



2025

KARNATAKA RADIOLOGY EDUCATION PROGRAM



HISTORY

61 year old female presented with history of trivial trauma 15 days ago following which she developed pain and swelling over left hip region and inability to bear weight

-h/o left shoulder injury 2 months back.

x-ray was advised



Generalized mottled appearance with osteopenia of visualized bones.


Fracture of clavicle at the junction of medial 2/3rd and lateral 1/3rd.

Fracture of proximal end of humerus.




Generalized mottled appearance with
osteopenia of visualized bones

Fracture of neck of left femur with
Superolateral displacement of
distal fragment and
subarticular erosions



I/V/O Generalized mottled appearance with osteopenia and Multiple fractures with trivial trauma - pathological fractures are suspected



Necessary blood investigations were done and found to have high calcium levels(14.3mg/dl)

Parathyroid hormone- 2730 pg/ml

Blood urea-49mg/dl, serum creatinine-1.2mg/dl

Initially USG neck was advised to look for parathyroid gland status

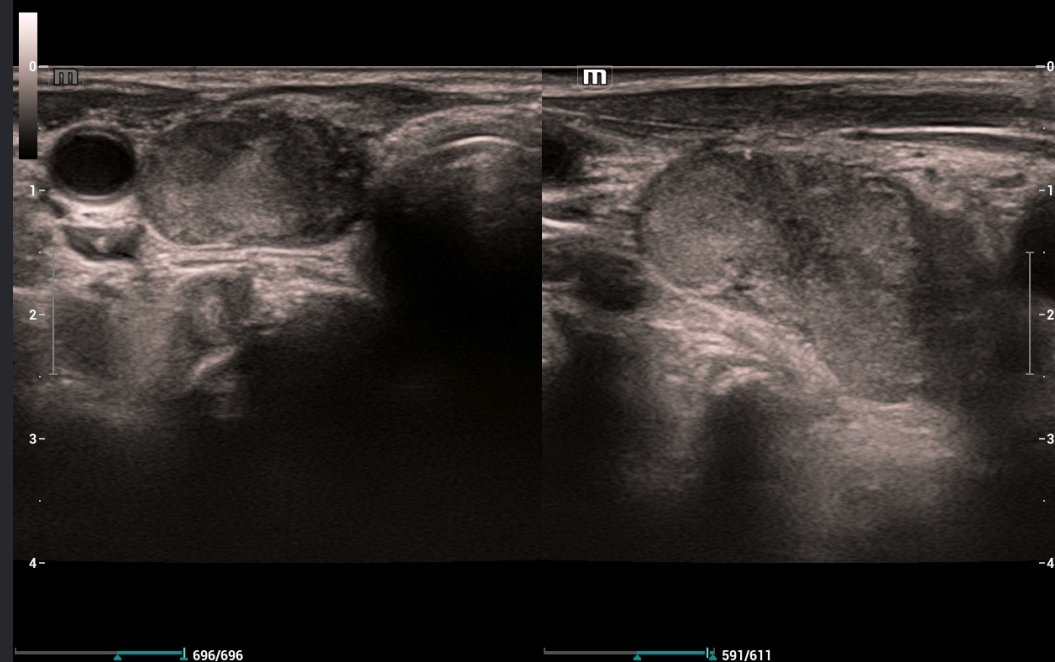
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20240312-155134-08D4
P. RAJENDRA PRASAD

L14-3Ws
Thyroid

AP 93.33% MI 1.4 TIS 0.4

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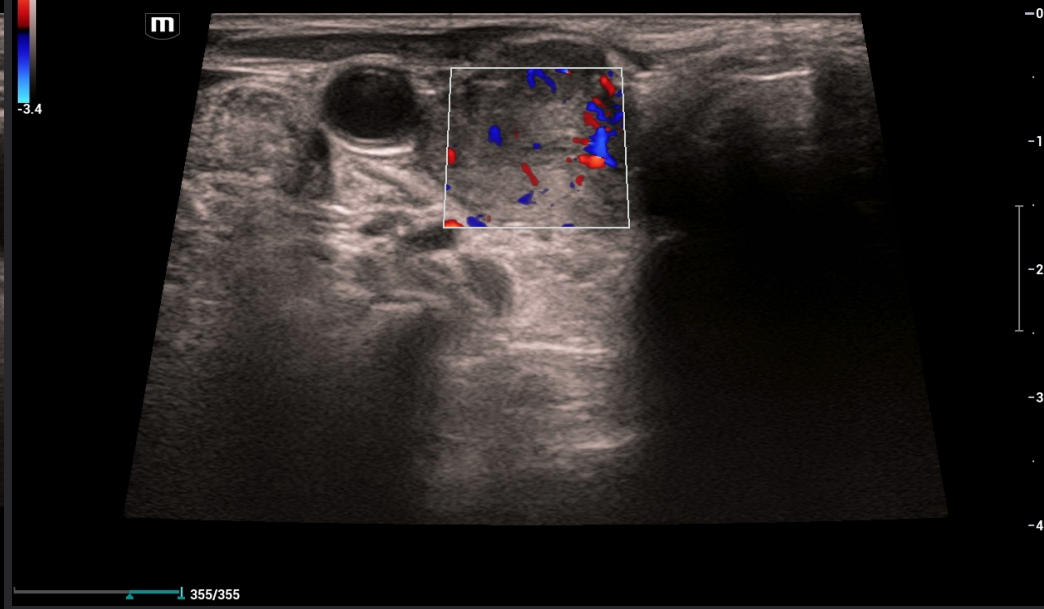
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20240312-155134-08D4
P. RAJENDRA PRASAD

L14-3Ws
Thyroid

AP 93.33% MI 1.4 TIS 0.4

3.4
-3.4



Well defined hypoechoic lesion noted posterior to right lobe of thyroid gland which shows significant internal vascularity on color doppler study.

