Table 1: Patients' characteristics

		SBRT (N, %)	SBRS (N, %)
N°		30 (59)	21 (41)
M/F		8/22	9/12
Age (range; average)		31-82; 64	39-85; 67
Primary tumor			
	Endometrium	6 (20)	0 (0.0)
	Ovary	5 (16.7)	1 (4.8)
	Cervix	5 (16.7)	1 (4.8)
	Vagina	2 (6.7)	0 (0.0)
	Breast	0 (0.0)	3 (14.3)
	Pancreas	4 (13.3)	1 (4.8)
	Prostate	3 (10)	5 (23.8)
	Colon	3 (10)	3 (14.3)
	Rectum	1 (3.3)	2 (9.5)
	Stomach	1 (3.3)	0 (0.0)
	Other	0 (0.0)	5 (23.8)
Treated lesion			
	Primary tumor	4 (13.5)	3 (14.2)
	Nodal metastases	22 (73)	7 (33.3)
	Distant metastases	4 (13.5)	12 (57.1)

Results: SBRT treatment: maximum small bowel and duodenum dose-volume constraints were exceeded in 5/30 (16.7%) and 2/30 (6.7%), respectively. Dose to OARs was: small bowel: Dmax 31.5-40.5 Gy, V30 0.2-13.4 cc; duodenum: Dmax 35.7-36.6 Gy, V30 2.1-3.7 cc.
SBRS treatment: maximum small bowel and duodenum dose-volume constraints were exceeded in 2/21 patients (9.5%) and 1/21 patient (4.7%), respectively. Dose to OARs was: small bowel: Dmax 15.6-16.3 Gy, V12 1.7-8.5 cc; duodenum Dmax 16.0 Gy, V12 0.1 cc.
With a median follow up of 24 months after SBRT and 18 months after SBRS, no early or late severe toxicity was observed in patients in whom constraints were not respected.

Conclusion: Patients irradiated on small bowel and duodenum did not develop severe toxicity although the administered doses were above constrains proposed in literature. A prolonged follow-up and a larger population are needed to confirm the safety of dose-volume constraints other than those reported in literature about SBRT and SBRS on abdominal area.

PO-0773

Reirradiation by extracranial stereotactic treatment: preliminary results of a dose escalation study

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Purpose or Objective: To define the maximum tolerated dose (MTD) of extra-cranial stereotactic treatment (SBRT) in previously irradiated patients.

Material and Methods: In a dose escalation (Phase I) study, previously irradiated patients were enrolled in two different arms depending on treatment site and previous dose: 1) retreatment with previous dose > 60 Gy or retreatment of pancreatic and pelvic tumors, 2) retreatment with previous dose < 60 Gy. SBRT was delivered in 5 fractions with static 3D technique (4 non-coplanar beams) or dynamic arc (VMAT). The dose was prescribed at the isocenter. The Planning Target Volume (PTV) was defined as the GTV + 5-15 mm margin. According to the study arm, the first cohort of 6 patients received a dose of 20 or 25 Gy, and subsequent cohorts of patients received doses up to 40 Gy. The dose limiting toxicity (DLT) was defined as any acute and late toxicity Grade ≥ 3. The MTD was defined a s the dose level with 2/6 or 4/12 DLT.

Results: From September 2004 to December 2014, 51 patients (M/F: 27/24; median age 65, range 44-87), previously irradiated with doses of 30 to 87 Gy (median dose 50 Gy) were enrolled, after 4-228 months from the first treatment (median 11 months). Sixty-six lesions were treated (23 primary lesions or relapses, 43 lymphadenopathies) mainly from gynecological tumors (30%), followed by gastrointestinal tumors (26%) and prostatic tumors (17%). Nineteen of the 66 lesions were in the neck or chest, 22 in the abdomen and 25 in the pelvis. With a median follow-up of 19 months (3-104), an overall response rate of 81% (Complete Response: 55%, Partial Response: 26%), with only 3% of disease progression was recorded. At 40 Gy dose-level, only 1 patient showed DLT (cutaneous fistula in the sacral region). Two-year local control was 75% and 2-year metastasis-free survival was 30%.

Conclusion: SBRT treatment in 5 fractions up to a dose of 40 Gy is well tolerated in previously irradiated patients. This dose escalation protocol is still ongoing (Table 1).

		Retreatment	
Level	n° pts	previous dose ≤ 60 Gy (pancreas e pelvis); previous dose > 60 Gy	previous dose ≤ 60 Gy
1	6 §	20 Gy	25 Gy
2	6 §	25 Gy	30 Gy
3	6 §	30 Gy*	35 Gy
4	6 §	35 Gy	**40 Gy**
5	6 §	40 Gy	45 Gy
6	6 §	**45 Gy**	50 Gy

Current dose level is underlined; *1 DLT

PO-0774

Extra-cranial radiosurgery in oligometastatic disease: a dose escalation study (Destroy-2).

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Purpose or Objective: To define the maximum tolerated dose (MTD) of stereotactic extracranial radiosurgery performed in a single session (SBRS) in different clinical settings.

Material and Methods: Based on a Dose Escalation study (Phase I), oligometastatic patients were enrolled in 4 different arms depending on site and treatment purpose: 1) liver metastases, 2) lung metastases, 3) lymph node metastases or liver or lung metastases with a prolonged local control purpose, 4) bone metastases (non-vertebral). Dose was prescribed according to the Rosel protocol (V100 >95%, V90 >99% and Dmax <140% of the prescription) with dynamic