

## Session II

## A Case of Metastatic Pancreatic Neuroendocrine Tumor Effectively Treated with Sunitinib

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### 1. Case presentation

49세 여자가 건강 검진상 시행한 초음파에서 우연히 발견된 간 종괴로 타원 경유하여 내원하였다. 과거력 및 계통적 문진, 신체 검진, 혈액 및 종양 표지자 검사에서 특이 소견은 없었다. 타원에서 시행한 영상 검진(CT, MRI) 및 조직 검사(liver biopsy) 확인 결과 간 전이가 동반된 췌장 미부의 신경내분비종양을 진단할 수 있었다. (Pancreas tail NET Gr2, M/liver)

### 2. Diagnosis

간 전이를 동반한 췌장신경내분비 종양(Pancreas tail NET Gr2, M/liver)

### 3. Therapy and Clinical course

본원 평가 이후 sunitinib 경구 투여 요법을 결정하고 2017년 1월 25일부터 투약을 시행하였다. 그리고 간전이 병변에 대하여는 2017년 2월 7일 간동맥 화학색전술 1차례 시행하고 이후 경과 관찰을 하였다. 2017년 4월 7일 시행한 복부 전산화단층촬영에서 췌장 미부와 간 전이의 크기 감소 소견이 확인되었고, 이에 sunitinib 경구 투여 요법을 휴지기 없이 투약 유지하였다. 이후 sunitinib 투약 효과에 의하여 간과 췌장 미부의 병변의 크기는 지속적으로 감소함을 확인 할 수 있었고, 이에 수술적 치료를 결정할 수 있게 되었다. 먼저 간 전이 병변에 대하여는 고주파 열치료 3차례 시행하였고('18.8.21/'18.8.22/'18.9.6), 이어서 췌장 미부의 병변의 경우 췌장 미부 및 비장 절제술을 시행하였다.('18.10.12) 수술 검체의 병리 소견상에서 grade 2 neuroendocrine tumor 소견을 확인할 수 있었다. - 이후 환자는 현재까지 재발 없이 외래에서 sunitinib 유지하면서 추적 관찰 중이다.

### 4. Conclusion

본 증례는 간전이가 있는 전이성 췌장내분비(NET Gr2) 종양의 경우, sunitinib 약제 유지와 동반한 국소 치료가 효과적인 치료 전략이 될 수 있음을 증례로서 보고하는 바이다.

**Key words:** 췌장내분비종양, Sunitinib

## Case presentation

- **F/49 (카자흐스탄 국적)**
- **CC:** Liver mass on imaging test
- **Present illness:**
  - 카자흐스탄 거주.
  - 2017년 1월 건강검진상 시행한 초음파에서 우연히 발견된 다발성 간종괴를 주소로 타원 경유하여 평가 및 진단 이후에 2<sup>nd</sup> opinion 구하기 위하여 본원 내원함.

(타원에서 CT 및 MRI 영상 평가 및 liver biopsy시행을 하였으며 췌장 미부의 신경내분비종양과 동반된 간 전이 소견을 진단한 상태로 내원함. - pancreas tail NET Gr 2, M/liver)

## Case presentation

- **Past medical history**
  - DM/HTN/Tbc/CLD(-/-/-/-)
  - Medication hx(-)
  - Op Hx(-)
- **Social history**
  - Smoking/Alcohol (-/-)
- **Family medical history**
  - None
- **Review of systems**
  - No specific findings
- **Physical examination**
  - No specific findings

