

Supplementary table 1. Basic characteristics of ovarian yolk sac tumor patients included in the study

Characteristic	Total (N= 427)	Training (N= 299)	Testing (N= 128)	p.value
Age				
≤23y	243 (56.9)	160 (53.5)	83 (64.8)	0.089
24~39y	139 (32.6)	106 (35.5)	33 (25.8)	
≥40y	45 (10.5)	33 (11.0)	12 (9.4)	
Race				
White	272 (63.7)	185 (61.9)	87 (68.0)	0.444
Black	71 (16.6)	51 (17.1)	20 (15.6)	
Others	84 (19.7)	63 (21.1)	21 (16.4)	
Marital_Status				
Single	321 (75.2)	219 (73.2)	102 (79.7)	0.109
Married	81 (19.0)	58 (19.4)	23 (18.0)	
Widowed/Blank	25 (5.9)	22 (7.4)	3 (2.3)	
CA125				
Negative/Borderline	26 (6.1)	19 (6.4)	7 (5.5)	0.663
Positive/elevated	175 (41.0)	126 (42.1)	49 (38.3)	
Unknown	226 (52.9)	154 (51.5)	72 (56.2)	
Laterality				
Unilateral	401 (93.9)	280 (93.6)	121 (94.5)	0.897
Bilateral	26 (6.1)	19 (6.4)	7 (5.5)	
Size				
≤195mm	330 (77.3)	225 (75.3)	105 (82.0)	0.16
>195mm	97 (22.7)	74 (24.7)	23 (18.0)	
Seer_stage				
Localized	146 (34.2)	92 (30.8)	54 (42.2)	0.06
Regional	124 (29.0)	87 (29.1)	37 (28.9)	
Distant	146 (34.2)	113 (37.8)	33 (25.8)	
Unknown	11 (2.6)	7 (2.3)	4 (3.1)	
AJCC_stage				
I	208 (48.7)	133 (44.5)	75 (58.6)	0.078
II	30 (7.0)	24 (8.0)	6 (4.7)	
III	98 (23.0)	73 (24.4)	25 (19.5)	
IV	54 (12.6)	43 (14.4)	11 (8.6)	
Unknown	37 (8.7)	26 (8.7)	11 (8.6)	
Chemotherapy				
No/Unknown	56 (13.1)	39 (13.0)	17 (13.3)	1
Yes	371 (86.9)	260 (87.0)	111 (86.7)	
Systemic_therapy				
No/Unknown	204 (47.8)	144 (48.2)	60 (46.9)	0.89
Yes	223 (52.2)	155 (51.8)	68 (53.1)	
Types_of_surgery				
USO (hys/nonhys)	133 (31.1)	85 (28.4)	48 (37.5)	0.201
BSO (hys/nonhys)	26 (6.1)	16 (5.4)	10 (7.8)	
SO and Ome (hys/nonhys)	118 (27.6)	84 (28.1)	34 (26.6)	
Debulking	80 (18.7)	60 (20.1)	20 (15.6)	
Other	70 (16.4)	54 (18.1)	16 (12.5)	
Regional_node				
Negative	190 (44.5)	129 (43.1)	61 (47.7)	0.485
Positive	28 (6.6)	22 (7.4)	6 (4.7)	
Unknown	209 (48.9)	148 (49.5)	61 (47.7)	
Liver				
No/Unknown	413 (96.7)	290 (97.0)	123 (96.1)	0.857
Yes	14 (3.3)	9 (3.0)	5 (3.9)	

Notes: AJCC: American Joint Committee on Cancer staging system, USO (Hys/Nonhys): Bilateral salpingo-oophorectomy (Hysterectomy/Non-hysterectomy), BSO (Hys/Nonhys): Bilateral salpingo-oophorectomy (Hysterectomy/Non-hysterectomy), SO and Ome (Hys/Nonhys): Salpingo-oophorectomy and oophorectomy (Hysterectomy/Non-hysterectomy).

Supplementary table 2. Univariate and multivariate Cox regression analyses in the training cohorts

Variables	Univariate analysis		Multivariable analysis	
	HR (95% CI)	p.value	HR (95% CI)	p.value
Age				
≤23y	Reference		Reference	
24~39y	4.94 (1.96-12.50)	<0.01	4.81 (1.75-13.22)	0.002
≥40y	20.20 (7.84-51.90)	<0.01	10.16 (3.31-31.21)	<0.001
Race				
White	Reference		-	
Black	0.66 (0.26-1.71)	0.4		
Others	0.38 (0.14-1.09)	0.07		
Marital Status				
Single	Reference		Reference	
Married	3.10 (1.55-6.18)	<0.01	1.56 (0.72-3.39)	0.258
Widowed/Blank	4.41 (1.85-10.50)	<0.01	1.89 (0.66-5.40)	0.237
CA125				
Negative/Borderline	Reference		-	
Positive/elevated	3.18 (0.43-23.70)	0.26		
Unknown	1.85 (0.25-13.90)	0.55		
Laterality				
Unilateral	Reference		-	
Bilateral	4.89 (2.24-10.70)	0.01		
Size				
≤195mm	Reference		-	
>195mm	0.58 (0.24-1.37)	0.21		
Seer stage				
Localized	Reference		Reference	
Regional	1.11 (0.28-4.46)	0.88	0.36 (0.04-3.39)	0.374
Distant	7.32 (2.57-20.80)	<0.01	0.41 (0.03-5.83)	0.511
Unknown	7.07 (1.29-38.70)	0.02	6.75 (0.65-69.68)	0.109
AJCC stage				
I	Reference		Reference	
II	2.53 (0.46-13.80)	0.28	4.29 (0.36-51.15)	0.250
III	6.37 (2.05-19.80)	<0.01	14.61 (1.15-186.01)	0.039
IV	20.60 (6.98-60.60)	<0.01	16.69 (1.16-240.50)	0.039
Unknown	3.55 (0.79-15.90)	0.1	1.04 (0.13-8.52)	0.969
Chemotherapy				
No/Unknown	Reference		-	
Yes	0.63 (0.28-1.42)	0.26		
Systemic therapy				
No/Unknown	Reference		-	
Yes	1.24 (0.65-2.37)	0.52		
Types of surgery				
USO (hys/nonhys)	Reference		-	
BSO (hys/nonhys)	5.58 (0.79-39.60)	0.09		
SO and Ome (hys/nonhys)	5.27 (1.15-24.00)	0.03		
Debulking	11.60 (2.64-51.20)	<0.01		
Other	8.68 (1.92-39.20)	<0.01		
Regional node				
Negative	Reference		Reference	
Positive	1.48 (0.32-6.86)	0.62	0.74 (0.14-3.80)	0.714
Unknown	3.05 (1.44-6.44)	0.01	3.33 (1.52-7.28)	0.003
Liver				
No/Unknown	Reference		Reference	
Yes	9.08 (3.50-23.60)	<0.01	4.00 (1.18-13.56)	0.026

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