Case 1: HER2 positive MBC

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- 54/F, postmenopausal
- First came to TMC on 3/8/15
- Diagnosed in Jan 2015
  - Right breast mass
  - Bones (L5 & S1), lung, spleen (upfront MBC)
  - IDC grade 2, ER positive and PR positive
  - HER2 positive (IHC3+)

- Treatment prior to TMC
  - Zoledronic acid once per month *plus*
  - Cycle 1-2: AC/EC & trastuzumab added to 2nd cycle
  - Cycles 3-5: paclitaxel + trastuzumab
  - Cycle 6: Nab paclitaxel + trastuzumab
  - Last cycle June 2015
- No subjective reduction in breast mass at the end of 6th cycle
- CT scan in July 2015: Right breast mass 4.5 cm with 1.3 cm ipsilateral axillary LN with single hypodense splenic mass and sclerotic S1 lesion.

DATE / TIME	CLINICAL NOTES AND MA (For Clinician's
	3/8/15 S/B D
	2cm Node axilla.
	5 x 5
	NAC pulled to gua
	Skin puckered.

- Considered resistant to taxane-trastuzumab
- Biopsy repeated from right breast mass

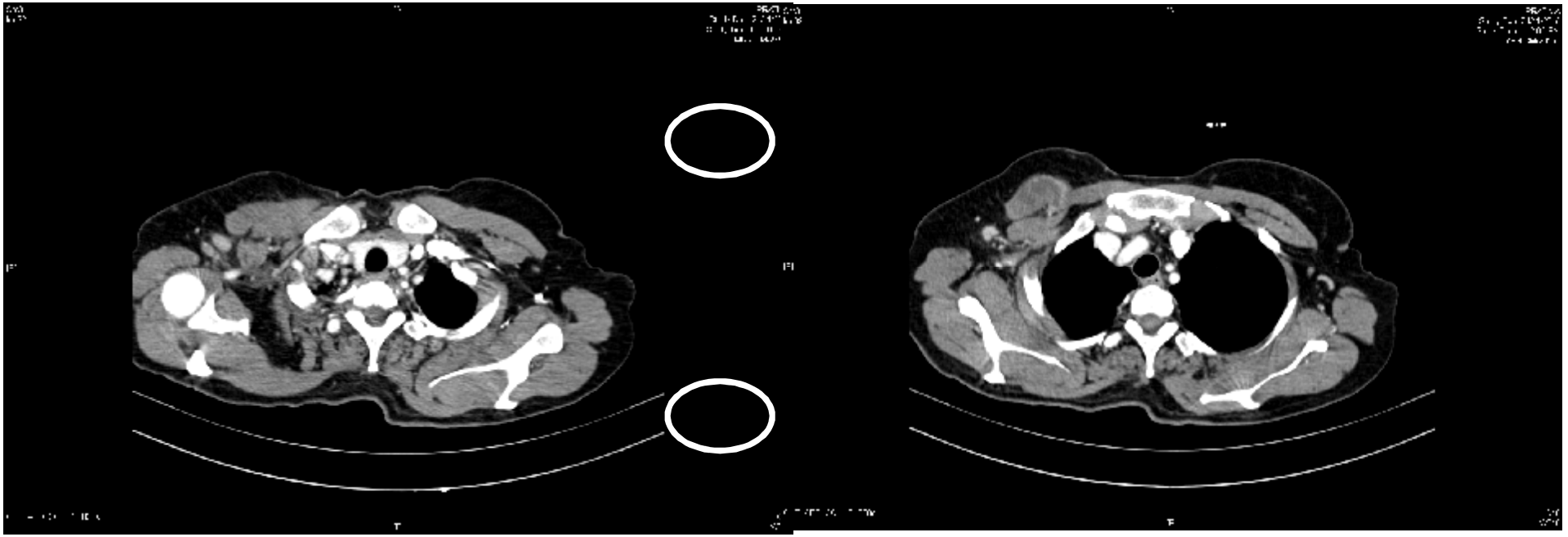
10-08-2015

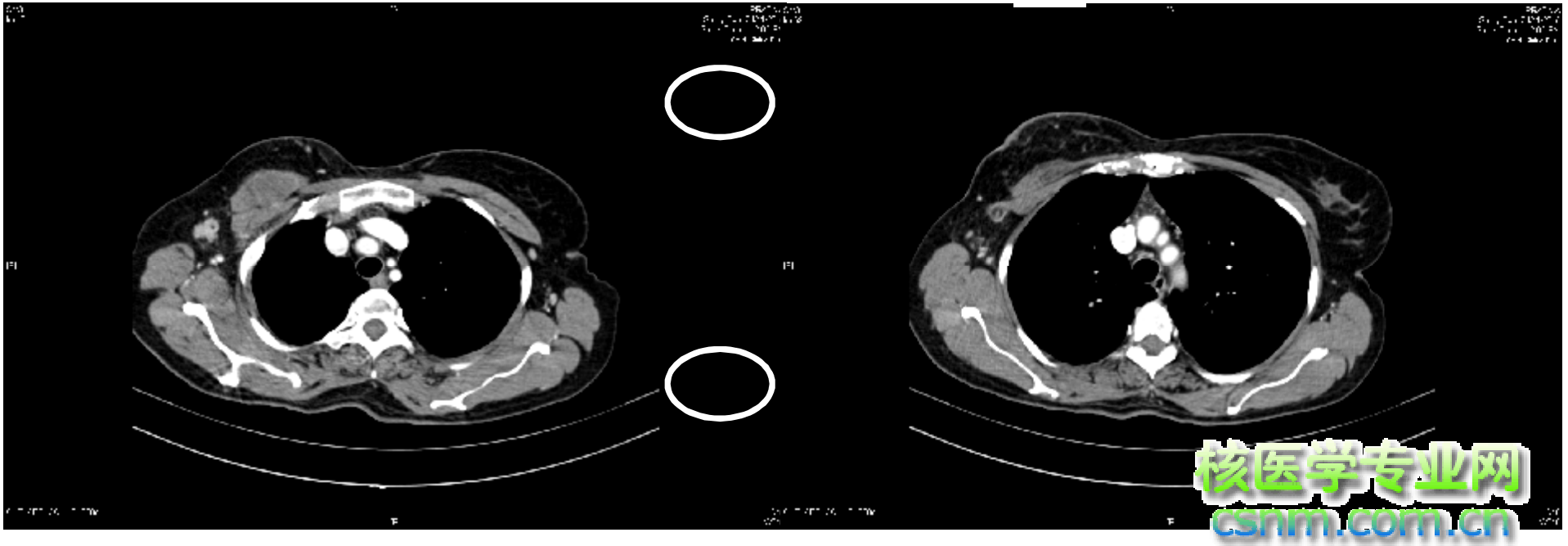
Right breast lump biopsy :

