Who provides follow-up care for patients with early breast cancer?

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OBJECTIVE To assess how often family physicians are involved in posttreatment care of their stage I breast cancer patients and to identify factors associated with family physicians providing follow-up care.

DESIGN A retrospective cohort study with a 5-year follow up by chart review.

PARTICIPANTS All cases of breast cancer seen at the London Regional Cancer Centre between 1982 and 1987 were reviewed to identify 183 stage I cancer patients alive at 5 years.

MAIN OUTCOME MEASURES Whether a physician (other than an oncologist) was involved in the follow-up care of patients, and whether the physician was a family physician or a surgeon.

RESULTS Follow-up care during the 5-year postoperative period was provided in most cases by oncologists alone (66.7%); family physicians and surgeons were involved in 17.5% and 15.8% of cases, respectively. Surgeons became involved in follow-up care much earlier (12 months) than family physicians did (23 months) (P = 0.01) and were more likely to provide care for patients who received radiation treatment (P = 0.04) and for patients who lived in London (P = 0.004). Most malignant breast lesions (77.5%) were discovered by patients themselves (P = 0.0001).

CONCLUSIONS Currently, family physicians are infrequently involved in follow-up care of their patients with early breast cancer.

OBJECTIF Évaluer la fréquence d'implication des médecins de famille dans les soins post-traitement de leurs patientes porteuses d'un cancer du sein de stade I et identifier les facteurs associés aux médecins de famille qui assurent le suivi.

CONCEPTION Une étude rétrospective par vérification des dossiers d'une cohorte de patientes suivies pendant cinq ans.

PARTICIPANTES Révision de tous les cas de cancer du sein vus au London Regional Cancer Centre entre 1982 et 1987, ce qui a permis d'identifier 183 patientes atteintes de cancer au stade I encore vivantes après cinq ans.

PRINCIPALES MESURES DES RÉSULTATS Vérifier si un médecin (autre qu'un oncologue) était impliqué dans le suivi des patientes et si ce médecin était un médecin de famille ou un chirurgien.

RÉSULTATS Pendant la période postopératoire de cinq ans, la plupart des patientes furent suivies exclusivement par les oncologues (66,7%); les médecins de famille et les chirurgiens furent impliqués dans 17,5% et 15,8% des cas respectivement. Les chirurgiens furent impliqués beaucoup plus précocément (12 mois) dans les soins de suivi que les médecins de famille (23 mois) (p = 0.01) et plus susceptibles de suivre les patientes traitées par radiothérapie (p = 0,04) et celles qui demeuraient à London (p = 0,004). La plupart des lésions malignes du sein (77,5%) furent découvertes par les patientes elles-mêmes (p = 0,0001).

CONCLUSIONS Actuellement, les médecins de famille sont rarement impliqués dans le suivi de leurs patientes atteintes de cancer du sein au stade précoce.

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N CANADA, BREAST CANCER IS still the most common form of cancer in women and a leading cause of women's

deaths.1,2 The larger number of women over age 50 and more vigilant methods of early detection predispose our aging population to an increased prevalence of this disease in coming years. In an era of limited health care funding, this increased case load will soon strain our cancer care resources.

Stage I $(T_1N_0M_0)^*$ breast cancer is the earliest form of the disease and hence has the highest survival rate.^{3,4} Traditional treatment of stage I breast

* T_1 – tumour 2 cm or less in greatest dimension, \mathcal{N}_0 – no regional lymph node metastases, M_0 – no distant metastases

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cancer is either surgery alone or surgery followed by radiation therapy.5-7 More recently, adjuvant chemotherapy has been used to treat some forms of early breast cancer.⁸ Failure of primary treatment (surgery with or without radiation) results in recurrences or metastases in 10% to 30% of cases, 90% of which occur in the first 5 years after treatment.9,10 A serious risk of recurrence remains, however, throughout a patient's life. 9,11

Posttreatment follow up of patients with breast cancer has three purposes: to screen for recurrence of ipsilateral disease, to screen for metastases, and to screen for new malignancy in the other breast.¹² Because much controversy surrounds the subject of breast cancer follow up, no consensus on posttreatment follow-up guidelines has been published to date.^{9,13} A typical posttreatment follow-up regimen, however, includes history taking, physical examination, complete blood cell counts and liver function tests, and chest radiography and annual mammography.¹³

With this type of follow-up regimen, no special skills or technology preclude family physicians from providing the care. 12,14-16 However, once cancer is diagnosed, many patients become lost to the care of their family physicians and are cared for by oncologists. Although the roles of family physicians in preventing cancer, 17,18 screening for cancer, 19 and providing palliative care to cancer patients²⁰⁻²² are well documented, less literature describes their role in posttreatment follow-up care.

