hypofractionated radiotherapy may be offered, providing equivalent local control with acceptable late effects. Compared with more protracted regimens, the fewer hospital attendances required not only are cost effective but may be more psychologically acceptable for elderly patients. A single hospital visit once a week for six weeks (3900 cGy in six fractions over six weeks) may be more acceptable than daily treatments for six weeks (6000 cGy in 30 fractions over six weeks). Further studies should address the issue of acceptability to patients in this regard.

In contrast to Dixon, we believe that tamoxifen should not be given routinely to the elderly population unless there are specific indications such as involved axillary nodes or metastases. Although the trial of the Novadex Adjuvant Trial Organisation and the meta-analysis by the Early Breast Cancer Trialists' Collaborative Group suggest an overall benefit, the probability of benefit to a given patient may depend more on specific prognostic factors. Determinants that may preclude the routine administration of tamoxifen include practical issues such as compliance, potential interactions with other drugs, cost, and potential side effects such as nausea, flushing, and increased risk of thromboembolism and endometrial carcinoma. The potential advantages and disadvantages should be discussed with the patient non-dogmatically.

For locally inoperable disease combined radiotherapy and tamoxifen may be appropriate if oestrogen receptor concentrations are raised, but age should not automatically contraindicate chemotherapy in elderly patients. Judicious appraisal of a patient's medical status and biological age with appropriately tailored treatment is essential.

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SIR,—J Michael Dixon suggests that tamoxifen alone is satisfactory treatment for patients unfit for a general anaesthetic whose tumours test positive for oestrogen receptors.¹ We question the use of oestrogen receptor immunocytochemical assay alone in selecting such patients for conservative management with tamoxifen as studies so far have recruited small numbers of patients with limited follow up (S C Low *et al*, 43rd scientific meeting of British Association of Surgical Oncology, December 1991).^{2,3} Additionally, this assay is expensive⁴ and not easy to perfect on fine needle aspirates, particularly if used only occasionally.⁵

Dixon does not mention the value of differentiating the grade of tumour as a prognostic indicator and method of selecting such patients for endocrine treatment, perhaps because grade cannot generally be determined from fine needle aspirates. Prospective multivariate analysis, however, has confirmed the grade of tumour as being one of the most important prognostic factors in operable disease in patients aged under 70,^{6,7} and Robertson *et al* found that this was a significant factor that affected both the disease free interval and overall survival in elderly patients.⁸ They found that 65% of patients initially treated with tamoxifen, and 42% of those initially treated with wedge mastectomy, who had progression of disease had grade 3 tumours; they noted that more grade 3 tumours than grade 1 and grade 2 tumours seemed to progress during tamoxifen treatment.

Thus in elderly patients the grade of the tumour will probably provide a reasonably accurate prediction of response to endocrine treatment,⁴ in addition to prognostic information. A biopsy under local anaesthesia may be used to provide

samples, ensuring that there is adequate material for assessment of histological grade; this could be regarded as a reasonable and practical alternative to oestrogen receptor immunocytochemical assay on fine needle aspirates.

If further data on predicted response are required, especially for the moderately differentiated group of tumours, we have found that pS2 status may be valuable. This can be determined in formalin fixed, paraffin embedded tissue with a relatively simple immunohistochemical technique. Studies have shown good correlation with response to endocrine treatment (K A Dookeran *et al*, 43rd scientific meeting of British Association of Surgical Oncology, Dec 1991),^{9,10} and pS2 may be particularly useful when data on oestrogen receptor status are unavailable (K A Dookeran *et al*, 43rd scientific meeting of British Association of Surgical Oncology, Dec 1991; R A Walker *et al*, winter meeting of Royal College of Pathologists, Jan 1992).

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SIR,—J Michael Dixon is right to encourage efforts to obtain local control of operable breast cancer in elderly patients by judicious use of surgery and radiotherapy and to discourage therapeutic nihilism.¹ In practice, however, operable breast cancer is less common among elderly patients than among the young. In a series of 1141 patients with breast cancer Stoll and Ackland found 35% over the age of 70 with locally advanced disease compared with 20% aged 50-59 and 14% aged 40-49.² Thus for many patients quality rather than length of survival is the more important variable. Prospective studies of the treatment of breast cancer in elderly patients need to include some form of assessment of quality of life.

