Male, 60 years
Alcoholic cirrhosis.
Preserved liver function. Child-Pugh A 5 points)
Performance status 0.
Biopsy proven HCC.
AFP 155ng/dL

Multifocal, bilobar disease.
No extrahepatic spread.
No vascular invasion.

BCLC stage B: Not candidate for chemoembolization
Considered for sorafenib: “Treatment stage migration”
Sorafenib started at full dose (800 mg/day).
HFSR grade 2 at day 28.
Dose reduction and returned to full dose.

• Stable disease as x RECIST 1.1 for 8 months.

Month 8.
  Growth of nodules.
  Appearance of vascular invasion.
  No liver function impairment.

Regorafenib started at full dose (160 mg/day) after > 2 weeks washout
HFSR grade 2 at day 20. Dose reduction.
Not able to escalate to full dose.
Stable disease as x RECIST 1.1 for 4 months.

Month 6.
New intrahepatic nodule.
10 mm diameter.
Arterial contrast enhancement at CT. No washout.
No liver function/PS impairment.

Is it progression?
Should treatment be interrupted?
Definitions of disease progression in HCC

**RECIST 1.1**
- New nodule
- Any size
- Irrespective of Dynamic pattern

**BCLC SHARP RECIST**
- New nodule
  - > 10 mm
- Arterial uptake

**Modified-RECIST**
- New nodule
  - > 10 mm
- Arterial uptake
- Venous washout

Early registration | Clinical practice | Late confirmation
Stable disease as x RECIST 1.1 for 4 months.

Month 6.
New intrahepatic nodule.
10 mm diameter.
Arterial contrast enhancement at CT. No washout.
No liver function/PS impairment. AFP 385 ng/dL

Is it progression?

Should treatment be interrupted?

Importance of pattern of progression and 3rd line feasibility?
CASE STUDY HCC

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Bayer
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Man, 67 yrs

Medical history:
- *Metabolic syndrome (AHT, obesity, diabetes)*
- 2006: *aortic valve replacement*

Problem 11/2014: intraperitoneal bleeding
- 6 cm lesion left liver lobe (*cirrhosis*); no varices; *Child-Pugh A*; no metastases
- *urgent left hemi-hepatectomy*: HCC, 6,5 x 3,2 x 2,4 cm; R0-resection
Man, 68 yrs

Follow-up:

- 8/2015: new liver lesion (segment 6) and 4 peritoneal nodules, normal AFP
- 9/2015: Sorafenib, tolerance: HFSR grade 1, hypertension grade 1
- 12/2015: intraperitoneal bleeding; splenectomy; stable disease
- 2/2016: Restart sorafenib
- 10/2016: Progression of existing lesions (liver, peritoneum), ECOG 1
Man, 69 yrs: progression after 1 year Sorafenib
Man, 69 yrs: progression after 1 year Sorafenib

Pembrolizumab 200 mg IV q3w
Peritoneal metastases of HCC under Pembrolizumab
HCC under Pembrolizumab

11/2016 Arterial

2.38 cm

01/2017 Arterial

3.67 cm

iRECIST

iUPD
HCC under Pembrolizumab

Arterial B600 DWI
ADC = 0.00083

Arterial B600 DWI
ADC = 0.00101

iRECIST iUPD iUPD

DWI PR

B600 DWI
ADC = 0.00083

B600 DWI
ADC = 0.00101
Man, 72 yrs: 6 months without immunotherapy

20/05/2019 – no evidence of disease