

# Case 2: Selection of Therapy in Well-Differentiated, G<sub>3</sub> Pancreatic NET

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## Moderator Question 1

Do you treat well-differentiated G<sub>3</sub> NETs differently than poorly-differentiated G<sub>3</sub> NECs?

- A) Yes
- B) No

## Clinical Course

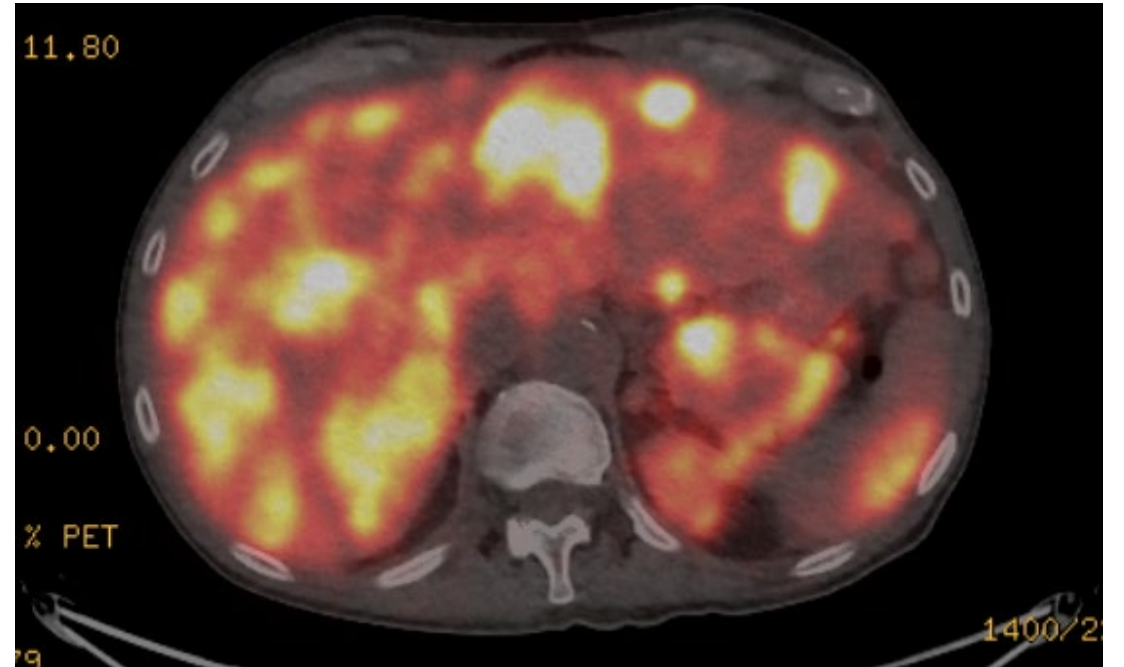
- 74 yo man presented with 12-14 lb weight loss and abdominal pain.
- CT CAP: pancreatic tail mass 7.1 x 4.9 x 5.9 cm with diffuse metastases in the liver, metastatic mesenteric and retroperitoneal involvement, periportal/peripancreatic adenopathy, ascites.
- Liver biopsy show a well-differentiated, grade 3 NET
- Chromogranin A elevated at 420 (<15 ng/ml)

## Clinical Course

Pathologic Feature	Biopsy Results
Morphology	Well Differentiated
Grade	3
Stains	+ synaptophysin, + chromogranin
Pancreatic Mitotic Index	0/10 HPF
Pancreatic Ki67	28%
Liver Mitotic Index	2/10 HPF
Liver Ki67	34%



Contrast CT A/P at diagnosis



$^{68}\text{Ga}$ -DOTATATE PETCT at diagnosis

# Clinical Course

## Past Medical History

- BCC
- BPH

## Medications

- Multivitamin
- Pantoprazole
- Tamsulosin

## Family History

- Mother: ovarian cancer
- Sister: breast cancer
- Maternal grandmother: pancreatic adenocarcinoma
- Ambry Genetics germline testing with no pathogenetic variants for patient

Audience  
Response  
Question 1

Which of the following is the best 1<sup>st</sup> line treatment option?

- A) Platinum / etoposide
- B) Temozolomide / Capecitabine
- C) Everolimus
- D) <sup>177</sup>Lu-Dotatate (PRRT)
- E) Immunotherapy

Audience  
Response  
Question 1

Which of the following is the best 1<sup>st</sup> line treatment option?

