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Supplemental information

**In-depth proteomics analysis
of sentinel lymph nodes from individuals
with endometrial cancer**

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SUPPLEMENTAL FIGURES

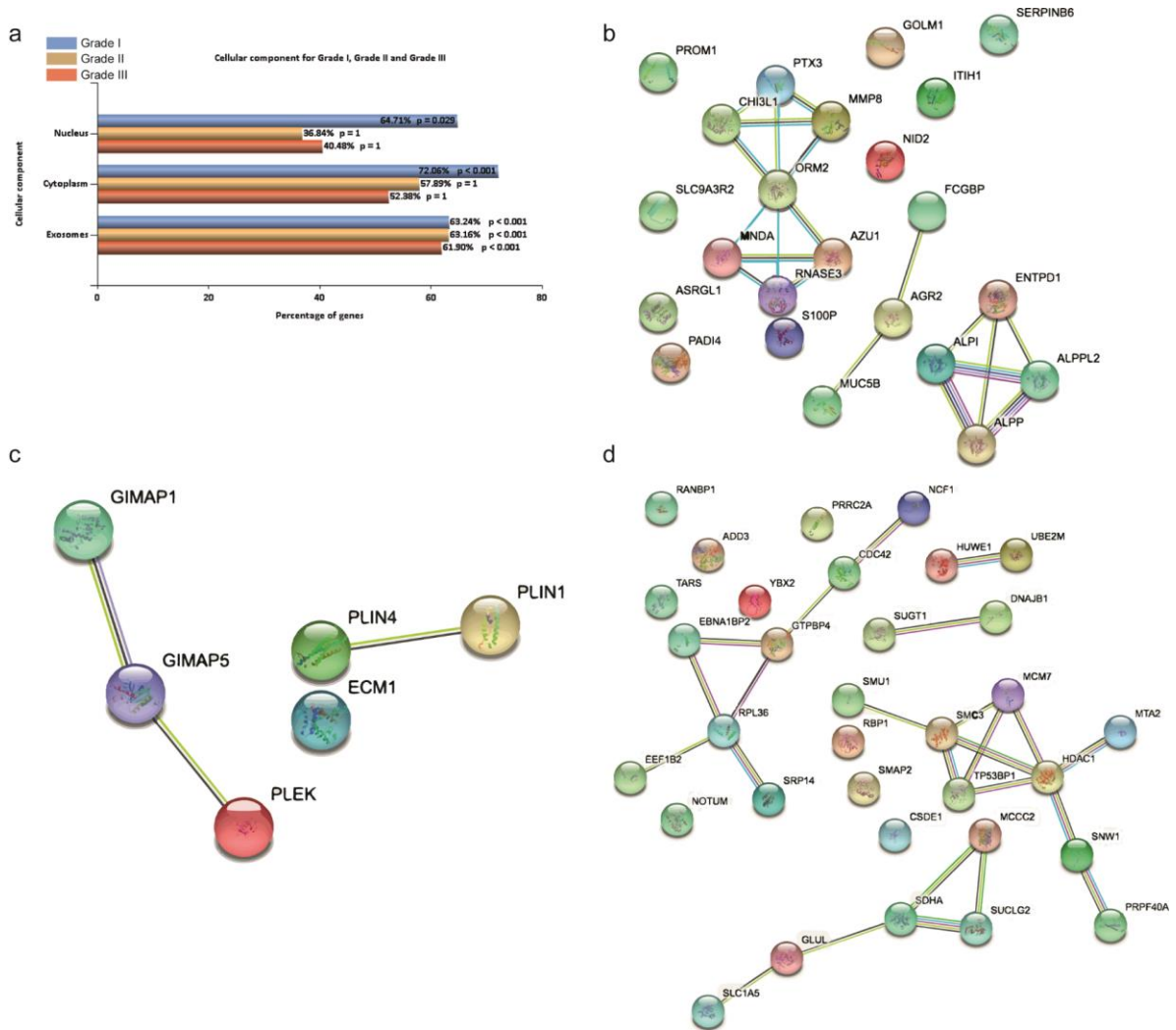


Figure S1: Sentinel lymph node proteomic analysis, related to Figure 1B. a) Funrich analyses of the specific proteins identified in different grades of sentinel nodes, string analyses of specific proteins identified in sentinel node b) Grade I, c) Grade II, d) Grade III.

