

# ESMO SUMMIT RUSSIA 2019

Case report:

*BRCA*-associated pancreatic cancer

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# CONFLICT OF INTEREST DISCLOSURE



No conflicts of interest to declare.



# ANAMNESIS

Patient F., 40 years old, female

## Complaints:

- ◆ October 2015 – abdominal pain, diagnosis of acute pancreatitis.
- ◆ January 2016 – chronic pain in the upper right abdomen.

## Examination:

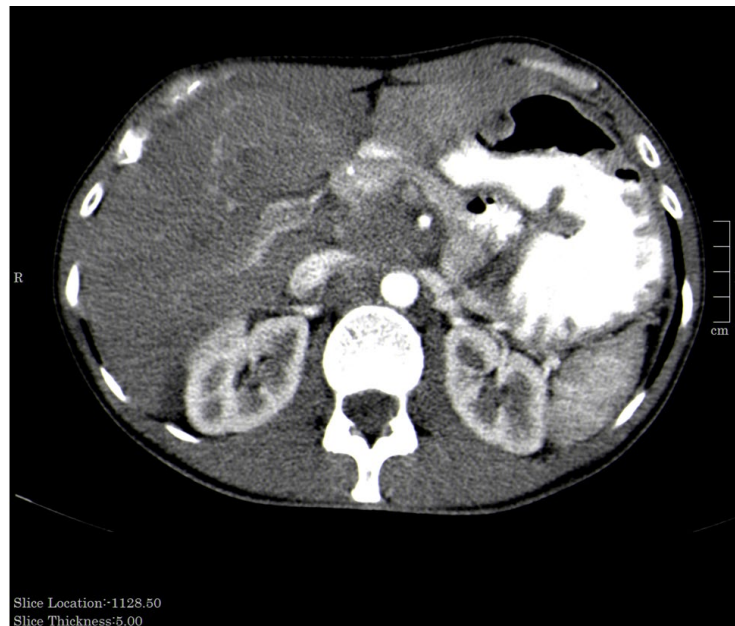
**26.01.16 MRI (regional hospital):** tumor of the uncinate process of the pancreas 2.7x3.3x3.9 cm with partial encasement of the superior mesenteric artery (SMA), next to the common hepatic artery (CHA) and the celiac axis (CA). There are no distant metastases.

**Diagnosis:** Uncinate process tumor.

# ANAMNESIS

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**29.01.2016 CT scan:** lesion 3.3x2.8 cm in the uncinata process of the pancreas is intimately adjacent to the posterior semicircle of the superior mesenteric vein (SMV). Tumor infiltration of SMA.

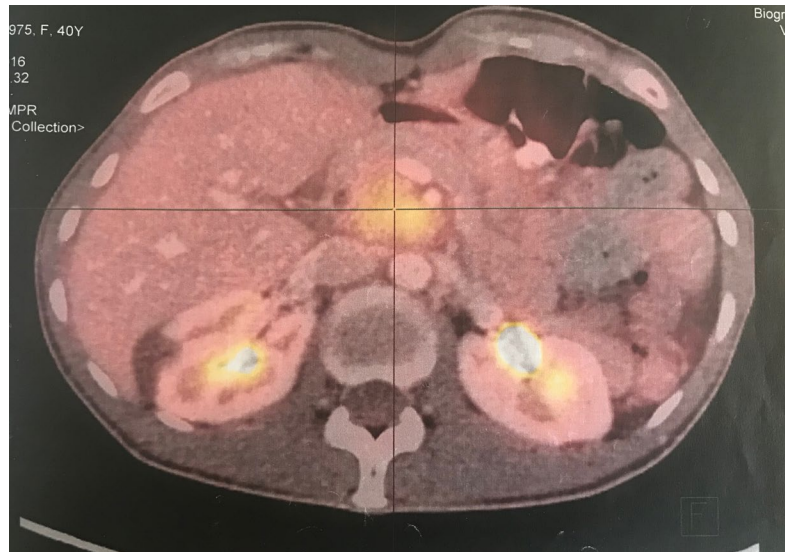


03.02.16 Cytologic examination – adenocarcinoma.

# ANAMNESIS

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**04.02.16 PET/CT:** focus of pathological accumulation of  $^{18}\text{F}$ -FDG 3.2x2.7x3.8 cm in the uncinata process of the pancreas with SUV(max) 8.66. Lesion is closely adjacent to the posterior semicircle of SMV and narrows lumen of the portal vein. There are no metastases.