A 1986 survey of cancer patients at a regional cancer centre revealed that 43.4% had their family physicians involved in follow-up care and 31.4% had appointments to see their family physicians in the near future. 16 Because these patients had various forms of cancer and were at various stages of the disease, it is difficult to apply these numbers to patients with stage I breast cancer who could be followed by family physicians.

This study was designed to assess how frequently family physicians were

involved in posttreatment follow-up care of their patients with stage I breast cancer and to identify factors associated with family physician follow-up care. We hypothesized there would be four such factors: increased patient age, living at a distance from a cancer clinic, having the breast lesion discovered by a family physician, and receiving minimal treatment for the cancer.

METHODS

To minimize observer variability, a single observer reviewed all 1057 charts of patients at the London Regional Cancer Centre diagnosed with breast cancer between 1982 and 1987. Of the cases reviewed, 183 met the following inclusion criteria.

- Patients had stage I breast cancer in one breast only.
- Patients remained alive, free of recurrence or progression of breast cancer (> stage I), and free of any other forms of cancer either before or during the 5-year follow-up period, starting with the initial oncology consultation.
- Patients remained in care for the duration of the 5-year follow-up period.
- Patients had charts that clearly reflected whether a physician other than an oncologist (usually a family physician or surgeon) was seeing them specifically for breast cancer during the follow-up period (this information came from questionnaires sent periodically to attending physicians of patients who were not being seen regularly at the cancer centre).

The following information was recorded for each case:

- chart number, to prevent duplication of data and to assess the reliability of the data collection process by an independent, random chart review;
- · date of birth;
- address (town or city); there are nine cancer clinics in the region, and patients were grouped according to

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- whether they lived within 20 km of any of the clinics:
- · who discovered the breast lesion (patient, family physician, breast screening clinic, mammography, or, if none of the above, "information not available");
- treatment (ie, surgery and radiation or surgery alone);
- date of initial oncology consultation (ie, beginning of the 5-year follow-up period);
- collaboration, which we defined as a physician other than an oncologist giving follow-up care during the 5-year period;
- onset of collaboration: the first time a collaborating physician saw a patient for follow-up care; and
- whether the collaborating physician was a family physician or a surgeon.

Table 1. Breast cancer follow-up care by treatment

PHYSICIAN PROVIDING FOLLOW-UP CARE	SURGERY AND RADIATION NO. OF CASES (%)	SURGERY ALONE NO. OF CASES (%)
Oncologist alone	88 (70.4)	34 (58.6)
Family physician involved	15 (12.0)	17 (29.3)
Surgeon involved	22 (17.6)	7 (12.1)

To assess the reliability of the process, 10 of the 183 cases were randomly selected and reviewed by a second observer. Data thus recorded were then compared with the original data. When the two observers could not agree on interpretation, a third observer made the final decision. We established data-recording guidelines.

The greatest concern about the data source in this study was how frequently the stage of the breast cancer was recorded inaccurately in the chart list and occasionally in the chart. This became apparent early on, and necessitated including a stage-confirmation step (using the pathology report) in the process.

Data collection reliability assessment revealed disagreements in recording "discoverer of lesion" from two of the 10 randomly selected charts and "date of collaboration" incorrectly recorded from one of those charts. There were four errors in recording type of treatment; all four were eliminated, however, by reducing the number of treatment possibilities from eight to two (ie, surgery alone or surgery and radiation).

All information collected was recorded in a coded format and processed using Epi Info version 5 statistical computing software. Probabilities were calculated using Student's t, χ^2 , and Fisher's exact tests.

RESULTS

Of the 183 cases we tracked between 1982 and 1992 that met our study's inclusion criteria, 61 (33.3%) were followed by a collaborating physician (ie, a physician other than, or in association with, an oncologist). Family physicians were the collaborating doctors in 32 (17.5%) of the cases; surgeons in 29 (15.8%) (Figure 1). Between 1982 and 1987, there was no significant change in the frequency of collaborations (P = 0.34). In fact, the frequency of collaborations involving family physicians remained relatively constant (P = 0.89), ranging from 12.1% to 23.3%. There was, however, a significant variation (P = 0.05) in the frequency of follow-up visits by surgeons, ranging from 4.3% to 30.8%. On average, surgeons became involved in the follow-up care of patients within 12 months of the oncology consultation, whereas family physicians did not become involved until about 23 months after the initial consultation (P = 0.01).

