

SIO Case Spotlight

PET/CT guided Ablation of liver CRC metastases

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Disclosures

- Constantinos Sofocleous: Consultant agreement and research support from Ethicon/Neuwave
- Achiude Bendet: None

Case

HISTORY OF PRESENT ILLNESS:

- 69 year old Female with history metastatic CRC with Pet positive recurrence in medial margin of prior hepatic wedge resection

PAST MEDICAL HISTORY:

- Obesity
- Obstructive sleep apnea- uses CPAP
- S/P DVT

PAST SURGICAL HISTORY:

- S/P RT hemicolectomy + LT lateral hepatectomy
- S/P Hepatic infusion pump insertion + removal
- S/P multiple wedge resection and ablation of liver metastases

FAMILY HISTORY:

- Mother- Colon Cancer

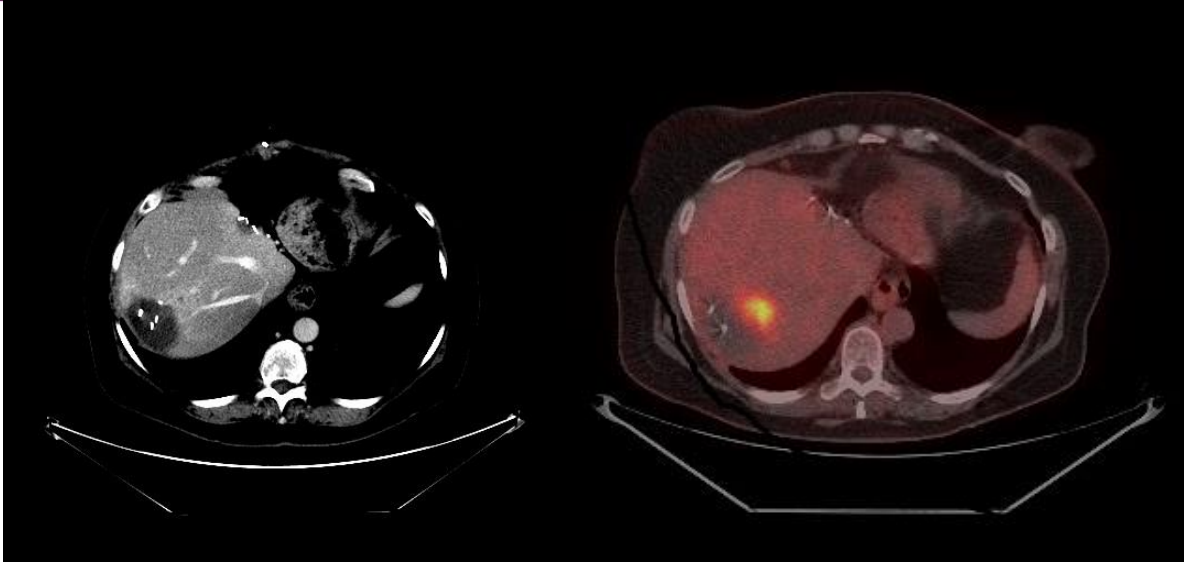
SOCIAL HISTORY:

- Former smoker

Physical Exam & Labs

- T 36.4 BP: 112/72, Pulse: 80bpm, RR: 16, SpO2: 97%
- Gen: No acute distress
- Cardiac: Regular rate and rhythm
- Lungs: Clear to auscultation bilaterally
- Abdomen: Soft, non tender, no hepatosplenomegaly, no ascites
- ECOG: 0
- Pertinent Labs : Normal liver enzymes, T bili 0.6, PLT 172, INR 1.06, CEA 22.7

