

Supplementary Table 7 – Variable Importance for predicting BCLM CD4+PD1+ using primary tumor clusters. Larger values imply higher variable importance. Clusters used in the optimal model are marked with “X.”

Cluster in Primary	Included In Optimal Model	Variable Importance
CD4+PD1+	X	72.705
CD8a+PD1+	X	12.524
α SMA+	X	9.352
CD163+MMP9+		8.851
CD206+		6.388
CD68+		5.221
CD31+		2.076
CD14+		0.000
CD68+MMP9+		0.000
CD163+		0.000
CD68+CD163+CD206+		0.000
MMP9+		0.000
CD56+		0.000
CD8a+PD1-		0.000
PD-L1+		0.000
Ki-67+		0.000
pERK+		0.000
HIF1 α +		0.000
E-cad+		0.000
Collagen+		0.000