- A) **Platinum / etoposide**
- B) Temozolomide / Capecitabine
- C) Everolimus
- D) <sup>177</sup>Lu-Dotatate (PRRT)
- E) Immunotherapy



## Clinical Course

- The patient received carboplatin/etoposide as 1st line therapy. Imaging initially showed tumor shrinkage.
- However, after 8 cycles, the patient developed increasing fatigue, imaging showed a mixed response and chromogranin rose from 3910 to 6232 in one month.

Audience  
Response  
Question 2

Which of the following is the best 2<sup>nd</sup> line treatment option?

- A) Add immunotherapy to platinum/etoposide
- B) Temozolomide / Capecitabine
- C) Everolimus
- D) <sup>177</sup>Lu-Dotatate (PRRT)
- E) Single agent immunotherapy

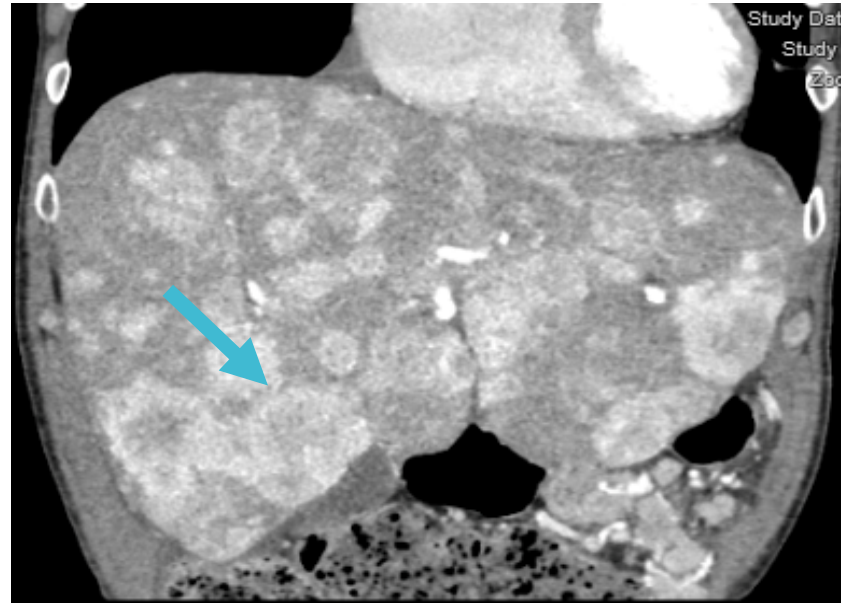
Audience  
Response  
Question 2

Which of the following is the best 2<sup>nd</sup> line treatment option?

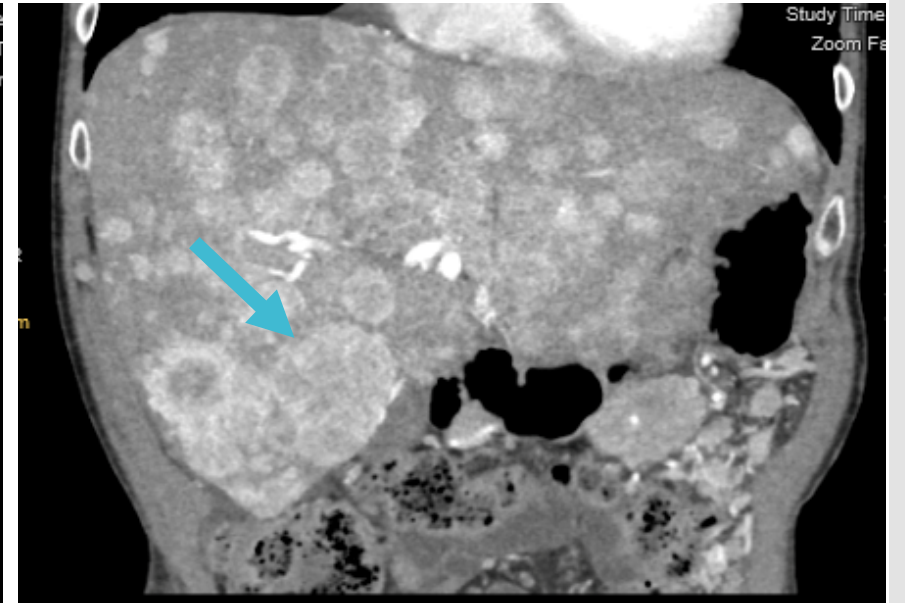
- A) Add immunotherapy to platinum/etoposide
- B) Temozolomide / Capecitabine**
- C) Everolimus
- D) <sup>177</sup>Lu-Dotatate (PRRT)
- E) Single agent immunotherapy

## Clinical Course

- As a 2<sup>nd</sup> line treatment, the patient received temozolomide/capecitabine.
- Imaging showed hepatic progression after 3 mo.