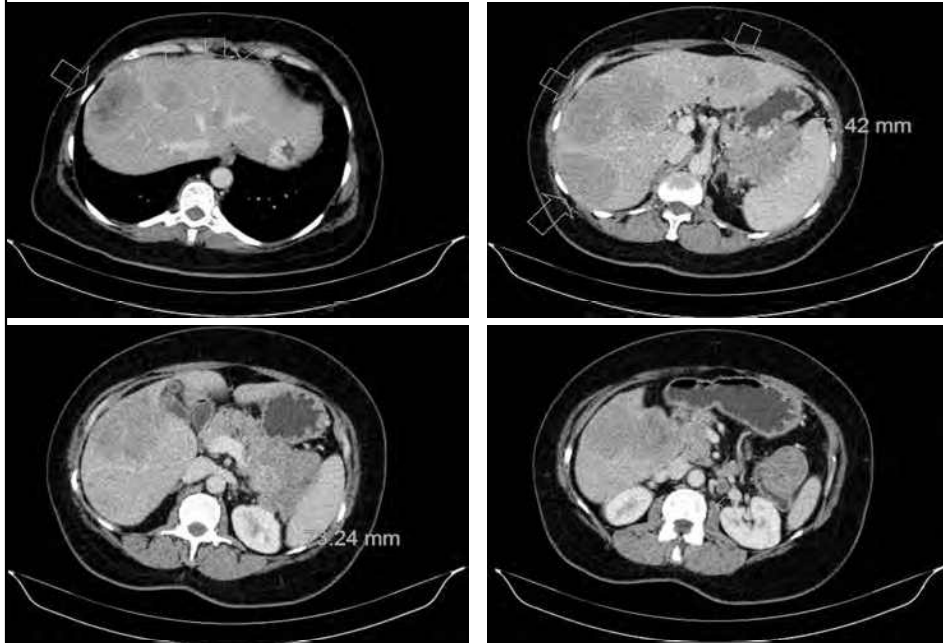


### Laboratory findings

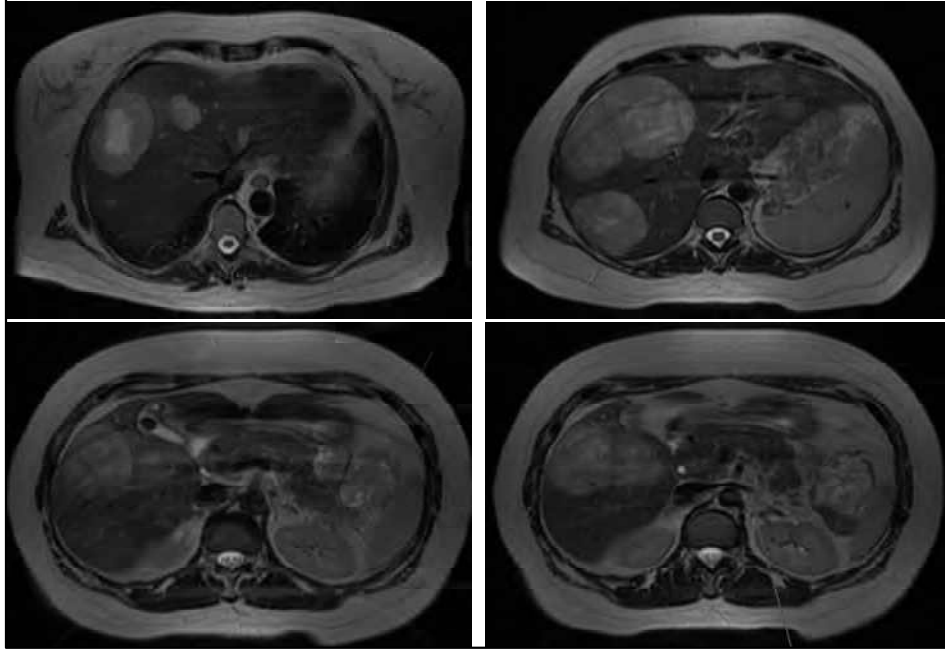
- CBC WBC 6,720/uL - Hb 13.9 g/dL - Plt 349,000/uL
- Tbil 0.5 mg/dL
- ALP 132 IU/L, GGT 196 IU/L
- AST/ALT 31/48 IU/L
- Prot/Alb 7.5/4.6 g/dL
- HBsAg(-), anti-HCV(-)
- AFP 6.6 mg/mL, CA 19-9 24.7 U/mL, CEA 1.2 ng/mL



### o/s AP CT (2017-01-14)



**o/s Abdomen MRI (2017-01-14)**



**o/s pathology  
– medical record & exam review**

o/s pathology (liver biopsy) => NET Gr 2. Well differentiated

o/s medical record => asymptomatic

o/s laboratory => W.N.L (except GGT)

o/s mamography =>W.N.L

o/s EGD, CFS => PHG, W.N.L (colon)

: 본원에서 repeat exam



## Initial Assessment and Plan

- **Initial assessment**

metastatic pancreatic neuroendocrine tumor (pancreas tail NET Gr 2,  
M/liver)

