

BCG Susceptibility Panel for NMIBC

This test combines the results for relevant single nucleotide variants, methylation variants, and immune infiltrate prediction to reach a final score for prediction of BCG treatment success for NMIBC.

Panel name BCG on NMIBC

URL: https://github.com/lucy924/nanopore_multiBM_pipeline

Clinical Details

Sample Name: test4predict

Bladder lesion, transurethral resection:

Papillary urothelial carcinoma, high grade (grade 3/3 - WHO 1973)

Noninvasive, pTa

Specimen: TURBT biopsy

Overall Result and Interpretation

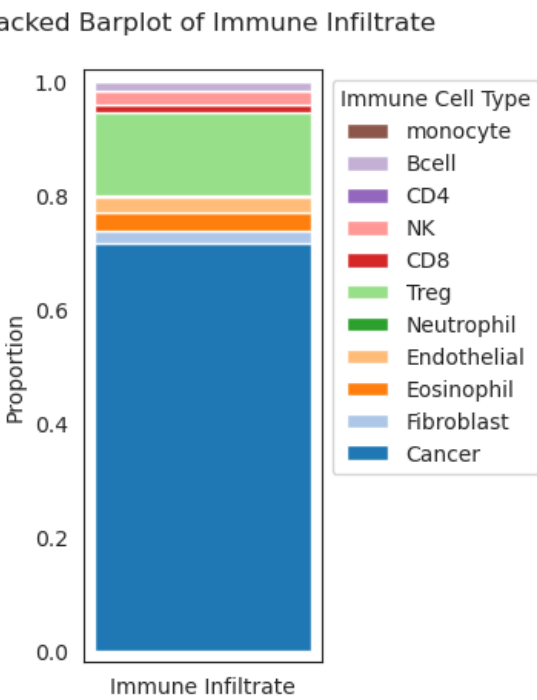
Tumour is **Somewhat Likely** to respond to treatment.

Guidance: Result is out of Highly Unlikely, Somewhat Unlikely, Somewhat Likely, Highly Likely

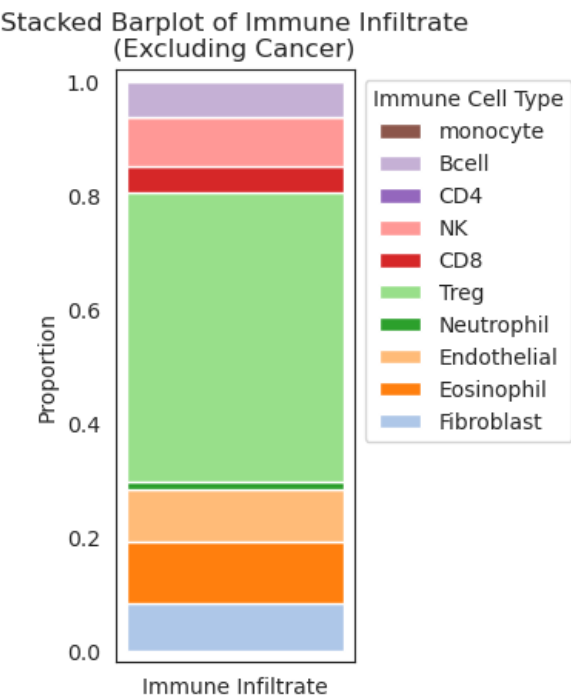
Comments: The result is an aggregate score obtained by combining the scores of biomarkers that reach read depth threshold and fall within respective scoring parameters.

Immune infiltrate results

Immune infiltrate proportions (full)



Immune infiltrate proportions (non-malignant)



Raw results

Guidance: Total (normalised) Score is a scale of 0% – 100%. 0% will respond and 100% will not respond to BCG treatment. Most results will fall between 25% and 75%. We recommend treatment with BCG when the result is <50% for patients who are otherwise healthy, and <40% for all other patients.

ID	Biomarker name	Biomarker type	Result Options	Result	Score
004	NOS3	snv	T T/T A/T G/A A G/G G	G G	0.16
005	NOS3	snv	C C/C T/T T	T C	0.53
009	CHST11	mod	0.0-1.0	0.12	2.63
010	KLF8	mod	0.0-1.0	0.24	1.67
011	GPR158	mod	0.0-1.0	0.26	2.92
012	C12orf42	mod	0.0-1.0	0.23	1.78
013	WDR44	mod	0.0-1.0	0.69	1.13
014	FLT1	mod	0.0-1.0	0.04	1.54
022	PMF1	mod	methyalted/unmethyalted	unmethyalted	1.21
025	IL1B	snv	G G/G A/A A	G A	1.0
026	IL1RAP	snv	G G/G A/A A G	G A	1.0
027	IL1RAP	snv	G G/G C/C C	G C	1.0
028	IL1RAP	snv	T T/T A/T C/A A C/C C	A C	1.0
029	IL1RAP	snv	G G/G A/A A	G A	1.0
030	IL18R1	snv	C C/C T/T T	T T	0.16
031	IL18R1	snv	G G/G C/C C	T T	1.0
032	IL18R1	snv	C C/C A/A A	T T	1.0
033	IL18R1	snv	C C/C T/T T	T T	0.16
035	IL18R1	snv	G G/G A/A A	A A	0.16
036	IL18R1	snv	G G/G A/A A	A A	1.0
401	LMR	immune_ratio	0.0-10.0	2.97	4.94
402	NLR	immune_ratio	0.0-10.0	0.34	1.65
403	monocyte_inf	immune_inf	0.0-1.0	NA	NA
405	Bcell_inf	immune_inf	0.0-1.0	0.02	1.71
406	CD4_inf	immune_inf	0.0-1.0	0.0	0.33

ID	Biomarker name	Biomarker type	Result Options	Result	Score
408	CD8_inf	immune_inf	0.0-1.0	0.01	0.07
409	Treg_inf	immune_inf	0.0-1.0	0.14	1.52
Total (raw)					33.50
Total (normalised to 0.0 - 100.0)					47.05

Methodology

Nanopore sequencing was used to detect single nucleotide variants, methylation status and immune status (by methylation) of the tumour sample.