



UNIVERSITY OF MIAMI
MILLER SCHOOL
of MEDICINE

Jackson
HEALTH SYSTEM



Massive Maxillary Tumors

Challenges and Considerations

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Fellow

Head and Neck Tumor

Microvascular Reconstructive Surgery

University of Miami/Jackson Health System

Conflicts of Interest



☞ None

Case Presentation



- ☞ CC: “My face is swollen and I have double vision”
- ☞ HPI: 44 y/o M presents to ED with 2 month h/o increasing left facial expansion and diplopia. Pt reports slight swelling that started 1 year ago but now has suddenly began growing. Mild pain, numbness of left side of face, denies constitutional symptoms.





Case Presentation



☞ PMH: denies

☞ Meds: denies

☞ All: NKDA

☞ Soc: 25 pk year smoker, quit 1 year prior, occ EtOH

☞ PSH: denies

☞ FamHx: father – HTN, CAD; mother – HTN

Pt had previously been
biopsied by outside
institution but no treatment
had been started secondary
to patient's insurance status

“favor carcinoma of minor salivary gland origin”

“most suggestive of **polymorphous adenocarcinoma, cribriform type**, possibly: myoepithelial carcinoma, secretory carcinoma, or adenocarcinoma not otherwise specified

Surgical Pathology Report

DIAGNOSIS:

Biopsy of palate lesion:

Intermediate grade salivary gland carcinoma. See note.

Note: This is a neoplasm composed of cords and cribriform nests of monotonous cells with a moderate amount of eosinophilic cytoplasm and vesicular nuclei with prominent nucleoli embedded in scant myxoid stroma. Mitotic figures are readily identified. Immunostains with appropriate controls show the tumor cells to be positive for pancytokeratin, S100 protein and CD56. They are negative for p40, chromogranin, p63, synaptophysin, TTF1 and NUT. The case was sent in consultation to Johns Hopkins Reference Laboratories where additional immunostains were performed. These confirm positivity for S100 protein and negativity for p63. They also show the tumor cells to be focally positive for calponin and smooth muscle myosin, and negative for cytokeratin 5/6 and mammaglobin with intact INI1. These overall findings, together with the morphology, favor a carcinoma of minor salivary gland origin. See separate report.

CO/ai

Diagnosis

Head and Neck Pathology Consultation Service

Outside Slides

1. Palate lesion (Biopsy, 002-SP-20-0002609, 3/23/2020): Intermediate grade salivary gland carcinoma. See note

Note: The tumor consists of cords and cribriform nests of monotonous cells with a moderate amount of eosinophilic cytoplasm and vesicular nuclei with prominent nucleoli embedded in scant myxoid stroma. Mitotic figures are prominent throughout the sample. Submitted immunostains show that the tumor cells are positive for pancytokeratin, S100, and CD56, and negative for p63, p40, synaptophysin, chromogranin, and NUT1. Additional immunostains performed at JHH confirm positivity for S100 and negativity for p63 and also show that the tumor cells are focally positive for calponin and smooth muscle myosin and negative for CK5/6 and mammaglobin with intact INI1. Overall, the morphology and immunophenotype favor a carcinoma of minor salivary gland origin. While these findings are most suggestive of a polymorphous adenocarcinoma, cribriform type (formerly known as cribriform adenocarcinoma of the tongue and minor salivary glands), a myoepithelial carcinoma, secretory carcinoma, or adenocarcinoma, not otherwise specified, also remain diagnostic possibilities. At the time of resection, further tissue sampling should allow for more specific classification. Thank you for sending this interesting case in consultation and allowing us to participate in the care of your patient.

