

SUPPLEMENTARY MATERIAL

Supplemental Table 1 – Reclassification of cases using traditional qualitative assessment of lymphovascular space invasion (LVSI) against the 3-tiered semi-quantitative system using the World Health Organization definition (N=1555).

Extent (n, %)	Absent (n=1365)	Present (n=175)	Suspicious (n=15)	Grand Total
No LVSI	1365 (100.0%)	-	6 (40.0%)	1371 (88.2%)
Focal LVSI	-	111 (63.4%)	8 (53.3%)	119 (7.7%)
Substantial LVSI	-	64 (36.6%)	1 (6.7%)	65 (4.2%)

Supplemental Table 2 – Demographic, clinical, histological, and surgical characteristics of patients with 2009 FIGO stage I endometrioid endometrial cancer treated surgically with pathology-proven negative nodes, according to research center (N=1555).

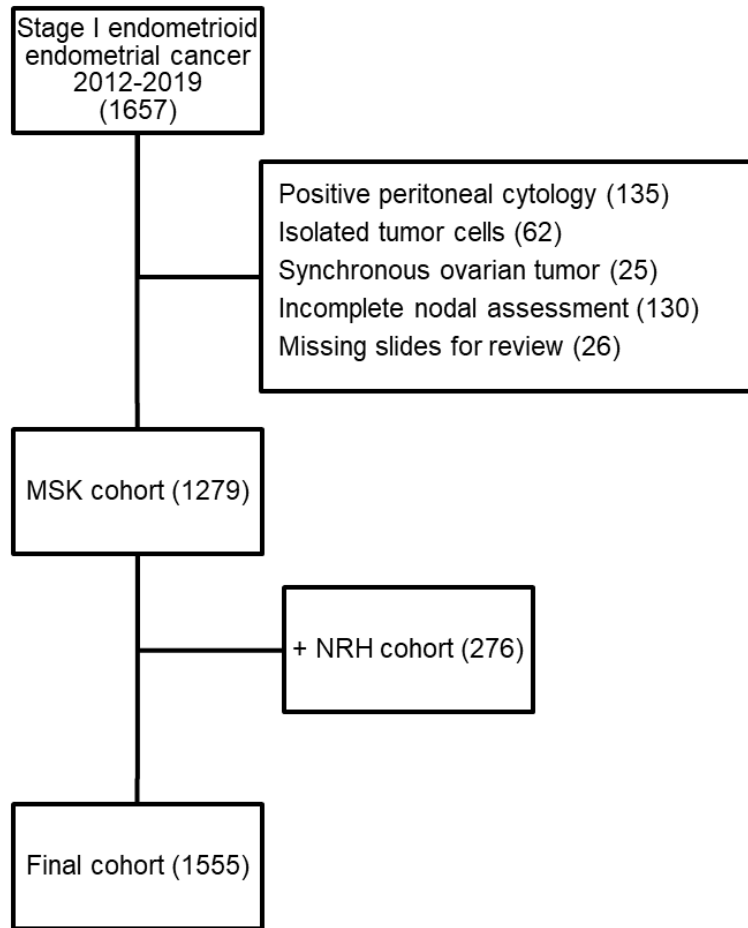
Characteristic	Overall (N = 1555)	New York (n = 1279)	Oslo (n = 276)	P value
Median age at surgery, years (range)	61 (24-92)	60 (24-92)	67 (30-89)	<0.001
Median BMI at surgery, kg/m ² (range)	31 (15-70)	31 (15-70)	28 (18-47)	<0.001
BMI ≥30 kg/m ² (n, %)	804 (51.8%)	700 (54.9%)	104 (37.7%)	<0.001
	Missing	4	4	0
Extent of LVSI (n, %)				<0.001
No LVSI	1371 (88.2%)	1161 (90.8%)	210 (76.1%)	
Focal LVSI	119 (7.7%)	87 (6.8%)	32 (11.6%)	
Substantial LVSI	65 (4.2%)	31 (2.4%)	34 (12.3%)	
Self-reported race (n, %)				<0.001
White	1296 (83.3%)	1030 (80.5%)	266 (96.4%)	
Black	66 (4.2%)	66 (5.2%)	0 (0%)	
Asian	107 (6.9%)	98 (7.7%)	9 (3.3%)	
Other	86 (5.5%)	85 (6.6%)	1 (0.4%)	
Surgical approach (n, %)				<0.001
Laparoscopy	184 (11.8%)	171 (13.4%)	13 (4.7%)	
Robot-assisted laparoscopy	1177 (75.7)	1032 (80.7%)	145 (52.5%)	
Laparotomy	194 (12.5%)	76 (6.0%)	118 (42.8%)	
FIGO 2009 stage (n, %)				<0.001
IA	1361 (87.5%)	1202 (94.0%)	159 (57.6%)	
IB	194 (12.5%)	77 (6.0%)	117 (42.4%)	
FIGO grade (n, %)				<0.001
G1	1083 (69.6%)	980 (76.6%)	103 (37.3%)	
G2	336 (21.6%)	223 (17.4%)	113 (40.9%)	
G3	136 (8.7%)	76 (5.9%)	60 (21.7%)	
Depth of myometrial invasion (n, %)				<0.001
None	842 (54.1%)	826 (64.6%)	16 (5.8%)	
<50%	519 (33.4%)	376 (29.4%)	143 (51.8%)	
≥50%	194 (12.5%)	77 (6.0%)	117 (42.4%)	
Method of nodal evaluation (n, %)				<0.001
SLN	1111 (71.4%)	1041 (81.4%)	70 (25.4%)	
LND	208 (13.4%)	53 (4.1%)	155 (56.2%)	
SLN+LND	236 (15.2%)	185 (14.5%)	51 (18.5%)	
Para-aortic LN dissection (n, %)	175 (11.3%)	53 (4.1%)	122 (44.2%)	<0.001

