RAISED CA 15-3 IN YOUNG BREAST CANCER PATIENT

DR JOSEPH KASESE

January 21, 2020

BOTSOGO

BOTSWANA ONCOLOGY
GLOBAL OUTREACH

Continuing Medical Education Announcement

Harvard Medical School

RSS 3081: Monthly BOTSOGO Tumor Board; 2019 - 2020 Academic Year

Today's Objectives:

- Describe the need for timely cancer case presentation and referral to treatment
- Formulate a multi-disciplinary plan for the care of common and complex oncologic cases
- Adopt successful, sustainable strategies to mitigate barriers to quality cancer care common in resource constrained environments

Target Audience:

Oncologists, internists, surgeons, radiation oncologists, infectious disease specialists, nurses, physicists, therapists, technicians, research staff, administrators, policy makers.

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Name	Role	Type of Financial Relationship
Jason Efstathiou, MD	Course Director	Blue Earth Diagnostics – Consultant Taris Biomedical – Consultant Janssen – Advisory Board
Tlotlo Ralefala, MD	Planner	Roche – Sponsorship Celgene – Grant

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Statements

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Credit Designation Statement

The Harvard Medical School designates this live activity for a maximum of 1 *AMA PRA Category 1 Credit™*. Physicians should claim only the credit commensurate with the extent of their participation in the activity

This activity meets the criteria of the Massachusetts Board of Registration in Medicine for 1.0 credits of Risk Management Study

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- To claim your CME credit for attendance at this session of the BOTSOGO Tumor Board, please fill out our survey following the Tumor Board.
- You can do this at your convenience on your personal or work computer by navigating to www.botsogo.org
  - Click “What We Do”
  - Click “Tumor Board”
  - Click the link under the section “Continuing Education Credits,” and complete and submit the survey
- A link to the survey is also sent to the BOTSOGO Tumor Board email list following each Tumor Board.

Core Principles of Case Review

Clinicians, pathologists, and other other members of the health care team uniformly strive to provide the best possible clinical care.

Despite these efforts, adverse outcomes still occur.

Reflection on, and re-evaluation of, our practices and outcomes are imperative to continuously improve the care we provide to patients.

Core Principles of Case Review

Discussion will focus on medical decision-making and reporting systems.

Discussion is privileged and content should not be discussed outside of this forum.

We seek to create a safe, collaborative, open and respectful atmosphere for discussion, learning, and improvement

Introductions of Presenter and Faculty

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NAME: MS

AGE AT PRESENTATION: 32 YEARS

PMH: NONE

FH: NONE

G1PO PREGNANT 7 MONTHS

HIV Negative

History

Lump in LLOQ

Noticed lump during breast self examination

7 months pregnant

Seen by her gynae who referred her to a surgeon

Surgeon confirmed 2 x 2 mass

No palpable axillary nodes

Proceeded to do an FNA

Pathology results confirmed ductal carcinoma

Surgeon recommended mastectomy

No oncology opinion requested

Pt not keen with treatment and was lost to follow-up.

Eventually seen at 34 weeks and had C/S and mastectomy with axillary dissection at the same time on the 8th of July 2014.

Social history

Teacher

No smoking/alcohol

Pathology Report

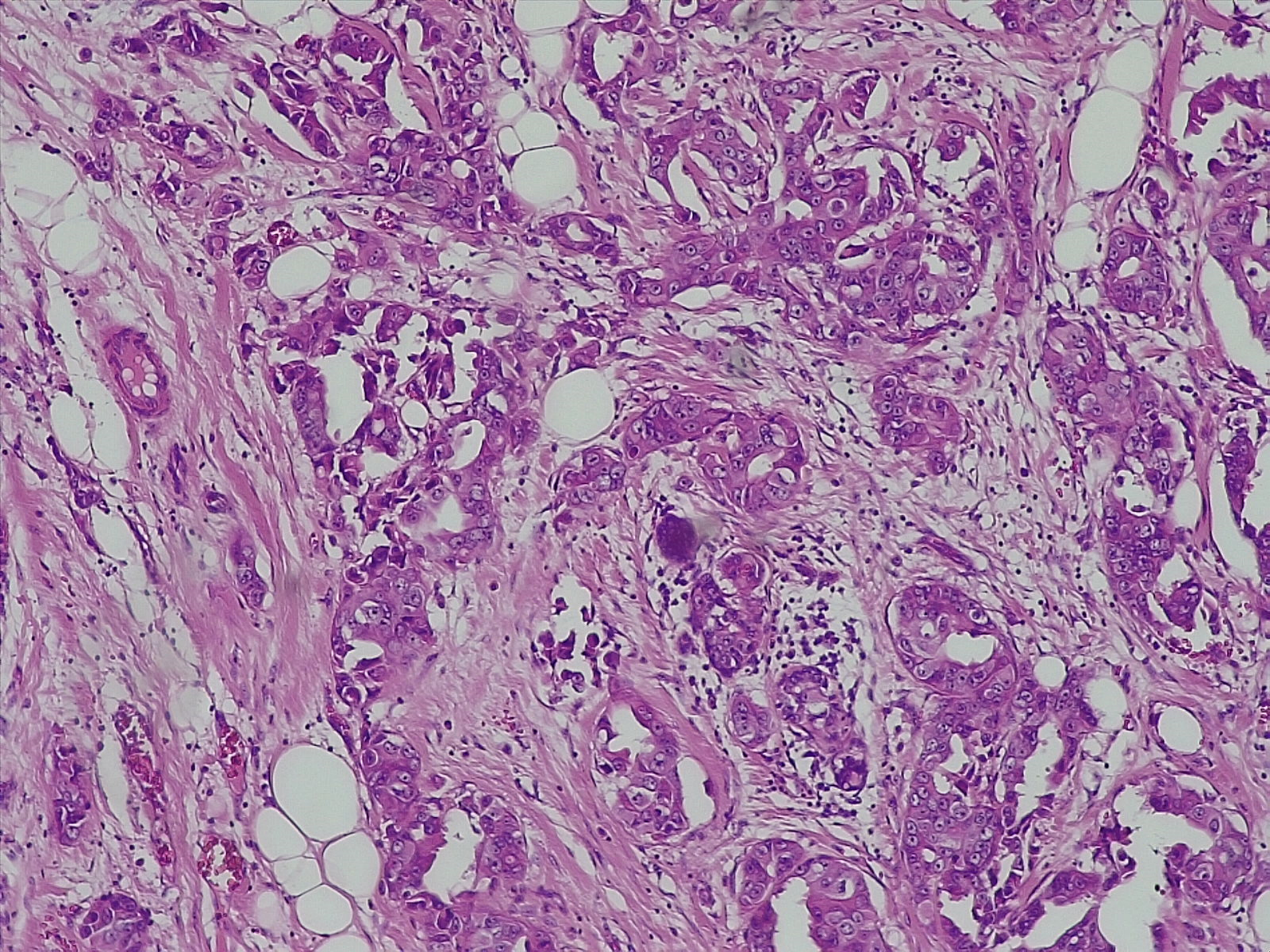
Final pathology confirmed the following:

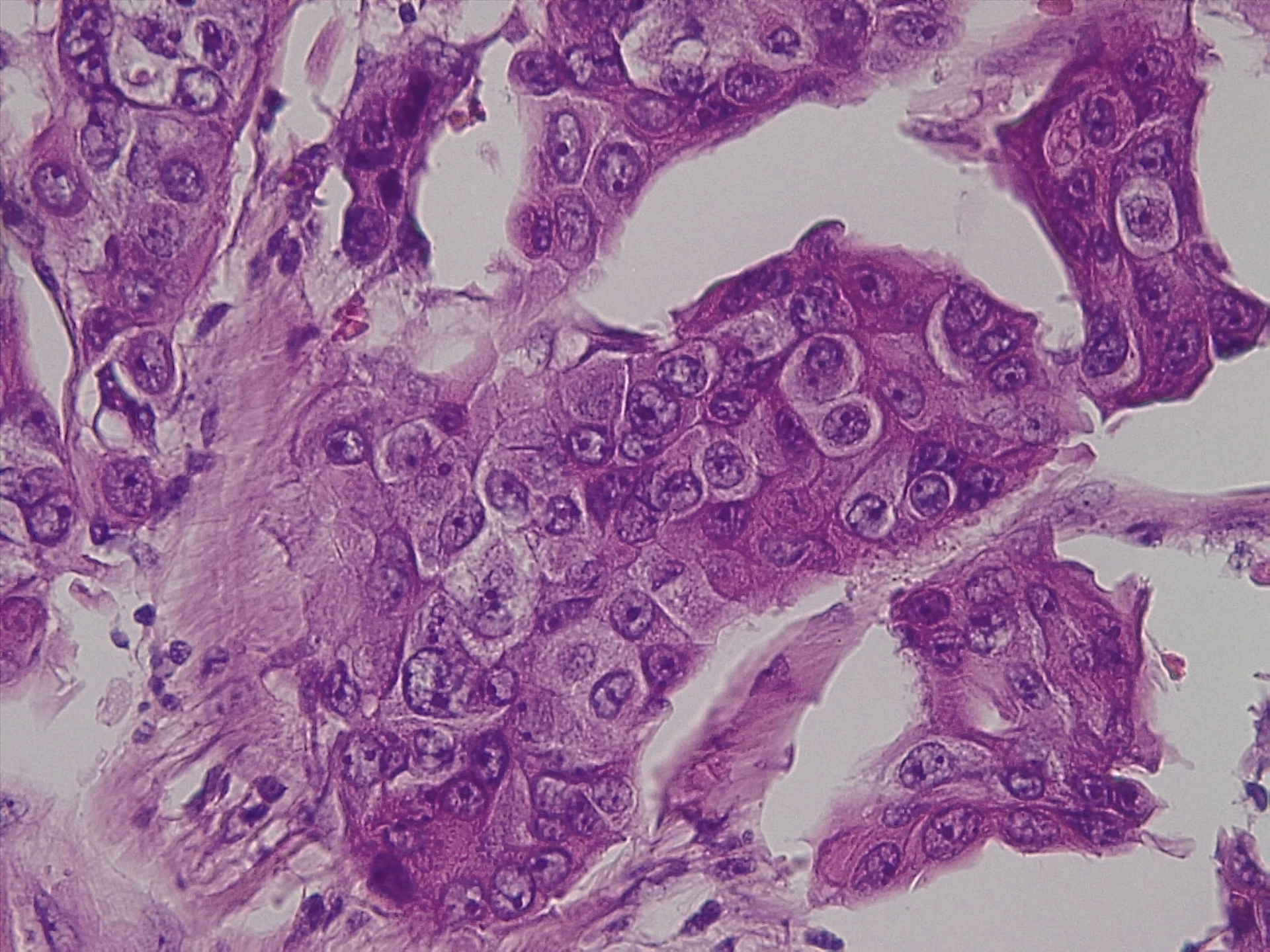
Grade 2 ductal carcinoma, 2 cm in size

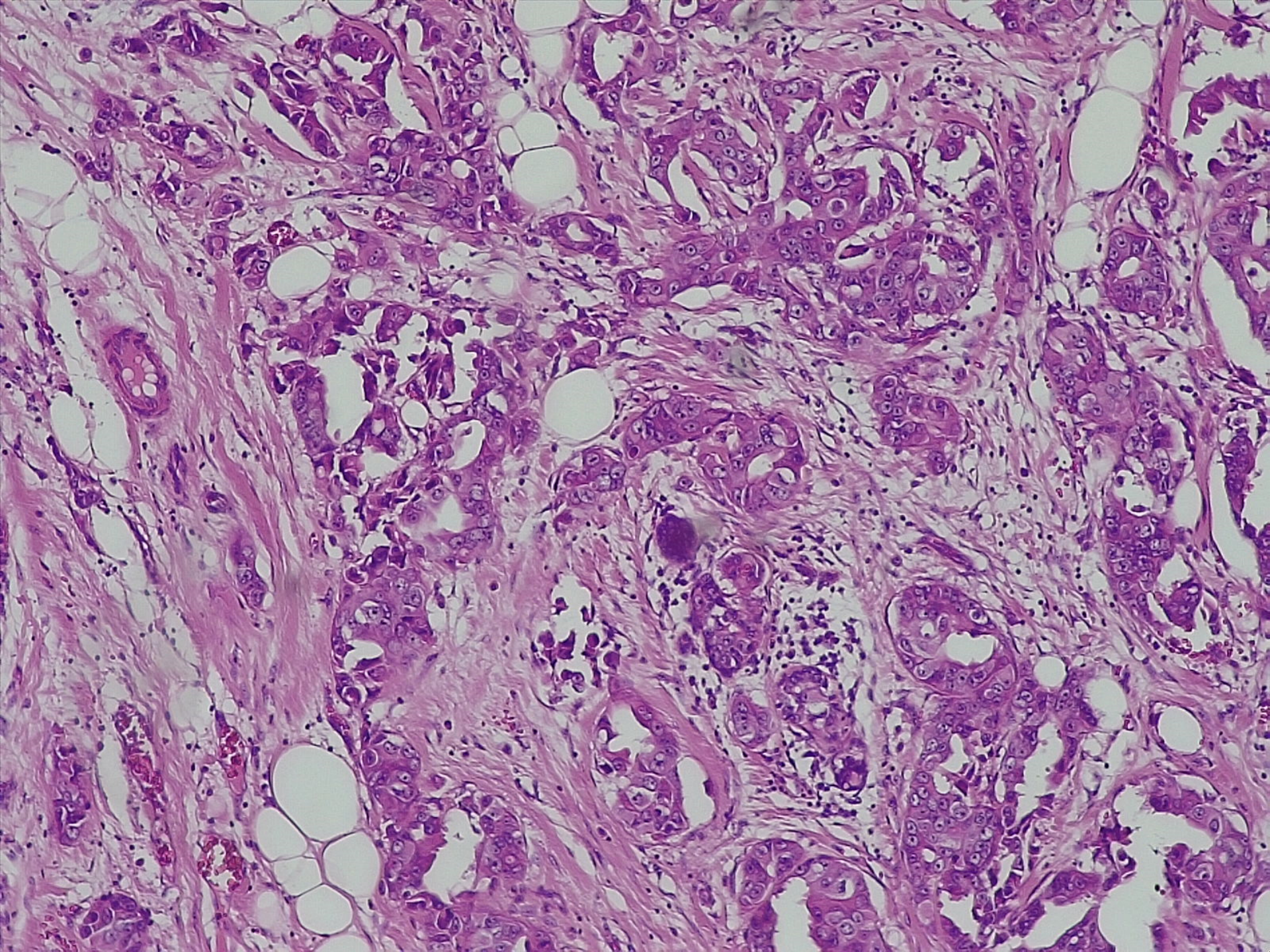
ER pos PR neg and Her-2 neu 2+ (equivocal)

