

## Supplementary data

**Supplementary Table 1.** Time to recurrence according to recurrent pattern (n = 91).

Pattern of recurrence	n	Time to recurrence, months
		Median (range)
Vagina only	8	9.0 (4.2 – 51.4)
Pelvis	3	13.3 (5.8 – 71.5)
Distant only	58	17.1 (4.8 – 97.2)
Pelvis-distant	22	11.0 (3.2 – 74.4)
Total	91	13.3 (3.2 – 97.2)

**Supplementary Table 2.** Time to failure for patients with extrvaginal recurrences (n=83).

Pattern of recurrence	Survivors		Non survivors		<i>p</i> value
	No. of Pts	TTF	No. of Pts	TTF	
Pelvis	2	42.4 (13.3 – 71.5)	1	5.8	1.000
Distant	18	21.9 (5.1 – 97.2)	40	12.4 (4.8 – 77.9)	0.156
Pelvis-distant	4	13.7 (5.9 – 74.4)	18	11.0 (3.2 – 35.1)	1.000
Total	24	<b>19.7</b> (5.1 – 97.2)	59	<b>12.2</b> (3.2 – 77.9)	<b>0.025</b>

TTF, Time to failure; pts, patients.

**Supplementary Table 3.** The relation between time to recurrence and SAR in patients with extra-vaginal recurrence (n = 83).

<b>Time to recurrence</b>	<b>N</b>	<b>5-year SAR</b>	<b><i>p</i> value</b>
≤ 6 months	13	15.4	<b>0.033</b>
> 6 months	70	29.8	
≤ 9 months	21	9.5	<b>&lt;0.001</b>
> 9 months	62	33.7	
≤ 12 months	33	12.8	<b>0.005</b>
> 12 months	50	38.2	
≤ 15 months	44	14.6	<b>0.004</b>
> 15 months	39	42.2	
≤ 18 months	52	18.1	<b>0.025</b>
> 18 months	31	44.6	
≤ 24 months	62	25.8	0.272
> 24 months	21	33.6	
Total	83		

SAR, survival after recurrence.

**Supplementary Table 4.** Multivariate analysis of survival after recurrence (n = 91).

	<b>HR of death (95% CI)</b>	<b>p value</b>
Cervical invasion (+ vs -)	3.75 (1.87 – 7.52)	<0.001
Histology (type 2 vs 1)	3.21 (1.57 – 6.55)	<0.001
Cytology (+ vs -)	2.22 (1.01 – 4.91)	0.048
Recurrent site (multiple vs single)	1.84 (0.92 – 3.69)	0.084
CA-125 at recurrence ( > 35 U/mL vs ≤35 U/mL)	2.06 (1.07 – 3.97)	0.030
Grade (3 vs 1-2)	1.44 (0.68 – 3.06)	0.344
ER and PR (ER(-) or PR(-) vs ER(+) & PR(+))	1.24 (0.60 – 2.58)	0.558
In-field failure of previous RT (yes vs no)	2.60 (0.97 – 6.95)	0.057
ER, estrogen receptor; PR, progesterone receptor; CI, confidence interval; RT, radiotherapy; HR, hazard ratio.		
Alternative model with cervical invasion replaces FIGO stage		

**Supplementary Table 5A.** Pattern of recurrence and number of recurrent site according to ER/PR status at initial diagnosis and recurrence.

	Pre-opPR+ and PR+ at rec			Pre-opPR+ and PR- at rec			Pre-opPR- and PR- at rec			<i>p</i> value
	No. of Pts (%)	5-y SAR (%)	<i>p</i> value	No. of Pt (%)	5-y SAR (%)	<i>p</i> value	No. of Pts (%)	5-y SAR (%)	<i>p</i> value	
Number of recurrent sites	17(100%)	94.1		16(100%)	42.2		18(100%)	23.8		0.001
Solitary	11(65%)	100.0	0.176	10(63%)	36.0	0.873	6(33%)	55.6	0.008	0.070
Multiple	6(35%)	83.3		6(37%)	50.0		12(67%)	8.3		0.028
Pattern of recurrence										
Vagina	6(35%)	100.0	0.277	0	NA	0.054	0	NA	0.256	NA
Pelvis	2(12%)	All alive (20.2, 31.6 M)		0	NA		0	NA		NA
Distant	5(29%)	100.0		12(75%)	47.6		9(50%)	37.0		0.258
Pelvis-distant	4(24%)	75.0		4(25%)	25.0		9(50%)	11.1		0.102

Rec, recurrence; SAR, survival after recurrence; f/u, follow-up; pts, patients; NA, not applicable.

**Supplementary Table 5B.** Pattern of recurrence and number of recurrent site according to ER/PR status at initial diagnosis and recurrence.

