**SSP RELIABILITY
FOR BREAST CANCER**

Breast cancers constitute a diverse and heterogeneous group of diseases. According to gene-expression profiling, breast cancers can be classified into one of five molecular subtypes: luminal A, luminal B, basal-like, HER2 and normal breast-like. Single sample predictor (SSP) analysis can also categorize breast cancers into three subtypes. A retrospective study by Weigelt and coauthors assessed the clinical usefulness of SSPs by determining the agreement between the different SSPs for the identification of the five breast cancer molecular subtypes established by gene-expression profiling.

“Our findings show that different SSPs and methods used for molecular subtype assignment produce inconsistent results. The classification of breast cancers into molecular subtypes other than basal-like cancer is strongly dependent on the SSP used. The agreement for each class was modest with the exception of the basal-like subtype” explains Reis-Filho, senior investigator of the study. Although different SSPs produced equivalent associations with outcome when applied to three cohorts of breast cancer, the patients assigned to luminal A, luminal B, HER2 and normal breast-like subtypes varied according to the SSP employed. Consistent with previous observations suggesting that normal breast-like cancers would represent samples with disproportionately high content of normal tissue rather than a molecular subtype, none of the microdissected breast cancers analyzed were classified as being normal breast-like regardless of the SSP used.

The authors argue that molecular subtypes of breast cancer other than normal breast-like are likely to exist, however different SSPs do not reliably assign the same patients to the same molecular subtypes. Stringent standardization of methodologies and definitions for identification of breast cancer molecular subtypes are needed.

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Original article Weigelt, B. *et al.* Breast cancer molecular profiling with single sample predictors: a retrospective analysis. *Lancet Oncol.* **11**, 339–349 (2010)