Contrast CT A/P before Tem /Cape



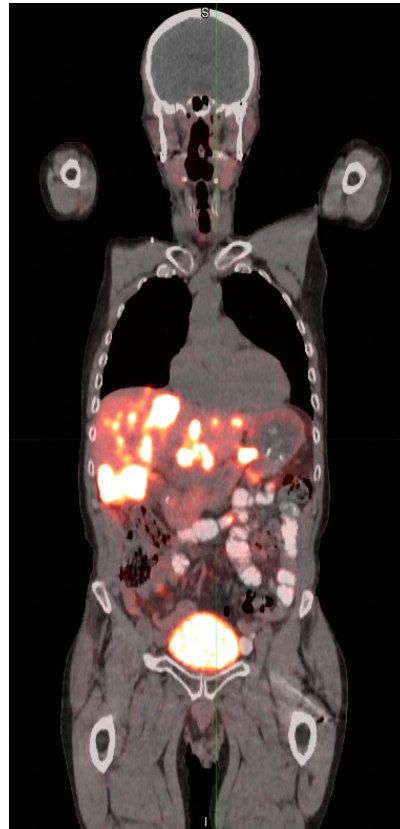
Contrast CT A/P after 3 mos Tem /Cape

## Clinical Course

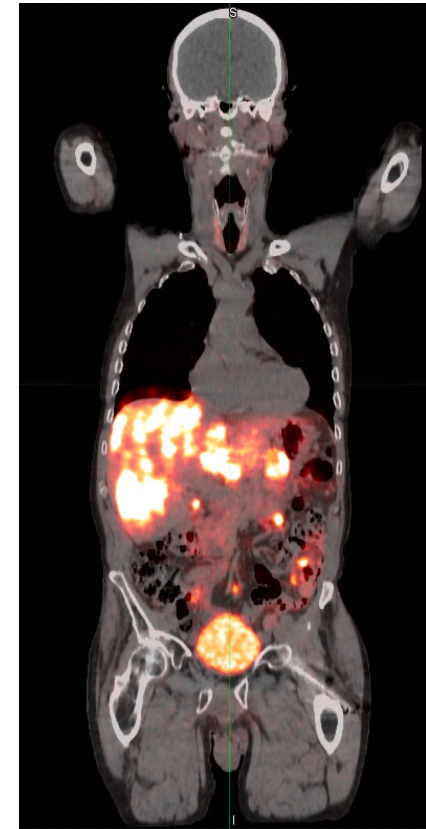
- The NET Tumor Board recommended systemic treatment. Liver disease burden was too high for successful chemoembolization.
- As 3<sup>rd</sup> line treatment the patient received capecitabine/oxaliplatin.
- Imaging initially showed excellent tumor shrinkage. After 11 cycles, imaging showed progression in liver and peritoneum.
- As 4<sup>th</sup>-line treatment the patient received <sup>177</sup>Lu Dotatate.

# Clinical Course

- After 2 cycles a  $^{68}\text{Ga}$  DOTATATE PET showed new liver and peritoneal metastases and increased size of the pancreatic mass.



DOTATATE PET before  $^{177}\text{Lu}$  Dotatate



DOTATATE PET after 2 cycles  $^{177}\text{Lu}$  Dotatate

## Clinical Course

- The patient was asymptomatic and this was interpreted as possible pseudo-progression.
- $^{177}\text{Lu}$  Dotatate was resumed and early interval imaging was scheduled.
- 1 month after treatment #3 a CT Abdomen showed increasing size of the pancreatic mass and hepatic/peritoneal metastatic disease. PR
- As 5<sup>th</sup> line treatment carboplatin/etoposide was re-started.

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- A) **Yes**
- B) No