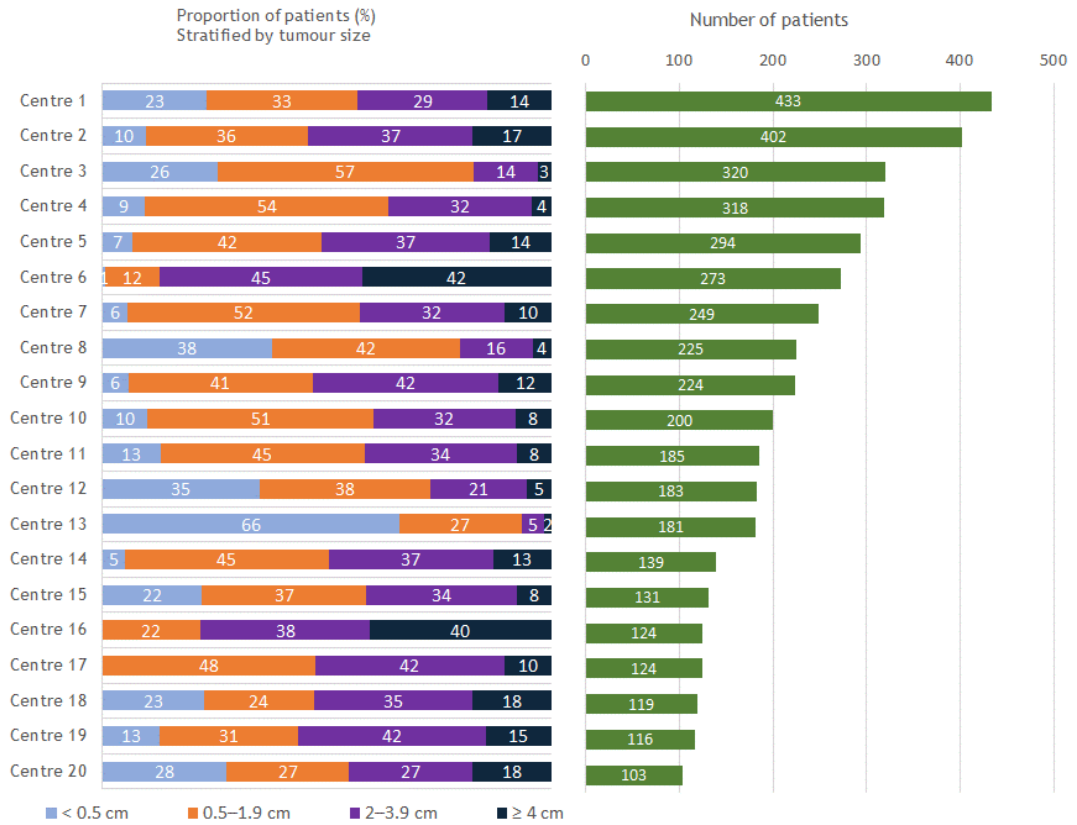
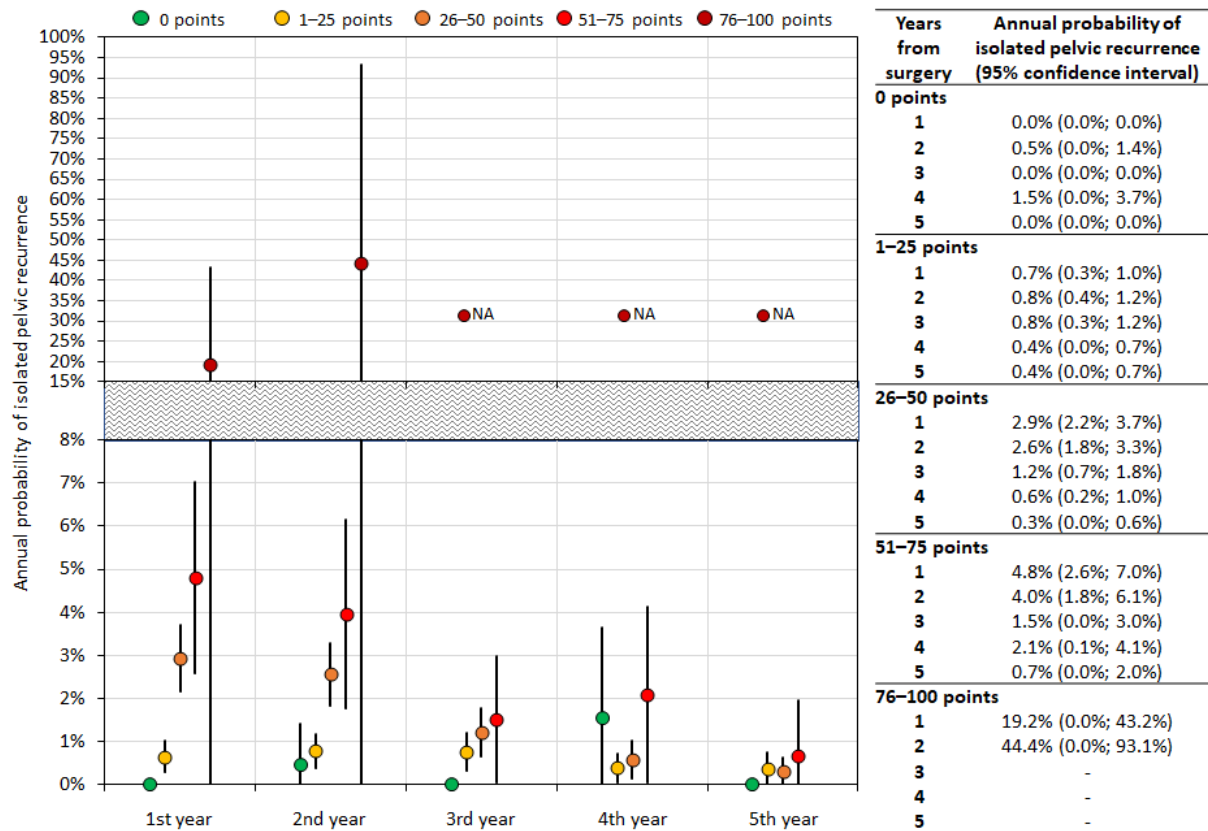


