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Editorial Comment

Can improved communication increase patient participation in randomised clinical trials?

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Randomised clinical trials (RCTs) have, in large part, defined current standards of cancer care. Future advances will be dependent not only on basic research and on the development of more effective anti-tumour agents, but on the rigorous evaluation of these strategies in controlled settings. Thus, ongoing patient participation in RCTs is crucial in improving cancer treatment. Patients participate in clinical trials for a variety of reasons [1,2]. In addition to altruistic motives, patients may perceive benefits such as earlier access to new treatment and more careful monitoring as part of a trial. In fact, it has been suggested that the outcome of patients enrolled in RCTs exceeds standard expectations regardless of the assigned therapy [1]. Despite these potential advantages to RCT participation, however, few cancer patients receive treatment as part of a formal study. Even in institutions with active clinical research programmes fewer than 50% of eligible patients are enrolled into RCTs [3].

An extensive literature outlines the barriers to RCT participation [1,2,4]. Physician barriers include lack of time and resources. Physicians may also fear that the discussion of a RCT will interfere with the doctor–patient relationship. They may also have difficulty in acknowledging the uncertainty of therapeutic benefits, may prefer a particular treatment or may have difficulty in obtaining informed consent. Potential barriers to patient participation include concern about random allocation, preference for control over decision-making, overestimation of the benefit of standard treatment, objection to being an experimental subject, mistrust of the healthcare team and lack of knowledge of what is required of trial participants. Given all these identified problems with RCT recruitment, interventions that might improve the participation rate in RCTs by reducing either physician or patient barriers would be welcome.

In this issue of the *European Journal of Cancer*, Fleissig and colleagues report the results of one such study ([5], pp. 322–331). The authors hypothesised that providing oncologists with results of patient questionnaires describing their attitudes to clinical trials and their preference for information, prior to a discussion about RCT participation, would increase patient and doctor satisfaction, improve recruitment and reduce consultation time. In this study, patients presenting to participating oncologists practising in District General and University Teaching Hospitals, who were eligible for clinical trials, were invited to participate in a communications study, given additional information and then they provided informed consent. Participants completed questionnaires that assessed their information needs, their attitudes toward participation in clinical trials and their anxiety scores. The patients' oncologists were then randomly allocated either to review the questionnaire responses prior to, or to proceed directly with, the consultation. Physicians' knowledge of the patients' questionnaire responses prior to the consultation had no impact on the major study outcomes of increased patient and doctor satisfaction, improved recruitment and reduced consultation time. The study did confirm, however, that responses to the Attitudes to Trials Questionnaire were highly predictive of patients' decisions to participate in clinical trials. Overall, 77.4% of the patients agreed to participate in the RCTs in which they were asked to participate, a much higher proportion than previously reported.

Intuitively, one might expect that knowledge of patients' attitudes regarding participation in clinical trials might be helpful to the oncologist during the consultation. So why did this study not demonstrate a benefit to this approach? There are many possible explanations, including the study design, the character-

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istics of the participating patients and physicians and co-interventions.

Patient selection factors may have played a role in the higher than expected enrolment in RCTs for which they were approached, and in the lack of evidence of benefit for the intervention. The method for identification of participants is unclear. Were all RCT-eligible patients approached to participate or were only selected patients invited? In addition, 9% of patients approached declined participation and 10% of those initially consenting to participate did not return questionnaires. Similarly, 11% of patients had participated in clinical trials previously and may have been more receptive to additional randomised trials than the average patient. The proportion of patients who had previous chemotherapy is not stated and may have also influenced the willingness to participate in randomised trials of systemic treatment. Thus, these patients may be systematically different from the average cancer patient. This may have resulted in a higher than expected rate of RCT participation and thus reduced the likelihood of identifying an effect of the intervention.

The physicians also seem to have been highly selected: of the 43 invited, 9 saw insufficient patients who were eligible for randomised trials to make data collection feasible. Data were eventually collected from only 15. Thus, the participating physicians may have been more committed to recruitment to clinical trials. The number of clinical trials discussed varied considerably by physician, ranging from 1 to 11. Thus, any impact of the knowledge of patients' attitudes toward clinical trials may have been offset by the oncologists' practised descriptions of the trials themselves. Indeed, review of audiotaped consultations revealed little evidence that the oncologists incorporated their knowledge of questionnaire responses in either the content or style of delivery of the consultation.