ADDENDUM
Addendum #2 Entered: 17/07/14-0807
MICROSCOPIC EXAMINATION:
HER2/NEU IN SITU HYBRIDISATION (SISH METHODOLOGY):
Her2/neu IHC: 2+
Number of cells quantified: 20
Mean chromosome 17 copy number: 1
Mean HER2/neu gene copy number: 2.3 (range 1 -3 copies per nucleus)
Ratio HER2:chromosome 17 = 2.3
RESULT: POSITIVE for HER2/neu gene amplification.

Ki67 index more than 30 %
Complete resection margins
no lymphovascular invasion; 8 out of 8 nodes negative







History (continued)

I first met her in August 2014 post surgery

On o/e she had well healed mastectomy scar and no evidence of residual disease

Proceeded to stage her:

- CT scan chest/abd/pelvis was normal
- Routine bloods were normal except for a marginally raised ca 153 of 34
- Isotope bone scan was normal
- ECHO done was normal
- Final staging T1N0M0

Commenced her on adjuvant chemotherapy(TCP)

- Herceptin 4mg/kg stat followed by 2mg/kg weekly d1
- Paclitaxel 175 mg/m2 iv3 weekly
- Carboplatin AUC 6 iv 3 weekly
- Had a total of 8 cycles

Completed chemotherapy December 2014

Post-treatment staging CT scan was normal

CA 15-3 was 16

Started on 3 weekly Herceptin for one year completed December 2015

Tamoxifen 20mg daily

Zoladex 10.8 mg 3 monthly

Steady rise of her CA 15-3 from July 2017 but remained within normal limits

Follow up scans and CXR remained normal

November 2017: CA 15-3 raised to 33

CT scan/bone scan normal

December 2017: CA 15-3 remained 33

January 2018: CA 15-3 went up to 43

Changed Tamoxifen to Femara

Continued Zoladex

March 2018: CA 15-3 raised to 57

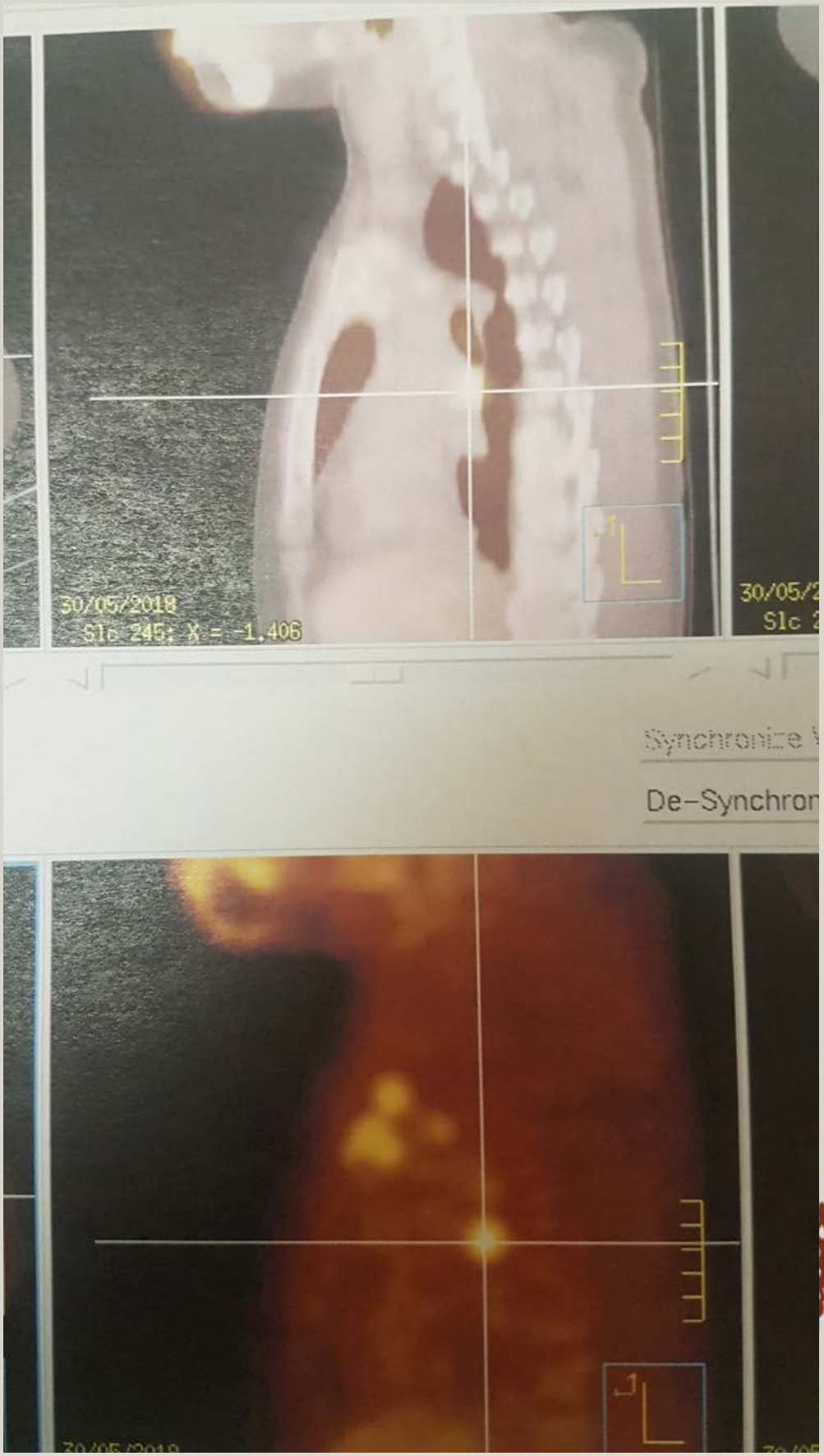
CT scan still remained negative.

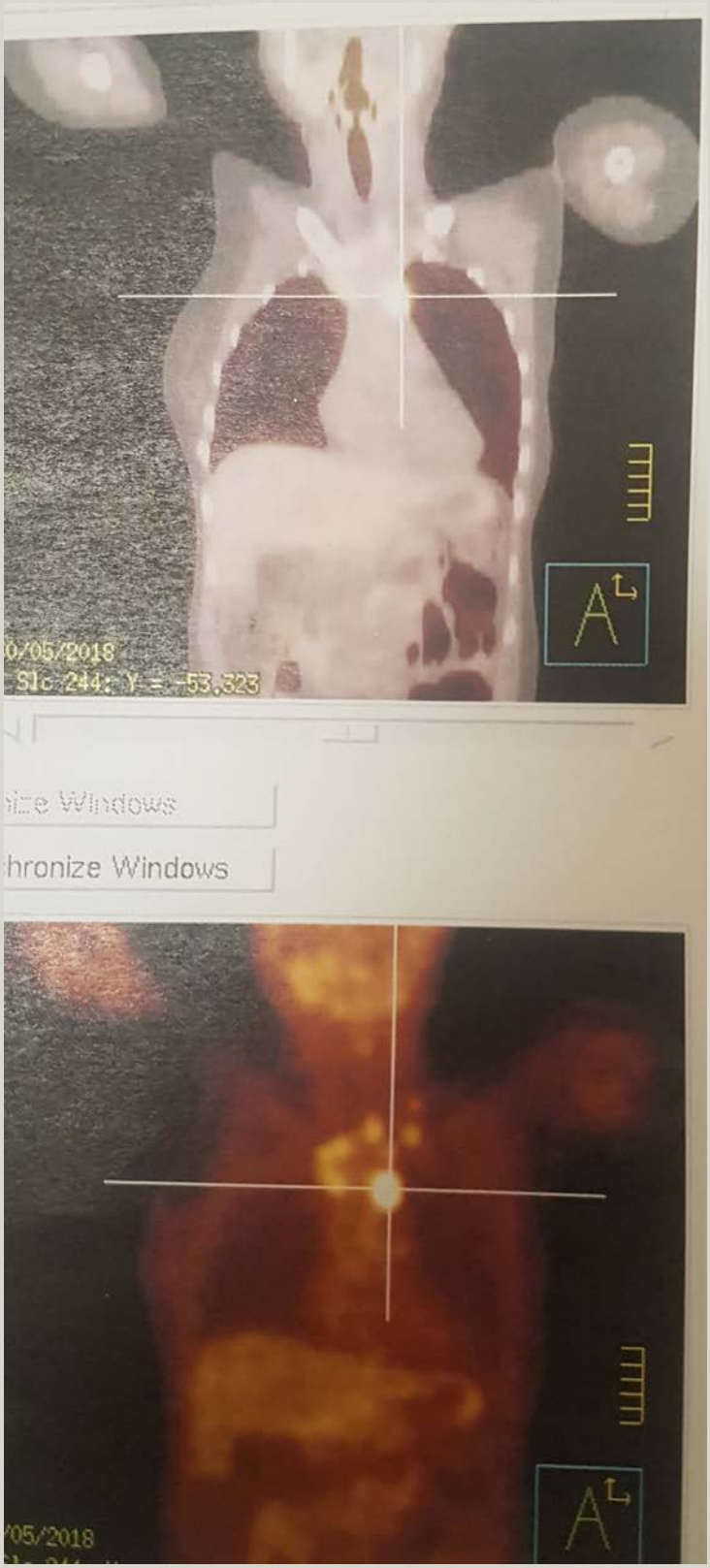
Eventually approval for PET scan given by funders

PET done in June 2018 confirmed:

- Results show Left SCF as well as mediastinal and
- right hilar lymph nodes in favour of metastatic disease