- **Initial plan**

Systemic therapy => sunitinib

Local therapy => TACE



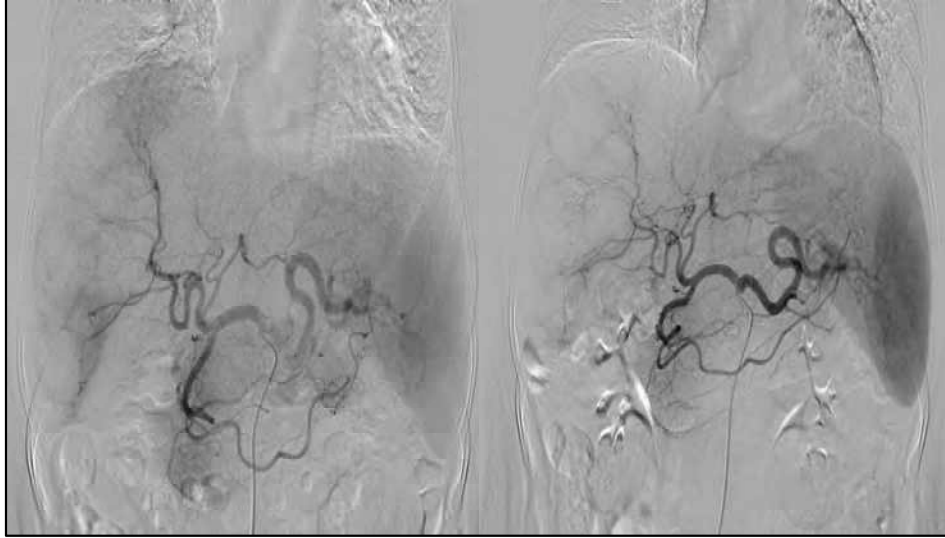
## Treatment course (overall)

- **2017.01.25 suten (sunitinib) 37.5 mg start ~**
- 2017.02.07 TACE #1
- 2017.04.07 hepatic angiography (TACE hold d/t hypovascularity)
- On suten medication
  - ➔ [2017.04.07 Liver CT] Interval decrease of pancreas tail NET with liver metastasis.
  - ➔ [2018.01.18 o/s AP CT] decrease hepatic metastasis. Pancreatic tail mass equivocally change.
  - ➔ [2018.05.16 o/s AP CT] Equivocally change.
  - ➔ [2018.08.14 FDG PET] Hypermetabolic mass in pancreatic tail, Multifocal hypermetabolic lesions in the liver
- 2018.08.20 RFA#1 (S3)
- 2018.08.21 RFA#2 (S8, -main S6, S5)
- 2018.09.06 RFA#3 (f/u CT check => S2, S4, S8)
  - ➔ [2018.10.11 PB CT] Stable RFA defects in both hemilivers, No evidence of distant metastasis
- equivocal change of about 4.3 cm pancreatic tail mass  
(➔ 2018.10.12 operation : distal pancreatectomy & splenectomy )
  - ➔ [2018.11.27 PB CT] equivocal change of about 4.3 cm pancreatic tail mass (➔ operation)

### Treatment course (TACE)

angiography (2017-02-07) => TACE

angiography (2017-04-07)



### Treatment course (체장병변)

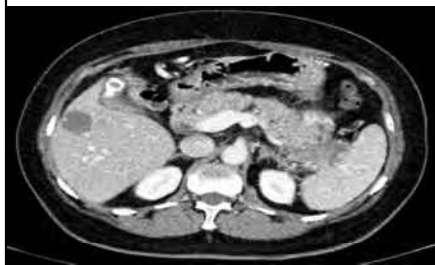
o/s abdomen CT (17-01-14)  
=> pancreatic tail mass 73 mm



Liver CT (17-04-07)  
=> pancreatic tail mass 50 mm



o/s abdomen CT (18-01-18)  
=> pancreatic tail mass 44 mm

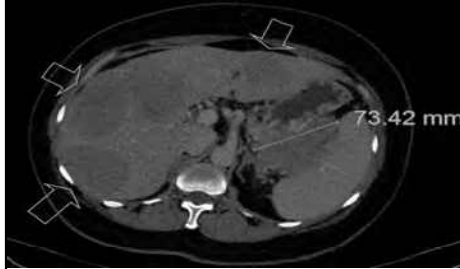


o/s abdomen CT (18-05-16)  
=> pancreatic tail mass 44 mm

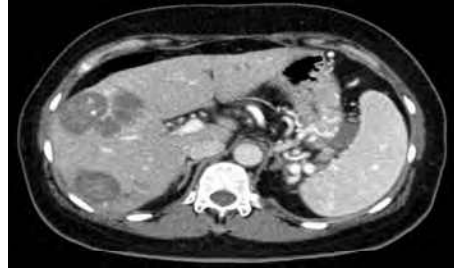


## Treatment course (간전이병변)

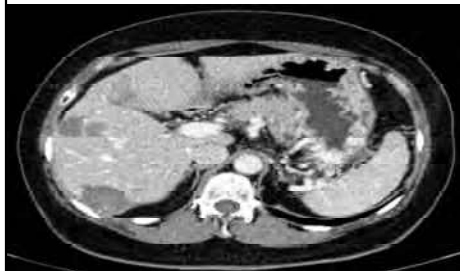
o/s abdomen CT (17-01-14)



