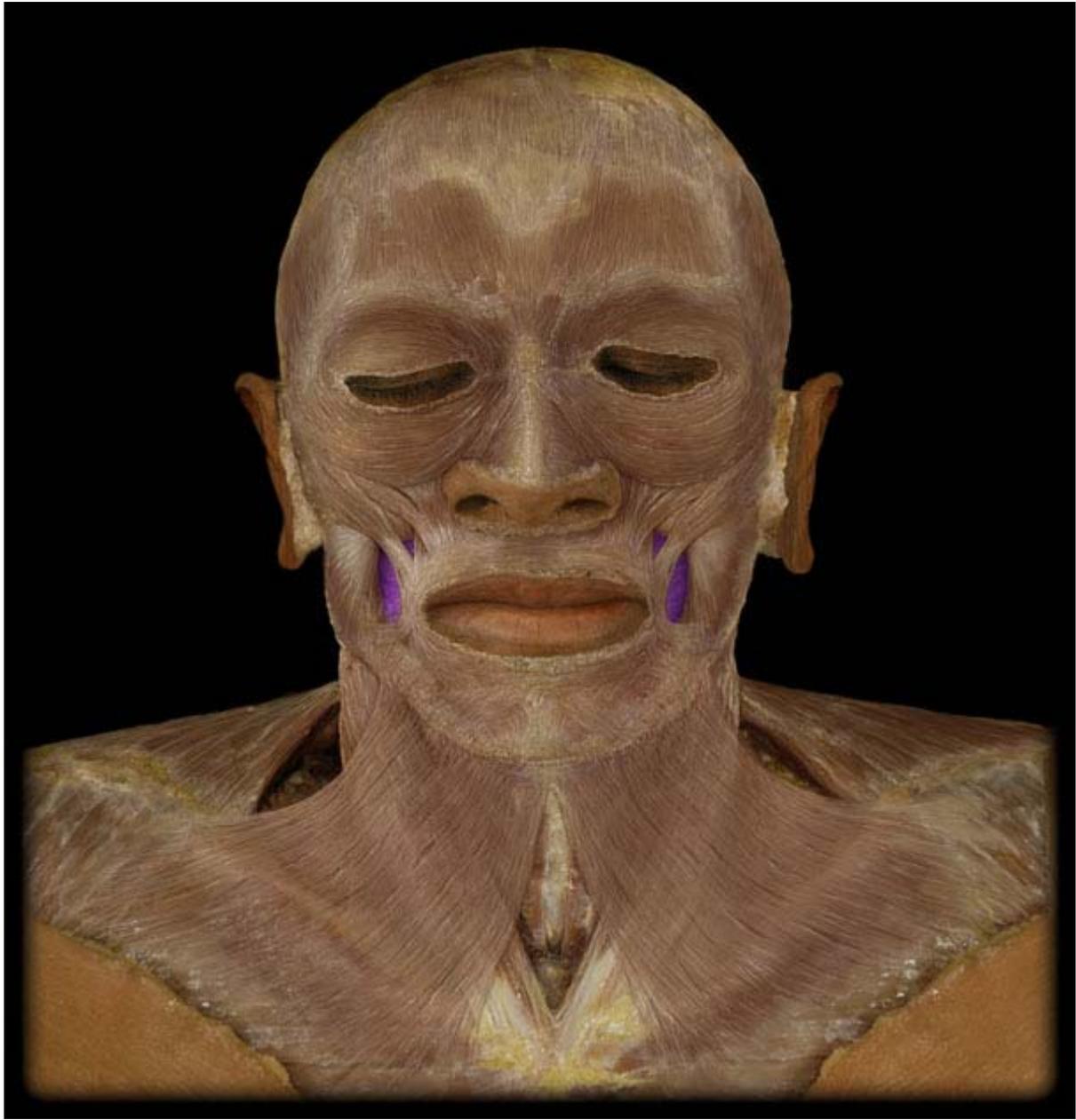


Anatomy & Physiology Lab

Unit One Skeletal Muscles

Instructor / Cliff Belleau



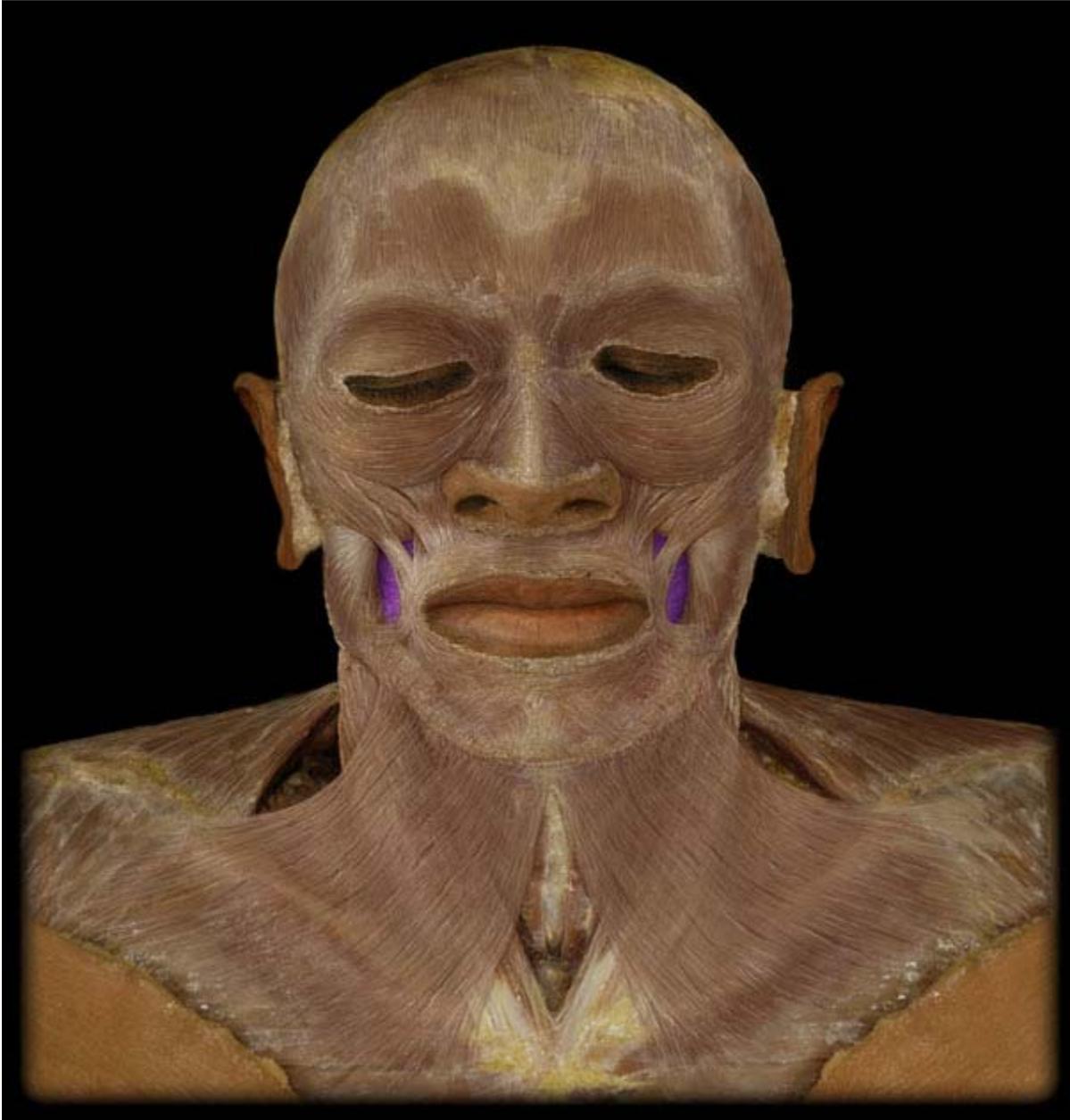
Buccinator

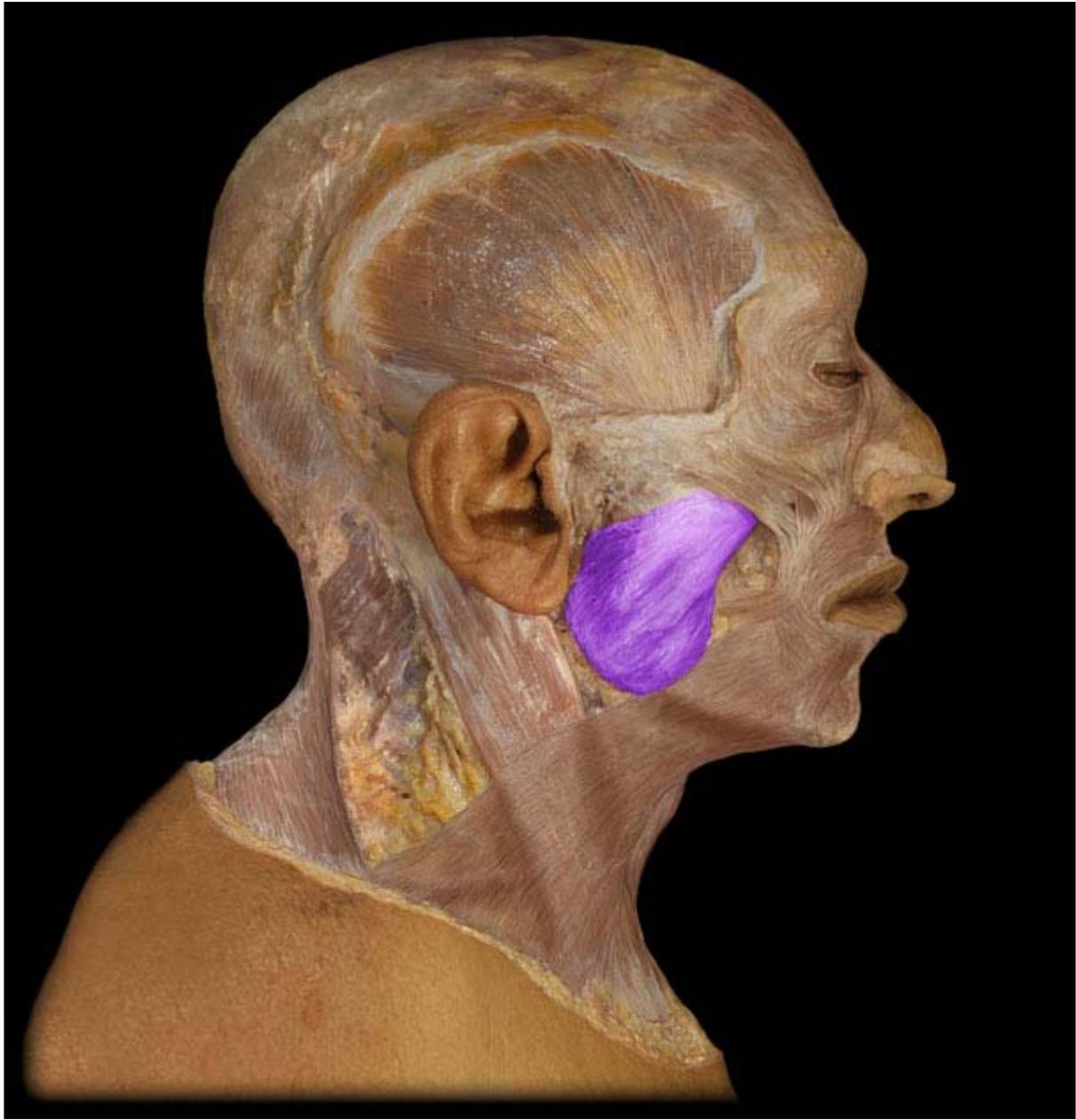
(BUC-sin-AY-tur)

Compresses cheek against teeth and gums.

O: alveolar processes on lateral surfaces of mandible and maxilla

I: orbicularis oris







Masseter

(ma-SEE-tur)

This muscle elevates your mandible allowing you to chew or “masticate” your food.