PET CT

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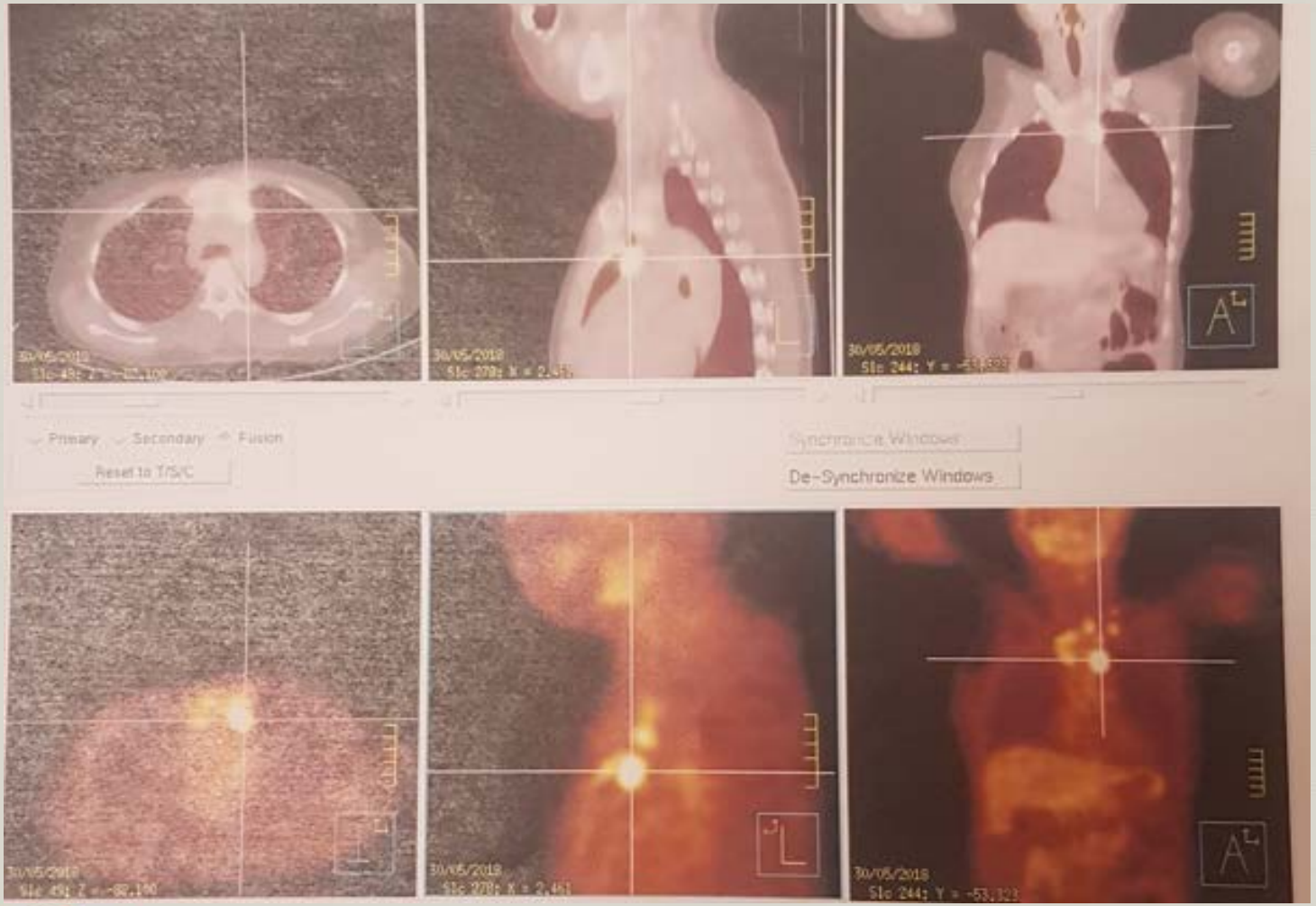
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Clinically very small node in the SCF

Biopsy done in June 2018 confirmed the following:

Immunohistochemical stains show the following results in the tumour cells:

Oestrogen receptors - weak to strong nuclear positivity in 70% of tumour cells.

Progesterone receptors - negative.

HER-2 - 3+.

Ki 67 - 80% nuclei positive.

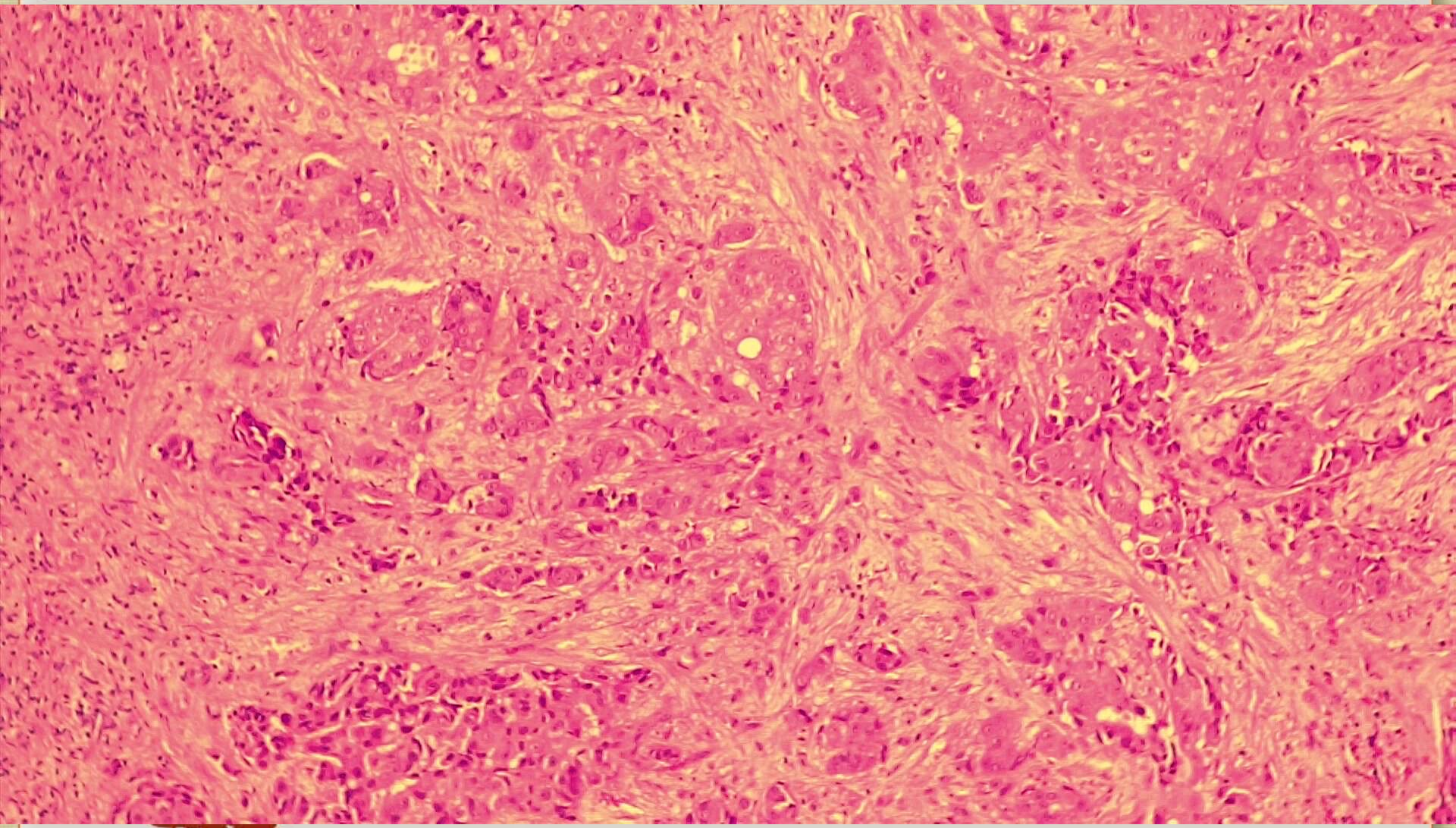
CK7 - positive.

CK20 - negative.

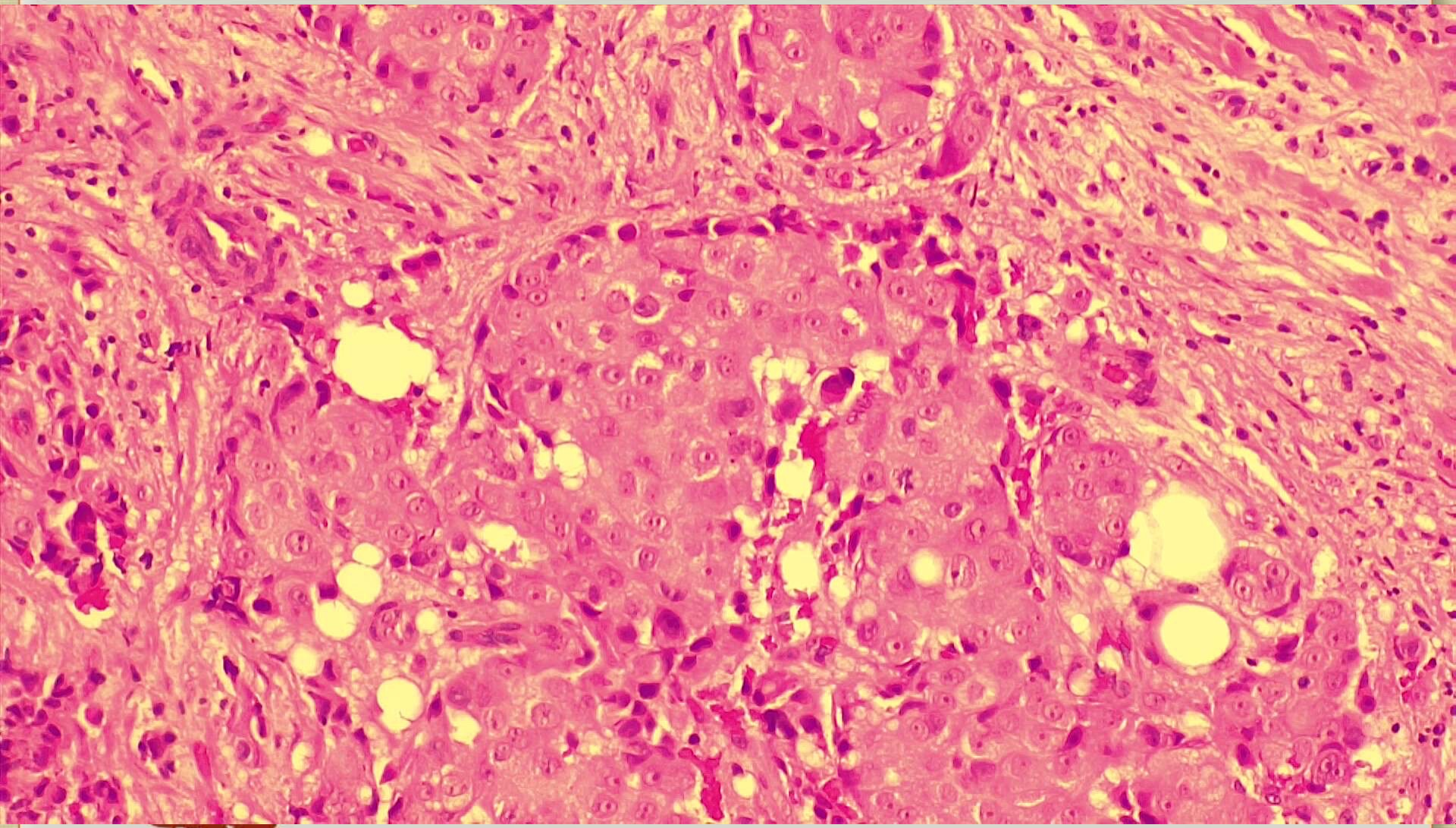
CDX-2 - negative.

The features in conclusion are compatible with metastatic carcinoma of breast.

Pathology (biopsy, June 2018)



Pathology (biopsy, June 2018)



MRI Results

MRI scan done confirmed disease metastatic disease in the same sites.

