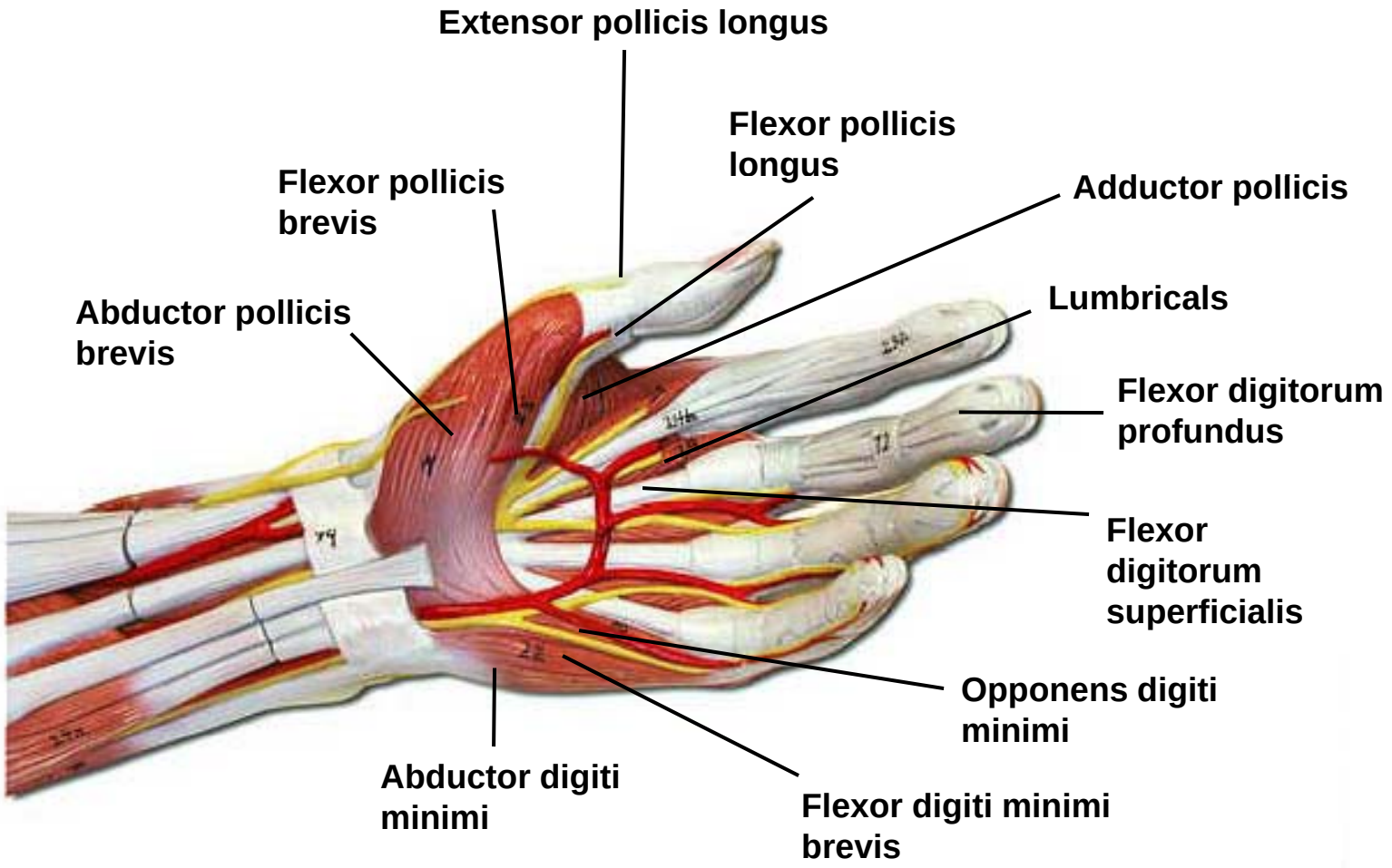
Deep muscles of the forearm, anterior view, left side



LT-M11: Deluxe Muscular Arm, 6-part, 3B Scientific®


Superficial muscles of the forearm and hand, posterior view, left side
Extensor pollicis longus
Extensor pollicis brevis
Extensor carpi radialis longus
Extensor carpi radialis brevis
Adductor pollicis
Extensor digitorum
Brachioradialis
Abductor pollicis longus
Dorsal interosseous
Anconeus
Extensor indicis
Abductor digiti minimi
Extensor digiti minimi
Flexor carpi ulnaris
Extensor carpi ulnaris
LT-M11: Deluxe Muscular Arm, 6-part, 3B Scientific®