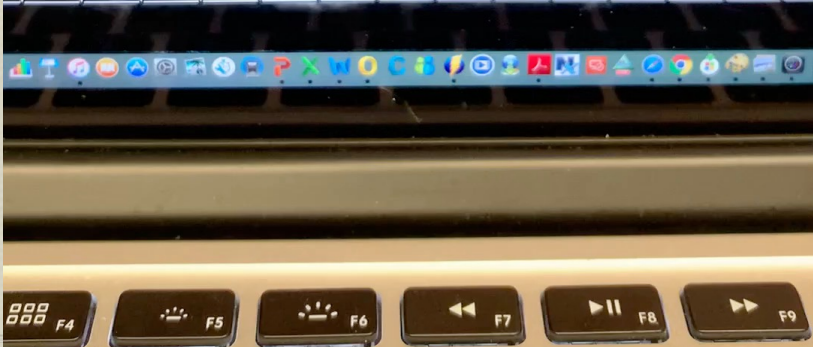
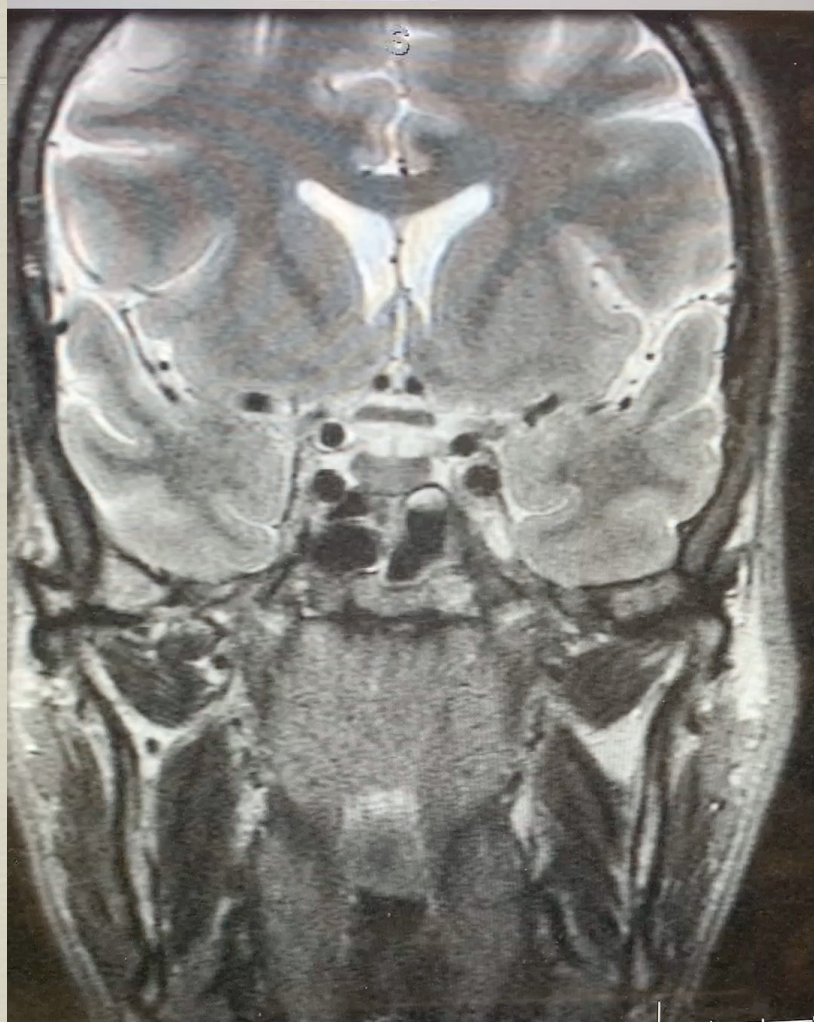
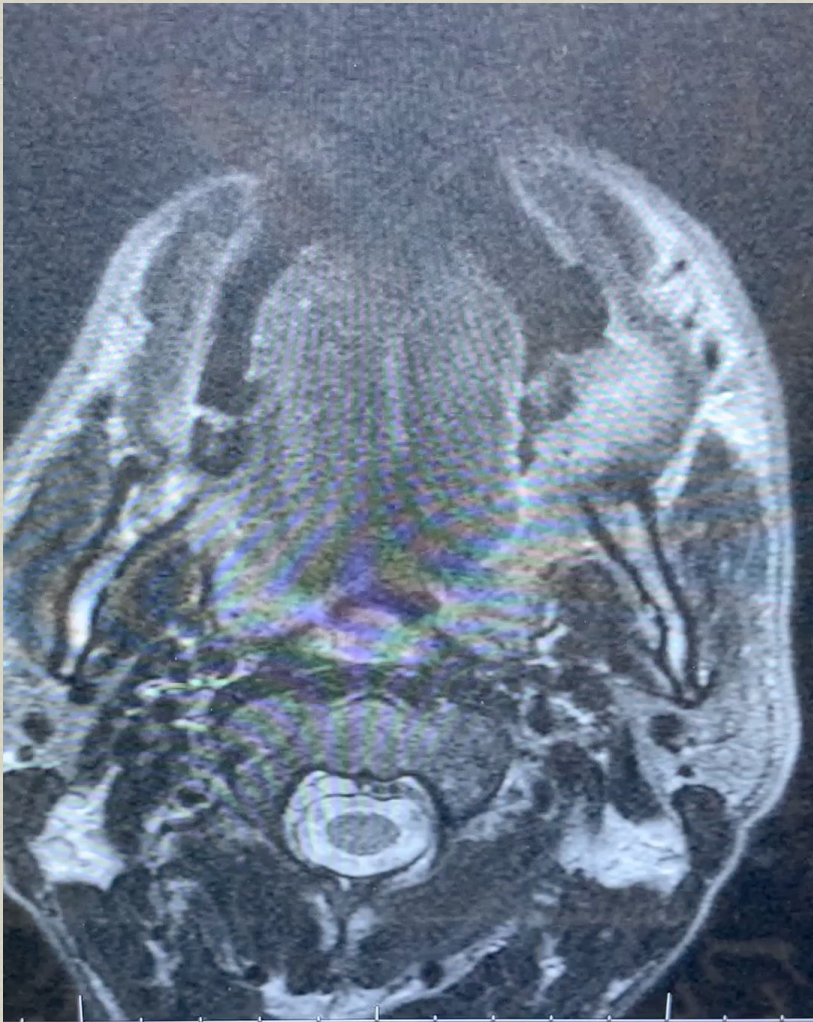
Workup



