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Authors' reply

Sir—Steven Greer raises several critical points about our report, of which he is a co-author. First, he mentions the omission of a recent paper that he thinks should have been cited because he believes that it shows a significant association between the fighting spirit response and breast cancer outcome.[1] However, in our view the findings of this study are equivocal. The investigators attempted to use a rating of psychological response similar to that of Greer and colleagues.[2] They noted, "The semi-structured interview, closely following that used in our earlier study (Greer et al, 1979), was designed to elicit patients' responses to their cancer diagnosis".[1] However, they comment ". . . it often proved difficult to rate patients' responses into any one of the previously used categories". They concluded that for breast cancer patients "None of the psychological test scores at 3, 6, 9 or 12 months distinguished those who had died or had recurrence by five years from those who were alive and well". With a breast cancer sample of only 107 this study was probably underpowered and as such failed to clarify the issues.

Second, he maintains that fighting spirit and helpless/hopeless responses, as measured by the MAC scale, are polar opposites. Since helpless/hopeless responses were associated with poorer survival he asks, why then is fighting spirit not associated with a favourable outcome? The issue therefore is whether these two psychological responses are polar opposites. These two responses tend to be inversely related, although not perfectly so; we have reported a correlation between the two of $r=-0{\cdot}46$.[3] We cannot conclude from our data on the development of the MAC scale that these responses are perfect opposites and have treated them as independent response dimensions. Also, for the purpose of replicating the original Greer study, to treat these dimensions as separate responses was appropriate.

Third, he mentions that we have developed a short form of the MAC, the mini-MAC, that in his opinion may be a better measure of the fighting spirit response.[4] On the contrary, we have published data comparing the MAC scale with Greer's original interview-based method and confirmed the reliability of MAC in assessing the original psychological response dimensions; Greer was a co-author on that report.[5] We do not have such data relating to the mini-MAC, and to replicate his original study the MAC scale was, therefore, the more appropriate of these two measures.

Fourth, Greer takes us to task for making the statement that "Our findings suggest that women can be relieved of the burden of guilt that occurs when they find it difficult *to maintain* (our italics) a fighting spirit". He says that there is "Not a shred of evidence . . . in support of this claim". This statement is correct. Similarly, there is not a shred of evidence in support of the idea that it does not cause difficulties and guilt. This statement is a clinical opinion based on the observation that there are some breast cancer patients who have interpreted the original Greer findings as meaning that if they do not constantly maintain a fighting spirit then the cancer might come back or get worse. What a terrible burden to bear. For these women we can now relieve them of this burden and explain that to have emotional ups and downs is normal.

The important finding from our study is that serious depression and helpless/hopeless responses have a modest impact on disease outcome whereas fighting spirit does not. It is not what may be added in by fighting but what is taken away by being helpless that seems important in disease outcome. To investigate this further is now the challenge.

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Occurrence of stroke with tamoxifen in NSABP B-24

Sir—We reported[1] results of a randomised controlled trial (NSABP B-24) evaluating the addition of tamoxifen to radiotherapy after lumpectomy among patients with intraductal carcinoma (ductal carcinoma in situ, DCIS). We included a brief presentation of adverse events, and noted that were no instances of stroke, for which tamoxifen can increase risk.[2] This information is incorrect and we wish to amend our previous report.

In the B-24 study, subsequent review of adverse events indicates that there were six stroke events reported (one placebo, five tamoxifen). Two of these six had been previously reported as transient ischaemic attack (TIA), and four were reported under various international classification of disease (ICD) codes not specifically identifying stroke. The median age of patients at the time of the event was 67·1 years (range 54·1–76·0 years). Four patients were 65 years or older. The average time on blinded study drug was 29·4 (range 6·3–41·9) months. Three patients had a history of hypertension, and one had a history of TIA. No instances of stroke were fatal.

In the NSABP Breast Cancer Prevention (P-1) Trial,[3] frequency of stroke in healthy women at increased risk of breast cancer receiving either placebo or tamoxifen was investigated. This trial was specifically designed to ascertain stroke and related events prospectively under a rigorous definition. In that study, a non-significant excess of strokes was recorded in patients receiving tamoxifen (average annual stroke incidence rate per 1000 women: placebo 0·92; tamoxifen 1·45). In the present Study of Raloxifene and Tamoxifen (STAR) trial, women with previous cerebrovascular accident, TIA, uncontrolled hypertension or diabetes, and atrial fibrillation are excluded from entry in an effort to reduce the risk of stroke.

In our B-24 report, we stated that physicians and patients should be aware of comorbid factors that may place individuals at increased risk of adverse events potentially related to tamoxifen use.[1] We regret the omission of frequency of stroke in that report and hope that this information will be useful in decisions about tamoxifen therapy for DCIS.

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