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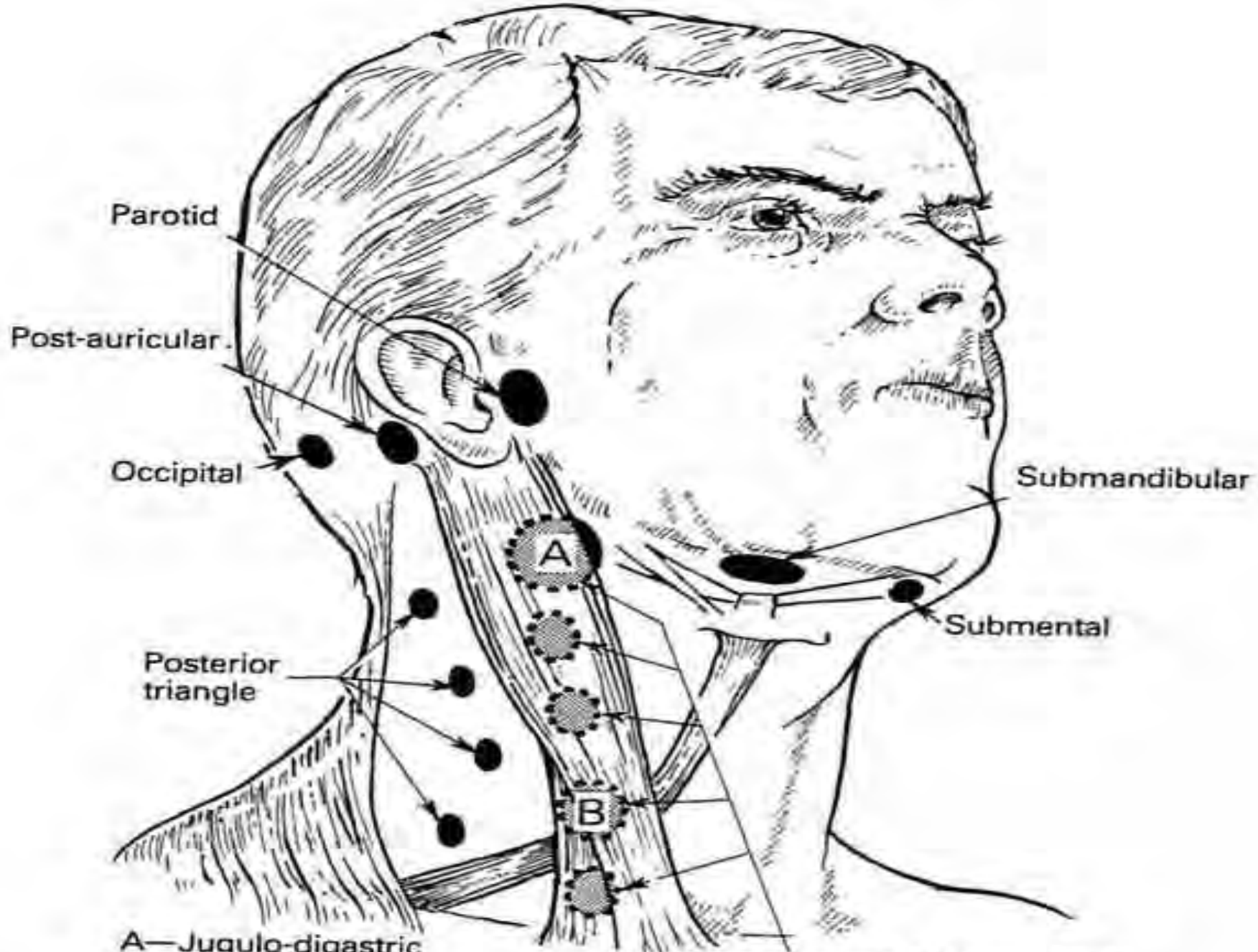
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NECK DISSECTION

