

Cervical Lymphadenopathy

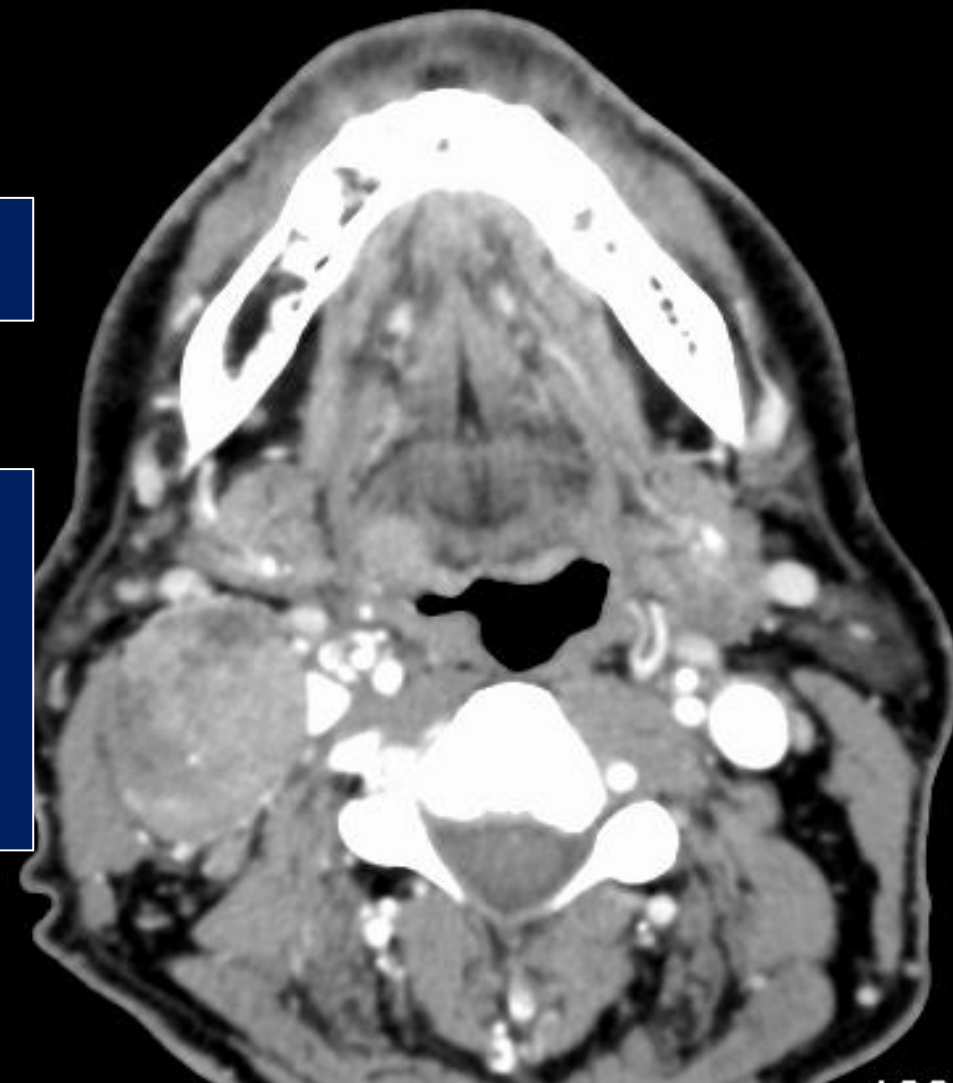
Mohit Agarwal MD

Associate Professor

Director Fellowship Program, Associate Section Chief

Founder of The Cortex Club

Medical College of Wisconsin, Milwaukee, WI



THE
CORTEx
CLUB

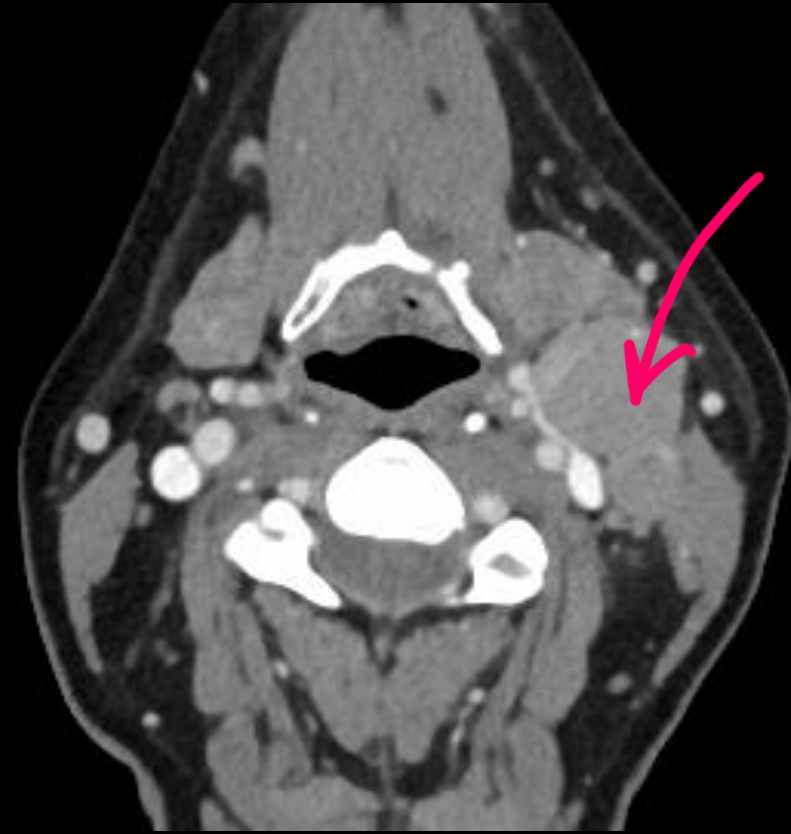
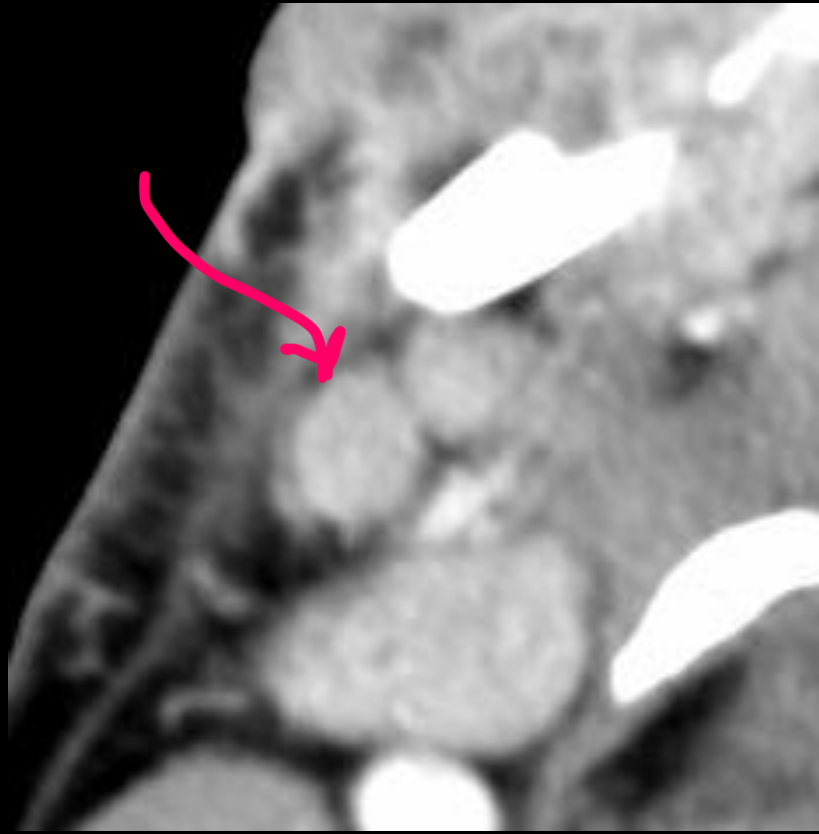


American College
of Radiology™

Froedtert

&

MEDICAL
COLLEGE of
WISCONSIN



Which level lymph node?

.....

Does that enlarged node upstage Ca ?

Objectives

- Review cervical lymph node levels
- Discuss features of lymphadenopathy
- Discuss anatomic features pertinent to Ca

Cervical lymph nodes

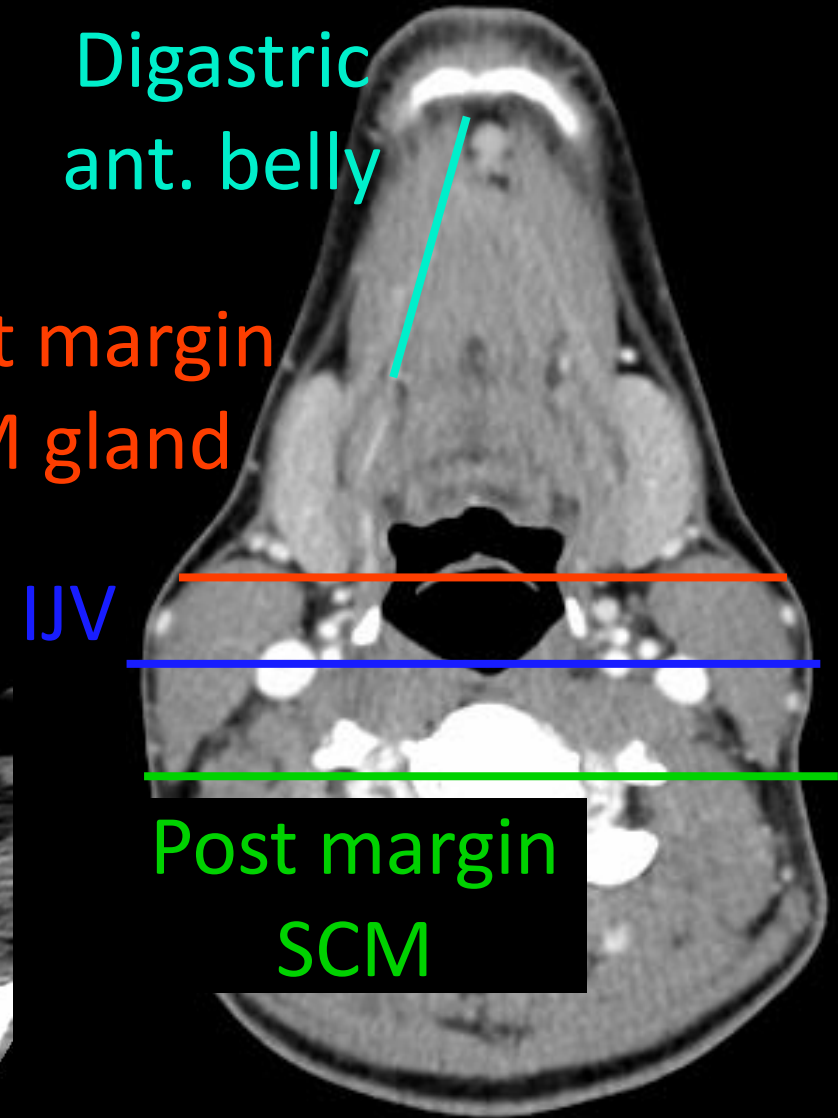
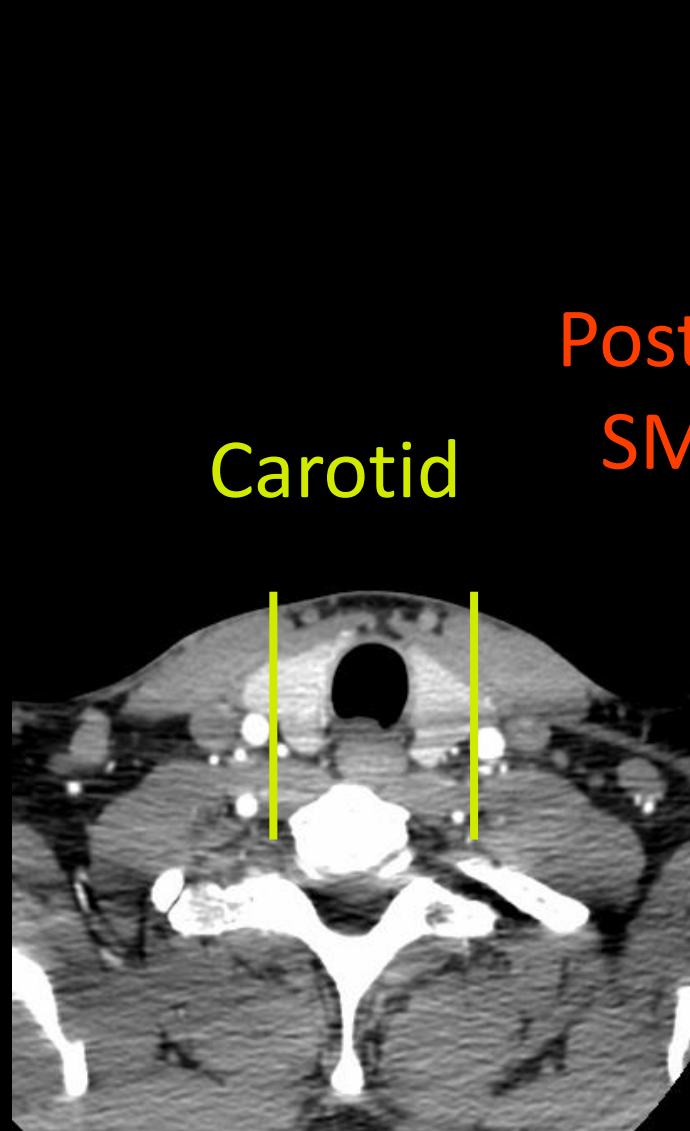
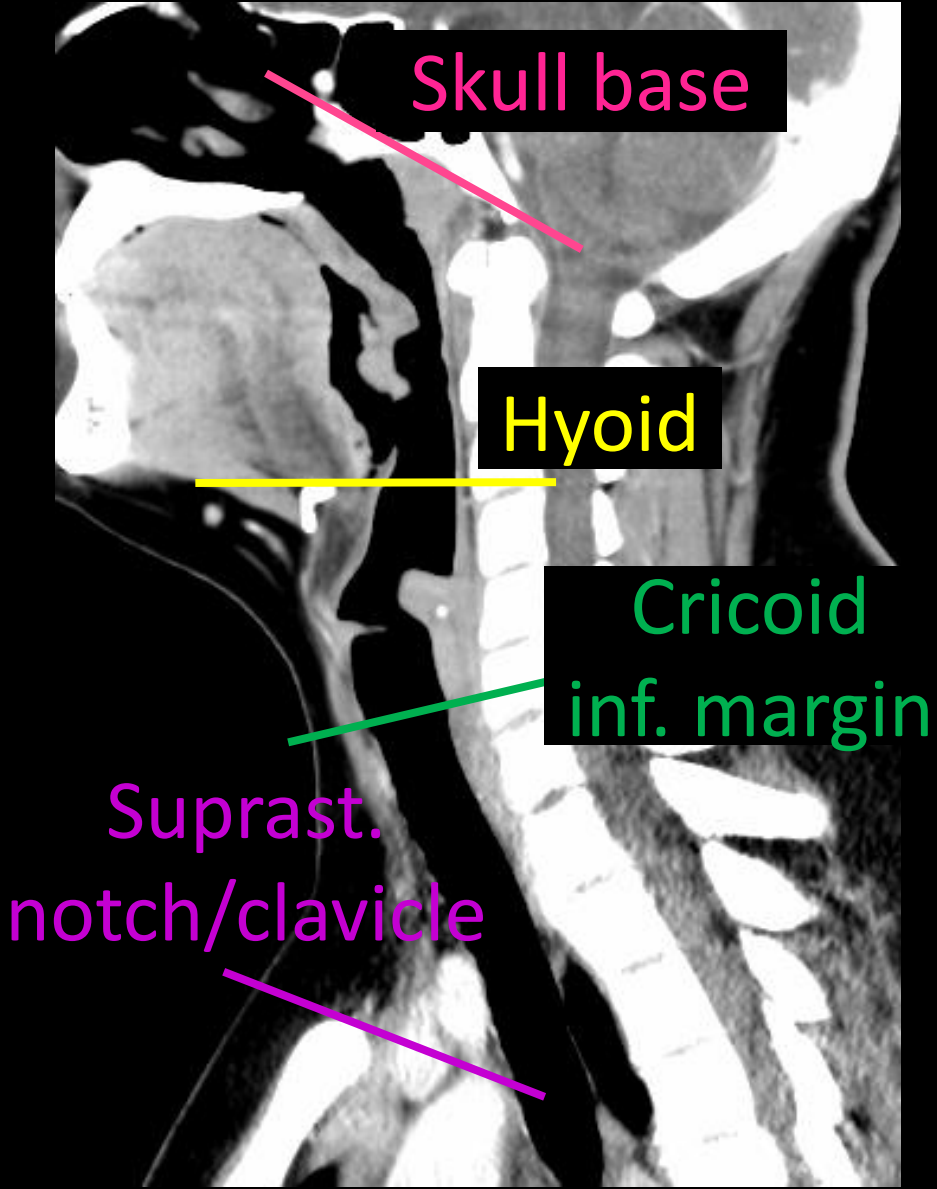
Levels I through VII

