Conference Abstracts

Intrinsic Subtypes in Ethiopian breast cancer Patients: implications for better care

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OBJECTIVE

The recent development of multi-gene assays for gene expression profiling has contributed significantly to the understanding of the clinically and biologically heterogeneous breast cancer (BC) disease. PAM50 is one of these assays used to stratify BC patients and individualize treatment. The present study was conducted to characterize PAM50-based intrinsic subtypes among Ethiopian BC patients.

PATIENTS AND METHODS

Formalin-fixed paraffin-embedded tissues were collected from 334 BC patients who attended five different Ethiopian health facilities. All samples were assessed using the PAM50 algorithm for intrinsic subtyping.

RESULTS

The tumor samples were classified into PAM50 intrinsic subtypes as follows: 104 samples (31.1%) were luminal A, 91 samples (27.2%) were luminal B, 62 samples (18.6%) were HER2-enriched and 77 samples (23.1%) were basal-like. The intrinsic subtypes were found to be associated with clinical and histopathological parameters such as steroid hormone receptor status, HER2 status, Ki-67 proliferation index and tumor differentiation, but not with age, tumor size or histological type. An immunohistochemistry-based classification of tumors (IHC groups) was found to correlate with intrinsic subtypes.

CONCLUSION

The distribution of the intrinsic subtypes confirms previous immunohistochemistry-based studies from Ethiopia showing potentially endocrine-sensitive tumors in more than half of the patients. Health workers in primary or secondary level health care facilities can be trained to offer endocrine therapy to improve breast cancer care. Additionally, the findings indicate that PAM50-based classification offers a robust method for the molecular classification of tumors in the Ethiopian context.