



A Case of Malignancy and Cured

Ass. Prof. Mazin Judy*

Corresponding Author: Ass. Prof. Mazin Judy, Iraqi board medical oncology, ESMO cert.

Copy Right: © 2021 Ass. Prof. Mazin Judy. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Received Date: November 10, 2021

Published Date: December 01, 2021

Patient Details

- A. H.
- Sixty years old female
- Baghdad
- Housewife
- Married with 5 sons
- Non smoker
- Negative past medical history
- Date of presentation: Feb. 2021
- Chief complaint: DLOC of two weeks duration
- HPI: condition started one month before presentation as progressive DLOC associated with headache, attacks of dry cough and Rt. shoulder pain and fatigue
- On examination: semiconscious old aged female of normal body built and not in respiratory distress
- Bp pressure 110/70, resp rate 16 l min. temp.37 C, regular pulse 64 l min
- She has pallor, no jaundice and no cyanosis
- Chest show poor air entry in the Rt lung upper zone, normal vesicular breathing elsewhere and no added sounds
- Heart examination revealed NDR and no added sounds

- Soft abdomen, no organomegaly
- Neurological examination: weakness in the Lt. side of the body

What is the next step in the management?

• **Investigations**

CBC: anemia

CXR: opacity in the upper part of the Rt lung

Brain CT scan: Rt parietal lobe mass with suspicion of met.

I.V. Symptomatic treatment is given to the patient

What is next?

CT chest shows a hyperdense mass in the upper lobe of the Rt. Lung with suspicion of bronchogenic cancer

Serological tumor markers were not elevated

Next step?

Bronchoscopy is done twice but failed to take bx.

A true cut biopsy cannot be done

Next step?

PET scan was done in April 2021 showing Hypermetabolic lesions in the lung (anterior segment of the upper lobe of the right lung), brain and bones

- Bx was taken from the head of the Rt. humerus showing adenocarcinoma

IHC CK 7 +ve, TTF-1 +ve

Diagnosis?

- Still the patient has a headache, the appropriate next step is?

- A. Starting erlotinib
 - B. Starting chemotherapy as paclitaxel with carboplatin
 - C. Send the patient for specific molecular tests and wait for results
 - D. Give RT to the brain
- The patient received RT to the brain as 5 fractions then started chemotherapy as a combination of pemetrexed (alvopem) and carboplatin, cycle every 3 weeks for 6 cycles
 - EGFR test shows no mutation
 - The patient can not afford immunotherapy or TKI drugs so other molecular tests are not done
 - The patient started to receive chemotherapy as combined alvopem and carboplatin as a cycle every 3 weeks
 - After 6 cycles another PET CT scan done