Liver CT (17-04-07)  
=> interval decrease liver metastasis



o/s abdomen CT (18-01-18)  
=> partial response



o/s abdomen CT (18-05-16)  
=> equivocal change



## Assessment and Plan

- **Assessment**

- pancreatic neuroendocrine tumor M/liver
- : Sunitinib => partial response
- : NET Gr 2. well differentiated

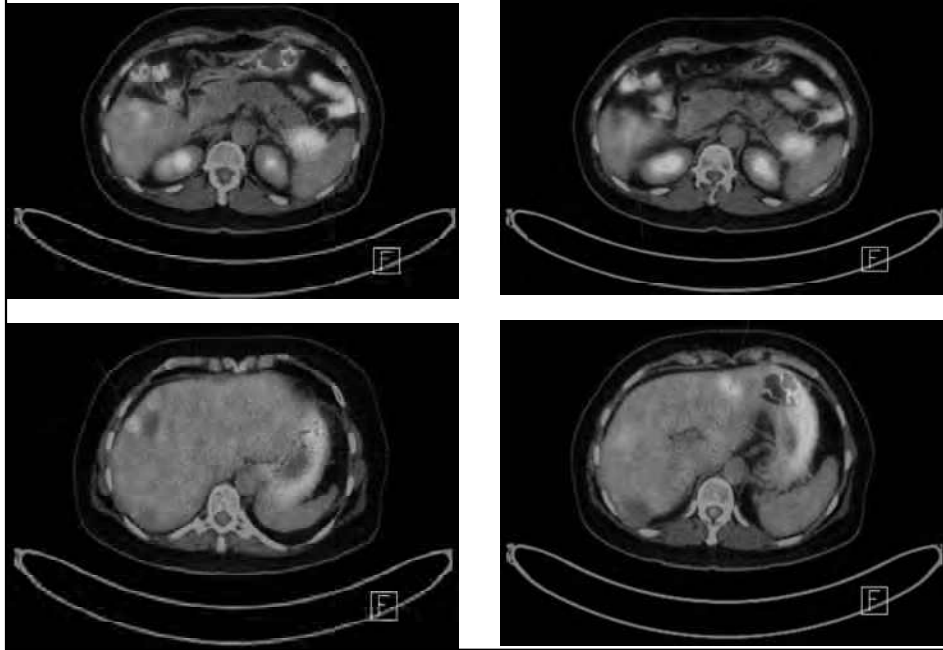
- **Plan**

Palliative therapy => curative therapy



- Residual liver metastasis => RFA.
- Pancreatic tail mass => operation.

### PET-CT (2018-08-14)

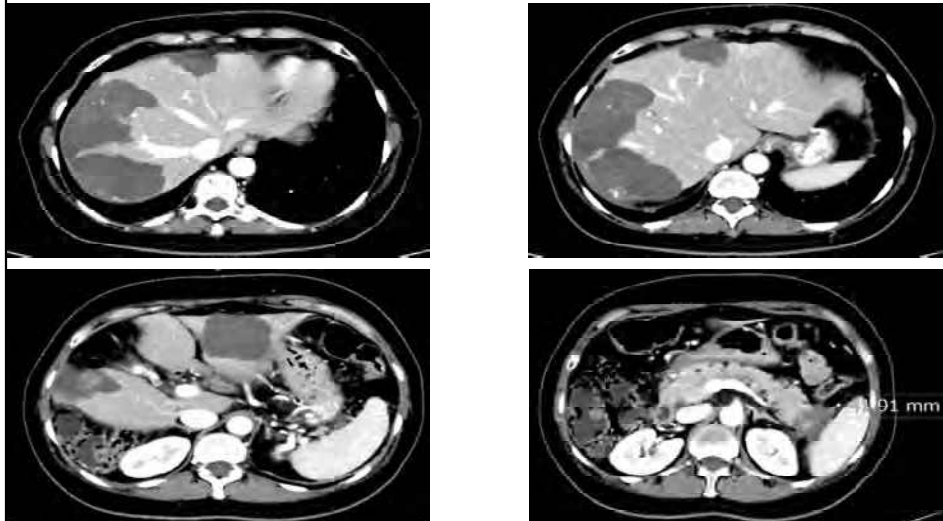


### Course during RFA

- [2018-08-21 Liver CT]
  - Successful RF ablation of presumed metastases at S3 without procedure related complication.
- [2018-08-22 Liver CT]
  - Successful RF ablation of presumed metastases at S8, S5, and S6 without procedure related complication.
- [2018-09-06 Liver CT]
  - f/u CT check => Remaining hepatic metastases in liver
  - Successful RFA was done at S4-8, S4 and S2 of liver.