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ANATOMY



Parotid

Post-auricular

Occipital

Submandibular

Submental

Posterior triangle

A—Jugulo-digastric

B—Jugulo-omohyoid

Deep to sternocleidomastoid—
deep jugular chain of nodes

LYMPHATIC CHAINS IN NECK

▣ DEEP JUGULAR CHAIN

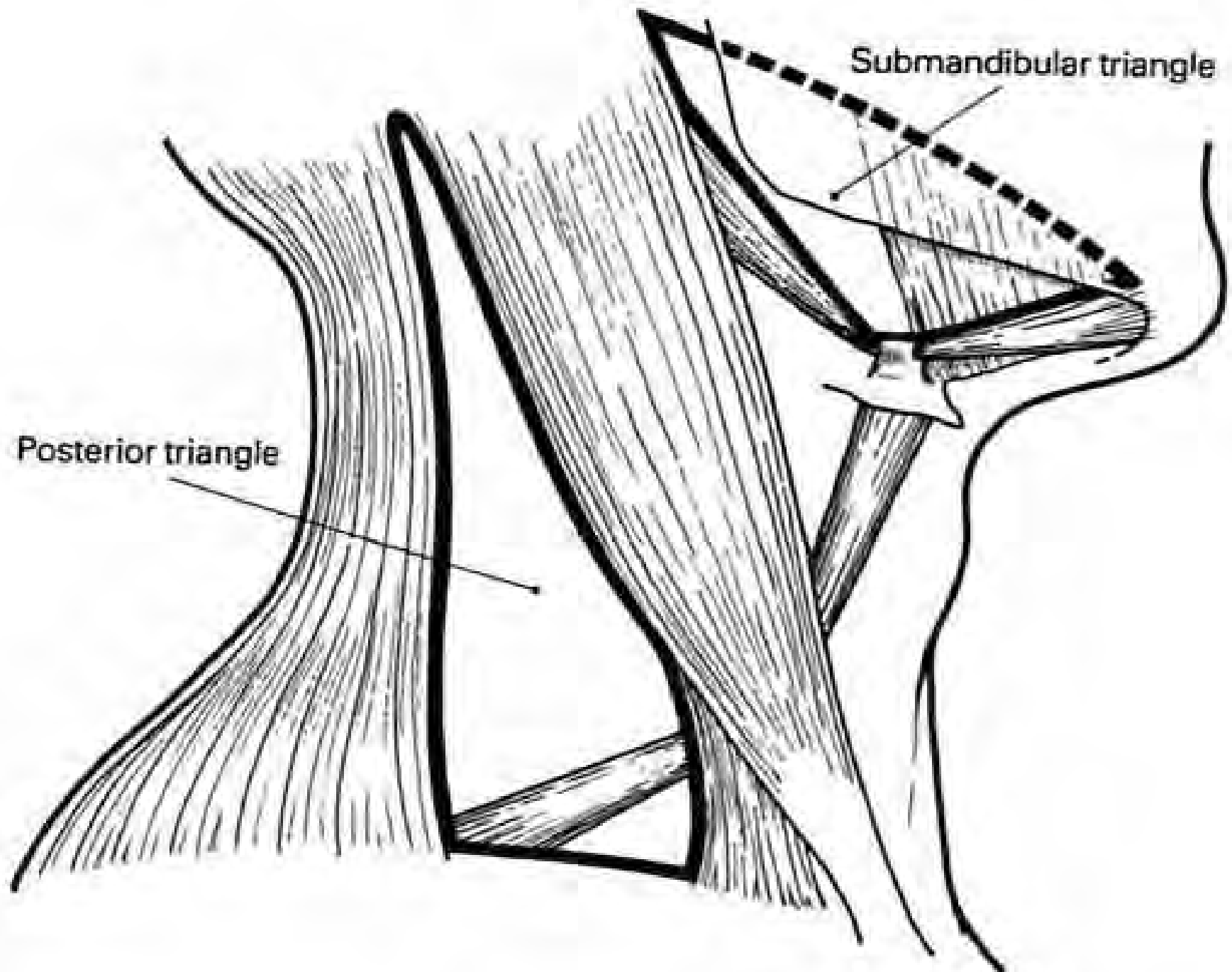
- JUGULO-DIGASTRIC

- JUGULO-OMOHYOID

▣ INTERMEDIATE GROUP

- EXTEND FROM OCCIPUT TO MANDIBULAR SYMPHYSIS

- OCCIPITAL, POST-AURICULAR, SUBMANDIBULAR, SUBMENTAL



TRIANGLES OF THE NECK

- ▣ ANTERIOR TRIANGLE

- SUBMANDIBULAR

- SUBMENTAL

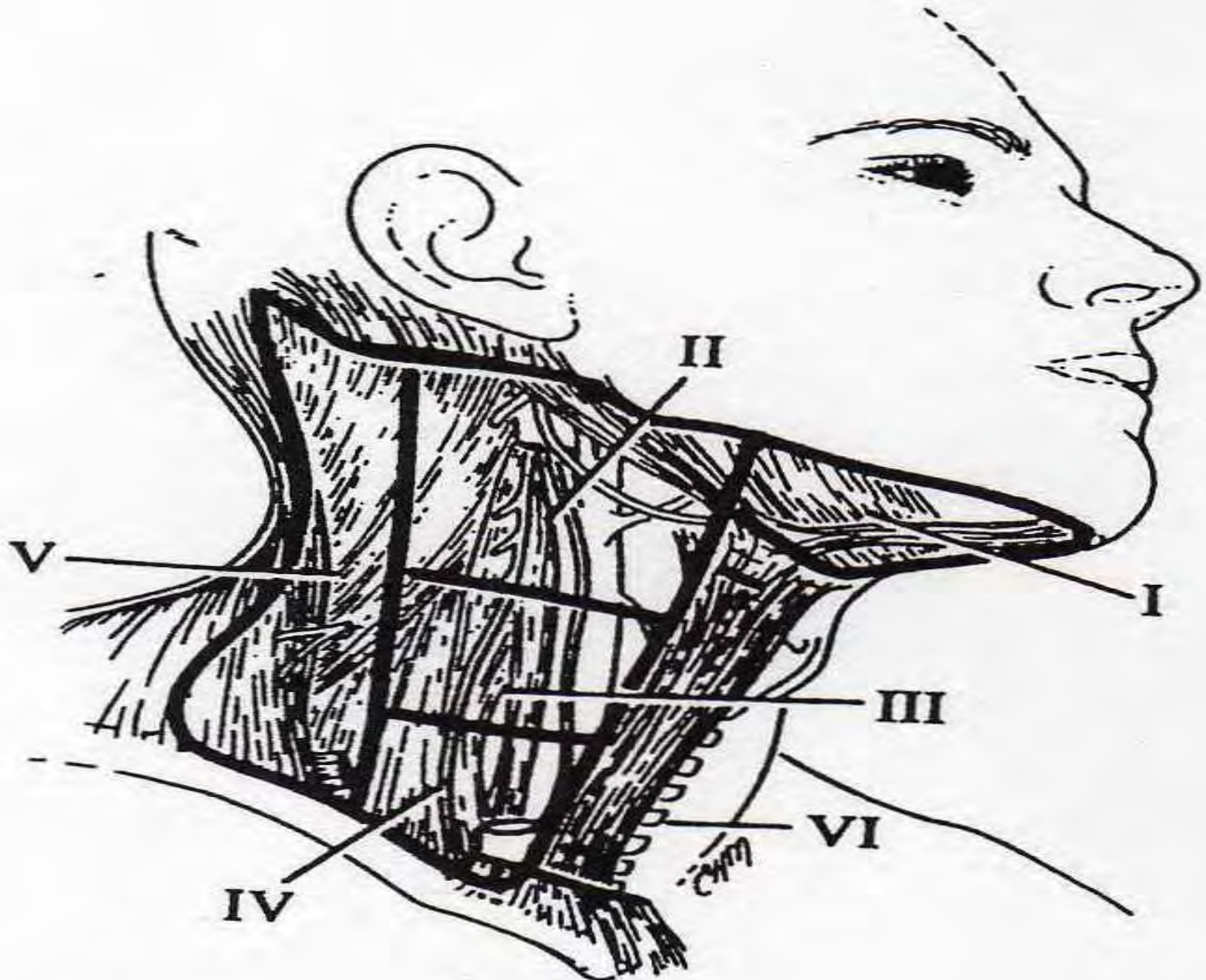
- CAROTID

- MUSCULAR

- ▣ POSTERIOR TRIANGLE

- OCCIPITAL

- SUPRACLAVICULAR



LYMPH NODE LEVELS -NECK

- ▣ LEVEL 1- SUBMANDIBULAR, SUBMENTAL
- ▣ LEVEL 2-UPPER JUGULAR NODES
- ▣ LEVEL 3- MIDDLE JUGULAR NODES
- ▣ LEVEL 4- LOWER JUGULAR NODES
- ▣ LEVEL 5-POSTERIOR TRIANGLE NODES
- ▣ LEVEL 6-ANTERIOR COMPARTMENT
NODES

TYPES OF NECK DISSECTION

- ▣ RADICAL NECK DISSECTION- LEVELS 1-5 WITH SACRIFICE OF IJV, SAN, SCM (CRILE)
- ▣ FUNCTIONAL NECK DISSECTION- LEVELS 1-5 WITH PRESERVATION OF IJV, SAN, SCM (BOCCA)
- ▣ MODIFIED RADICAL NECK DISSECTION
 - MRND I- PRESERVATION OF SAN
 - MRND II- PRESERVATION OF SAN, IJV
 - MRND III- PRESERVATION OF SAN, IJV, SCM



TYPES OF NECK DISSECTION

SELECTIVE NECK DISSECTION

REMOVE THE NODES CONSIDERED TO BE AT HIGH RISK FROM A GIVEN PRIMARY.

LEVEL I, II, III- WITH PRESERVATION OF SAN, IJV & SCM- SUPRAOMOHYOID

LEVELS I-IV- EXTENDED SUPRAOMOHYOID.