Patients ranged in age from 28 to 86 years with a mean of 57.5 years and a median of 58 years. When the median was used to divide the population equally into young and old, no significant difference was found in the frequency of collaborations (P = 0.96). Using 69 years as the upper limit of the "young" age group, again, no significant difference (P = 0.84) in

frequency could be demonstrated. This was also the case when the population was divided into seven age groups according to decade.

Neither the person nor the method used in discovering the original breast lesion had any statistically significant association (P=0.34) with which physician provided follow-up care. However, patients whose family physicians discovered the breast lesion tended to receive follow-up care from their family physicians (P=0.06). By far the greatest number of breast lesions were discovered by patients themselves (P=0.0001). Of the 142 charts that reported who discovered the lesion, 110 (77.5%) named the patient.

No significant difference in frequency of collaboration was found between care of patients receiving surgery and radiation and those receiving surgery alone (P = 0.16). However, patients who received radiation treatment were much more likely to be followed by an oncologist alone than by a family physician (P = 0.02) (Table 1), and, when collaboration did occur, the collaborating physician was more likely to be a surgeon than a family physician (P = 0.04).

There was no significant difference in the frequency of collaborations for patients living within a 20-km radius of any of the nine cancer clinics and those living outside that area. There were relatively more collaborations in follow-up care of patients living in London, predominantly involving surgeons (P = 0.004) (Table 2). The chart review revealed that two London surgeons in particular had patients assessed postoperatively by an oncologist with the expectation of all concerned that patients would return to them for follow-up care. (This practice was probably due to the surgeons' special interest in the disease and explains why the surgeons collaborated sooner than the family physicians. It also explains the more frequent collaborations for patients living in the city.)

DISCUSSION

This study has shown that family physicians in London, Ont, were infrequently involved in posttreatment follow-up care of their patients with stage I breast cancer. Although we demonstrated that patients receiving radiation treatment were less likely to be followed by family physicians, we were unable to identify any factors indicating that patients were likely to be followed by family physicians.

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Table 2. Breast cancer follow-up care by patient residence

PHYSICIAN PROVIDING FOLLOW-UP CARE	IN LONDON NO. OF CASES (%)	OUTSIDE LONDON NO. OF CASES (%)
Oncologist alone	18 (51.4)	104 (70.3)
Family physician involved	5 (14.3)	27 (18.2)
Surgeon involved	12 (34.3)	17 (11.5)

on recording accuracy and completeness. The importance of recording accurate staging, management, and follow-up information on patients referred for breast cancer in order to have meaningful reports has been recognized.²³ Chart information errors arise from omission, ambiguity, and inaccuracy. Reliability can be further

compromised by observer bias and

inconsistency when data are abstract-

ed from the chart.

Chart review data are dependent

In our study, absent and ambiguous data were recorded as "unknown." Inconsistency between observers was eliminated by having only one observer; single observer bias and inconsistency were reduced by establishing data-recording guidelines. Determining whether a family physician or a surgeon was involved in follow up was simple because a completed questionnaire or letter would be present in the chart. A shortcoming of the study was failure to record the number of charts that did not meet the inclusion criteria and the reason.

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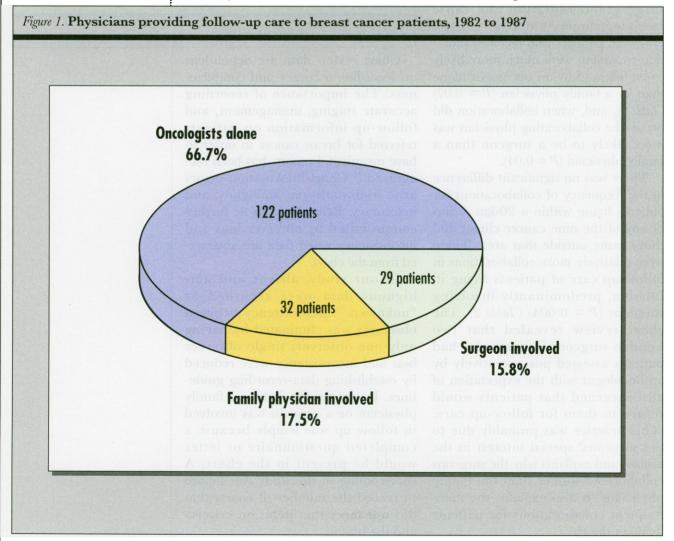
The low frequency of patients with stage I breast cancer receiving posttreatment follow-up care from their family physicians can be explained, at least in part. Several studies have reported the poor communication between primary care physicians and specialists that often precludes successful transfer of patients back to primary care physicians. 14-16

