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# Accuracy of general practitioner referrals to a breast clinic

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**The large number of referrals for breast disease necessitates that some form of appointment stratification is carried out to try and ensure that those patients likely to have malignant disease are seen as soon as possible.**

**A 6-month prospective study was carried out in which all new patient referral letters were assessed and graded on a three-point scale indicating the perceived likelihood of carcinoma.**

**In all, 496 new patient referrals were assessed and graded. There were 94 classed as 'urgent' (representing a likely carcinoma), 186 as 'soon' (carcinoma unlikely but possible) and 216 as 'routine' (carcinoma very unlikely).**

**The median waiting times to being seen in the outpatient department after referral were 6, 20 and 32 days, respectively, for the three groups.**

**Of the patients, 56 (11.3%) were found to have a carcinoma; 41 (73.2%) of these had been placed in the 'urgent' group, 11 (19.6%) in the 'soon' group and 4 (7.1%) in the 'routine' group. All carcinomas in the routine group were coincidental findings.**

**These results suggest that the information in the general practitioner referral letters may be used to reliably identify most patients with breast cancer, allowing appointment stratification and minimising any psychologically damaging delay before treatment.**

Fortunately only a minority of patients referred to a breast clinic will have a carcinoma (*1*). There is often a high level of anxiety in patients with breast disease, both benign and malignant, but the especially high rate of psychological and psychiatric morbidity in patients with breast cancer is well-recognised (*2,3*). Although waiting between referral and consultation is to be deplored, generous access makes it inevitable. Delay in consultation is likely to be more upsetting for those who prove to have malignancy than those with benign disease. It is therefore advantageous to identify those patients likely to have breast cancer and to give them priority in outpatient appointments.

We undertook a prospective survey of all new patients referred to the breast clinic. Our aims were:

1 To identify those patients likely to have breast cancer using the information contained in the general practitioner letter.
2 To see those patients in the outpatient department as soon as possible.
3 To ensure that the carcinomas were being accurately identified and appointments sent appropriately.

## Methods

During the period 10 August 1992 to 15 March 1993, all new referral letters from general practitioners to a single consultant specialising in breast surgery were assessed and graded prospectively into three groups: Group 1, Urgent (carcinoma likely); Group 2, Soon (carcinoma possible); Group 3, Routine (carcinoma very unlikely). Patients with breast disease referred to other consultants were not included. All patients sent from the breast screening service were included and were automatically given an urgent appointment. The waiting time for each patient was recorded as the time between the date of the referral letter and the date of the outpatient attendance. In the case of those referred from the breast screening centre the date of the first visit was used.

All patients were questioned and examined in the clinic. Most went on to some form of imaging (either mammography, ultrasound or both). It was then possible to assign one of the following working diagnoses to each patient on clinical and radiological grounds: 1, carcinoma; 2, Paget's disease; 3, normal; 4, request for screening; 5, fibroadenoma; 6, simple cyst; 7, fibroadenosis; 8,

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mastalgia; 9, duct ectasia; 10, duct papilloma; 11, miscellaneous.

A Surecut® biopsy was performed in the clinic on those patients with a carcinoma. Admission for surgery was arranged with the patient within 10 days and, where possible, a choice between mastectomy and wide local excision and radiotherapy was offered. If the breast care sister was not present at the consultation the patient was invited to see her before leaving the clinic.

Another outpatient consultation was arranged before admission to discuss the results of the histology.

## Results

During the period of the study there were 30 clinics, four were cancelled because of bank holidays. The number of new patients was reduced when the consultant was on annual leave. Of the 496 new patients, 94 were classed as 'urgent', 186 as 'soon' and 216 as 'routine'.

### Waiting time

The mean waiting times (±standard deviation, range) for each group before consultation were: 'urgent', 7 days (±6, 0 to 33); 'soon', 21 days (±9, 6 to 44); 'routine', 36 days (±15, 12 to 71). These times include weekends and statutory holidays.

The longer waiting times in the 'urgent' group are for patients referred from the breast screening centre where the waiting time is measured from the first mammogram. In some cases the women were recalled for further imaging before referral.

### Overall diagnosis

Of the patients, 56 (11.3%) were found to have a carcinoma, all were confirmed histologically; 165 (33.3%) were normal on clinical and radiological grounds; and the other 275 (55.4%) were given one of the other benign diagnoses. In the miscellaneous group there were two sebaceous cysts, one with musculoskeletal pain, and two lipomas. Of the 56 carcinomas detected, 41 (73.2%) had been placed in the 'urgent' group, 11 (19.6%) in the 'soon' group and 4 (7.1%) in the 'routine' group.

### Diagnosis by group (Fig. 1)

There were 94 patients in the 'urgent' group and 41 (42.7%) had a carcinoma; 8 (8.3%) were normal, with the remaining 45 (46.8%) having a variety of other benign conditions.

In the 'soon' group, 11 of the 186 patients (5.9%) had a carcinoma; 53 (28.5%) were normal; and 122 (65.6%) had other benign diagnoses.

Of the 216 patients in the 'routine' group, 105 (48.6%) were found to be normal; 107 (49.5%) had benign conditions; and 4 (1.9%) were found to have carcinomas. In all cases these were coincidental findings of impalpable tumours revealed on mammography; in three cases on the opposite side to the condition prompting the initial referral.

