

Suppl. Table 1: Comparison of patients with cervical cancer from the entire patient cohort and the MRI study cohort

Variable	Whole cohort (n ₁ =724)	MRI cohort (n ₂ =416)	p
Age (yrs.)			0.78*
Median (IQR)	43 (36–55)	43 (36–55)	
Current/previous smoker			0.16**
(n ₁ =707, n ₂ =411)			
No	451	275	
Yes	253	127	
FIGO (2009) stage			0.30**
(n ₁ =722, n ₂ =416)			
I	527	282	
II	118	80	
III	50	37	
IV	27	17	
Clinical tumor size (cm) (n₁=379, n₂=230)			0.41**
<2	93	46	
2–4	174	109	
>4	112	75	
Primary treatment			0.002**
(n ₁ =724, n ₂ =416)			
Surgery only	395	210	
Surgery and adjuvant treatment	100	51	
Primary radiotherapy with or without chemotherapy	193	147	
Other	36	8	
Microscopic depth of invasion (mm)			0.71*
(n ₁ =344, n ₂ =181)			
Median (IQR)	6 (3–9)	6 (3–9)	
Histologic subtype			0.78**
(n ₁ =724, n ₂ =416)			
Adenocarcinoma	160	92	
Squamous cell carcinoma	512	292	
Other	52	32	
Histologic grade			0.67**
(n ₁ =582, n ₂ =343)			
Low/medium	438	253	
High	144	90	

*Mann–Whitney U test **Pearson's chi-square test

FIGO, International Federation of Gynecology and Obstetrics; IQR, interquartile range

Suppl. Table 2: Inter-reader reproducibility for MRI tumor size measurements by 3 readers in patients with cervical cancer .

	Mean (cm)			Mean difference (IQR) (cm)			ICC (95% CI)
	reader 1	reader 2	reader 3	reader 1/2	reader 1/3	reader 2/3	
All patients (n=416)							
AP _{imaging}	2.1	2.1	2.2	0 (0.9)	0.1 (1.3)	0 (1.2)	0.84 (0.82-0.87)
TV _{imaging}	2.2	2.4	2.5	0.3 (0.9)	0.3 (1.2)	0 (1.3)	0.85 (0.83-0.88)
SAG _{imaging}	2.0	2.3	2.5	0.3 (1.0)	0.5 (1.6)	0.2 (1.6)	0.83 (0.80-0.85)
MAX _{imaging}	2.9	2.9	3.0	0 (1.2)	0 (1.8)	0 (1.7)	0.85 (0.83-0.87)
Patients with visible tumor only (n=270)							
AP _{imaging}	3.2	3.2	3.3	0 (0.6)	0.1 (0.6)	0.1 (1.0)	0.69 (0.64-0.74)
TV _{imaging}	3.3	3.6	3.7	0.4 (0.7)	0.5 (0.9)	0.1 (1.0)	0.70 (0.64-0.74)
SAG _{imaging}	3.0	3.5	3.8	0.5 (0.8)	0.8 (1.4)	0.5 (1.2)	0.73 (0.68-0.77)
MAX _{imaging}	4.5	4.4	4.5	0 (0.6)	0 (1.0)	0 (1.1)	0.72 (0.67-0.76)

AP_{imaging}, anteroposterior diameter; ICC, intraclass correlation coefficient; IQR, interquartile range; MAX_{imaging}, maximum diameter; SAG_{imaging}, sagittal diameter; SD, standard deviation; TV_{imaging}, transverse diameter

Suppl. Table 3: Uni- and multivariable hazard ratios for MRI-derived tumor size variables for predicting progression- or recurrence-free survival in 416 patients with uterine cervical cancer (89 patients had progression or recurrence)

Variables	Univariable HR (95% CI)	p*	Multivariable HR (95% CI) [†]	p*
AP _{imaging} (cm)	1.70 (1.53–1.88)	<0.001	1.17 (0.84–1.64)	0.71
TV _{imaging} (cm)	1.61 (1.47–1.77)	<0.001	1.05 (0.78–1.40)	0.76
SAG _{imaging} (cm)	1.39 (1.31–1.48)	<0.001	0.83 (0.67–1.04)	0.34
MAX _{imaging} (cm)	1.41 (1.33–1.50)	<0.001	1.47 (1.11–1.95)	0.03
	Univariable HR (95% CI)	p*	Multivariable HR (95% CI) [†]	p*
MAX _{imaging} (cm)	1.41 (1.33–1.50)	<0.001	1.26 (1.17–1.36)	<0.001
Age (decade)	1.53 (1.36–1.73)	<0.001	1.37 (1.17–1.58)	<0.001
FIGO (2018) stage (III/IV vs. I/II)	7.24 (4.69–11.19)	<0.001	2.85 (1.72–4.73)	<0.001
MAX _{imaging} (cm) in FIGO (2018) subgroups	Univariable HR (95% CI)	p*	-	-
FIGO I (n=260)	1.66 (1.28–2.16)	<0.001	-	-
FIGO II (n=50)	1.18 (0.85–1.63)	0.56	-	-
FIGO III (n=81)	1.29 (1.14–1.47)	<0.001	-	-
FIGO IV (n=25)	1.09 (0.93–1.27)	0.56	-	-
Subgroup analysis of surgically treated patients who had histopathological assessments of primary tumor (n=261; 26 patients had progression or recurrence) with pelvic lymph node sampling (n= 200 patients; 23 patients had progression or recurrence) [‡]				
	Univariable HR (95% CI)	p*	Multivariable HR (95% CI) ^Q	p*
MAX _{imaging} (cm)	1.46 (1.27–1.67)	<0.001	1.41 (1.25–1.59)	<0.001
Age (decade)	1.42 (1.07–1.88)	0.03	-	-
MAX _{histology} (cm)	1.34 (1.20–1.50)	<0.001	-	-
Inflammatory reaction (yes vs. no)	0.75 (0.25–2.22)	0.60	-	-
Microscopic depth of invasion (cm)	3.78 (1.78–8.04)	0.007	-	-
Vascular space invasion (yes vs. no)	4.40 (2.04–9.52)	0.005	-	-
Histologic grade (high vs. low/medium)	4.73 (2.14–10.43)	<0.001	-	-
Lymph node metastasis (yes vs. no)	7.15 (3.23–15.79)	<0.001	5.70 (2.58–12.60)	<0.001

AP_{imaging}, anteroposterior tumor diameter at MRI; CI, confidence interval; FIGO, International Federation of Gynecology and Obstetrics; HR, hazard ratio; MAX_{imaging}, maximum tumor diameter at MRI; MAX_{histology}, maximum tumor diameter in histological samples; MRI, magnetic resonance imaging; SAG_{imaging}, sagittal tumor diameter at MRI; TV_{imaging}, transverse tumor diameter at MRI

*Cox proportional-hazards model; all p values corrected for multiple testing with Holm–Bonferroni method. Significant p-values are given in boldface.

[†]Includes all variables listed

[‡]Missing data were handled by multiple imputation in order to perform multivariable analysis on all patients treated with surgery

^QVariables in model were selected by using the "fastbw"-function in the "rms" r-package (1)