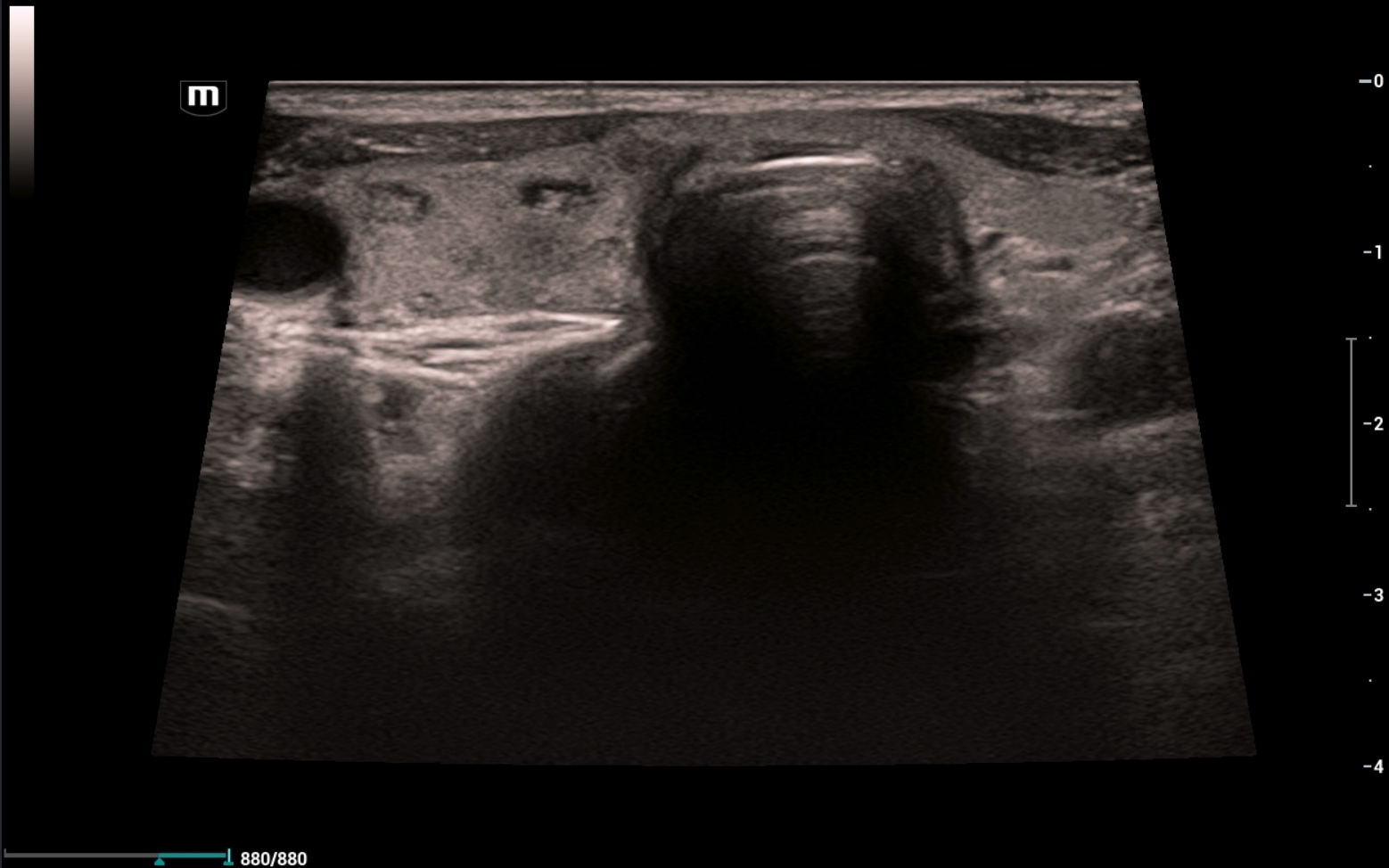
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20240312-155134-08D4

L14-3Ws
Thyroid

AP 93.33% MI 1.4 TIS 0.4

Normal sized thyroid gland with few tiny nodules in right lobe





I/V/O primary hyperparathyroidism, skeletal
survey is being done




Multiple tiny radiolucencies in calvaria giving rise to Salt and pepper appearance



A well defined expansile lytic lesion with sclerosed cortex and multiple septae within noted involving proximal end of 2nd metacarpel, similar smaller lesion noted in the 2nd middle phalynx.