**Diagnosis:** Pancreatic cancer. T4N0M0 III stage



# ANAMNESIS

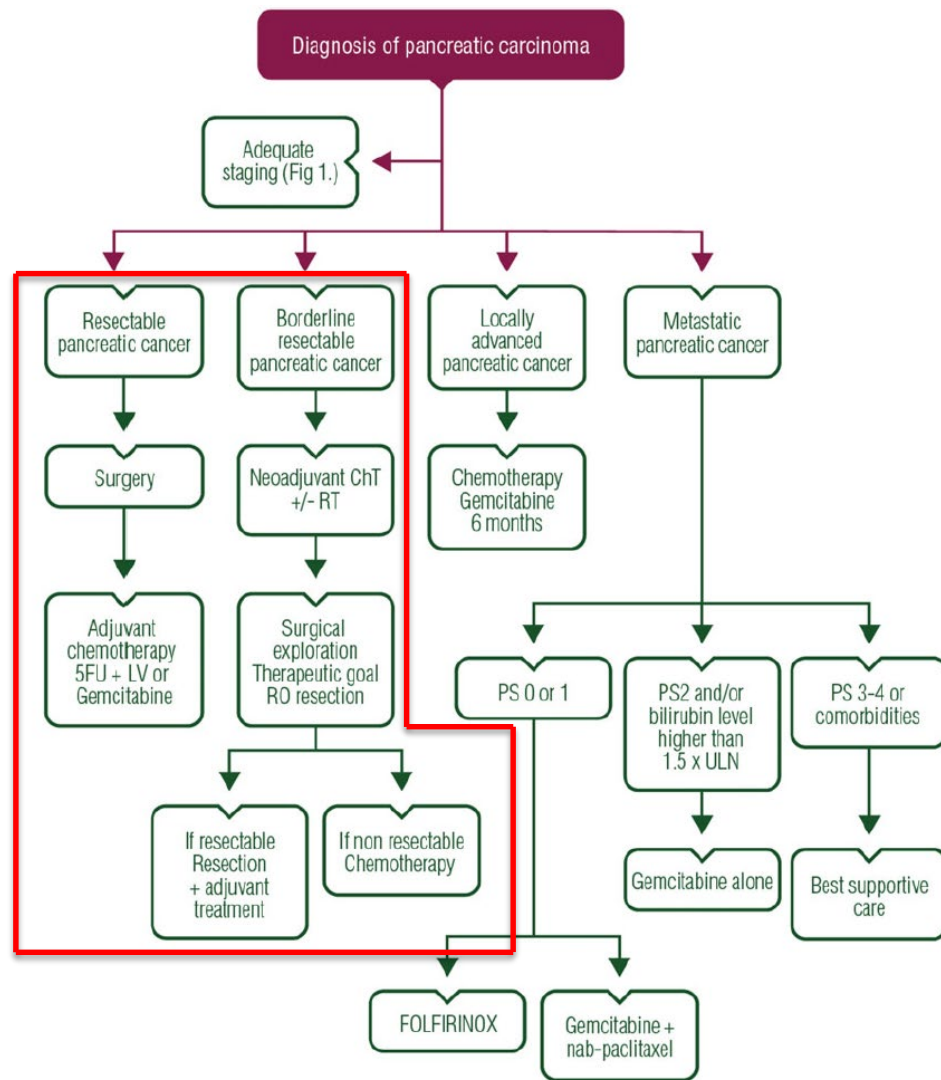
Patient F., 40 years old, female

- ◆ **10.02.2016 Tumor markers:** CEA 0.45 ng/mL, CA19-9 1549 U/mL
- ◆ **Family history:** mother – breast cancer, grandmother – gastric cancer.
- ◆ **02.03.2016 PCR for founder mutations:** germline mutation **5382insC** (c.5266dupC) in the *BRCA1* gene.
  