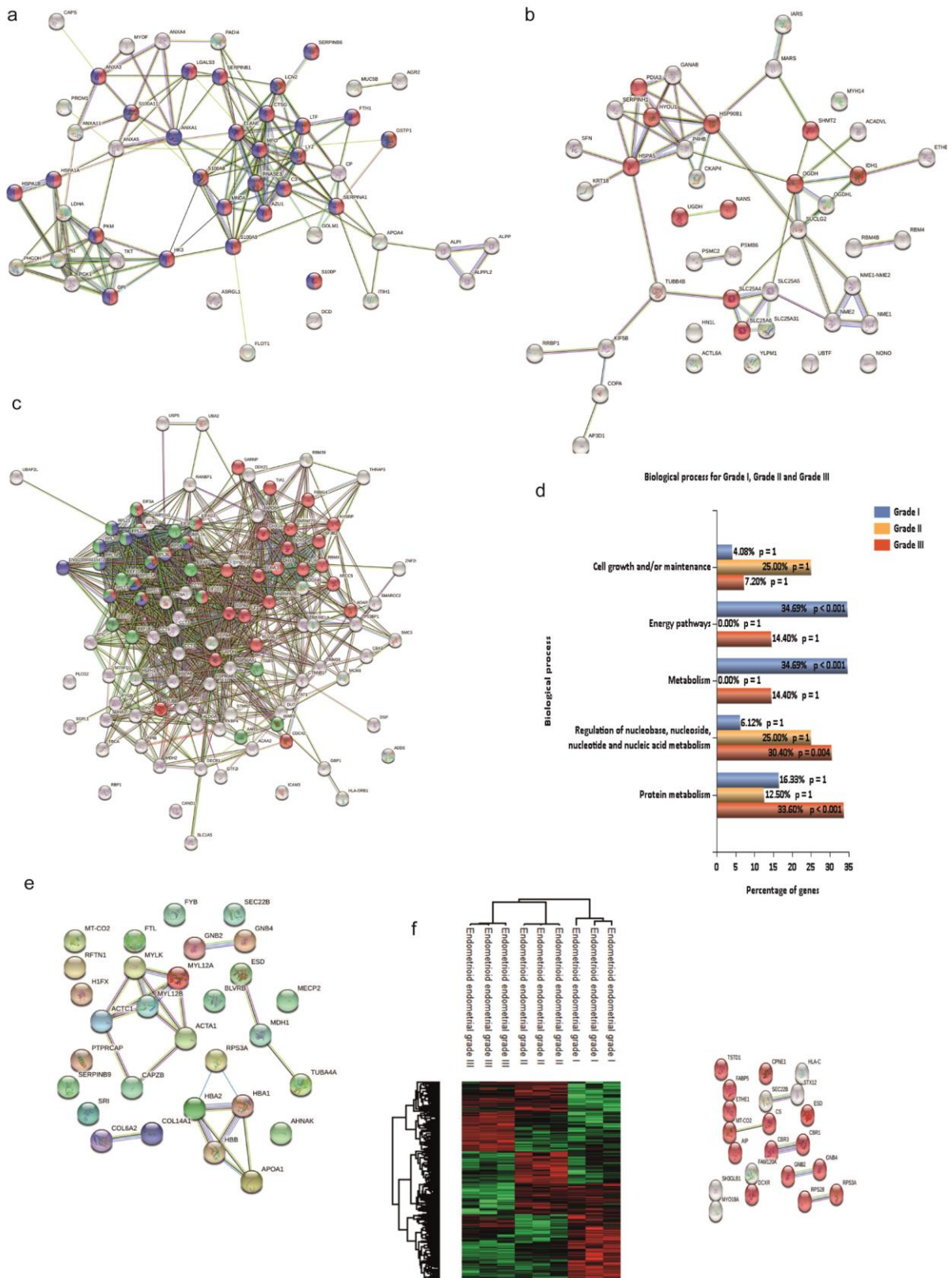


Figure S2: Analysis of heatmap clusters from SLN and EC, related to Figure 2. String analyses of over-expressed proteins identified in a) Cluster 1 of the Hierarchical clustering of the most variable proteins between healthy tissues and sentinel node grade I-III, b) Cluster 2, c) Cluster 3 and d) Funrich biological processes analyses of the 3 clusters, e) string analyses of Cluster 4 corresponding to proteins which are more represented in the normal sentinel node, f) Hierarchical clustering of the most variable proteins between healthy tissues and endometrial carcinoma grade I-III (n=3 for each category, ANOVA with permutation-based FDR < 0.01), inset string analysis of proteins have been identified in common between Grade II and Grade III.

