Gene expression analysis of tumor-infiltrating CD4+ cells reveals differences in immune function and survival according to different breast cancer (BC) molecular subtypes.


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Study Aim

- Several studies have demonstrated the role of the adaptive immune response in controlling growth and recurrence of human tumors. However, its role in BC remains largely unknown.
- Here, we aim to gain further insight into the functional defects characterizing breast tumor-infiltrating T cells and to assess their relationship with BC subtypes and clinical outcome.

Global gene expression analysis of tumor-infiltrating CD4+ cells reveals several gene differences according to BC subtypes from which they derive.

Clinical Relevance?

Publicly Available Datasets

Systemically Untreated Pts (N=1100)

- Microarray Datasets
- Clinical Outcome

Univariate and Multivariate Analysis

(Triple negative)

CD4 IS is the signature having a strong prognostic information in triple negative subtype

Conclusions

- There are differences in the "immune function" of tumor-infiltrating CD4+ cells according to BC molecular subtypes:
  - Higher "immune response" in triple-negative and HER2+
  - triple-negative and HER2+ tumors may be suitable candidates for adjuvant immunotherapy strategies

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