- ☞ CT with contrast
- ☞ MRI with contrast
- ☞ CT chest with contrast
- ☞ Labs

CT with contrast





MRI with contrast

Surgical Plan

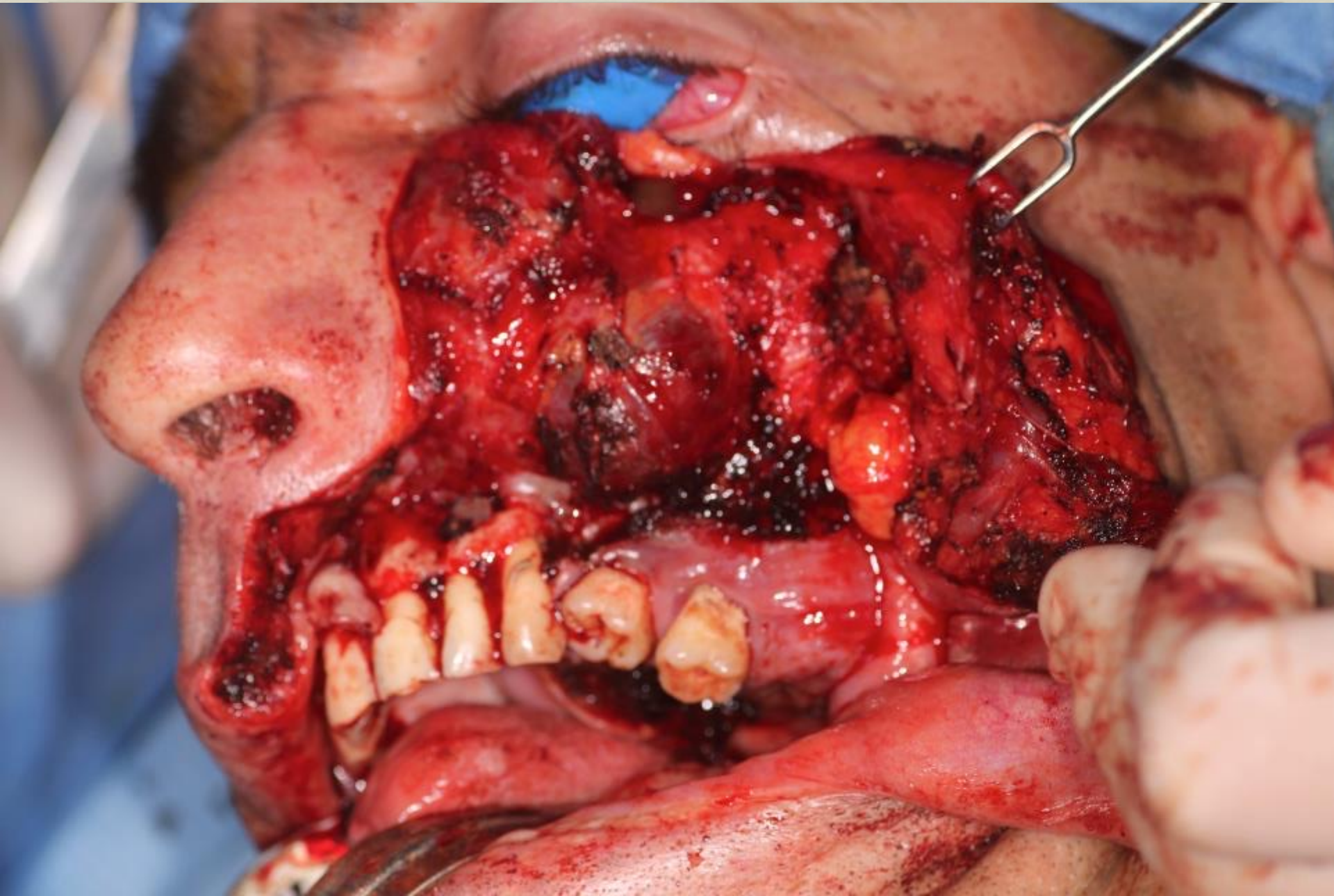


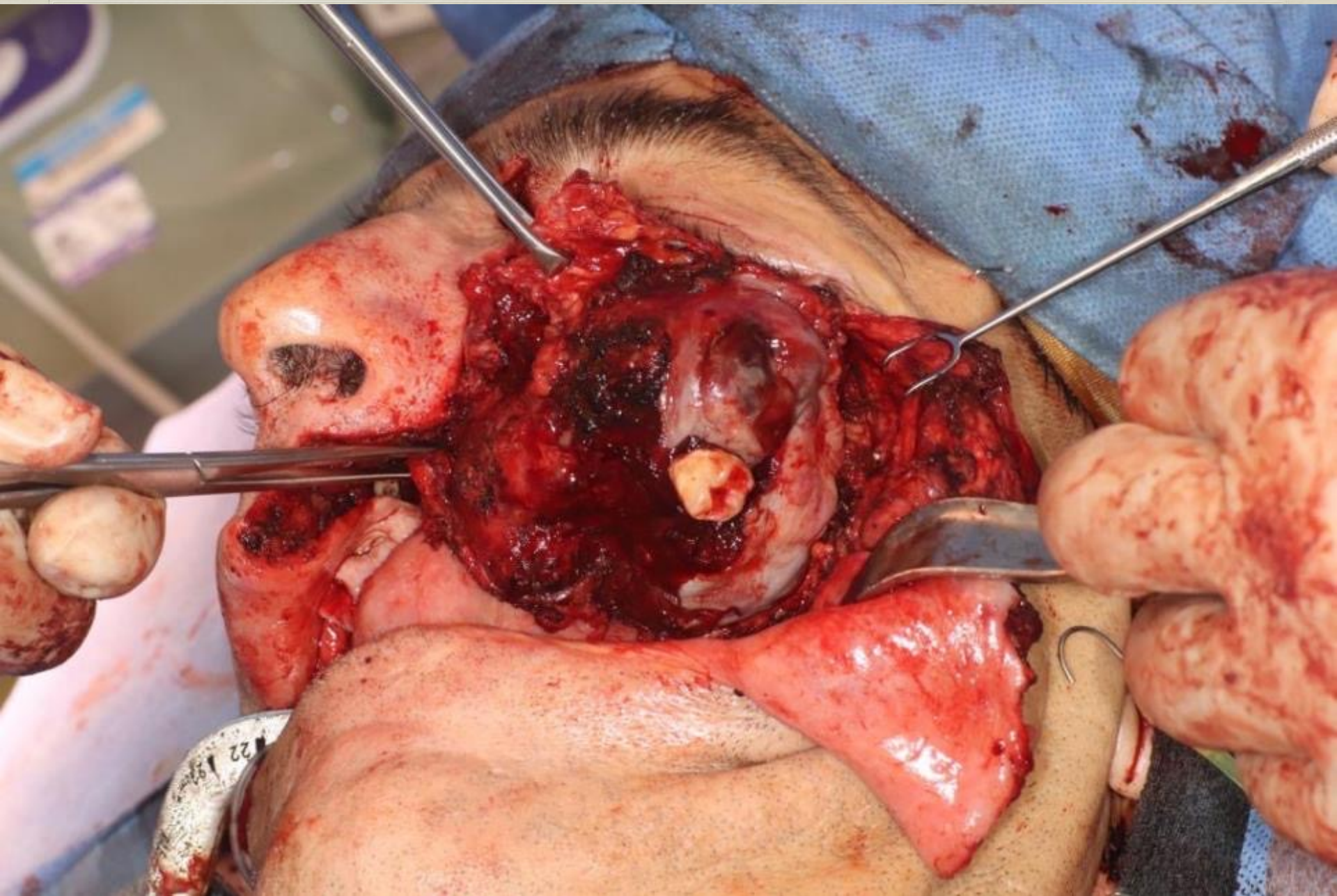
- ❧ Frozen section biopsy to confirm diagnosis
- ❧ Left total maxillectomy
- ❧ Open ethmoidectomy
- ❧ Possible orbital exenteration
- ❧ Anterolateral thigh free flap reconstruction