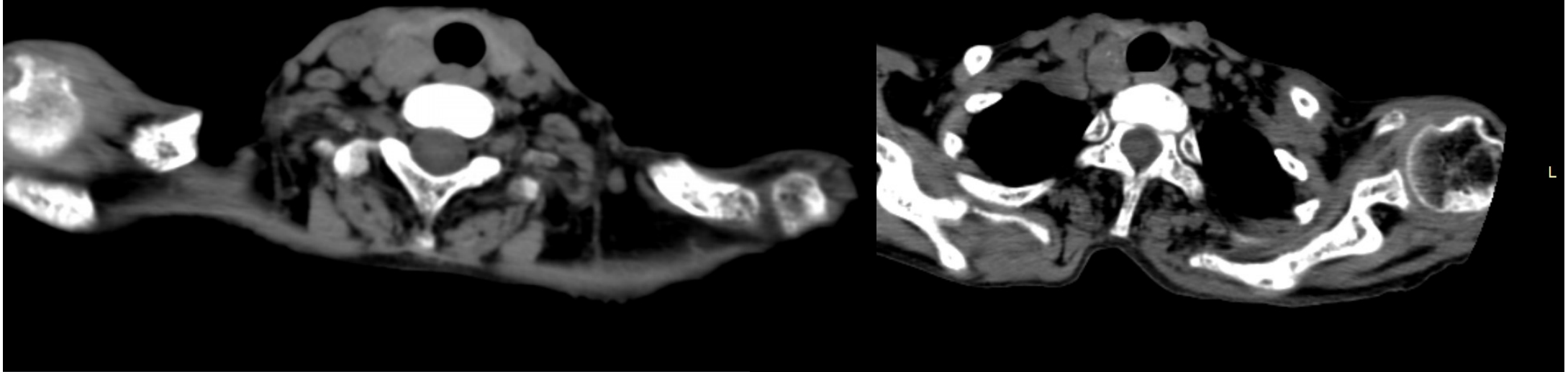


Later 4D-CT neck was advised for exact anatomical location, to characterize the lesion, relation to the surgical landmarks, to look for supernumerary glands, and to look for anatomical variations.



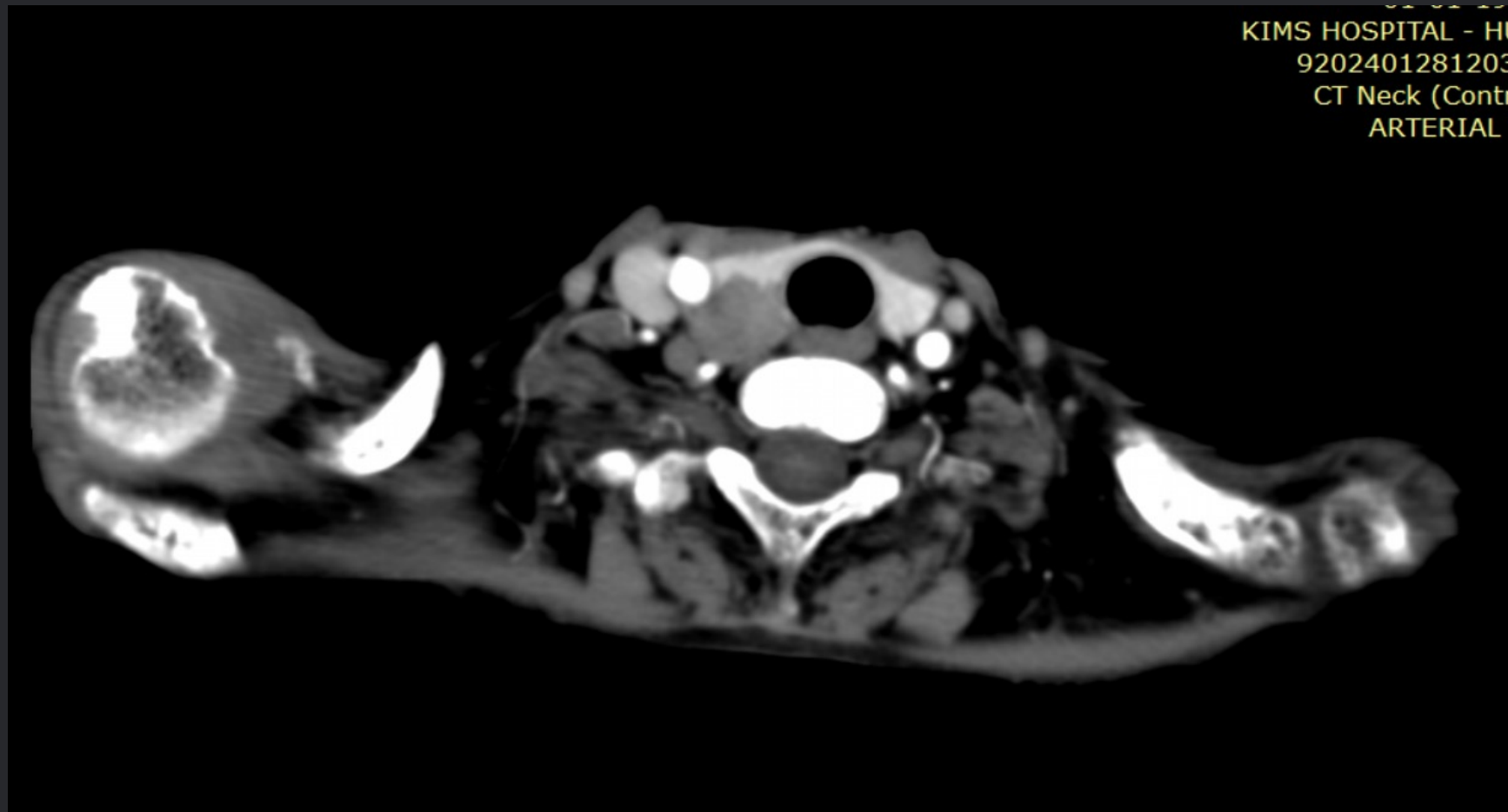
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KIMS HOSPITAL - H
9202401281203
CT Neck (Contr
axial

