

Supplementary Table 2. Patient characteristics of bladder specimens used for the validation.

BLCA Tissue samples	
	BLCA Patients characteristics
Stage	Ta (n = 16; 13.4%)
	T1 (n =31; 26.3%)
	T2 (n =39; 32.7 %)
	T3 (n =24; 20.1%)
	T4 (n =8; 6.7%)
	Unknown (n = 1; 0.8%)
Lymph node metastasis	N0 (n = 27; 22.7%)
	N1 (n =10; 8.4%)
	N2 (n =9; 7.6%)
	N3 (n =3; 2.5%)
	Nx (n = 70; 58.8 %)
Smoking status	n = 42(35.3%; Non-Smokers)
	n = 36 (30.3%; Current Smokers)
	n = 41 (34.4%; Former Smokers)
Gender	n = 84(70.6%; Male)
	n = 35(29.4%; Female)
LVI Status	LVI Neg (n = 67; 56.3 %)
	LVI Pos (n =52; 43.7%)
Cohorts	UWH (n = 69; 58%)
	UTSW (n = 27; 22.7%)
	BCM (n =23 ;19.3%)