## APPENDIX A. Supplementary data



**Supplementary Fig. S1** Participating centres. **A:** % clusters of patients stratified according to tumour size. **B:** number of database patients per participating centre.



**Supplementary Fig. S2** Landmark analysis of annual risk of isolated pelvic recurrence following surgery. N/A: not analysed.

### Supplementary Table S1

Cumulative incidence of recurrences

Time since surgery	No. of observed recurrences (cumulative)	Probability of recurrence (Kaplan-Meier estimate)	Cumulative proportion of recurrences (based on K-M estimate)
1 year	176	0.041	25.6%
2 years	331	0.077	48.4%
3 years	419	0.100	62.9%
4 years	464	0.114	71.9%
5 years	488	0.123	77.7%
6 years	505	0.132	83.6%
7 years	512	0.138	87.1%
8 years	522	0.149	94.2%
9 years	526	0.156	98.3%
10 years	527	0.158	100.0%

## Supplementary Table S2

Univariate analysis of factors associated with disease-free survival/ Annual probability of recurrence according to the respective factor.

Predictor	Category	N	HR (95% CI)	P	Sequential landmark analysis: annual probability of recurrence									
					1st year	2nd year	3rd year	4th year	5th year	6th year	7th year	8th year	9th year	10th year
<b>Total</b>	-	4 343	-		4.1%	3.8%	2.5%	1.6%	1.0%	1.1%	0.6%	1.3%	0.8%	0.3%
<b>Age at surgery</b>	< 40	1 501	Reference		4.3%	2.7%	2.2%	1.0%	0.5%	0.7%	0.3%	0.4%	0.6%	0.0%
	40–49	1 343	1.12 (0.89; 1.40)	0.329	3.9%	3.7%	2.0%	1.5%	1.0%	0.5%	0.6%	1.3%	0.7%	0.0%
	50–59	857	1.44 (1.13; 1.82)	<b>&lt; 0.003</b>	3.6%	4.4%	2.9%	2.7%	1.9%	2.2%	0.9%	1.9%	0.8%	0.0%
	≥ 60	642	1.59 (1.23; 2.05)	<b>&lt; 0.001</b>	4.2%	5.5%	3.7%	1.8%	1.3%	1.5%	1.3%	2.6%	1.3%	2.6%
<b>Surgical approach</b>	<b>Open</b>	2 578	Reference		4.1%	4.1%	2.3%	1.6%	0.9%	1.3%	0.5%	1.4%	0.8%	0.0%
	<b>MIS</b>	1 538	1.10 (0.92; 1.31)	0.313	4.5%	3.7%	3.2%	1.8%	1.4%	0.6%	1.0%	1.2%	0.0%	1.7%
<b>No. of positive pelvic LN</b>	<b>0 / not assessed</b>	3 700	Reference		3.0%	2.9%	2.0%	1.2%	0.8%	0.9%	0.7%	1.4%	0.9%	0.4%
	<b>1</b>	282	2.19 (1.65; 2.91)	<b>&lt; 0.001</b>	7.1%	6.6%	4.7%	2.9%	1.5%	1.9%	0.0%	0.0%	0.0%	0.0%
	<b>2</b>	166	3.03 (2.22; 4.13)	<b>&lt; 0.001</b>	7.2%	10.4%	6.9%	6.0%	1.2%	1.5%	0.0%	0.0%	0.0%	0.0%
	<b>≥ 3</b>	195	4.87 (3.79; 6.27)	<b>&lt; 0.001</b>	17.4%	12.6%	6.6%	4.6%	5.5%	4.0%	0.0%	3.6%	0.0%	n < 20
	<b>0 / not assessed</b>	4 293	Reference		3.9%	3.6%	2.4%	1.6%	1.0%	1.0%	0.6%	1.3%	0.8%	0.3%
<b>No. of positive paraaortic LN</b>	≥ 1	50	5.40 (3.56; 8.21)	<b>&lt; 0.001</b>	20.0%	20.3%	8.8%	n < 20	n < 20	n < 20	n < 20	n < 20	n < 20	n < 20
