**Supplementary Table Legends**

**Supplementary Table 1.** Biopsies acquired in each patient.

**Supplementary Table 2.** Antibodies used in RPPA.

**Supplementary Table 3.** Response to REMARK guidelines.

**Supplementary Table 4.** Patient and tumor characteristics.

**Supplementary Table 5.** The tumor cellularity of each biospecimen as assessed by H&E.

**Supplementary Table 6.** Correlation of protein expression by RPPA between different biospecimens (Spearman's correlation). Analysis was conducted in samples with ≥20% cellularity as well as in all samples separately.

**Supplementary Table 7.** Comparison of protein expression by RPPA between different biospecimens (Student’s t-test).

**Supplementary Table 8.** Correlation of biomarker expression by RPPA between CNB, central and peripheral samples based on biospecimen variables.

**Supplementary Table 9.** Correlation of biomarker expression by RPPA and tumor cellularity in CNB, central and peripheral samples. Analysis was conducted in samples with ≥20% cellularity as well as in all samples separately.

**Supplementary Table 10.** Correlation of biomarker expression by RPPA in CNB and FNA with central and peripheral samples based on whether neoadjuvant chemotherapy had been administered.

**Supplementary Table 11.** Comparison of the correlation of biomarker expression by RPPA in CNB and FNA with central and peripheral samples based on whether neoadjuvant chemotherapy had been administered.