

Table S1. Multivariate regression analysis of risk factors for differential diagnosis between benign, borderline and malignant adnexal mass.

	Benign vs. BOT		Benign vs. Malignant		BOT vs. Malignant	
	OR (95% CI)	P value	OR (95% CI)	P value	OR (95% CI)	P value
Age	1.032(1.009~1.055)	0.005	1.023(0.996~1.050)	0.093	1.010(0.978~1.044)	0.547
Menopause	/	/	0.996(0.346~2.871)	0.994	1.810(0.447~7.337)	0.406
CA125	1.008(1.005~1.012)	0.000	1.010(1.006~1.014)	<0.001	1.001(0.999~1.003)	0.432
HE4	1.002(0.994~1.009)	0.612	1.000(0.997~1.003)	0.895	1.000(0.995~1.006)	0.950
RMI	0.999(0.999~1.000)	<0.001	1.051(1.024~1.078)	<0.001	1.000(0.999~1.001)	0.947
ROMA	0.989(0.951~1.029)	0.576	1.002(0.971~1.034)	0.903	1.047(1.009~1.087)	0.016
CPH-I	1.006(0.937~1.080)	0.870	0.999(0.998~0.999)	<0.001	1.009(0.967~1.052)	0.686

BOT: Borderline ovarian tumor

Table S2. CPH-I in the discrimination of benign vs. BOT adnexal mass in different age groups.

Age group (years)	Optimal cutoff values ^a					Standard cutoff values			
	AUC	Cutoff Value	Sensitivity (%)	Specificity (%)	Accuracy (%)	Cutoff Value	Sensitivity (%)	Specificity (%)	Accuracy (%)
<30	0.9194	1.069%	83.33	91.21	90.29	7%	25.00	97.80	89.32
30~49	0.6030	0.8921%	55.00	75.90	71.84	7%	15.00	92.77	77.67
≥50	0.6334	2.161%	63.16	71.93	69.74	7%	31.58	87.72	73.68

a. The optimal cut-off values were selected by maximizing the Youden index on the basis of AUC

AUC: Area under the curve;

Table S3. HE4, RMI, ROMA index and CPH-I in evaluation the risk of adnexal mass.

Reference	Country	HE4 (pmol/L)				RMI				ROMA (%)						
		AUC	OCV		SCV		AUC	OCV		SCV		AUC	OCV		SCV	
			Pre-	Post-	Pre-	Post-		Pre-	Post-	Pre-	Post-		Pre-	Post-	Pre-	Post-
Musalhi, 2016	Oman	0.824	63.6	137.9	70	70	0.853	240	944	200	200	0.887	16.4	28.4	13.1	27.7
Richards, 2015	Australia	0.756	/	/	70	140	0.638	/	/	200	200	0.741	/	/	7.4	25.3
Anton, 2012	Brazil	0.777	68	104	70	70	0.861	244	113	200	200	0.824	13.9	39.7	13.1	27.7
Karlsen^a, 2015	Denmark	0.940	/	/	/	/	0.959	/	/	200	200	0.954	/	/	/	/
Stiekema, 2014	Netherlands	Pre 0.95, post 0.96	/	/	70	70	Pre 0.91, post 0.89	/	/	200	200	Pre 0.95, post 0.95	/	/	12.9	27.8
Hogdall, 2016	Denmark	0.933	/	/		//	0.959	/	/	/	/	0.954	/	/	/	/
Minar^a, 2018	Czech	/	/	/	/	/	/	/	/	/	/	0.88	/	/	13.1	27.7
Nikolova^a, 2017	Macedonia	0.934	/	/	70	70	0.880	/	/	25	25	0.929	/	/	7.4	25.3
Sandri, 2013	Italy	0.92	/	/	70	70	/	/	/			0.93	/	/	7.4	25.3
SU WEI, 2016	China	0.990	/	/	140	140	/	/	/	/	/	0.994	/	/	11.4	29.9
Gorp, 2012	Belgium	/	/	/	/	/	0.931			200	200	0.893	/	/	12.5	14.4
Moore, 2010	America	/	/	/	/	/	0.87	/	/	/	/	0.953	/	/	/	/
Karlsen, 2012	Denmark	0.939	/	/	70	140	0.958	/	/	200	200	0.954	/	/	7.4	25.3
Yanaranop, 2017	Thailand	0.824	/	/	70	140	0.876	/	/	200	200	0.862	/	/	11.4	29.9
Winarto, 2014	Indonesia	0.899	103.4	103.4	70	70	0.8731	368.7	368.7	200	200	0.9046	28	54	7.4	25.3
Cho, 2015	Korea	0.859	69.2	72.3	/	/	/	/	/	/	/	0.860	15.1	19.3	/	/
Zhang, 2015	China	0.902	71.5	151.4	92.1	121	/	/	/	/	/	0.919	20.7	34.5	11.4	29.9
The, 2018	Malaysia	0.895	140	140	70	70	/	/	/		/	Pre 0.859, Post 0.907	10.1	40.0	11.4	29.9
Abdalla, 2018	Poland	0.928	54	92	70	140	/	/	/	/	/	0.928	8.8	29.5	11.4	29.9
Terlikowska, 2016	Poland	0.895	70.3	109.1	140	140	/	/	/	/	/	0.918	14.9	33.4	11.4	29.9