FIGO: International Federation of Obstetrics and Gynecology, n: number, LVSI: lymphovascular space invasion, BMI: body mass index, SLN: sentinel lymph node mapping, LND: lymph node dissection, LN: lymph node.

Supplemental Table 3 – Univariate and multivariate analyses of overall survival for patients with 2009 FIGO stage I endometrioid endometrial cancer treated surgically with pathology-proven negative nodes (N=1555).

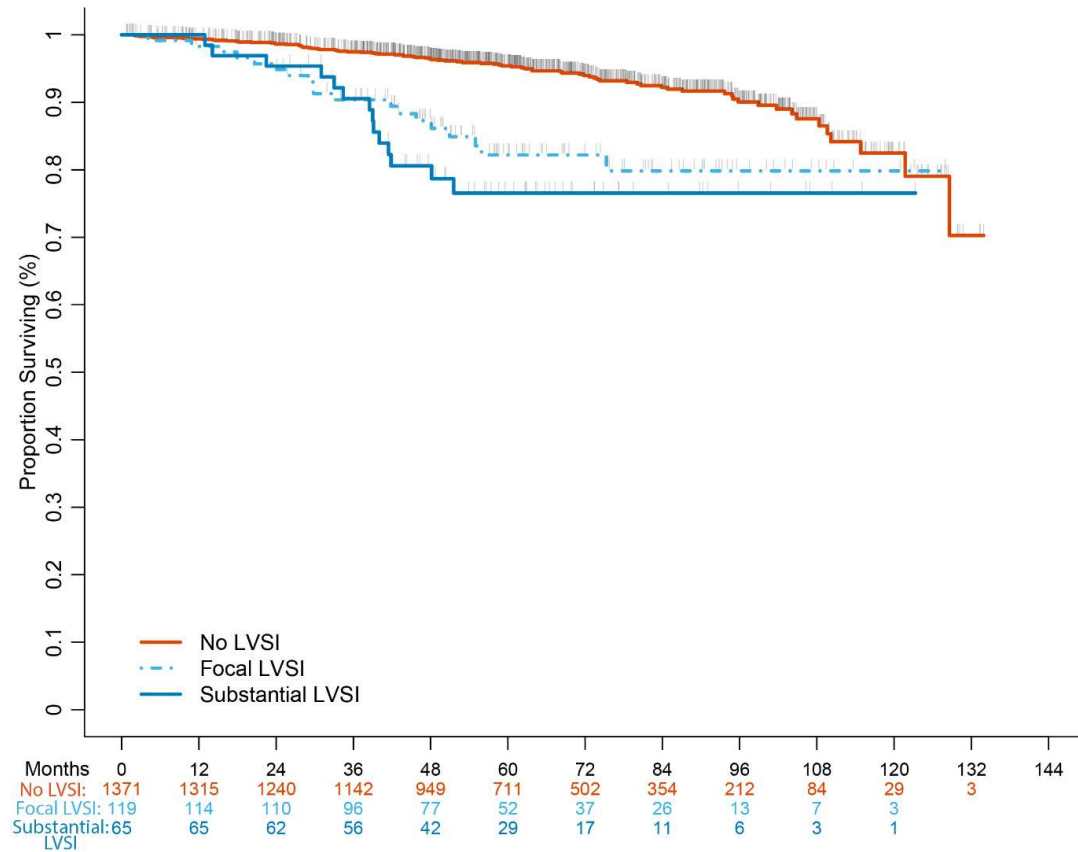
Characteristic	N (event)	5-year OS rate (95% CI)	Univariate	Multivariate
			HR (95% CI)	aHR (95% CI) ; Cox P _v
Cohort	1555 (118)	93.5% (92.0%-94.7%)	-	-
Extent of LVSI				
No LVSI	1371 (85)	95.4% (94.0%-96.5%)	Reference	Reference
Focal LVSI	119 (19)	82.2% (73.0%-88.5%)	2.79 (1.89-4.12)	2.03 (1.80-2.30) ; <0.001
Substantial LVSI	65 (14)	76.5% (63.5%-85.5%)	3.8 (3.26-4.43)	2.69 (2.38-3.03) ; <0.001
Age at surgery (1-year increment)		-	1.09 (1.08-1.1)	1.11 (1.10-1.11) ; <0.001
BMI category				
BMI <30 kg/m²	747 (57)	94.4% (92.3%-96.0%)	Reference	-
BMI ≥30 kg/m²	820 (60)	92.8% (90.5%-94.5%)	1.11 (0.78-1.58)	
Self-reported race				
White	1296 (104)	93.2% (91.6%-94.6%)	Reference	-
Black	66 (7)	86.7% (71.3%-94.2%)	1.55 (0.87-2.77)	
Asian	107 (3)	98.9% (92.2%-99.8%)	0.5 (0.29-0.87)	
