Her2 : overexpression of HER2 and other genes pertaining to the HER2 amplicon. a high frequency of *TP53* and *PIK3CA* mutations. The HER2-enriched tumours showed *HER2* amplification in 80% of cases

Basal: the lack of expression of ER and HER2 and by positive expression of genes characteristic of basal-like cells of the breast and by high proliferative activity. *TP53* mutation is most frequent in the basal-like cancers, with most of the significantly mutated genes in luminal tumours being absent. *TP53* was mutated in 80% of basal-like BCs

Normal: normal breast-like class displayed a triple-negative phenotype but did not cluster with the basal-like centroid and was characterised by expression profiles similar to those found in normal breast tissue.

Luminal: heterogeneous with respect to the expression of other genes and outcome

Luminal B: mutations affecting both *TP53* and *PIK3CA*. *PIK3CA* and *TP53* were mutated in 29% of luminal B tumours

Luminal A: the greatest number and diversity of significantly mutated genes, with *PIK3CA* at 45% being the most frequent. 40% of luminal A tumours had a *PIK3CA* mutation.

The vast majority (76%) of BC are characterised and driven by recurrent copy number alterations (CNAs) (C-class) while tumours characterized and driven by recurrent mutations (M-class) are almost exclusively of luminal subtype (92%), and 99% of basal-like tumours are of C-class.

Four main clusters were identified and appeared to be related to ER and HER2 expression (Luminal, HER2 positive, basal-like and normal breast like).