LEVELS II, III, IV- LATERAL NECK DISSECTION

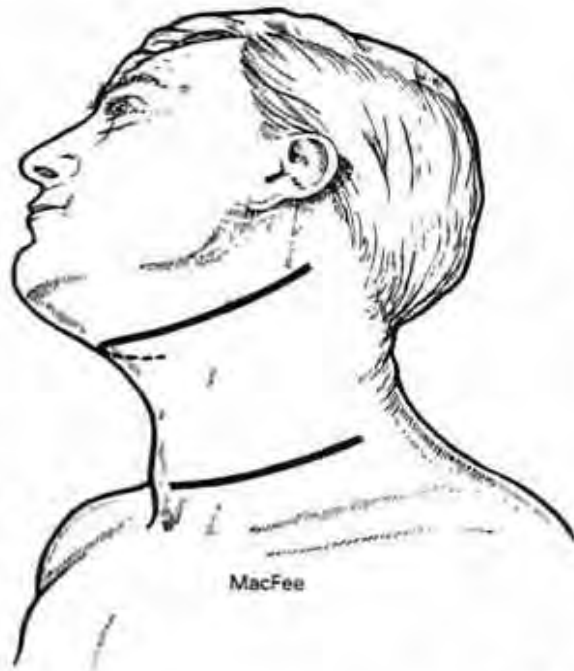
LEVELS II TO V- POSTEROLATERAL



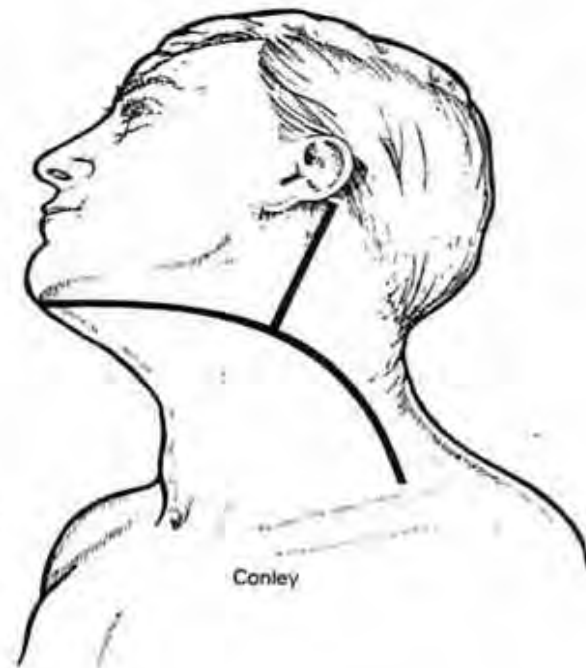
SKIN INCISIONS



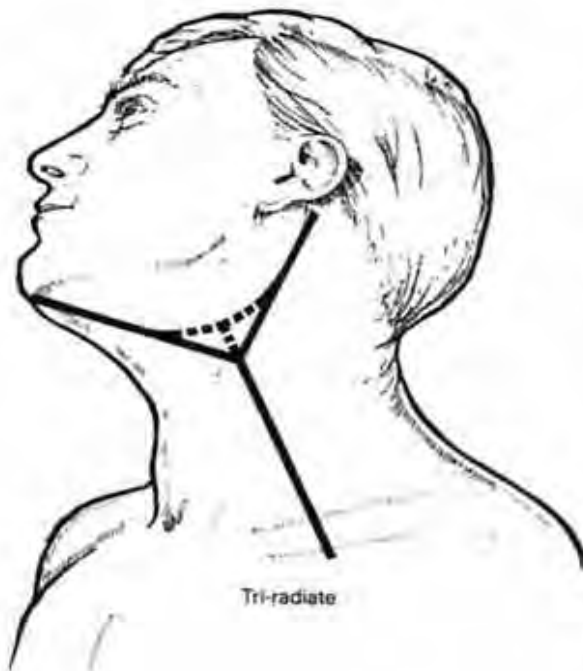
Schobinger



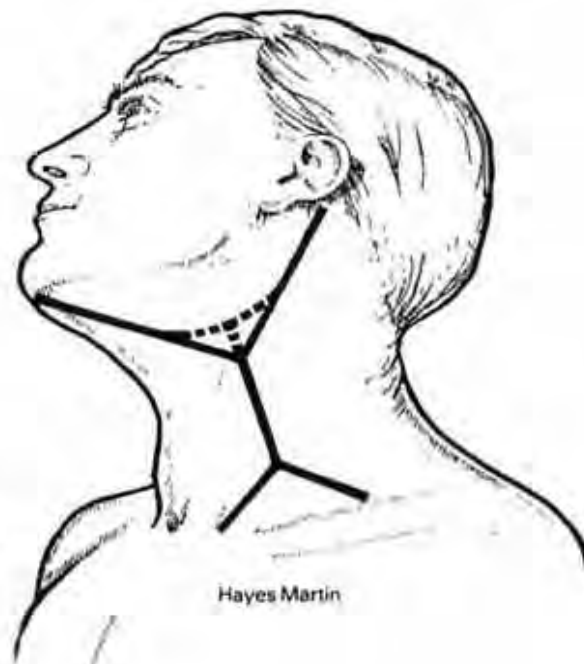
MacFee



Conley



Tri-radiate



Hayes Martin



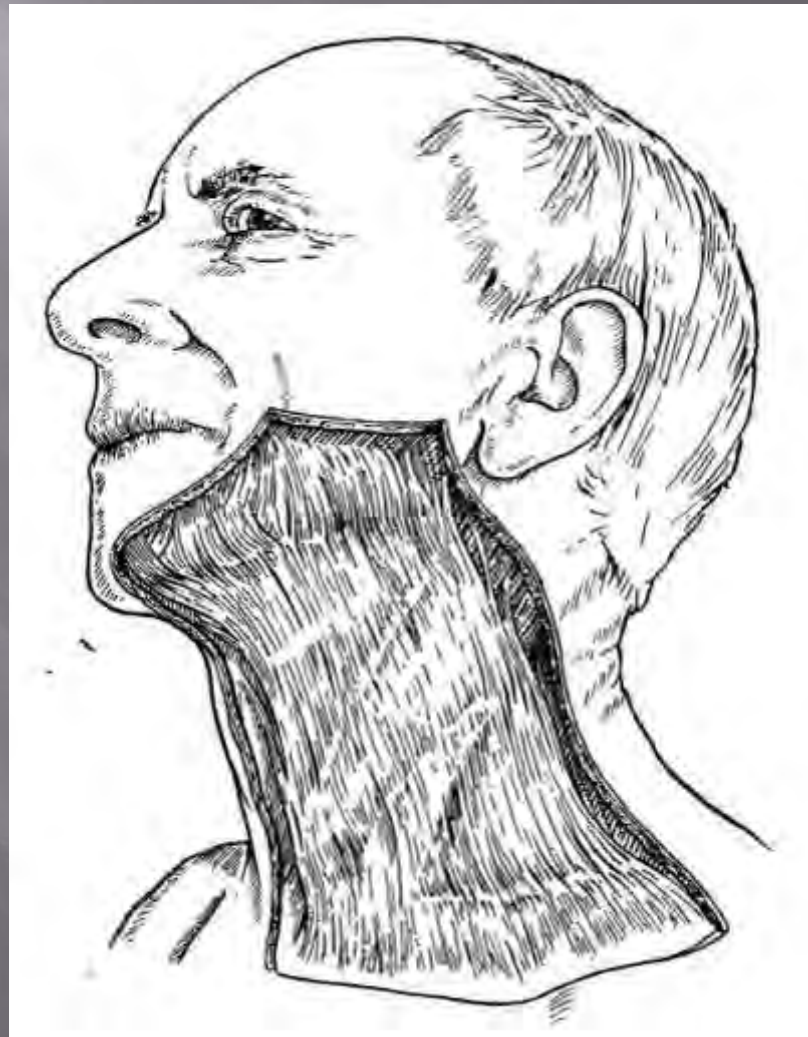








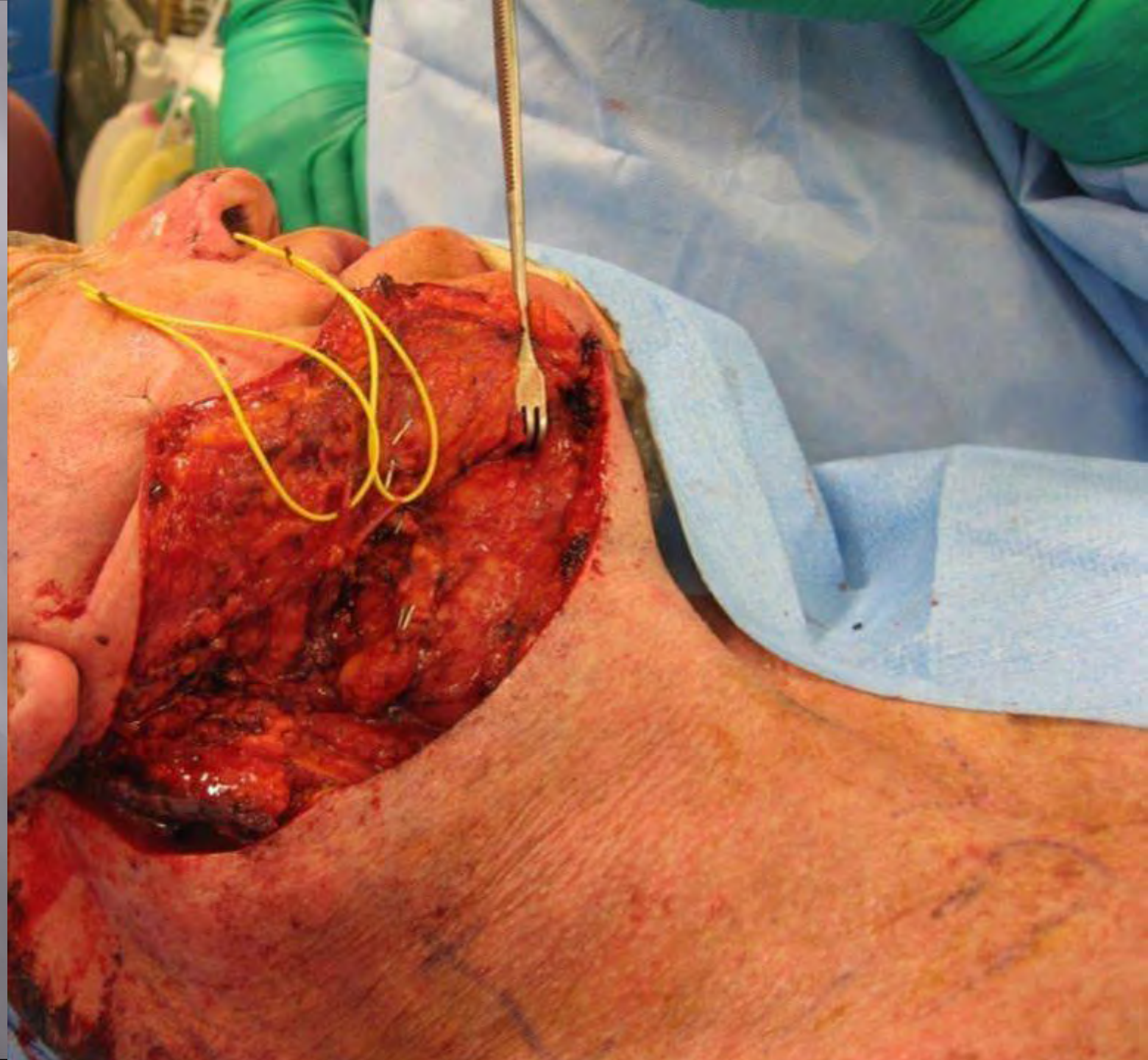
PLANE OF ELEVATION SUB-PLATYSMAL

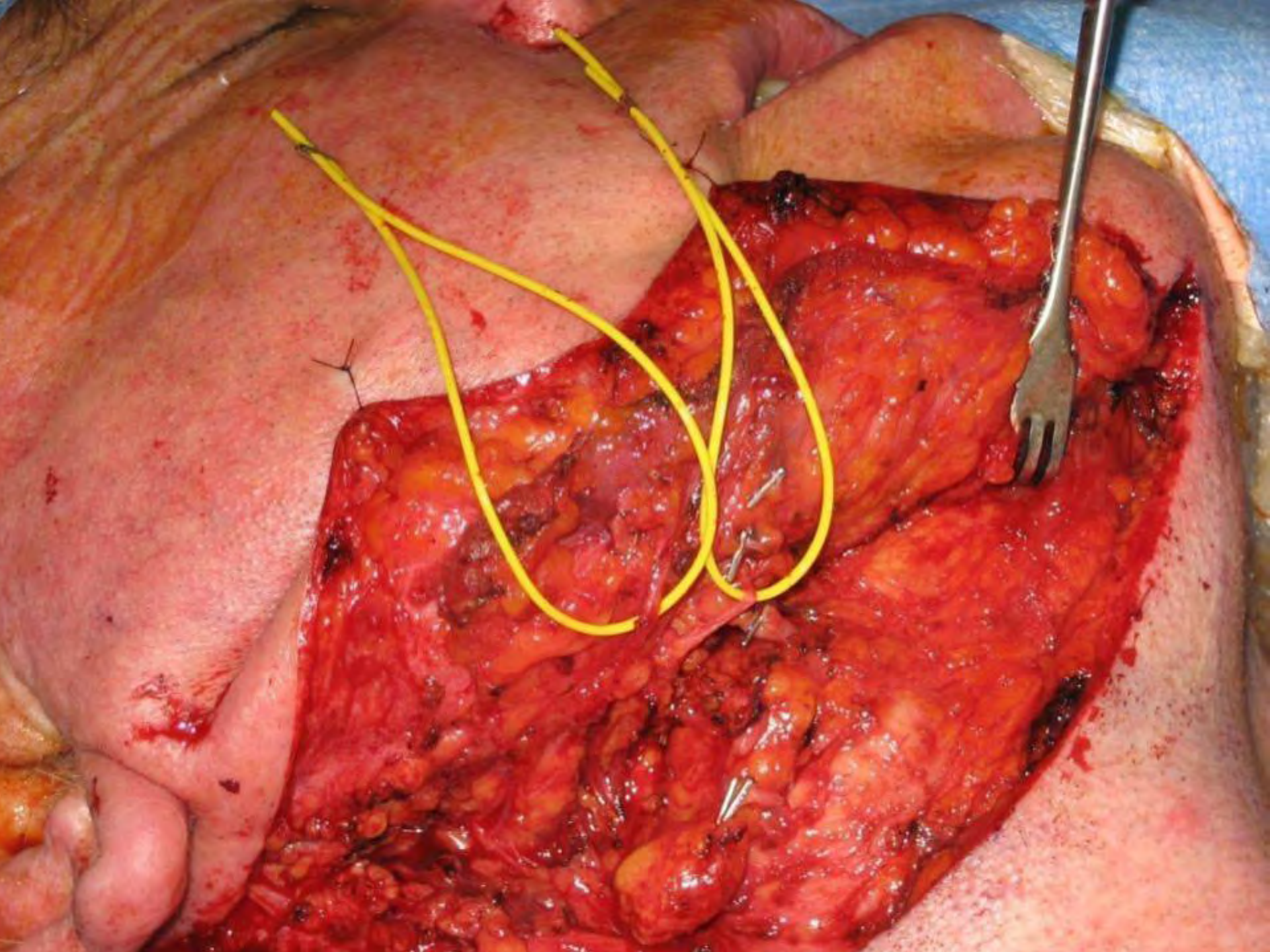


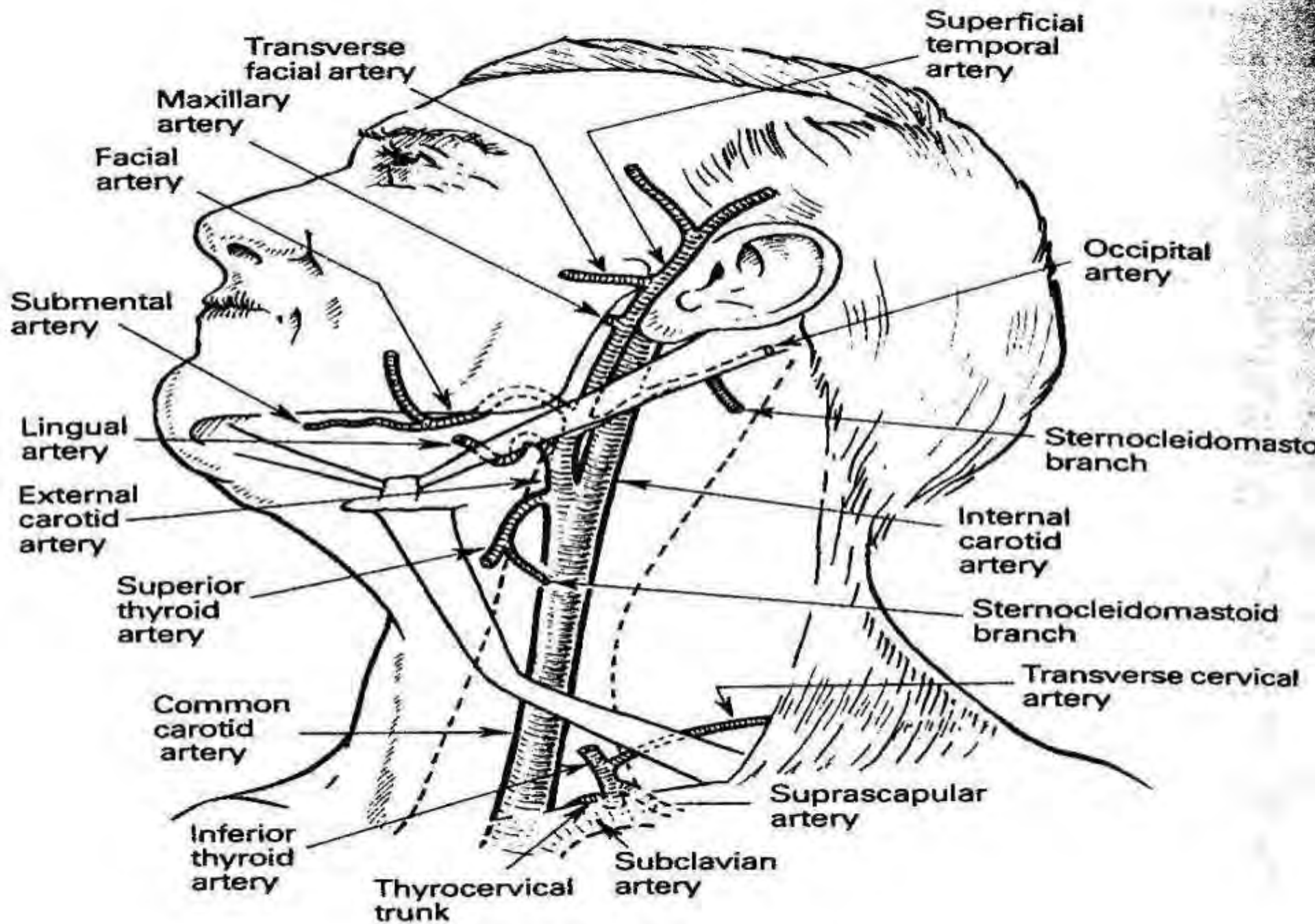