	< 0.5 cm	711	Reference		0.3%	1.3%	1.0%	1.1%	0.0%	0.0%	0.6%	0.0%	1.2%	0.0%
	0.5–1.9 cm	1 723	2.15 (1.39; 3.33)	<b>&lt; 0.001</b>	1.9%	2.0%	2.0%	0.8%	0.9%	0.5%	0.4%	1.4%	0.5%	0.0%
	2.0–3.9 cm	1 349	5.15 (3.38; 7.85)	<b>&lt; 0.001</b>	5.4%	5.8%	3.6%	1.7%	1.4%	1.9%	0.9%	0.9%	0.0%	1.0%
<b>≥ 4.0 cm</b>	560	9.17 (5.96; 14.11)	<b>&lt; 0.001</b>	12.2%	8.1%	3.3%	5.2%	2.1%	2.4%	0.8%	3.5%	3.3%	0.0%	
	<b>No / not assessed*</b>	2 787	Reference		2.3%	2.2%	1.7%	1.1%	0.8%	0.7%	0.6%	1.1%	0.8%	0.4%
	<b>Yes</b>	1 556	2.72 (2.29; 3.24)	<b>&lt; 0.001</b>	7.1%	6.7%	4.1%	2.7%	1.6%	1.7%	0.6%	1.7%	0.7%	0.0%
	<b>Squamous</b>	2 966	Reference		3.9%	3.4%	1.8%	1.4%	0.6%	0.7%	0.8%	1.5%	0.9%	0.0%
<b>Tumour histotype</b>	<b>Adeno</b>	1 072	1.12 (0.91; 1.37)	0.292	3.3%	3.3%	3.4%	1.1%	1.9%	1.9%	0.3%	0.5%	0.7%	1.3%
	<b>Adenosquamous</b>	206	2.11 (1.54; 2.88)	<b>&lt; 0.001</b>	5.8%	7.7%	4.2%	4.7%	2.9%	1.4%	0.0%	0.0%	0.0%	n < 20
	<b>Neuro</b>	43	5.46 (3.44; 8.68)	<b>&lt; 0.001</b>	20.9%	17.6%	10.9%	5.0%	n < 20	n < 20	n < 20	n < 20	n < 20	n < 20
	<b>Other</b>	56	2.72 (1.65; 4.50)	<b>&lt; 0.001</b>	7.1%	7.8%	8.8%	5.4%	3.7%	0.0%	n < 20	n < 20	n < 20	n < 20
	<b>1</b>	599	Reference		1.0%	1.9%	1.2%	0.8%	0.6%	0.4%	0.6%	1.1%	0.0%	0.0%
<b>Grade</b>	<b>2</b>	1 628	2.30 (1.58; 3.34)	<b>&lt; 0.001</b>	3.4%	3.3%	2.6%	2.3%	1.5%	1.5%	0.7%	0.7%	0.5%	1.1%
	<b>3</b>	917	3.76 (2.58; 5.48)	<b>&lt; 0.001</b>	7.1%	6.4%	3.8%	1.6%	0.6%	1.7%	0.5%	3.2%	1.3%	0.0%
	<b>Unknown</b>	1 199	2.09 (1.42; 3.07)	<b>&lt; 0.001</b>	4.1%	3.4%	2.1%	1.0%	0.9%	0.4%	0.6%	1.1%	1.0%	0.0%
	<b>1a1</b>	550	Reference		0.0%	1.1%	0.7%	0.9%	0.0%	0.0%	0.0%	0.0%	2.1%	0.0%
<b>pT</b>	<b>1a2</b>	421	2.65 (1.37; 5.13)	<b>0.004</b>	1.4%	1.5%	2.0%	1.0%	0.4%	0.0%	0.9%	2.5%	1.7%	0.0%
	<b>1b1</b>	2 709	4.84 (2.78; 8.42)	<b>&lt; 0.001</b>	3.7%	3.6%	2.4%	1.2%	1.1%	1.4%	0.5%	1.0%	0.0%	0.5%
	<b>1b2</b>	321	11.56 (6.42; 20.81)	<b>&lt; 0.001</b>	11.3%	6.5%	3.1%	5.2%	1.4%	2.5%	0.0%	4.8%	0.0%	0.0%
	<b>2a1</b>	155	12.36 (6.63; 23.02)	<b>&lt; 0.001</b>	4.5%	13.0%	8.6%	3.5%	1.3%	0.0%	5.5%	0.0%	0.0%	n < 20
	<b>2a2</b>	39	22.12 (10.64; 46.00)	<b>&lt; 0.001</b>	25.6%	6.9%	0.0%	11.2%	n < 20	n < 20	n < 20	n < 20	n < 20	n < 20
	<b>2b</b>	148	14.28 (7.69; 26.51)	<b>&lt; 0.001</b>	11.5%	9.2%	6.7%	4.9%	2.9%	0.0%	0.0%	4.8%	n < 20	n < 20
	<b>No</b>	4 195	Reference		3.8%	3.6%	2.4%	1.5%	1.0%	1.1%	0.7%	1.2%	0.6%	0.3%
	<b>Yes</b>	148	2.89 (2.12; 3.93)	<b>&lt; 0.001</b>	11.5%	9.2%	6.7%	4.9%	2.9%	0.0%	0.0%	4.8%	n < 20	n < 20