Younger patients may understand and cope well with the emotional and physical demands of surgery and complex, time consuming radical radiotherapy. Although there is no evidence that elderly patients' tolerance of radical radiotherapy is any less than that of young patients,³ various emotional and physical factors often conspire to diminish the quality of life of elderly patients with breast cancer. Fears of cancer (based on an era when the disease was rarely curable), death, hospitals, tests, and treatment⁴ may be aggravated by the physical handicaps of impaired vision, hearing, memory, and mobility. This may be exacerbated by long waits for ambulances for daily

attendances at a radiotherapy department or disorientation from admission to an unfamiliar hospital environment. For such patients hormonal treatment, simple and short palliative local radiotherapy to control breast discharge or bleeding, and single fractions to relieve pain from bone metastases⁵ are most likely to maintain a reasonable quality of life.

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Aggressiveness of breast cancers detected by screening

SIR,—P J Klemi and colleagues' finding that breast cancers detected by screening are less aggressive than control cancers should be interpreted cautiously.¹ Firstly, the design and reporting of the study make it possible to compare percentages of tumours of advanced stage, for example, but not to compare the corresponding incidences of tumour, which are more important as markers of future mortality.²

Secondly, restricting the cases to those detected in the first round of screening renders the results a foregone conclusion: it has long been known that screening detects cancers with "length bias," which are slower growing and less aggressive than clinically diagnosed cancers, but most of these cancers are detected in the first round of screening.^{3,4} The restriction to the first round is probably also responsible for the observation that variables of malignant potential were lower in the tumours detected by screening after adjustment for size. After excluding tumours detected in the first round colleagues and I found that tumours detected by screening were better differentiated than control tumours (presumably because of the malignant progression referred to by Klemi and colleagues⁵) but that the distributions of differentiation grades in the two groups were almost identical after adjustment for size.⁴

Workers in other screening programmes should not be unduly alarmed at finding substantial numbers of tumours of lower malignant potential at the first round but should try to improve early detection of fast growing tumours if the phenomenon continues to be observed at later screens. Klemi and colleagues' results are consistent with those of some other studies^{6,7} in seeming to advance the time of diagnosis while failing to reduce mortality. They do not explain why these studies do not reduce mortality while others do.^{2,7}

It seems clear that if screening is to reduce mortality from breast cancer it has to detect aggressive, poorly differentiated cancers early.⁸ Indeed, the proportion of poorly differentiated tumours in a screened population should be similar for a given size to that expected in the absence of screening.⁸ Klemi and colleagues' paper shows that this was not the case at the first screen,¹ but knowing whether it was achieved at subsequent screens would be more helpful.

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Nurse triage in accident and emergency departments

SIR,—Steve George and colleagues disparage nurse triage because it increases waiting time in an accident and emergency department without improving patient satisfaction.¹ Triage, however, is not intended solely to decrease waiting time but to improve the quality of care and ration services.^{2,3} In the absence of triage how can the authors justify long waiting times in accident and emergency departments before assessment?

In the department studied, triage simply prioritised patients by severity of injury. Surely prioritisation is not an adequate response to an increase in demand for services. This should include training nurses in accident and emergency departments to manage or instigate management independently and to encourage the primary care team in dealing with minor injuries.

Triage has been enthusiastically adopted in accident and emergency departments all over the country⁴ and now seems to provide a duplicated assessment procedure and possibly, as George and colleagues suggest, an increase in waiting time. If service providers wish to do more than merely respond passively to ever increasing demand then consideration will have to be given as to the best management of those who attend accident and emergency departments, and triage could have a large role in managing and diverting patients.

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SIR,—Steve George and colleagues' failure to identify many of the generally accepted benefits of triage in accident and emergency departments should be viewed with scepticism.¹ The study was based on classifying patients into triage and no triage groups according to patients' time of arrival, but only a minority (48%) of the triage group were actually assessed by a triage nurse. As a result, many of the study's conclusions seem to be invalid. For example, the conclusion that "triage extended

waiting times, particularly in those requiring the most urgent attention," lacks foundation: only 24 of the 70 patients in the triage group who were assigned to priority category 1 (most urgent) had actually been assessed by a triage nurse.

Furthermore, the efficacy of both triage and informal assessments inevitably depends on the skills and experience of the staff concerned. George and colleagues fail to describe the methods of training and audit (if any) used in the department they evaluated. But the nurses who made formal (triage) assessments probably also made informal (no triage) assessments. As the assessments made during these periods are likely to have been similar it is not surprising that the study failed to identify differences in patients' satisfaction.