O: zygomatic arch

I: lateral surface of
mandibular ramus





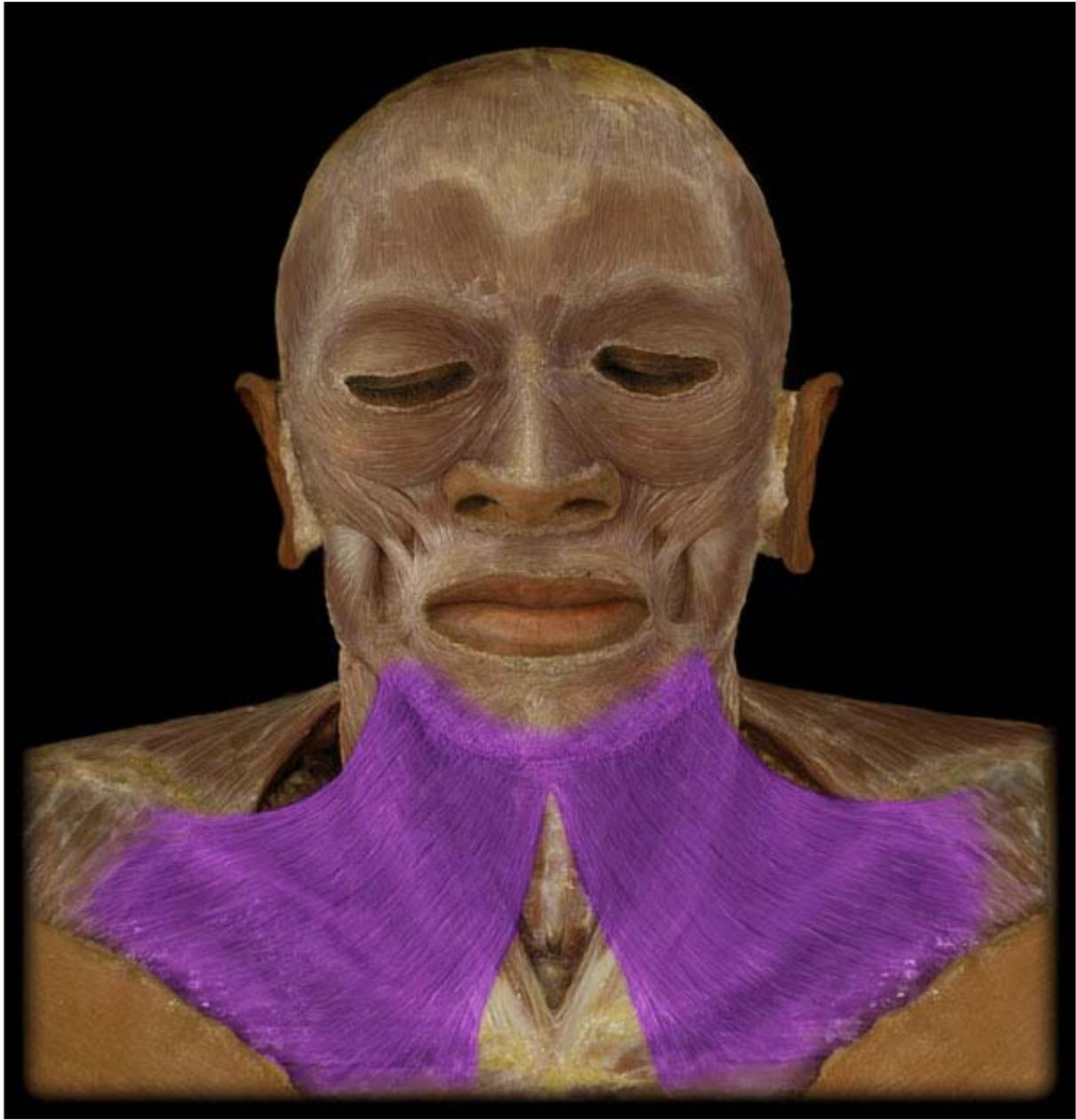
Temporalis

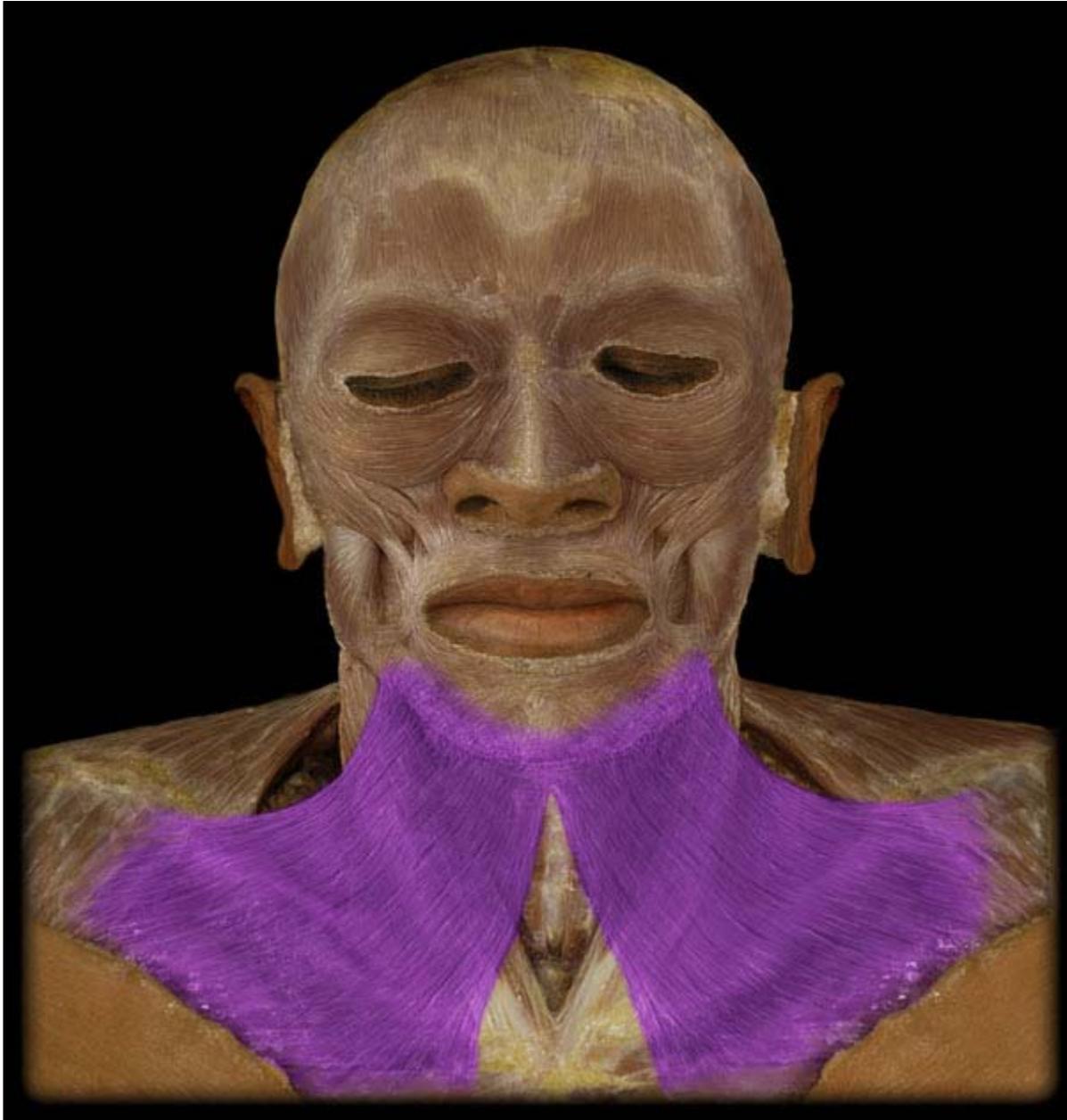
(TEM-po-RAY-liss)

This muscle lies over the temporal bone. It elevation and retraction of mandible.

O: temporal line and temporal fossa of temporal bone

I: coronoid process of mandibular ramus





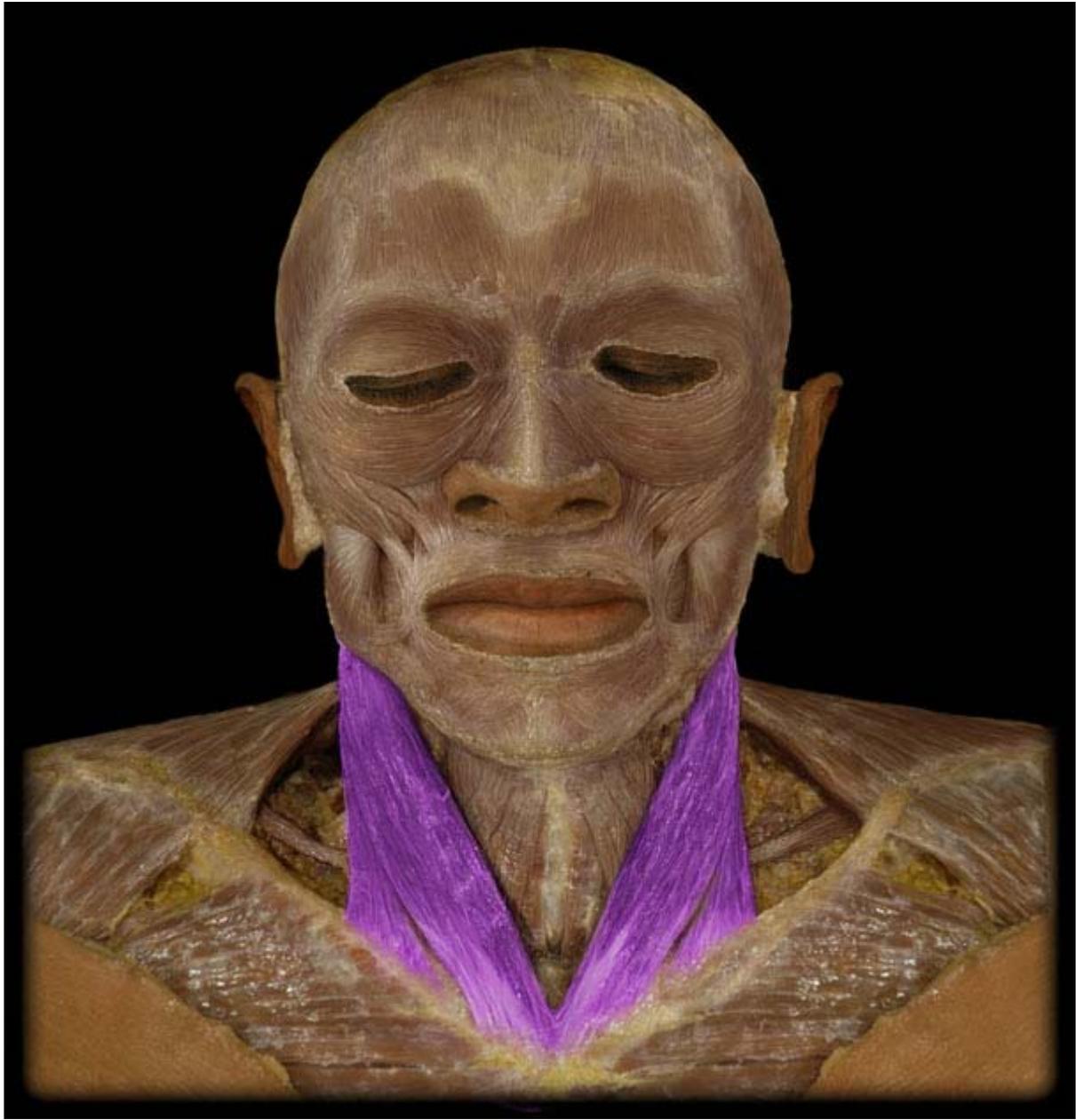
Platysma

(plah-TIZ-muh)

draws lower lip and angle of mouth downward in expressions of horror or surprise

O: fascia of deltoid and pectoralis major

I: mandible and skin of lower face



Sternocleidomastoid

(STIR-no-CLY-do-
MAST-oyd)

unilateral action tilts
head in opposite side or
as in rotating head -
bilateral action to draw
head forward as when
reading

O: manubrium of
sternum and clavicle

I: mastoid process







Sternocleidomastoid





Deltoid

anterior fibers flex and medially rotate arm

lateral fibers abduct arm

posterior fibers extend and laterally rotate arm

O: acromion and spine of scapula

I: deltoid tuberosity of humerus





Supraspinatus

(SOO-pra-spy-NAY-tus)

Latin prefix, supra, means above. Aids deltoid in abduction of arm

O: supraspinous fossa of scapula

I: greater tubercle of humerus





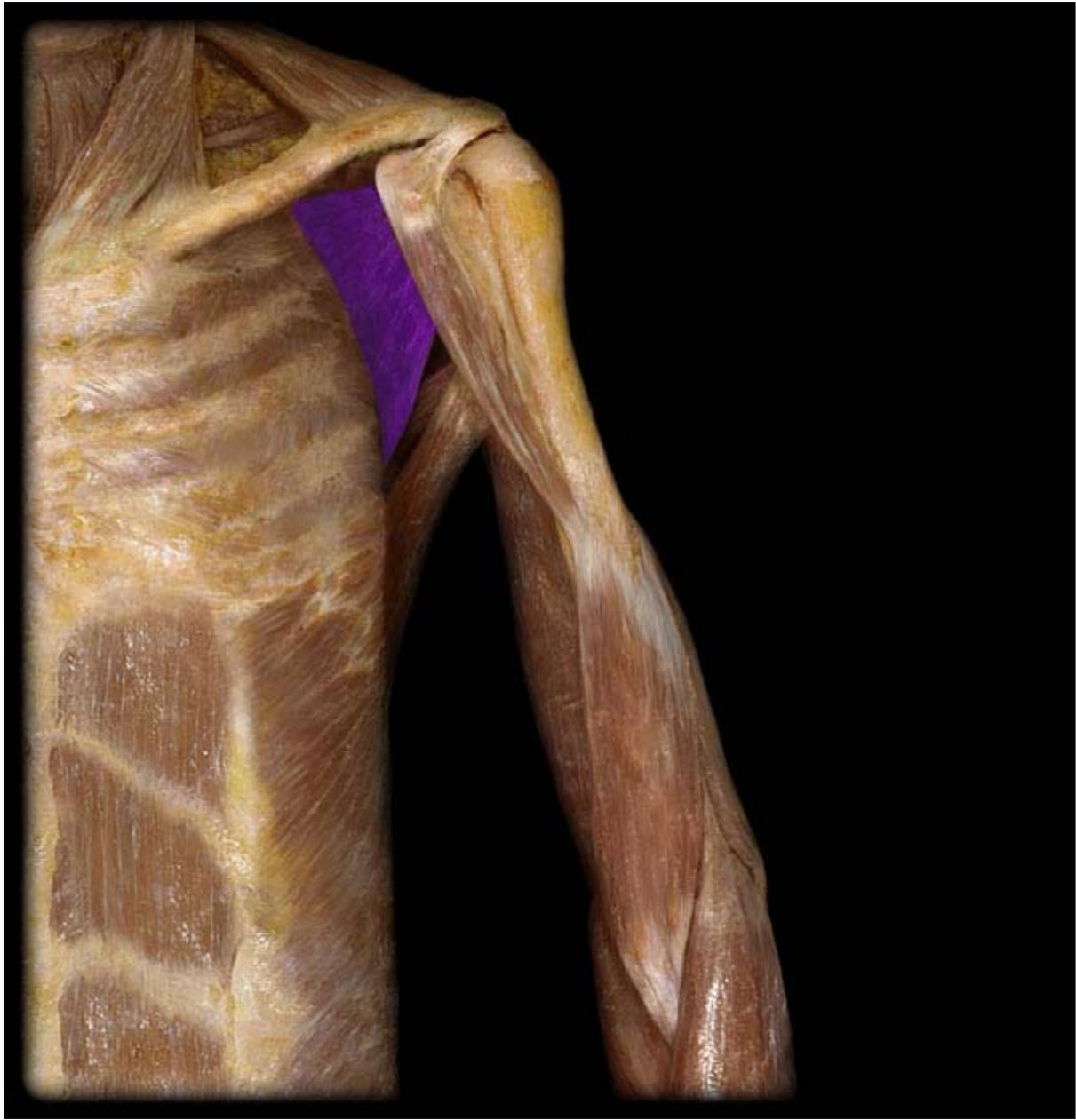
Infraspinatus

(IN-fra-spy-NAY-tus)

