

Letters

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Comments on *Survival of Breast Cancer Patients in Lithuania and Norway, 1988–1992*, Kliukienė and Andersen, *Eur J Cancer* 1998, 34, pp. 372–377

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KLIUKIENĖ AND Anderson report survival differences among breast cancer patients in Lithuania and Norway in an article recently published in the *European Journal of Cancer* [1]. The study is very interesting, but, since it is based on cancer registry data, it might have some limitations concerning the validity of the results. This should be properly discussed in order to avoid misinterpretation of the results.

Appropriately, the authors evaluated the influence of known prognostic factors on survival, such as tumour size, lymph node status and age at diagnosis, in order to control for confounding bias. However, I believe that some aspects, such as the influence of screening activities and treatment differences in survival rates, were not discussed properly, and need to be examined further.

According to the authors, the survival rate difference was more pronounced in stage II and stage III patients. This was probably related to the fact that the tumour size and lymph node status in these groups were much more favourable in the Norwegian dataset, perhaps as an effect of more intensive screening activities by breast self-examination campaigns in this country. The authors stated that breast self-examination has positive effects in reducing breast cancer mortality, which have not been established by prospective studies. The two most important ongoing prospective randomised trials, one in Russia and another in China, have not found, among patients performing breast self-examination, consistent evidence of a reduction in mortality so far [2, 3].

The authors also suggest that selection bias should be discussed in their study, since 80% of the patients in the Lithuanian dataset were from a geographical region where a single institution was responsible for breast cancer treatment. However, they discard such a possibility based on the fact that age and stage cancer distributions of the study population were similar to those observed in the rest of the country

(Lithuania). None the less, the possibility of selection bias regarding treatment differences was not considered in the analysis, and this factor accounts for considerable variations in survival rates, since it has been found to be a strong prognostic factor [4]. Moreover, the type of institution where a breast cancer patient receives treatment has been proved to influence survival, with patients treated at teaching and large community hospitals having the best prognosis [5].

Therefore, although the age and stage distribution of the Lithuanian dataset were similar to the whole country data, the treatment offered was possibly more favourable in the hospital abridging 80% of the Lithuanian dataset than would be observed in the rest of the country. Such selection bias could spuriously decrease the survival differences observed between Norway and Lithuania because of treatment differences.

Hence, the study results should be considered with some restrictions, since the differences found could be less accurate than expected.

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Response from J. Kliukienė and A. Andersen

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WE THANK Dr de Souza for his interesting comments on our paper 'Survival of breast cancer patients in Lithuania and Norway, 1988–1992' [1].

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