Unfortunately images not available

Pre-treatment echo done and was normal

Started on FEC x4

CA 15-3 came down to 12

Repeat MRI scan showed no evidence of disease

Followed by Pertuzumab/Herceptin/Docetaxel x6

Completed March 2019

CA 15-3 was 11.7

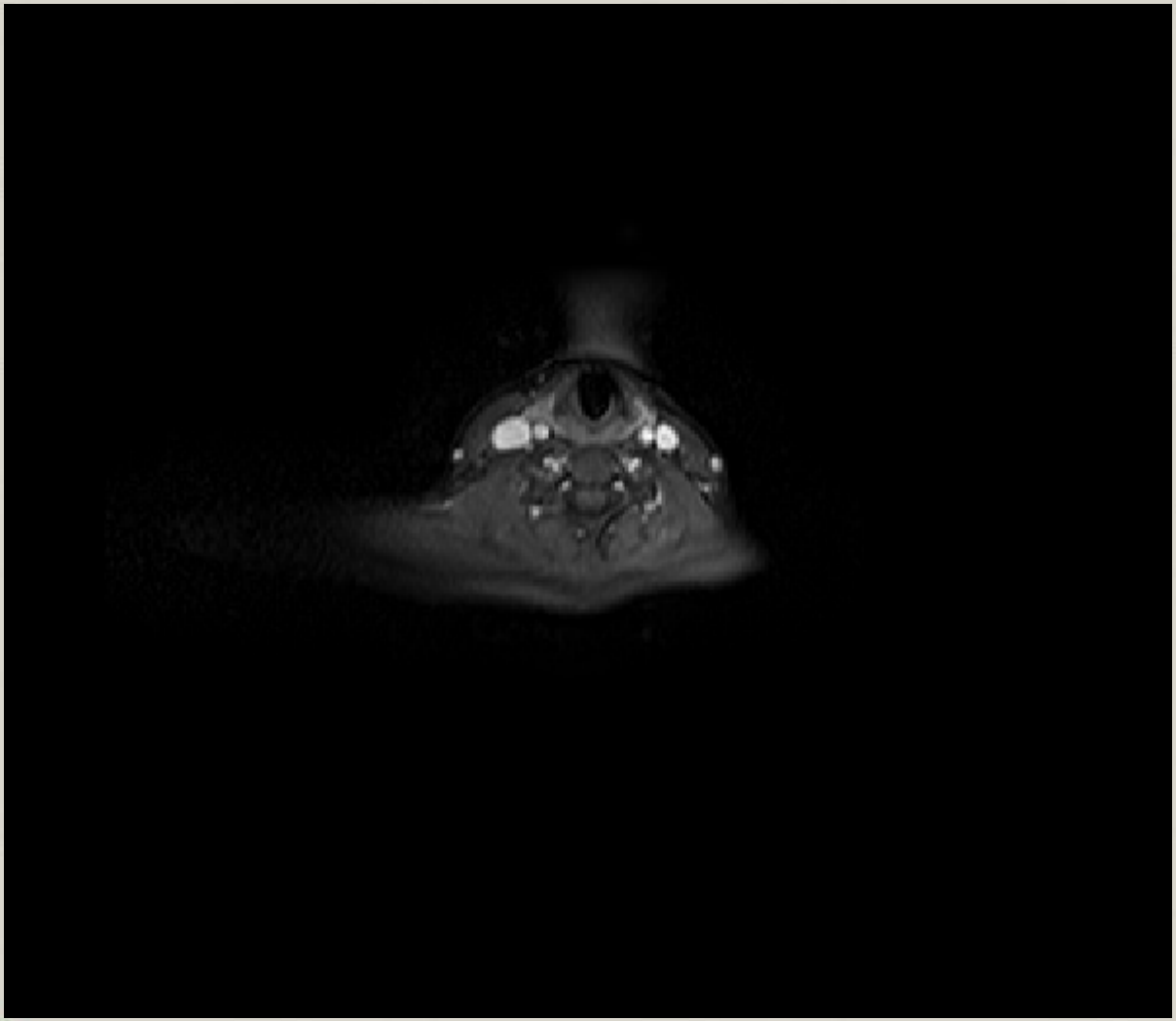
Continued Femara and Zoladex

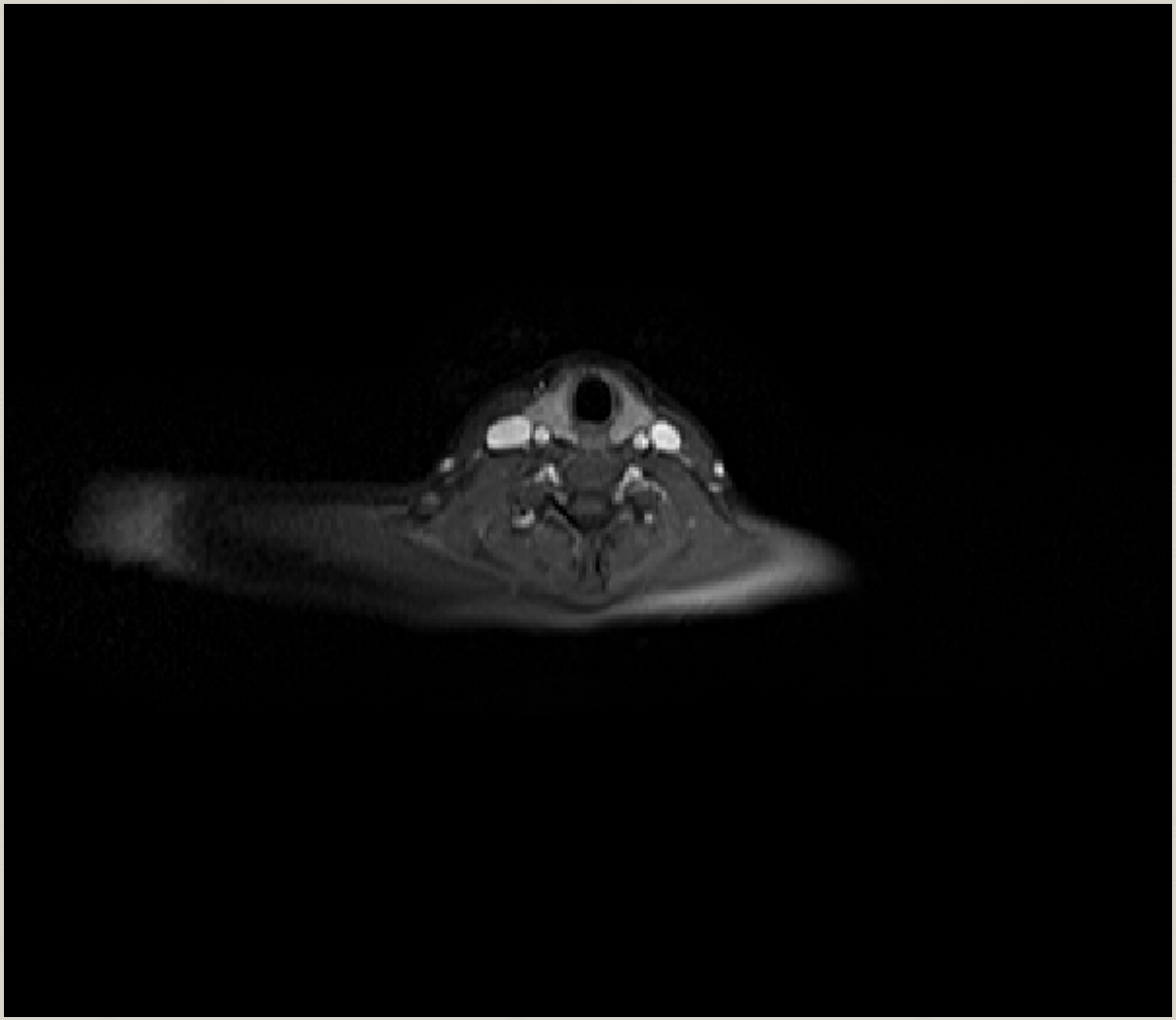
MRI done post treatment was normal

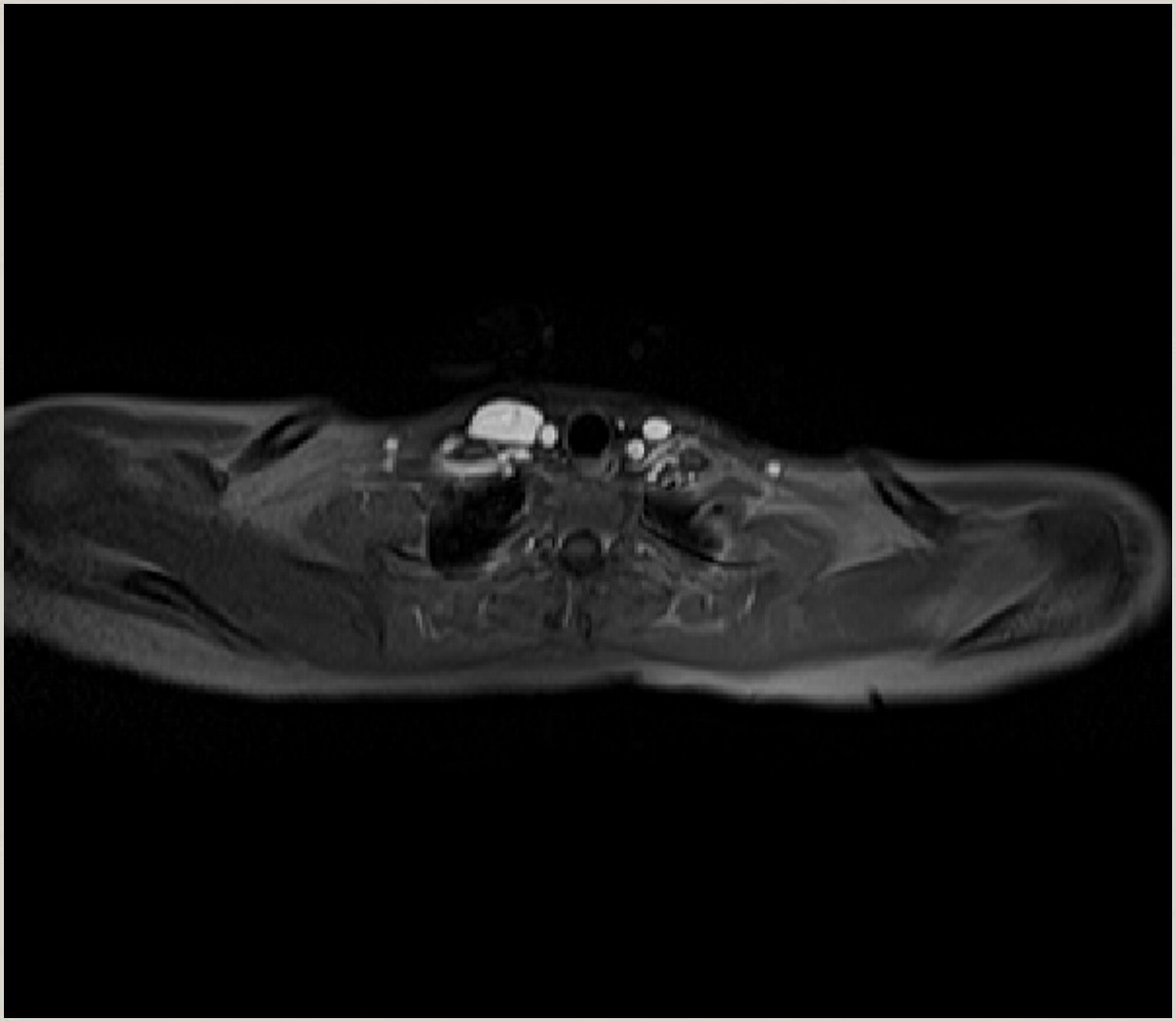
PET requested but funders slow to respond

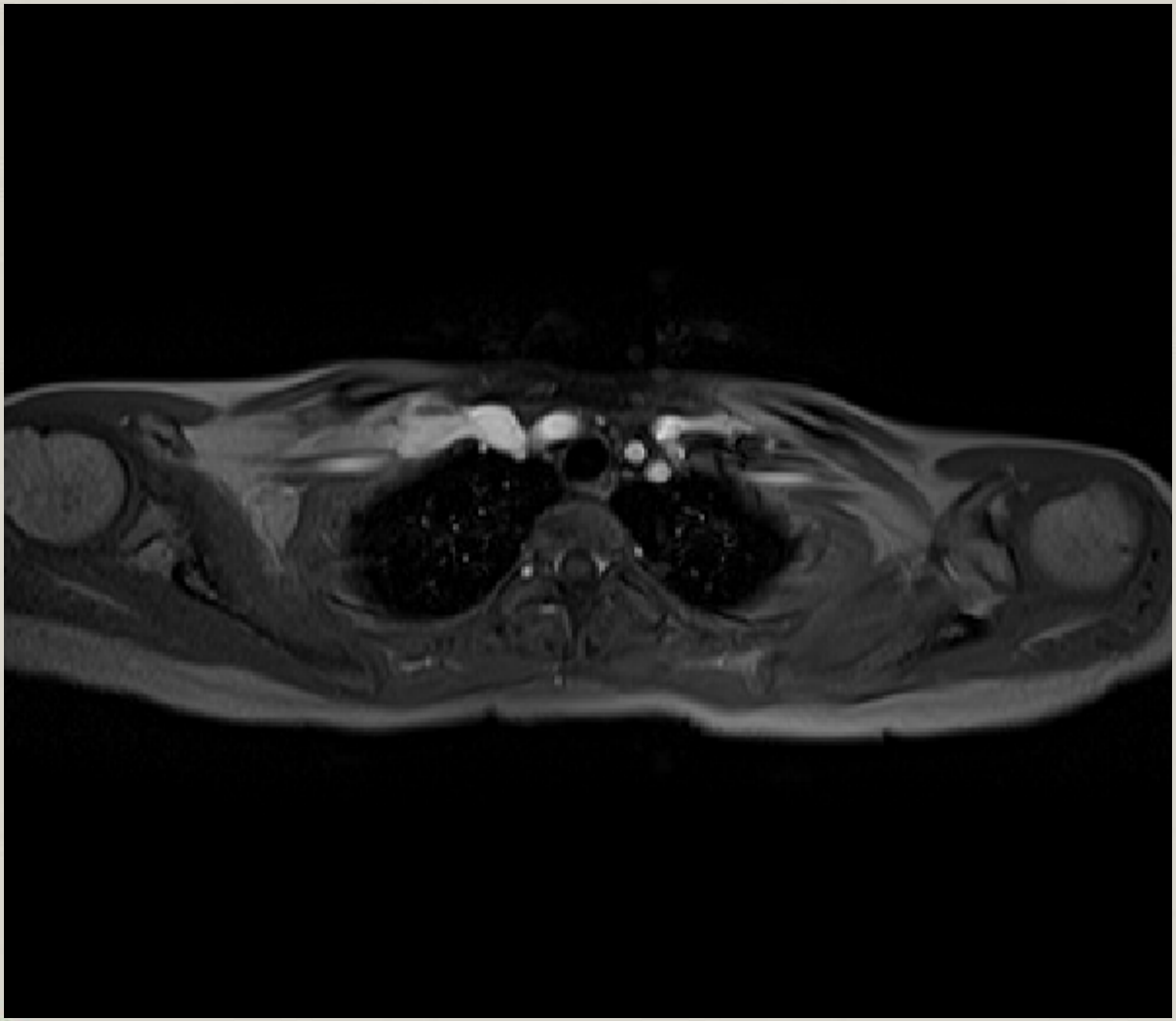
Request to continue HP but no funds available