Muscles of the hand, anterior view, left side



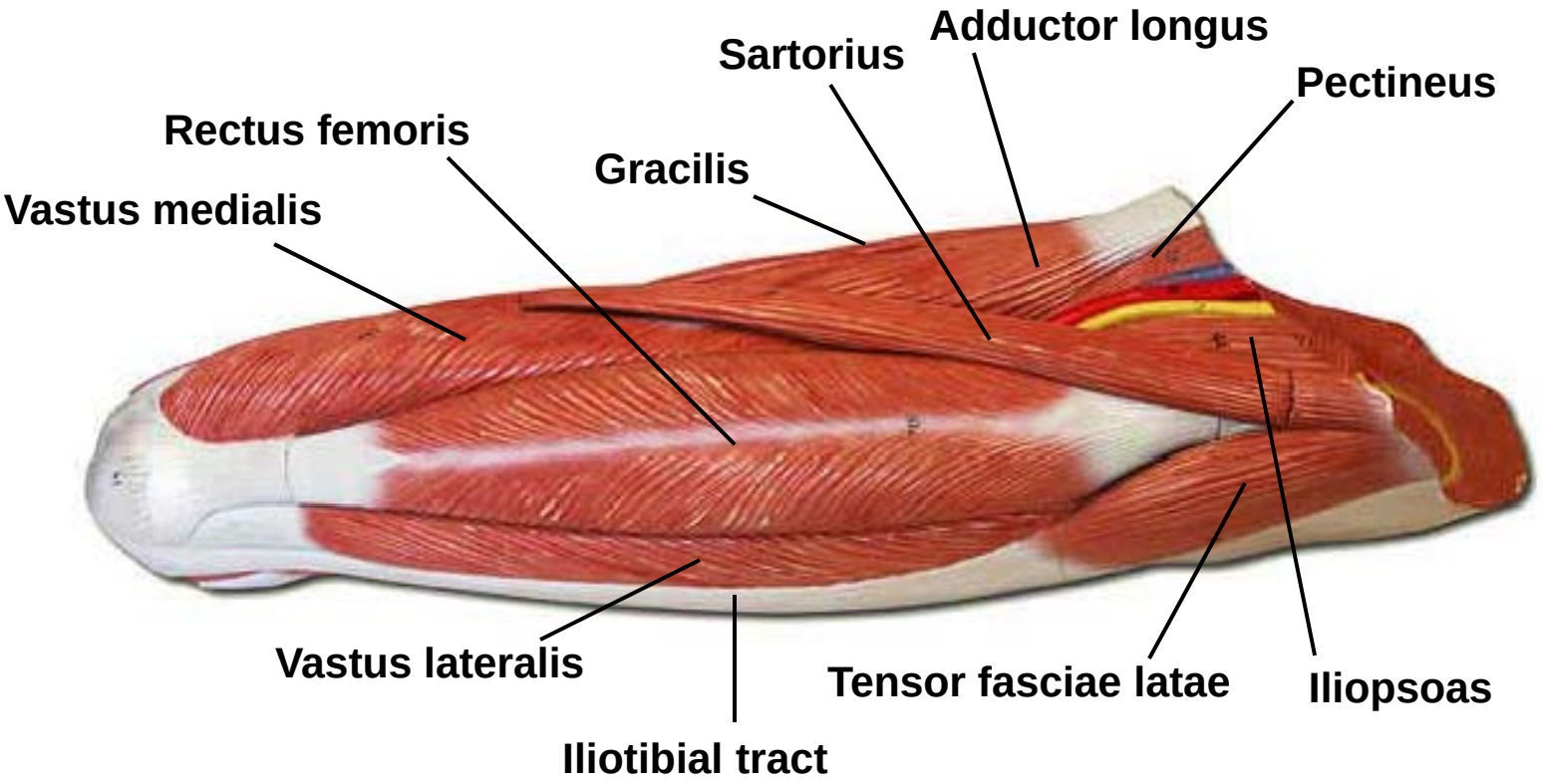
LT-M11: Deluxe Muscular Arm, 6-part, 3B Scientific®