- ◆ There are no severe comorbidities.
- ◆ ECOG 0
- ◆ Complete blood count, chemistry test – normal test results.

**Diagnosis:** *BRCA*-associated pancreatic cancer. T4N0M0 III stage

# Cancer of the pancreas: ESMO Clinical Practice Guidelines for diagnosis, treatment and follow-up<sup>†</sup>

M. Ducreux<sup>1,2</sup>, A. Sa. Cuhna<sup>2,3</sup>, C. Caramella<sup>4</sup>, A. Hollebecque<sup>1,5</sup>, P. Burtin<sup>1</sup>, D. Goéré<sup>6</sup>, T. Seufferlein<sup>7</sup>, K. Haustermans<sup>8</sup>, J. L. Van Laethem<sup>9</sup>, T. Conroy<sup>10</sup> & D. Arnold<sup>11</sup>, on behalf of the ESMO Guidelines Committee\*



# TREATMENT

Patient F., 40 years old, female. ECOG 0.

*BRCA*-associated pancreatic cancer. T4N0M0

## Variants of chemotherapy:

- ◆ FOLFIRINOX
- ◆ Nab-paclitaxel plus Gemcitabine
- ◆ GEMOX or GEMCIS
- ◆ Gemcitabine

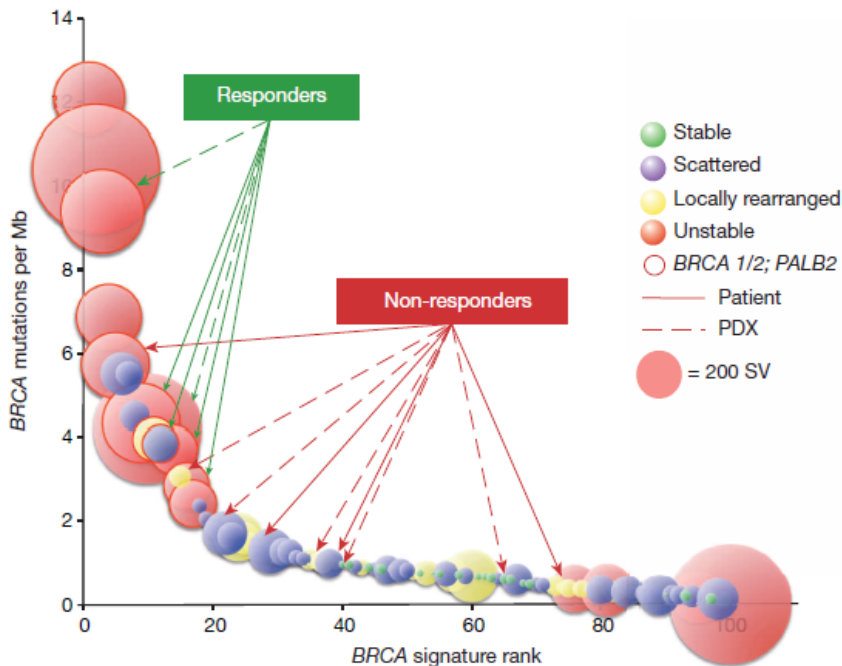