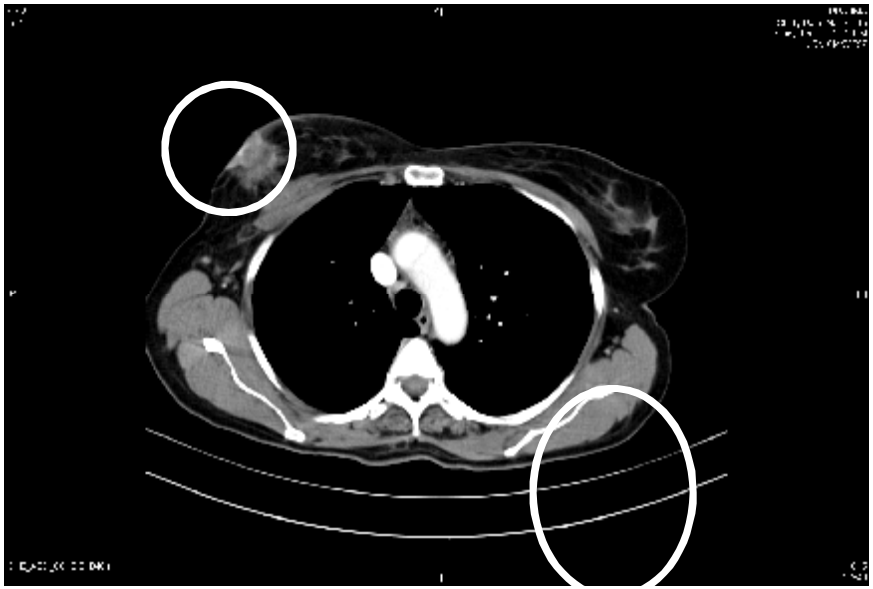
Infiltrating duct carcinoma, grade III.
Modified R.B. Score : 3+3+2 = 8.
Ductal carcinoma in situ is not seen.

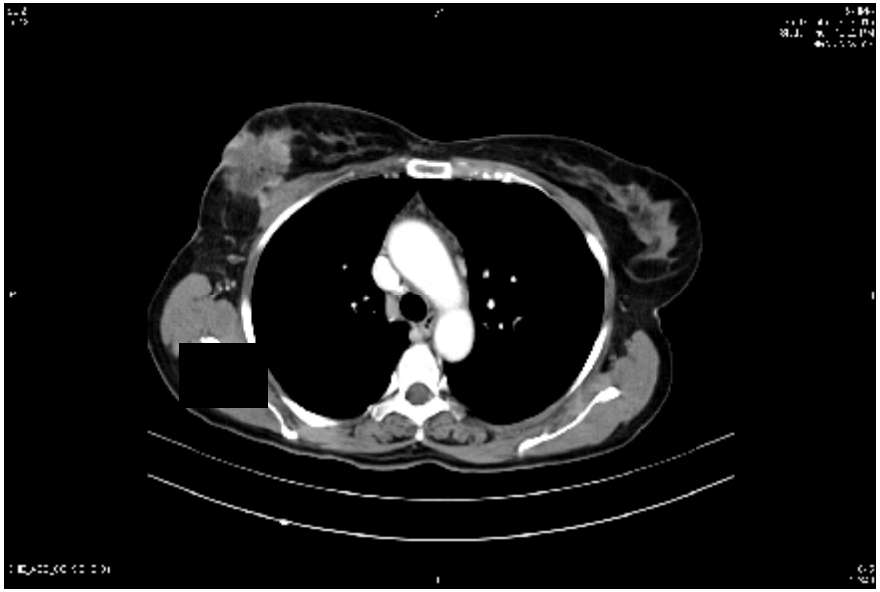
On immunohistochemistry,
ER-Positive (40% tumour cells show strong intensity nuclear staining, Allred score 7/8).
PR-Negative.
CerbB2-Positive (Score 3+).

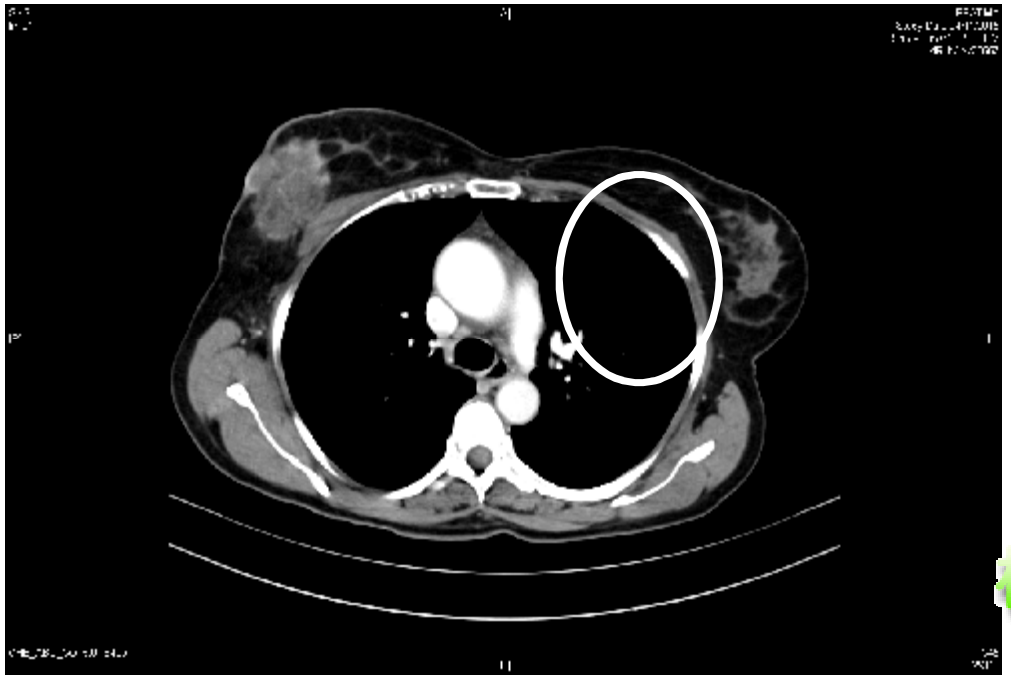
- Patient was started on letrozole and lapatinib with zoledronic acid in August 2015 and continued it until November 2015.
- She was reevaluated in November:
  - pain in right side of chest, axilla, arm & weakness in right upper limb with no subjective benefit
  - 10x8 cm mass in R UOQ, overlying skin fixed
  - 3x3 cm hard tender swelling palpated just above the Rt breast extending to Rt SC region
  - Possible right brachial plexopathy