Other	86 (4)	95.1% (85.4%-98.4%)	0.76 (0.41-1.4)	
Surgical approach				
MIS	1361 (85)	94.5% (93.0%-95.7%)	Reference	Reference
Laparotomy	194 (33)	87.7% (81.7%-91.8%)	2.25 (1.86-2.72)	1.77 (1.58-1.97) ; <0.001
FIGO 2009 stage				
IA	1361 (87)	94.5% (93.0%-95.8%)	Reference	-
IB	194 (31)	86.6% (80.6%-90.9%)	2.43 (1.54-3.83)	
FIGO grade				
G1	1083 (59)	95.7% (94.0%-96.9%)	Reference	Reference
G2	336 (35)	91.2% (87.6%-93.9%)	1.76 (1.69-2.01)	0.89 (0.80-0.99) ; 0.027
G3	136 (24)	83.2% (75.3%-88.7%)	2.96 (2.36-3.71)	1.24 (1.05, 1.45) ; 0.010
Depth of myometrial invasion				
None	842 (26)	97.8% (96.4%-98.7%)	Reference	Reference
<50%	519 (61)	89.9% (86.6%-92.4%)	3.72 (3.18-4.37)	1.93 (1.72-2.17) ; <0.001
≥50%	194 (31)	86.6% (80.6%-90.9%)	5.03 (4.54-5.57)	1.38 (1.16-1.65) ; <0.001
Landmark analysis				
No adjuvant treatment	1215 (80)	94.5% (92.8%-95.8%)	Reference	
Adjuvant treatment	323 (35)	89.0% (84.6%-92.2%)	1.56 (0.57-4.26)	

FIGO: International Federation of Obstetrics and Gynecology, N: number, OS: overall survival, HR: hazard ratio, CI: confidence interval, aHR: adjusted hazard ratio, Cox P_v: P value obtained using the multivariate Cox proportionate hazard regression analysis, LVSI: lymphovascular space invasion, BMI: body mass index, MIS: minimally invasive surgery, G: grade.



