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Editorial

It probably took several generations to convince people that the world is round. Indeed, we still have a 'Flat Earth Society'. Since the 1970s, we have known that oestrogen receptor (ER) positivity is associated with improved response to endocrine therapies. The Early Breast Cancer Trialists overview [1] has established this beyond reasonable doubt in early breast cancer, including showing a direct relationship with quantity of ER in the tumour. A similar relationship between quantity of ER and length of response to endocrine therapy has been shown for advanced disease [2]. Not surprisingly, these relationships only hold true when the assay is carried out in a competent laboratory and the case for External Quality Assurance (EQA) has been firmly made [3]. Despite these convincing sets of data, Gordon Wishart's surveys have shown that the frequency of ER testing is very variable across the UK [4]. Guidelines are now being written to contain the full information on how ER content should be determined and how the results should be interpreted. Nevertheless, a recent report from Madhaven and Murray [5] concludes that there remains disagreement on technology, cut-off levels and the application of the results to treatment decisions. Oestrogen receptor cooperative groups are well used to collaborations [6] on the technical details and, with support from their clinical and administrative colleagues, can readily achieve agreement. Some further work on cut-off values is required, but will only be achieved by all parties meeting to agree and fund the appropriate studies [7].

When there is a marker available that gives a clear management advantage, it seems strange that it is not used in a controlled and universal manner. When the marker can be measured for £10–20 per patient (or even less), whereas the wrong therapy might cost £100s and have serious side-effects, then one begins to question the logic behind the decision-making processes. It is true that such a marker is only of real value if all laboratories are required to take part in recognised EQA schemes, but the one offered by the UK national EQA scheme is running well [8] and, incidentally, proving that not all labarotories can handle the assays as well as they might think—both justifying the scheme and establishing the need to run remedial courses. Given our combined knowledge, surely the time has come to ensure that every breast cancer patient has ER (and probably also progesterone receptor?) content determined on the primary sample.

References

1. Early Breast Cancer Triallists Collaborative Group. Tamoxifen for early breast cancer: an overview of the randomised trials. *Lancet* 1998, **351**, 1451–1467.
2. Jordan VC. Studies on the estrogen receptor in breast cancer: 20 years as a target for the treatment and prevention of breast cancer. *Breast Cancer Res Treat* 1995, **36**, 267–285.
3. Barnes DM, Millis RR, BeexLVAM, Thorpe SM, Leake RE. Increased use of immunohistochemistry for oestrogen receptor measurement in mammary carcinoma: the need for quality assurance. *Eur J Cancer* 1998, **34**, 1677–1682.
4. News. UK survey finds variation in oestrogen receptor testing. *Br Med J* 2001, **323**, 713.
5. Madhavan KS, Murray PA. A UK survey of tamoxifen prescribing and oestrogen receptor status. *Breast* 2002, **11**, 265–266.
6. Koenders A, Thorpe SM. Standardisation of steroid hormone receptor assays in human breast cancer—I. Reproducibility of oestradiol and progesterone receptor assays. *Eur J Cancer Clin Oncol* 1983, **19**, 1221–1229.
7. Wishart GC, Gaston M, Poultsidis AA, Purushotham AD. Hormone receptor status in primary breast cancer—time for a consensus? *Eur J Cancer* 2002, **38**, 1201–1203.
8. Rhodes A. External quality assessment of immunocytochemistry: UK NEQAS review of run 52. *J Cell Pathol* 2001, **5**, 253–293.

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