Latin prefix, infra, means below. Aids deltoid in abduction of arm

O: supraspinous fossa of scapula

I: greater tubercle of humerus





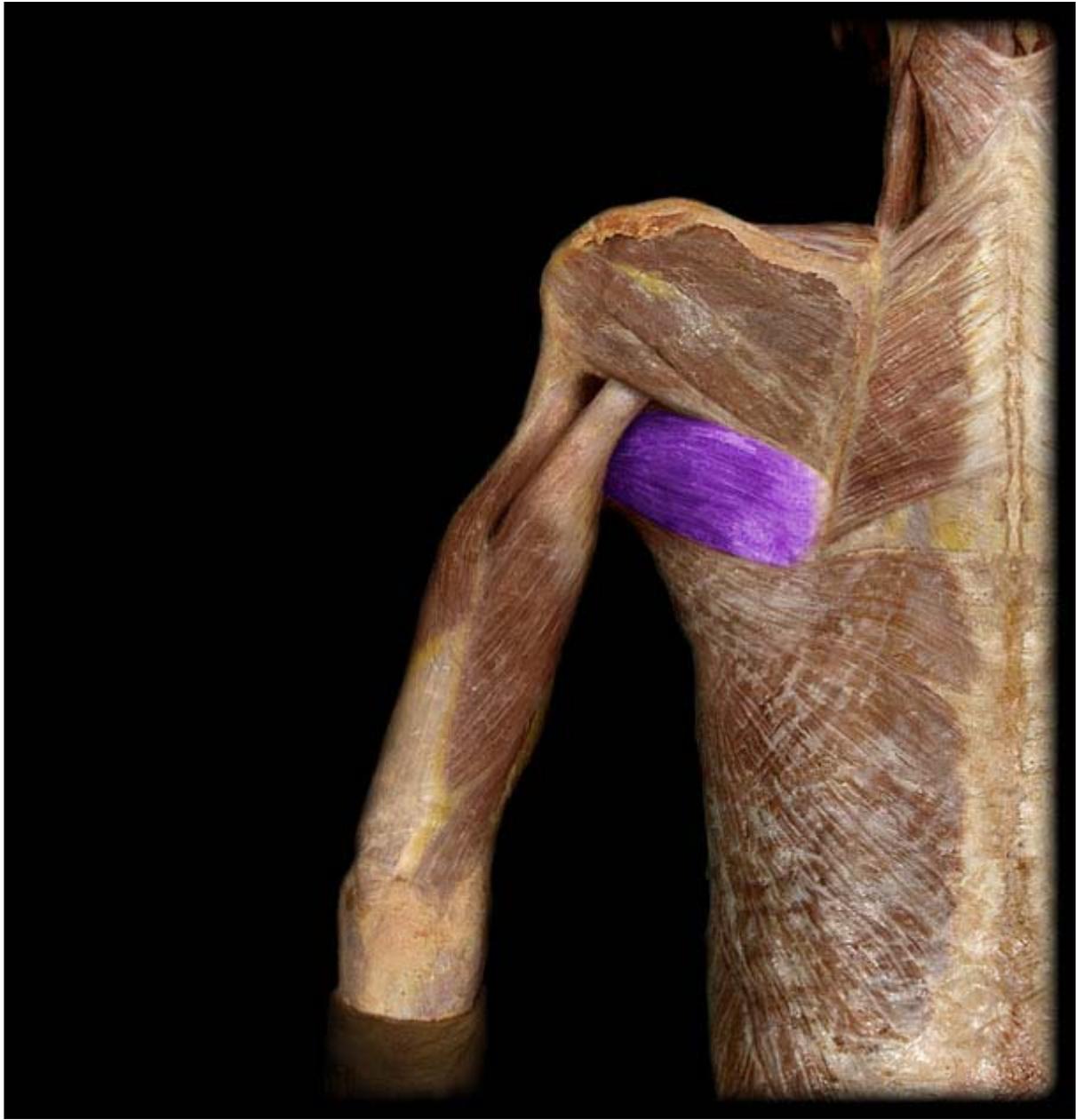
Subscapularis

(SUB-SCAP-you-LERR-
iss)

modulates action of
deltoid plus rotates
humerus medially

O: subcapular fossa of
scapula

I: lesser tubercle of
humerus





Teres Major

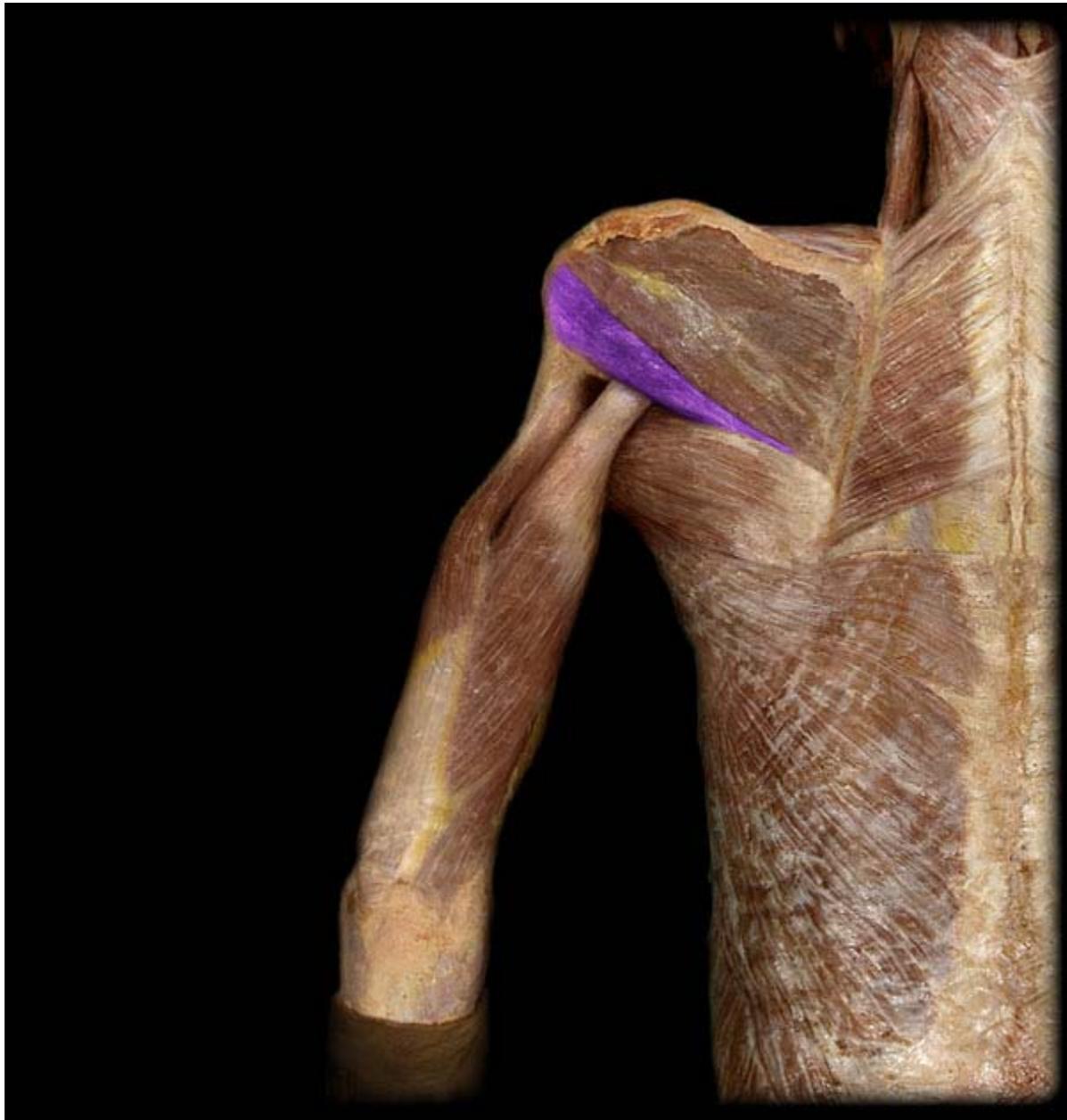
(TERR-ezz)

Teres is a Latin word which means round and smooth. This muscle extends and medially rotates humerus

O: inferior angle of scapula

I: medial lip of intertubercular sulcus of humerus





Teres Minor

(TERR-ezz)

prevents humeral head from sliding upward as arm is abducted, rotates humerus laterally

O: lateral border and adjacent posterior surface of scapula

I: greater tubercle of humerus, posterior surface of joint capsule





Latissimus Dorsi

(la-TISS-ih-mus DOR-sye)

The Latin word “latus” means broad and flat. This muscle adducts and medially rotates humerus

O: vertebrae T7 through L5

I: floor of intertubercular sulcus of humerus





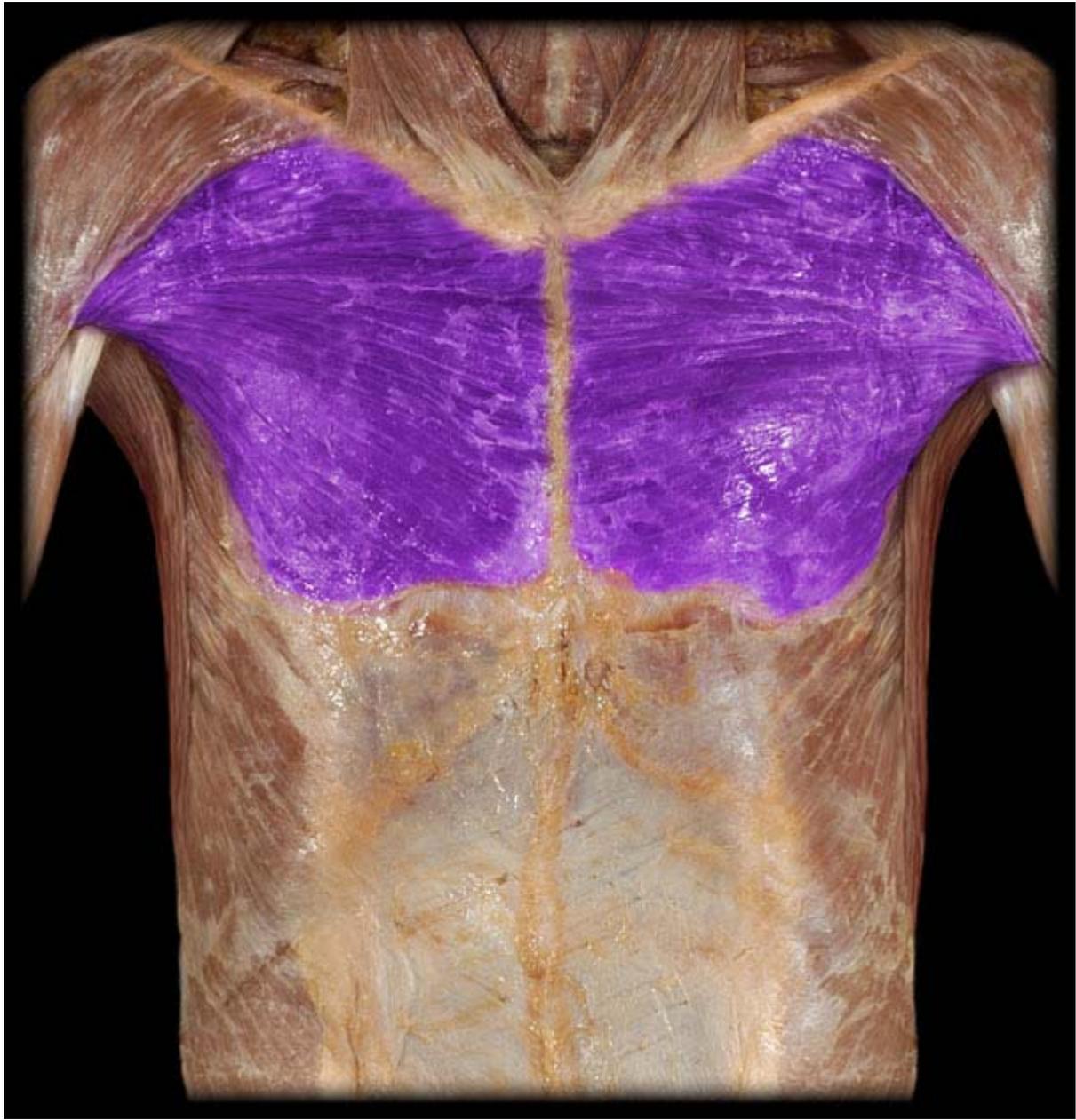
Trapezius

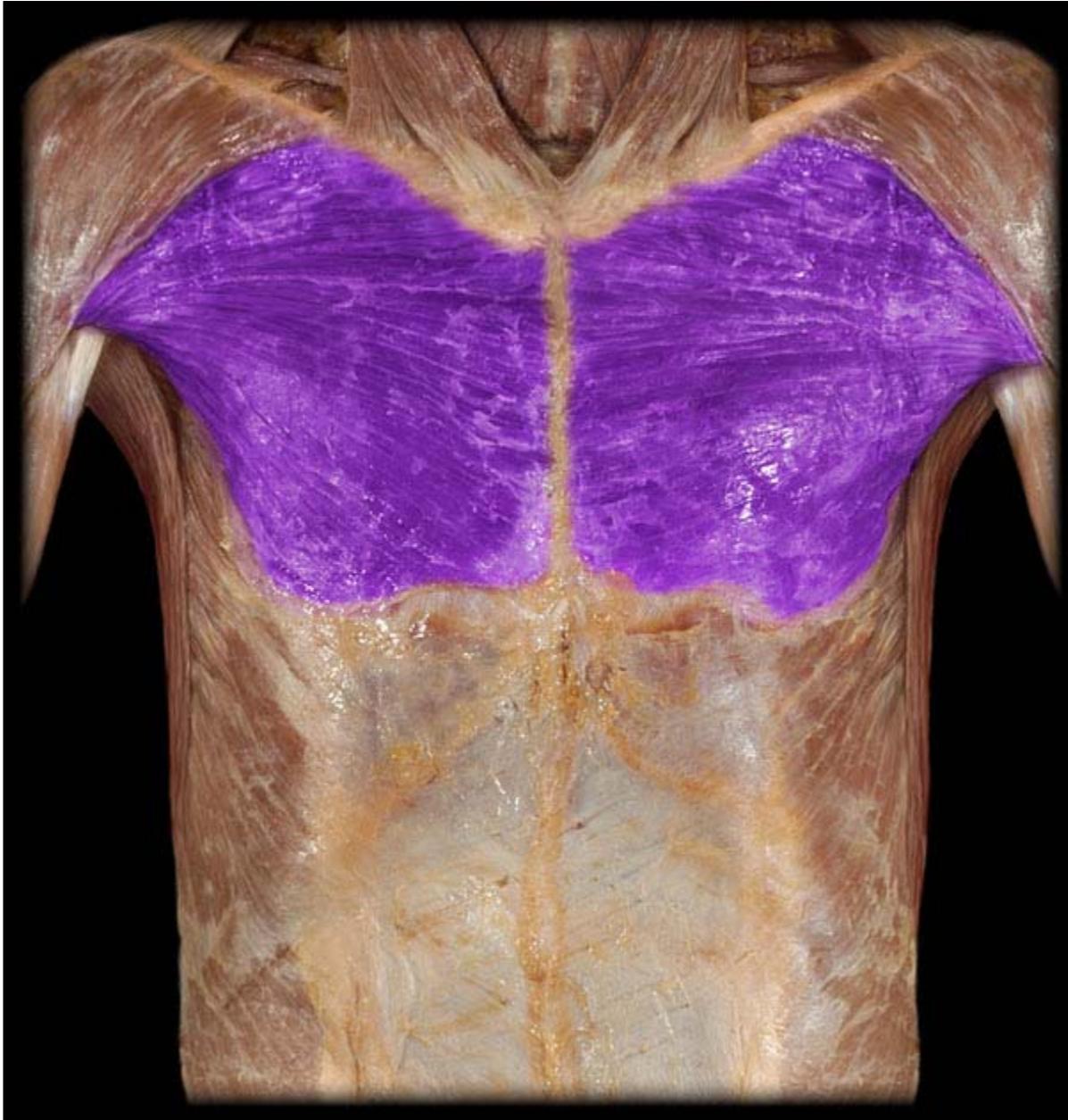
(tra-PEE-zee-us)

