**Suppl 4.** Correlation between the presence of a PIK3R1 gene mutation and pathological complete response in human breast cancer patients. Using a patient cohort database, the frequency o*f PIK3R1* mutation in the pathological complete response group (PCR) was compared with the non-pathological complete response (non-PCR) group for breast cancer patients receiving neo-adjuvant treatment. A p value was determined by Fisher’s exact test.