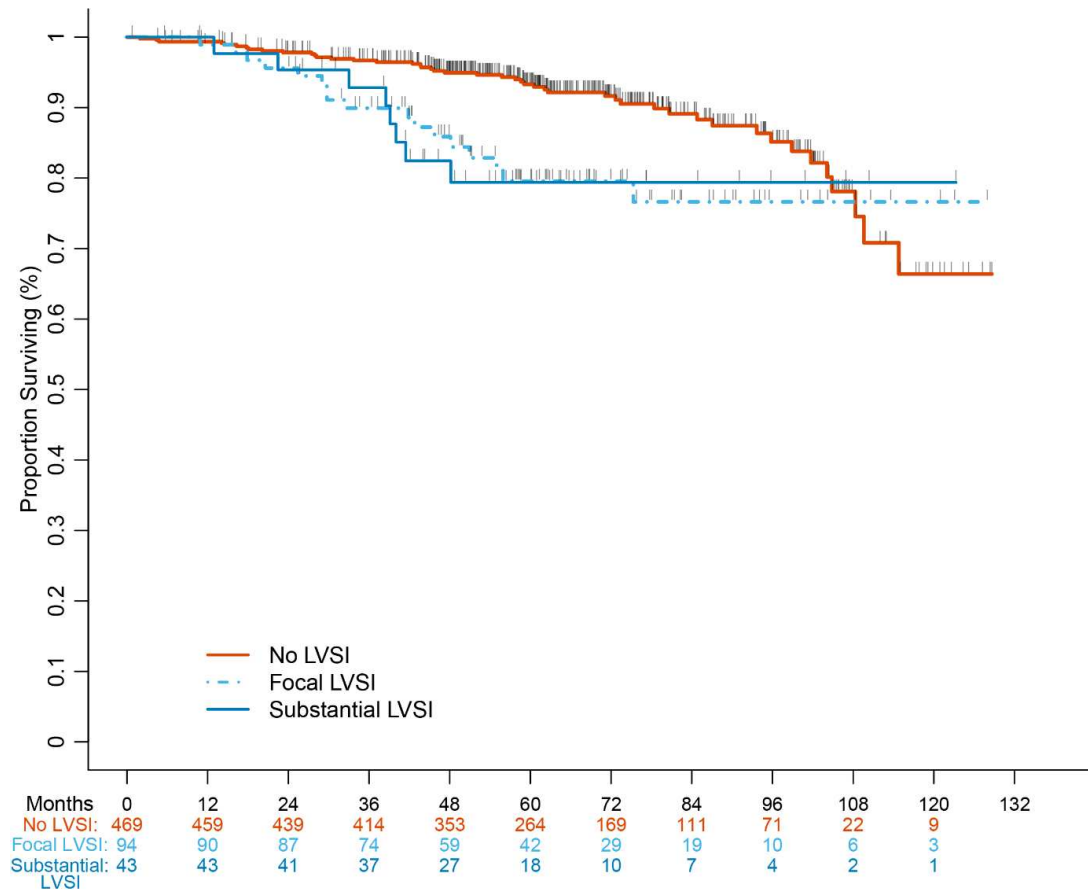
Supplemental Figure 1 – CONSORT-style diagram detailing inclusion and exclusion criteria for the study population.

Stage: according to the 2009 International Federation of Obstetrics and Gynecology (FIGO) staging system, MSK: Memorial Sloan Kettering Cancer Center – New York cohort, NRH: Norwegian Radium Hospital/Oslo University Hospital – Oslo cohort.



Supplemental Figure 2 – Kaplan-Meier curves for overall survival of patients with 2009 FIGO stage I endometrioid endometrial cancer treated surgically with pathology-proven negative nodes, according to extent of lymphovascular space invasion (N=1555).

FIGO: International Federation of Obstetrics and Gynecology, LVSI: lymphovascular space invasion.



Supplemental Figure 3 – Kaplan-Meier curves for overall survival of patients with 2009 FIGO stage I grade 1 or 2 endometrioid endometrial cancer, excluding patients with no myometrial invasion who were treated surgically with pathology-proven negative nodes, according to extent of lymphovascular space invasion (N=606).

FIGO: International Federation of Obstetrics and Gynecology, LVSI: lymphovascular space invasion.