Imaging

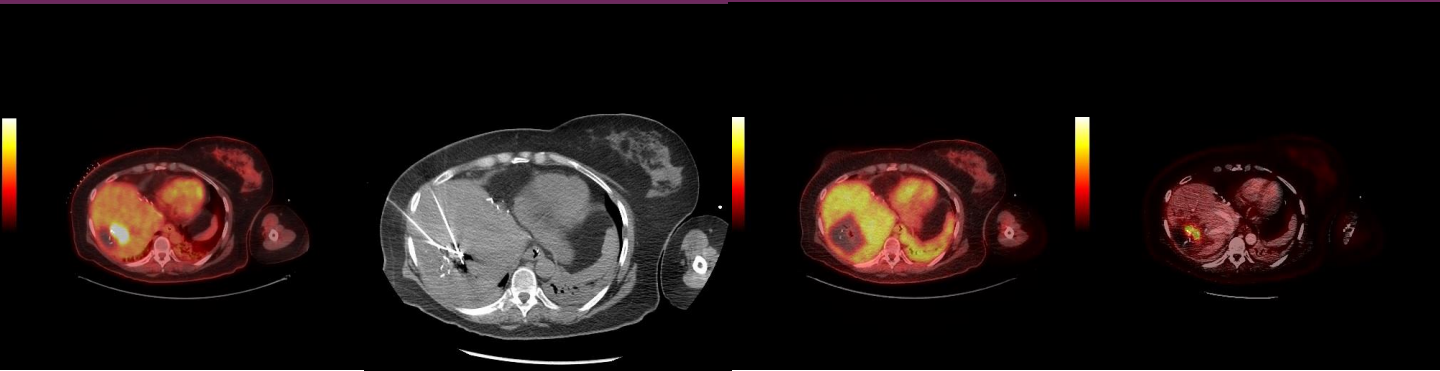


- CECT shows prior resections in the liver with no evident new lesion
- PET/CT show a few FDG avid lesions, mainly in the medial margin of the prior resection

Clinical Discussion

- Newly FDG avid liver metastases not shown on CT or MRI
- Multiple hepatic resections- patient not candidate to further surgery.
- Patient was referred to PET guided liver ablation

Procedure- Embolization

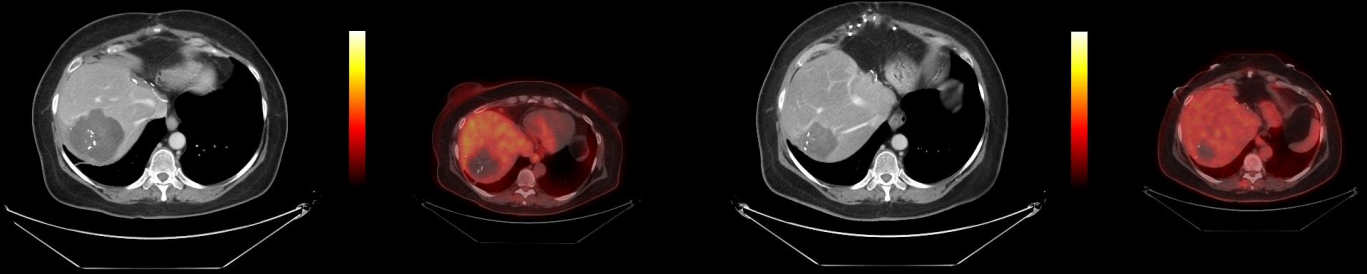


- Split dose of 4.4 mCi 1 hour prior to procedure and 8.6 mCi post ablation of F-18 FDG
- Prior to ablation is seen the known FDG avid lesion
- Ablation done using 2 Neuwave MW electrodes at 65W for total of 26 minutes (3 locations)
- Post ablation PET/CT shows no FDG uptake
- Fusion of pre ablation PET/CT and post ablation CT shows good ablation margins around the lesion

Immediate Course

- There were no immediate complications and the patient was discharged on the same day
- 1 episode of fever and chills 2 days after ablation- treated with ABX

Follow-up Imaging



- First 6 weeks follow up show 7cm ablated area with no FDG uptake on PET/CT
- Last follow up 18 month after treatment show 4.5cm ablated area with no evidence for recurrence

Discussion

- ❑ PET/CT guidance offers a few advantages over other imaging modalities
- ❑ It can detect US, CT and MRI occult lesions
- ❑ It offers immediate imaging biomarker for treatment success
- ❑ Another option for occult lesions is fusion of different imaging modalities
- ❑ Disadvantages include higher radiation exposure and costs

*Cornelis et *al.* Journal of nuclear Medicine, July 2016