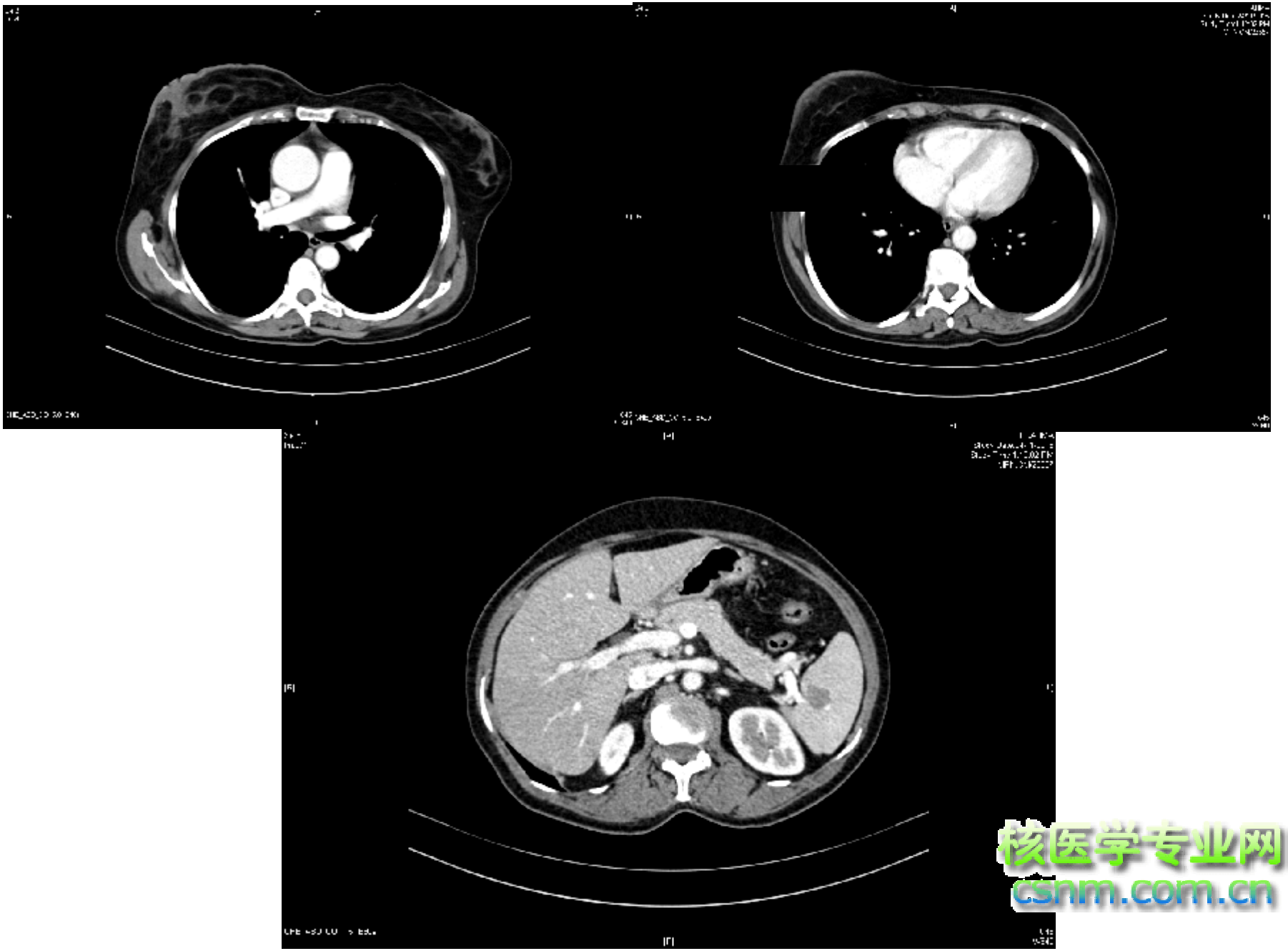












As compared to previous outside CT films dated 18/7/2015.
CT study reveals,
- Mild increase in the size of right breast mass and mild increase in size of necrotic right axillary nodes.
-Necrotic deposit involving right pectoralis muscle-better appreciated in present scans and appears increased in size.
-Unchanged hypodense lesion in spleen-? Deposit.
-No significant change in size and number of previously seen lung nodules.
-An ill defined S1 vertebra sclerotic lesion.

- Patient considered to have clinical and radiological disease progression on letrozole + lapatinib
- Since patient was progressing on 2 lines of ant-HER2 therapy, biopsy repeated from right breast mass to confirm HER2 status

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03-12-2015

Gross Description

Received multiple cores aggregating to 1.5x0.5cm, submitted entirely.

Microscopic Description

Right breast core biopsy:

Infiltrating ductal carcinoma, grade III.

Modified R.B. score: 3+3+2=8.

Large areas of necrosis is noted.

On immunohistochemistry,

ER: Negative

PR: Negative

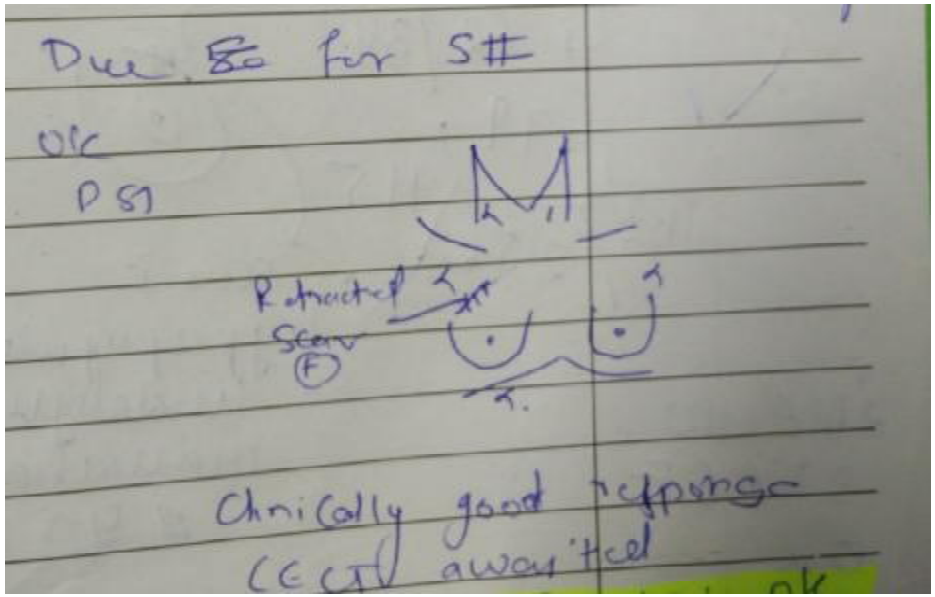
CerbB2: Positive (Score 3+)