DISSECTION

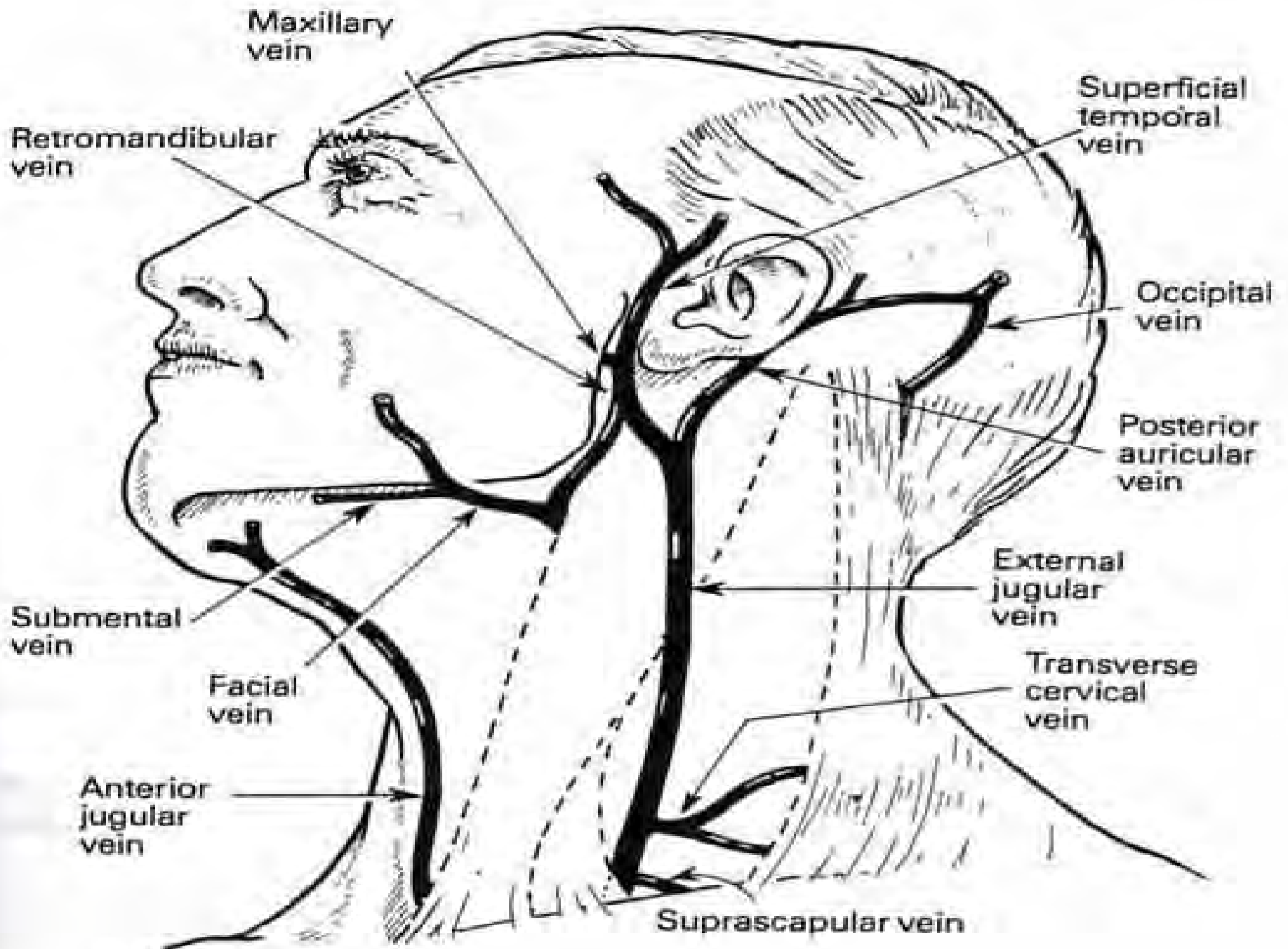
SUBMANDIBULAR & SUBMENTAL TRIANGLES----LEVEL 1

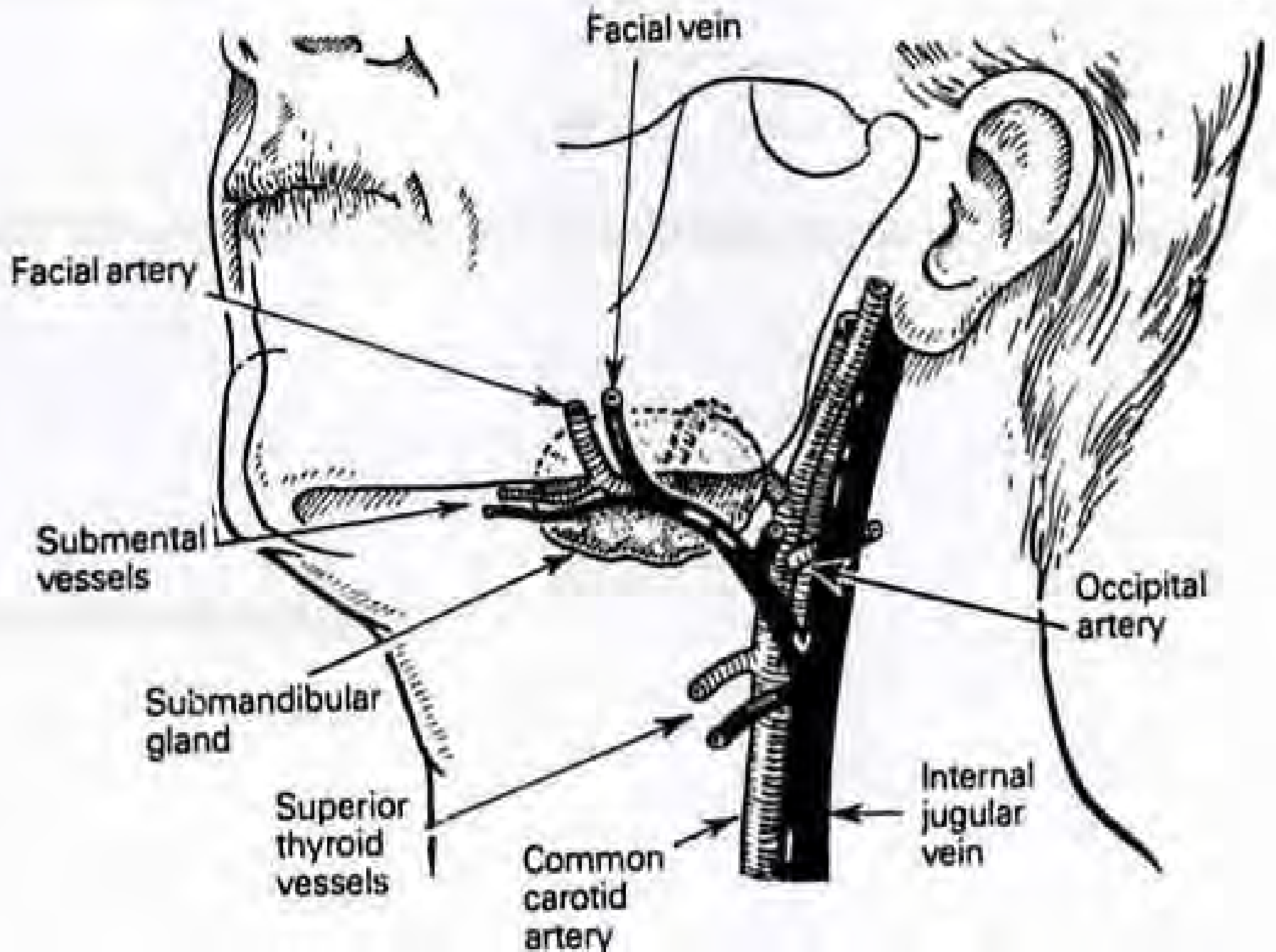
- ▣ SUBPLATYSMAL PLANE ELEVATION
- ▣ IDENTIFY THE MMN AT THE POINT OF FACIAL ARTERY CROSSING THE MANDIBULAR BORDER
- ▣ SUPRAPERIOSTEAL ELEVATION OF THE SUBMANDIBULAR GLAND
- ▣ IDENTIFY THE POSTERIOR EDGE OF THE MYELOHYOID MUSCLE
- ▣ IDENTIFY HYPOGLOSSAL NERVE, SUBMANDIBULAR DUCT, LINGUAL NERVE
- ▣ LINGUAL NERVE CONNECTED TO SUBMANDIBULAR GLAND VIA RAMI COMMUNICANTES