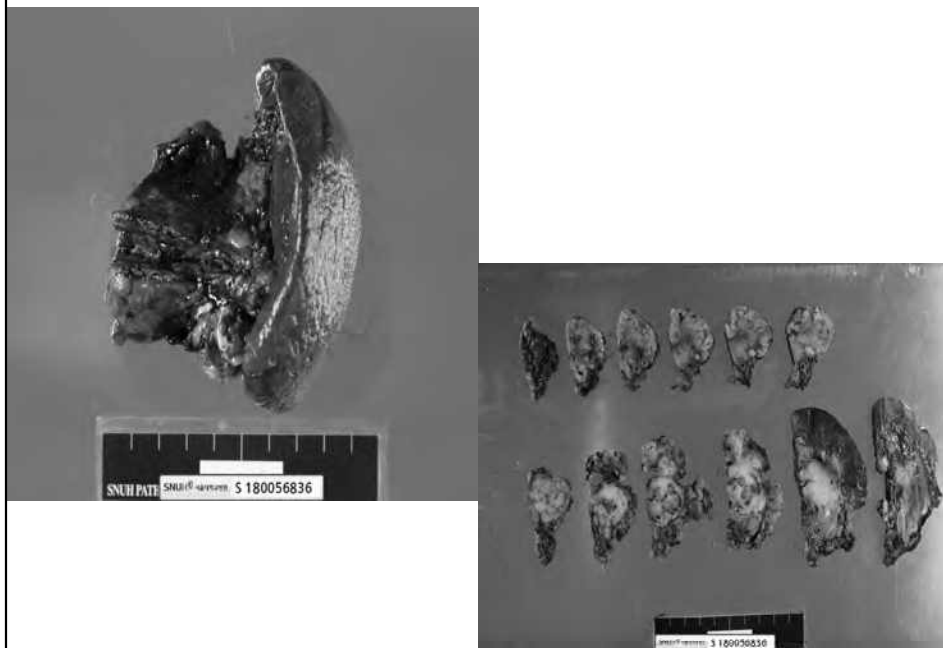


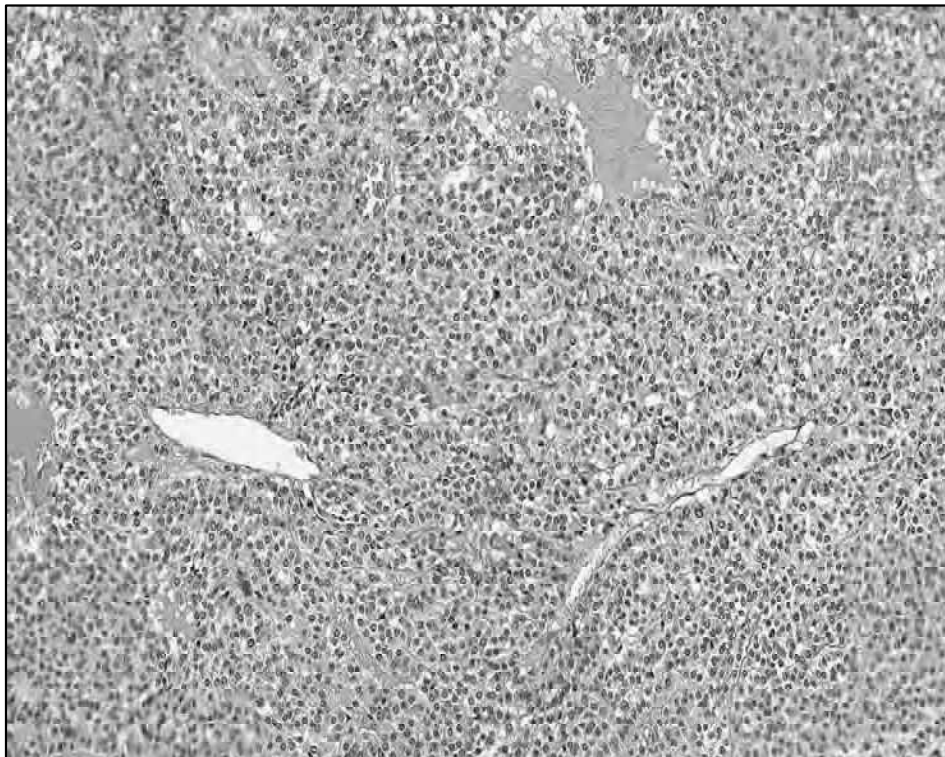
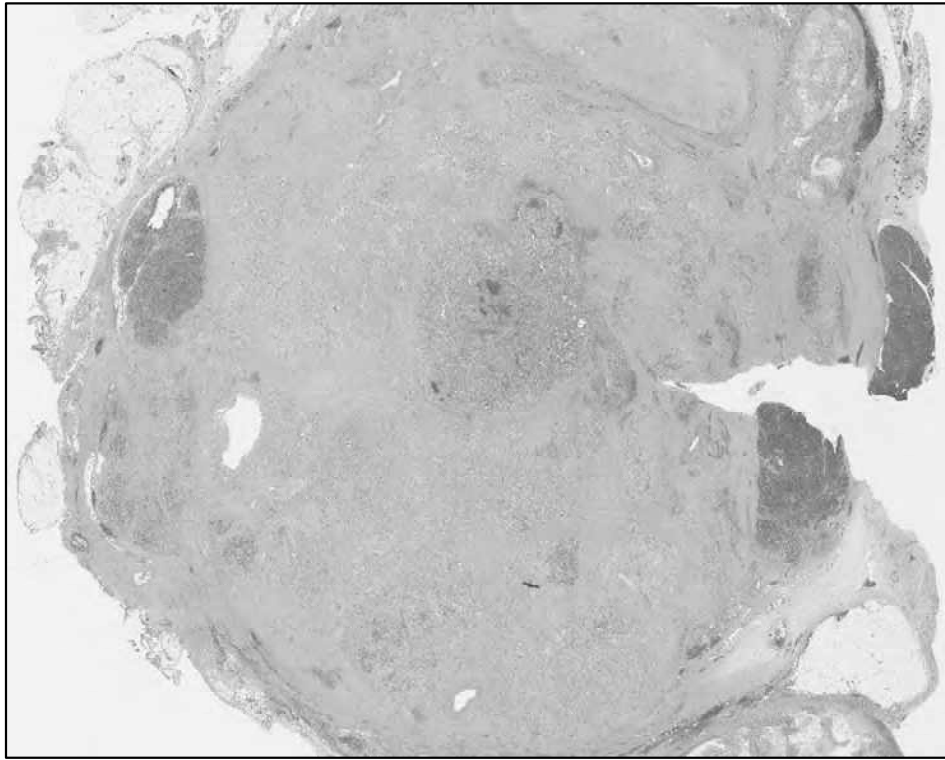
### PBCT [2018-10-11]