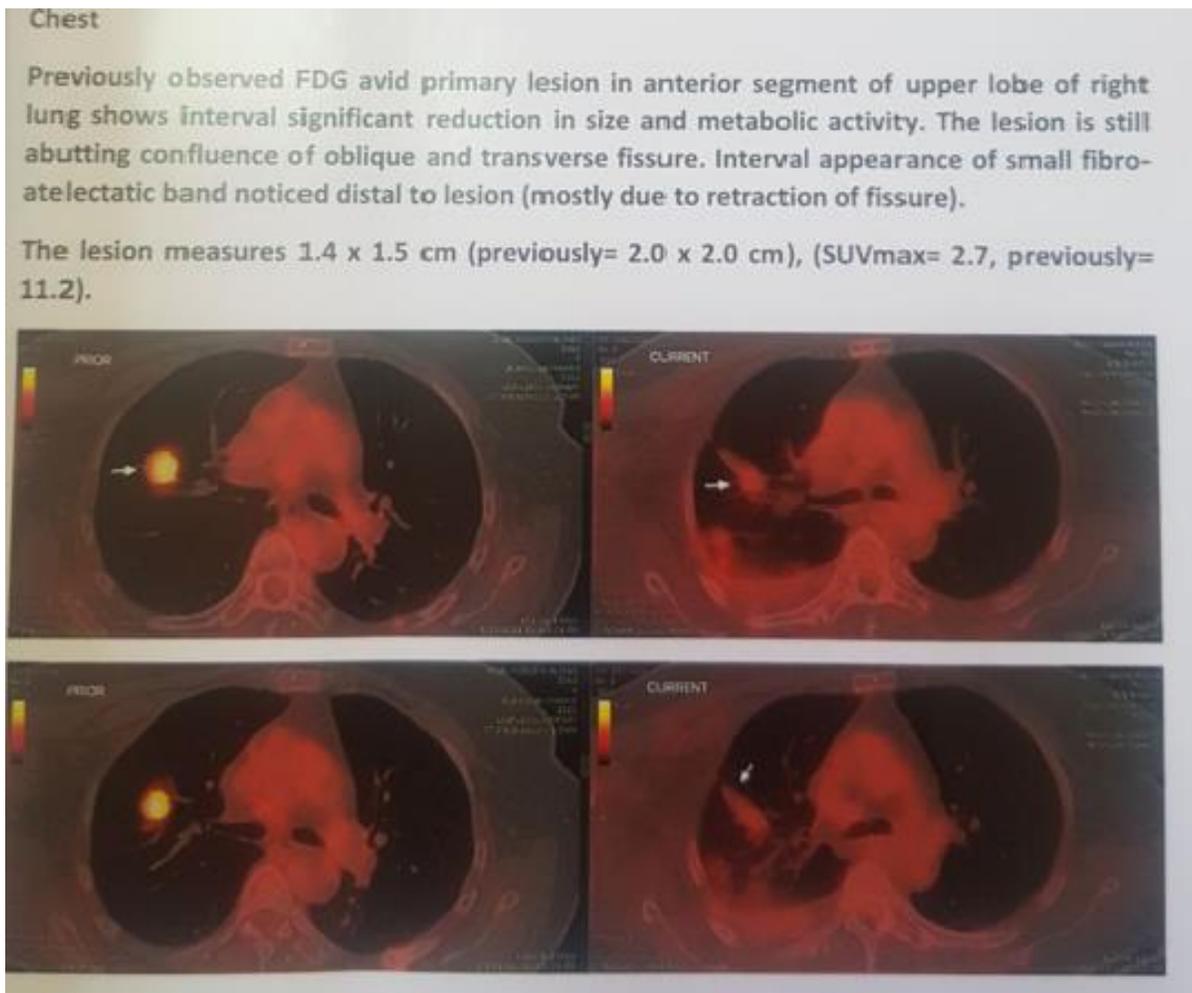


Figure 1

Previously mentioned FDG avid right hilar lymph node has resolved in present scan. However another node in right lower para-tracheal region shows moderate reduction in size and tracer uptake in present scan. The residual node measures 0.9 x 1.4 cm (previously= 1.3 x 1.9 cm), (SUVmax= 2.8, previously= 9.2).

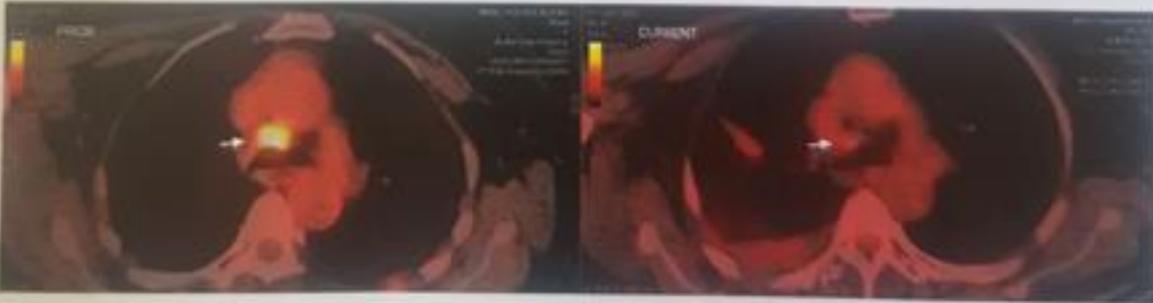


Figure 2

Musculoskeletal

Previously documented FDG avid lytic sclerotic lesion in head of right humerus shows significant reduction in tracer activity and increased sclerosis (SUVmax= 4.1, previously= 16.2); response to radiotherapy.