Muscle named for its shape which resembles a trapezoid. This muscle extends and laterally flexes neck

O: external occipital protuberance, medial one-third superior nuchal line, spinous processes of vertebrae C7-T4

I: acromion and spine of scapula, lateral third of clavicle





Pectoral Major

(PECK-toe-RAY-liss)

The Latin word “pectus” means chest. This chest muscle flexes, adducts, medially rotates humerus as in aid to hugging

O: medial half of clavicle, lateral margin of sternum, costal cartilages of 1 through 7

I: lateral lip of intertubercular sulcus of humerus





Pectoral Minor
(not required)





Serratus Anterior

(serr-AY-tus)

The Latin word “serra” means saw. The muscle’s margins look like the cutting edge of a saw. This muscle draws the scapula laterally and forward around the chest.

O: nearly all ribs

I: medial border of scapula





Coracobrachialis

(COR-uh-co-BRAY-kee-AY-lis)

flexes and medially rotates arm

O: coracoid process of ulna

I: medial aspect of humeral shaft





Biceps Brachii

(BY-seps BRAY-kee-eye)

This muscle gets its name from two Latin words: brachial which means arm and caput which means head. Bi-caput would mean two headed. This muscle's action is the forceful supination of forearm and synergist in elbow flexion

O: the long head to superior margin of glenoid cavity, the short head to coracoid process of scapula

I: tuberosity of radius





Biceps Brachii
(Long Head)





Biceps Brachii
(Short Head)



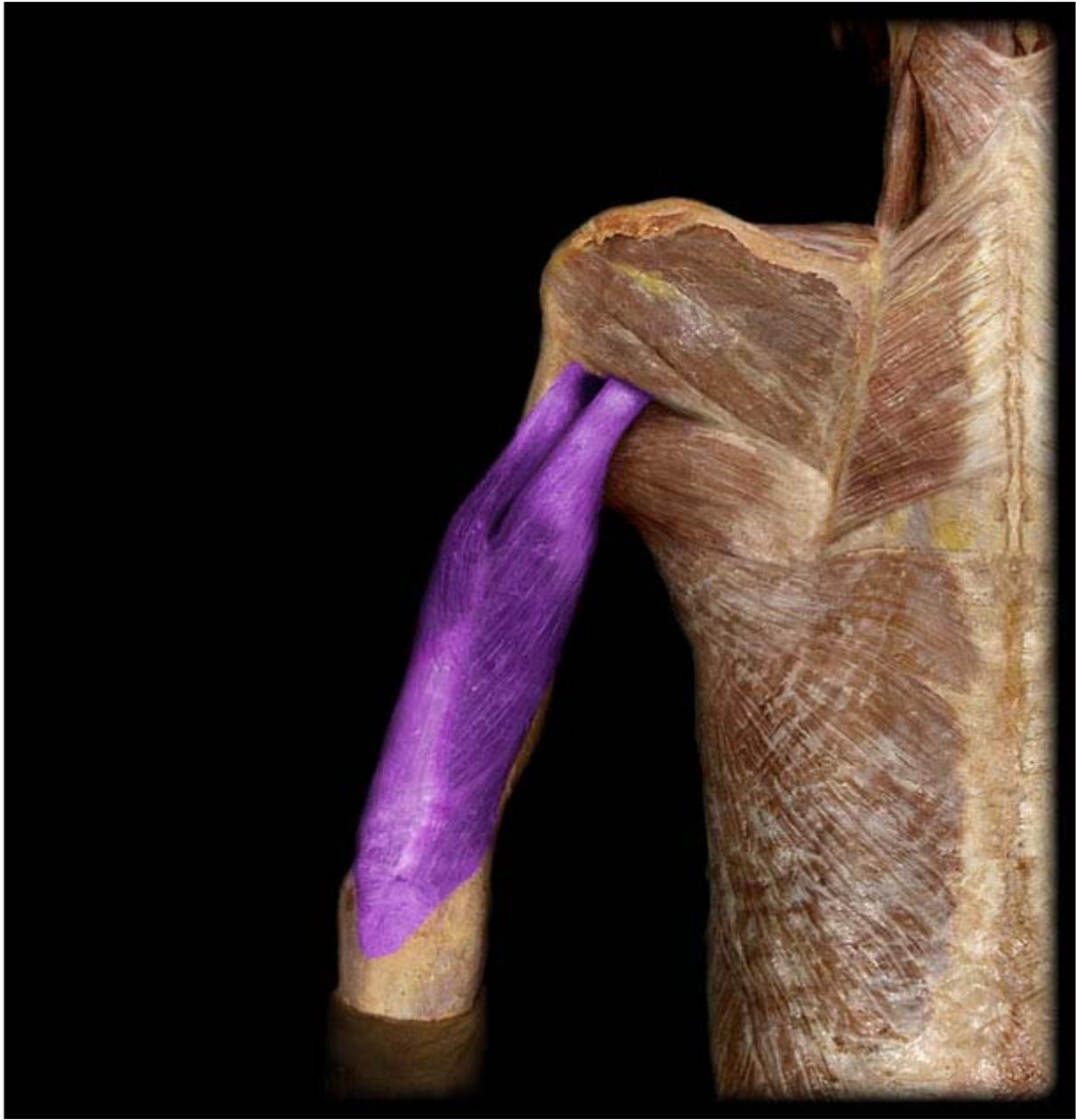


Biceps Brachii





Biceps Brachii





Triceps Brachii

(TRI-seps-BRAY-kee-eye)

The only muscle on the dorsal surface of the upper arm. It extends elbow, long head extends and adducts humerus

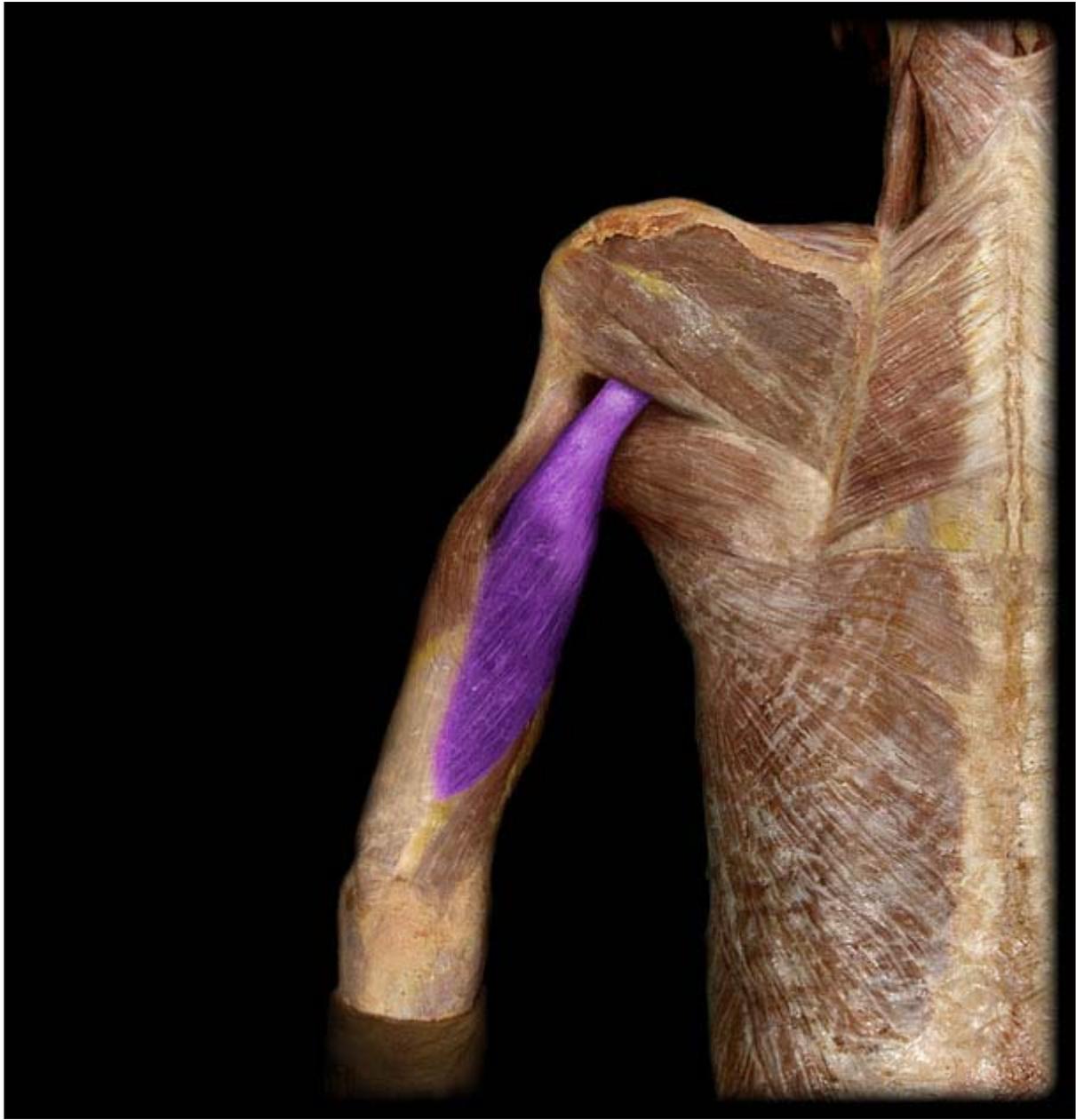
O: long head to inferior margin of glenoid cavity, lateral head to posterior surface of proximal end of humerus, medial head to posterior surface of entire humeral shaft

I: olecranon of ulna





Triceps Brachii
(Lateral Head)





Triceps Brachii
(Long Head)





Triceps Brachii
(Medial Head)





Brachialis

(BRAY-kee-AY-lis)

prime mover of elbow flexion

O: anterior surface of distal half of humerus

I: coronoid process and tuberosity of ulna





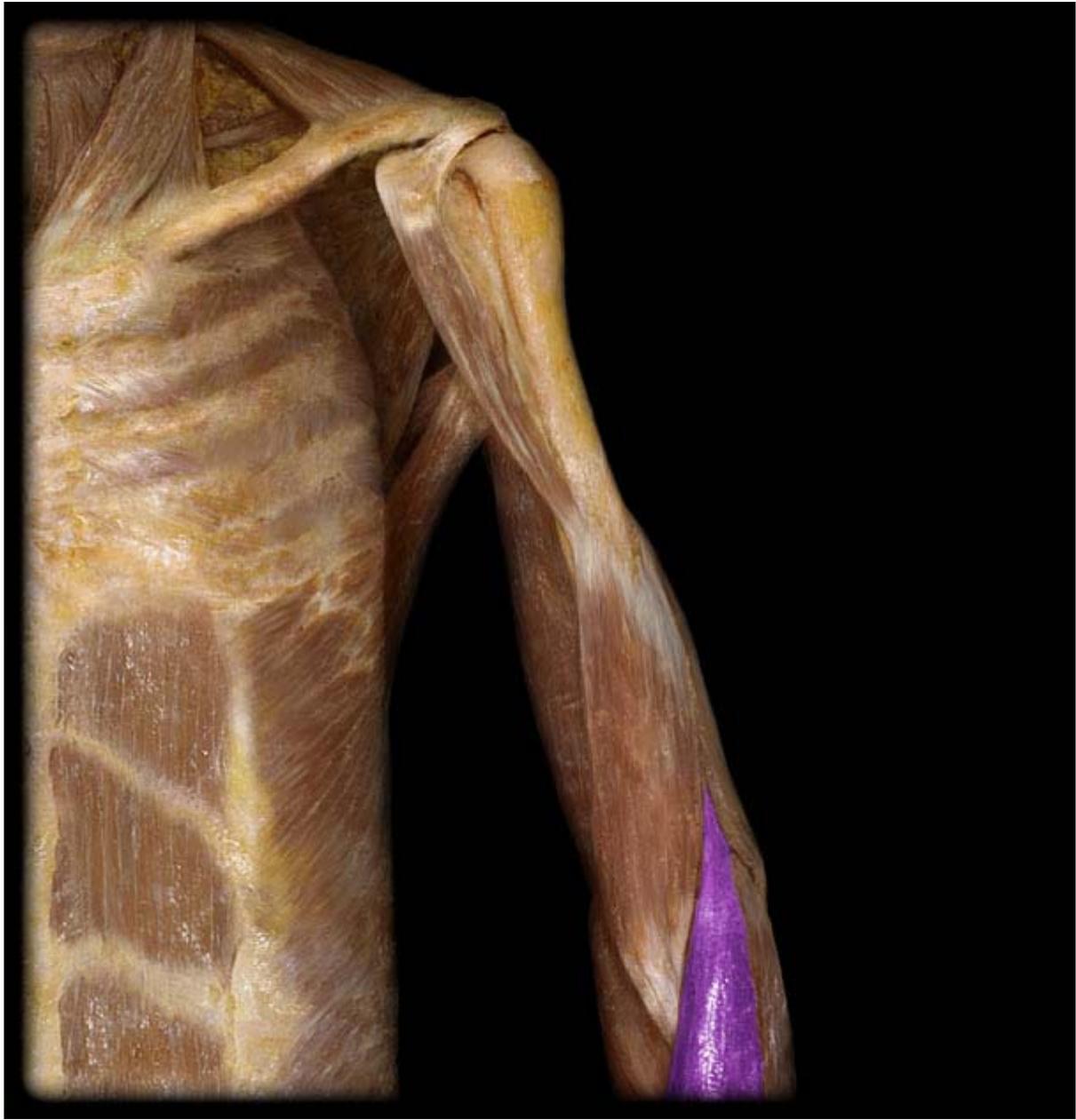
Brachioradialis

(BRAY-kee-oh-RAY-dee-AY-lis)