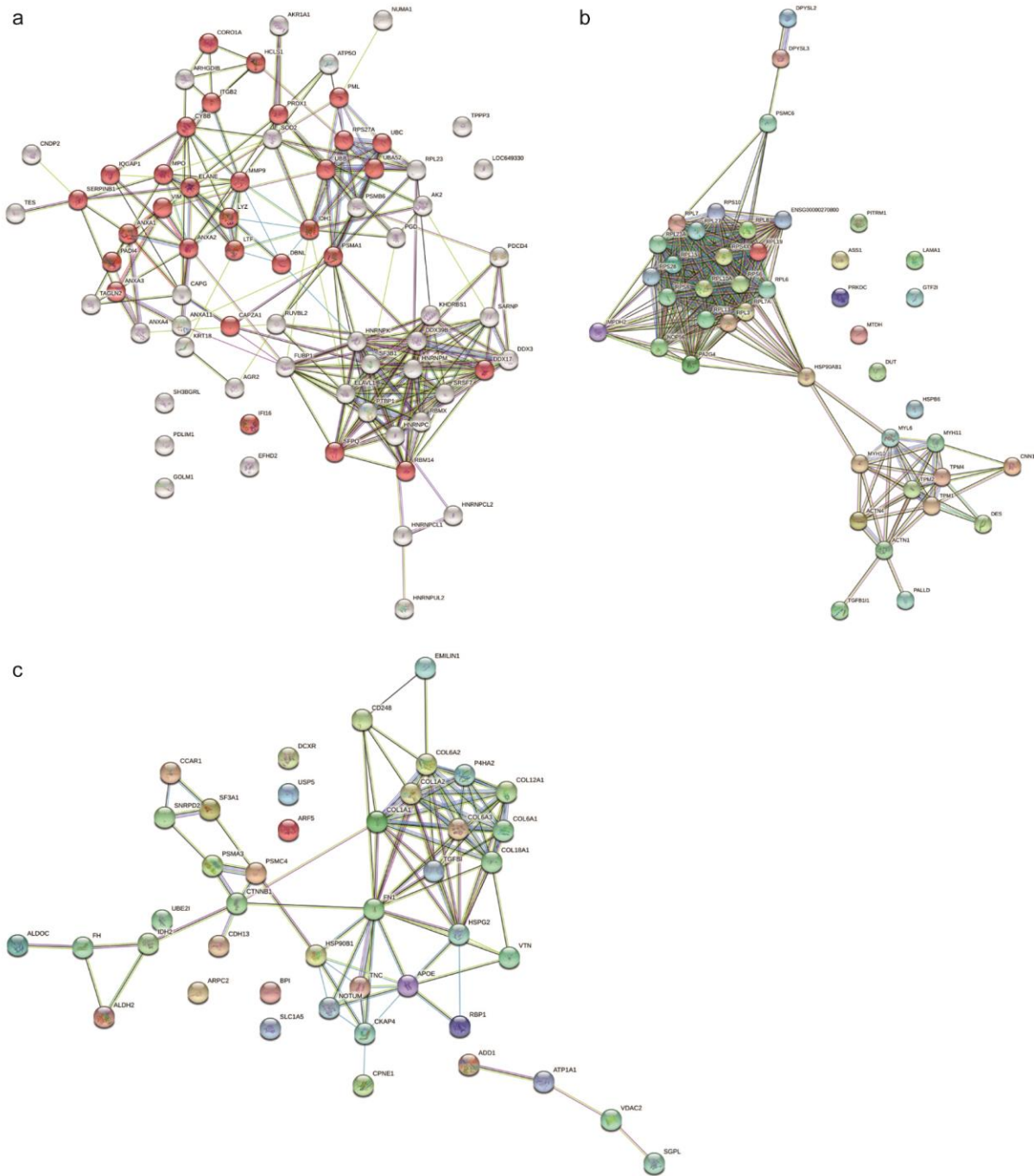


Figure S3: Analysis of cluster over-expressed from EC heatmap, related to Figure 4d. String analyses of over-expressed proteins identified in a) Cluster 1 of the Hierarchical clustering of the most variable proteins between healthy tissues and endometrial carcinoma grade I-III, b) Cluster 2, c) Cluster 3.