Figure 3

Multiple other FDG avid lytic lesions involving few bilateral ribs, dorso-lumbar vertebrae, sacrum, bilateral iliac bones, both ischium, pubic bone and right proximal femur show interval significant sclerotic changes. Tracer uptake among many of the lesions is remaining stable or has mildly increased. Maximum uptake noticed in left ala of sacrum (SUVmax= 14.8, previously= 14.1).

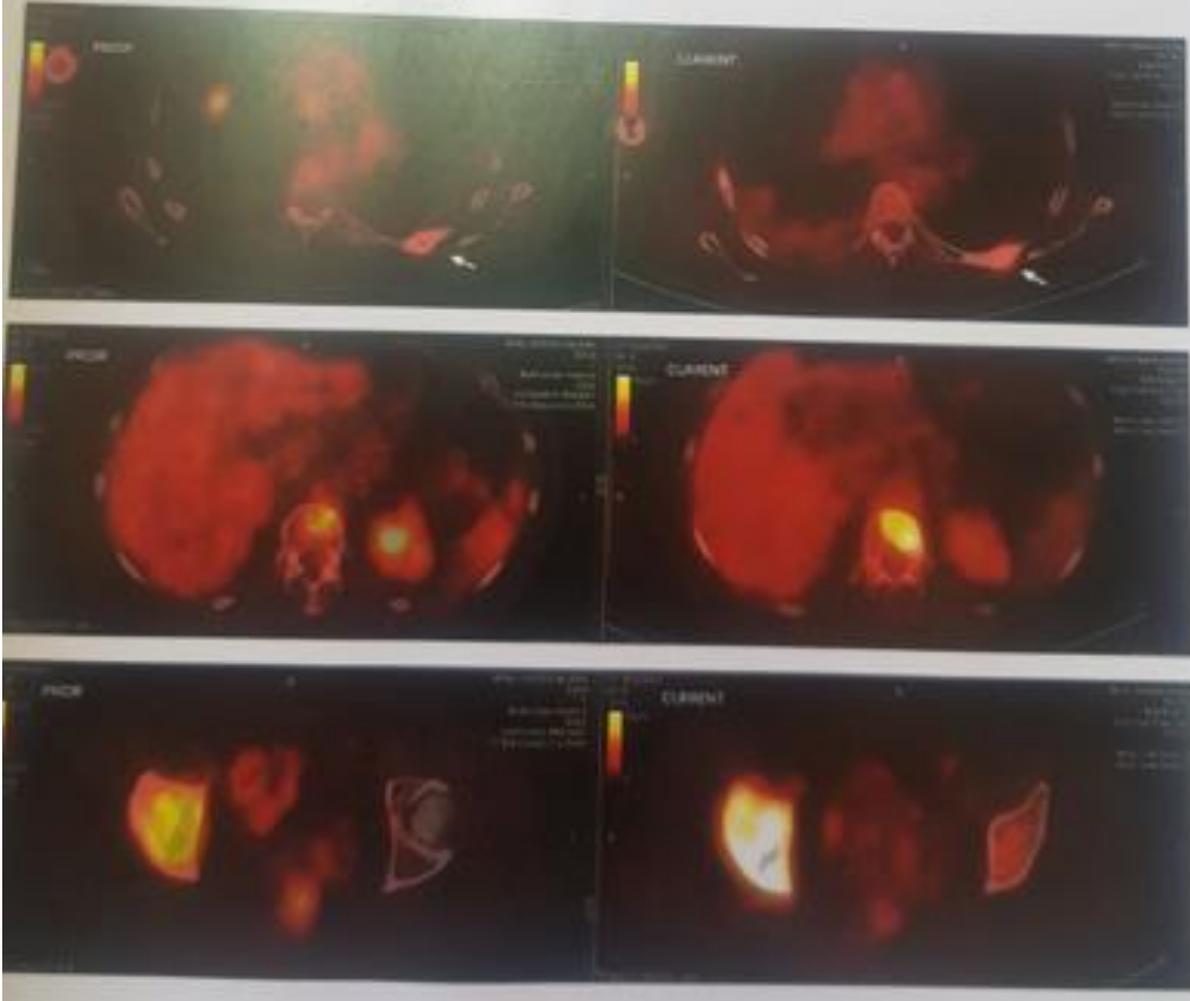


Figure 4

The patient is kept on alvopem maintenance

- **Pemetrexed (alimta , alvopam)**

In February 2004, the U.S. (FDA) approved pemetrexed for treatment of malignant pleural mesothelioma, a type of tumor of the mesothelium,, in combination with cisplatin for patients whose disease is either unresectable or who are not otherwise candidates for curative surgery.

- In September 2008, the FDA granted approval as a first-line treatment, in combination with cisplatin, against locally advanced and metastatic non-small cell lung cancer (NSCLC) in patients with non-squamous histology

- **Mechanism of action**

Pemetrexed is chemically similar to folic acid and is in the class of chemotherapy drugs called folate antimetabolites.

- It works by inhibiting three enzymes used in purine and pyrimidine synthesis—thymidylate synthase (TS), dihydrofolate reductase (DHFR), and glycinamide ribonucleotide formyltransferase (GARFT).

- By inhibiting the formation of precursor purine and pyrimidine nucleotides, pemetrexed prevents the formation of DNA and RNA, which are required for the growth and survival of both normal cells and cancer cells

- Patients are recommended to take folic acid and vitamin B12 supplement even if levels are normal when they are on pemetrexed therapy

- **Pemetrexed, whether used alone or in combination with cisplatin, has these side effects**

Low blood cell counts, as measured by a complete blood count. This is dose-limiting toxicity.