20240070160
01-01-1963 F
KIMS HOSPITAL - HUBLI
9202401281203922
CT Neck (Contrast)



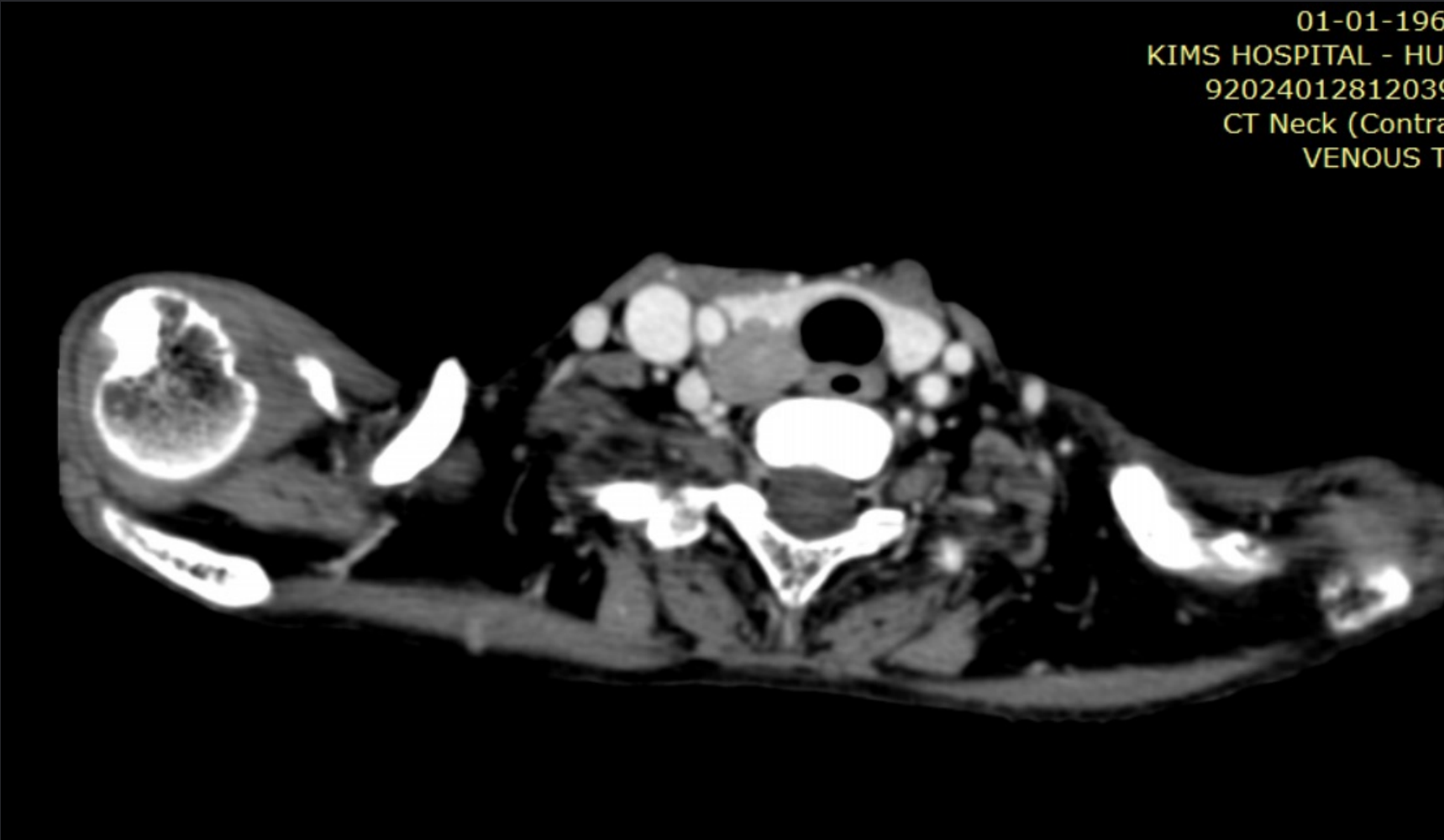
Well defined hypodense lesion seen in the region of right inferior parathyroid gland , few specs of calcification noted within.