Bandiera, 2011	Italy	Pre 0.9016 0.9400	post /	/	70	140	/	/	/	/	/	/	/	/	/	7.4	25.3
Huy, 2018	Viet Nam	0.894		55.4	59.3	70	140	/	/	/	/	/	0.912	9.89	25.62	7.4	25.3
Fujiwara, 2015	Japan	Type □ 0.82; □ 0.95		44	63.3	/	/	/	/	/	/	/	Type □ 0.85 ; □ 0.96	6.0	19.6	/	/
Lycke, 2018	Sweden	Pre 0.867 Post 0.822	/	/	70	140	Pre 0.883 Post 0.849	/	/	200	200	Pre 0.839 Post 0.841	/	/	11.4	29.9	
Chen, 2015	China	0.963		87.6	87.6	140	140	/	/	/	/	0.972	18.1	31.5	11.4	29.9	
Salim, 2019	Karachi	/	/	/	/	/	/	/	/	/	/	0.914	/	28.11	/	27.7	
Kim, 2019	Korea	0.896		83.0	85.5	92.1	121.1	/	/	/	/	Pre 0.824 Post 0.935	18.8	22.5	11.4	29.9	
Melo, 2018	Portugal	0.872		71.6	71.9	70	140	0.907	308	243	200	200	0.904	20.3	34.0	7.4	25.3
Romagnolo, 2016	Italy	Pre 0.918 Post 0.928		63.1	102.3	150	150	/	/	/	/	Pre 0.922 Post 0.974	13.2	32.5	13.1	27.7	
Ortiz-Muñoz, 2014	Spain	0.920		77	140	140	140	/	/	/	/	0.945	/	/	11.4	29.9	
Xu, 2016	China	Pre 0.817 Post 0.862		70	84.8	140	140	/	/	/	/	Pre 0.818 Post 0.882	13.4	18.7	11.4	29.9	
Shen, 2017	China	0.9155	/	/	70	140	/	/	/	/	/	0.9421	/	/	7.4	25.3	
Chan, 2013	six Asian countries	0.93		78.6	78.6	70	140	/	/	/	/	/	7.3	24.6	7.4	25.3	
Cradic, 2018	America	/	/	/	/	/	/	/	/	/	/	Pre 0.95 Post 0.94	1.00	2.44	1.14	2.99	
Present	China	0.8596		49.5	64.5	70	70	0.9449	101	538.9		0.8806	7.606	18.51	13.1	27.7	

a. The studies of Karlsen, Minar and Nikolova evaluated the CPH-I, and the AUCs were 0.960, 0.870 and 0.924 respectively, with the same standard cut-off value of 7%, higher than our present study(AUC=0.8643).And we established optimal cut-off value of 2.27 and 3.316 for pre- and post-menopausal women, respectively. AUC: Area under the curve; OCV: Optimal cut-off value; SCV: Standard cut-off value.