- IA and IB
- IIA and IIB
- III
- IV
- VA and VB
- VI
- VII

‘Other nodes’

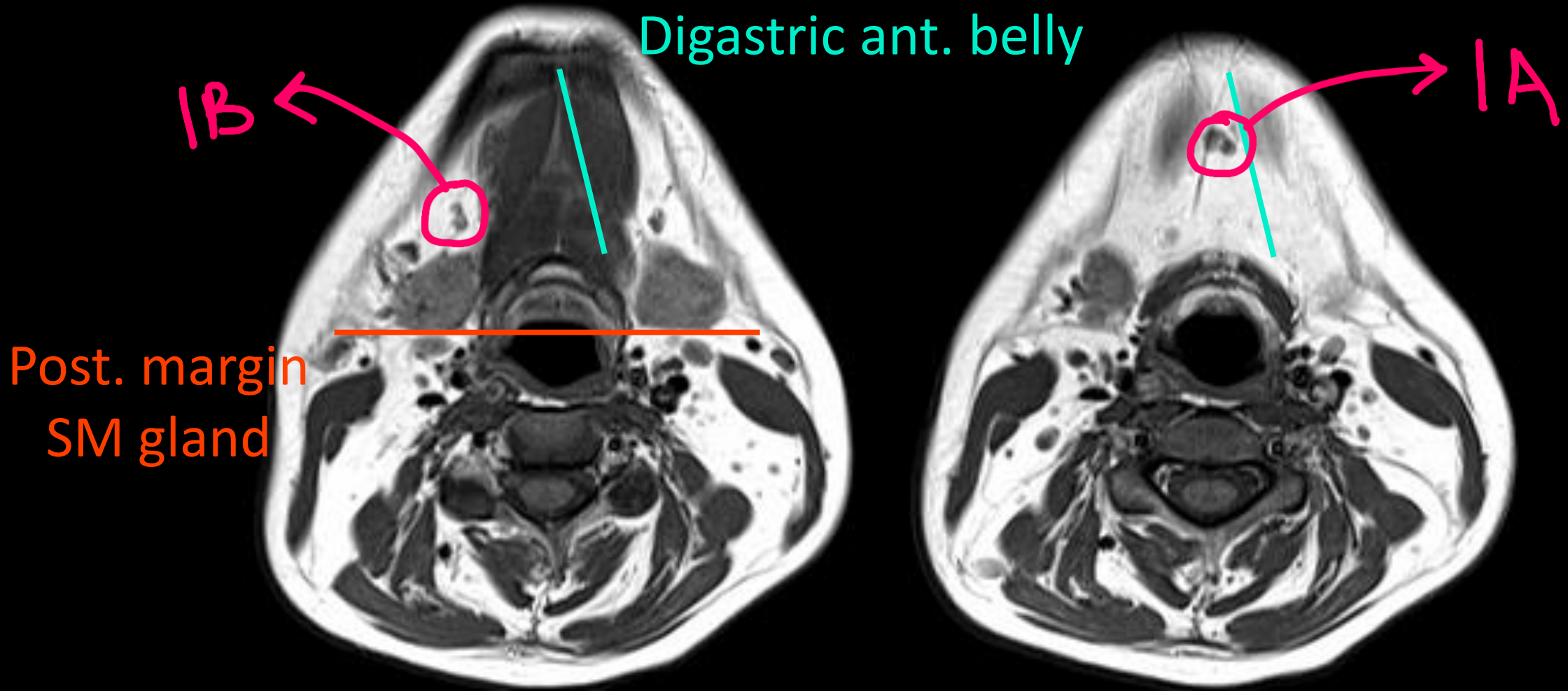
- Suboccipital
- Retropharyngeal
- Parapharyngeal
- Buccinator (facial)
- Preauricular
- Peri- and intraparotid