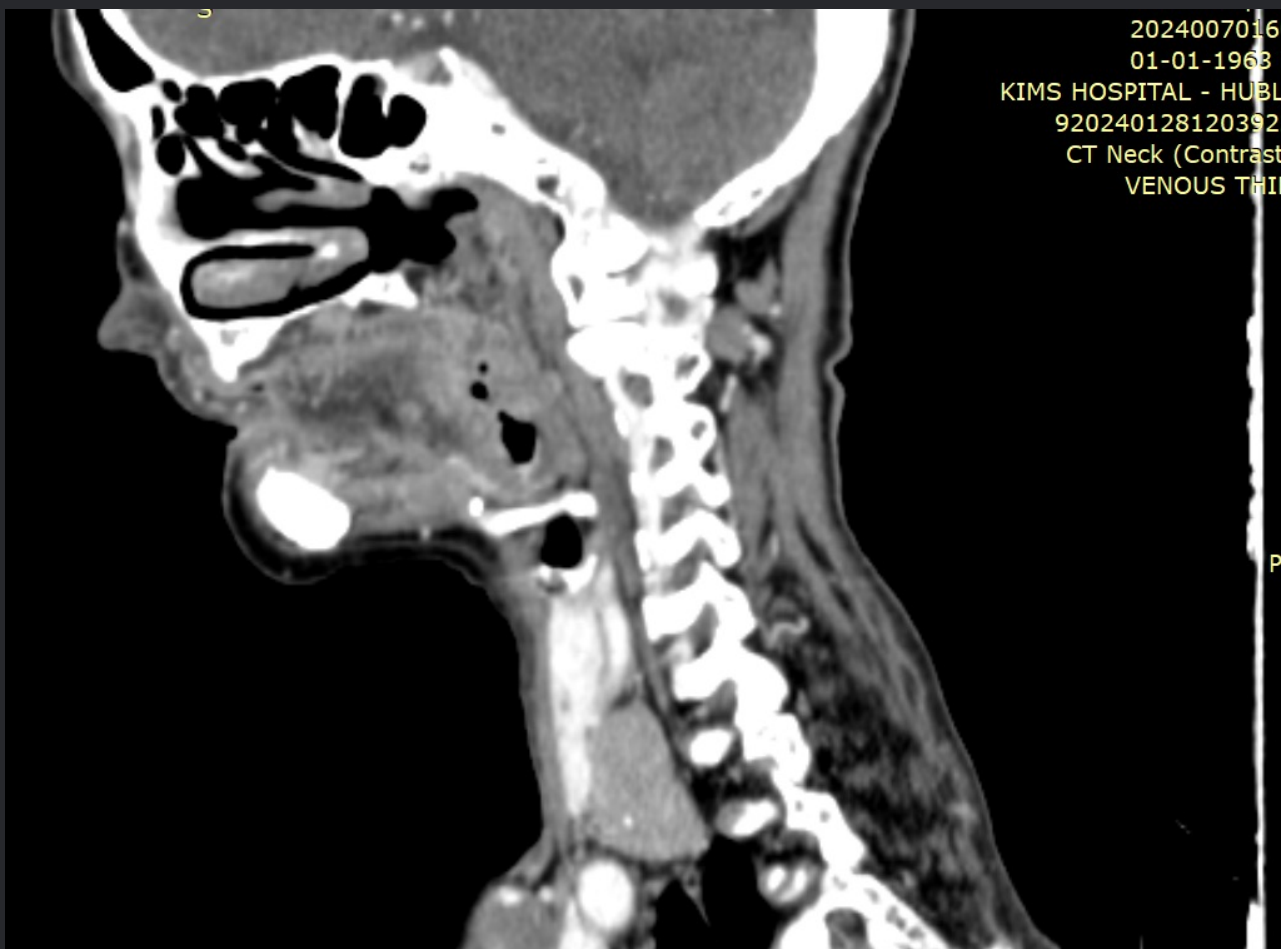
KIMS HOSPITAL - HU
9202401281203
CT Neck (Contr
ARTERIAL



Well defined enhancing lesion noted in the region of right inferior parathyroid gland measuring about 2x1.8x3cm. The lesion is in contact with the posterior surface of thyroid gland. The lesion is relatively anterior to the tracheoesophageal groove and is 1.5-1.7cms below the cricoid cartilage.

