Table SI. Clinicopathological characteristics of 127 patients with bladder urothelial cancer treated by cystectomy.

Feature	Value
Age (years)	
Median (range)	64 (39-88)
≤65	73 (57.48)
>65	54 (42.52)
Sex	
Male	113 (88.98)
Female	14 (11.02)
Smoking history	
Yes	68 (53.54)
No	59 (46.46)
Clinical stage	
pTis/pTa	8 (6.30)
pT1	37 (29.13)
pT2	34 (26.77)
pT3	36 (28.35)
pT4	12 (9.45)
pN stage	
pN0	106 (83.46)
pN1	15 (11.81)
pN2+	6 (4.72)
NMIBC (≤pT1)	45 (35.43)
MIBC (>pT1)	82 (64.57)
Pathological grade	
Low	11 (8.67)
High	116 (91.33)
Lymphovascular invasion	
Yes	38 (29.92)
No	89 (70.08)
APE1 grade	
0	6 (4.72)
1	18 (14.17)
2	40 (31.50)
3	63 (49.61)
VEGFA grade	
0	29 (22.83)
1	31 (24.40)
2	48 (37.80)
3	19 (14.96)
CD163 grade	
0 (<10%)	11 (8.66)
1 (10-20%)	54 (42.52)
2 (21-50%)	34 (26.77)
3 (>50%)	28 (22.05)

Values are expressed as n (%) unless otherwise specified. VEGFA, vascular endothelial growth factor A; APE1, apurinic/apyrimidinic endodeoxyribonuclease 1; NMIBC, non-muscle invasive bladder cancer.

Table SII. Association of immunohistochemistry marker expression with clinicopathological parameters.

Protein/expression status	Stage			Grade			LVI		
	NMIBC	MIBC	P-value	Low	High	P-value	Yes	No	P-value
APE1			0.711			0.744			0.019
Low	24	40		6	58		12	52	
High	21	42		4	59		24	39	
VEGFA			0.355			0.748			0.554
Low	24	36		4	56		15	45	
High	21	46		6	61		21	46	
CD163			0.197			0.054			n/a
Low	26	37		8	55		18	45	
High	19	45		2	62		18	46	

VEGFA, vascular endothelial growth factor A; APE1, apurinic/apyrimidinic endodeoxyribonuclease 1; NMIBC, non-muscle invasive bladder cancer; LVI, lymphovascular invasion.

Table SIII. Correlation of APE1 and VEGFA expression with CD163^{+} macrophage infiltration in bladder cancers.

Protein/statistic	APE1	VEGFA	CD163
APE1			
r value	1.000	0.208	0.196
P-value		0.018	0.027
VEGFA			
r value	0.208	1.000	0.408
P-value	0.018		<0.001
CD163			
r value	0.196	0.408	1.000
P-value	0.027	<0.001	

VEGFA, vascular endothelial growth factor A; APE1, apurinic/apyrimidinic endodeoxyribonuclease 1.

Table SIV. Correlation of APE1, VEGFA and CD163 expression in muscle invasive bladder cancer tissues with multiple immunofluorescence staining.

Factor 1	Factor 2	R	P-value
Tumor APE1	Stroma CD163	0.9090909	5.55×10^{-5}
Tumor APE1	Intratumor CD163	0.8363636	0.002564662
Tumor APE1	Total CD163	0.8363636	0.002564662
Tumor APE1	Tumor VEGFA	0.6545455	0.03382516
Tumor APE1	Stroma CD34	0.6363636	0.0403864

VEGFA, vascular endothelial growth factor A; APE1, apurinic/apyrimidinic endodeoxyribonuclease 1.

Table SV. Area under the curve for ROC analysis.

Test result variable(s)	Area	Std. error	Asymptotic sig.	Asymptotic 95% CI	
				Lower boundary	Upper boundary
APE_VEGF_CD163_T_N	0.867	0.036	0.000	0.797	0.936
APE1_T_N	0.824	0.039	0.000	0.747	0.901
T_N	0.773	0.042	0.000	0.690	0.856
T_N_APE1_CD163	0.849	0.038	0.000	0.775	0.923
APE1_CD163_VEGF	0.727	0.048	0.000	0.634	0.820

Comparing area under the curve for multiple combination of variables. ROC, receiver operating characteristics; Std., standard; sig., significance; VEGFA, vascular endothelial growth factor A; APE1, apurinic/apyrimidinic endodeoxyribonuclease 1; CI, confidence intervals.