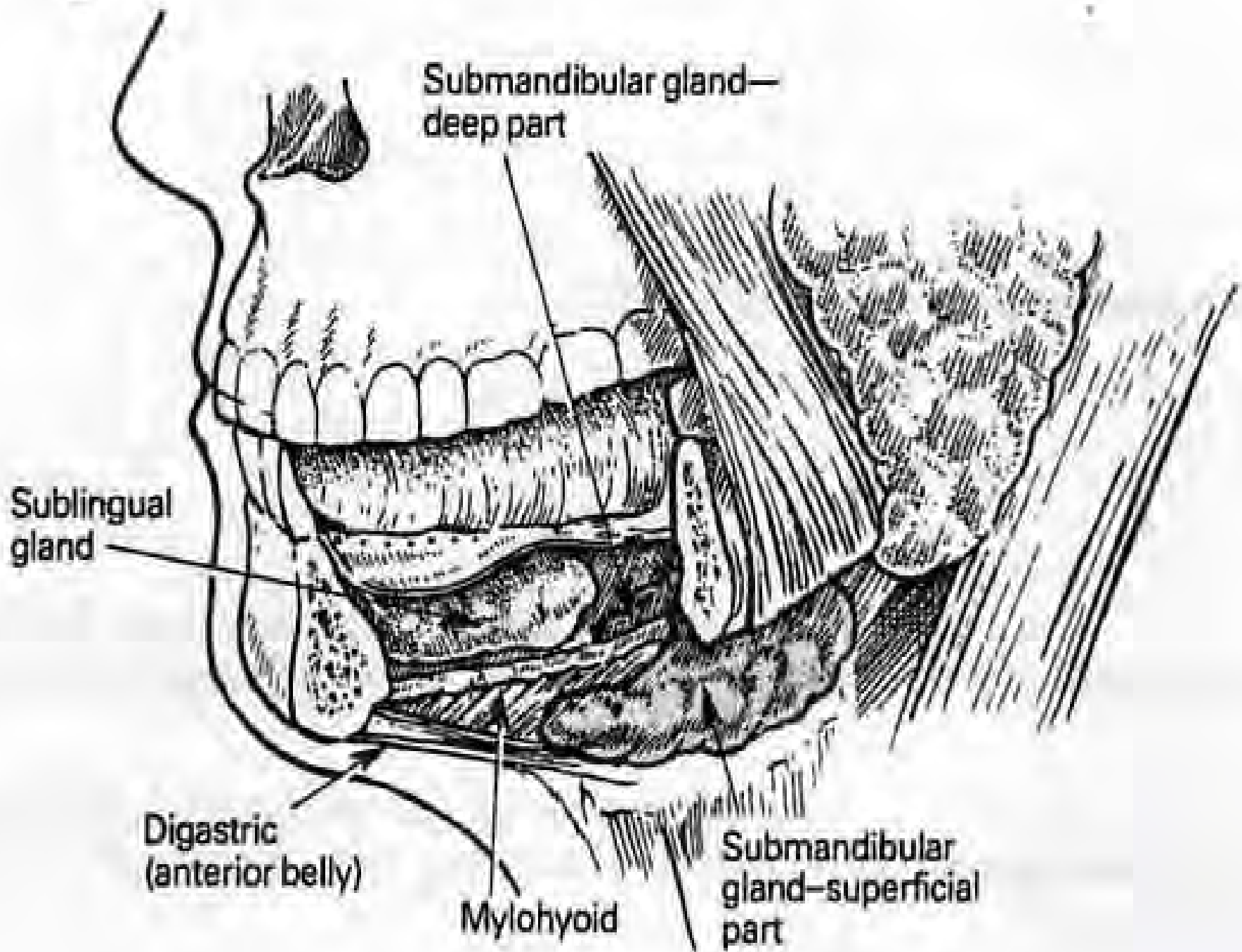








B



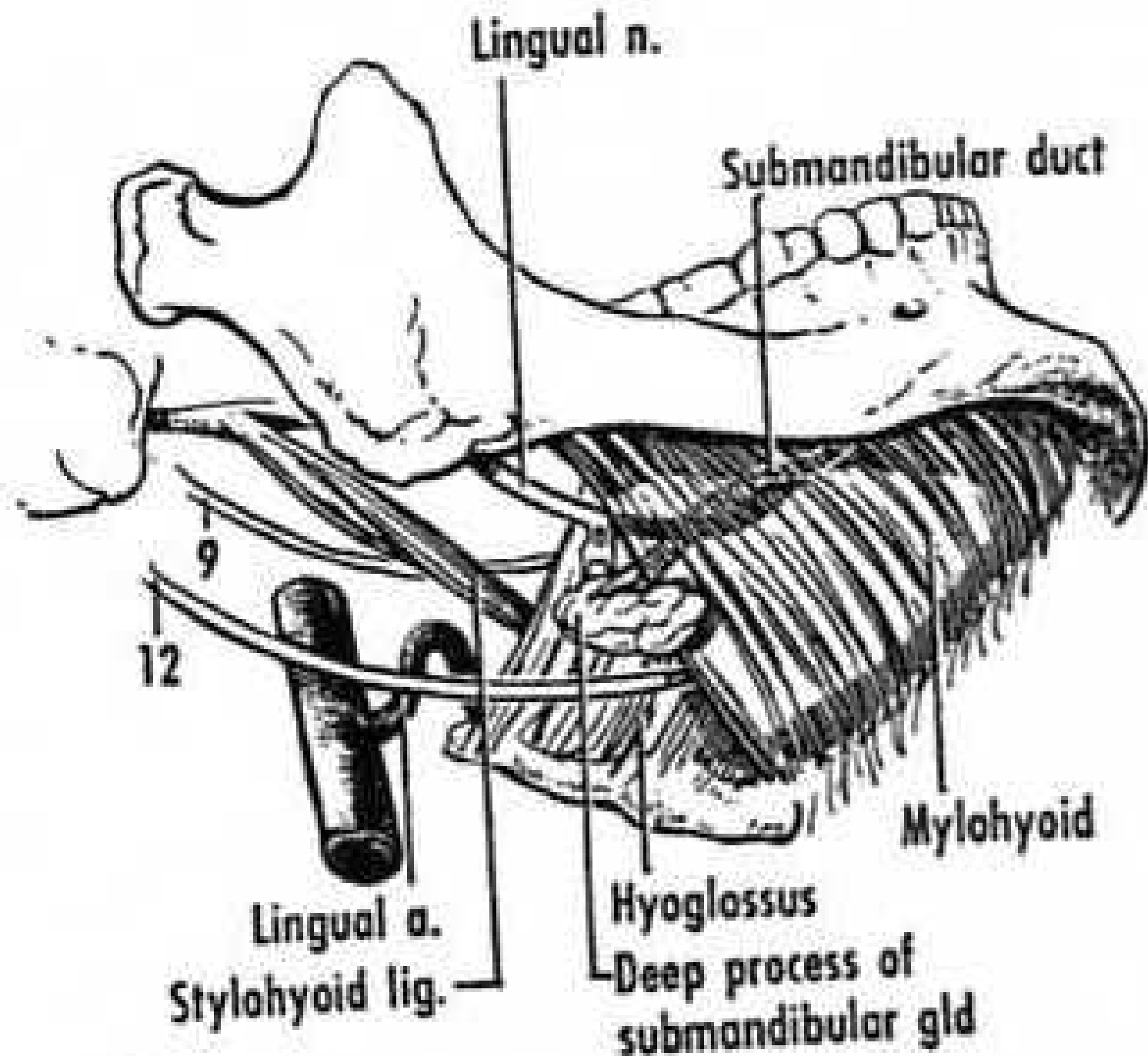
Submandibular gland—
deep part

Sublingual
gland

Digastric
(anterior belly)