# Cancer of the pancreas: ESMO Clinical Practice Guidelines for diagnosis, treatment and follow-up<sup>†</sup>

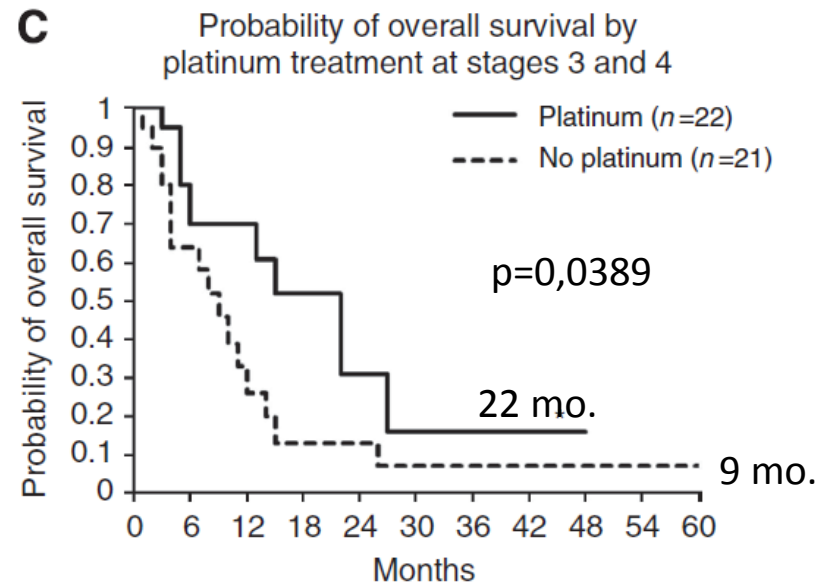
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**BRCA2, PALB2, ATM, or mismatch repair (hMLH1 and MSH2) gene mutations, which subsequently cause a DNA damage repair deficiency, might be more sensitive to platinum or PARP inhibitors.**



Wadell N et al. Nature, 2015. 518(7540):495-501



Golan T et al. Br J Cancer. 2014. 111(6):1132-8.

# INDUCTION CHEMOTHERAPY

11.02.16 - 1 cycle of **FOLFIRINOX** has been started.

**Adverse event:** immediate type allergic reaction grade 2-3 occurred on the 30th minute of irinotecan infusion

01.03.16 – 03.06.16 5 cycles of **GEMOX**

## **Toxicity:**

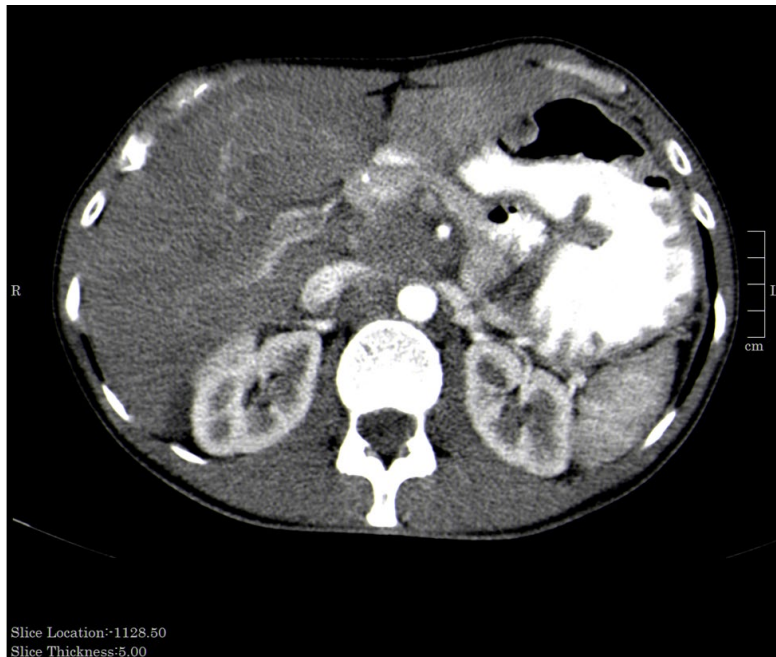
- ◆ Thrombocytopenia grade 2, Neutropenia grade 4
- ◆ Nausea grade 1, Vomiting grade 1
- ◆ Increased AST/ALT grade 1
- ◆ Peripheral neuropathy grade 1