	Pre-opER+ and ER+ at rec			Pre-opER+ and ER- at rec			Pre-opER- and ER- at rec			Pre-opER- and ER+ at rec			<i>p</i> value
	No. of Pts (%)	5-y SAR (%)	<i>p</i> value	No. of Pt (%)	5-y SAR (%)	<i>p</i> value	No. of Pts (%)	5-y SAR (%)	<i>p</i> value	No. of Pts (%)	5-y SAR (%)	<i>p</i> value	
Number of recurrent sites	17(100%)	88.2		12(100%)	41.7		17(100%)	21.2		5(100%)	75.0		0.011
Solitary	12(71%)	91.7	0.315	7(58%)	42.9	0.752	6(35%)	41.7	0.014	2(40%)	100.0	0.564	0.274
Multiple	5(29%)	80.0		5(42%)	40.0		11(65%)	9.1		3(60%)	66.7		0.121
Pattern of recurrence													
Vagina	6(35%)	All alive (34.5-101.9M)	0.426	0	NA	0.133	0	NA	0.164	0	NA	0.317	NA
Pelvis	2(12%)	All alive (20.2, 31.6 M)		0	NA		0	NA		0	NA		NA
Distant	5(29%)	80.0		10(83%)	50.0		8(47%)	31.3		3(60%)	100.0		0.540
Pelvis-distant	4(24%)	75.0		2(17%)	0.0		9(53%)	11.1		2(40%)	50.0		0.018

Rec, recurrence; SAR, survival after recurrence; f/u, follow-up; pts, patients; NA, not applicable.

**Supplementary Table 6A.** Failure pattern and survival of patients with stage III/IV according to adjuvant therapy (n = 53).

	<b>No. with isolated vaginal failure (5-y SAR)</b>	<b>No. with pelvic failure (5-y SAR)</b>	<b>No. with distant failure (5-y SAR)</b>	<b>No. with pelvic+distant failure (5-y SAR)</b>
Surgery alone (n = 0)	0 (NA)	0 (NA)	0 (NA)	0 (NA)
Surgery +CT (n = 17)	0 (NA)	1 (DOD at 2 months)	7 (14.3%)	9 (33.3%)
Surgery +RT (n = 8)	0 (NA)	0 (NA)	7 (38.1%)	1 (DOD at 9.1 months)
Surgery +CT+RT (n = 28)	0 (NA)	1 (Alive at 31.6 months)	23 (16.4%)	4 (0.0%)
SAR, survival after recurrence; CT, chemotherapy; RT, radiotherapy; DOD, died of disease; NA, not applicable.				

**Supplementary Table 6B.** Failure pattern and survival of patients with stage II according to adjuvant therapy (n = 11).

	<b>No. with isolated vaginal failure (5-y SAR)</b>	<b>No. with pelvic failure (5-y SAR)</b>	<b>No. with distant failure (5-y SAR)</b>	<b>No. with pelvic+distant failure (5-y SAR)</b>
Surgery alone (n = 6)	1 (Alive at 42.6 months)	1 (Alive at 20.2 months)	3 (33.3%)	1 (DOD at 14.1 months)
Surgery +CT (n = 1)	0 (NA)	0 (NA)	0 (NA)	1 (DOD at 3.2 months)
Surgery +RT (n = 3)	0 (NA)	0 (NA)	3 (0.0%)	0 (NA)
Surgery +CT+RT (n = 1)	0 (NA)	0 (NA)	0 (NA)	1 (DOD at 32.9 months)
SAR, survival after recurrence; CT, chemotherapy; RT, radiotherapy; DOD, died of disease; NA, not applicable.				



**Supplementary Table 7.** Failure pattern and survival of patients with positive cytology according to adjuvant chemotherapy (n=18).

	<b>No. with isolated vaginal failure (5-y SAR)</b>	<b>No. with pelvic failure (5-y SAR)</b>	<b>No. with distant failure (5-y SAR)</b>	<b>No. with pelvic+distant failure (5-y SAR)</b>
Adjuvant chemotherapy				
Yes	0 (NA)	0 (NA)	11 (0.0%)	4 (0.0%)
No	0 (NA)	0 (NA)	2 (1 DOD at 12.6 months, 1 Alive at 52.9 months)	1 (Alive at 72.6 months)
SAR, survival after recurrence; DOD, died of disease; NA, not applicable.				

**Supplementary Table 8.** Failure in pelvis and survival of patients with cervical invasion according to primary hysterectomy and adjuvant therapy.

	<b>Simple hysterectomy (n = 29)</b>				<b>RH-PLND (n = 13)</b>			
	No. with isolated vaginal failure (5-y SAR)	No. with pelvic failure (5-y SAR)	No. with distant failure (5-y SAR)	No. with pelvic+distant failure (5-y SAR)	No. with isolated vaginal failure (5-y SAR)	No. with pelvic failure (5-y SAR)	No. with distant failure (5-y SAR)	No. with pelvic+distant failure (5-y SAR)
Adjuvant pelvic RT								
Yes	0 (NA)	0 (NA)	14 (0.0%)	4 (0.0%)	0 (NA)	0 (NA)	5 (0.0%)	0 (NA)
No	0 (80.0%)	2 (1DOD at 2 months, 1 Alive at 20.2 months)	2 (0.0%)	7 (0.0%)	1 (Alive at 42.6 months)	0 (NA)	5 (40.0%)	2 (50.0%)
5-year SAR*	0%				38.5%			

SAR, survival after recurrence; RT, radiotherapy; RH-PLND, radical hysterectomy and pelvic lymph node dissection; DOD, died of disease; NA, not applicable.

\* $p = 0.034$