PERGAMON

European Journal of Cancer 38 (2002) 1465

European Journal of Cancer

www.ejconline.com

Reply to Editorial Comment

Professor R.W. Blamey

City Hospital, Nottingham, NG51 PB, UK

Received 11 April 2002; accepted 29 April 2002

The UKCCCR trial of the frequency of breast cancer screening is published in this issue and is accompanied by a commentary from Dr Ingvar Andersson.

The trial has major economic implications, for to increase the frequency to even every two years would raise the cost of national screening by around £15 million per year. Any action must be based on evidence of greater efficacy and not on the siren voices condemning the present interval.

To await mortality figures would take many years and the trial was based upon the predicted survival, using combined prognostic factors in all tumours arising. This is likely to accurately reflect survival because the combination, the Nottingham Prognostic Index [1], is very well validated [2, 3, 4]. In addition, unless there is a significant change in important prognostic factors, it would be difficult to explain how any change in survival could be brought about.

The result clearly showed little amelioration of the prognostic factors in the population randomised to invitation to annual screening. The predicted reduction in deaths at 10 years was 5%, with wide confidence limits. This figure would represent a 4% further reduction over the 20% obtained by the prevalent screening; also since shortening the interval could only be tested on attenders to the prevalent screening, the overall reduction would be further diluted in the whole population.

Dr Andersson states that this result is somewhat unexpected. However, screening relies upon gaining a lead time in detection. The lead time obtained by a prevalent screen is such that more than 50% of cancers gain over 18 months with a maximum of 3 years, plenty of time to alter the prognostic factors; in the trial group, 40% gained an extra lead of an average of 4 months (again a figure diluted in the whole population).

Other implied criticisms are largely lateral to these central considerations: Dr Andersson quotes 'More data on interval cancers will be of interest' – but mortality is not as simple as screen detected 'good', interval 'bad'. Screening quality has certainly improved during and since the trial, but such an improvement would be expected to decrease the magnitude of any effect from shortening the interval.

It is a pity, therefore, that Dr Andersson retreats into saying the answer is not yet clear. Both results and theory show that any reduction will be at best very small and, indubitably, not cost effective.

Niels Bohr's indeed said 'prediction is difficult' but his prediction of the energy released by nuclear fission was dramatically substantiated within a few years!

References

1. Blamey RW. The design and clinical use of the Nottingham Prognostic Index in breast cancer. *The Breast* 1996, **5**, 156–157.
2. Balslev I, Axelsson CK, Zedelar K, Rasmussen BB, Cartensen B, Mouridsen HT. The Nottingham Prognostic Index applied to 9,149 patients from the studies of the Danish Breast Cancer Cooperative Group (DBCG). *Breast Cancer Res & Treat* 1994, **32**, 281–290.
3. Sundquist M, Thorstenson S, Brudin L, Wingren S, Nordenskjold B. Incidence and prognosis in early onset breast cancer. *The Breast* 2002, **11**, 30–35.
4. D'Eredita G, Martellotta M, Natale T, Ferrarese F. Prognostic factors in breast cancer: the predictive value of the Nottingham Prognostic Index in patients with a long term follow-up and treated in a single institution. *Eur J Cancer* 2001, **37**, 591–596.

PII: S0959-8049(02)00211-3