Mylohyoid

Submandibular
gland—superficial
part



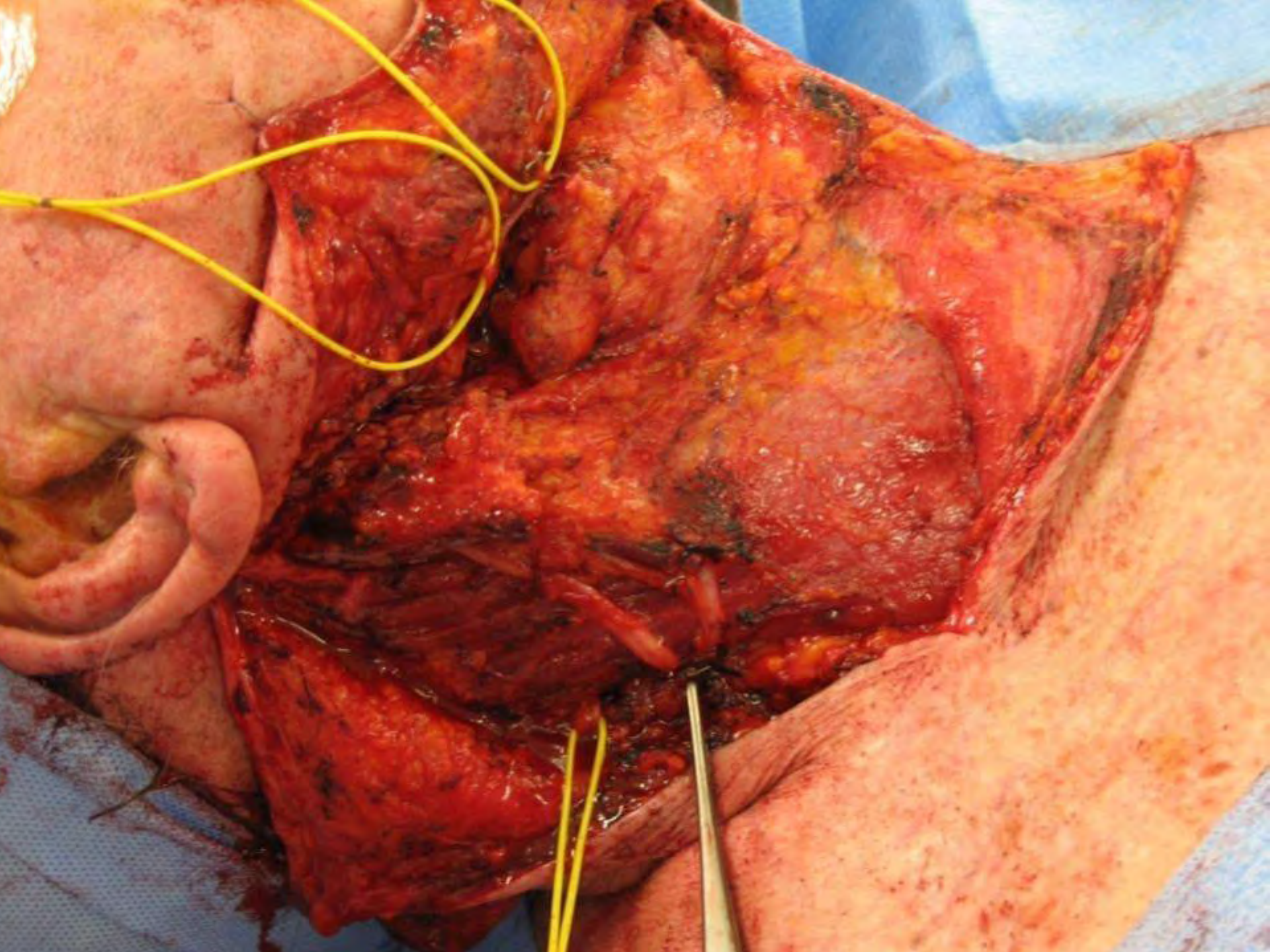
SUBMANDIBULAR & SUBMENTAL TRIANGLES----LEVEL 1

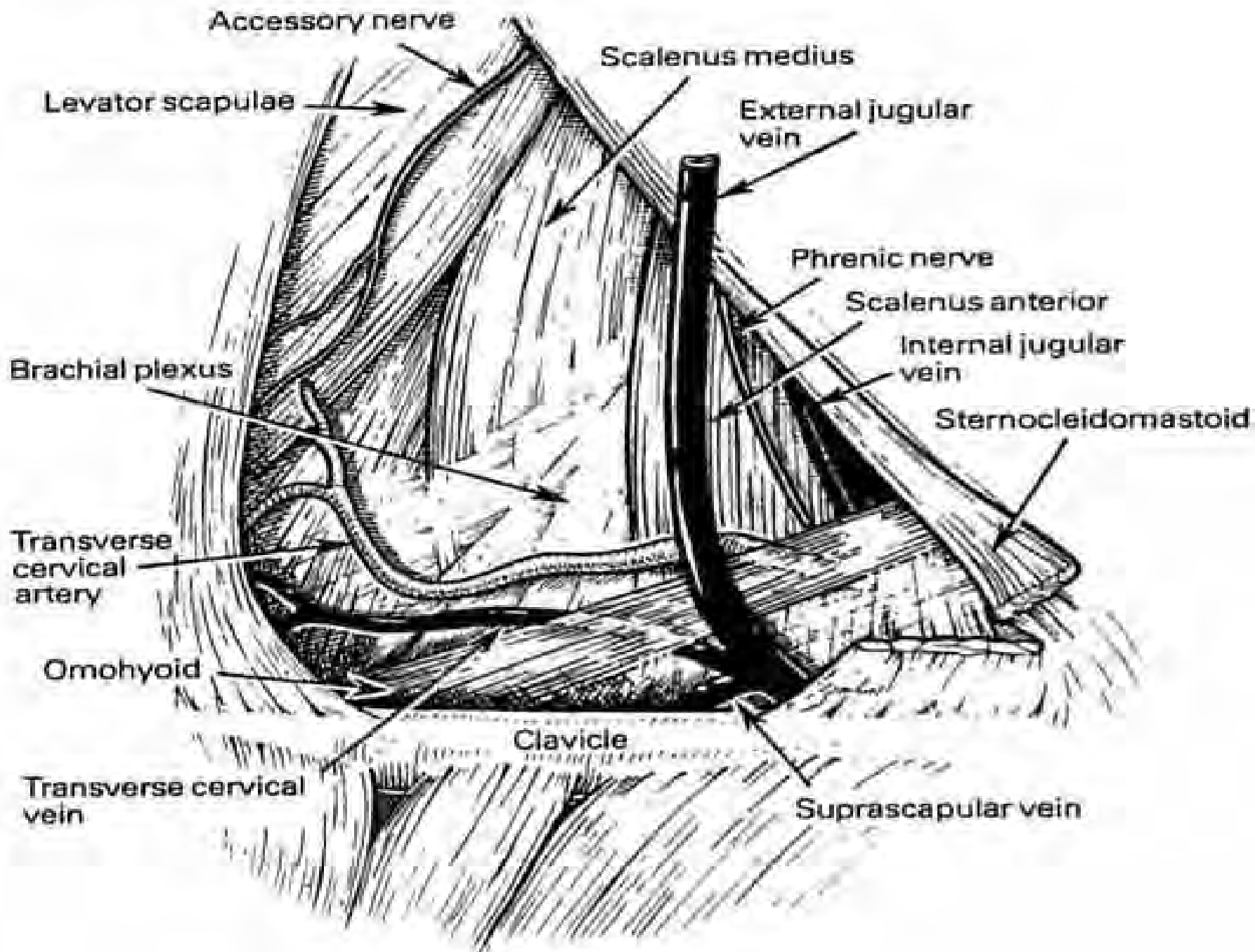
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- ▣ IDENTIFY THE POSTERIOR EDGE OF THE MYELOHYOID MUSCLE
- ▣ IDENTIFY HYPOGLOSSAL NERVE, SUBMANDIBULAR DUCT, LINGUAL NERVE
- ▣ LINGUAL NERVE CONNECTED TO SUBMANDIBULAR GLAND VIA RAMI COMMUNICANTES

OCCIPITAL & SUPRACLAVICULAR TRIANGLES--- LEVEL V

- ▣ SUBCUTANEOUS PLANE ELEVATION
 - PLAYSMA IS POORLY DEFINED
- ▣ IDENTIFY THE GREAT AURICULAR NERVE, THEN THE ACCESSORY NERVE
- ▣ BLUNT DISSECTION IN THE SUPRACLAVICULAR TRIANGLE- BRACHIAL PLEXUS
- ▣ IDENTIFY THE TRANSVERSE CERVICAL VESSELS
- ▣ LIGATE THE SUPRACLAVICULAR TISSUES
 - BEWARE OF THE THORACIC DUCT