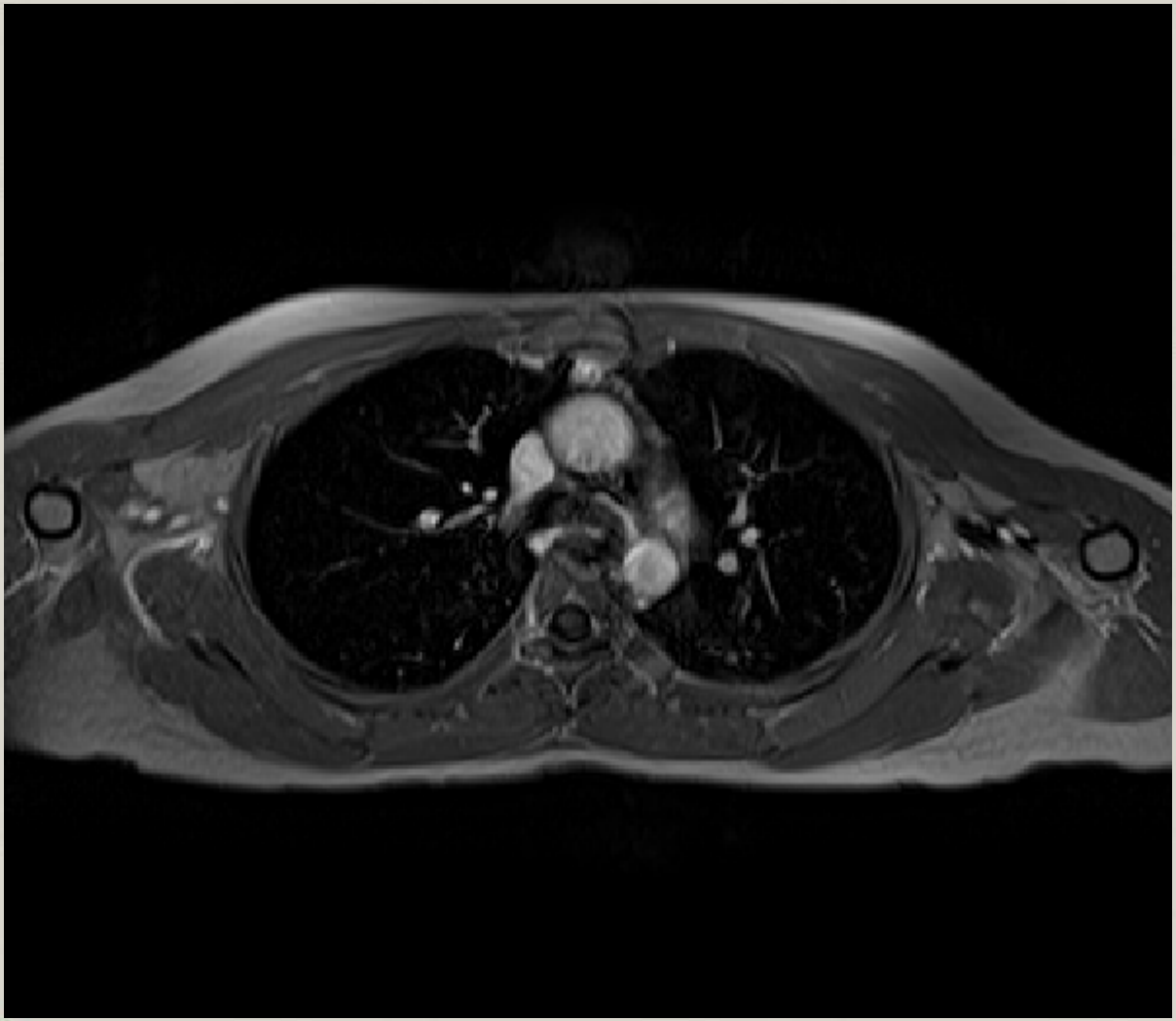
Unfortunately patient was lost to follow-up for 3 months.

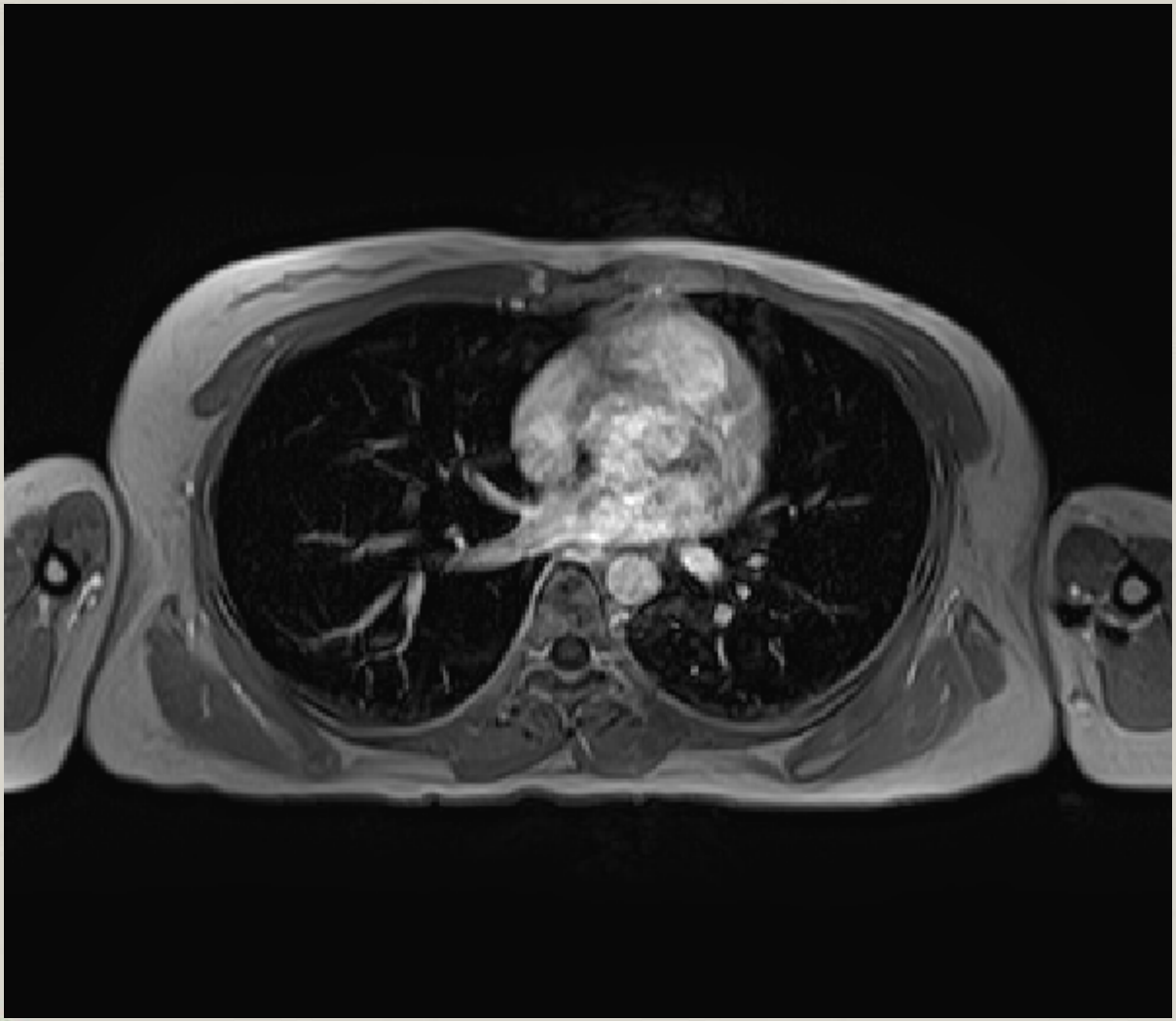






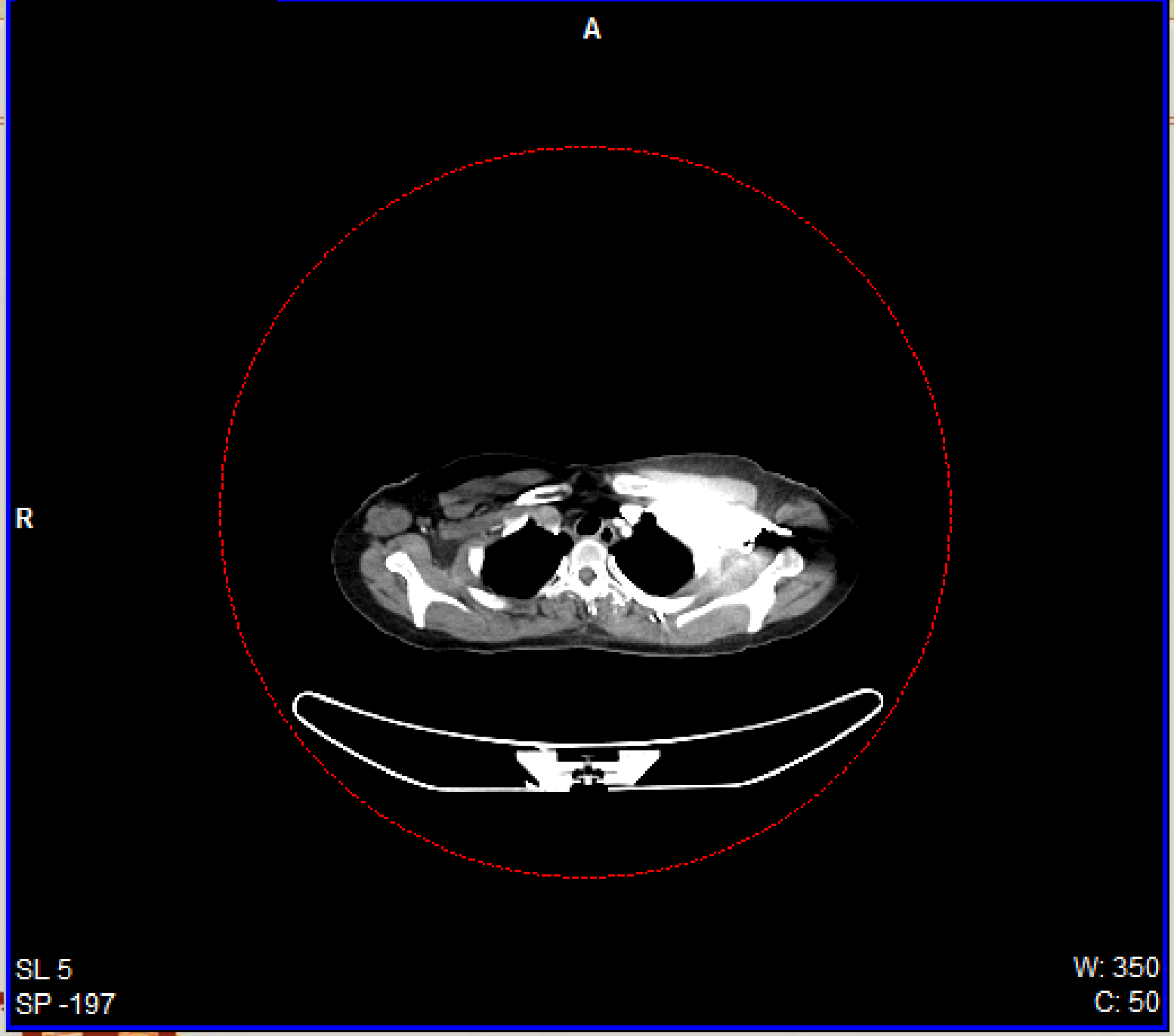






Patient seen again in August 2019 with PET scan done at Joburg General Hospital confirming the following:

- Ill-defined hyperdensity appearing to conforming to the sulcus in the frontal lobe(MRI suggested)
- Right supraclavicular nodes
- Multiple pre/para tracheal nodes
- Pre-vascular lymph nodes
- Aorto-pulmonary nodes
- Pre-carinal nodes
- Sub-carinal nodes
- Left hilar nodes
- Para-oesophageal nodes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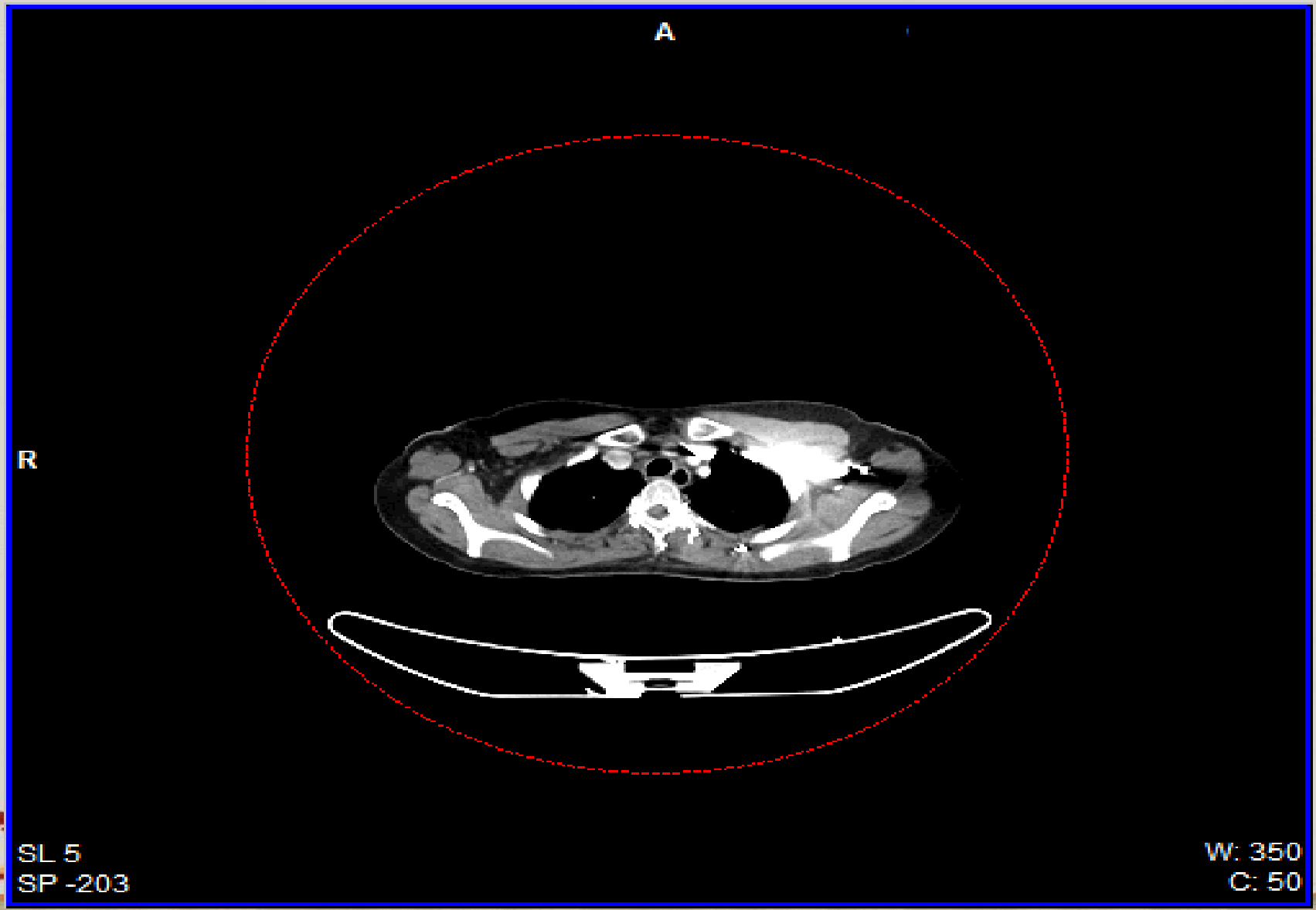
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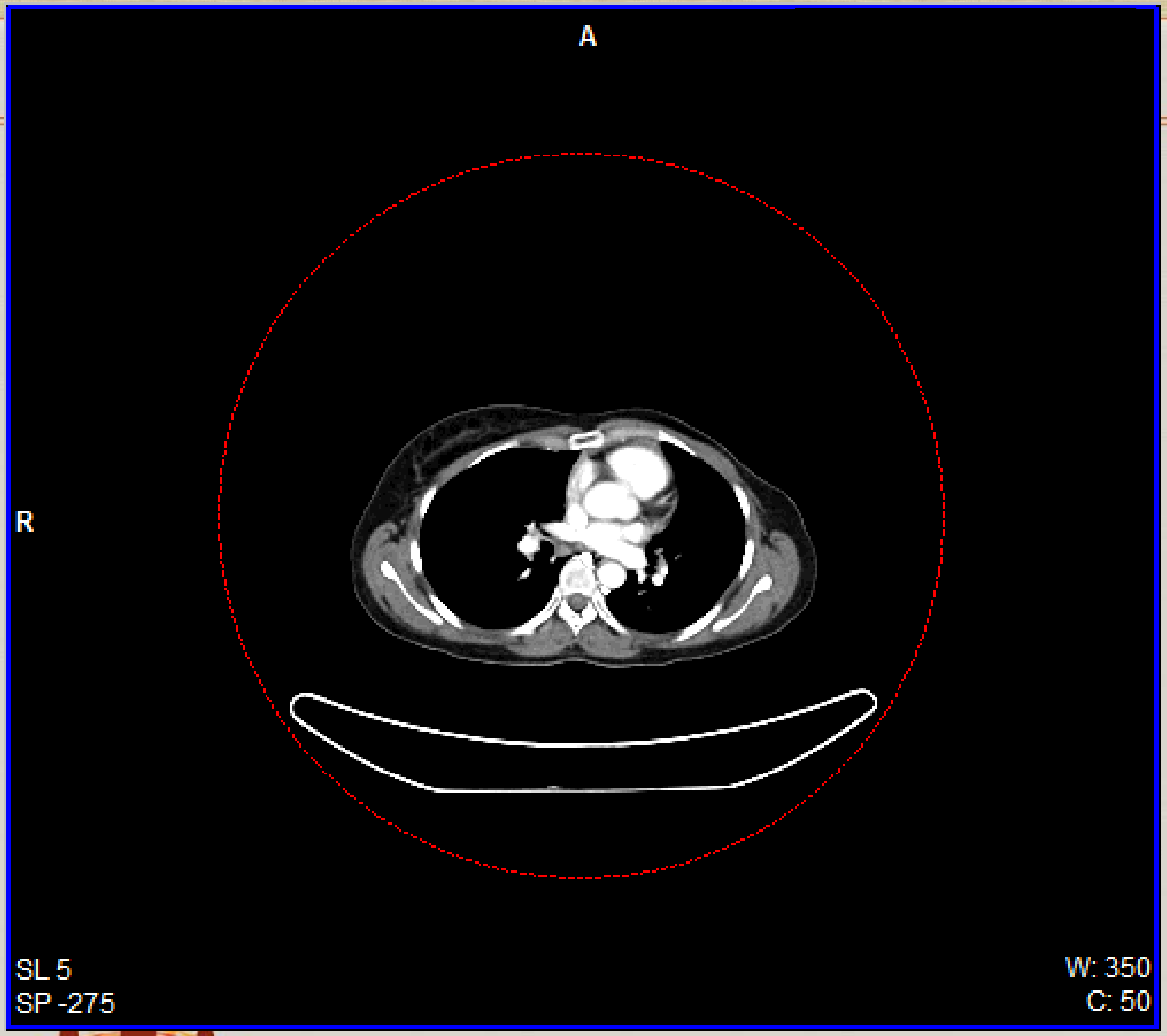
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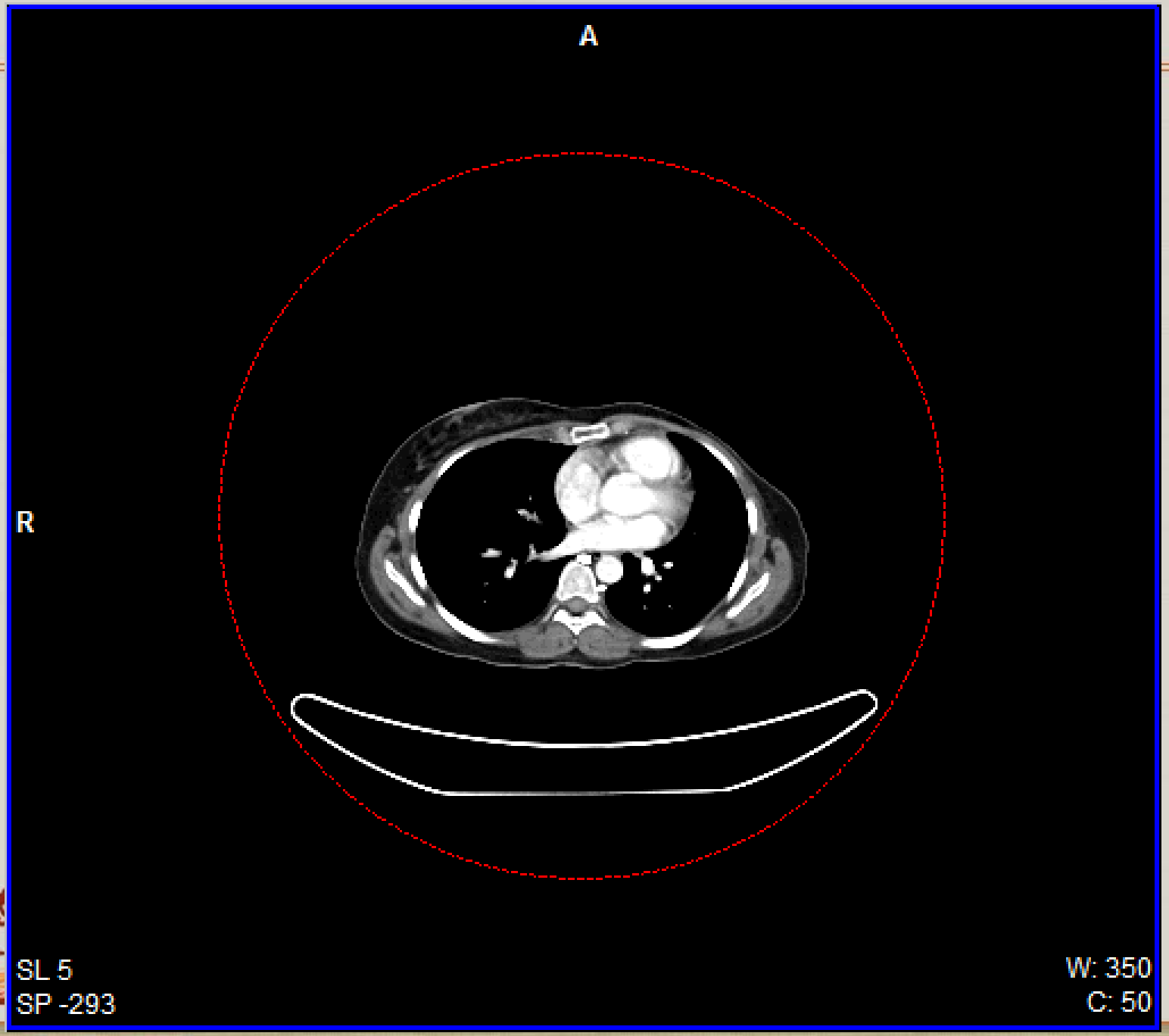
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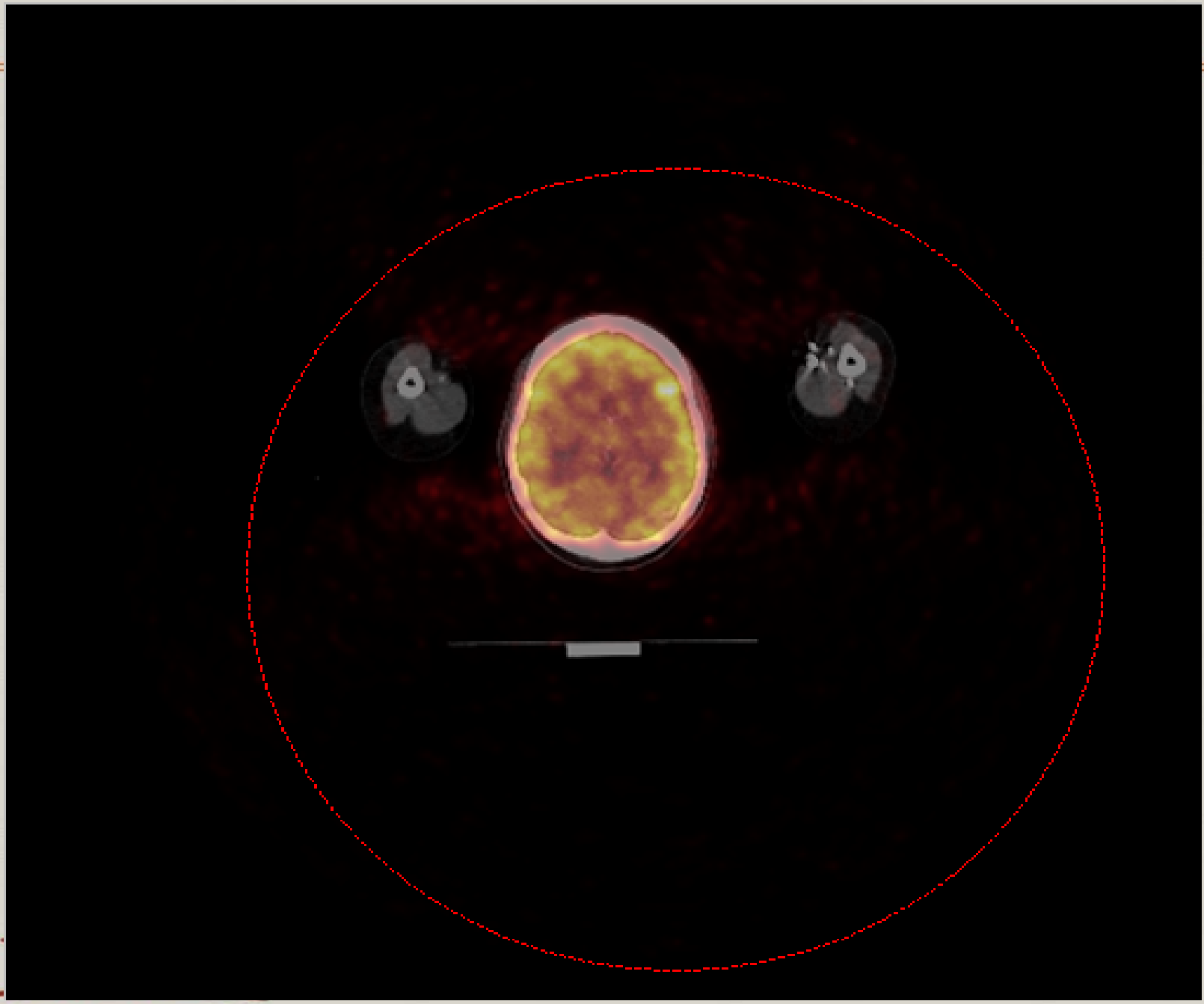
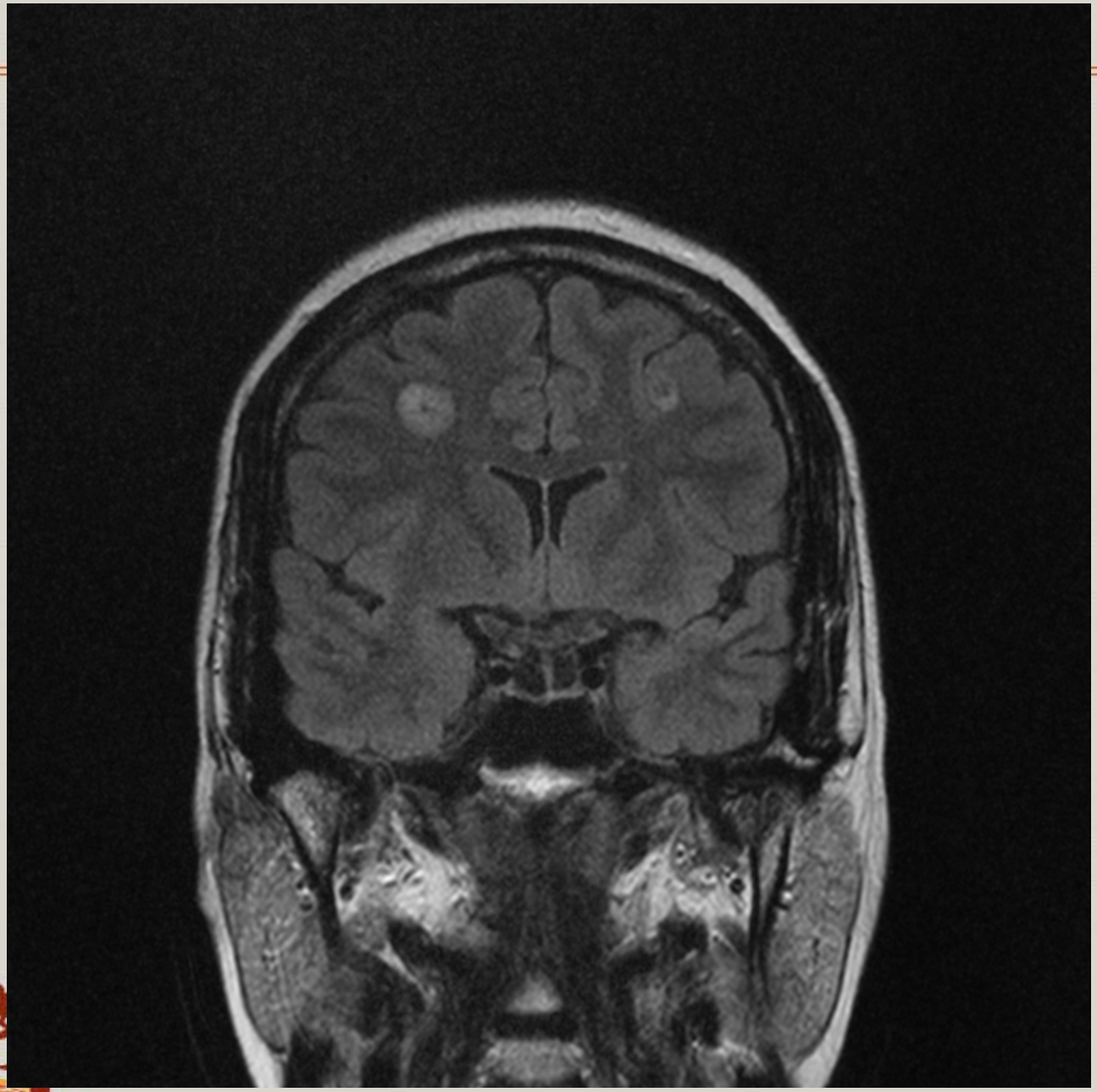
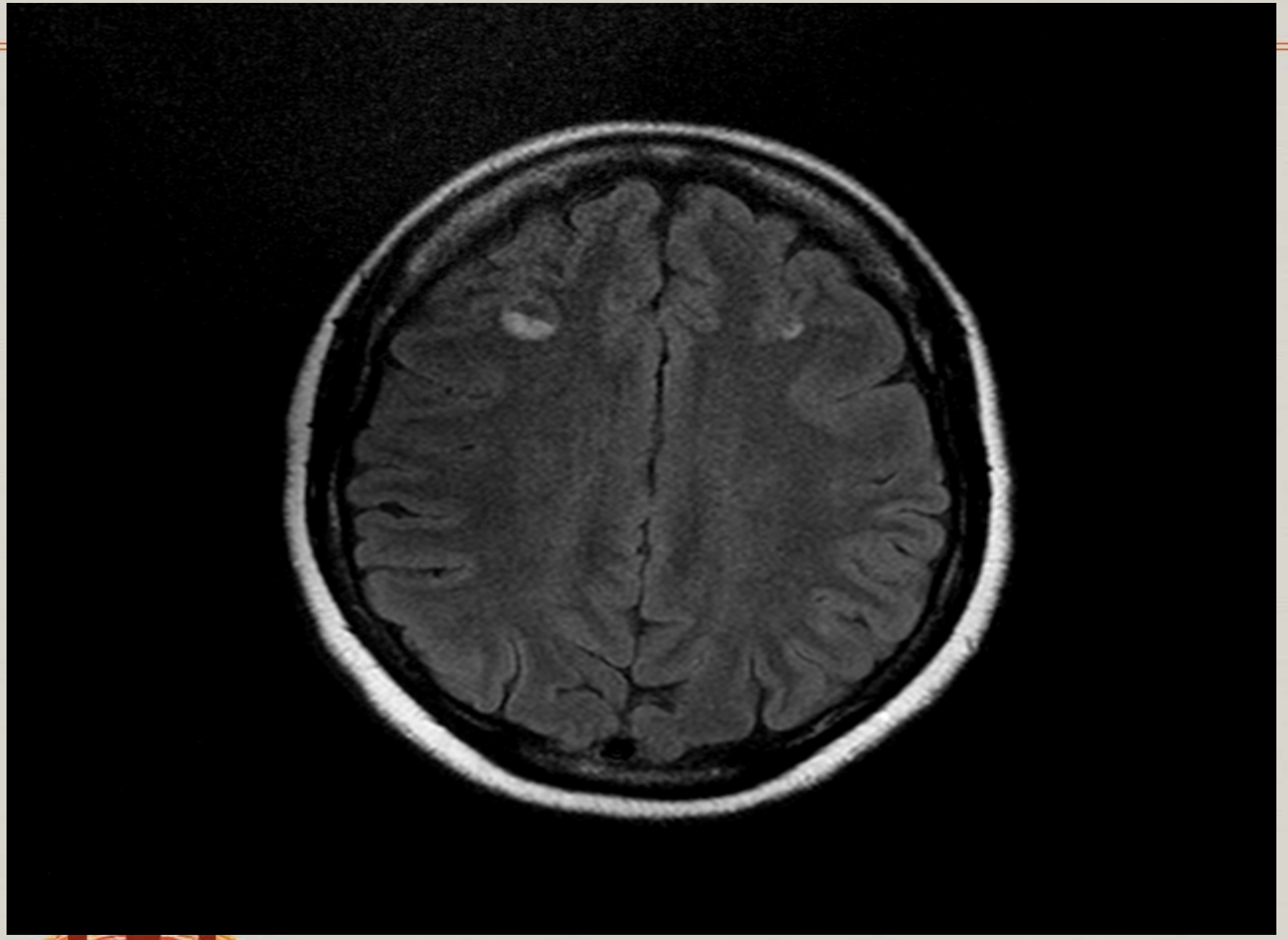


