

Additional File 4

	Pathologically Node Positive	Pathologically Node Negative
Predicted Node Positive by GP using a single rule	7 [§]	0
Predicted Node Negative by GP using a single rule	3	21 [†]

§ True positive subjects

† True negative subjects

Accuracy: 90%
Sensitivity: 70%
Specificity: 100%
Positive Predictive Value: 100%
Negative Predictive Value: 88%

Performance of the rule “ $(MAP2K6 / KDR) \times (1.0 - (MAP2K6 / ICAM1)) > .71$ ” selected from the meta-rule generated using the three most frequently used genes, viz. *KDR*, *MAP2K6* and *ICAM1*, on the validation set and result metrics.