Muscles of the hand, posterior view, right side

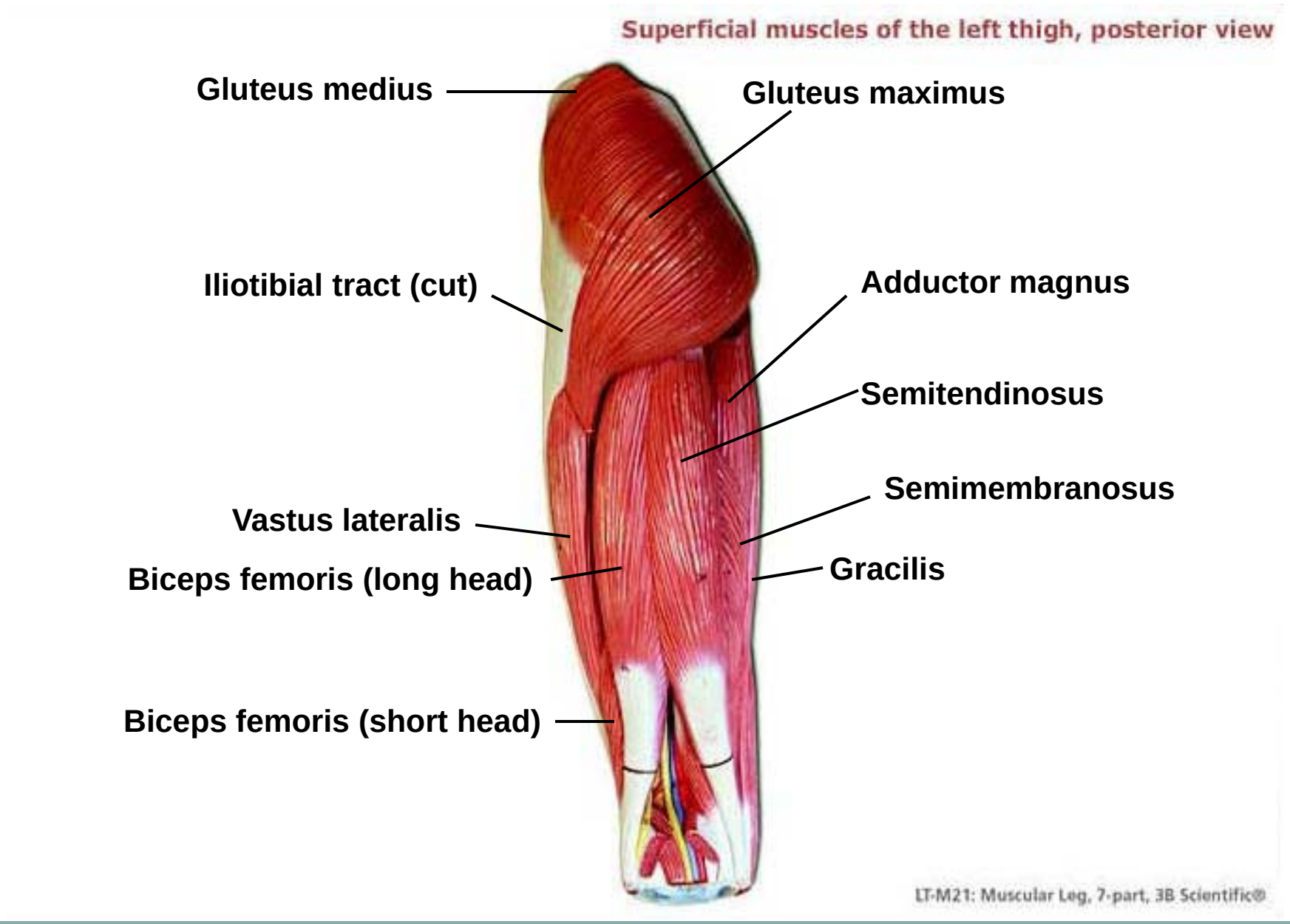