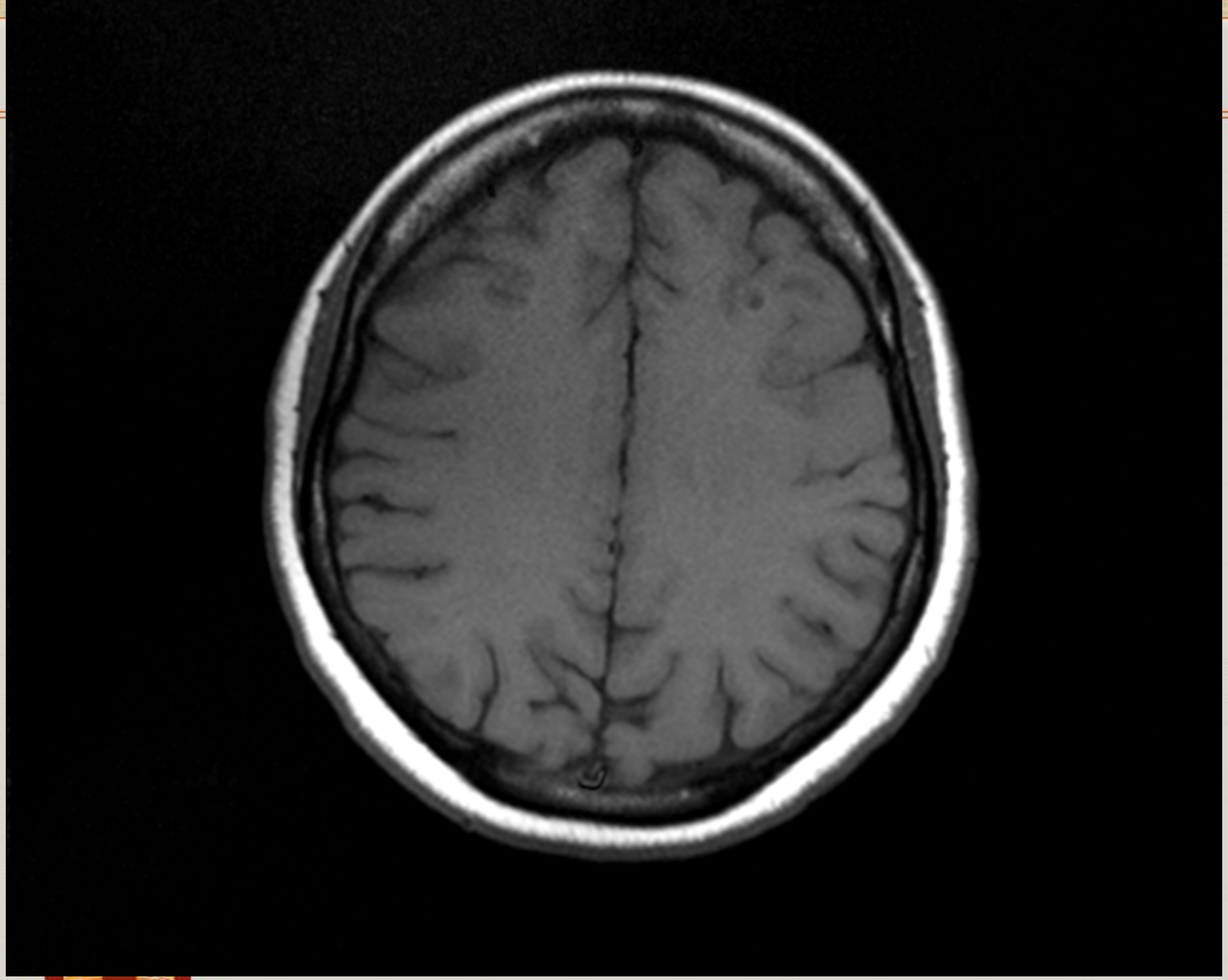
Brain MRI results:

BRAIN MRI done confirmed the following:

Bilateral frontal and left occipital nodular lesions with no restriction of diffusion and haemorrhage, presenting no significant perilesional oedema and showing ring and homogeneous enhancements







CA 15-3 done was 98.9

Commenced on capecitabine and lapatinib

Developed grade 3 toxicity hand and foot syndrome and Xeloda reduced to 1g bd from 1.5 g

Lapatinib has not been available only arriving next week

Meanwhile has had 3 cycles of Xeloda

Ca 153 57.1 on 26/09 and 28.4 on 28/10

Repeat MRI confirms remitting lesions

December 2019

Patient presented for follow-up;

- Lapatinib arrived and was added to treatment plan.
- Two nodules found along mastectomy scar and immediately excised.