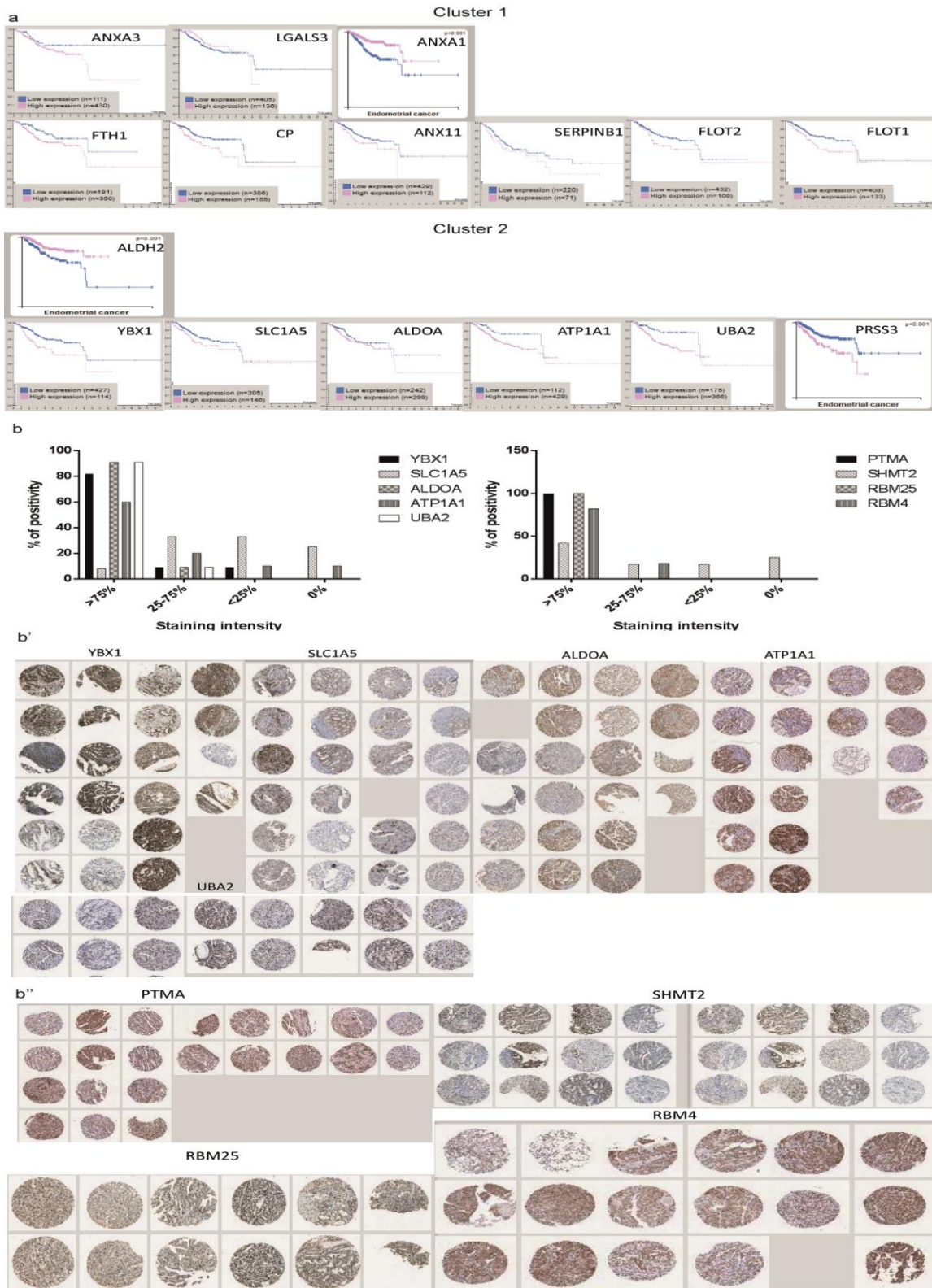


Figure S4: TCGA analysis of 2 the clusters from heatmap of all samples, related to Figure 5a. a) Overall survival curve obtained from TCGA and pathological atlas of proteins identified in Cluster 1, Cluster 2 from heatmap analysis performed on the 24 samples (sentinel node, endometrial carcinoma, and healthy tissues) after ANOVA with an FDR of 0.01 (**Figure 5a**), **b)** quantification of the IHC of markers in **b'** and **b''**, **b')** TMA analyses by IHC of specific markers detected in endometrial carcinoma and considered by TCGA as bad prognosis markers, **b'')** TMA analyses by IHC of markers detected in both sentinel nodes grade I, II and II as well as in grades I, II, III of endometrial cancer grades after correlation matrices studies.

SUPPLEMENTAL TABLES

Table S1: Information concerning patients and type of tumors identified by the pathologist, related to Figure 1A.

