Editorial

Quality control for the immunohistochemical demonstration of oestrogen and progesterone receptors

It is now almost 40 years since it was first shown that oestrogenic hormones exert their actions through combination with specific receptor proteins. Subsequently, endocrine responsive breast cancers were shown to contain increased amounts of these oestrogen receptors (ER). There is almost worldwide acceptance that the measurement of oestrogen and progesterone (PR) receptors provides valuable information to aid in the selection of patients for endocrine treatment. Furthermore, the recent overview of randomised trials of antihormone treatments in early breast cancer has confirmed this, and has recognised the need for some degree of quantification, because benefit is proportional to the amount of the receptor present in the tumour. However, it has taken a switch towards the use of immunohistochemical assays in pathology laboratories for there to be a routine service for ER determination in all breast cancers centres within the UK.

Central to this new and important development is the establishment of appropriate external quality assessment (EQA) schemes to minimise the variability that is known to exist between laboratories when assaying ER (and PR) by immunohistochemistry (UK NEQAS-ICC) organising laboratory. Initial studies in this area have emphasised the need to establish appropriate assay conditions, cut off points for the immunohistochemical assays, and how the results obtained might be applied in patient management. However, little, if any, consideration has been given to how results obtained might be applied in patient management. Unfortunately, accurate receptor measurements are crucial in this area, and it is evident that problems must be overcome if we are to provide a reproducible nationwide assay service that assigns patients in a uniform manner to the correct therapeutic options.

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