Impression

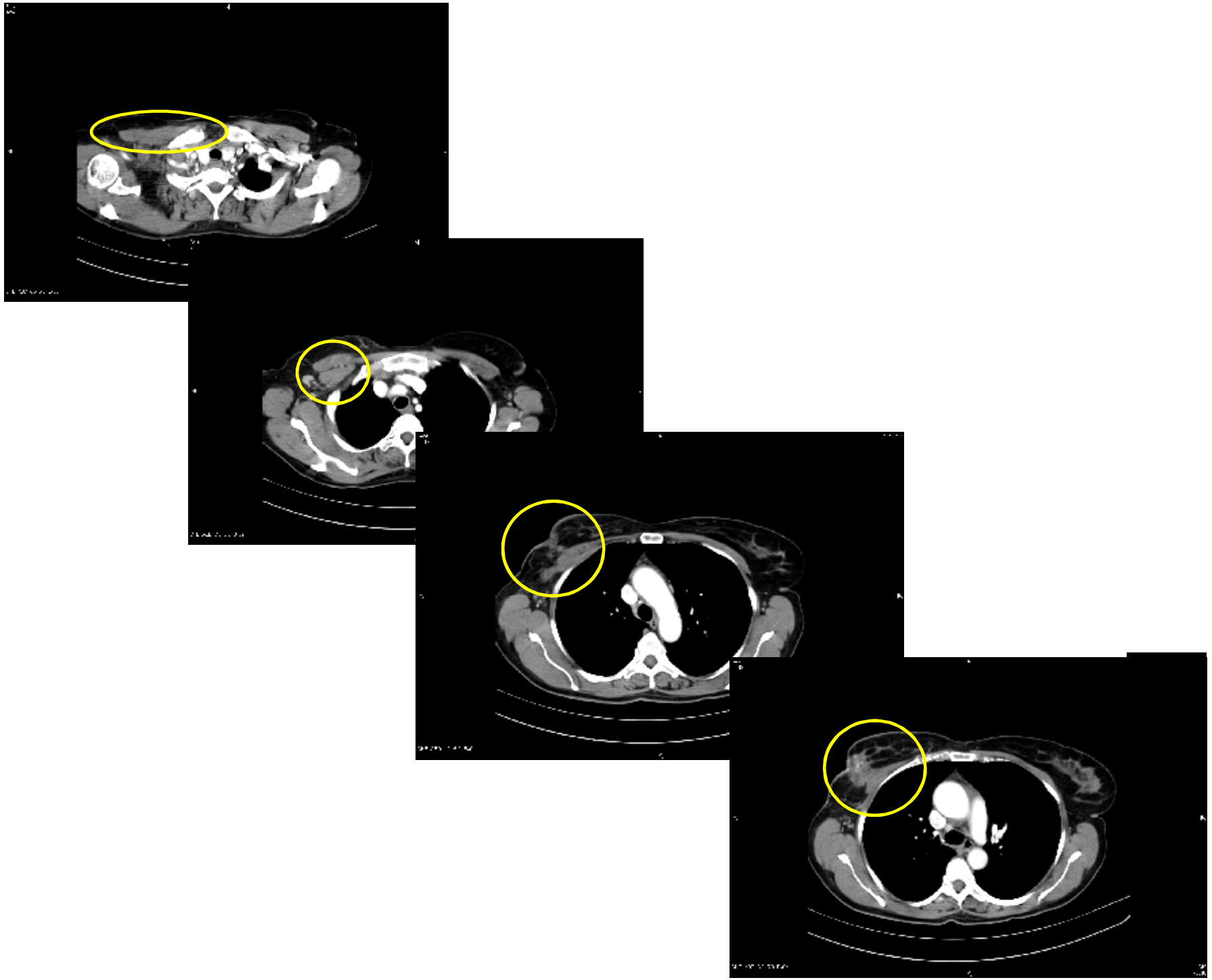
Right breast core biopsy:

Infiltrating ductal carcinoma, grade III.

- CBC and LFT were normal
- Patient started on T-DM1 in November 2015 at 3.6 mg/kg every 3 weeks
- Completed 4th cycle on 3rd February 2016 with good tolerance



- Continued on T-DM1.
- 6th cycle completed on 16th March 2016 with good tolerance
- The right arm weakness has reduced significantly.