# INDUCTION CHEMOTHERAPY

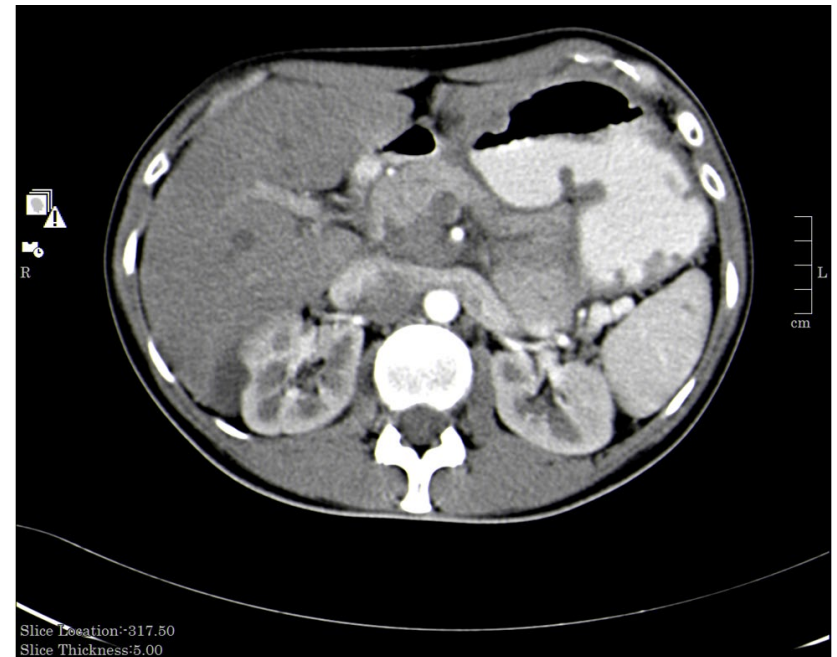
## Efficacy

**14.06.2016 Tumor markers** : CEA 1.72 ng/mL, CA19-9 213.7 U/mL (baseline CA19-9 1549 U/mL)

**14.06.16 CT-scan** : tumor 3.3x2.2 cm in the uncinata process of the pancreas, adjacent to SMV and the right semicircle of SMA (stable disease by RECIST 1.1).



29.01.16



14.06.16

# FURTHER TREATMENT

## Options

- ◆ Surgical treatment
- ◆ Radiation therapy (or chemoradiotherapy)
- ◆ Continuation of chemotherapy
- ◆ Follow-up



# FURTHER TREATMENT

## Surgery

**30.06.2016** - laparotomy, irreversible electroporation procedure in the area of SMV/SMA, pancreaticoduodenectomy, cholecystectomy.

Complication: gastroparesis.