Co-interventions may also have contributed to the observed negative result. Forty-one per cent of patients were given additional information about the specific trial that they were asked to consider by another health professional. These interactions were not controlled for in the randomisation process. The delivery of additional information may have increased the overall recruitment rate and minimised differences between the two groups. The potentially most important co-intervention in this study, however, is the delivery of information about RCTs to both control and intervention groups, and the administration of a questionnaire that probed their attitudes and barriers to RCT participation. The results of the Attitudes to Trials Questionnaire supports the contention that its administration alone led to a systematic change in attitudes toward clinical trial participation. Of the approximately 2/3 of patients who initially replied that they would not be prepared to participate in an RCT or were uncertain about participation, after the additional information and reassurance provided in four subsequent questions, 70.3% changed their minds, indicating their willingness to participate in a RCT. Thus, the information about clinical trials provided in the questionnaire may have increased overall participation and limited the ability to detect the impact of the individual responses on oncologist behaviour, and hence on the major outcome measures.

This study also illustrates the difficulties inherent in conducting communications research in the clinical setting. The study suffered from lower than expected physician participation and longer accrual than anticipated due in part to overestimation of trial-eligible patients and to practical issues that limited the number of patients who could be recruited from each clinical session. In addition, the outcome measures selected may not be optimal to assess communication interventions.

Are these results in keeping with previously published literature? Other investigators have attempted to increase RCT recruitment in a variety of ways. Some have attempted to improve information about the nature of the specific RCT under consideration [6,7], others have compared different techniques for presenting this information [8], while others have evaluated interventions to improve patients' understanding of the importance of RCTs in general and to dispel misunderstandings about RCT participation [9]. In general, the impact of these interventions on RCT participation rate has been disappointing.

Simes and colleagues randomised patients eligible for RCTs of chemotherapy to either individualised or full disclosure of information [6]. Although patients in the full disclosure group were initially more anxious than the individualised disclosure group (differences that disappeared by 4 weeks of follow-up), they had a significantly greater knowledge of the research plan, their illness and treatment. However, patients in the full disclosure group were more likely than their individualised disclosure counterparts to decline entry into the RCT (7% versus 18%).

Aaronson and colleagues also evaluated the impact of information provision on RCT participation [7]. Patients considering phase II and III trials were randomised to a standard consultation or the same plus a follow-up telephone call from a clinical trials nurse for further discussion of the trial. Patients receiving the extra discussion were better informed than the standard consultation group about the clinical trial, voluntary nature of participation, randomisation process, right of withdrawal and treatment alternatives. They were no more anxious than the standard group. As was observed by Simes and colleagues [6], the intervention group was more likely to decline trial participation (13% versus 24%).

Llewellyn-Thomas compared two techniques of information provision to a group of patients asked to

consider entry into a hypothetical RCT [8]. All participants were receiving radiation treatment for a variety of diagnoses. They were randomised to receive information about a hypothetical RCT either by audiotape or interactive computer program. There were no differences in understanding or satisfaction in the two groups, but those receiving information via the interactive computer program were more likely to agree to enter the hypothetical RCT (62 versus 42%) chi square (raw) $P < 0.05$, chi square (Yates corrected) $P = 0.072$.

Other investigators have attempted to improve RCT recruitment by improving patients' understanding of RCTs in general. Davis randomised patients considering RCTs to receive standard information about RCTs or to receive this information plus a booklet prepared by the National Cancer Institute (NCI) that explained clinical trials [9]. Although patients receiving the booklet were more knowledgeable about RCTs overall, they were no more likely to agree to participate in trials.

These studies taken together suggest that techniques to provide information about RCTs can improve understanding of the nature of RCTs in general and details of the specific RCT under consideration. Improved knowledge has not translated into enhanced RCT participation; if anything, these studies suggest that information may impede RCT recruitment. This finding raises an ethical issue about informed consent procedures in general.

Another strategy to improve RCT recruitment is to improve the communication skills of the oncologists. Albrecht and colleagues videotaped interactions between oncologists and patients where the primary purpose of the interaction was to present the possibility of a clinical trial [10]. Patients were more likely to accept the RCT when their oncologist verbally discussed items included in the consent form, and when they behaved in a supportive, patient-centred, reflective and responsive manner. Accrual was also associated with a discussion of benefits, side-effects, patients' concerns and resources available to manage the concerns. This study suggests that training of oncologists in effective communication styles and behaviours may positively impact upon RCT recruitment.

The current study attempted to influence the communication style of the oncologist by providing patients' attitudes toward clinical trials [5]. This intervention did not appear to influence RCT recruitment, shorten consultation time or improve satisfaction. This is not surprising since there was no evidence that the oncologists used the information provided in the questionnaires. The authors indicate, however, that the questionnaires might have been more effectively utilised if the oncologists had received specific training in methods of incorporating patients' attitudes toward trial participation in their communication.

Despite the largely negative results of intervention studies thus far, it is important to continue to identify methods to improve RCT participation. Several additional areas require systemic evaluation. The timing of patient education about the RCT being presented may be crucial [11]. Further examination of the doctor–patient relationship and strategies to enhance the quality of communication are warranted. Finally, it has been suggested that there is a need to raise community awareness of the importance of RCTs in order to foster enhanced participation and eventually to achieve the goal of improving outcomes from cancer [12].

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