Dorsal interosseus

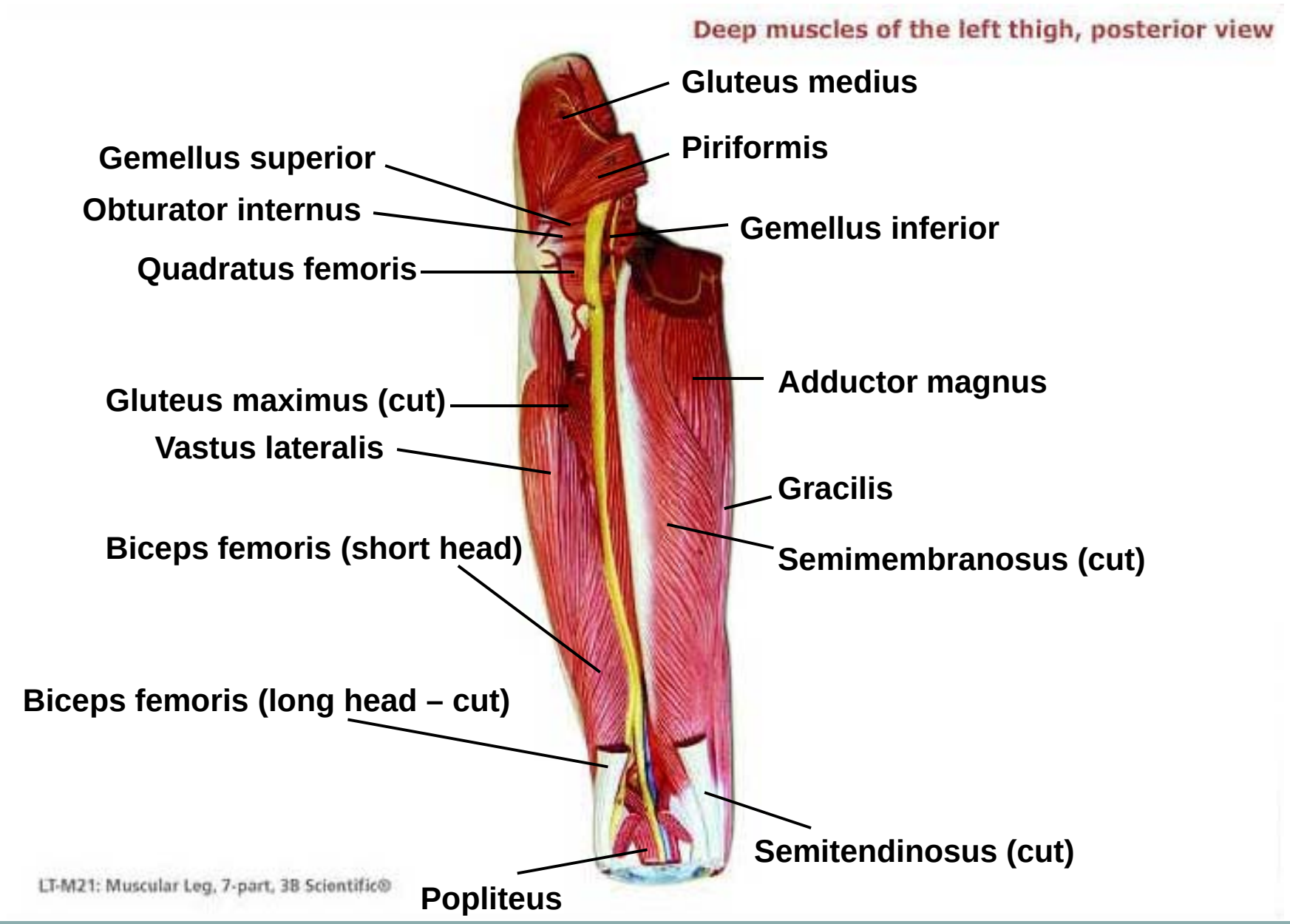
Abductor digiti minimi

