

CerbB2 Status in Breast Cancer: Pathologic Issues

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Abstract

Introduction: *CerbB2 status determination in breast cancer is currently performed for predictive and prognostic information. However, much has yet to be learned about the accuracy, reproducibility and clinical correlation of the different testing methods available today. This is a review of the testing methods commonly in use and their applications in the management of breast cancer.* **Methods:** *A Medline search for review articles with keywords cerbB2, Her2 testing, immunohistochemistry (IHC), fluorescence in situ hybridisation (FISH) and breast cancer was done. Manual cross-referencing from the afore-mentioned articles and perusal of the package inserts, recommendations and manuals from the manufacturers of various commercially available test kits were also performed.* **Results:** *The 2 main methods of testing in use in most routine laboratories are IHC and FISH on formalin fixed, paraffin embedded, breast cancer tissue. There is no single, universally accepted method and the plethora of testing and interpretative protocols has confounded the issue of clinical correlation of cerbB2 status with outcome and patient selection for therapy. The current consensus in the literature is leaning towards FISH; however, as pointed out in this paper, the use of FISH as a routine test in most diagnostic laboratories is not yet a reality mainly due to cost, technical and manpower constraints. In this regard, IHC is by default the preferred choice in many routine laboratories.* **Conclusion:** *Universal standardisation of testing methods for cerbB2 status determination, together with further clinical studies on the correlation of each method with outcome and response to therapy, will aid in the identification of the ideal method for stratifying patients with breast cancer into prognostic and optimal therapeutic groups.*

Ann Acad Med Singapore 2002; 31:793-8

Key words: *Fluorescence in situ hybridisation (FISH), Her2, Herceptest, Herceptin, Immunohistochemistry (IHC)*

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