Cervical LN landmarks

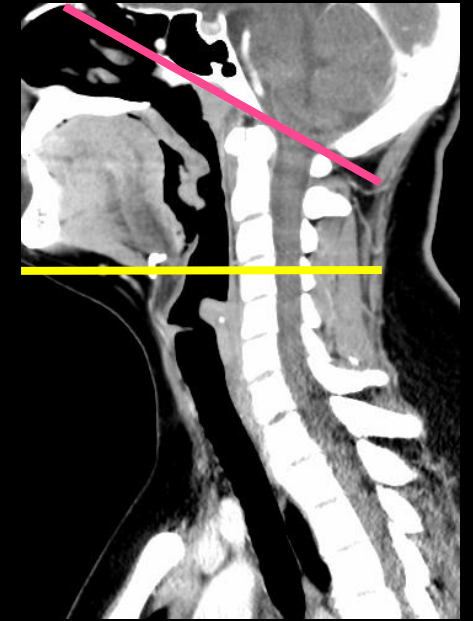


Level I

Anterior to posterior margin SM gland



Level II



II

IJV

IIA

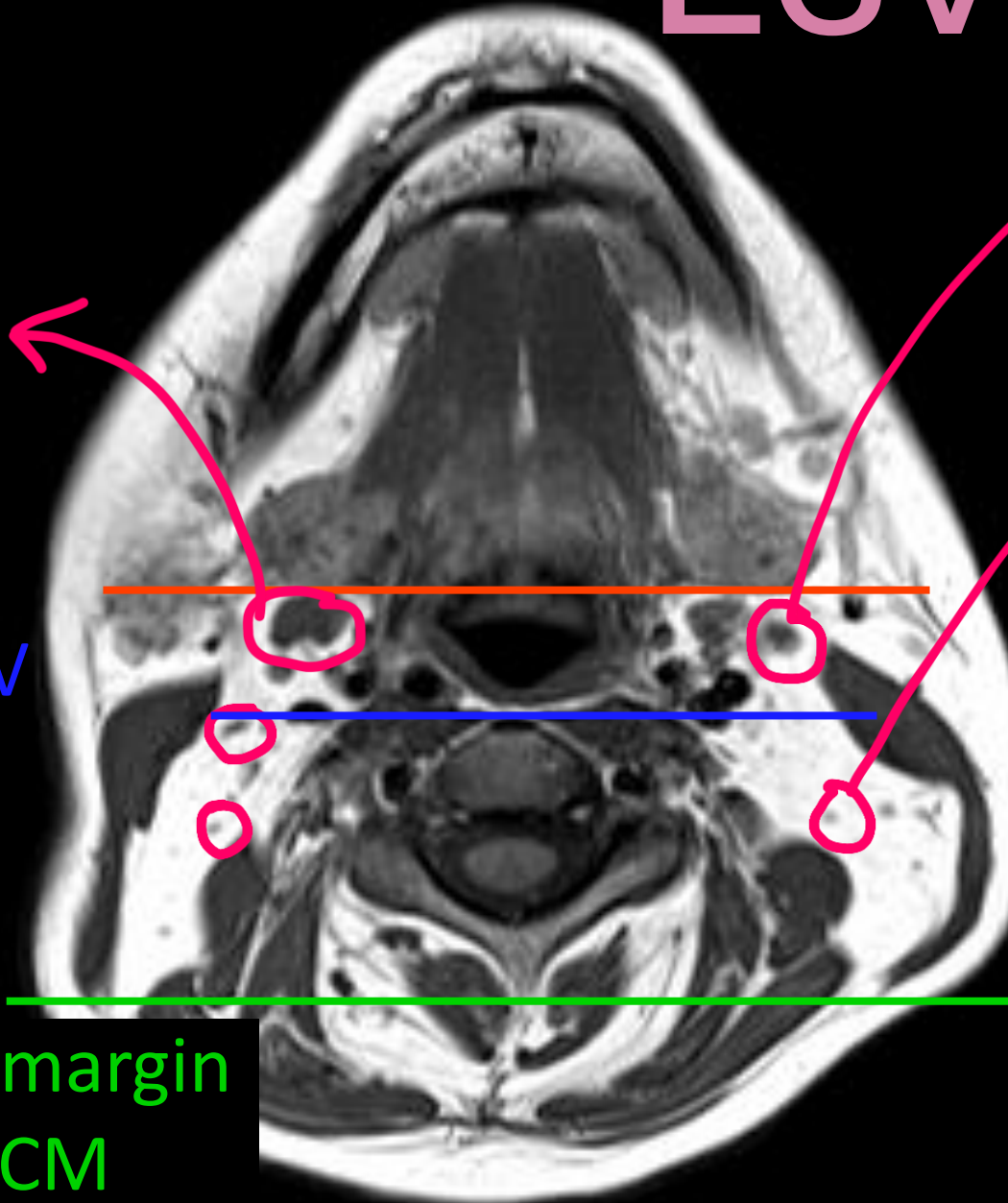
IIB

Posterior to SM gland

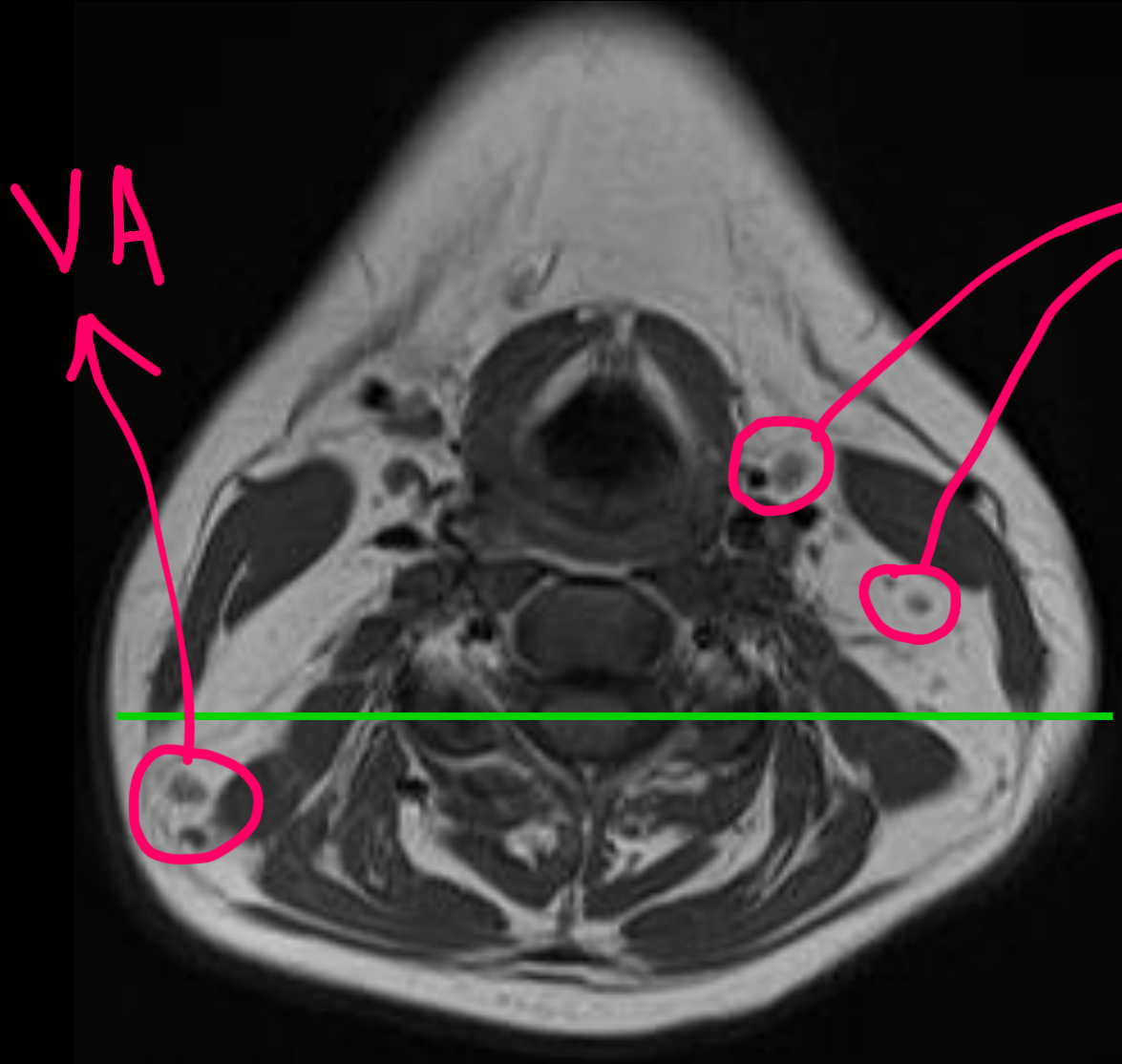
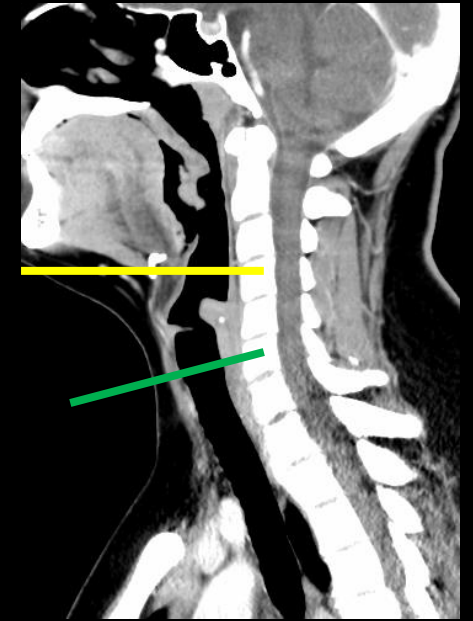
Between skull base & hyoid

Ant. to SCM post margin

Post margin
SCM



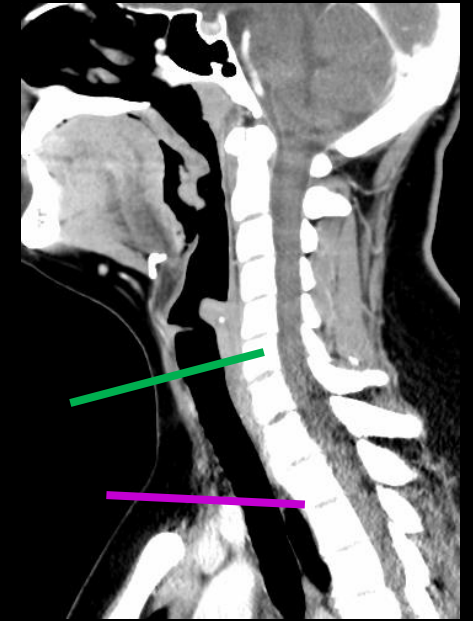
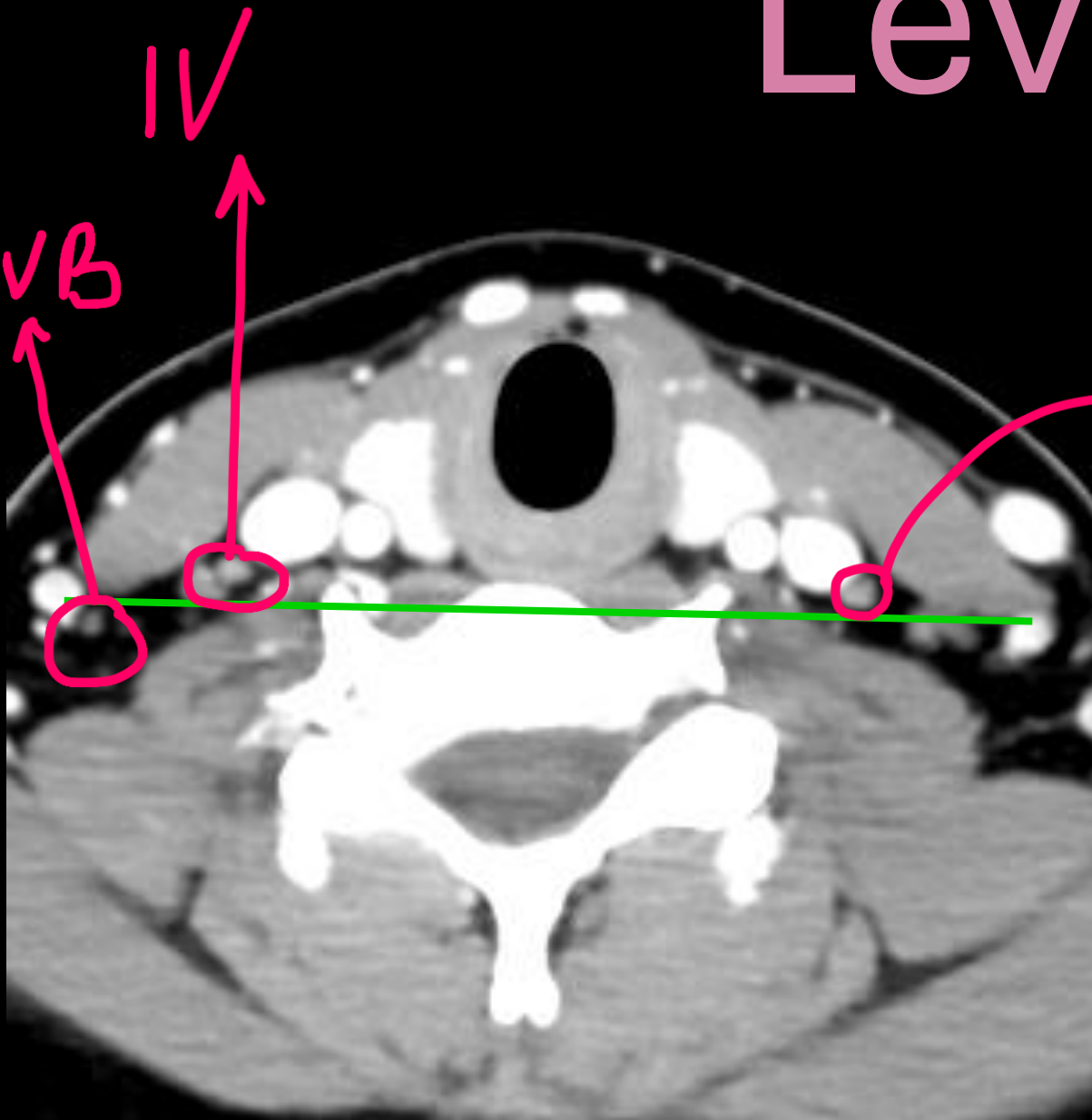
Level III



Between hyoid and cricoid

Ant. to SCM post margin

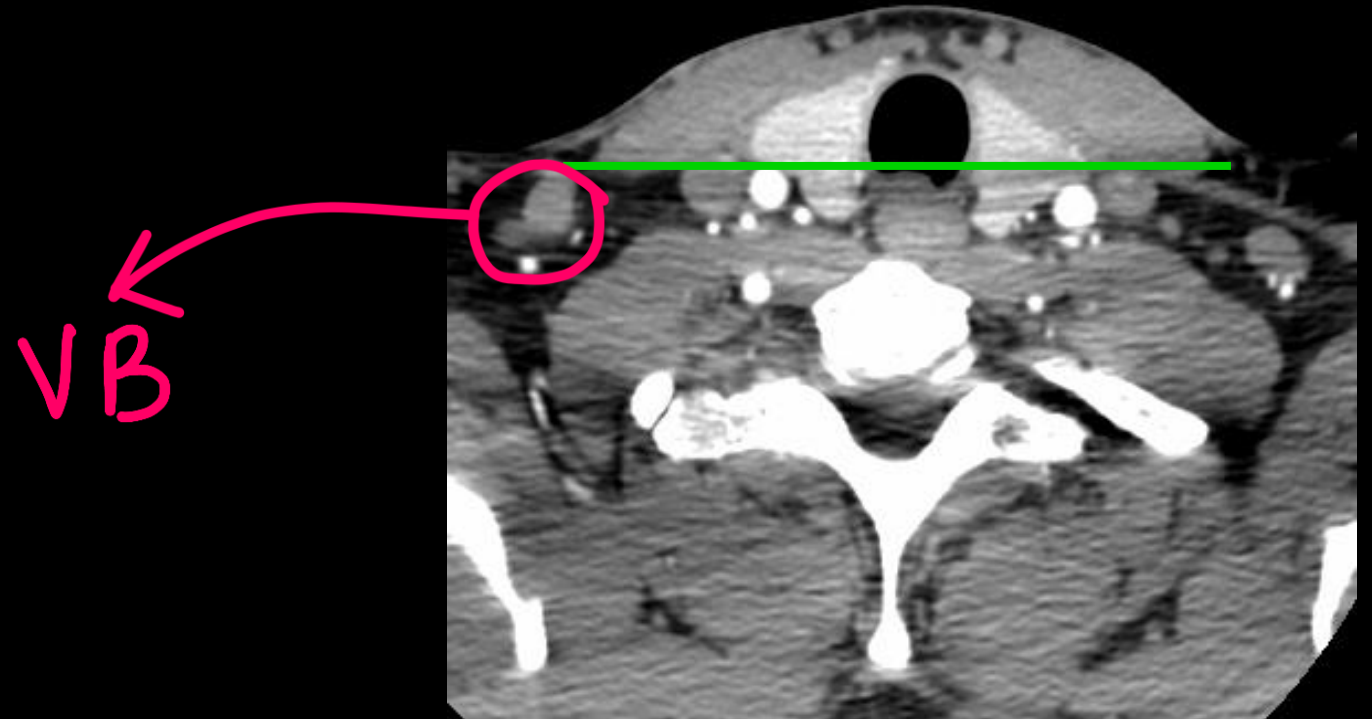
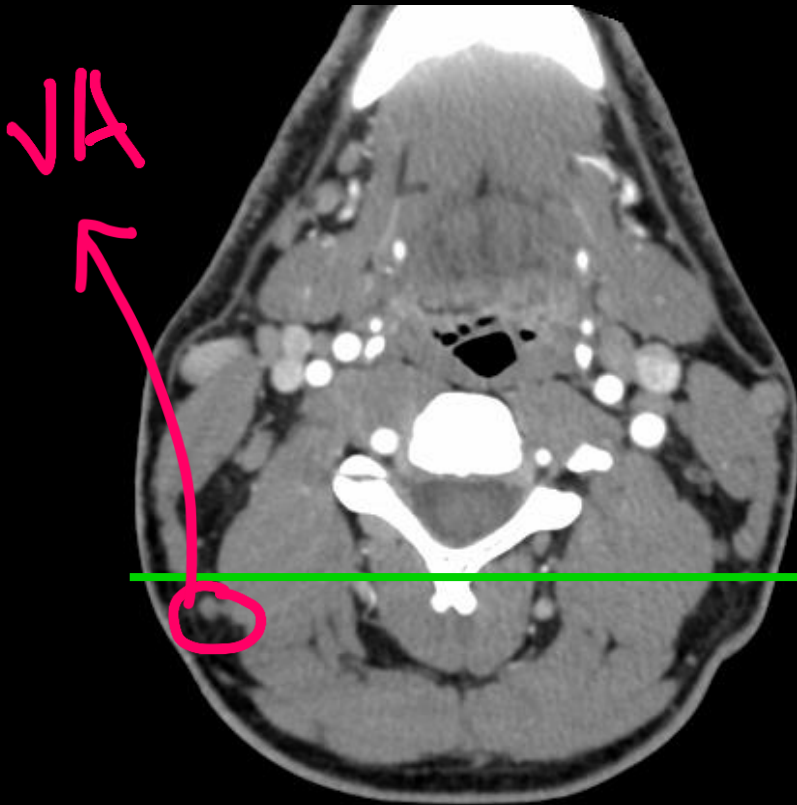
Level IV