- Fatigue and sleepiness. Fatigue can be reduced through an off-label prescription of modafinil

- Nausea and vomiting. Pemetrexed's emetogenic effects are managed with prophylactic antiemetics.

- Diarrhea.

- Oral mucositis (mouth, throat, or lip sores). Oral ulcers can be mitigated by proper oral hygiene, including rinsing the mouth with salt water following consumption of food or drink.

- Loss of appetite.

- Skin rash. Physician-prescribed glucocorticoids administered on the day prior, day of, and a day after infusion typically avoid skin rashes.

- Constipation.

Conclusion

This is a known case of metastatic carcinoma right lung. Present comparative PET CT scan findings revealed

Interval is a significant reduction in size and metabolic activity of primary lesion in the upper lobe of the right lung.

Interval significant reduction in size, numbers and metabolic activity of metastatic mediastinal lymph nodes.

Interval appearance of right pleural effusion and few sub-pleural ground glass opacities -infective changes.

Interval overall sclerotic changes in multiple lytic metastases in the skeleton with variable changes in metabolic activity. Increase metabolism in the background of sclerotic changes in skeletal metastases indicate metabolic flare due to repair mechanism; signifies a favorable response

Interval resolution of the suspicious cortical lesion in the parietal lobe in the brain.

Interval regression of focal hyperactivity in the right lobe of thyroid with stable multinodular changes. The uptake in the thyroid gland likely represents chronic thyroiditis. Suggested TFT & USG neck correlation.

No other remarkable lesion in the remainder of the whole-body survey.

Overall pattern indicating favorable therapy response.

Close follow-up of the above-mentioned metastatic bony lesions is recommended.