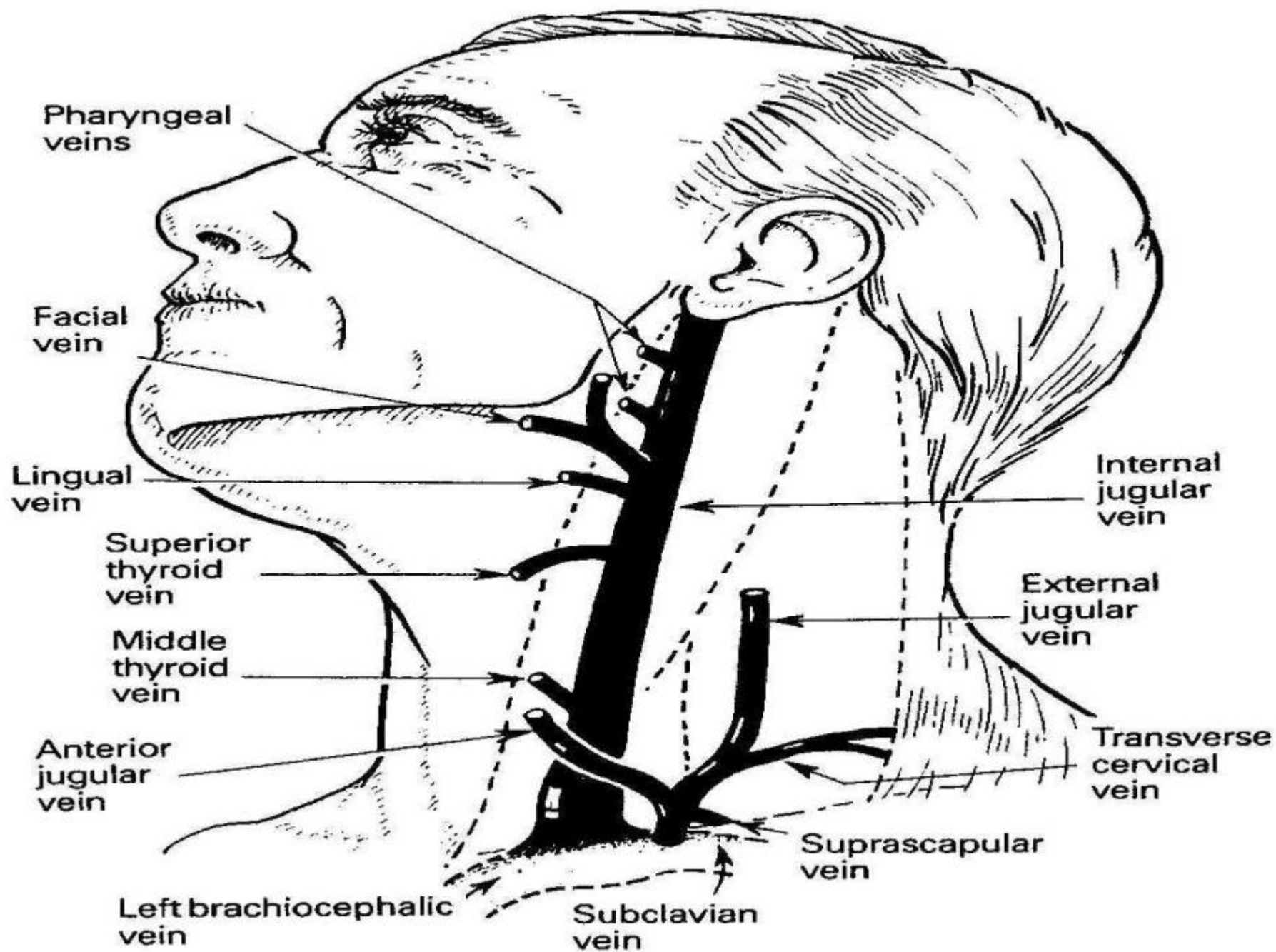


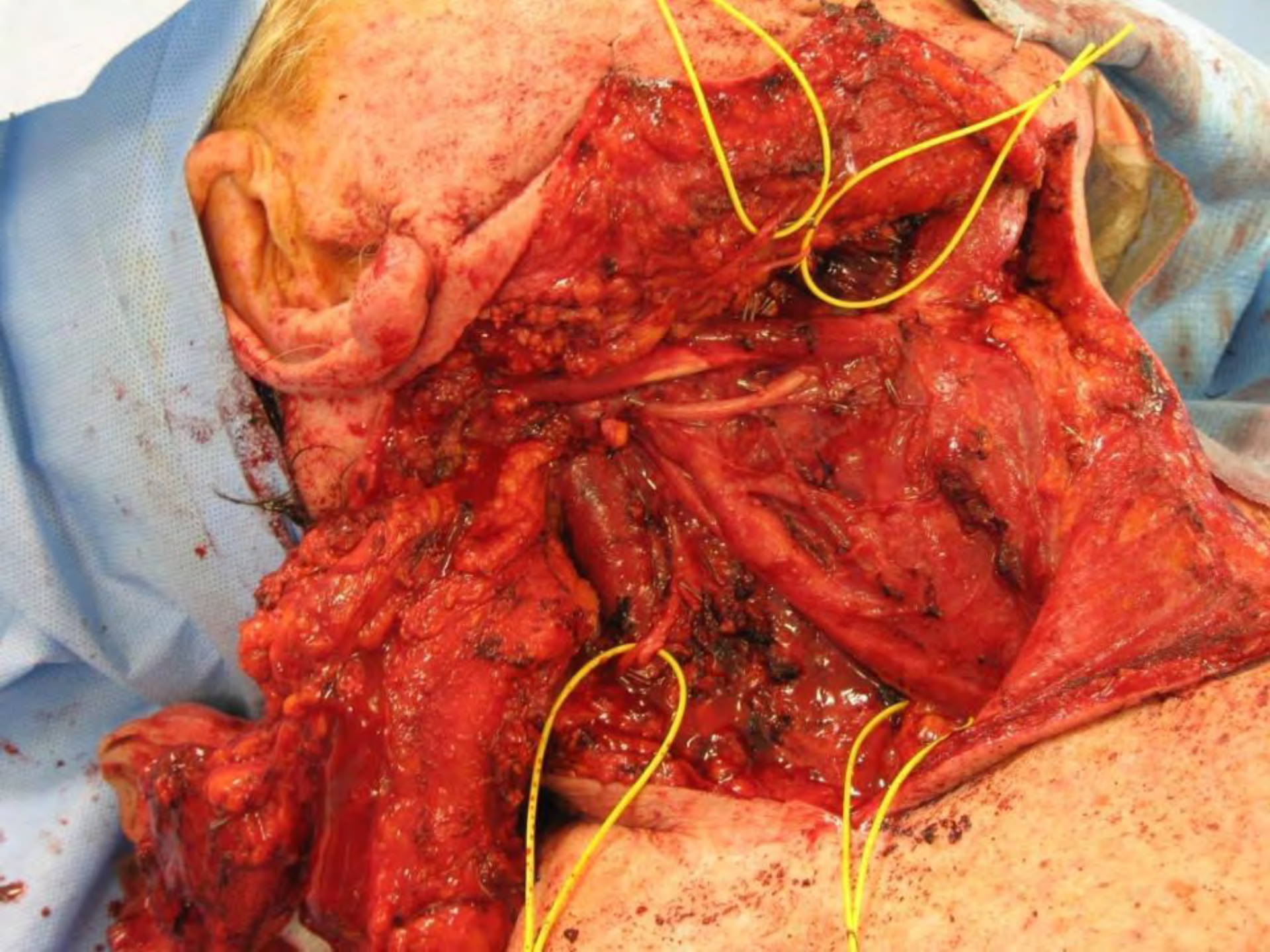
OCCIPITAL & SUPRACLAVICULAR TRIANGLES--- LEVEL V

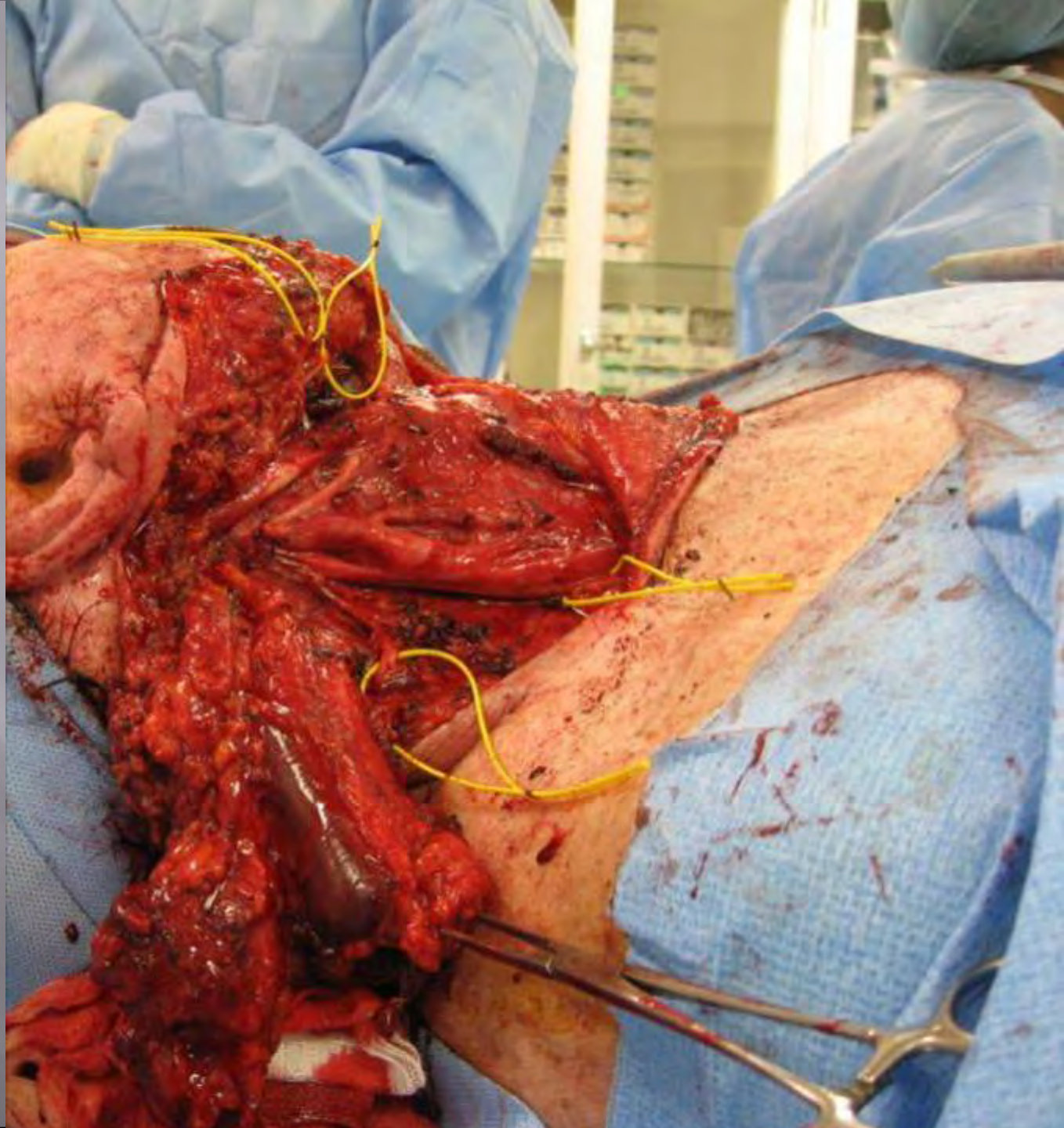
- ▣ SUBCUTANEOUS PLANE ELEVATION
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THEN THE ACCESSORY NERVE
- ▣ BLUNT DISSECTION IN THE
SUPRACLAVICULAR TRIANGLE- BRACHIAL
PLEXUS
- ▣ IDENTIFY THE TRANSVERSE CERVICAL VESSELS
- ▣ LIGATE THE SUPRACLAVICULAR TISSUES
- BEWARE OF THE THORACIC DUCT