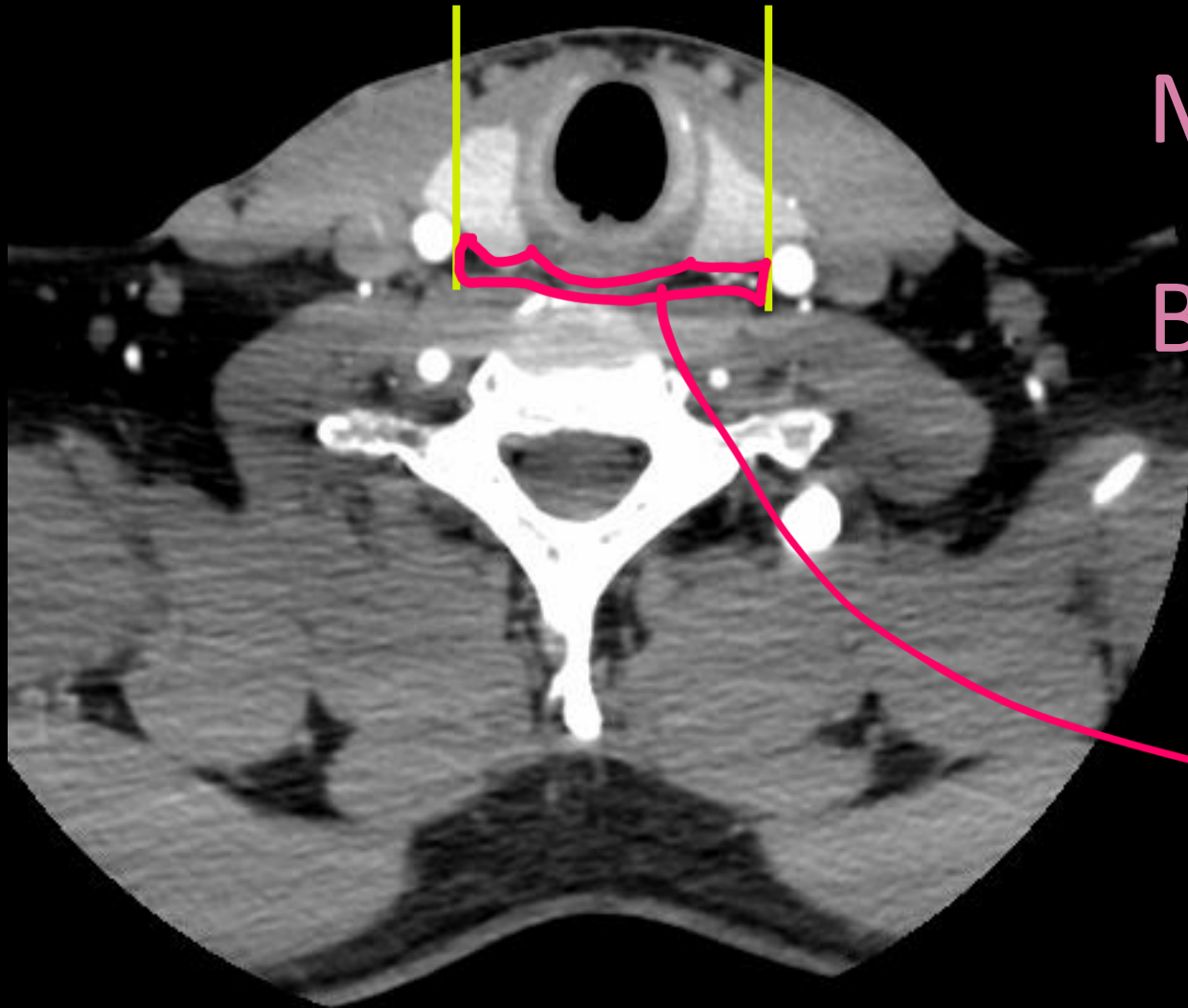
Between cricoid & clavicle
Ant. to SCM post margin
Includes supraclavicular