flexes elbow

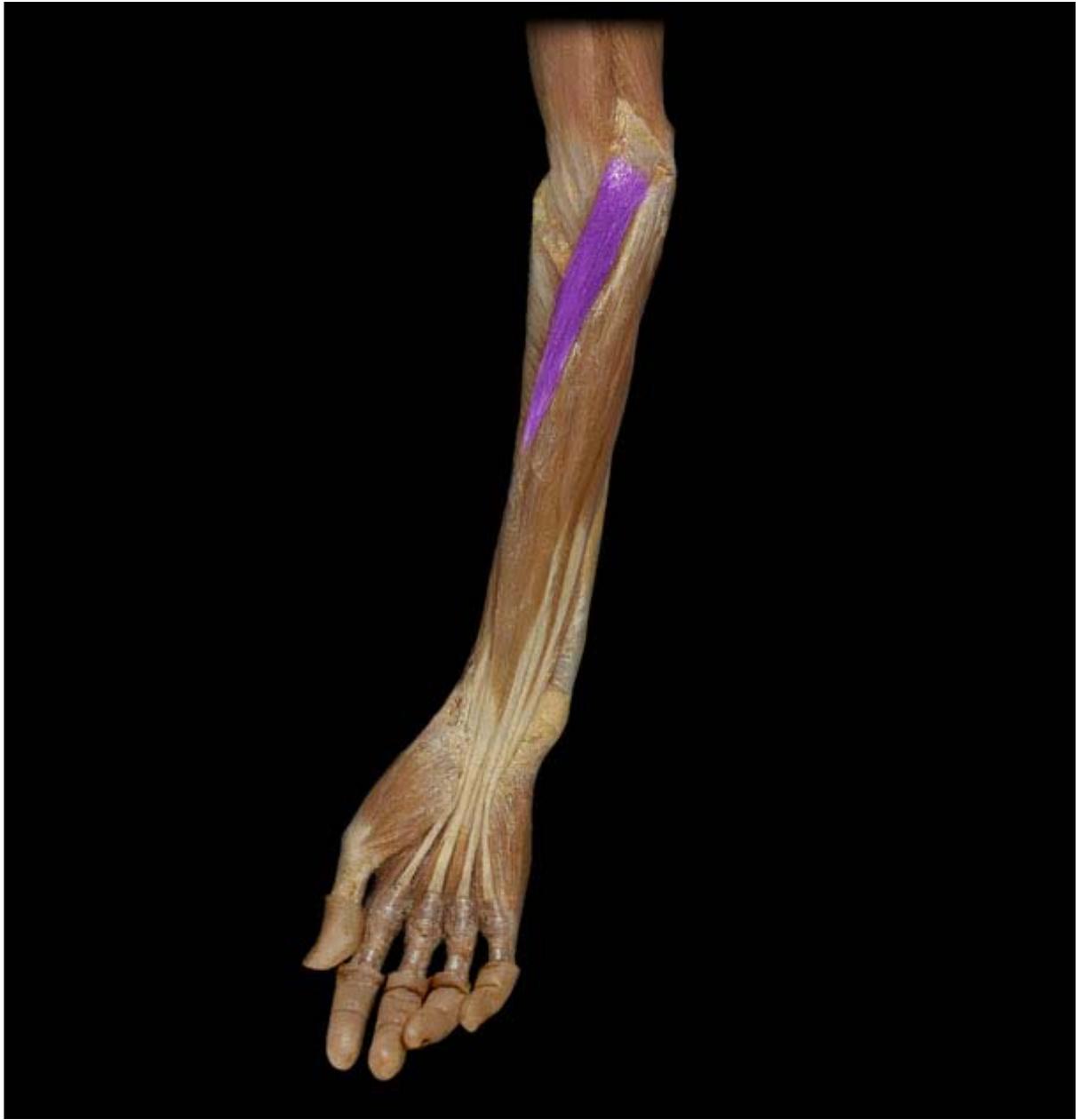
O: lateral supracondylar ridge of humerus

I: lateral surface of radius near styloid process



Brachioradialis







Pronator Teres

(PRO-nay-tur TERR-ezz)

assists pronator
quadratus in pronation
but only in forceful action

O: humeral shaft near
medial epicondyle,
coronoid process of ulna

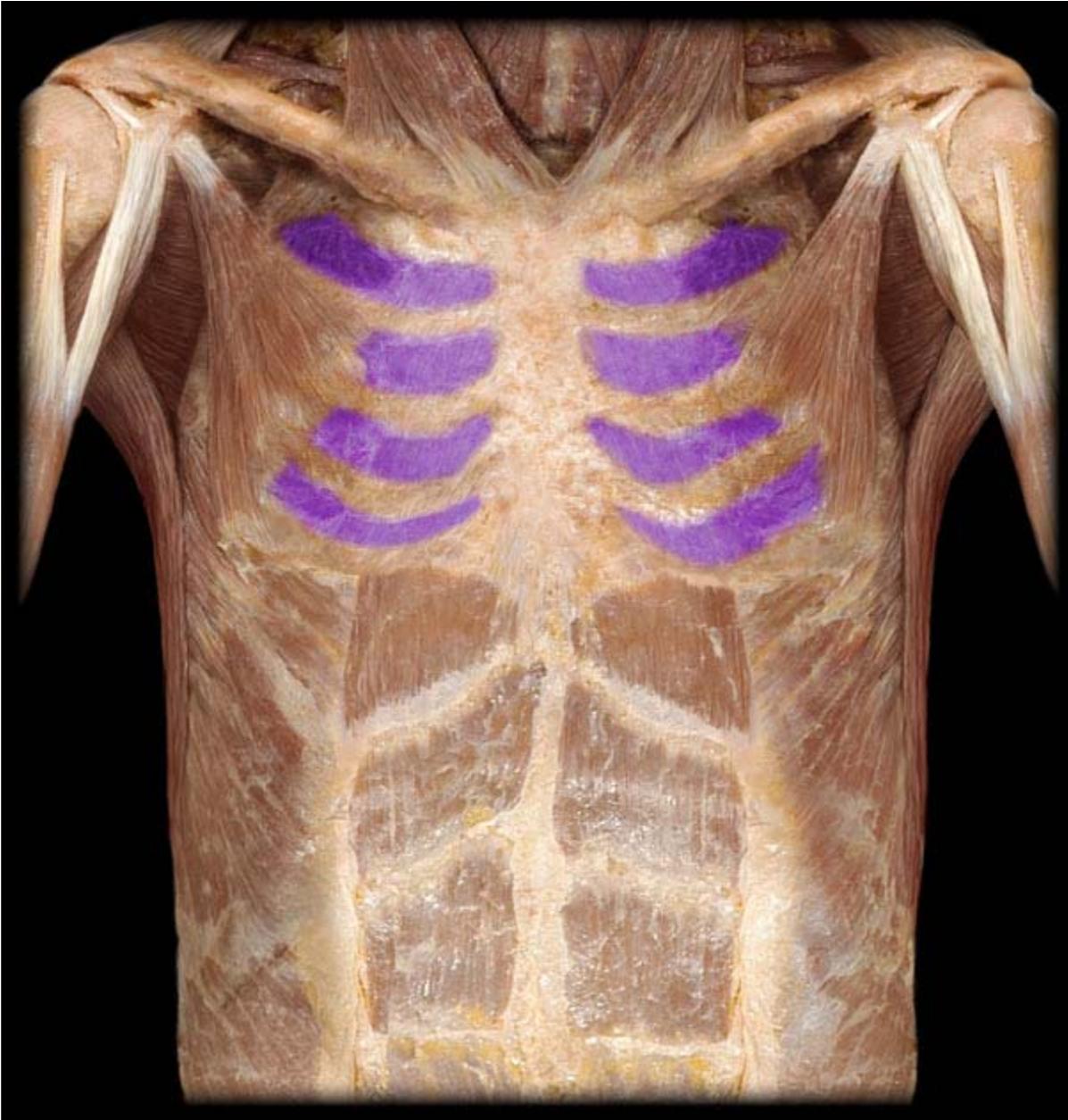
I: lateral surface of radial
shaft



Pronator Quadratus
(not required)







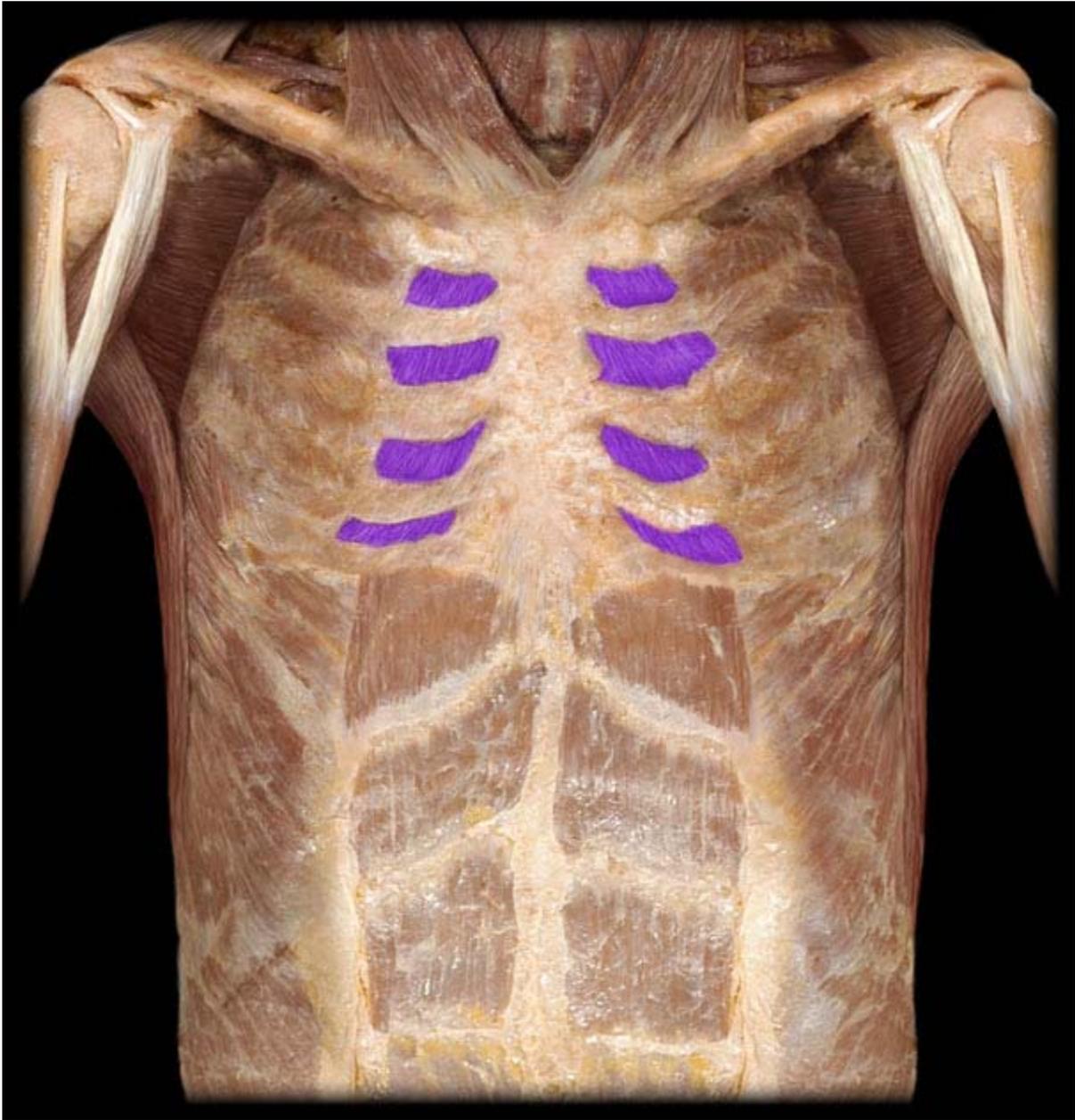
External Intercostal

(IN-tur-COSS-tulz)

elevate and protract ribs 2 through 12, expanding the thoracic cavity, aid to forced inspiration