\* Univariable analysis of LVSI showed that records with missing LVSI variable were not significantly differing from LVSI negative patients (HR 1.14 (95% CI: 0.70; 1.85); p=0.596) and were therefore pooled together.

LN: lymph node; LVSI: lymphovascular space invasion; MIS: minimally invasive surgery (laparoscopic, robotic, combined)

### Supplementary Table S3

Presence of symptoms at the time of recurrence diagnosis and recurrence localization according to the risk group

	No. of patients	No. of recurrences (all patients)	Presence of symptoms		Localization of recurrence		
			Asymptomatic	Symptomatic	Pelvic	Distant	Combined
0 points	213	4* (2%)	1 (50%)	1 (50%)	3 (75%)	0 (0%)	1 (25%)
1–25 points	1844	97* (5%)	40 (47%)	45 (53%)	51 (53%)	21 (22%)	25 (26%)
26–50 points	1899	284* (15%)	109 (45%)	135 (55%)	142 (51%)	74 (27%)	62 (22%)
51–75 points	374	131* (35.0%)	37 (31%)	82 (69%)	40 (32%)	50 (39%)	37 (29%)
76–100 points	13	12 (92%)	2 (17%)	10 (83%)	4 (33%)	4 (33%)	4 (33%)

**Chi-squared Test for Trend in Proportions in presence of symptoms:  $P = 0.003$ . Chi-squared Test for Trend in Proportions in localization: pelvic  $P < 0.001$ ; distant  $P = 0.002$ ; combined  $P = 0.370$ .**

\*Some recurrences are of unknown type/ presence of symptoms.