Supplementary Table 1. Urinary biomarkers in cervical cancer women identified by LC-QTOF/MS in positive mode.

No.	VIP	Rt (min)	Ion form	Formula	Metabolite Name	Trend
1	12.05	3.37	$[M+H]^+$	170.1819	3-Methylhistidine	↓
2	7.29	3.45	$[M+H]^+$	193.1236	Citric acid	↑
3	7.21	3.39	$[M+H]^+$	112.1015	Cytosine	↓
4	6.48	0.69	$[M+H]^+$	176.1846	Indoleacetic acid	↑
5	5.82	3.76	$[M+H]^+$	196.1723	Salicyluric acid	↓
6	5.79	0.89	$[M+H]^+$	150.2119	L-Methionine	↓
7	5.57	3.02	$[M+H]^+$	120.0758	Aminomalonic acid	↑
8	5.47	6.17	$[M+H]^+$	133.1147	Glutaric acid	↑
9	5.43	5.44	$[M+H]^+$	393.5717	Ursodeoxycholic acid	↓
10	5.14	2.49	$[M+H]^+$	175.1978	N-Acetylornithine	↑

No. was the number of metabolites from S- and VIP-score plots constructed from the supervised OPLS-DA analysis of urine. VIP is variable importance in the project and its value of above 5.00 showing high relevance for explaining the differences of sample groups.

Supplementary table 2. Result from ingenuity pathway analysis with MetPA.

No.	Pathway Name	Total	Expected	Hits	Raw p	Impact
1	Citrate cycle (TCA cycle)	20	0.083091	1	0.080196	0.06327
2	Histidine metabolism	44	0.1828	1	0.16876	0.0056
3	Lysine degradation	47	0.19526	1	0.17928	0.06505
4	Fatty acid metabolism	50	0.20773	1	0.18967	0
5	Glyoxylate and dicarboxylate metabolism	50	0.20773	1	0.18967	0.00326
6	Cysteine and methionine metabolism	56	0.23265	1	0.2101	0.03806
7	Pyrimidine metabolism	60	0.24927	1	0.22346	0.02127
8	Aminoacyl-tRNA biosynthesis	75	0.31159	1	0.27178	0
9	Arginine and proline metabolism	77	0.3199	1	0.27801	0.00447
10	Citrate cycle (TCA cycle)	20	0.083091	1	0.080196	0.06327

Note: Total is the total number of compounds in the pathway; the Hits is the actually matched number from the user uploaded data; the Raw p is the original p value calculated from the enrichment analysis; the Impact is the pathway impact value calculated from pathway topology analysis.