CASE	AGE	BMI	WHO	POPULATION	EVOLUTION	TREATMENT	SAMPLES	TISSUE TYPE
1601533BA	59	35	0	Caucasian population	No evidence of disease at 48 months	surgery, extended radiotherapy, and brachytherapy	1,2, 3 4,5,6	Endometrial Cancer Grade I Heathy endometrial
1601533AG	59	35	0	Caucasian population	No evidence of disease at 48 months	surgery, extended radiotherapy, and brachytherapy	1, 2, 3	Sentinel Lymph Node Grade I
1700689AK	67	37.5	1	Caucasian population	No evidence of disease at 28 months	surgery, pelvic radiotherapy, and brachytherapy then chemotherapy	1, 2, 3	Endometrial Cancer Grade II
1700689BH	67	37.5	1	Caucasian population	No evidence of disease at 28 months	surgery, pelvic radiotherapy, and brachytherapy then chemotherapy	1, 2, 3	Sentinel Lymph Node Grade II
1702767AG	70	31.3	0	Caucasian population	dead during chemotherapy	surgery, chemotherapy	1, 2, 3	Endometrial Cancer Grade III
1702767AA	70	31.3	0	Caucasian population	dead during chemotherapy	surgery, chemotherapy	1, 2, 3	Sentinel Lymph Node Grade III
1702767BH	70	31.3	0	Caucasian population	dead during chemotherapy	surgery, chemotherapy	1, 2, 3	Healthy Sentinel Lymph Node
1704661AD	44	34.1	0	Caucasian population		Normal endometrial epithelium	1, 2, 3	Heathy endometrial
2001811	73	27.2	0	Caucasian population	No evidence of disease at 4 months	Surgery, brachytherapy	1	Endometrial cancer grade I and associated node
1701714	65	27	0	Caucasian population	Pulmonary metastasis at 36 months	Surgery, pelvic radiotherapy, brachytherapy	1	Endometrial cancer grade II and associated node
1704931	71	41.3	0	Caucasian population	No evidence of disease at 29 months	Surgery, pelvic radiotherapy, brachytherapy	1	Endometrial cancer grade II and associated node
1805814	67	33.8	0	Caucasian population	No evidence of disease at 18 months	Surgery, pelvic radiotherapy, brachytherapy	1	Endometrial cancer grade III and associated node
1904162	74	26.7	0	Caucasian population	No evidence of disease at 14 months	Surgery	1	Endometrial cancer grade II and associated node
1702260	60	37.9	0	Caucasian population	No evidence of disease at 36 months	Surgery, brachytherapy	1	Endometrial cancer grade II and associated node
1902287	65	32.2	0	Caucasian population	No evidence of disease at 9 months	Surgery, chemotherapy, pelvic radiotherapy, brachytherapy	1	Endometrial cancer grade II and associated node

Table S5: Identified proteins in Clusters 1 & 2 which represents the proteins in common between SLN Grade I and Endometrial Grade I (Cluster 1) and SLN Grade III and Endometrial Grade III (Cluster 2), related to Figure 5.

	Cluster 1		Cluster 2	Cluster 2	
	Protein Names	Gene Names		Protein Names	Gene Names
	Ferritin heavy chain; Ferritin heavy chain, N-terminally processed; Ferritin	FTH1		Nuclease-sensitive element-binding protein 1	YBX1
	Ig kappa chain C region	IGKC		Trypsin-3	PRSS3
	Ig alpha-1 chain C region	IGHA1		Glutamine synthetase	GLUL
	Inter-alpha-trypsin inhibitor heavy chain H1	ITIH1		Sphingosine-1-phosphate lyase 1	SGPL1
	Ceruloplasmin	CP		Catenin beta-1	CTNNB1
	Complement C3	C3		Amino acid transporter; Neutral amino acid transporter B(0)	SLC1A5
	Cytochrome b-245 heavy chain	CYBB		Palmitoleoyl-protein carboxylesterase NOTUM	NOTUM
	Lysozyme C;Lysozyme	LYZ		Aldehyde dehydrogenase, mitochondrial	ALDH2
	Annexin A11	ANXA11		Ubiquitin carboxyl-terminal hydrolase 5	USP5
	Leukocyte elastase inhibitor	SERPINB1		Kinesin-1 heavy chain	KIF5B
	Erythrocyte band 7 integral membrane protein	STOM		Fructose-bisphosphate aldolase;Fructose-bisphosphate aldolase A	ALDOA
	Annexin A1;Annexin	ANXA1		Sodium/potassium-transporting ATPase subunit alpha-1	ATP1A1
	Catalase	CAT		SUMO-activating enzyme subunit 2	UBA2
	Flotillin-2	FLOT2		Core histone macro-H2A.2	H2AFY2
	Superoxide dismutase	SOD2		Tubulin polymerization-promoting protein family member 3	TPPP3
	Integrin beta	ITGB2			
	Flotillin-1	FLOT1			
	Azurocidin	AZU1			
	Eosinophil cationic protein	RNASE3			
	Neutrophil gelatinase-associated lipocalin	LCN2			
	Intestinal-type alkaline phosphatase	ALPP			