

Patient	Age (y)	Sex	Tumor location	Previous surgery	Initial tumor classification	Grading	Previous chemotherapy	Clinical indication for RCTx
1	69	M	Head	Whipple	pT2 pN1 (2/12) cM0 L1 V0 Pn0 R0	G3	Gem+Cap	LRPAC
2	80	M	Head	Whipple	pT2 pN1 (1/25) L0 V0 Pn1 R1	G3	Gem	LRPAC
3	80	M	Head	No	cT3 cN0 cM0	G2	FOLFIRINOX Gem+nab/Paclitaxel	LAPAC
4	60	W	Body	No	cT4 cN1 cM0	G2	FOLFIRINOX	LAPAC
5	42	M	Tail	Distal pancreatectomy	pT3 pN1(1/30) L1 V0 Pn1 R0	G3	FOLFIRINOX Gem+nab/Paclitaxel	LRPAC
6	56	W	Head	pp-Whipple	pT3 pN0 (0/15) L0 V0 Pn1 R0	G3	FOLFIRINOX Gem+nab/Paclitaxel	LRPAC
7	58	M	Head	Whipple	pT2 pN2 (13/30) L1 Pn1 R1	G3	FOLFIRINOX	LRPAC
8	61	M	Head	Whipple	pT2 pN0 (0/14) cM0 L0 V0 Pn1 R0	G3	FOLFIRINOX	LRPAC
9	58	W	Head	Whipple planned; abort of operation due to intraoperative detection of liver metastasis	cT4 cN0 cM0 (pM1 (hep) intraoperative)	G2	FOLFIRINOX Gem+nab/Paclitaxel	LAPAC
10	74	W	Body	No	cT4 cN0 cM0	G3	FOLFIRINOX	LAPAC
11	64	M	Head	Abort of operation due vessel infiltration	cT2 cN0 cMx	G3	FOLFIRINOX	LAPAC
12	75	W	Body	Distal pancreatectomy	pT2 pN0 (0/4) L0 V0 Pn0 R0	G1	Gem+nab/Paclitaxel	LRPAC
13	57	M	Head	No	cT4 cN0 cM1 (hep)	high grade intraepithelial neoplasm	FOLFIRINOX	LAPAC

14	49	W	Head	Duodeno-pancreatectomy	pT3 pN1 (6/39) L0 V0 Pn0 R0	G2	Gem/Cis Gem FOLFIRINOX	LRPAC
15	62	M	Head	Whipple	pT2 pN1 (1/24) L0 V0 Pn1 R0	G2	FOLFIRINOX Gem+nab/Paclitaxel	LRPAC
16	64	M	Head	Whipple	pT3 pN2 (5/20) L1 V0 Pn1 G3 R1	G3	mFOLFIRINOX	LRPAC
17	89	W	Head	No	cT4 cN0 cM0	G3	FOLFIRINOX	LAPAC
18	62	W	Head	Pancreatectomy	ypT1c ypN0(0/26) L0 V0 Pn1 R1 cM0	G2	Neoadjuvant mFOLFIRINOX Adjuvant mFOLFIRINOX Gem+nab/Paclitaxel	LRPAC
19	58	W	Body	Whipple	pT2 pN2(8/19) L1 V0 Pn1 R0 G2	G2	mFOLFIRINOX	LRPAC
20	82	M	Head	Whipple	pT3a pN1a (1/21) pL1 pV0 Pn0 R0	G2	Capecitabine	LRPAC
21	52	W	Head	No	cT4 cN0 cM0	G3	mFOLFIRINOX	LAPAC
22	64	W	Head	No	cT4 cN0 cM0	Borderline	FOLFIRINOX Gem/Abraxane	LAPAC
23	54	W	Body	Whipple	pT1c pN1(1/19) L1 V0 Pn1 R0	G3	FOLFIRINOX	LRPAC
24	56	M	Head	Whipple	pT2 pN2(5/36) L1 V0 R0Pn1	G3	mFOLFIRINOX	LRPAC
25	61	W	Body	No	cT4 cN0 cM0	G3	FOLFIRINOX	LAPAC
26	57	M	Head	No	cT2 cN0 cM0	G2	mFOLFIRINOX	LAPAC
27	68	W	Head	No	cT4 cN2 cM0	G3	FOLFIRINOX	LAPAC

Supplementary Table S1. Detailed patient characteristics. *FOLFIRINOX* folinic acid, fluorouracil, irinotecan and oxaliplatin. *RTx* radiotherapy. *LAPAC* locally advanced pancreatic adenocarcinoma. *LRPAC* locally recurrent pancreatic adenocarcinoma.

