AUC for Fisher's Exact Test and the **Beta-Binomial Model** MIMOSA: constrained 1.00 12000 MIMOSA: unconstrained True 0.98 8000 0.96 (x) 0009 0.94 0.92 2000 Fisher's Exact Test MIMOSA: constrained 0.90 0 MIMOSA: unconstrained 10000 20000 30000 50000 75000 150000 0.0000 0.0005 0.0010 0.0015 1e+05 Number of Events Fisher MIMOSA: constrained MIMOSA: unconstrained Fisher MIMOSA: constrained MIMOSA: unconstrained 1.0 0.4 8.0 0.3 0.6 sensitivity True FDR 0.4 0.2 0.2 -0.0 0.2 0.4 0.8 0.1 0.2 0.0 0.3 0.4 0.6 1.0

Nominal FDR

1 – specificity