O: inferior margins rib 1 through 11

I: superior margin of next lower rib



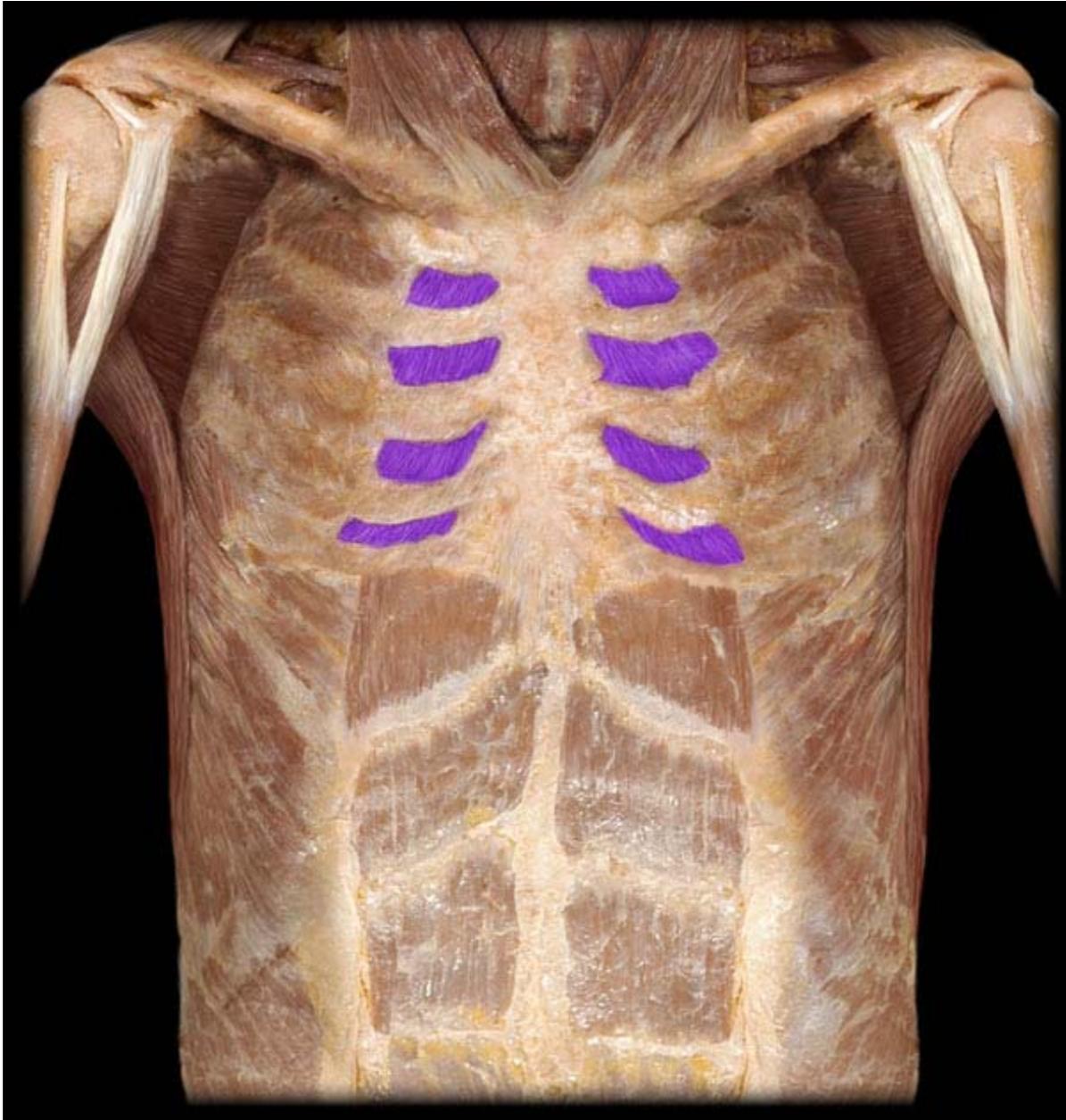
Internal Intercostal

intercartilaginous attachment aids in inspiration

interosseous attachment aids in expiration

O: superior margins and costal cartilages of ribs 2 through 12

I: inferior margins of next higher rib







External Oblique

supports abdominal viscera against pull of gravity

O: ribs 5-12

I: anterior half of iliac crest, symphysis and superior margin of pubis





Internal Oblique

supports abdominal viscera against pull of gravity plus unilateral contraction causes ipsilateral rotation of waist

O: inguinal ligament, iliac crest, thoracolumbar fascia

I: ribs 10-12, costal cartilage 7-10, pubis



Rectus Abdominis

(REC-tus ab-DOM-ih-nis)

Rectus is Latin for straight. This muscle flexes lumbar region of vertebral column

O: pubis symphysis, superior margin of pubis

I: xiphoid process, costal cartilage 5-7





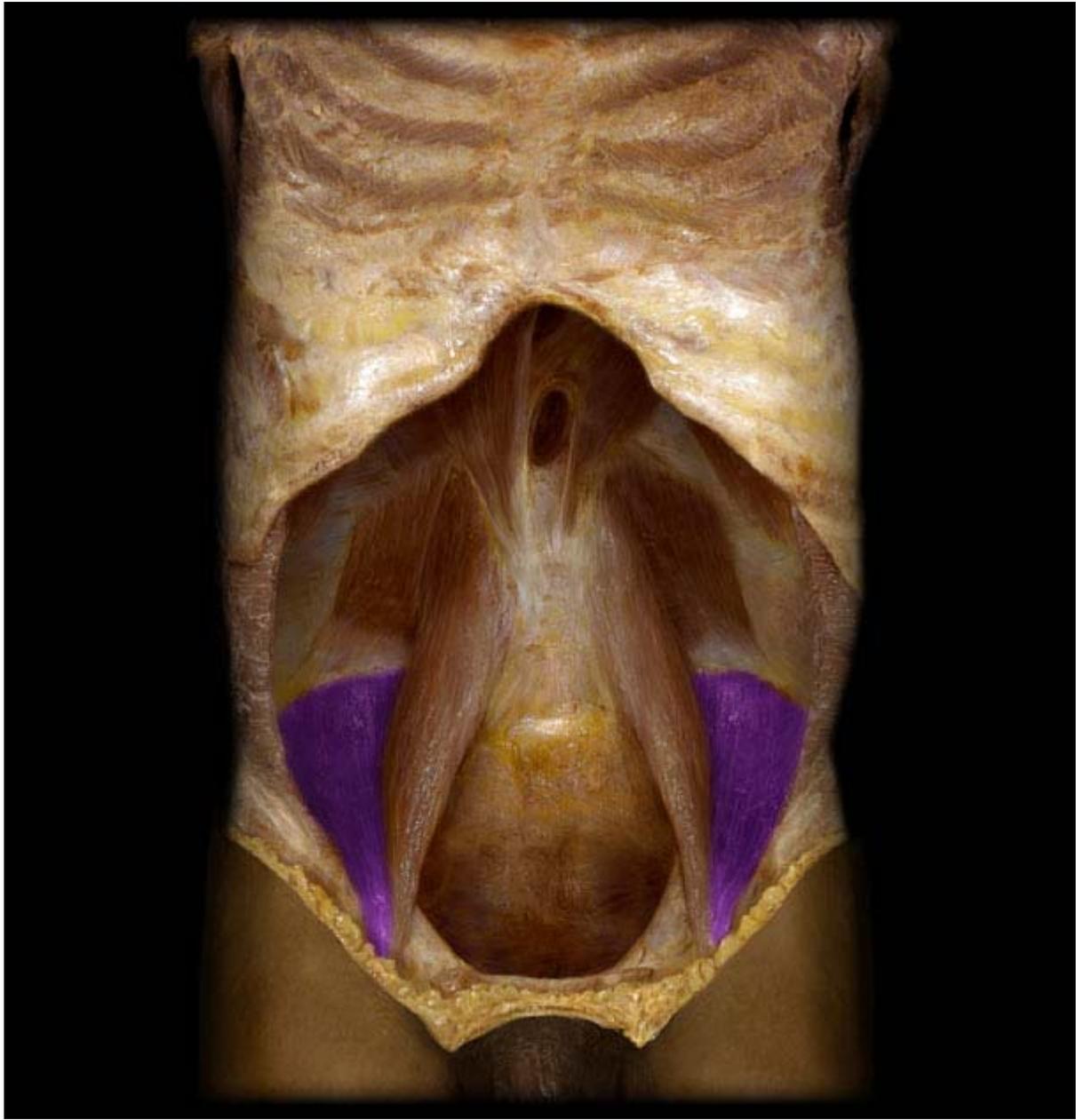


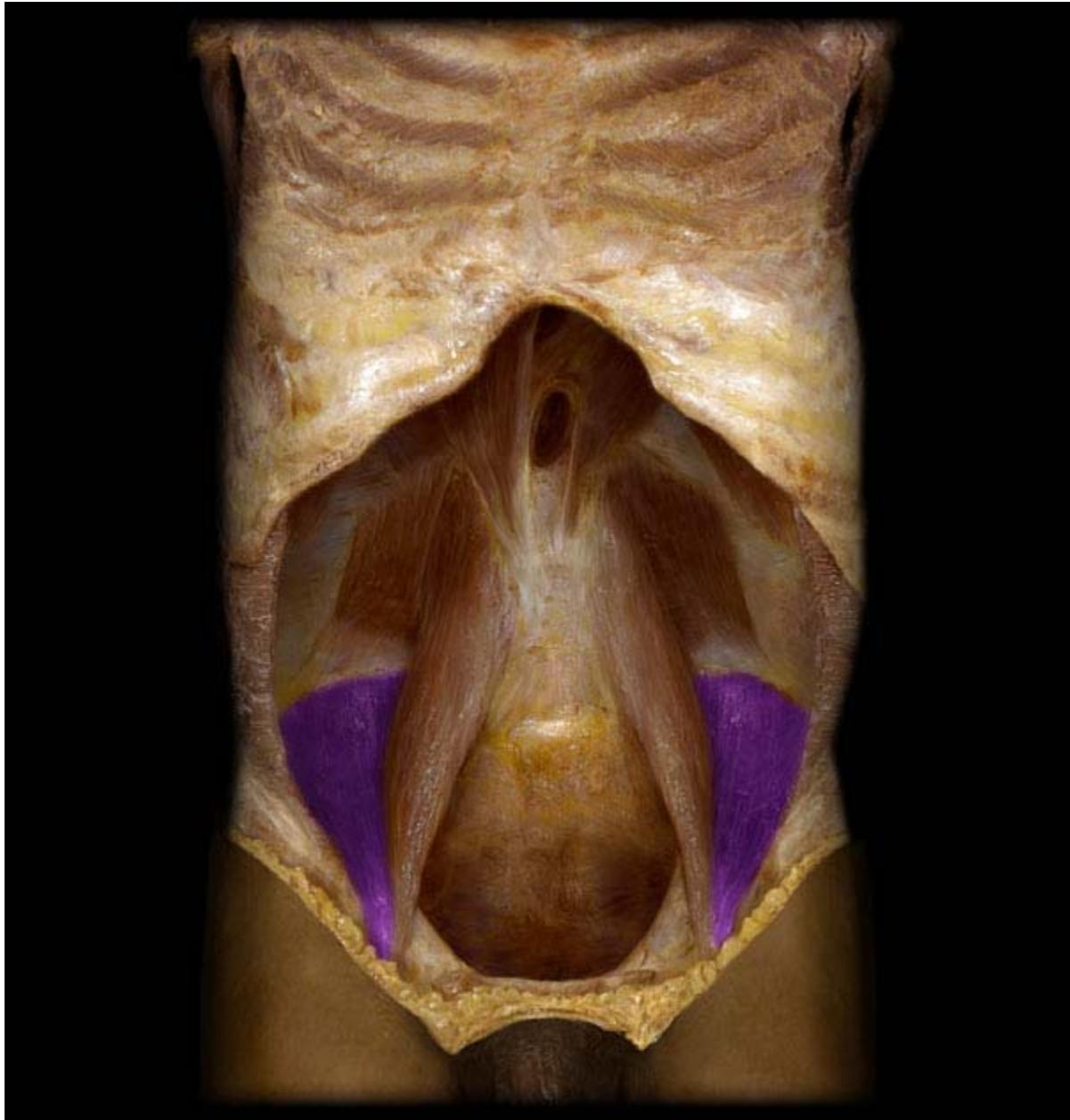
Transverse Abdominis

compresses abdominal content

O: inguinal ligament, iliac crest, thoracolumbar fascia

I: linea alba, pubis, aponeurosis of internal oblique





Iliacus

(ih-LY-uh-cus)

flexes thigh at hip, flexes trunk at hip when thigh fixed

O: iliac crest, iliac fossa

I: lesser trochanter





Psoas Major





Adductor Longus





Adductor Magnus

Magnum is the Latin word for large. The largest adductor muscle is located on the medial surface of the upper leg just posterior to the gracilis muscle. The adductor magnus adducts and medially rotates thigh, flexes thigh at hip

O: inferior ramus of pubis, tuberosity of ischium

I: gluteal tuberosity and medial supracondylar line of femur



Gracilis

(GRASS-ih-lis)

Gracilis is Latin for slender. The gracilis flexes and medially rotates tibia at knee

O: body and inferior ramus of pubis, ramus of ishium

I: medial surface of tibia just below condyle







Sartorius

In Latin the word sartor means a tailor. The muscle used in crossing your legs in the tailor's position is called the sartorius. It runs diagonally across the ventral upper leg. Sartorius aids in knee and hip flexion, abducts and laterally rotates thigh