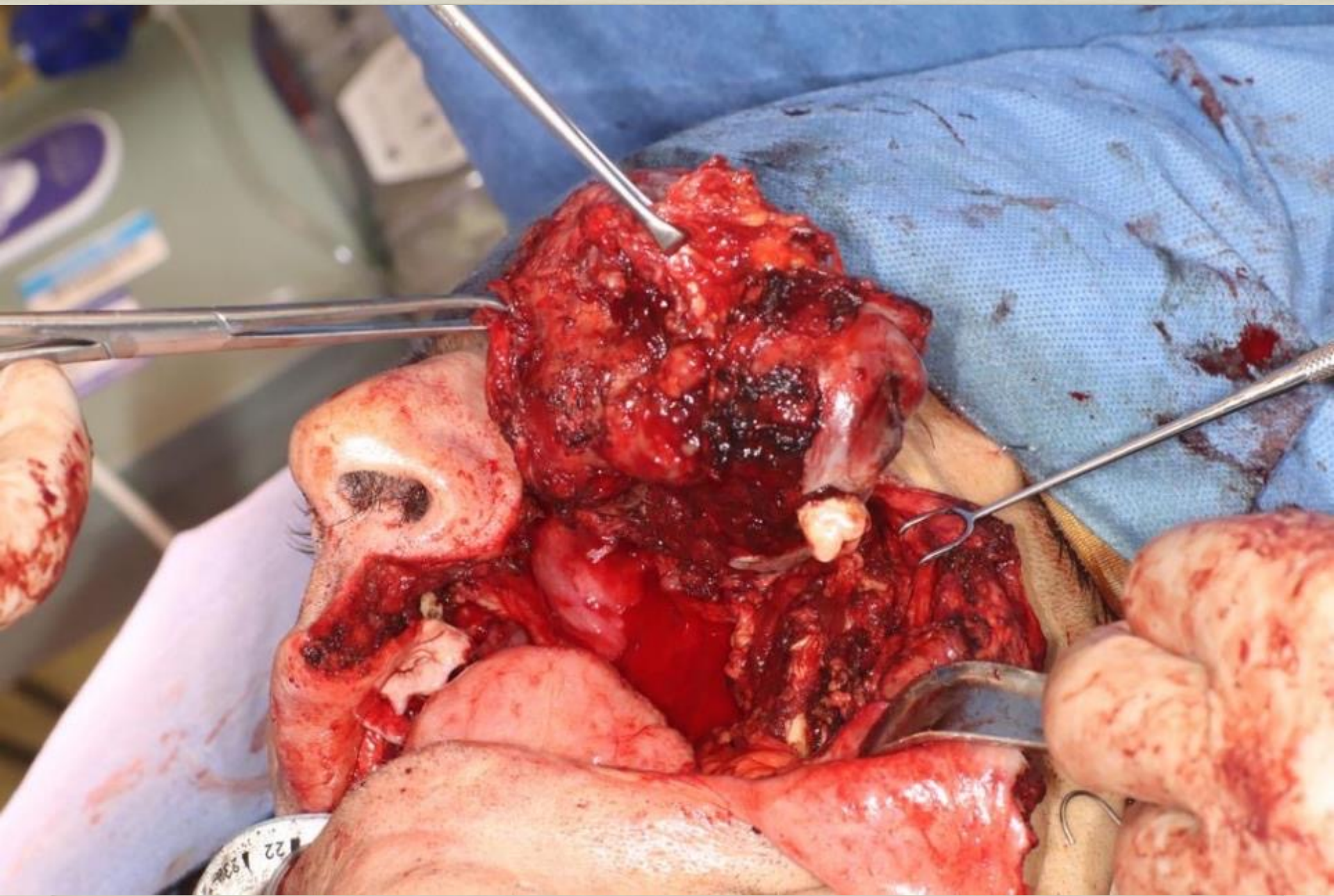




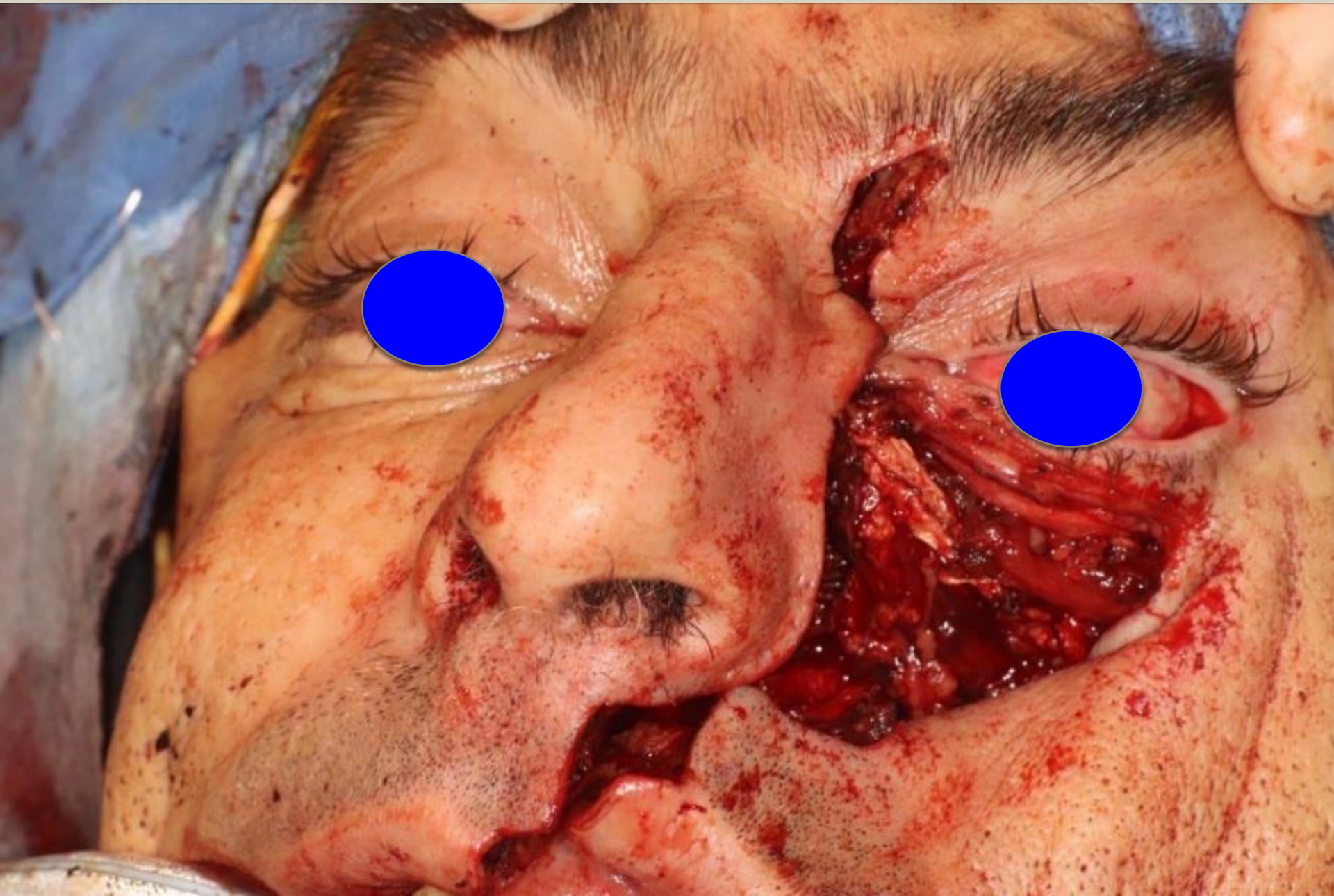
intraoperative frozen section biopsy: polymorphous adenocarcinoma, cribiform variant