Level V

Posterior to SCM post margin
Superior to cricoid – VA, Inferior - VB



Level VI



Medial to carotids

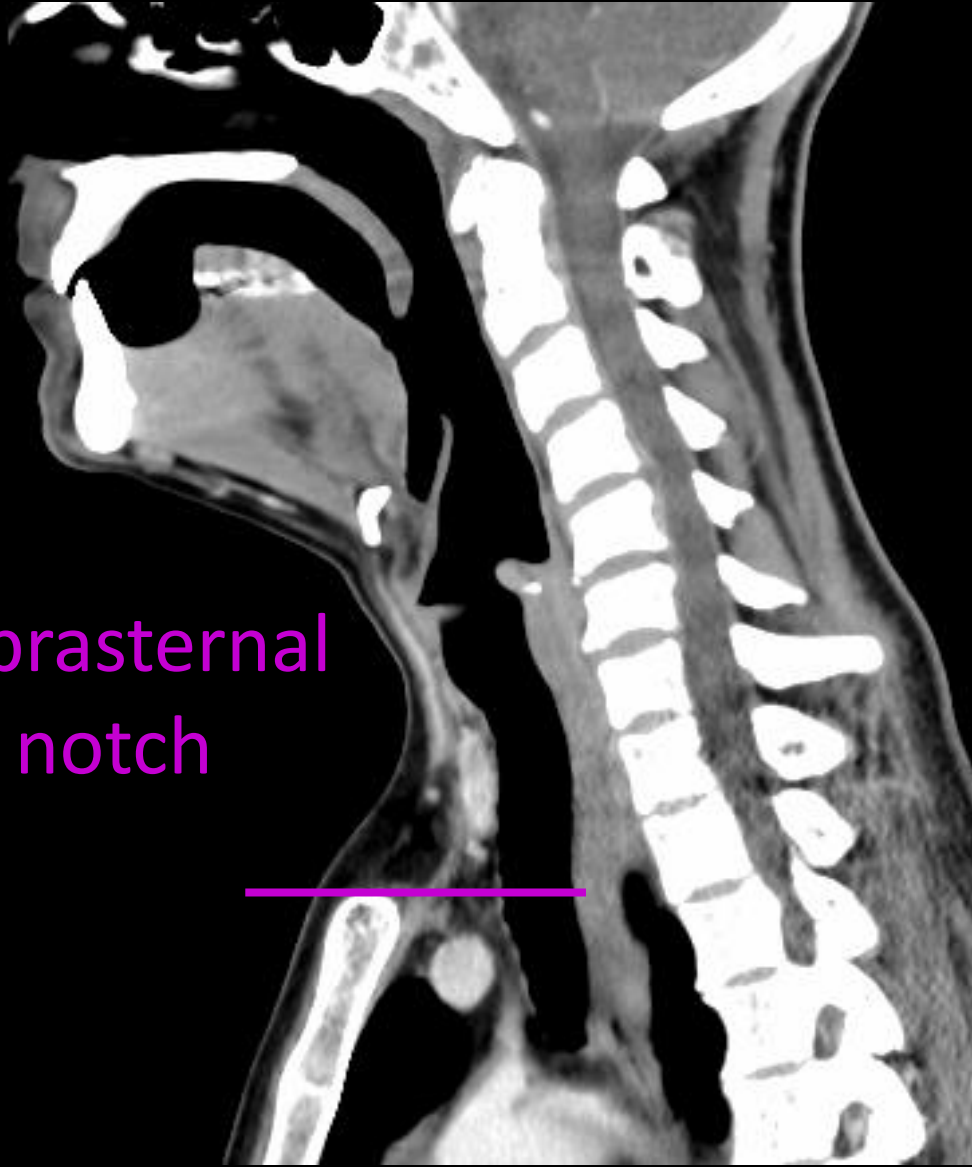
Between hyoid & sternum

VI

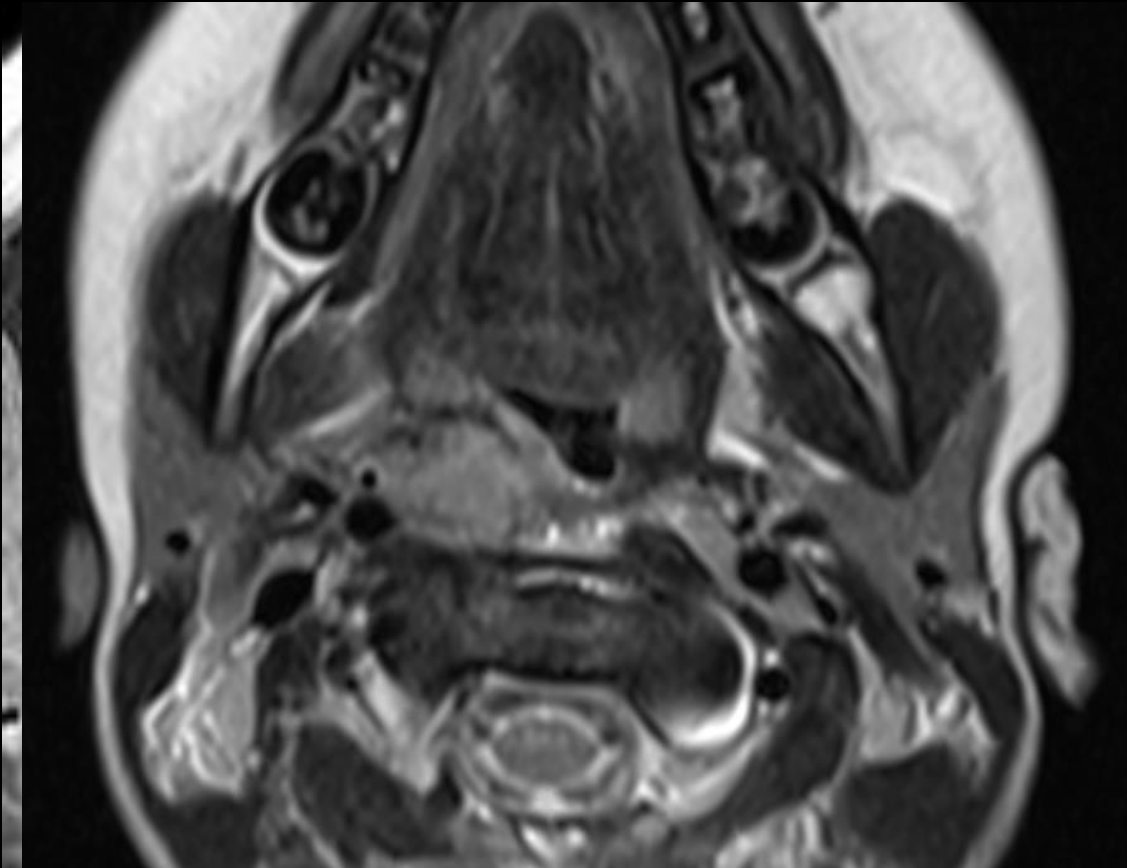
Level VII

Inferior to suprasternal notch
Superior to innominate artery

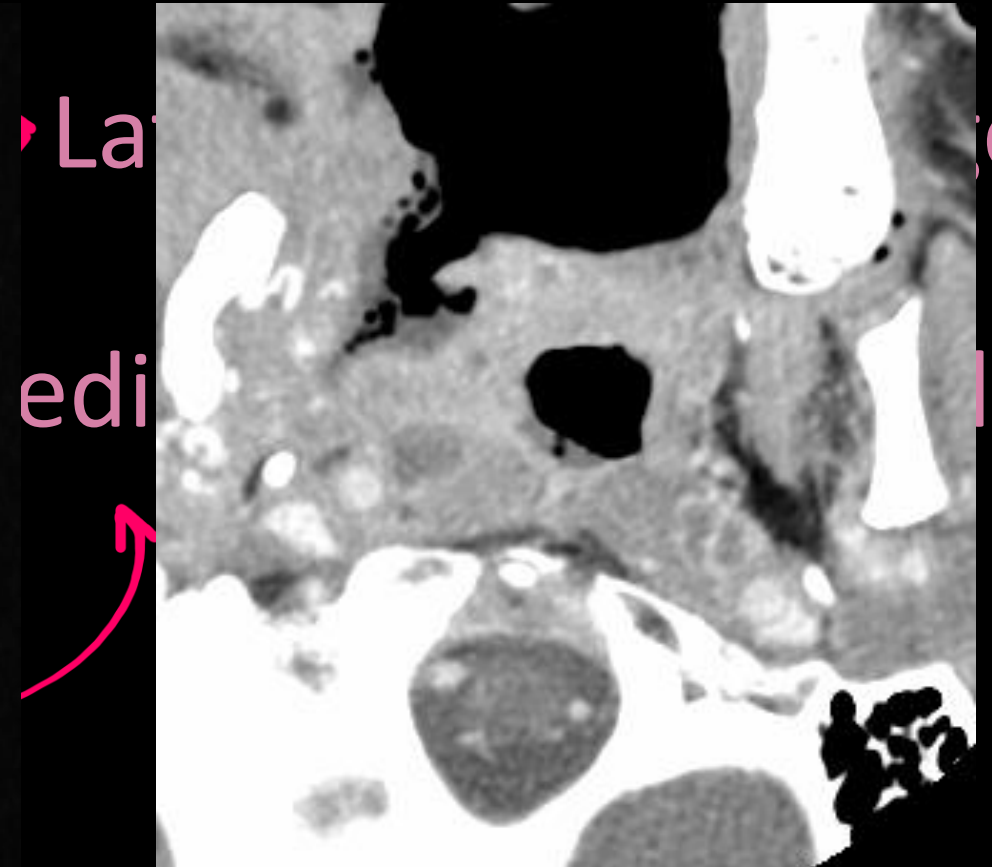
Suprasternal
notch



Retropharyngeal



Suppurative adenitis



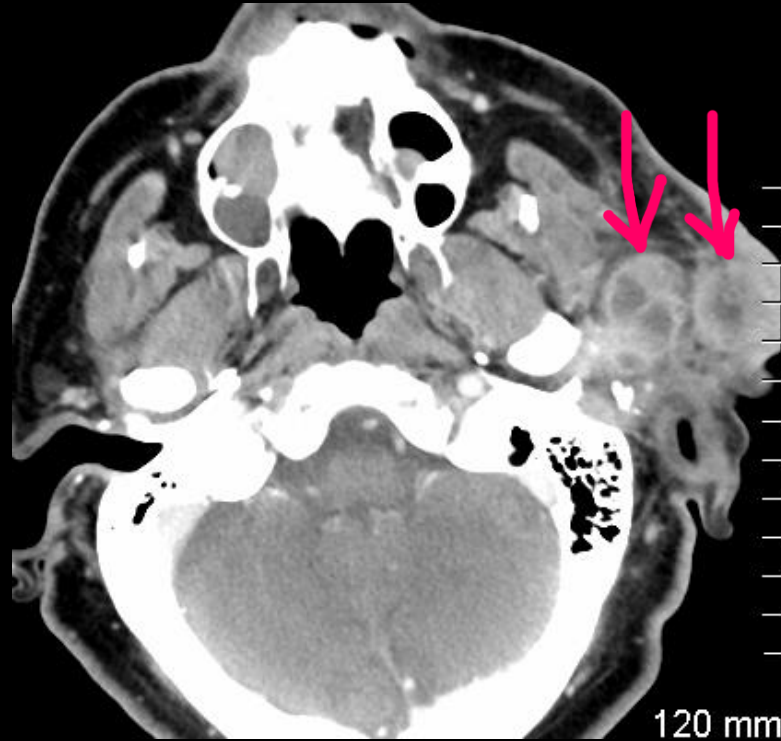
RP adenopathy

▶ Lat

edi

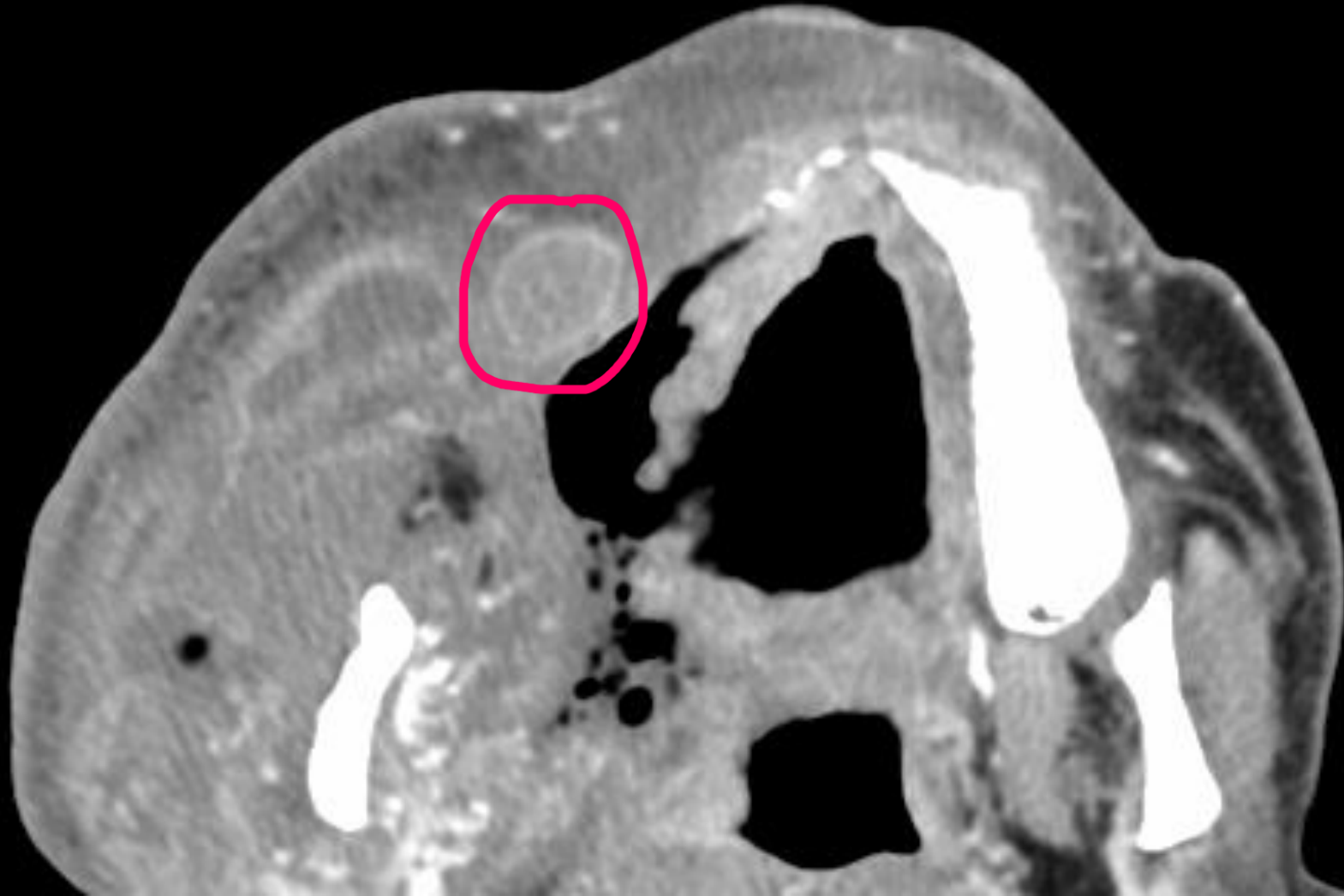