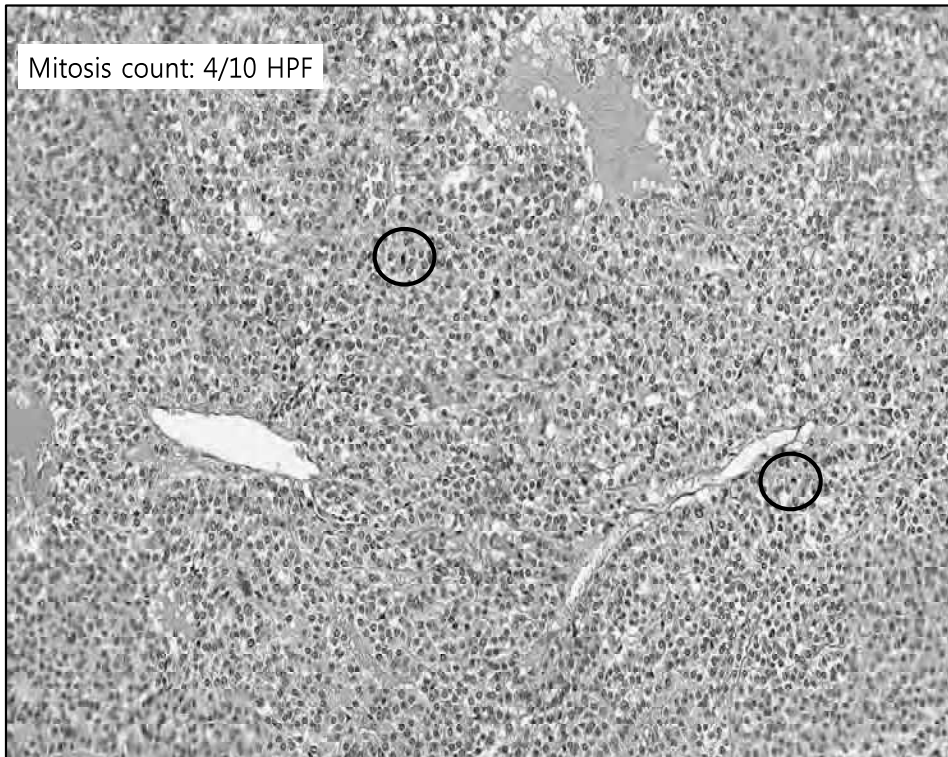
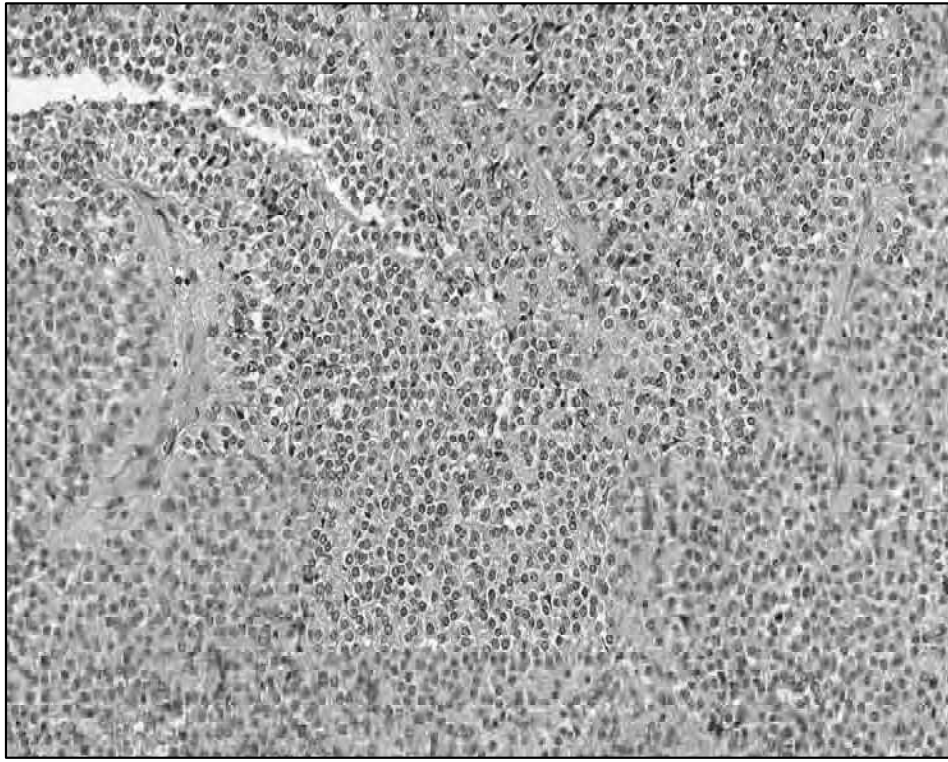