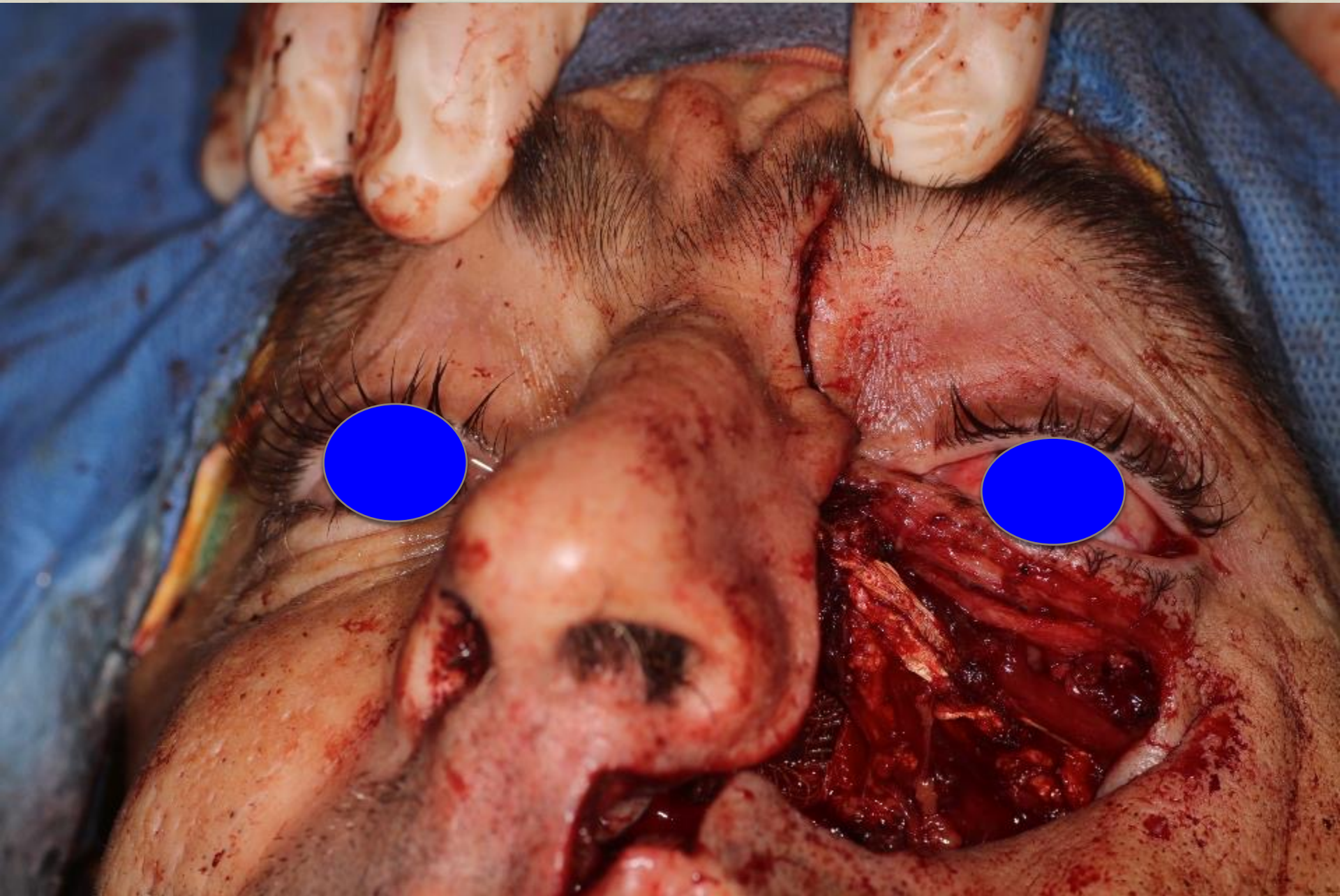






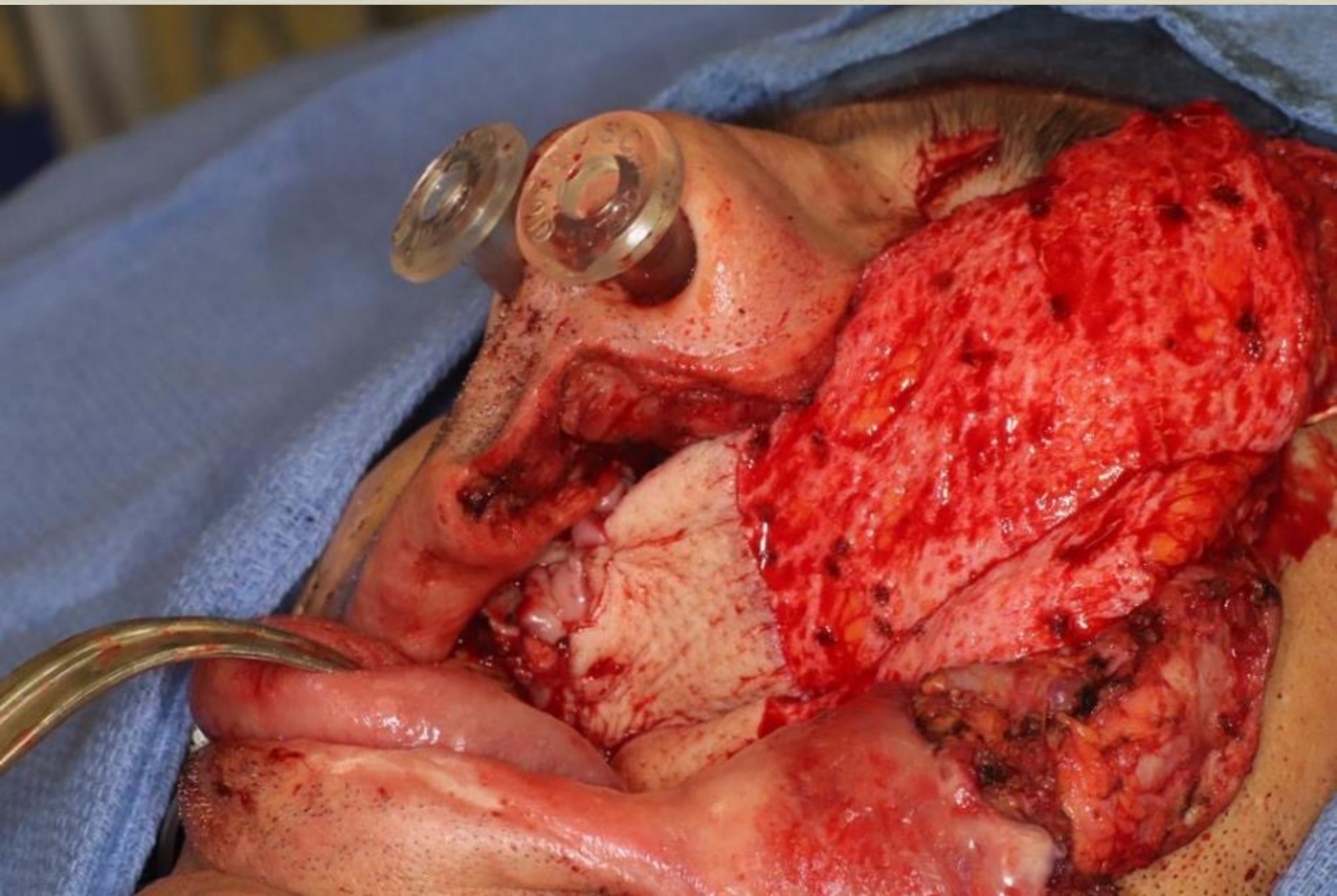




















Final Diagnosis



H. TUMOR LEFT MAXILLA:

POLYMORPHOUS ADENOCARCINOMA, CRIBRIFORM VARIANT, 8.0 cm in largest dimension. See note.

Angiolymphatic invasion is present.

No definitive evidence of perineural invasion.

Patient planned to received adjuvant
radiation therapy

Challenges

∞ Ablative

∞ Reconstructive

∞ Socioeconomic

Ablative Surgical Challenges



∞ Airway

∞ tracheostomy?

∞ Approaches

∞ intraoral vs Weber-Ferguson

∞ dieffenbach or lynch extensions?

∞ Brain/skull base

∞ intracranial extension? Combined craniotomy and transfacial approach

∞ dural resection?

∞ infratemporal fossa exploration

Ablative Surgical Challenges



☞ Nose

- ☞ resection of septum, nasal walls
- ☞ loss of structural support of nose/tip
- ☞ endotracheal tube

☞ Orbit/Globe

- ☞ involvement of orbital compartment? Intraconal vs extraconal
- ☞ enucleation vs exenteration

Ablative Surgical Challenges

☞ Skin

☞ involvement or adherent to underlying tumor -> resection?

☞ Soft palate (speech and swallowing)

☞ can some velar muscles be spared?

☞ Nerves (sensory and motor)