real

Suboccipital, Preauricular, Periparotid



Suboccipital Preauricular Periparotid

Facial/Buccinator



Objectives

- Review cervical lymph node levels
- Discuss features of lymphadenopathy
- Discuss anatomic features pertinent to Ca

Abnormal lymph nodes

Enlarged

Measured in long axis in axial plane

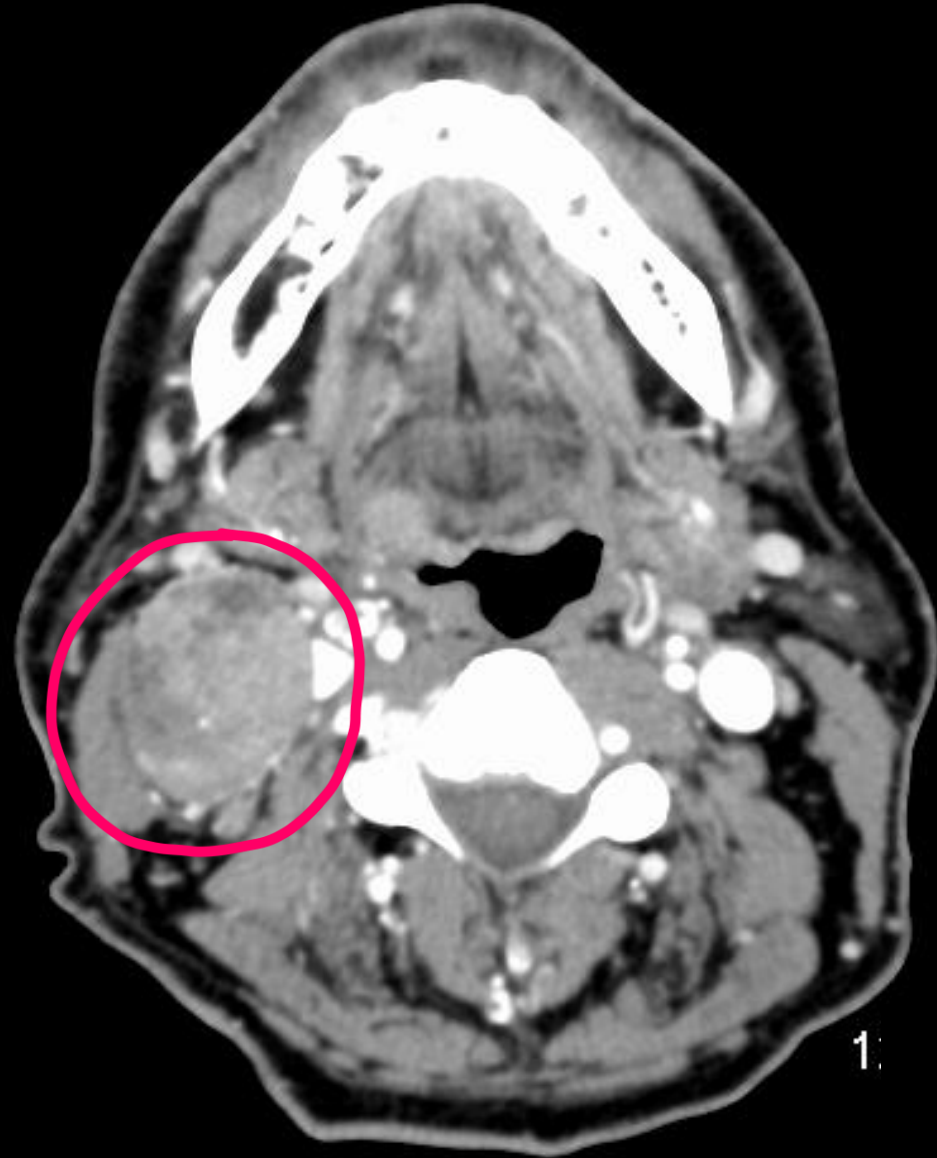
Greatest dimension when staging

Level II – 15mm

Retropharyngeal – 8mm

All other groups – 10mm

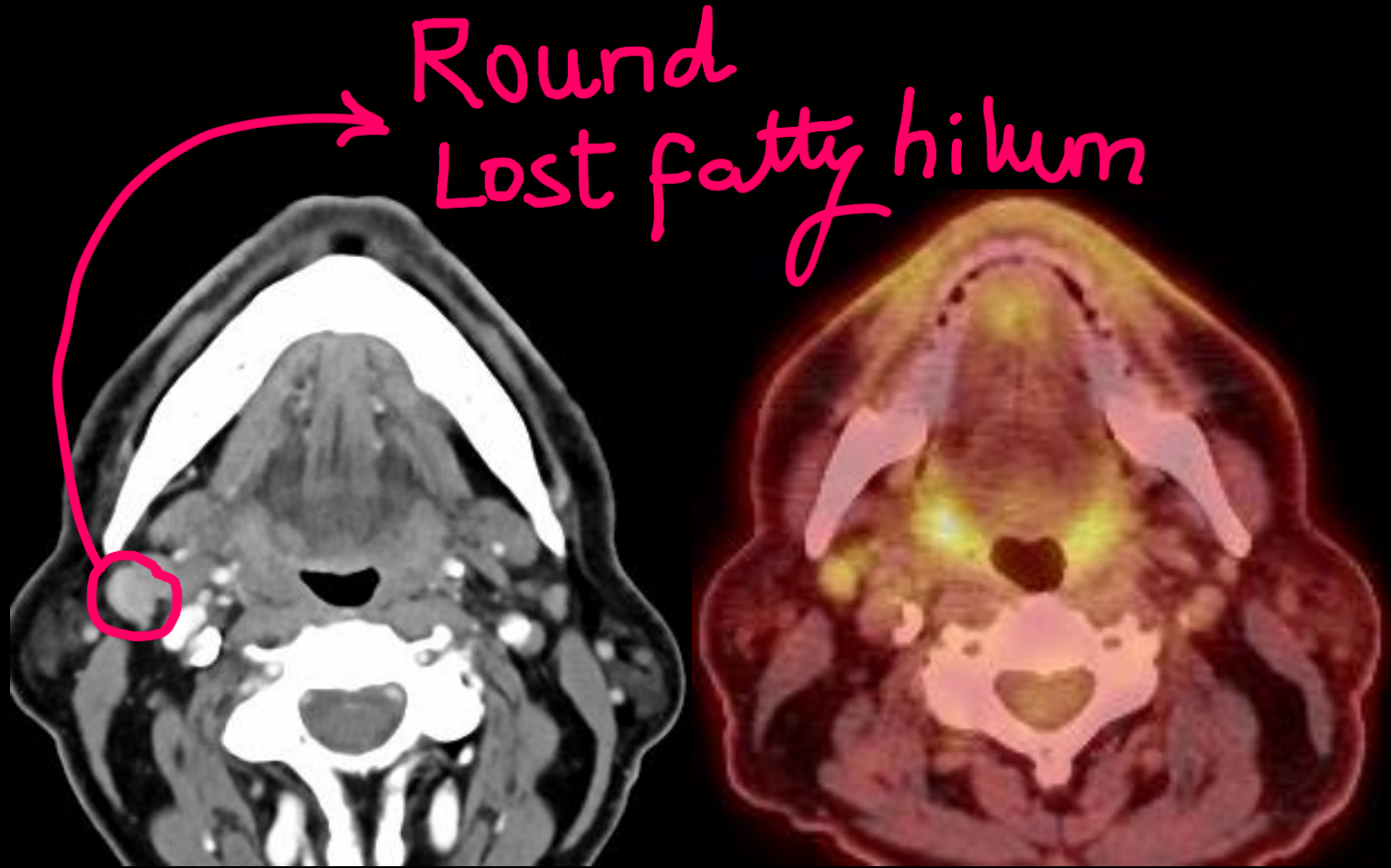
MORPHOLOGY TRUMPS SIZE!