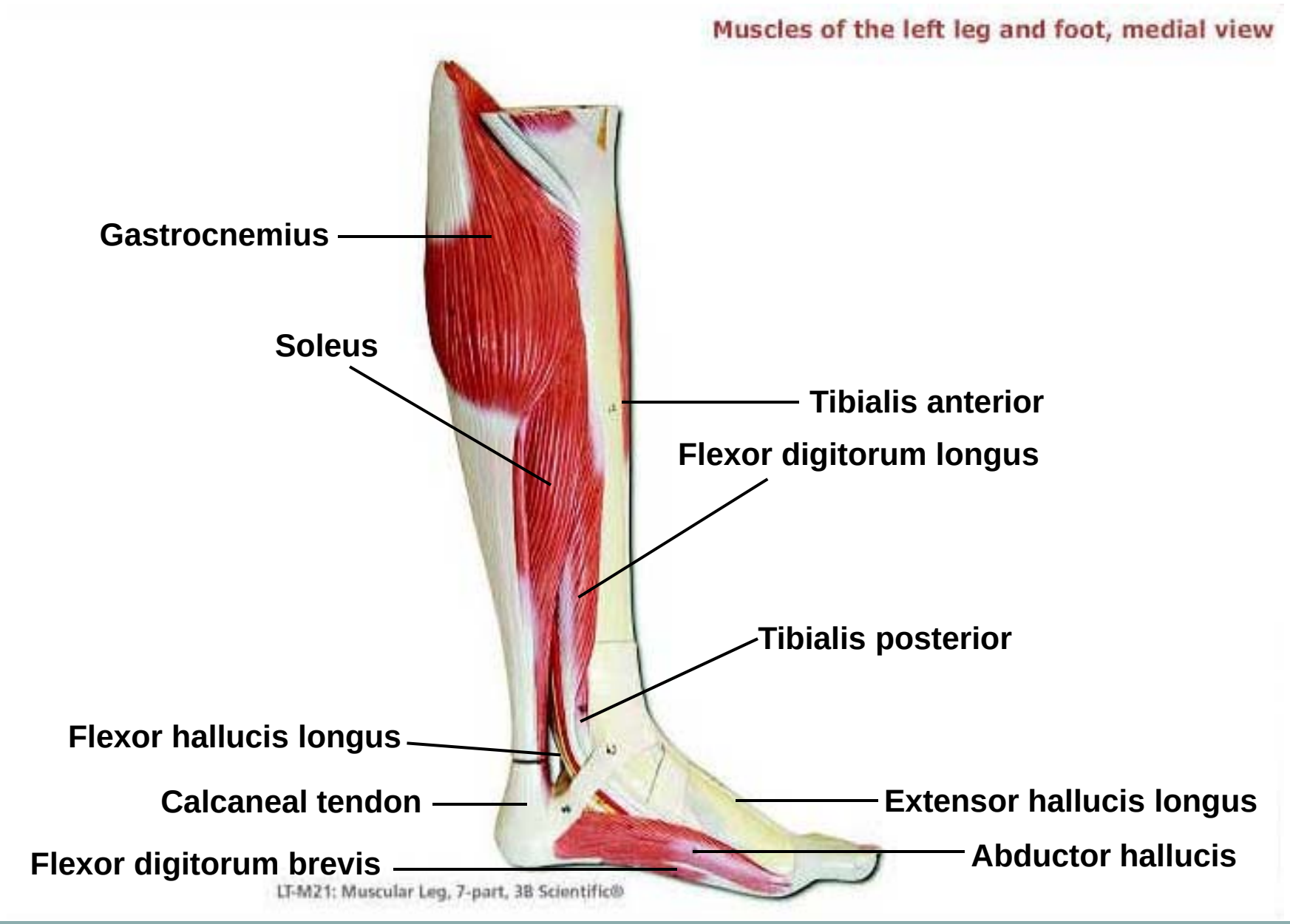
Superficial muscles of the left thigh, anterior view