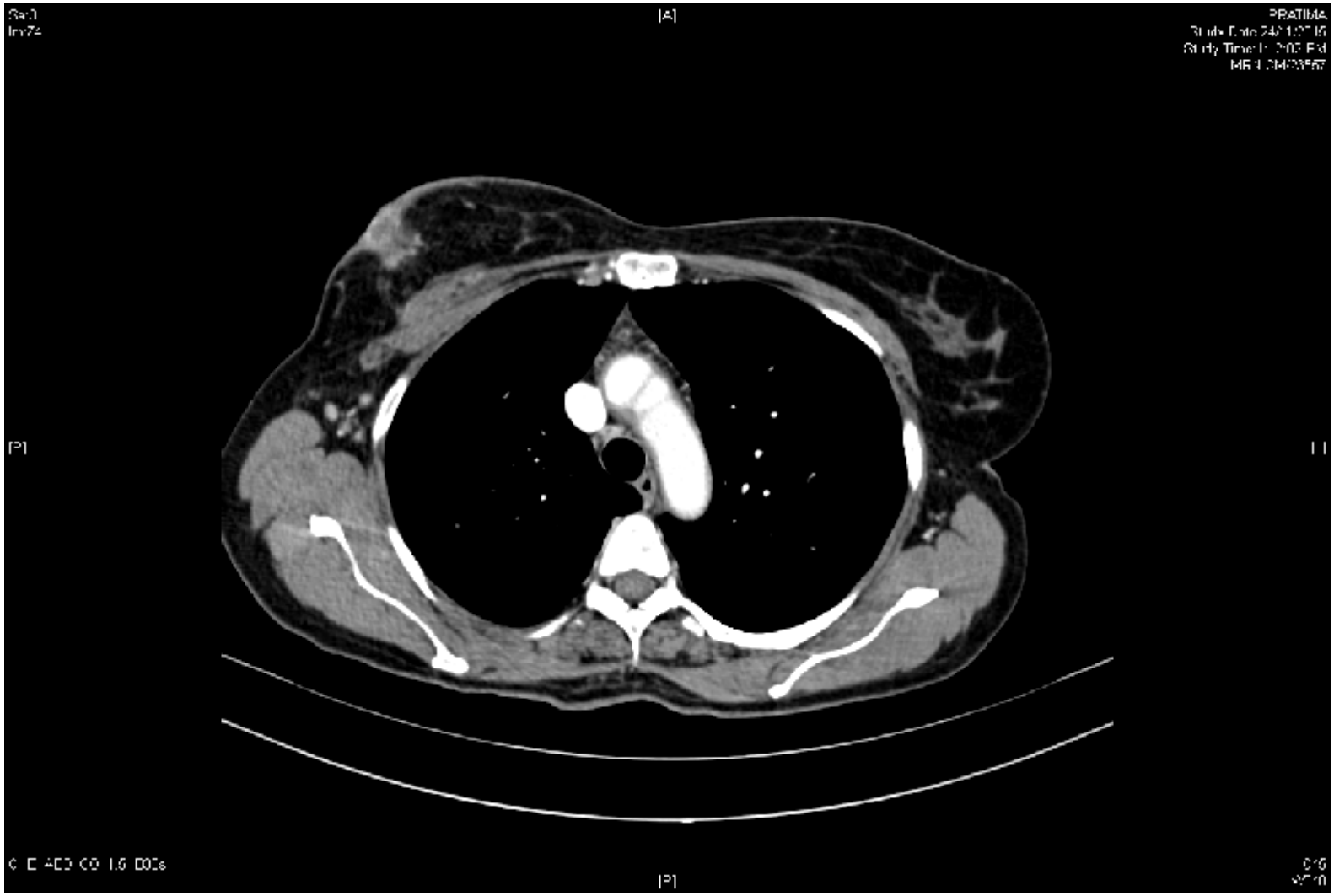


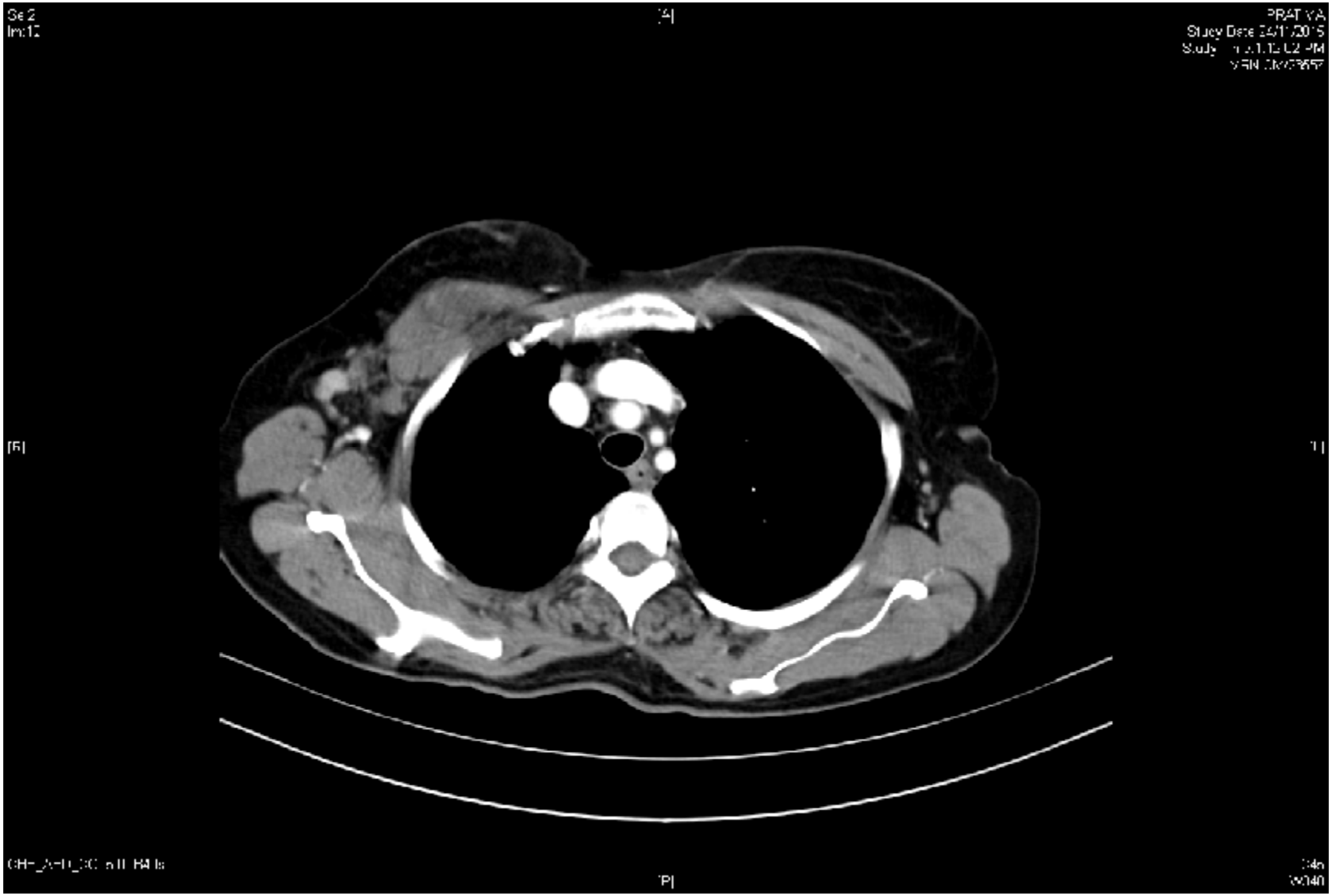
IMPRESSION

Case of carcinoma breast post chemotherapy.
Compared with previous CT dated 24.11.2015

CT reveals
-Regression in the size of the previously noted heterogenously enhancing lesion in the right breast with other satellite lesions and the right axillary adenopathy.

- Patient continued on T-DM1 with PAP
- 7^{th} cycle on 6^{th} April 2016





Case 2: HER2 positive MBC

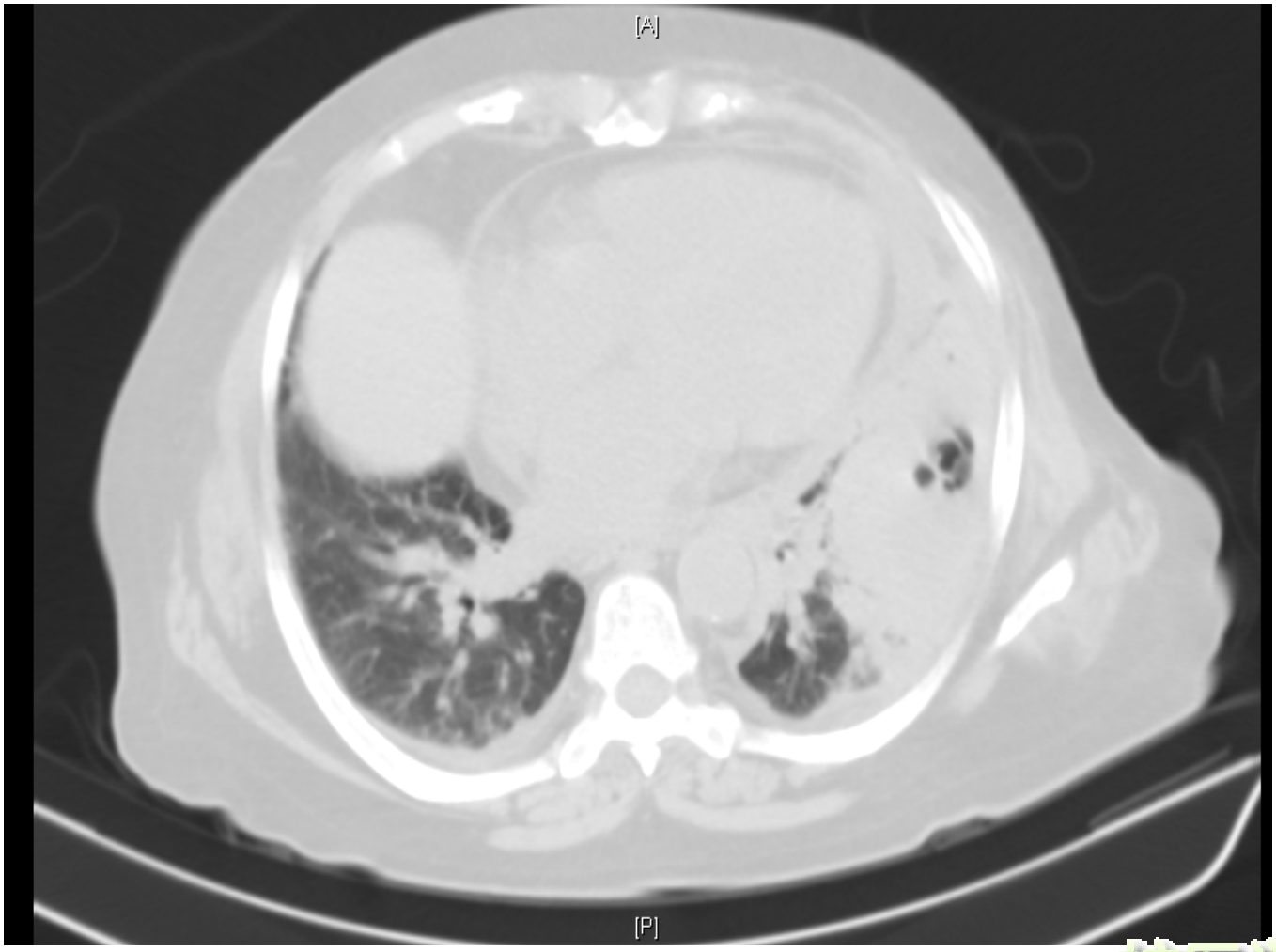
- 66 years old woman
- Post menopausal
- Hypothyroid
- Diabetic
- Presented with left breast lump in Dec 2010

- Excision biopsy: IDC grade III, ER & PR negative and HER2 was 3+ by IHC
- Metastatic work up—negative
- She received 4 cycles of neoadjuvant chemotherapy with CEF regimen followed by MRM
- HPR: pT0 (therapy related changes), 5/17 nodes+ with PNE
- She received 4 cycles of paclitaxel with 1 year of maintenance trastuzumab, last in March 2012.
- She was on regular follow up.