Abnormal lymph nodes

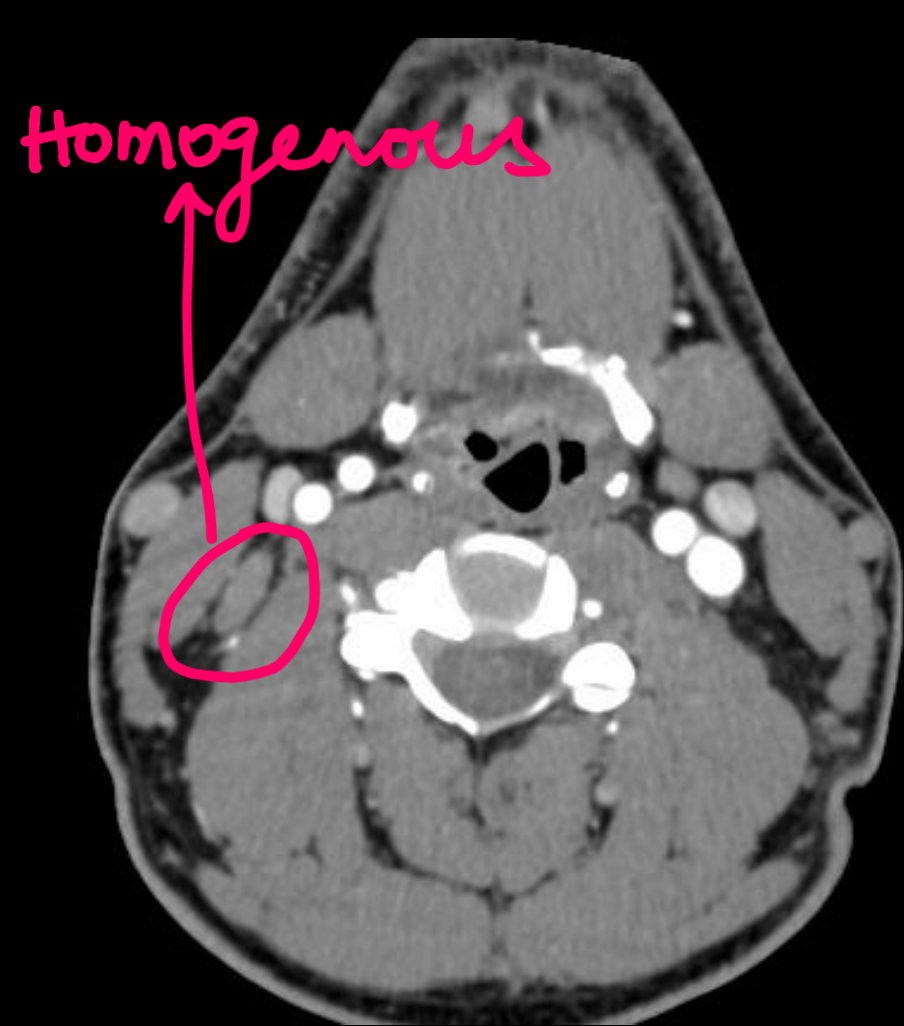


Normal

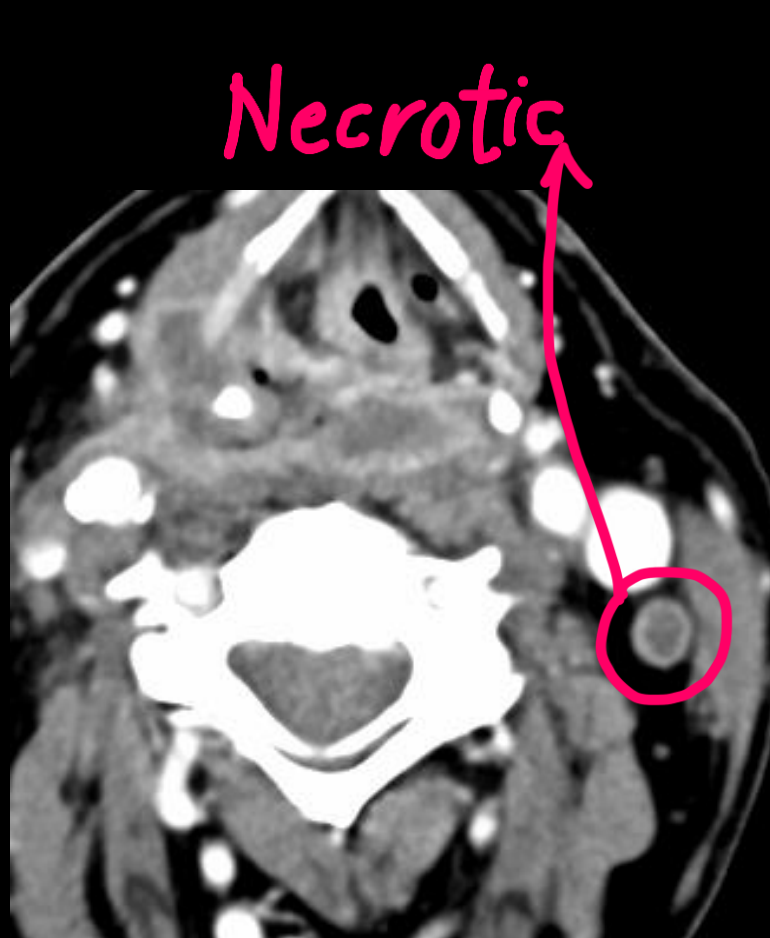


Abnormal

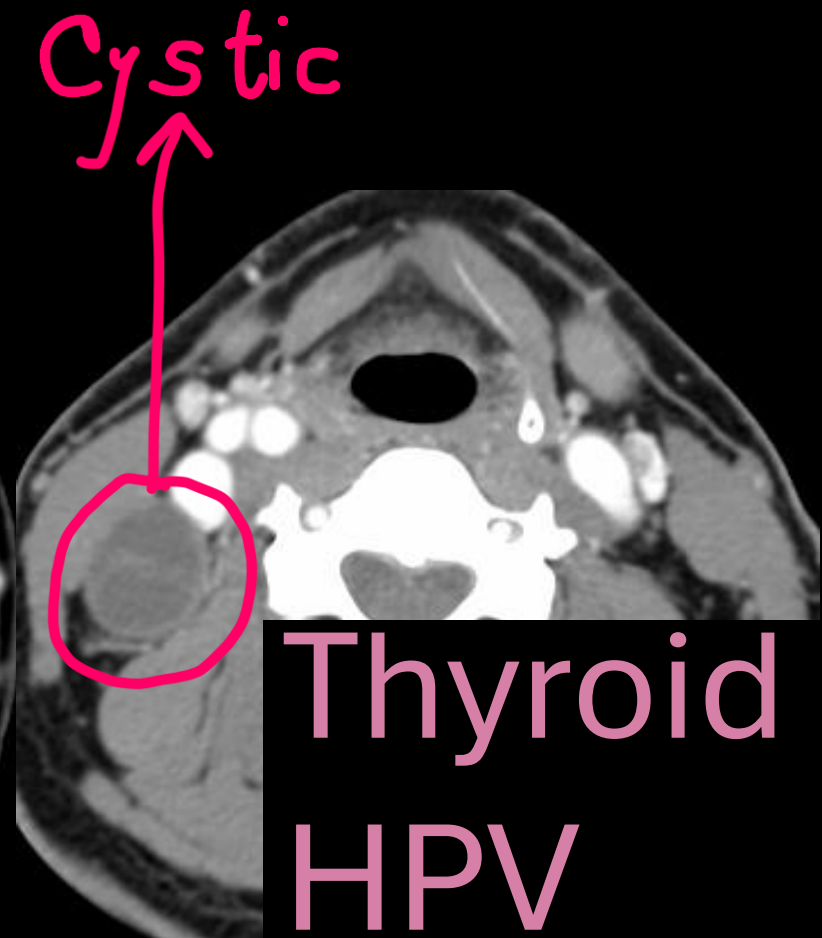
Abnormal lymph nodes



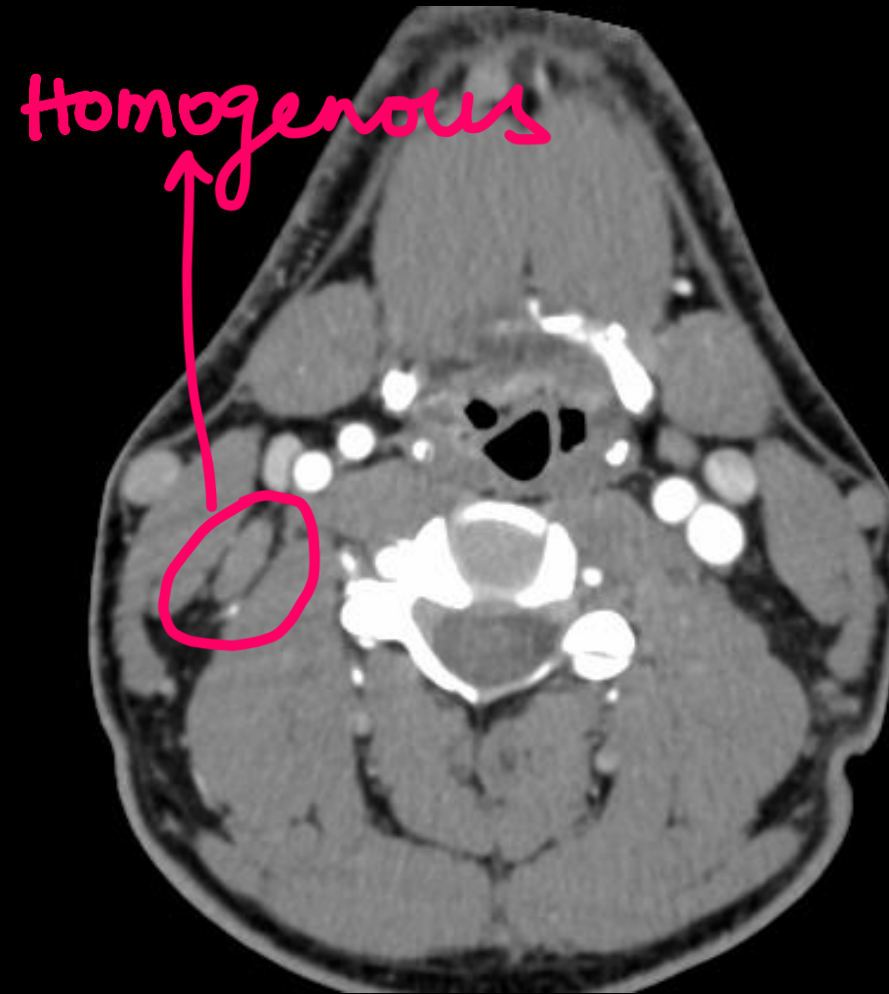
Normal



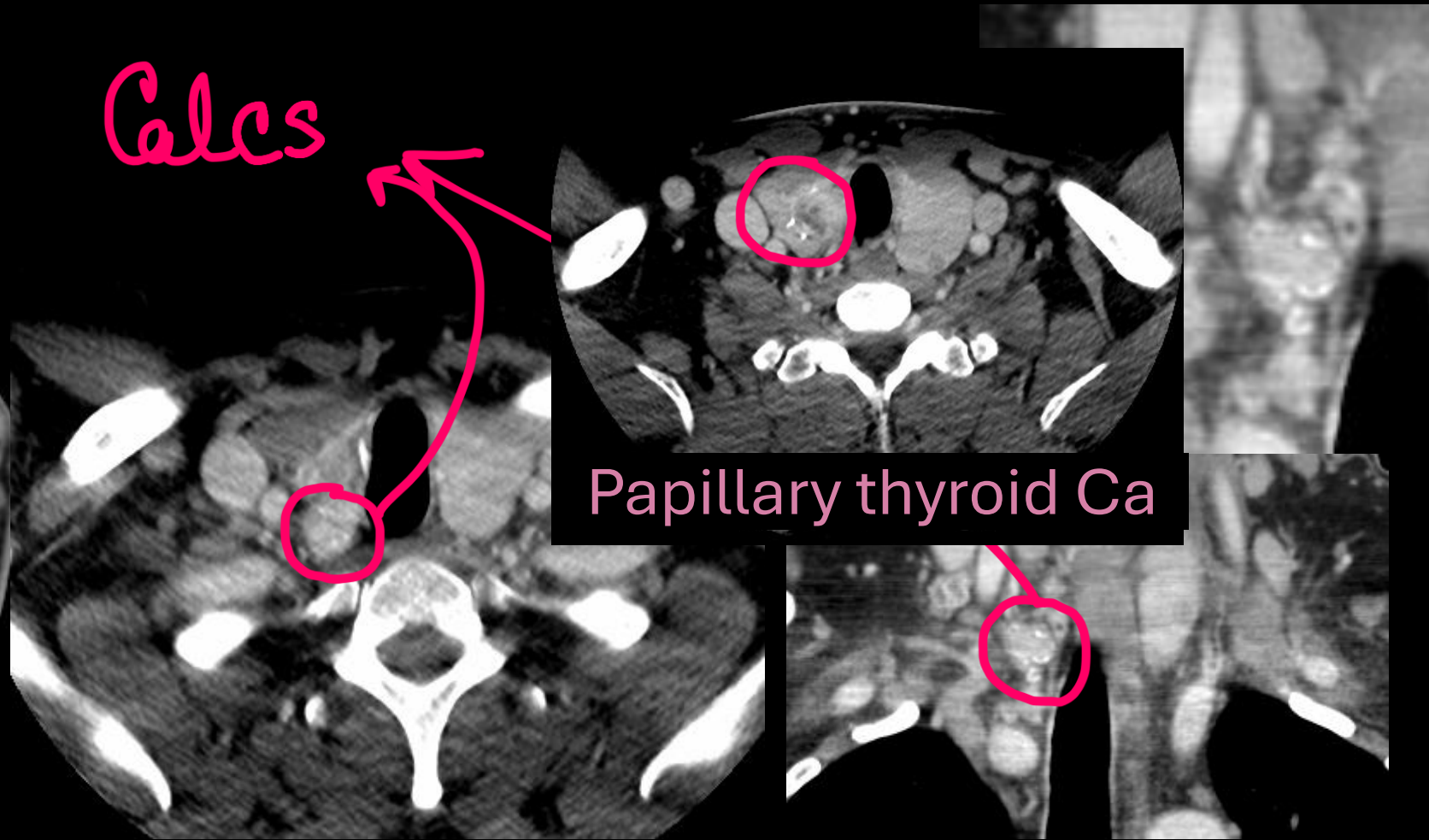
Abnormal



Abnormal lymph nodes



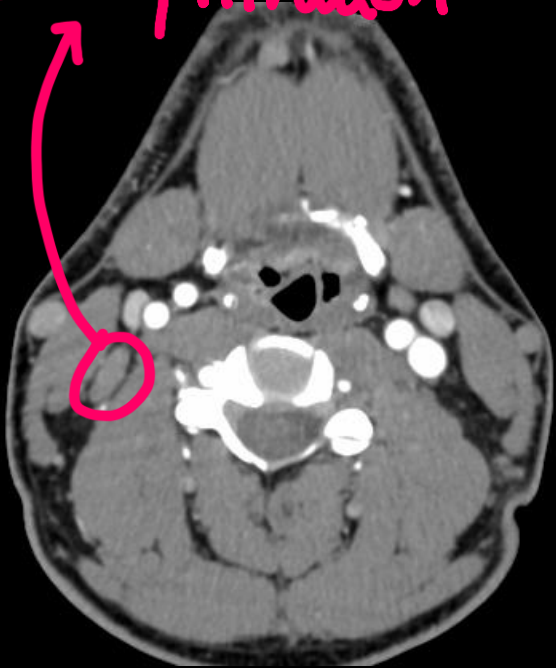
Normal



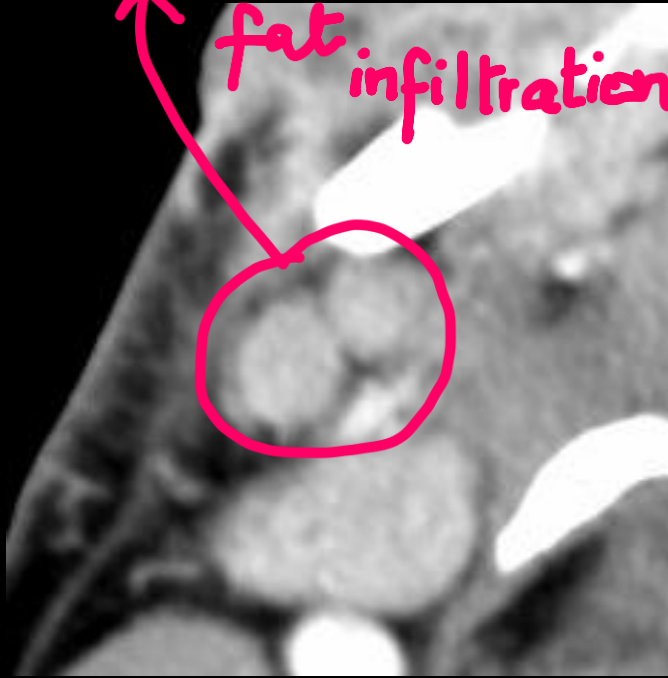
Abnormal

Abnormal lymph nodes

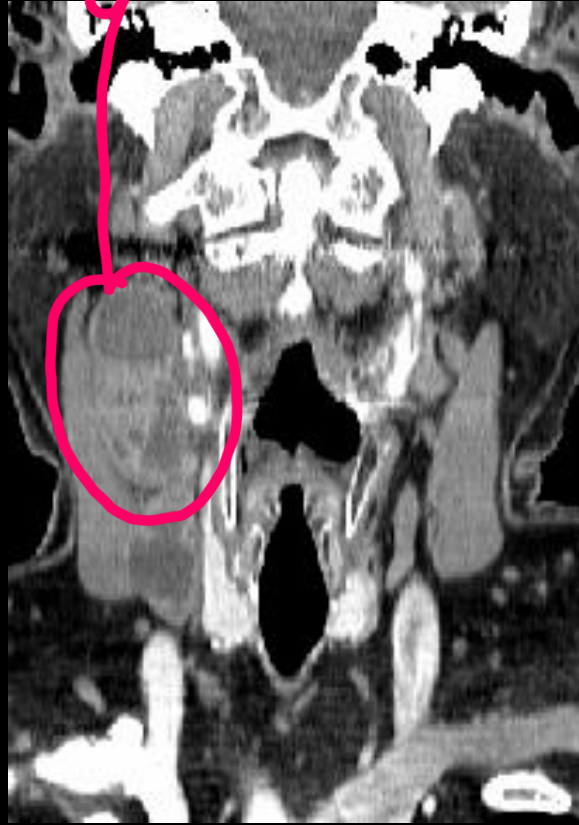
Clean adj fat
No infiltration



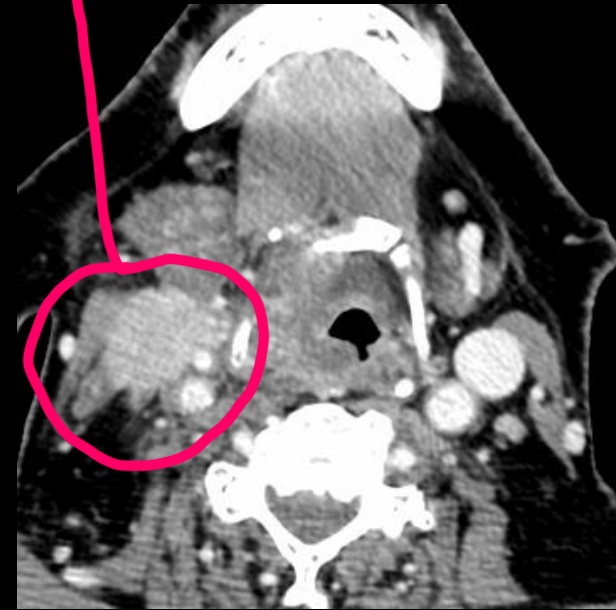
Indistinct
nodal margins/
fat infiltration



Conglomeration



Infiltration of
Surr. structures,
muscle, vessels
etc.



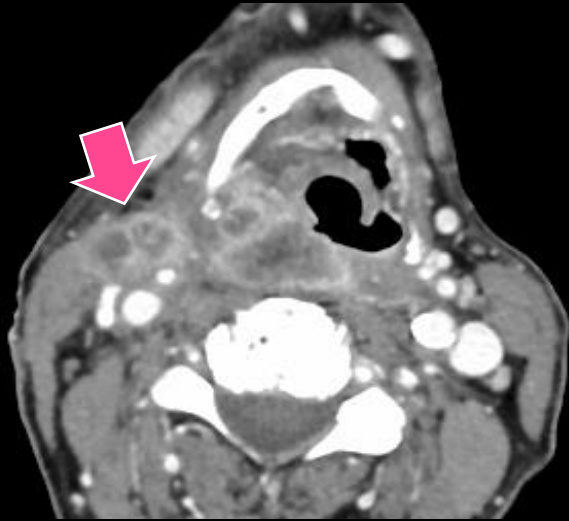
Normal

Abnormal – signs of ENE

Objectives

- Review cervical lymph node levels
- Discuss features of lymphadenopathy
- Discuss anatomic features pertinent to Ca