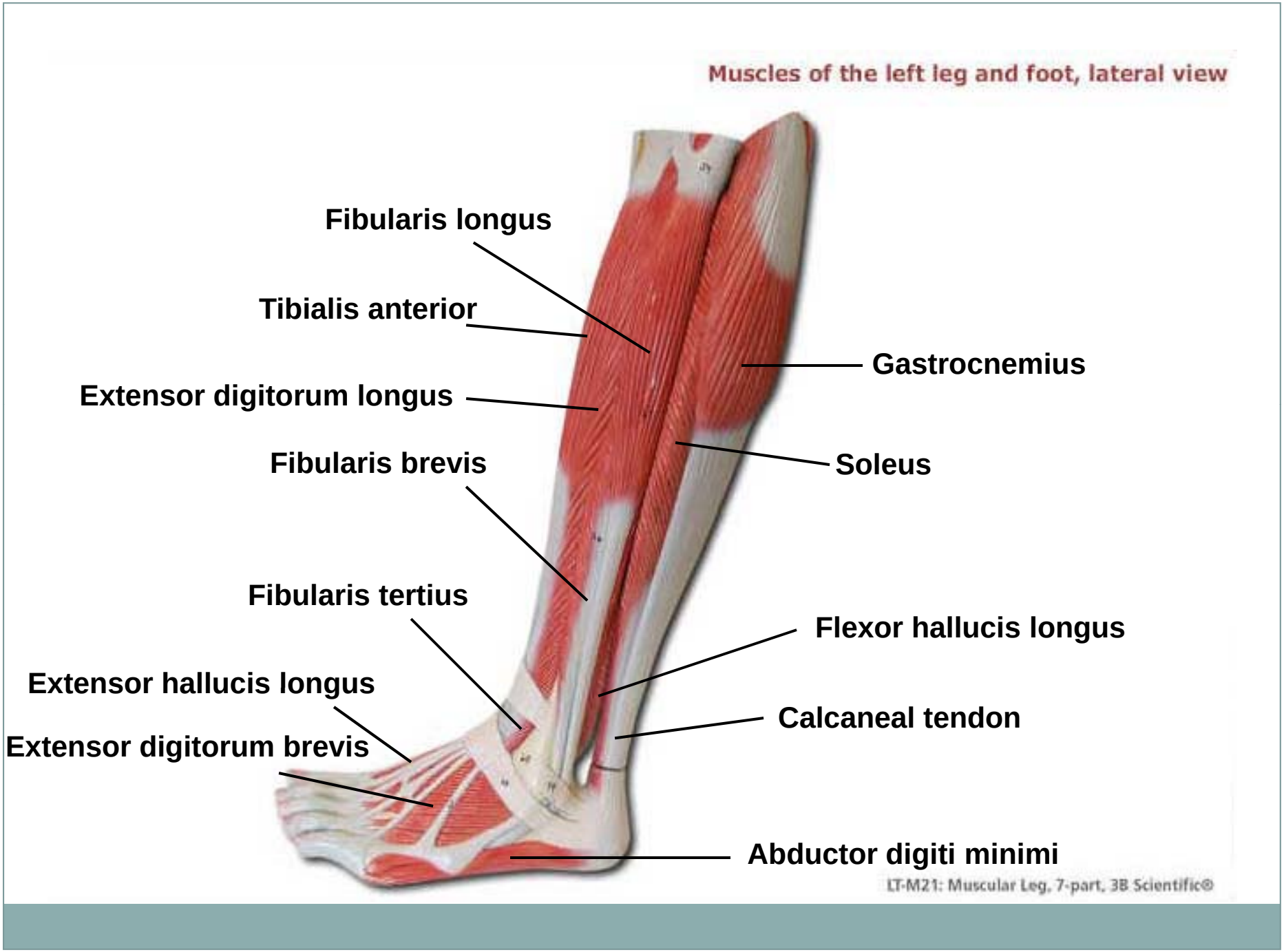


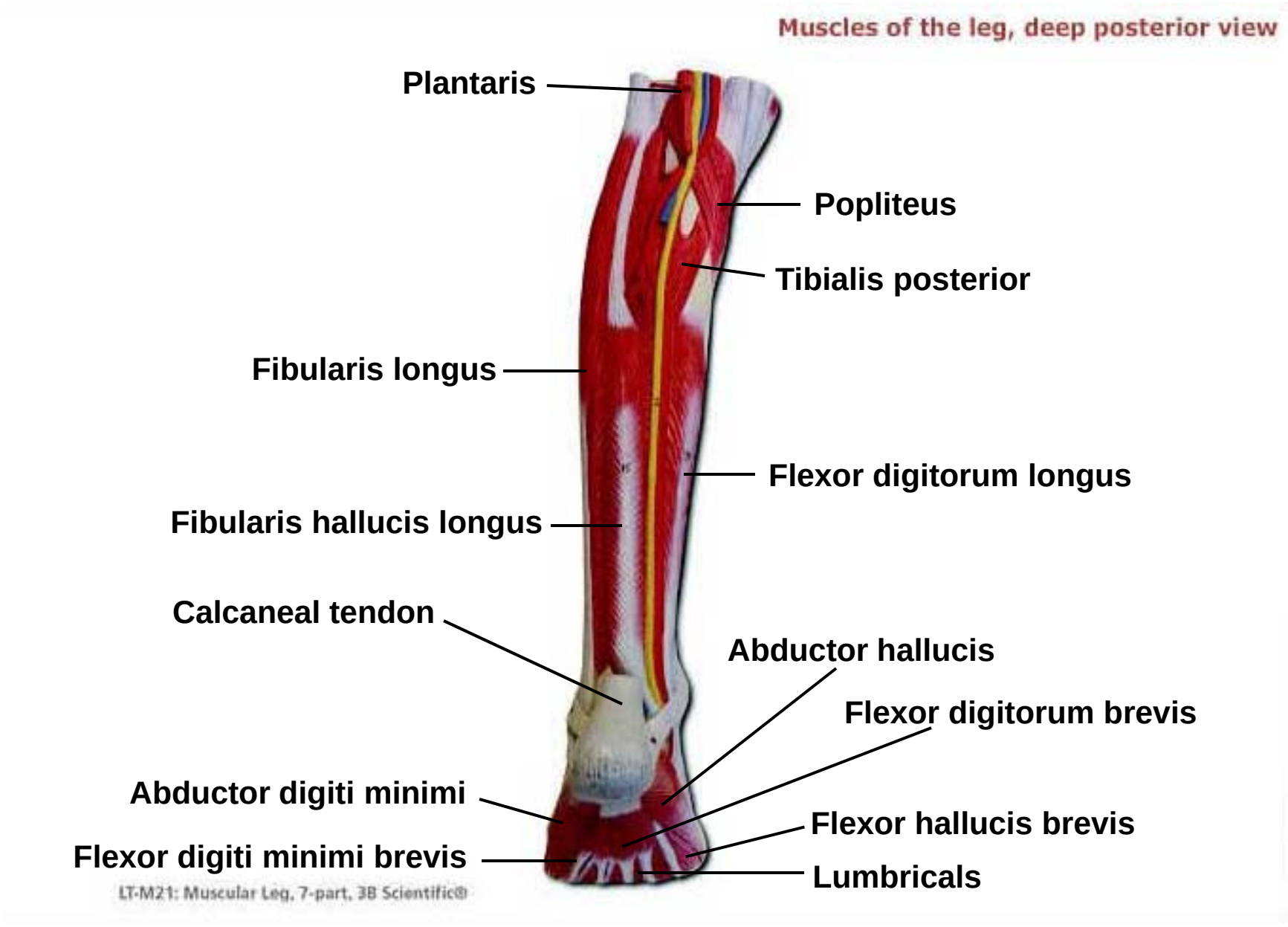
LT-M21: Muscular Leg, 7-part, 3B Scientific®


Superficial muscles of the left thigh, posterior view
Gluteus medius
Gluteus maximus
Iliotibial tract (cut)
Adductor magnus
Semitendinosus
Semimembranosus
Vastus lateralis
Biceps femoris (long head)
Gracilis
Biceps femoris (short head)
LT-M21: Muscular Leg, 7-part, 3B Scientific®


Deep muscles of the left thigh, posterior view
Gluteus medius
Piriformis
Gemellus superior
Obturator internus
Gemellus inferior
Quadratus femoris
Adductor magnus
Gluteus maximus (cut)
Vastus lateralis
Gracilis
Biceps femoris (short head)
Semimembranosus (cut)
Biceps femoris (long head – cut)
Semitendinosus (cut)
Popliteus
LT-M21: Muscular Leg, 7-part, 3B Scientific®


Muscles of the left leg and foot, medial view
Gastrocnemius
Soleus
Tibialis anterior
Flexor digitorum longus
Tibialis posterior
Flexor hallucis longus
Calcaneal tendon
Extensor hallucis longus
Flexor digitorum brevis
Abductor hallucis
LT-M21: Muscular Leg, 7-part, 3B Scientific®


Muscles of the left leg and foot, lateral view
Fibularis longus
Tibialis anterior
Extensor digitorum longus
Fibularis brevis
Fibularis tertius
Extensor hallucis longus
Extensor digitorum brevis
Gastrocnemius
Soleus
Flexor hallucis longus
Calcaneal tendon
Abductor digiti minimi
LT-M21: Muscular Leg, 7-part, 3B Scientific®


Muscles of the leg, deep posterior view
Plantaris
Popliteus
Tibialis posterior
Fibularis longus
Flexor digitorum longus
Fibularis hallucis longus
Calcaneal tendon
Abductor hallucis
Flexor digitorum brevis
Abductor digiti minimi
Flexor hallucis brevis
Flexor digiti minimi brevis
Lumbricals
LT-M21: Muscular Leg, 7-part, 3B Scientific®