Family physicians' tendency to provide follow-up care to patients when they had discovered the lesion might be due to the increased confidence of both patient and physician in the physician's clinical skills. The high proportion of stage I breast cancer lesions discovered by patients themselves is probably due to the group's including women who developed symptoms of breast disease, women whose partners discovered the lesion,

and women conducting breast self-examination.

Patients treated postoperatively with radiation therapy were much less likely to be followed by family physicians, possibly because they were under the direct care of oncologists for a long time and because they would be followed by oncologists specifically for problems related to radiation treatment. If patients undergoing the new adjuvant chemotherapy also remain under oncologists' care for the same reasons, even fewer patients would receive follow-up care from family physicians.

We expected that, for the sake of convenience, patients residing far from a cancer clinic would be more likely to receive their follow-up care from their family physicians. This was not the case. Although the 20-km limit was



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arbitrary, analysis of the data at different distance limits had no effect on the frequency of involvement of family physicians in follow-up care.

Family physicians follow patients in cooperation with specialists for a variety of illnesses including diabetes and heart disease. There are numerous advantages to having family physicians provide follow-up care for their patients with early stage breast cancer. As primary care physicians, they are typically more accessible to their patients than are specialists. As a result, more frequent visits are easily arranged as needed. Patients come to their family physicians for other medical problems; therefore, treating breast cancer would be in the context of treating the patient as a whole.

Family physicians often also provide medical care to patients' relatives. First-degree female relatives at risk for breast cancer can be more closely followed and family members' concerns more easily discovered and dealt with. A family physician, who has known a patient in her premorbid state, is in a good position to assess (and subsequently manage) the effect the disease has on her and her family and to evaluate how well she is recovering. A patient might also be more likely to express concerns about her marriage and sex life to her family physician than to a physician she has known only for a short time and who provides only specialized care.14

Our results clearly indicate that primary care physicians in London are infrequently involved in the follow-up care of their patients with stage I breast cancer. Reports from Alberta and Ontario indicate that this situation is widespread.24 We have, therefore, an opportunity to include follow-up care of cancer patients in our system of care. To do this, we must cooperate with oncologists in developing concise follow-up protocols and dependable support systems. This can happen only if we can improve communication and collaboration between cancer specialists and primary care physicians.

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PRESCRIBING INFORMATION

THERAPEUTIC CLASSIFICATION

Anti-inflammatory, analgesic and antipyretic agent.

INDICATION

The treatment of osteoarthritis, rheumatoid arthritis, ankylosing spondylitis and juvenile rheumatoid arthritis.

CONTRAINDICATIONS

Naprosyn should not be given to patients with active peptic ulcer or active inflammatory disease of the gastrointestinal tract. It is also contraindicated for those who have shown a sensitivity to it and for patients in whom ASA or other NSAIDs induce the syndrome of asthma, rhinitis or urticaria Sometimes severe and occasionally fatal anaphylactoid reactions have occurred in such individuals. Suppositorie should not be given to patients under 12 years of age or those with inflammatory lesions of the rectum or anus.

WARNINGS

Peptic ulceration, perforation and gastrointestinal bleeding, sometimes severe and occasionally fatal have been reported during therapy with NSAIDs, including Naprosyn.

Naprosyn should be given under close supervision to patients prone to gastrointestinal tract irritation particularly those with a history of peptic ulcer, diverticulosis or other inflammatory disease of the gastrointestinal tract. Patients taking any NSAID should be instructed to contact a physician immediately if they snoulo be instructed to contact a physician immediately it may experience symptoms or signs suggestive of peptic ulceration or gastrointestinal bleeding. These reactions can occur without warning at any time during the treatment. Elderly, frail and debilitated patients appear to be at higher risk from a variety of adverse reactions from NSAIDs. For such patients, consideration should be given to a starting dose lower than

The safety of Naprosyn in pregnancy and lactation has not been established and its use is therefore not recommended.