CAROTID & MUSCULAR TRIANGLES--- LEVEL II, III, IV

- ▣ INTERNAL JUGULAR VEIN
 - DEEP TO THE OMOHYOID INFERIORLY
 - DEEP TO THE DIGASTRIC SUPERIORLY
 - NO POSTERIOR TRIBUTARIES
 - TRANSFIX THE IJV, NOT JUST TIED
 - IDEALLY, LIGATE THE UPPER END FIRST
BUT IT WOULD DEPND ON SURGEON
AND TUMOUR FACTOR
 - SUPERIORLY, IDENTIFY ACCESSORY,
VAGUS, HYPOGLOSSAL NERVES
- ▣ FACIAL ARTERY- TIED AGAIN AT EXTERNAL CAROTID

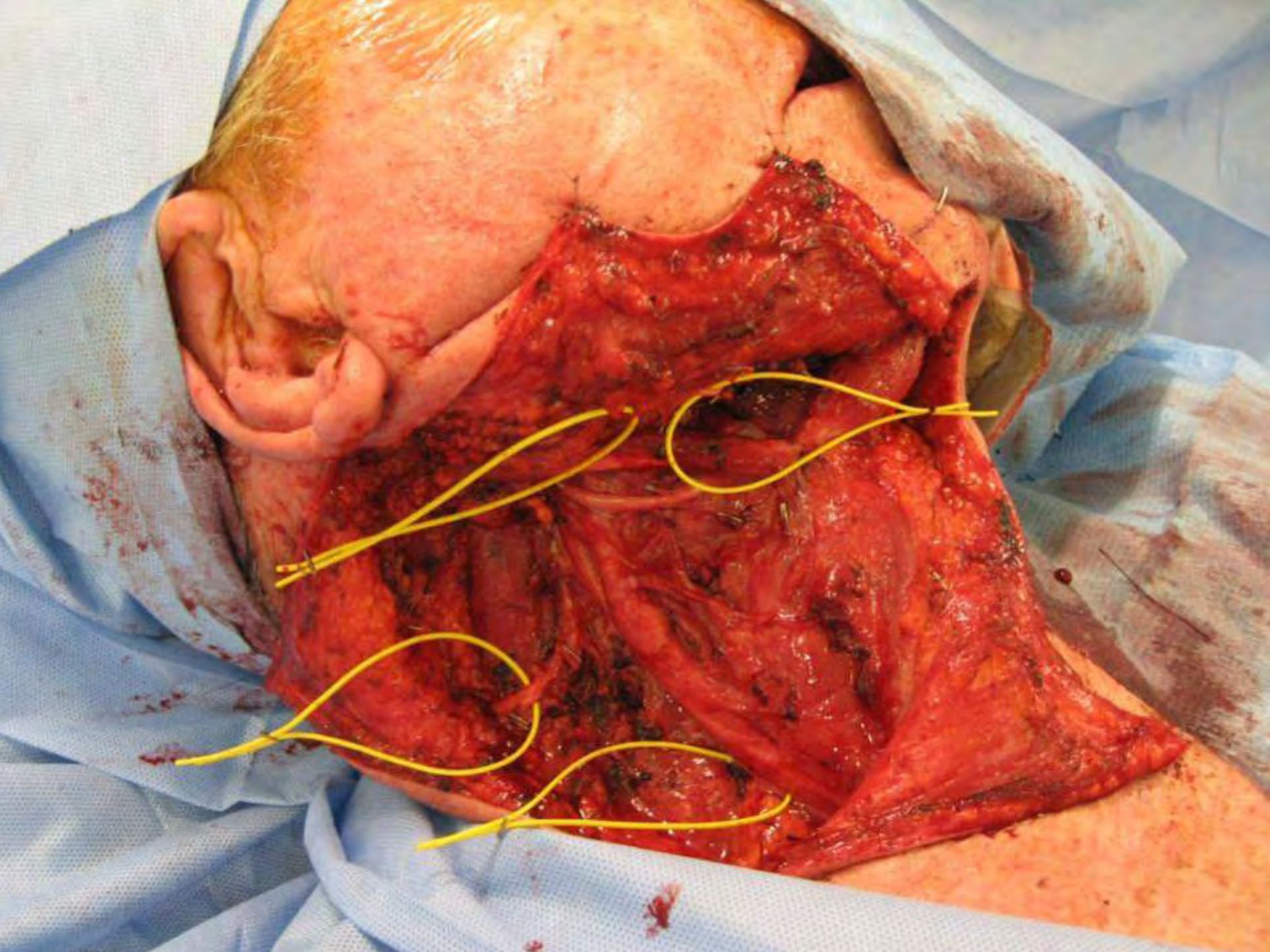






CAROTID & MUSCULAR TRIANGLES--- LEVEL II, III, IV

- ▣ INTERNAL JUGULAR VEIN
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VAGUS, HYPOGLOSSAL NERVES
- ▣ FACIAL ARTERY- TIED AGAIN AT EXTERNAL CAROTID



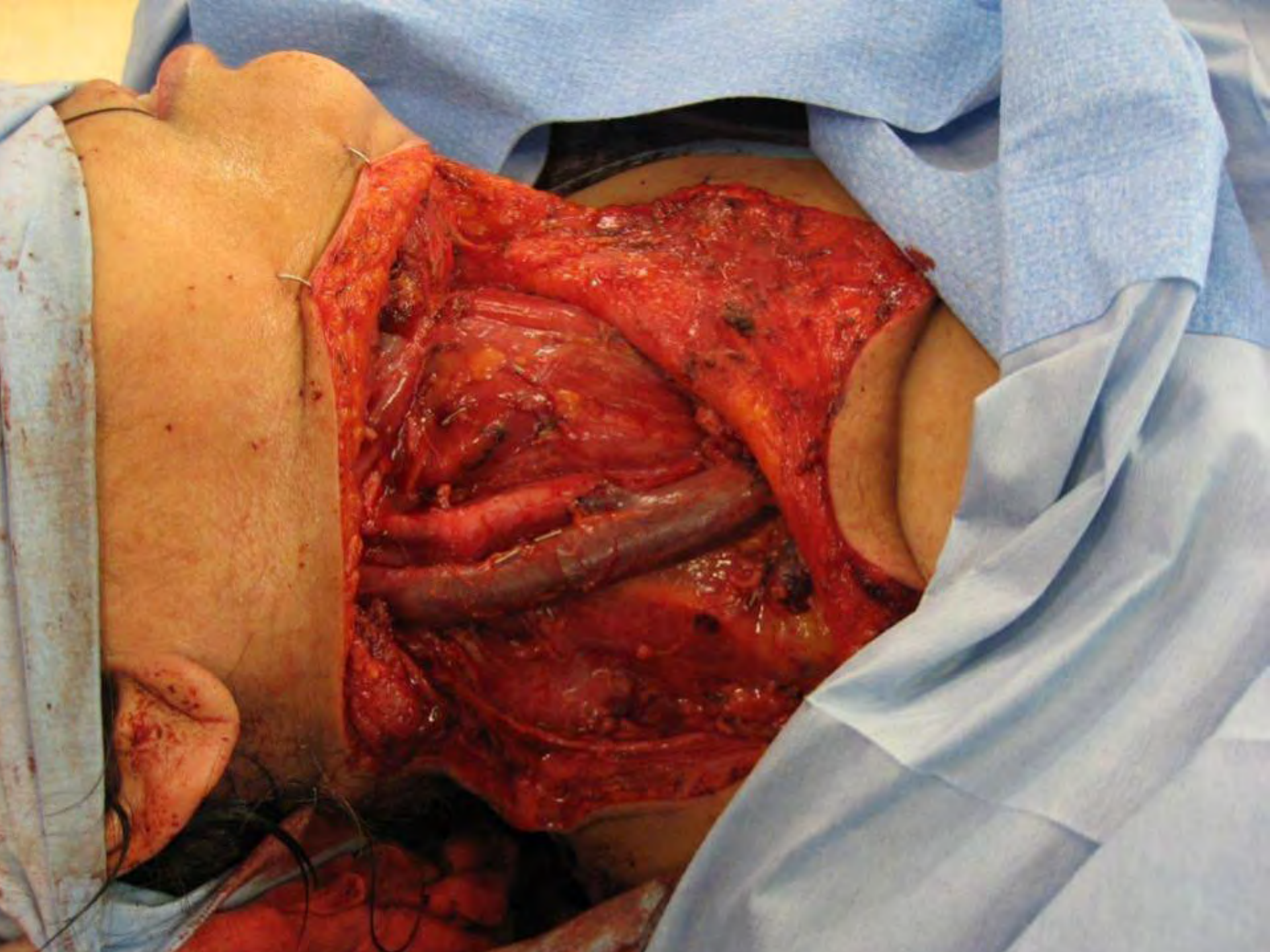
BILATERAL NECK DISSECTION



BILATERAL NECK DISSECTION

- ▣ NOT OFTEN PERFORMED.
- ▣ USUALLY ONE SIDE IS LESS RADICAL
- ▣ PLAN INCISION CAREFULLY
 - BILATERAL TRI-RADIATE
- ▣ DO THE LESSER INVOLVED FIRST TO SAFEGUARD ONE IJV
- ▣ TRY TO PRESERVE ONE STERNOMATOID
- ▣ IF NOT SIMULTANEOUS, 2ND IJV MAY BE REMOVED IF DELAYED BY (?)MONTHS







COMPLICATIONS

- ▣ SYSTEMIC

- ▣ LOCAL

INTRAOPERATIVE- BLEEDING, NERVE DAMAGE, THORACIC DUCT, PNEUMOTHORAX, BRADYCARDIA-CAROTID BODY STIMULATION

EARLY- INFECTION, BLEEDING-CAROTID BLOWOUT, FLAP NECROSIS, CHYLOUS LEAK

LATE- CHYLOUS LEAK, VOCAL CHORD PARALYSIS, NERVE DAMAGE, NEUROMA, SHOULDER DYSFUNCTION, SCAR, DEFORMITY