- Presented in June 2013 with cough and breathlessness of 1 month duration
- X ray thorax—B/L pleural effusion
- ICD insertion was done left side
- CT chest & abdomen on 18/6/2013
  - mild pericardial effusion, bilateral pleural effusion, hepatic hypodense lesion in R lobe of 11.5 x 7.2 cm & L lobe (2 small lesion).
  - Sclerotic lesions in D11 & D12 vertebrae
- Pleural fluid cytology positive for adenocarcinoma
- Impression—Metastatic breast cancer, liver, pleural effusion and bones with DFI of 15 months from last adjuvant trastuzumab

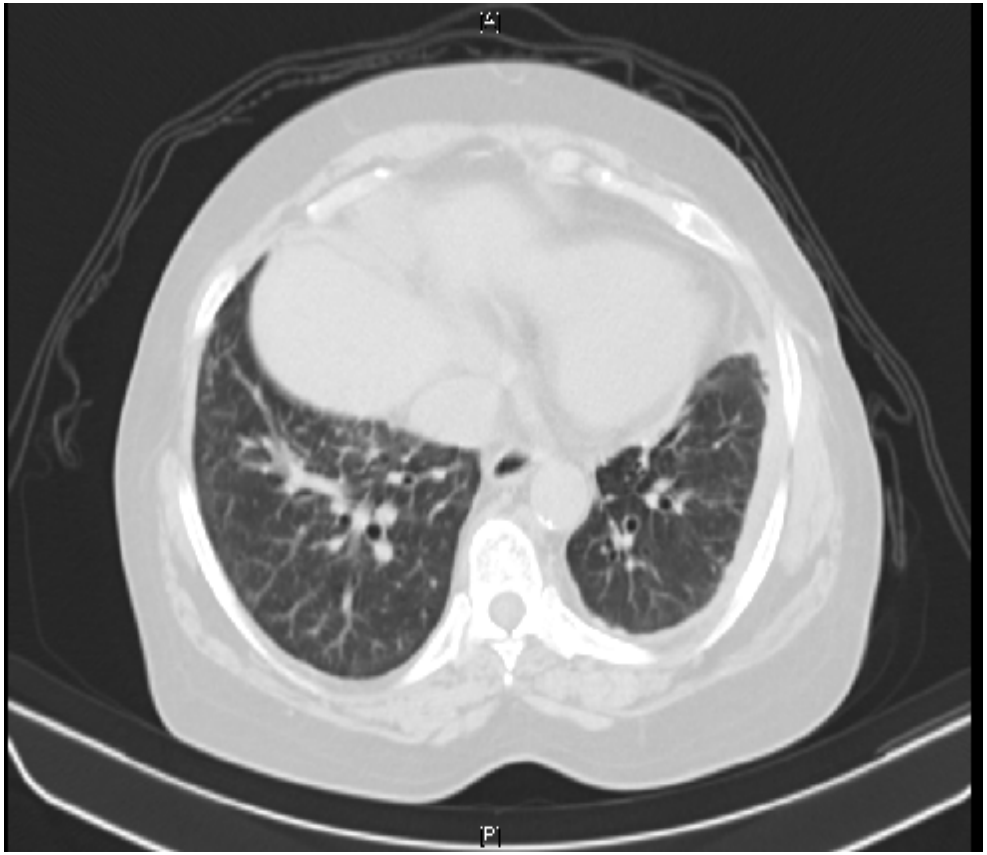
- She was started on gemcitabine-carboplatin + trastuzumab + zoledronic acid
- After 3 cycles, in August 2013, there was reduction in pericardial fluid and decrease in liver mets but an increase in bilateral pleural effusion
- After cycle 5 she was admitted for acute onset breathlessness

Left sided empyema 13/9/2013



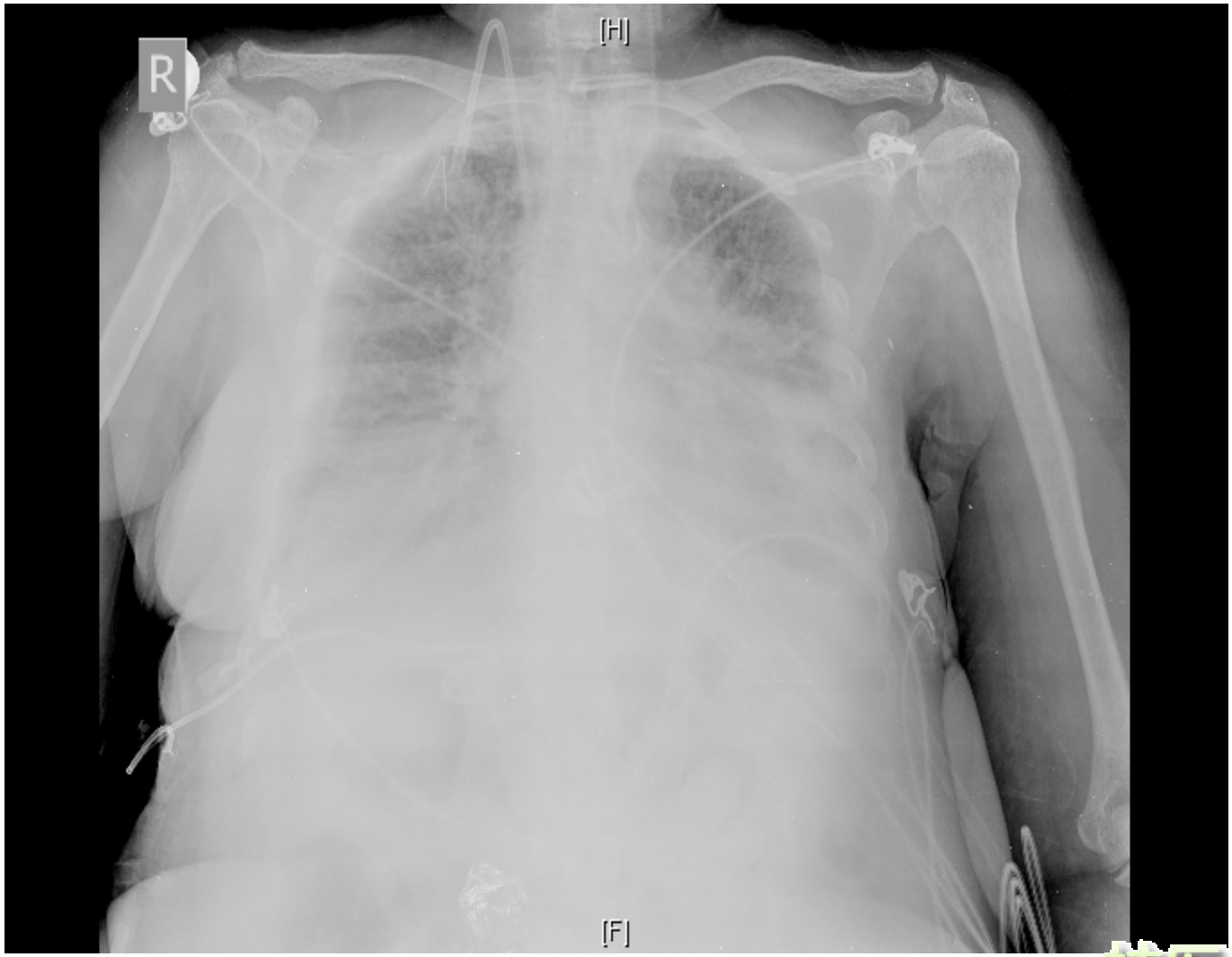
- USG guided pigtail catheter insertion was performed with drainage of frank pus(empyema).
- Pus c/s grew staph aureus and pseudomonas and she was treated with cefoperazone and teicoplanin for 2 weeks.
- She responded well and was then discharged and planned to continue with only trastuzumab