O: anterior superior spine of ilium

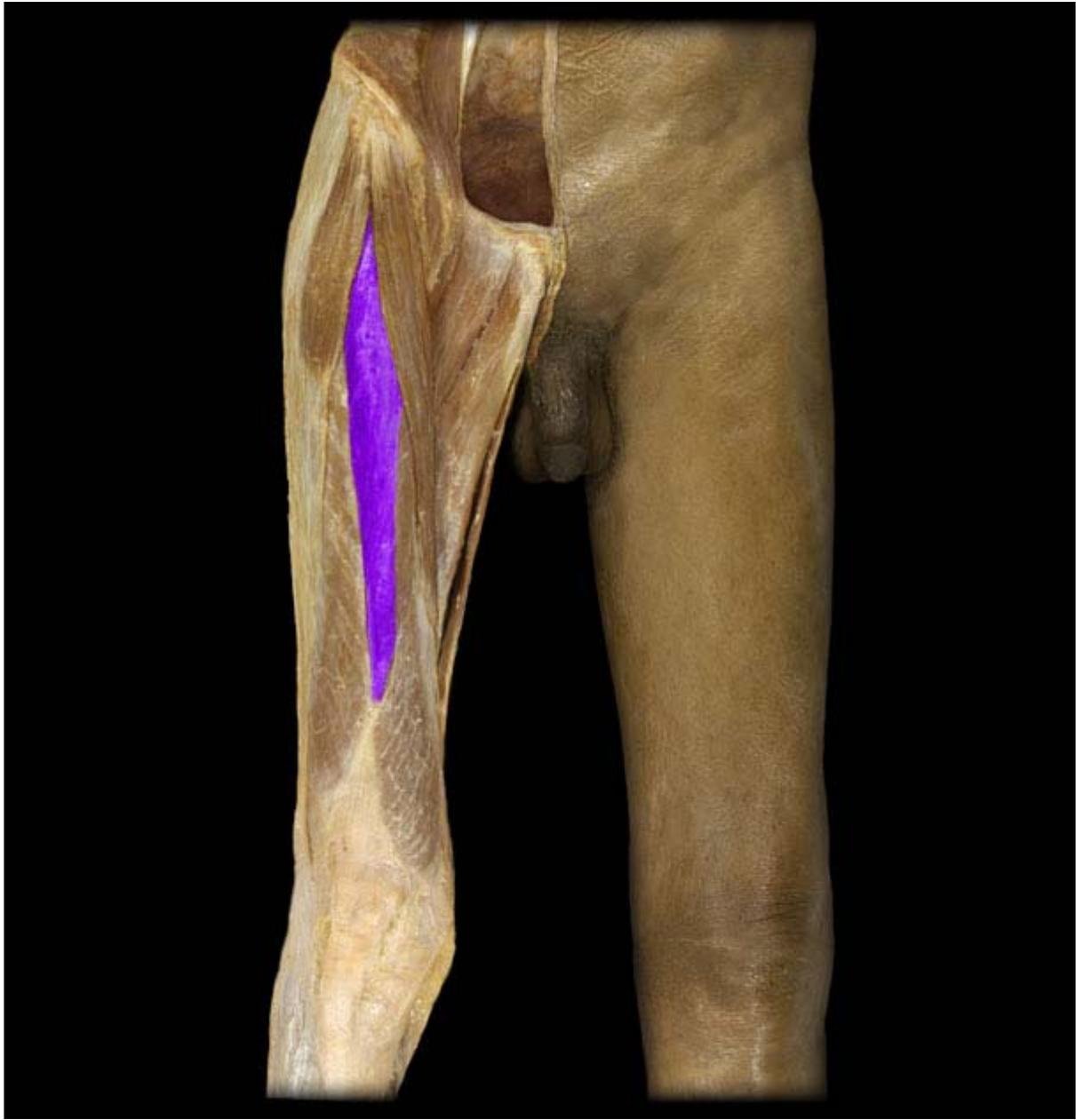
I: medial surface of proximal end of tibia





Quadriceps Femoris

The “Quadriceps Femoris Group” consists of the rectus femoris, vastus intermedius, vastus lateralis, and vastus medialis. It is the most powerful muscle of the body



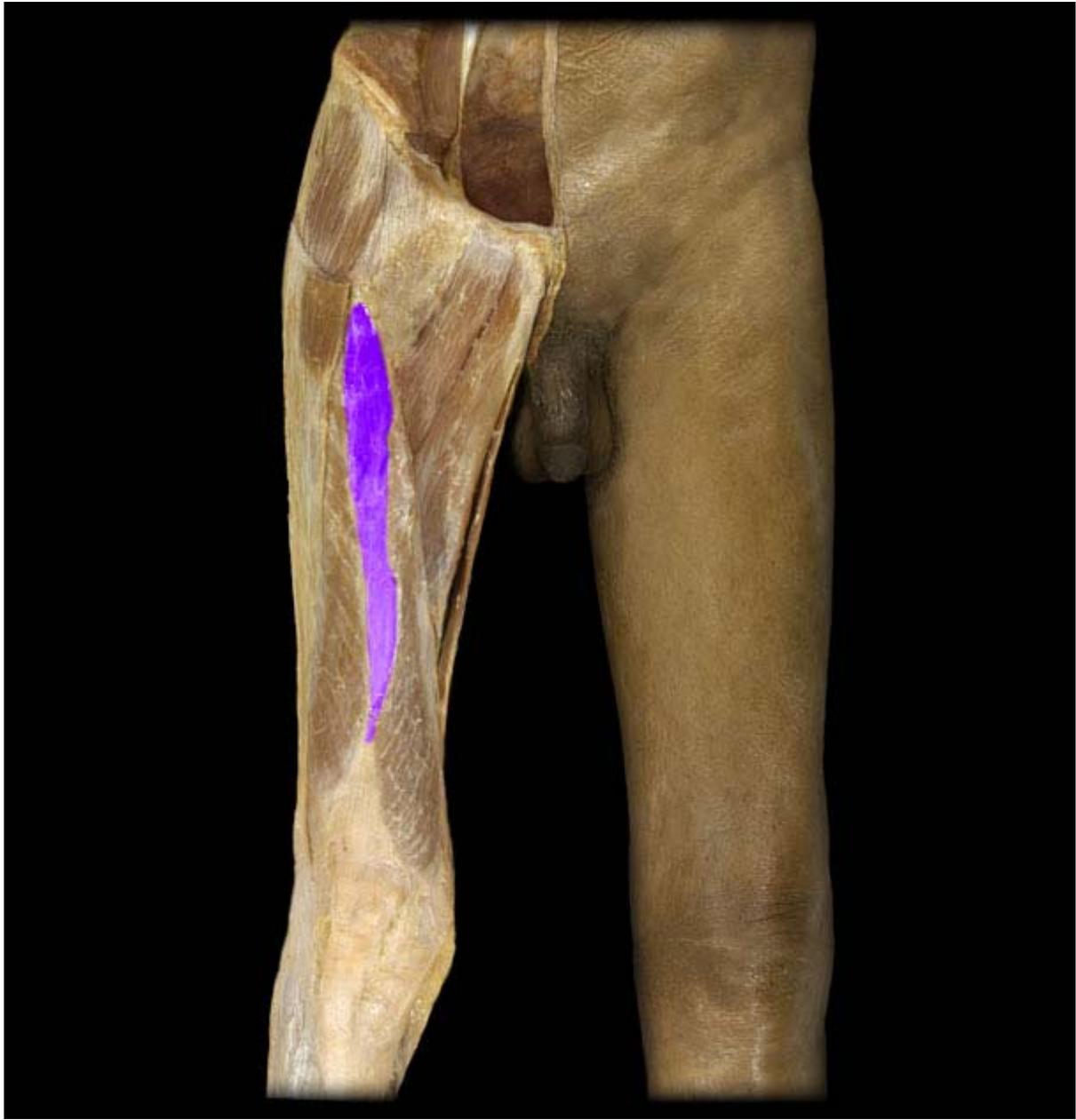


Rectus Femoris

Rectus is Latin for straight. The rectus femoris extends knee, flexes thigh or trunk