Patient	Scan before radiotherapy/ follow-up	TNM (CT-based)	TNM (FAPI-PET/CT-based)	Additional findings in FAPI PET/CT	Staging change	Change of therapy after FAPI-PET/CT	Additional diagnostic measures
1	Before RTx	T4 N1 M0	T4 N1 M0	None	No	No	None
	1 st follow-up	T0 N0 M0	T4 N0 M1 ((LYM)	Local, recurrent tumor tissue detectable, distant lymph node metastasis	Up	Radiation of distant lymph node metastasis	Biopsy of distant lymph node metastasis and confirmation PDAC
	2 nd follow-up	T4 N0 M1(LYM)	T4 N1 M1(OTH,LYM)	Soft tissue metastasis	Up	Palliative intended radiation therapy of distant metastasis	None
	3 rd Follow-up	T4 N0 M1(LYM,ADR,H EP)	T4 N0 M1(PER,HEP,B RA,ADR,OTH,LYM)	Diffuse metastases	Up	No (Best supportive care)	Cranial MRI
2	Before RTx	T1 N0 M0	T1 N0 M0	None	No	No	None
	1 st follow-up	T0 N0 M0	T0 N0 M0	None	No	No	None
	2 nd follow-up	T0 N0 M0	T0 N0 M0	None	No	No	None
	3 rd follow-up	T0 N0 M0	T0 N0 M1(OSS)	Bone metastasis	Up	Radiation of Oligometastasis	None
3	Before RTx	T4 N1 M1(PER)	T4 N1 M1(HEP, PER)	None	No	No (No radiotherapy; systemic chemotherapy only)	None
4	Before RTx	T4 N1 M0	T4 N0 M0	Morphologically suspicious mesenterial lymph nodes without FAPI expression	Down	Change of target volume	None
	1 st follow-up	T4 N1 M0	T4 N0 M1(PER)	Morphologically suspicious mesenterial lymph nodes without FAPI expression, peritoneal carcinomatosis	Up	No	Biopsy: no malignancy
	2 nd follow-up	T4 N1 M0	T4 N0 M1 (PER,HEP)	Morphologically suspicious mesenterial lymph nodes without FAPI expression,	Up	Systemic chemotherapy	None

				peritoneal carcinomatosis, hepatic metastasis			
5	Before RTx	T4 N1 M0	T4 N0 M0	Morphologically suspicious mesenterial lymph nodes without FAPI expression	Down	Changed target volume	None
	1 st follow-up	T4 N1 M1 (HEP)	T4 N0 M1 (PUL,HEP,PER)	Pulmonary metastases, peritoneal carcinomatosis	Up	No (Systemic molecular therapy)	None
6	Before RTx	T4 N2 M0	T4 N0 M0	Morphologically suspicious mesenterial lymph nodes without FAPI expression	Down	No (Abort of radiotherapy due to poor general condition)	None
7	Before RTx	T4 N0 M0	T1 N0 M0	None	Down	No	None
	1 st follow-up	T4 N0 M0	T0 N0 M0	No vital tumor tissue	Down	No	None
	2 nd follow-up	T4 N0 M0	T0 N0 M0	No vital tumor tissue	Down	No	None
	3 rd follow-up	T4 N0 M0	T2 N0 M1(HEP)	Liver metastases	Up	Systemic chemotherapy	Abdominal MRI: confirmation of liver metastases
8	Before RTx	T0 N1 M1(HEP)	T2 N1 M1(HEP,OSS)	Bone metastasis	Up	No (No radiotherapy; systemic therapy only)	None
9	Before RTx	T4 N1 M1	T3 N0 M0	Morphologically suspicious mesenterial lymph nodes without FAPI expression	Down	No (Refusal of radiotherapy; continuation of CTx)	None
10	Before RTx	T4 N1 M0	T4 N0 M0	Morphologically suspicious mesenterial lymph nodes without FAPI expression	Down	Change of target volume	None
	1 st follow-up	T4 N0 M0	T4 N1 M0	Lymph node metastasis	Up	Radiotherapy of singular lymph node metastasis	None
	2 nd follow-up	T4 N1 M0	T4 N2 M0	Diffuse lymph node metastases	Up	Systemic chemotherapy	None
11	Before RTx	T0 N0 M0	T2 N0 M0	Vital tumor tissue	Up	Indication for local radiotherapy	None
	1 st follow-up	T0 N0 M0	T2 N0 M0	Vital tumor tissue	Up	No	None
	2 nd follow-up	T0 N1 M0	T3 N0 M0	Vital tumor tissue	Up	No	None