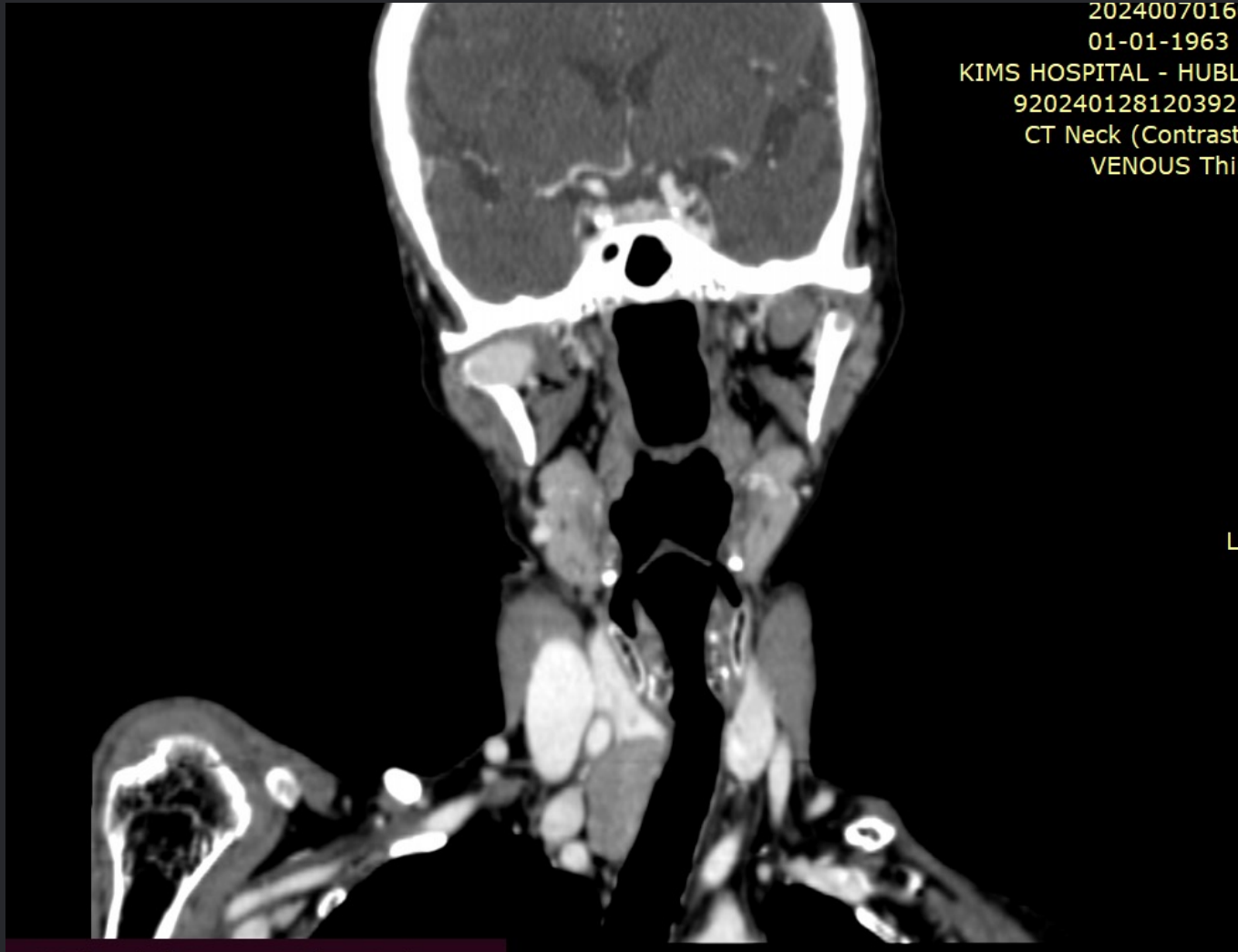
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CT Neck (Contra
VENOUS T





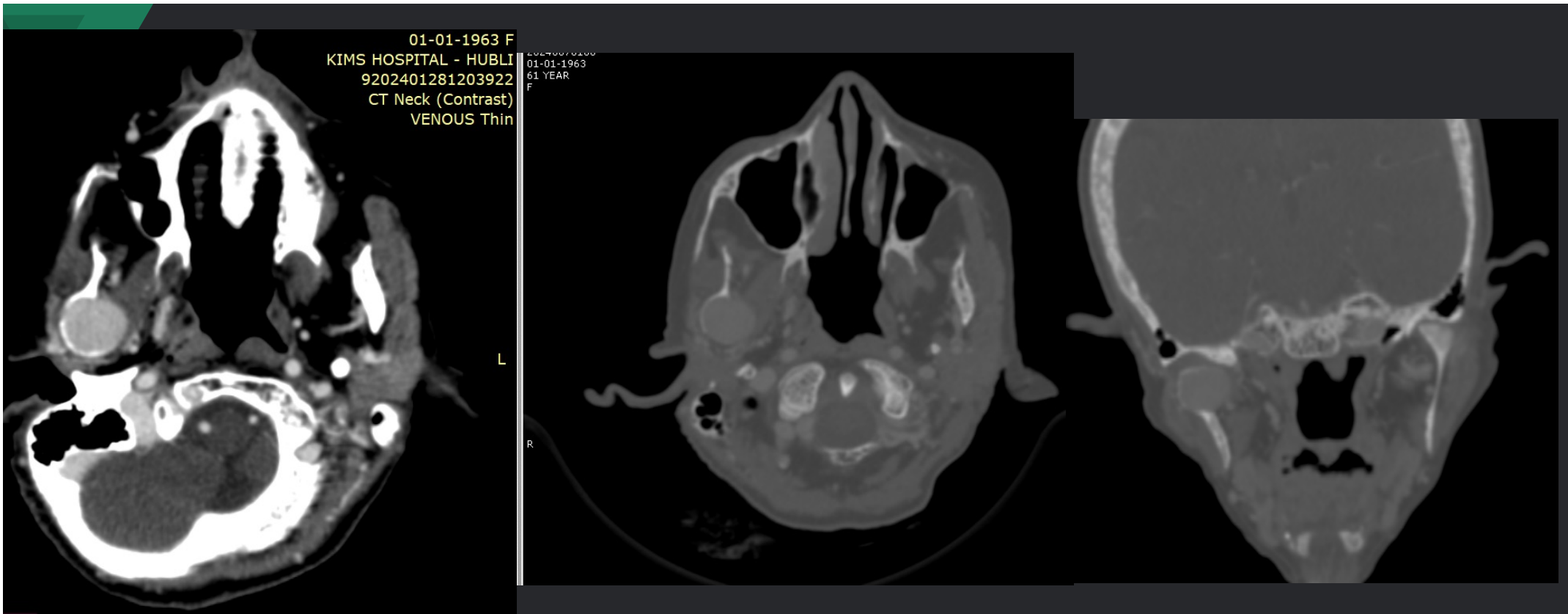
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KIMS HOSPITAL - HUBLI
9202401281203922
CT Neck (Contrast)
VENOUS THIN

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CT Neck (Contrast)
VENOUS Thin