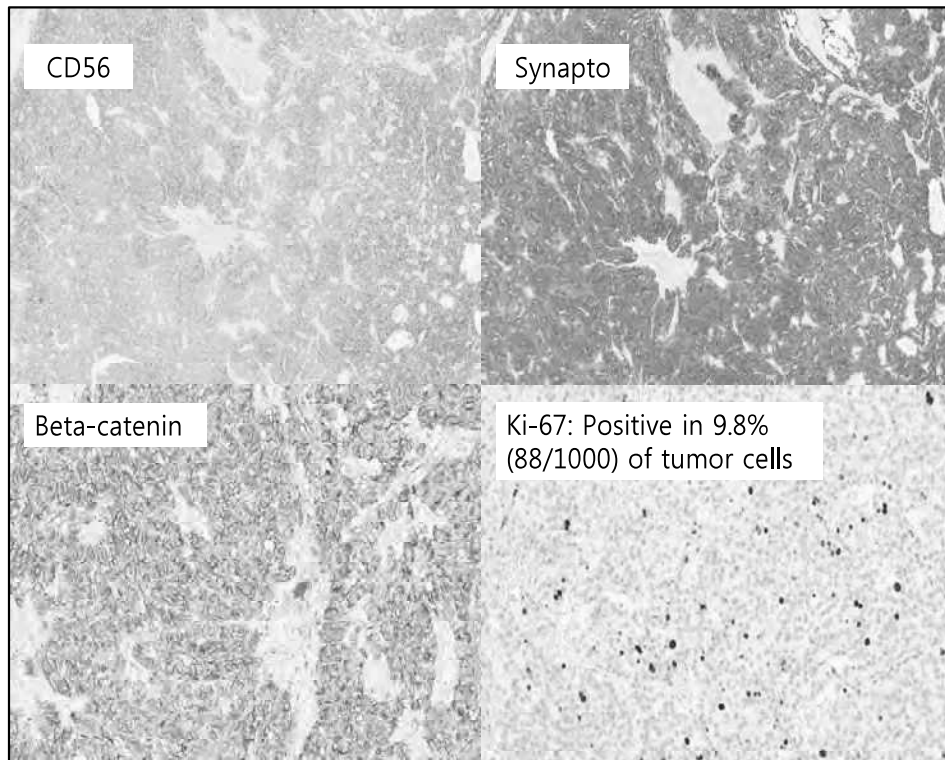
- Stable RFA defects in both hemilivers
- No evidence of distant metastasis