PRECAUTIONS

Naprosyn (naproxen) should not be used concomitantly with the related drug Anaprox (naproxen sodium) since they both circulate in plasma as the naproxen anion.

GI system:

If pentic ulceration is suspected or confirmed, or if gastrointestinal bleeding or perforation occurs, Naprosyn should be discontinued, and appropriate treatment instituted.

Renal Effects: Patients with impaired renal function nemal checks. Patents with impared train function, extracellular volume depletion, sodium restrictions, heart failure, liver dysfunction, those taking diuretics, and the elderly are at greatest risk of developing over trenal decompensation. Assessment of renal function in these patients before and during therapy is recommended. Naprosyn and its metabolites are eliminated primarily by the kidneys, and therefore, a reduction in daily dosage should be anticipated to avoid the possibility of drug accumulation in patients with significantly impaired renal function.

Peripheral edema has been observed, consequently, natients reripineral edema has been observed, consequently, patients with compromised cardiac function should be kept under observation when taking Naprosyn. Naprosyn Suspension contains sodium chloride (20 mg/mL). This should be considered in patients whose overall intake of sodium must be

As with other drugs used with the elderly or those with impaired liver function it is prudent to use the lowest effective

Severe hepatic reactions including jaundice, and cases of fatal hepatitis have been reported with NSAIDs. The prescriber should be alert to the fact that the anti-inflammatory, analgesic

and antipyretic effects of Naprosyn may mask the usual signs of infections. Periodic liver function tests and ophthalmic studies are recommended for patients on chronic therapy. Caution should be exercised by patients whose activities require alertness if they experience drowsiness, dizziness vertigo or depression during naproxen therapy. Naproxyn may displace other albumin-bound drugs from their binding sites and may lead to drug interactions or interfere with certain laboratory tests. See Product Monograph for further details.

ADVERSE REACTIONS

(1) Denotes incidence of reported reactions between 3% and 9%. (2) Denotes incidence of reported reactions between 1% and 3%. See Product Monograph for reactions occurring in less than 1% of patients.

Gastrointestinal: Heartburn(1), constipation(1), abdominal pain(1), nausea(1), diarrhea(2), dyspepsia(2), stomatitis(2), diverticulitis(2). Rectal burning(1) has been reported occasionally with the use of naproxen suppositories.

Central Nervous System: Headache(1), dizziness(1), drowsiness(1), lightheadedness(2), vertigo(2), depression(2). and fatique(2)

Skin: Pruritus(1), ecchymoses(1), skin eruptions(1), sweating(2), and purpura(2).

Cardiovascular: Dyspnea(1), peripheral edema(1), and

Special Senses: Tinnitus(1), and hearing disturbances(2).

Adverse reactions reported for SR tablets were similar to standard tablets.

DOSAGE AND ADMINISTRATION

DOSAGE AND ADMINISTRATION
Adult: Oral: The usual total daily dosage for osteoarthritis, rheumatoid arthritis and ankylosing spondylitis is 500 mg (20 mL, 4 teaspoons) a day in divided doses. It may be increase gradually to 750 or 1000 mg or decreased depending on the patient's response. Patients with rheumatoid arthritis or osteoarthritis maintained on a dose of 750 mg/day in divided doses can be switched to a once daily dose of Naprosyn SR 750 mg. The single daily dose of Naprosyn SR should not be exceeded and can be administered in the morning or evening. Naprosyn SR tablets should be swallowed whole

Rectal: Naprosyn Suppositories (500 mg) can replace one of the oral doses in patients receiving 1000 mg of Naprosyn daily.

Juvenile Rheumatoid Arthritis: The recommended daily dose is approximately 10 mg/kg in two divided doses.

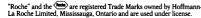
AVAILABILITY

Naprosyn is available as: 125 mg, 250 mg, 375 mg, and 500 mg Tablets, as 250 mg, 375 mg and 500 mg Enteric Coated Tablets, as 750 mg Sustained-Release Tablets and 500 mg Suppositories. Suspension: Each 5 mL. contains 125 mg of naproxen. Shake bottle gently before use. Pharmacists are to provide the Naprosyn Patient Information leaflet when dispensing this drug. Product Monograph available to health professionals upon request.

Professionias upon request.

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