Several factors may have influenced whether patients in the triage group were actually assessed by a triage nurse. For instance, during periods of undue workload the triage nurse may have been called to help elsewhere in the department, resulting in a tendency for triage to stop when waiting times were longest. Patients clearly in need of immediate care, such as those requiring resuscitation, may also have missed out on formal assessment. Another source of bias might have resulted from some patients leaving the accident and emergency department after being assessed by a triage nurse (before registration); they would not have appeared in the sample of patients. The method of assigning patients to the triage and no triage groups is unlikely to have adequately controlled for variability in workload, staffing levels, and the experience of triage nurses, and therefore a multivariate method of analysis should have been used.

At King's College Hospital we are also developing and evaluating our system of triage, including methods for initial training, regular updating and assessment of the competence of staff, and intervention and retraining after poor performance. This should fill an important gap. It will provide a baseline against which to compare and evaluate alternative models of assessing patients attending the accident and emergency department.

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SIR,—Steve George and colleagues' paper on nurse triage is clearly invalid as only 48% of patients presenting during the triage period were actually seen by a triage nurse.¹ This suggests that triage was abandoned when the department became busy or short of nurses for whatever reason; thus the patients assessed by a triage nurse during this period would be seen less rapidly simply because the department was busy. It follows that the comparison is worthless because in effect busy times are being compared with relatively slack times; obviously patients have to wait longer when the department is busy.

Furthermore, lack of a triage nurse on six half day shifts within weeks allocated to triage necessitated redesignating these shifts as no triage shifts, and triage was then run instead on the corresponding half day shifts of the following no triage weeks. It is absurd, however, to suggest that, for example, all Tuesday afternoons are busy: a single seriously ill patient can change the situation within seconds. I suggest that the arrival of a patient subsequently classified as being in priority category 1 sometimes led to a tendency to abandon triage (due to nursing shortages) for an entire shift rather than for just some patients, so that a triage shift was redesignated as a no triage shift. This would explain why a higher proportion of patients allocated to priority category 1 were

seen during no triage shifts (4.3%) than during triage shifts (2.8%). Specifically, a waiting time of either 16 minutes or 26.5 minutes for patients in priority category 1 can hardly be considered to be satisfactory (their table IV).

This study clearly fails to compare like with like.

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SIR,—Steve George and colleagues challenge the value of nurse triage in accident and emergency departments.¹ Triage is rapidly increasing in importance nationally, and the conclusions of this study, which suggest additional delays, have major implications for the development of accident and emergency care.

We believe, however, that clinical aspects of the study flaw the conclusions. Retrospective categorisation of patients by a consultant in accident and emergency permits subjective error unless triage categories are defined for specific clinical conditions. This, however, defeats one of the prime objects of triage, which is to categorise patients to reflect the workload in the accident and emergency department. Triage should be a dynamic process with patients moving between categories depending on their own clinical circumstances and those in the department. Without this information reviews based on casualty records alone will be inaccurate. Blinded retrospective categorisation by other triage nurses may have increased validity.

The authors confirm, however, that patients who have early contact with a nurse, whether through formal triage or informally, obtain the same benefits in terms of satisfaction.

The apparent deficiency of triage is increased delay before treatment for those patients in the more urgent clinical categories. If retrospective observer error is discounted the conclusions reflect local implementation of triage policy and represent a valuable audit finding in need of correction. The results cannot be extrapolated nationally.

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SIR,—The difficulties in attempting to assess objectively the value of a nursing procedure such as triage should not be underestimated. I do not think that Steve George and colleagues have succeeded, and I question the validity of their results.¹

Triage means "sorting" and in my department is simply the assessment of the degree of urgency of every incoming patient's condition. It should be a dynamic process, altered if the patient's condition changes. In this context the difference between formal triage and informal prioritisation is not clear from the paper, and in both groups waiting times closely mirrored the prioritisation, suggesting to me that some degree of triage was in fact being carried out throughout. A valid study would need to compare triage with no sorting at all, patients being seen as far as possible in order of arrival, as is still the case in a few departments.

The two groups are acknowledged to be different, and in the triage group under half of the patients actually underwent the procedure supposedly under study. My department achieves triage for 99% of patients: triage cannot be bypassed because it is the receiving nurse's responsibility