	3rd follow-up	T0 N1 M0	T3 N0 M0	Vital tumor tissue	Up	No	None
12	Before RTx	T4 N0 M0	T4 N0 M0	None	No	No	None
12	1 st follow-up	T4 N0 M0	T4 N0 M1(per)	Peritoneal carcinomatosis	Up	Systemic chemotherapy	None
13	Before RTx	T4 N2 M0	T4 N0 M0	Morphologically suspicious mesenterial lymph nodes without FAPI expression	Up	Change of target volume	None
	1 st follow-up	T4 N0 M0	T4 N0 M1(PER)	Peritoneal carcinomatosis	Up	Systemic chemotherapy	None
14	Before RTx	T4 N1 M1(ADR)	T4 N0 M0	No detection of distant metastases	Down	Indication for local radiotherapy	None
	1 st follow-up	T4 N1 M1(ADR)	T4 N1 M1(HEP)	Liver metastases	No	Systemic chemotherapy	Abdominal MRI
15	Before RTx	T4 N1 M0	T4 N0 M0	Duodenal infiltration	Up	No radiotherapy due to local infiltration	Abdominal MRI
16	Before RTx	T4 N0 M0	T0 N0 M0	Suspicious locally recurrent tissue without FAPI expression	Down	No radiotherapy	None
17	Before RTx	T2 N1 M0	T3 N0 M0	Morphologically suspicious mesenterial lymph nodes without FAPI expression	Down	Change of target volume	None
	1 st follow-up	T4 N1 M0	T3 N0 M0	Morphologically suspicious mesenterial lymph nodes without FAPI expression	Down	Change of target volume	None
	2 nd follow-up	T4 N0 M1(PUL)	T3 N0 M1(PUL)	None	No	No (systemic chemotherapy)	None
18	Before RTx	T0 N0 M0	T1 N0 M0	Vital tumor tissue detectable	Up	Indication for radiotherapy	None
	1 st follow-up	T4 N1 M0	T2 N0 M0	Morphologically suspicious mesenterial lymph nodes without FAP-expression	Down	No	None

19	Before RTx	T4 N2 M1(PUL)	T4 N1 M1(PER)	Peripancreatic lymph node metastasis, peritoneal carcinomatosis	No	No (no radiotherapy; systemic chemotherapy only)	None
20	Before RTx	T4 N1 M0	T4 N0 M0	Morphologically suspicious mesenterial lymph nodes without FAPI expression	Down	Change of target volume	None
	1 st follow-up	T4 N1 M1(HEP)	T0 N0 M1(PER,HEP)	Peritoneal carcinomatosis, no local vital tumor tissue	Up	No (systemic chemotherapy only)	None
21	Before RTx	T4 N1 M0	T4 N0 M1(PER)	Duodenal infiltration, peritoneal carcinomatosis	Up	No radiotherapy; systemic chemotherapy only	None
22	Before RTx	T4 N0 M0	T1 N0 M0	None	Down	No	None
23	Before RTx	T4 N1 M0	T4 N0 M1(PER)	Peritoneal carcinomatosis	Up	No radiotherapy; systemic chemotherapy only	None
24	Before RTx	T4 N2 M0	T4 N0 M0	Morphologically suspicious mesenterial lymph nodes without FAPI expression	Down	Change of target volume	None
25	Before RTx	T4 N1 M0	T4 N0 M0	Morphologically suspicious mesenterial lymph nodes without FAPI expression	Down	Change of target volume	None
26	Before RTx	T4 N0 M0	T2 N0 M0	None	No	No	None
27	Before RTx	T4 N0 M0	T2 N0 M0	None	No	No	None

Supplementary Table S2. Detailed patient characteristics. Location of metastasis: *hep* hepatic, *per* peritoneal, *lym* lymphatic, *oss* bone, *adr* adrenal, *bra* brain. *RTx* radiotherapy