### Pancreatectomy & splenectomy (2018-10-12)







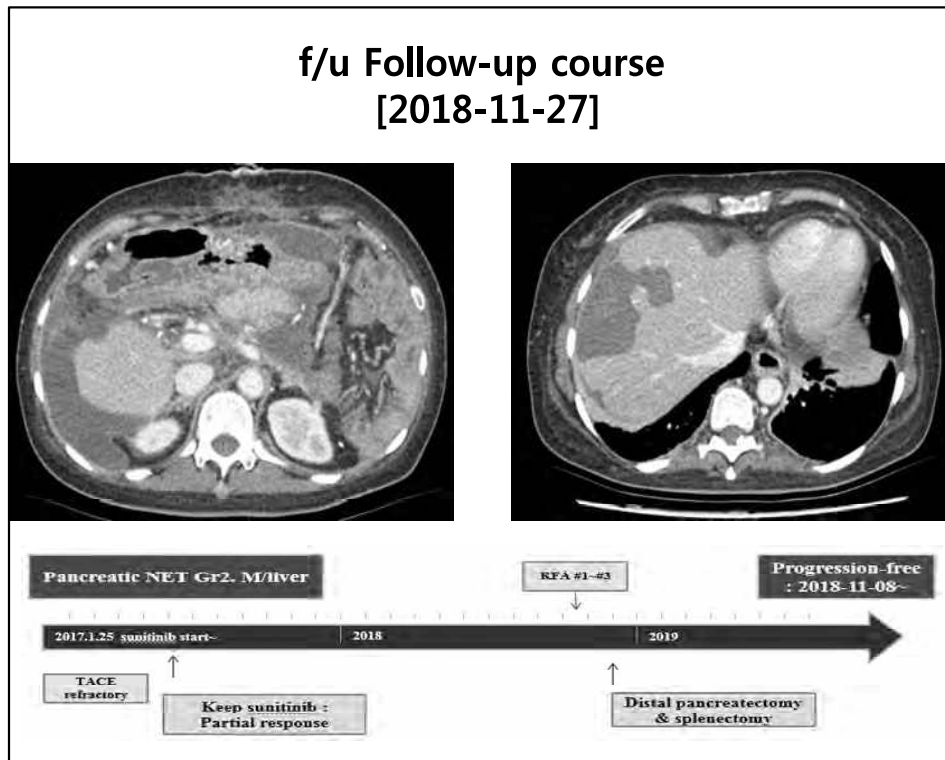


Pancreas and spleen, distal pancreatectomy and splenectomy:

**NEUROENDOCRINE TUMOR, grade 2**

- Post-neoadjuvant chemotherapy status
- Tumor regression grade: CAP grade 3, poor or no response (extensive residual cancer)
- Gross type: nodular
- Location of tumor: tail
- Size of tumor: 4.5x3.6x3.5cm
- Depth of invasion:
  - pancreas: invasion beyond pancreas
  - spleen: invasion of parenchyma [15]
  - large vessel : no invasion
- Pathologic staging of primary tumor (AJCC 8<sup>th</sup> ed.): pancreas, neuroendocrine
- **ypT4: tumor invading adjacent organs or the wall of large vessels**
- Surgical margin: Free from tumor
  - safety margin : pancreas parenchymal, 1.5cm; pancreas anterior, 0.1 cm; pancreas posterior, 0.05cm;
- **Lymph node: metastasis in 3 out of 13 lymph nodes (ypN1)**
  - peritumoral 2/2; peripancreatic 1/3; LN #8 0/1; LN #9 0/2; splenic artery' 0/5;
- Lymphatic invasion: not identified
- Venous invasion: present [5]
- Perineural invasion: present
- Tumor border: infiltrative
- Stromal reaction: desmoplasia
- Pancreatic intraepithelial neoplasm (PanIN): present, grade 1a [2]
- Mitosis count: 4/10 HPF
- Necrosis: 20%

- Well differentiated neuroendocrine tumor WHO grade 1: < 2 mitoses/10 HPF or Ki67 index < 3%
- **Well differentiated neuroendocrine tumor WHO grade 2: 2 - 20 mitoses/10 HPF or Ki67 index 3 - 20%**
- Well differentiated neuroendocrine tumor WHO grade 3: > 20 mitoses/10 HPF or Ki67 > 20%
- Poorly differentiated neuroendocrine carcinoma WHO grade 3: > 20 mitoses/10 HPF or Ki67 > 20%



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