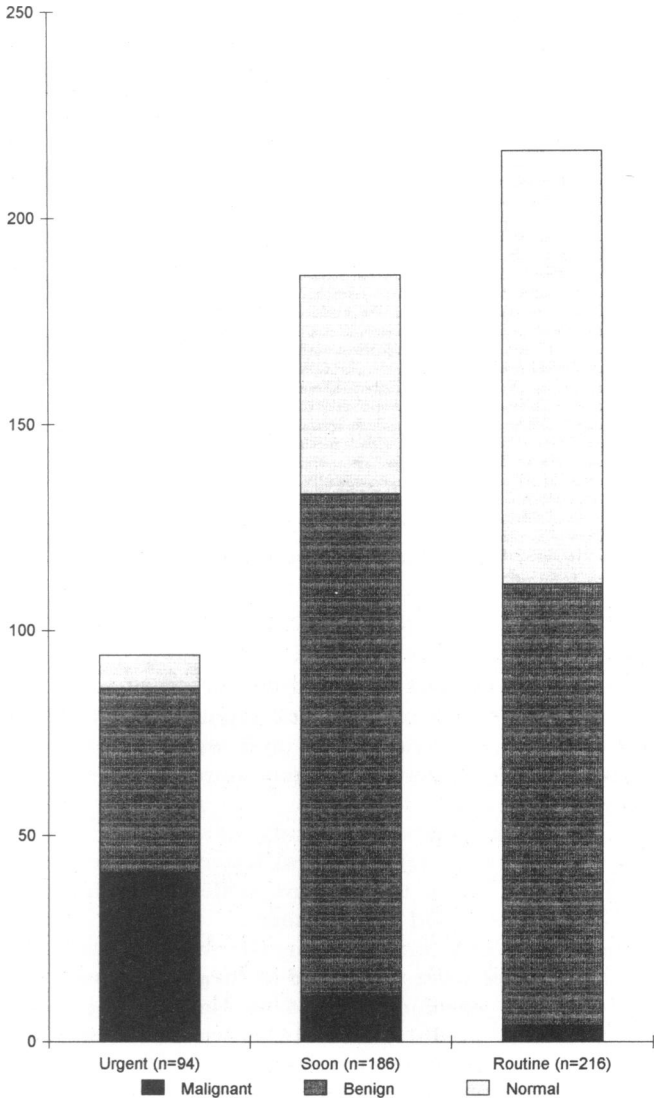


*Figure 1.* Diagnoses in the three groups.

### Referrals from breast screening

There were 35 patients sent to the clinic from the district breast screening service; 16 (45.7%) had a carcinoma; 15 (42.9%) had histologically proven benign lumps; and 4 (11.4%) were diagnosed as having diffuse benign disease after clinical examination and review of their mammograms.

## Discussion

There are over 20 million new outpatient referrals in the UK each year (*4*). Such a volume of patients necessitates that some form of appointment stratification is performed. Hodge *et al.* (*5*) analysed general practitioner referrals to general medical clinics and found that the reason for

referral was often unclear or unstated, although subsequent patient management was not affected. They highlight four key reasons for referral: diagnosis, investigation, management and reassurance. In the setting of a breast clinic, the decision as to whether a carcinoma is present usually involves the interpretation of the general practitioner's description of a lump, along with other considerations such as age, previous breast disease and the results of any recent mammograms. In our study it seems that the general practitioners are very good at identifying carcinomas, or in providing descriptions of them in their letters. This resulted in over 70% being placed in the 'urgent' group and >90% being seen within 3 weeks. The use of a relatively small number of defined diagnoses in reporting back to the general practitioners has also led to an increase in these terms in the referral letters and more letters containing a specific diagnosis.

During the period of our study, fine-needle aspiration cytology (FNAC) was not available at the Ipswich Hospital and so Surecut biopsy was performed on palpable lumps. The benign-to-malignant biopsy ratio of 1:1 in the patients referred from the breast screening service also reflects the absence of this service. There is now a dedicated cytologist in post at our hospital and we would expect this ratio to improve with the use of stereotactic FNAC. In addition, the use of FNAC will decrease the need for Surecut biopsies.

Reassurance can be a difficult problem in women with benign breast disease. Over one-third of the patients in our study were considered to be normal on examination. Many of these also had mammograms or ultrasound carried out, although this was often done to reassure the patient. The question arises as to whether these cases should be considered inappropriate referrals, which merely prolongs the waiting time for other patients. Nunez (*6*) discussed the concept of inappropriate referrals in the setting of an otolaryngology unit. He defined an inappropriate referral as one in which the patient had no evidence of disease and required no treatment, investigation or follow-up. He found that approximately 15% of patients fulfilled these criteria. As Howard (*7*) argued subsequently, specialist referral can reassure and educate the patient, even when it is recognised by the general practitioner that there is no disease present. Anxiety (*8*) is an important aspect of breast disease and often patients may not be reassured without referral. In these cases the specialist is still performing an important task in managing benign breast disease. Bearing in mind the number of patients who appear to be reassured by mammography, it has been suggested that open access to such an investigation would help reduce clinic numbers and therefore waiting times. Curtin and Sampson (*9*) have addressed this problem and conclude that an open-access non-screening service for general practitioners is not required as they already accurately divide women into high- and low-risk groups. High-risk patients are referred to the breast clinic, whereas very few abnormalities are found in those referred directly for mammography. This concurs with our results and discourages us from instituting an open-access policy for general practitioner mammography requests. In common with Dawson *et al.* (*10*), we have not found unnecessary referrals to be a major problem, although since our study the waiting time to being seen in clinic for 'routine' referrals for reassurance (*11*) has risen from 3 to 10 weeks. We believe this to be the result of copious media publicity.

We have found the general referral letters to be accurate in predicting breast cancer, confirming the safety of our system for stratifying the urgency of appointments.

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