

Table S1. Multivariate cox proportional hazards regression model analysis of Disease-free survival of serous ovarian carcinoma patients in the discovery set.

Factor	Coefficient	Hazard Ratio (HR)	95% Confidence Interval (CI)	p- value
High Peritumoural Tumour Budding (PTB)	0.5430	1.205	(0.8726, 2.632)	0.191
Low Tumour-stroma Ratio (TSR)	0.7642	1.637	(0.8716, 1.9227)	0.0962
Mature Stromal Type	- 0.4628	0.389	(0.1645, 0.8760)	0.002

Table S2: Summary of key histopathological Features and their diagnostic and prognostic relevance in Low-Grade and High-Grade Serous Ovarian Carcinoma (LGSOC and HGSOC)

Histopathological Feature	Diagnostic and Prognostic Relevance
LVSI (Lymphovascular Space Invasion)	Indicator of aggressive behaviour and lymph node metastasis. Strongly associated with HGSOC , less commonly observed in LGSOC .
MVD (Microvessel Density)	Linked to tumour aggressiveness and metastatic potential. Higher in HGSOC , while typically lower in LGSOC .
TB (Tumor Budding)	Indicator of metastatic potential and poorer outcomes. Frequently seen in HGSOC but rare or absent in LGSOC .
TILs (Tumor-Infiltrating Lymphocytes)	Predictor of better prognosis and therapy responses. High peritumoral TILs are associated with HGSOC , while low TILs are more typical in LGSOC .
TSR (Tumor-Stroma Ratio)	Prognostic predictor of disease-free survival. Low TSR (more stroma) is linked with HGSOC , while high TSR (less stroma) is often seen in LGSOC .
Stromal Type	Independent prognostic marker for disease-free survival. Immature-intermediate stroma is common in HGSOC , while mature stroma is more frequent in LGSOC .
TLS (Tertiary Lymphoid Structures)	Associated with better overall survival. More commonly found in HGSOC , while rare in LGSOC .