- CT scan Jan 2014 showed resolution of pleural effusion and persistent hepatic nodular lesions unchanged from post 3rd cycle size.
- Patient was largely asymptomatic and in PS-1



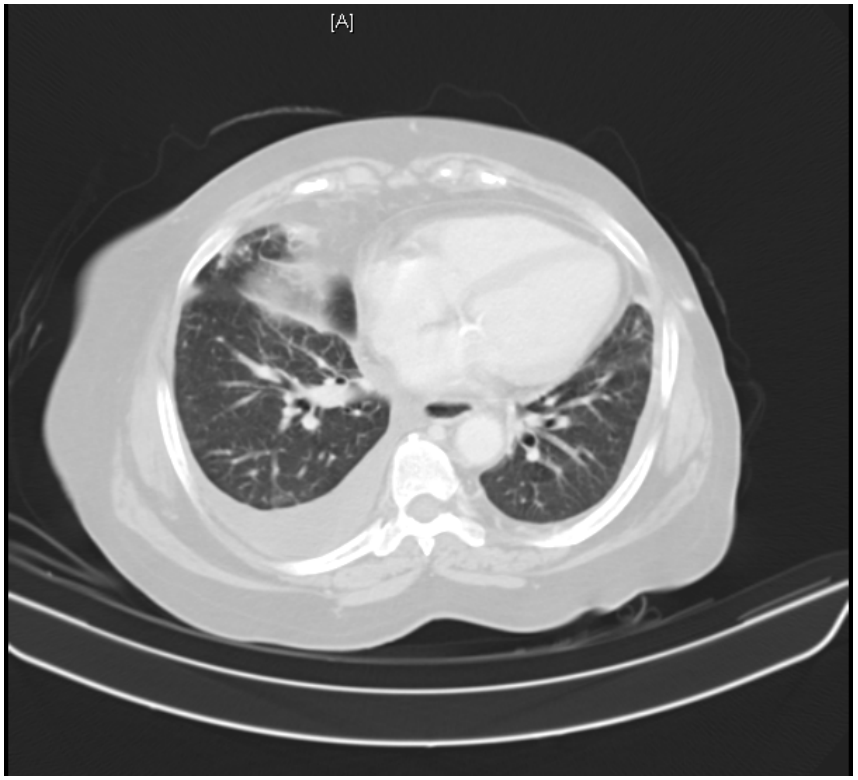
She was continued on single agent trastuzumab

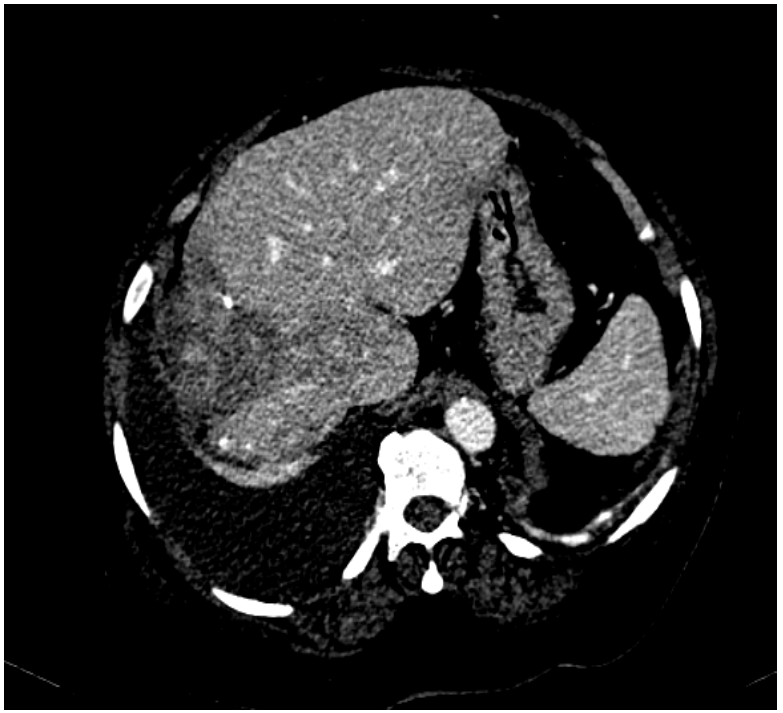
- Patient received 13th cycle of trastuzumab on 5th March 2014.
- On 19th March 2014 she presented with worsening of dysnea and desaturation requiring O2 inhalation.
- CT scan showed bilateral patchy consolidation with interstitial opacities, increasing liver mets and bilateral mild bilateral pleural effusion and multiple lytic lesion in thoracic vertebra.
- She was considered to be in disease progression.



- She was started on paclitaxel and lapatinib
- After 3 cycles of paclitaxel and lapatinib in July 2014 she had a partial response with reduction in pleural and liver mets.
- However, she developed paclitaxel induced skin toxicity with grade 2 neuropathy so paclitaxel was stopped and she was continued on lapatinib.
- In November 2014, she had disease progression in pleural effusion and liver mets.
- Capecitabine was added to lapatinib in November 2014 and was continued until Feb 2015

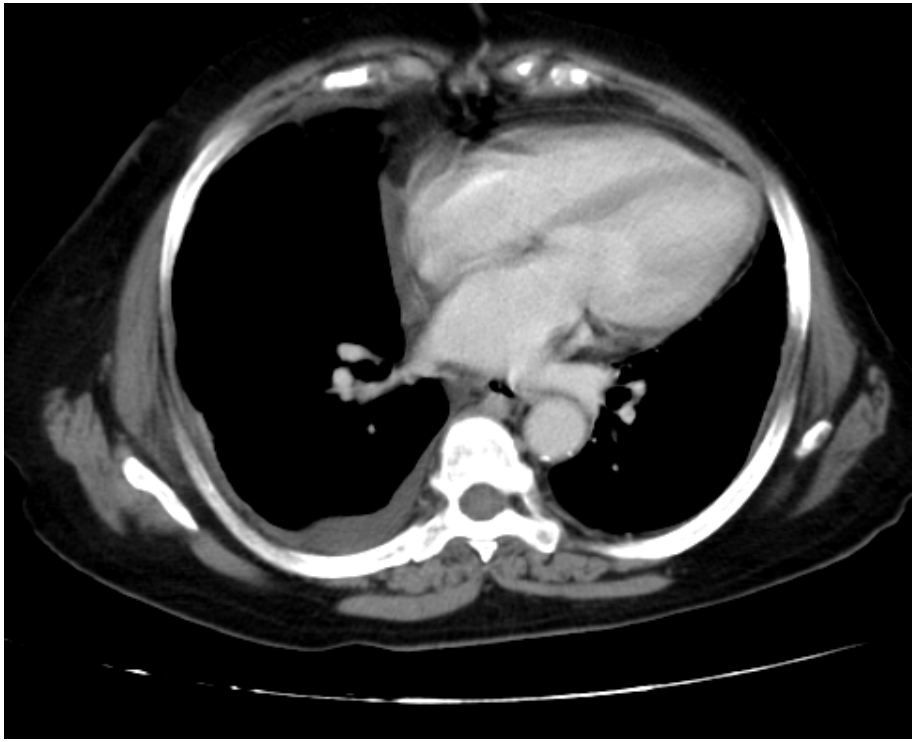
She continued to have symptomatic deterioration with Increase in pleural effusion and liver mets.