Pathology results of nodule excision:

MACROSCOPY

- The specimen consists of tissue which measures 33 x 19 x 7mm.

MICROSCOPIC EXAMINATION

- Microscopic examination shows mature fibrofat tissue as seen with a fibrolipoma. No breast lobules or ducts are present.

DIAGNOSIS : TISSUE FROM BREAST

- FIBROLIPOMA

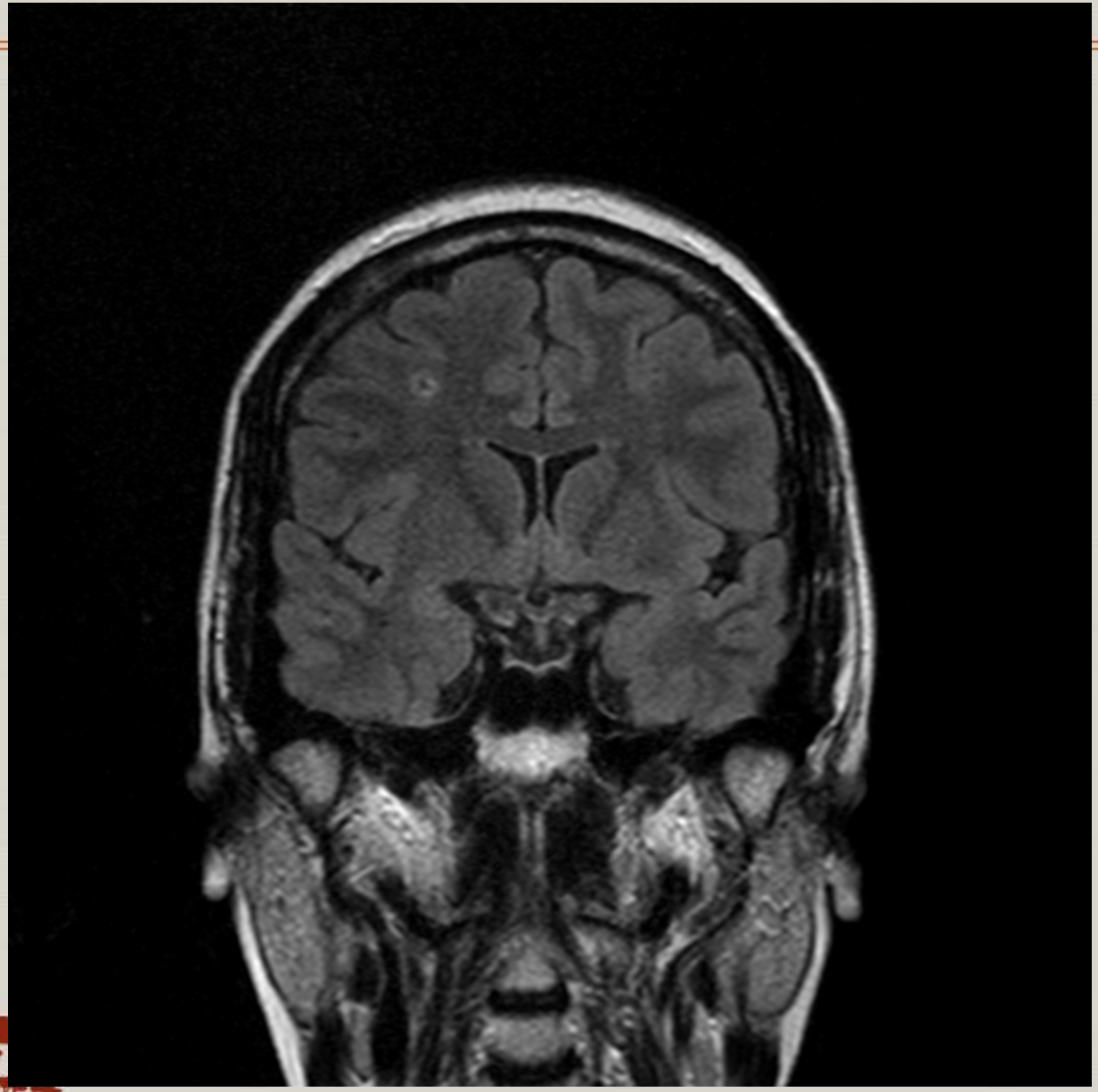
January 2020:

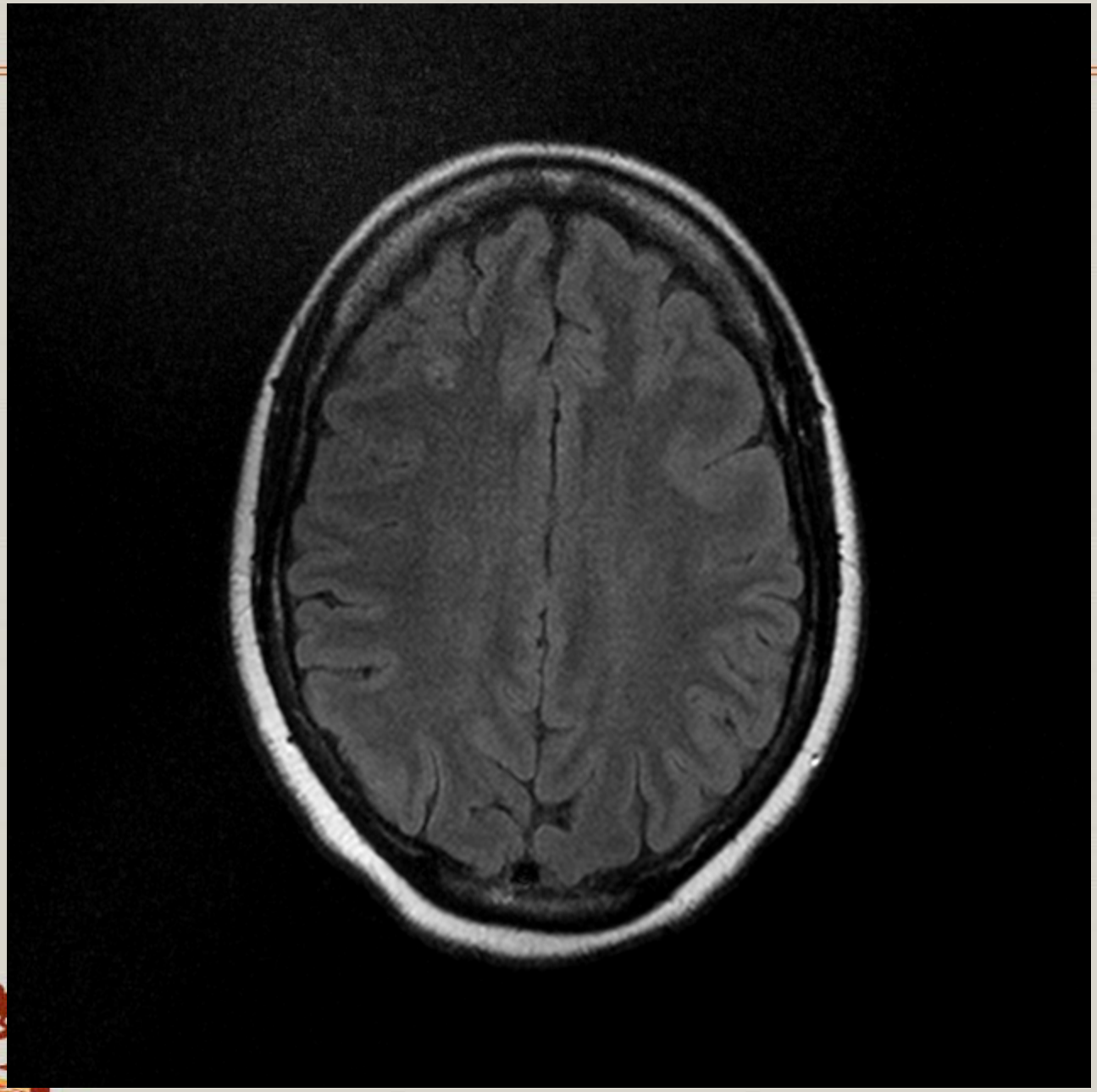
MRI brain, chest & abdomen

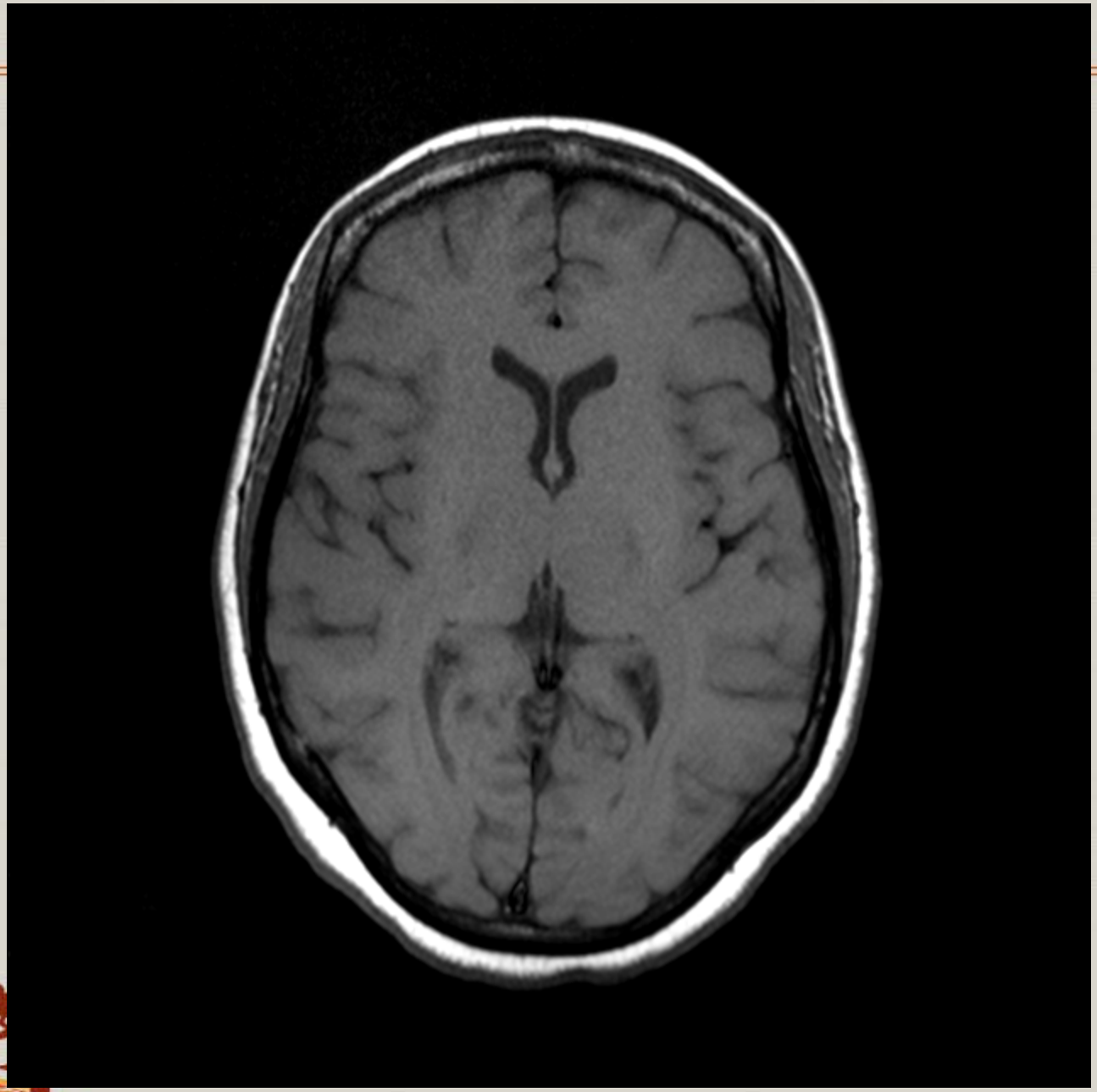
- Largest brain lesion: 0.6 cm
  (1.36 cm in August 2019; 0.8 in October 2019)
- Chest and abdomen are clear

Latest CA 15-3:

- 13 as of January 2020







Lessons learnt:

- The marginally raised CA 15-3 at the beginning: was it a warning sign?
- If PET was done and was positive at the beginning ?change in her management ?anthracyclines ?RT
- ? Role for RT now
- How about hormone therapy ?resistant
- Current treatment is it until disease progression or toxicity
- Should we still go ahead and include Tykerb if it arrives, given the response from monotherapy?
- Is whole brain RT indicated(patient asymptomatic from start)
- What next if she starts to progress ? Trastuzumab/Pertuzumab
  - ? TDM-1
  - ?OTHER CHEMOTHERAPY REGIMENS