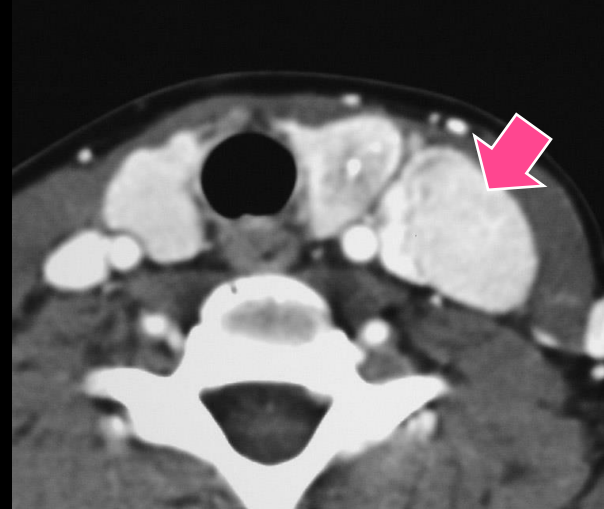
Cervical lymphadenopathy



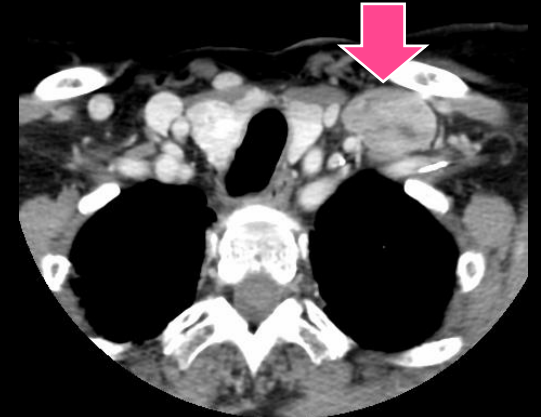
Squamous + Salivary Ca



Lymphoma/Leukemia



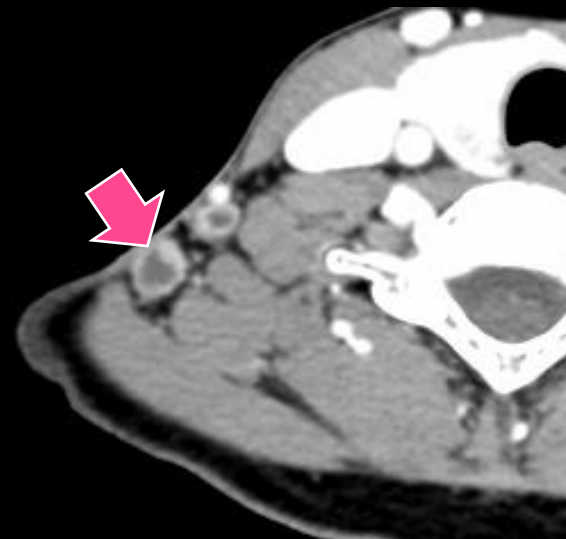
Thyroid Ca



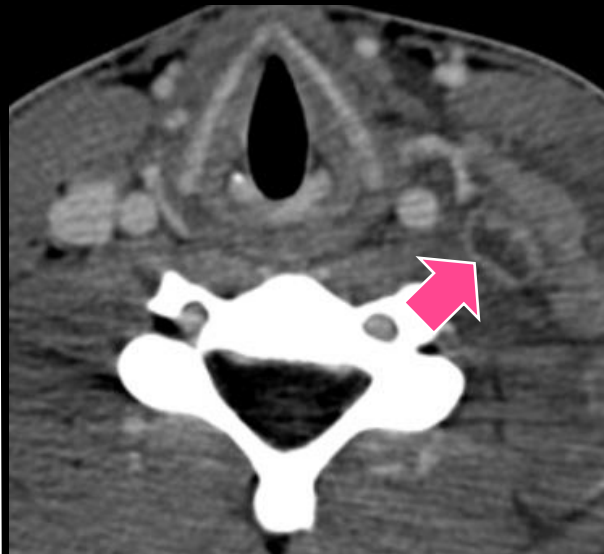
Metastasis



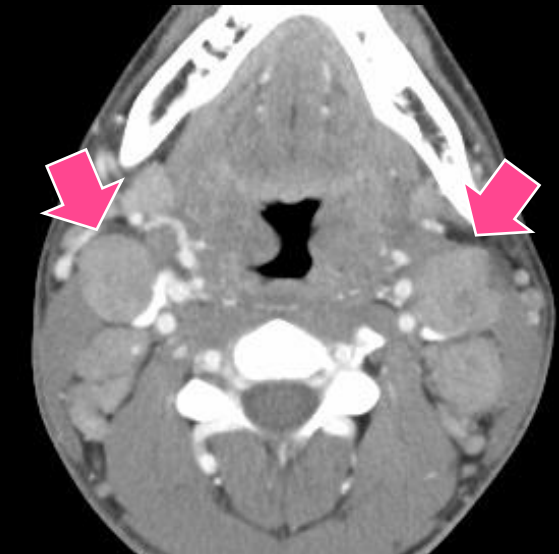
Kimura disease



Tubercular

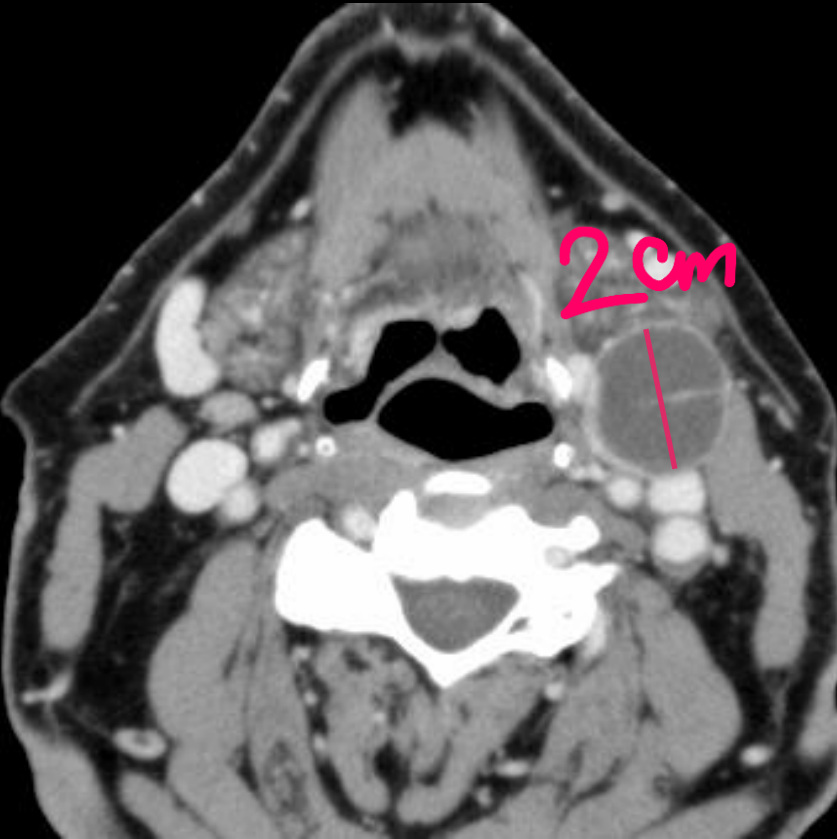


Suppurative



Mononucleosis

N stage determinants

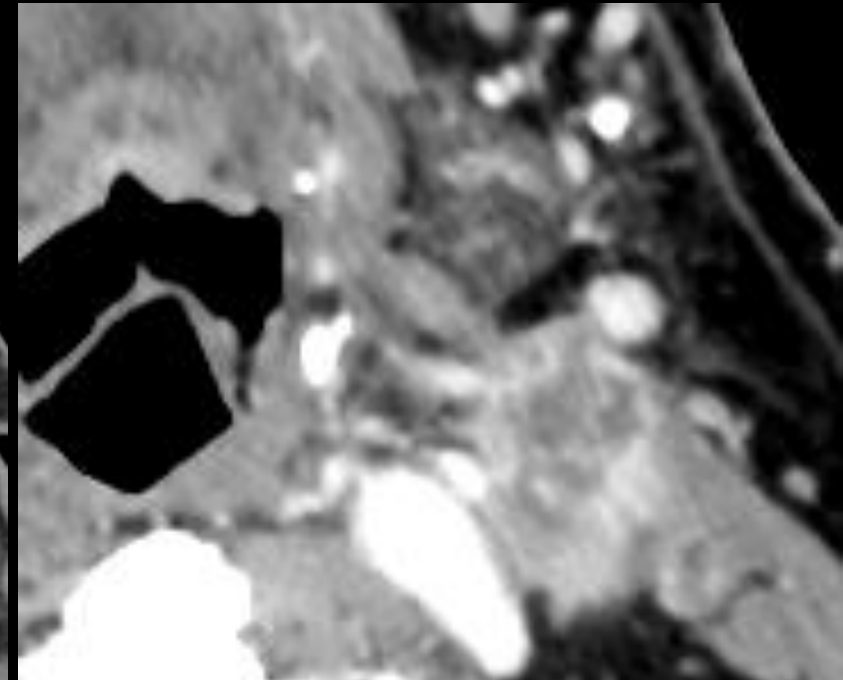


Size

<3, 3-6, >6cm



Single vs multiple
Ipsilateral vs
contralateral

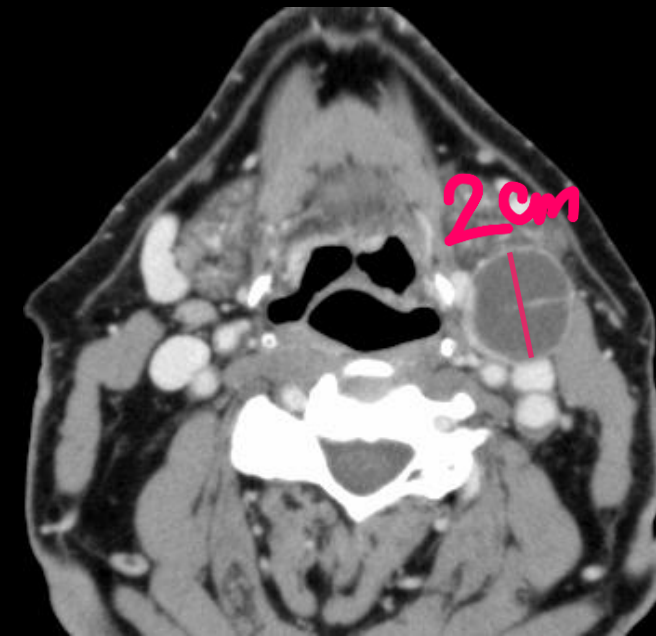


ENE is highest clinical
nodal stage (N3b)

ENE

(extranodal extension)

For all Ca other than HPV and NPC



Single **N1**
Ipsilateral
3cm or smaller



Single **N2a**
Ipsilateral
>3cm <6cm

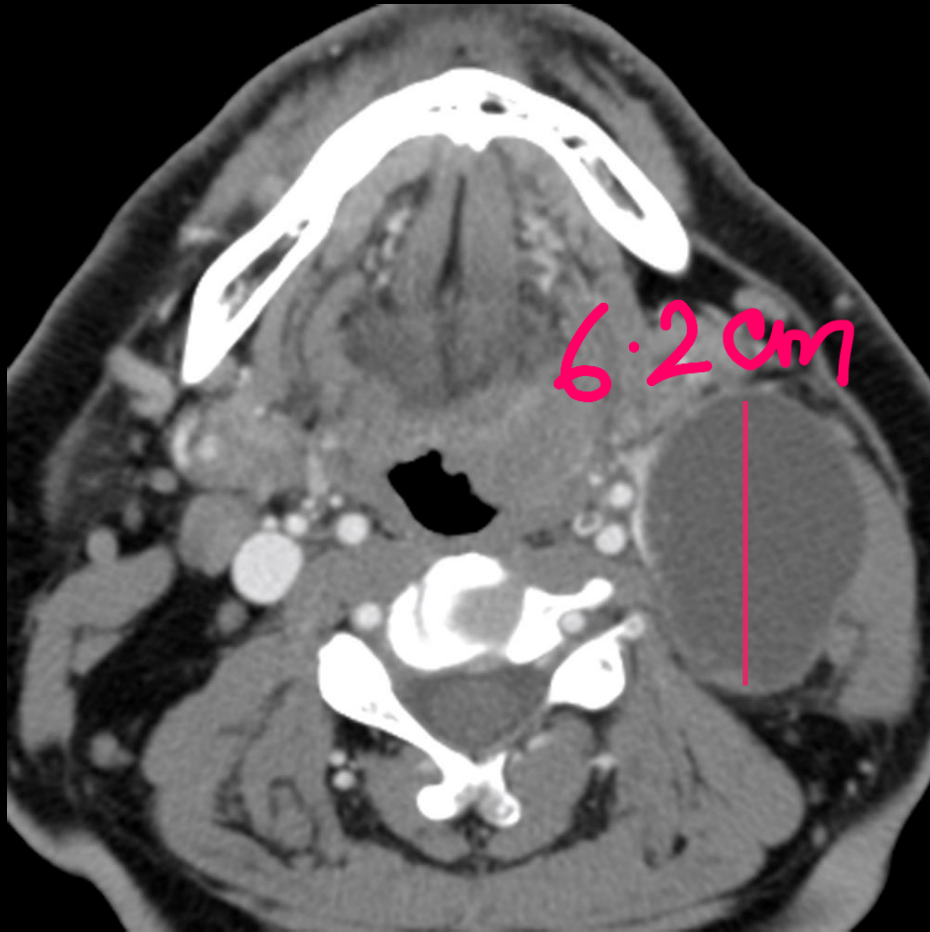


Multiple **N2b**
Ipsilateral
<6cm

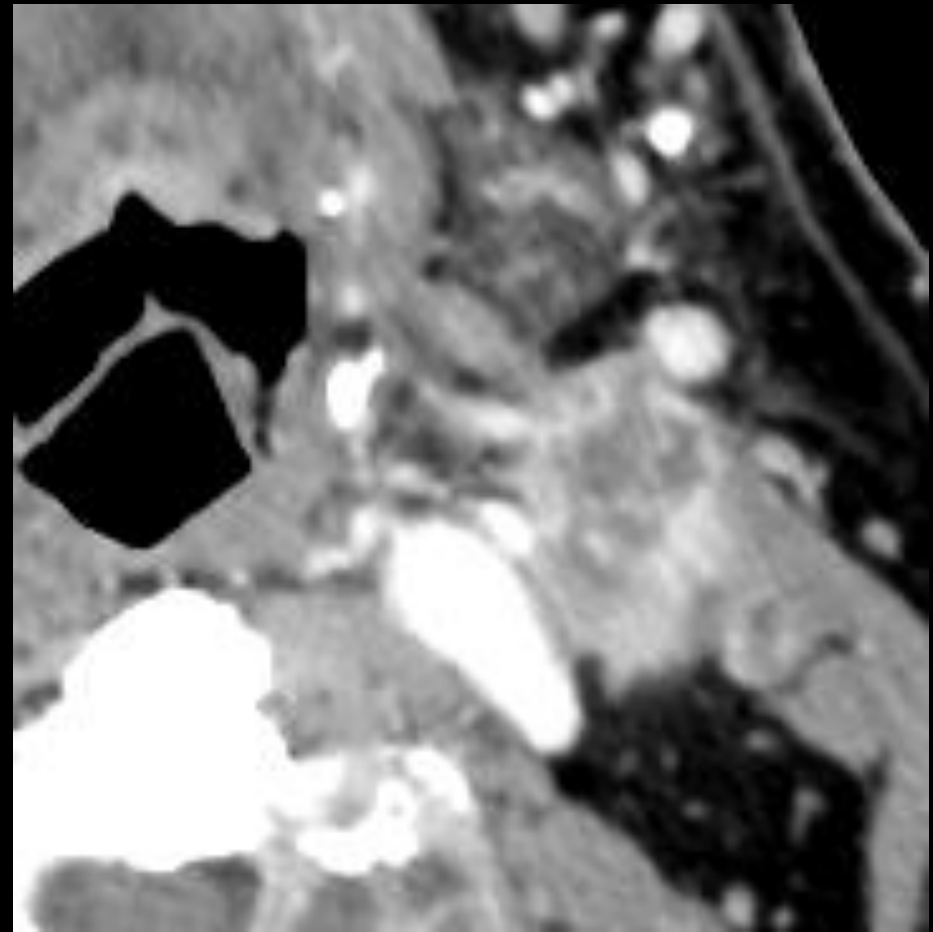


Bilateral or **N2c**
Contralateral
<6cm

For all Ca other than HPV and NPC

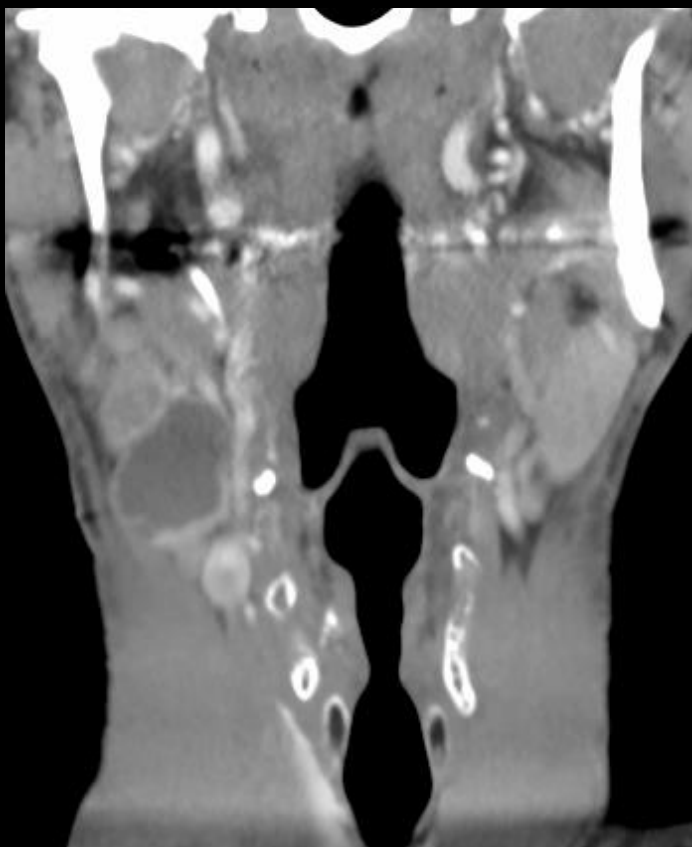


>6cm N3a



ENE N3b

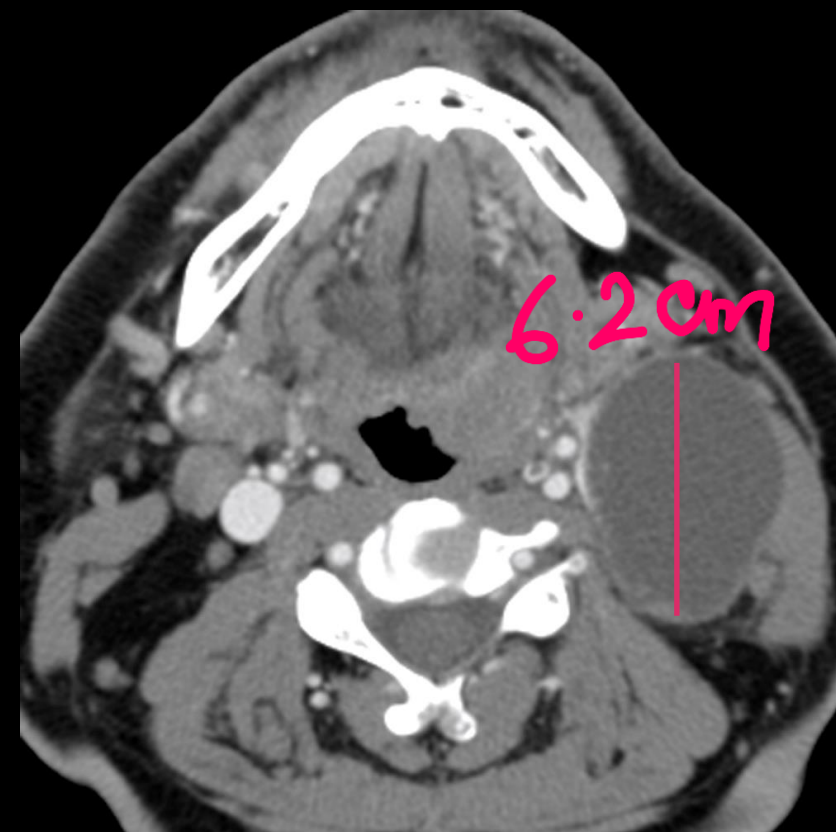
HPV/ p16 (+) Ca



Single or multiple
Ipsilateral **N1**
<6cm



Contralateral or
bilateral **N2**
<6cm



N3
>6cm

Nasopharyngeal Ca



N1

U/L cervical or
U/L or B/L RPN
<6cm above cricoid



B/L cervical
<6cm N2
Above cricoid



LN below cricoid
Or >6cm N3
Or ENE

Objectives

- Review cervical lymph node levels
- Discuss features of lymphadenopathy
- Discuss anatomic features pertinent to Ca

Thank You

Mohit Agarwal
magarwal@mcw.edu