**Histological examination: adenocarcinoma**, pathomorphosis grade 2.

**20.07.16 Abdominal ultrasound:** no abnormalities are observed, no tumor relapse/metastases are revealed

**10.08.2016 Tumor markers:** CEA 1,08 ng/mL, CA19-9 19,63 U/mL

**11.08.16 – 17.10.16** gemcitabine 1000 mg/m<sup>2</sup> IV days 1, 8,15 of each 28-day cycle in adjuvant setting

**10.12.16 CT-scan:** no local or distant recurrences were found.

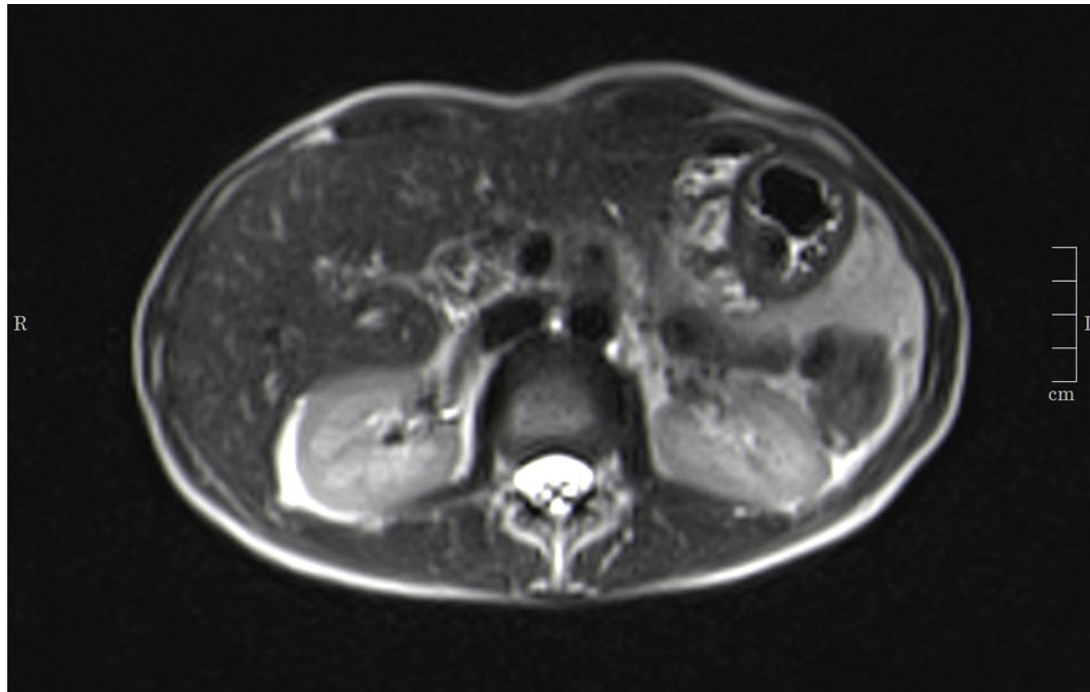
# RECURRENCE

5 months after the end of adjuvant therapy

**06.03.17 Tumor markers:** CEA 1,44 ng/mL, CA19-9 232,5 U/mL

**09.03.17 MRI:** recurrence in the area of surgery, tumor infiltration of SMA (2.0x1.7 cm).

No distant metastases were found.



# FURTHER TREATMENT

## Options

- ◆ Radiation therapy
- ◆ Chemotherapy
- ◆ Chemotherapy with further radiation therapy
- ◆ Surgery

# TREATMENT OF THE RECURRENCE

Radiation therapy and with further chemotherapy

**27.03.2017 – 31.03.2017:**

stereotactic radiation therapy under the control of IGRT imaging using three-dimensional 3D CRT planning on the area of recurrence, single boost 7.5 Gy, 5 fractions. Total boost dose 37.5 Gy.

**04.04.2017 Tumor markers:** CEA 0.9 ng/mL, CA19-9 674 U/mL

**19.04.17-04.09.17** 6 cycles of **GEMOX**

## **Toxicity:**

- ◆ Neutropenia grade 3, anemia grade 1
- ◆ Peripheral neuropathy grade 2



# TREATMENT OF THE RECURRENCE

## Efficacy

**03.10.2017 Tumor markers:**

CEA 1.64 ng/mL, CA19-9 34.84 U/mL

**03.10.2017 CT-scan:** progression of the disease? in the area of the mesenteric root 3,5x2,3 cm

**01.11.2017 PET-CT:** infiltration of the anterior semicircle of the aorta without focal accumulation of the radiopharmaceutical with SUV(max) 2.72 - positive dynamics in metabolic activity compared to previous study.





# PROGRESSION OF THE DISEASE

20 months after SBRT->ChT

**16.05.19 Abdominal ultrasound:** hypodense lesion 1.3x0.8 cm with a clear contour is determined in the parapancreatic region.

No other lesions were found.

**Tumor markers 15.05.2019:** CA19-9 9,13 U/mL

FNA: in progress

## Possible treatment options (if it is recurrence):

- ◆ Chemotherapy
- ◆ Local treatment (radiotherapy, irreversible electroporation, radiofrequency ablation, etc.)



**THANK YOU FOR YOUR ATTENTION!**

**Acknowledgment:**

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