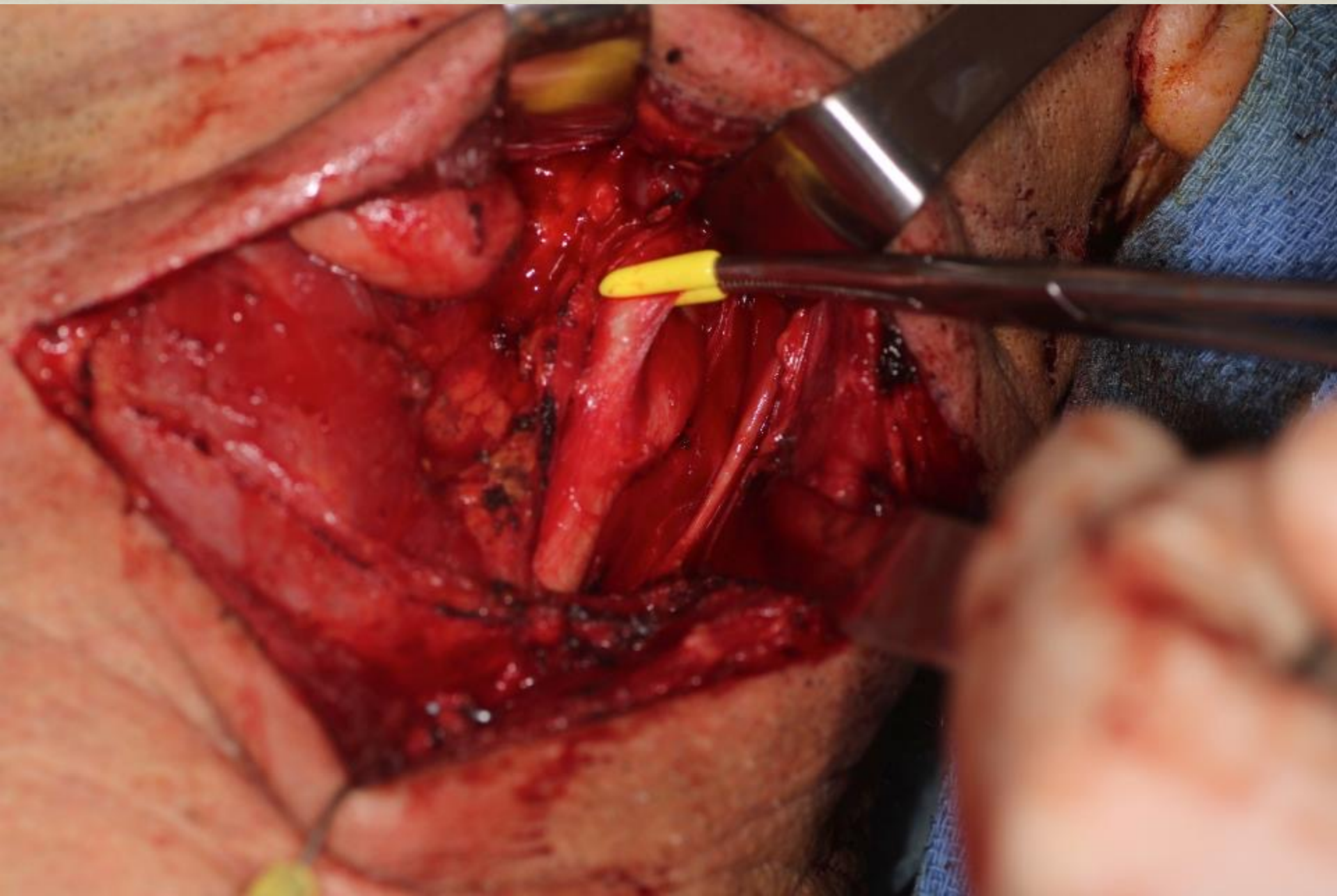
☞ V2 or its branches (IO)

☞ V3 – at skull base – especially with infratemporal fossa exploration

☞ CN VII (buccal, zygomatic branches)

Ablative Surgical Challenges

- ❧ Bleeding
 - ❧ type and screen
 - ❧ consider preop CTA/MRA
 - ❧ arterial vs venous
 - ❧ preop embolization?
 - ❧ intraop external carotid ligation?
- ❧ Distorted anatomy
- ❧ Patient co-morbidities



Reconstructive Surgical Challenges

∞ Choice of reconstruction

- ∞ obturator? soft tissue free flap? osseous free flap? local flaps? combination of free and local flaps?

∞ Brain/Skull Base

- ∞ dural resection -> reconstruction, seal off brain

∞ Nose

- ∞ obliteration of nasal cavity post-resection or with flap
- ∞ reconstruction of nasal/tip support
 - ∞ primary or secondary
- ∞ alar base – cinch

Reconstructive Surgical Challenges

∞ Orbit/Globe

- ∞ preparation of site for prosthetic globe
- ∞ placement of periorbital implants for prosthesis
- ∞ reconstruction of bony orbit and re-suspension of globe
 - ∞ if keeping globe, good positioning to prevent diplopia
 - ∞ plates vs flaps

∞ Skin

- ∞ Soft palate (speech and swallowing)
 - ∞ create/reconstruct velopharyngeal closure

Reconstructive Surgical Challenges

∞ Nerves (sensory and motor)

- ∞ nerve reconstruction
- ∞ facial re-animation -> delayed

∞ Flap challenges

- ∞ site of anastomosis
- ∞ chimeric flap needed?
- ∞ sensate flap?

∞ Teeth

- ∞ obturator?
- ∞ dental implants – osseous flap
- ∞ removable denture over soft tissue flap? zygomatic or pterygoid implants?

Reconstructive Surgical Challenges

- ∞ Adjuvant treatments
 - ∞ postop radiation -> effect on reconstruction
 - ∞ postop chemotherapy -> effect on healing
- ∞ Patient co-morbidities

Socioeconomic Challenges

- ☞ Support system/network – preop and postop
- ☞ Financial
- ☞ Social stigma/isolation – therapy
- ☞ Decreased QOL

Final Words

- ☞ Significant surgical challenges
- ☞ Need to consider social factors
- ☞ Multidisciplinary approach
- ☞ Hope for the best, plan for the worst
- ☞ PATIENT DRIVEN APPROACH



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THANK YOU