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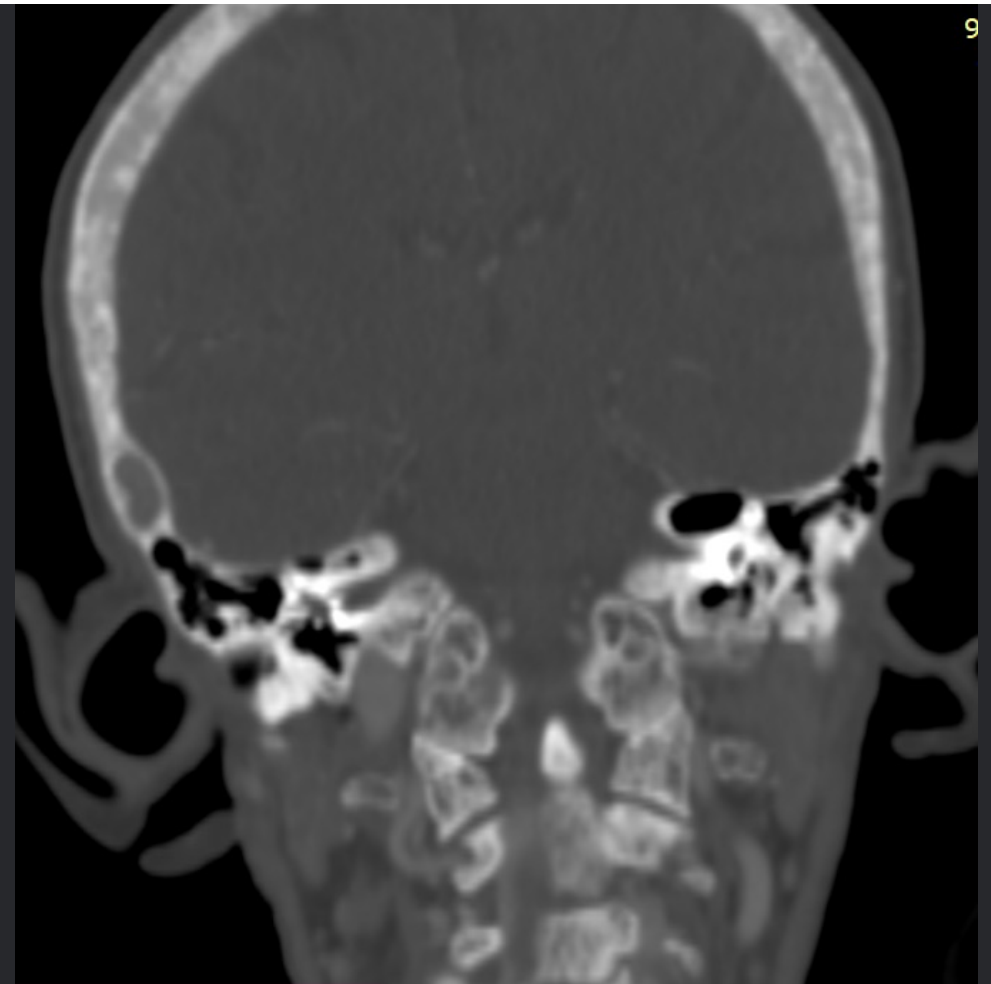
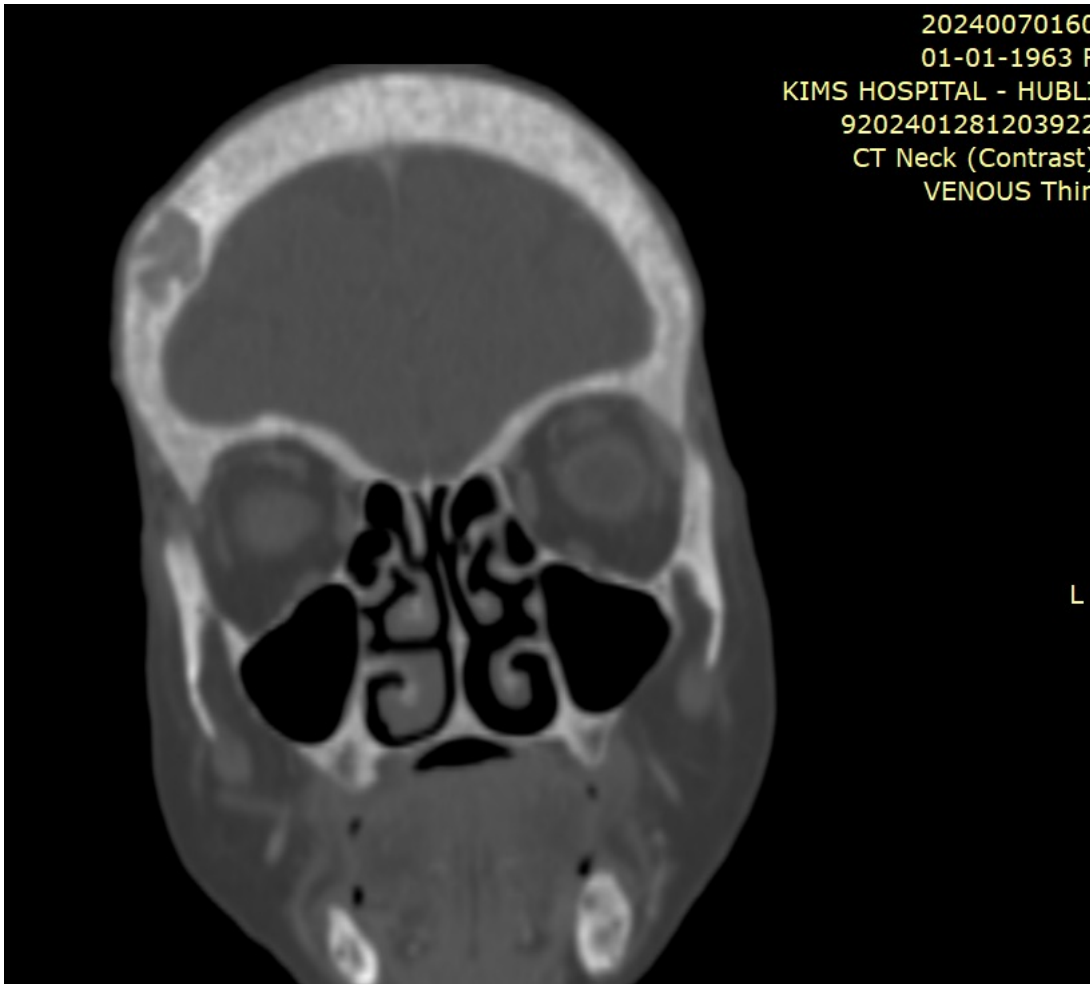