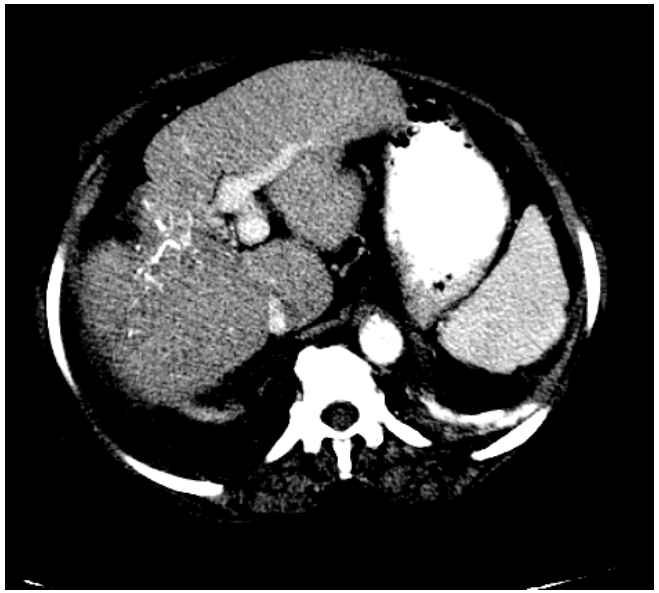


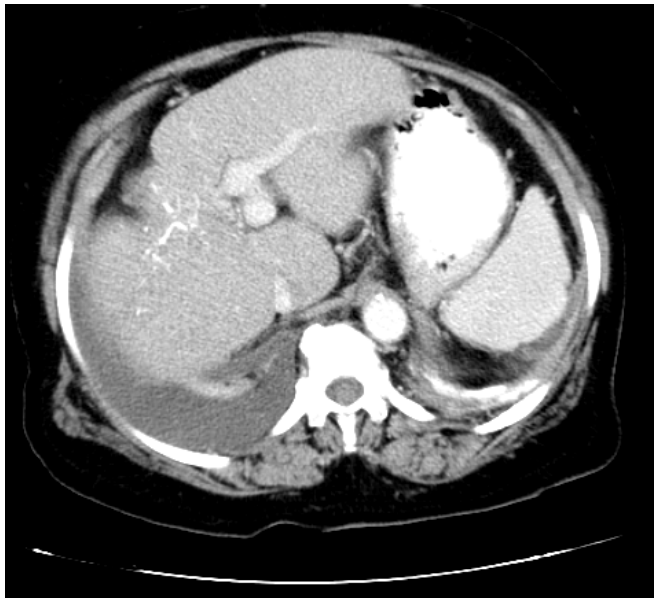


- She was started on T-DM1 plus denosumab from Feb 2015 and after 3rd cycle had good symptomatic response. CT scan showed partial response in liver and pleural metastases.
- She completed 6th cycle of T-DM1 in May 2015.

- There was complete resolution of liver mets, partial resolution of pleural and pericardial effusions and good symptom control.

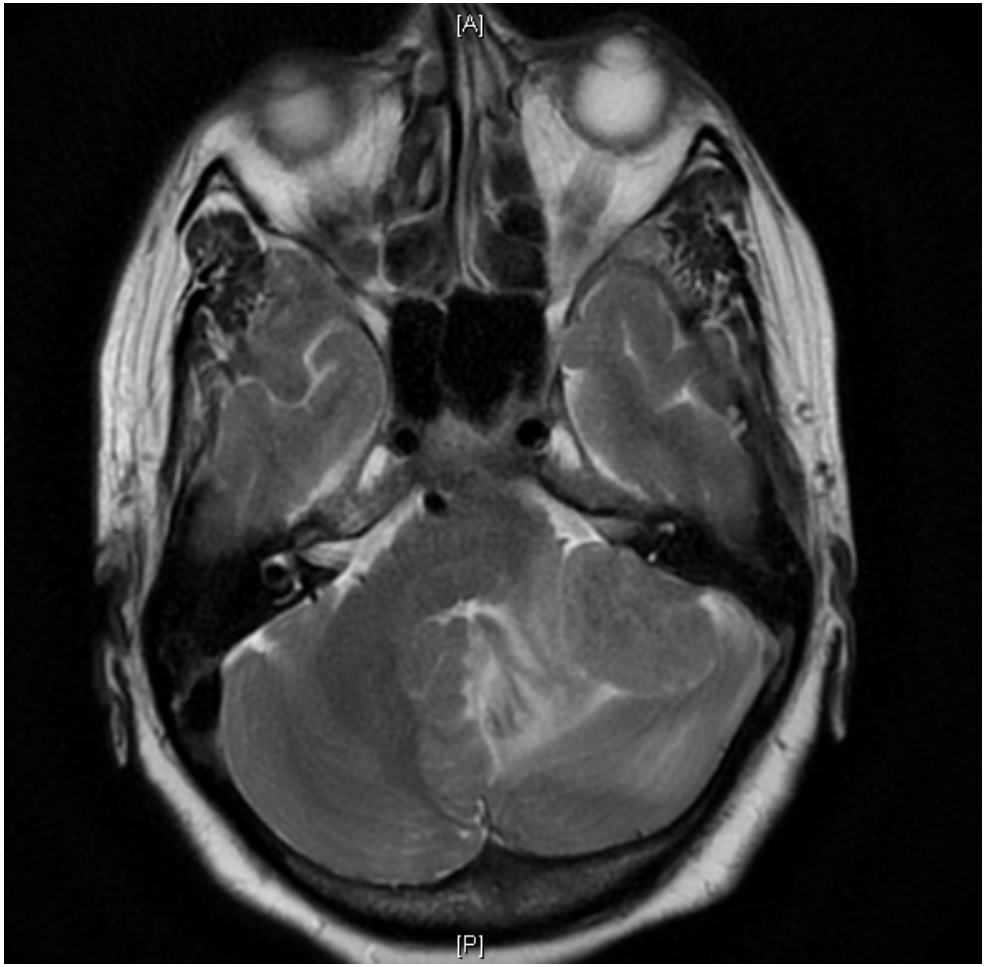






- Patient was continued on denosumab and after discussion, for financial reasons, T-DM1 was discontinued.
- She was started on trastuzumab + lapatinib as maintenance treatment in July 2015.
- In November 2015 there was good control in liver and pleura but she developed multiple symptomatic brain metastases.

MRI Brain(9/11/2015) showing cerebellar mets



- She was given whole brain RT
- Her performance status is gradually deteriorating
- Per her wishes systemic therapy was stopped except denosumab.
- She is receiving symptomatic treatment with home care support.