O: ilium at anterior inferior spine

I: patella, tibial tuberosity, condyles of tibia

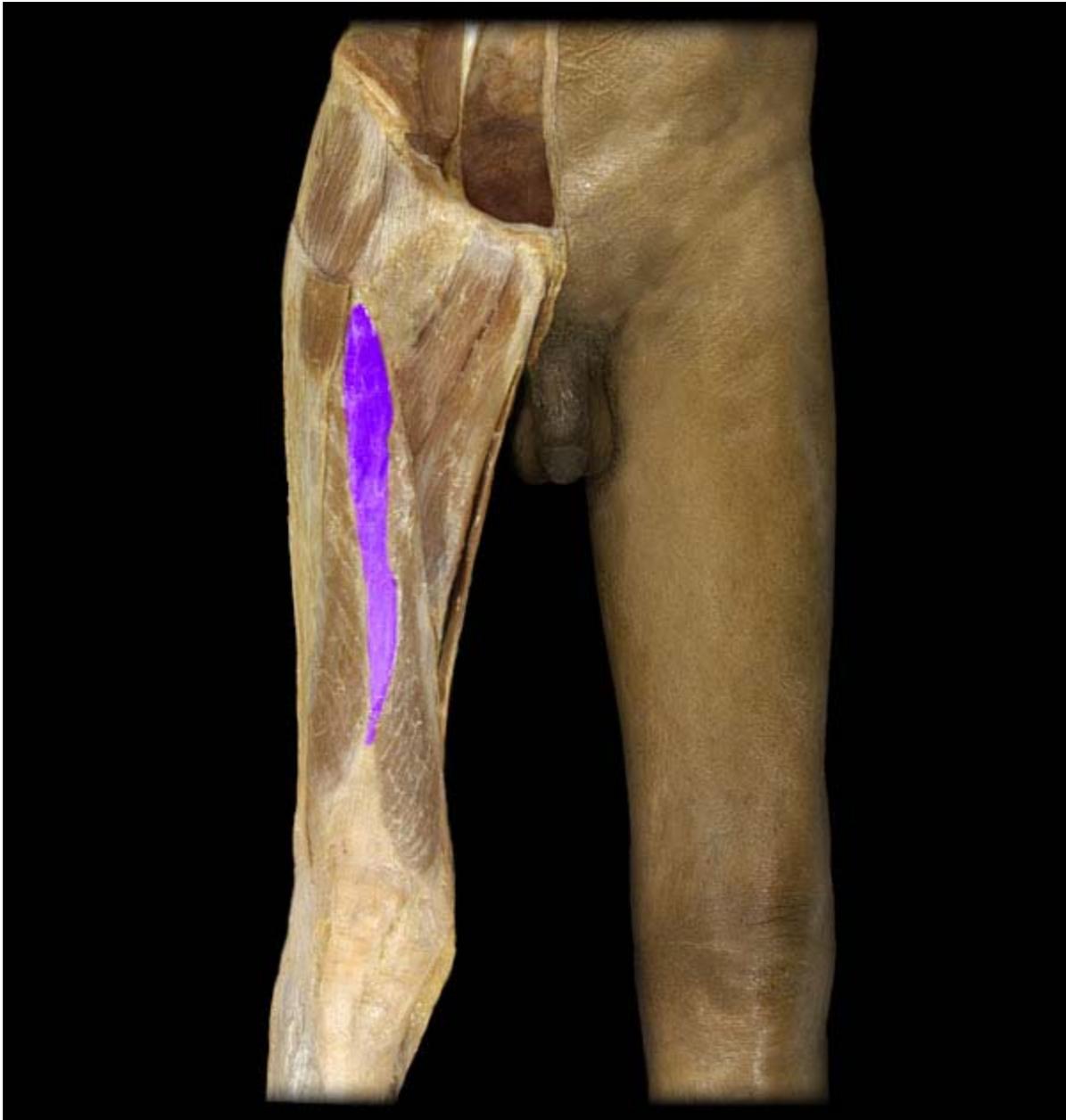


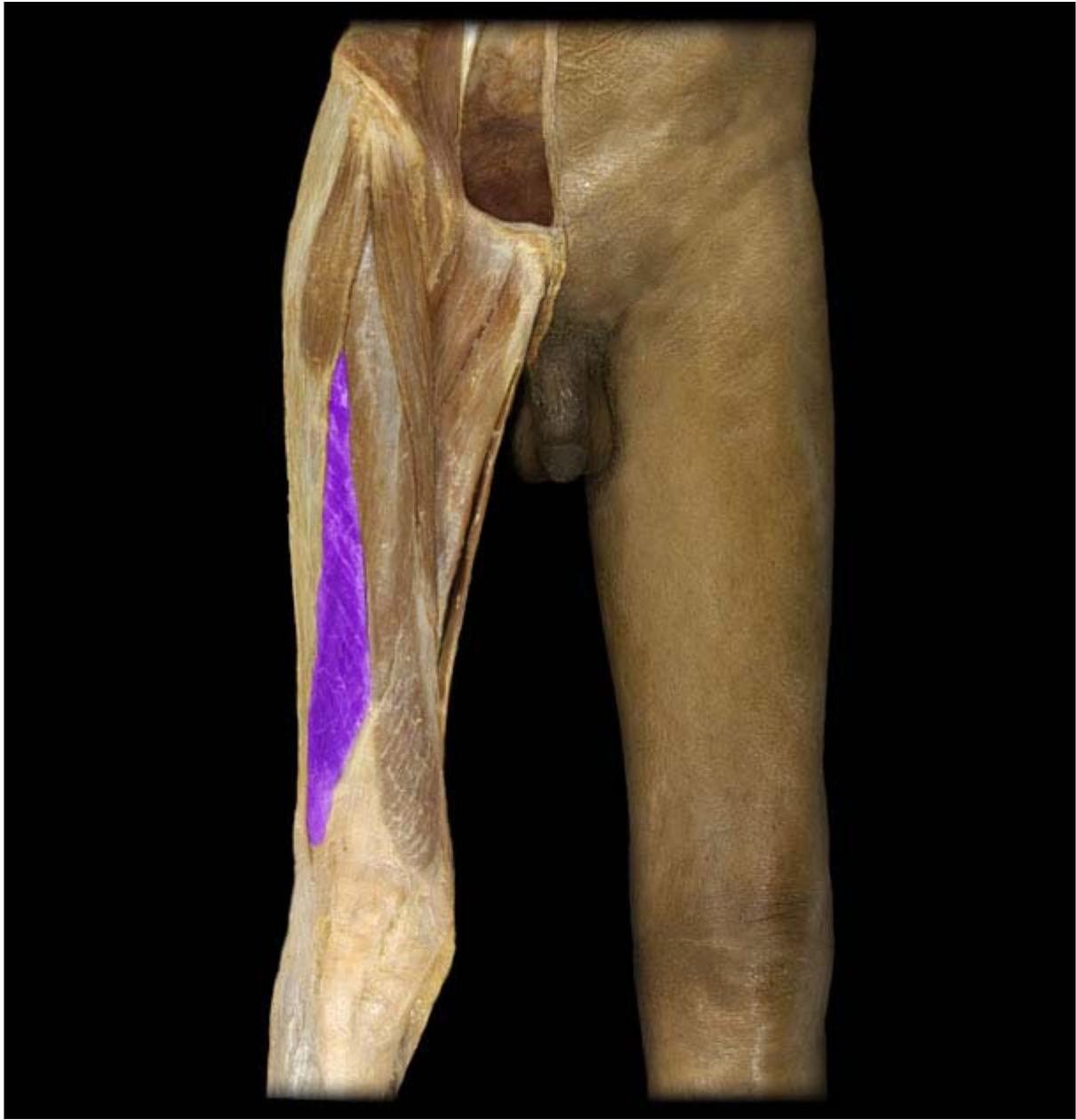
Vastus Intermedius

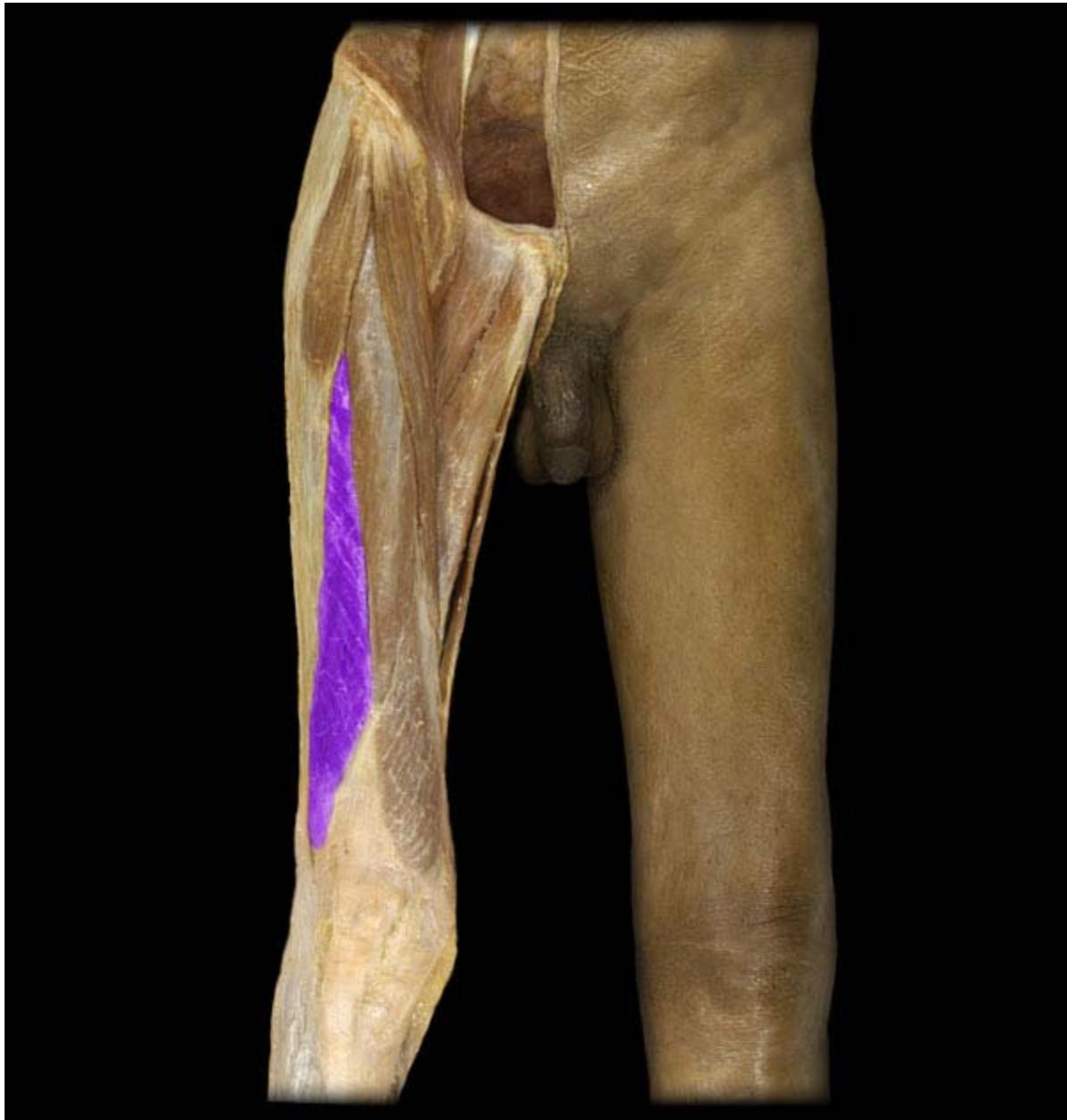
Vastus is Latin for great. You will not be able to see this muscle on the leg model unless you remove the rectus femoris. It is visible on the muscle chart. The vastus intermedius extends knee

O: anterior and lateral surfaces of femoral shaft

I: patella, tibial tuberosity, lateral and medial condyles of tibia







Vastus Lateralis

extends knee

O: femur of greater trochanter

I: patella, tibial tuberosity, lateral and medial condyles of tibia





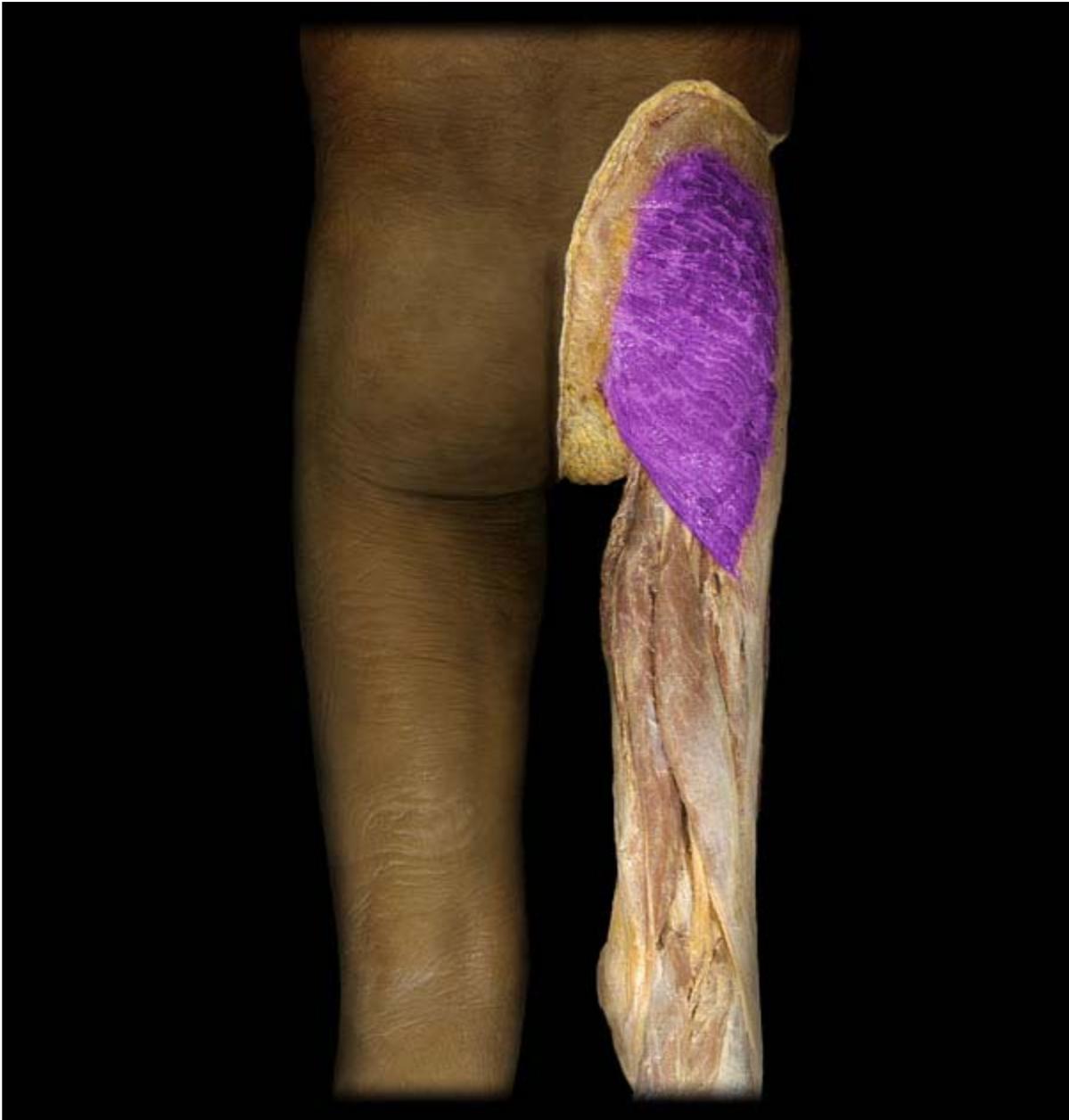
Vastus Medialis

extends knee

O: femur
intertrochanteric line

I: patella, tibial
tuberosity, lateral and
medial condyles of tibia





Gluteus Maximus

Gluteus is from the Greek word meaning buttock. Maximus is Latin for greatest. The gluteus maximus extends thigh at hip as in stair climbing, backswing of leg as when walking

O: posterior gluteal line of ilium, posterior surface from iliac crest to posterior superior spine

I: gluteal tuberosity of femur





Gluteus Medius

abducts and medially rotate thigh as in walking

O: most of lateral surface of ilium

I: greater trochanter of femur





Gluteus Minimus
(Not Required)



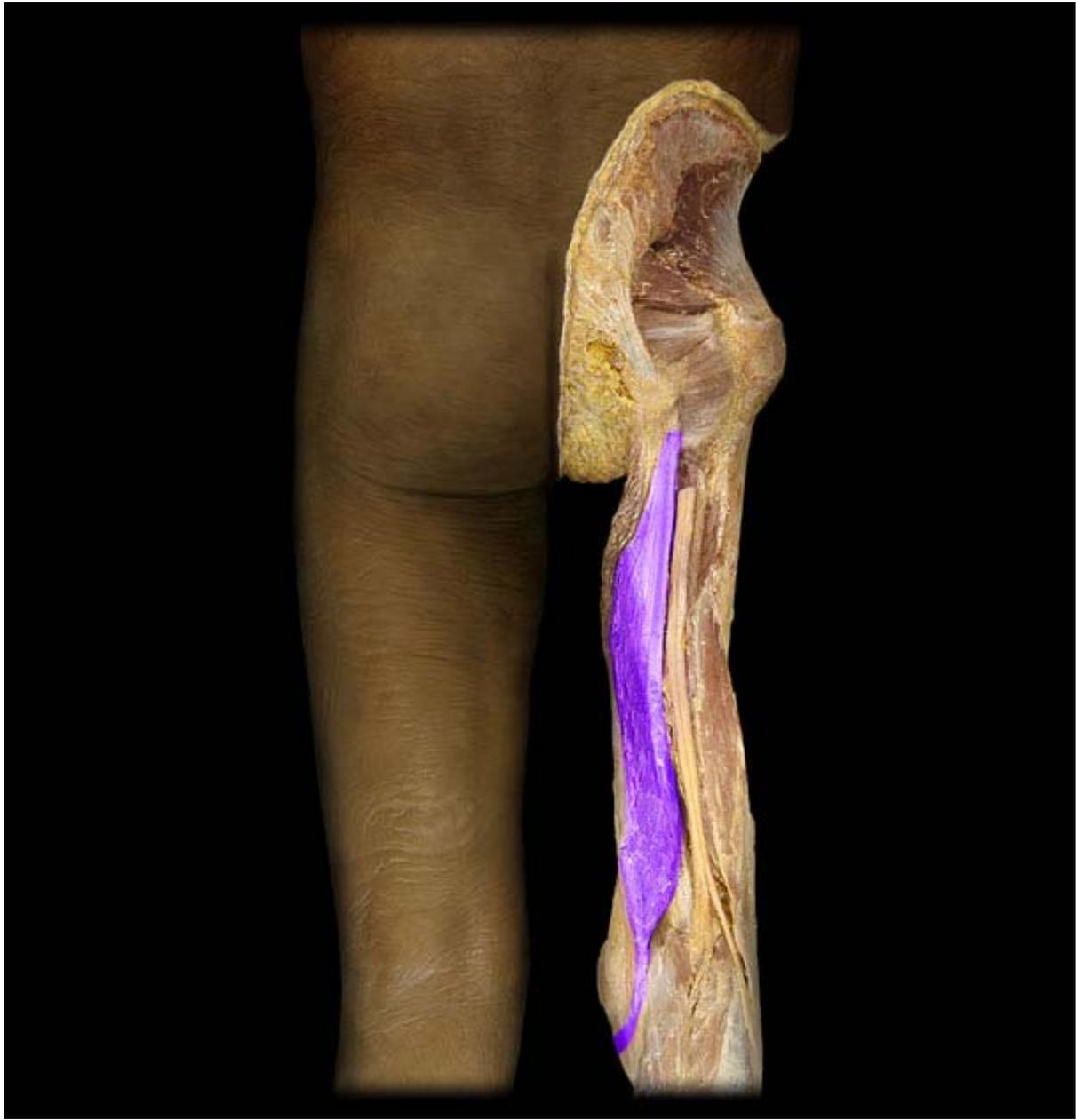


Biceps Femoris

flexes knee, extends hip

O: long head to ischial tuberosity, short head to lateral supracondylar line of femur

I: head of femur





Semimembranosus

(SEM-ee-TEN-din-OH-sus)

flexes knee, medially rotates tibia on femur, medially rotates femur when hip is extended

O: ischial tuberosity

I: medial surface of upper tibia





Semitendinosus

(SEM-ee-TEN-din-OH-sus)

flexes knee, medially rotates tibia on femur, medially rotates femur when hip is extended

O: ischial tuberosity

I: medial surface of upper tibia





Gastrocnemius

(GAS-trock-Nee-me-us)

plantar flexes foot,
flexes knee as in
walking, superficial to
the soleus muscle

O: condyles and
supracondylar line of
femur

I: calcaneus





Soleus

(SO-lee-us)

plantar flexes foot,
steadies leg on ankle
when standing, deep to
the gastrocnemius

O: posterior surface of
head and proximal one-
fourth of fibula, middle
one-third of tibia

I: calcaneus





Extensor Digitorum Longus

(DIDJ-ih-TOE-rum) /

extends toes, dorsiflexes
foot

O: lateral condyle of tibia,
shaft of fibula

I: middle and distal
phalanges II-V





Tibialis Anterior

(TIB-ee-AY-lis)

dorsiflexes and invert
foot, resist backward
tipping of body

O: lateral condyle and
lateral margin of
proximal half of tibia

I: medial cuneiform,
metatarsal I