A well defined enhancing expansile lytic lesion noted in the right condylar process of mandible. It measures 1.9x1.4cm. The overlying cortex is thinned out with erosions in its medial aspect.

Patient Name: 30

KIMS HO
9202
CT





Few expansile lytic lesions also noted in the calvaria
Mottled appearance of bones



SUMMARY

- Hypercalcemia with high parathyroid hormone levels and generalised osteopenia with mottled appearance of bones with Pathological fractures of left clavicle, proximal end of humerus, fracture neck of femur, salt and pepper appearance of skull, with enhancing right inferior parathyroid gland with few specs of calcification.
- Expansile lytic lesions of condylar process of bilateral mandible, calvarium, right 2nd metacarpel bone- I/V/O hyperparathyroidism, Brown's tumor is considered.
- Considering the above features it is diagnosed as **Parathyroid adenoma/carcinoma in hyperparathyroidism with brown's tumor.**



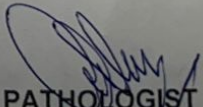
KARNATAKA INSTITUTE OF MEDICAL SCIENCES, HUBLI.
Govt of Karnataka.

Name : [REDACTED]	Age: 60years
UHID : 20240070160	Sex: FEMALE
Sample Received on: 14/03/2024	Reported on: 15/03/2024
Lab name: PATHOLOGY COLLEGE LAB	Lab Ref No: C- 963/24

SITE OF FNAC: USG GUIDED FNAC of parathyroid swelling.

MICROSCOPY : Smears are highly cellular showing tumour cells arranged in tight clusters, monolayered sheets and in singles. These cells are round to oval with small nuclei showing anisonucleosis, granular chromatin and abundant eosinophilic cytoplasm. Some of the clusters show traversing blood vessels. Background shows ruptured cytoplasmic material, plenty of bare nuclei and hemorrhage.

IMPRESSION : FEATURES ARE SUGGESTIVE OF PARATHYROID ADENOMA.


PATHOLOGIST
KIMS, HUBLI



KARNATAKA INSTITUTE OF MEDICAL SCIENCES, HUBLI
KARNATAKA
Govt of Karnataka
hubballikims.karnataka.gov.in

LABORATORY OBSERVATION REPORT

UHID: 20240070160	Reg Date: 18/3/24
Patient Name: [REDACTED]	Age/Sex: 60YEARS/ FEMALE
Department: GENERAL SURGERY	HPR No: B-1570/24
Lab Name: PATHOLOGY	Report Date: 22/03/2024

HISTOPATHOLOGY REPORT

SPECIMEN:

Excised specimen of right inferior parathyroid adenoma.

GROSS:

Specimen consists of single grey brown circumscribed tissue bit measuring 2.5x2.5x1cm. Externally congested. Cut surface shows circumscribed whitish area measuring 2cm in diameter and adjoining friable areas. Also noted in the same container multiple friable grey white tissue bits amounting to 3cc.


MICROSCOPY:

Section studied shows tumor cells arranged in palisading pattern around blood vessels with a thick capsule. These cells are columnar to cuboidal with clear cytoplasm centrally placed hyperchromatic, monomorphic nuclei. Mitotic figures are 1 per 10 high power field. Tumor is infiltrating the capsule. There is no lymphovascular invasion.

IMPRESSION:

Features suggestive of PARATHYROID CARCINOMA.

Professor
Department of Pathology
KIMS, HUBLI-580 022


PATHOLOGIST
KIMS, HUBLI

MINIMALLY INVASIVE PARATHYROIDECTOMY IS DONE.

INTRAOPERATIVELY RIGHT INFERIOR PARATHYROID GLAND
WAS ENLARGED, ABOUT 3x2CMS IN SIZE, SOFT IN
CONSISTENCY AND FOUND ADHERENT TO TRACHEA
POSTERIORLY.



Post operative day 1:

Serum PTH-510 pg/ml – significantly reduced.



Thank You