PSYCHIATRIC ILLNESS AND PSYCHOSOCIAL CONCERNS OF PATIENTS WITH NEWLY DIAGNOSED LUNG CANCER

M. Lynne Ginsburg, MB, ChB, FRCPC; Carol Quirt, Msc;
A. David Ginsburg, MD, FCP (SAf), FRCPC, FRCP (Edin), FACP; William J. MacKillop, MB, ChB, FRCPC, FRCR

Abstract • Résumé

Objective: To determine the nature and incidence of psychiatric illness, symptoms of potential psychiatric significance, substance abuse and psychosocial concerns among patients with newly diagnosed lung cancer.

Design: Case series.

Setting: Kingston Regional Cancer Centre, a tertiary care facility for ambulatory cancer patients.

Patients: Seventy-one consecutive English-speaking patients with recently diagnosed lung cancer undergoing radiotherapy or chemotherapy were asked to participate; 52 of the 57 patients who agreed were available for evaluation.

Outcome measures: Current and previous psychiatric diagnoses of affective, anxiety and adjustment disorders, and alcohol and tobacco abuse; symptoms of sadness, fear, shock, anger, denial, acceptance, guilt, suicidal ideation, thoughts of death, insomnia, loss of libido, impaired concentration and reduced level of work or interest; psychosocial concerns about family, work and finances; and an impression of coping.

Results: At the time of the interview two (4%) of the patients were found to have an affective disorder, none had an anxiety disorder, and six (12%) had an adjustment disorder. Previously, 16 patients (31%) had had an affective or anxiety disorder or both. Two (4%) had had an adjustment disorder following the diagnosis of their lung cancer that had resolved before the interview. At some point in their lives 24 patients (46%) had abused alcohol, and 7 (13%) were currently abusing alcohol. All had smoked, 33 (63%) having been tobacco dependent. Feelings of sadness were expressed by 23 (44%), fear by 15 (29%), anger by 2 (4%), shock by 9 (17%) and guilt by 4 (8%). Seven (13%) had considered suicide, and thoughts of death were reported by 16 (31%). Twenty (38%) were accepting of their diagnosis, and 5 (10%) expressed optimism. Twenty-seven (52%) had insomnia, which was reported to be severe by 15 (29%). Loss of libido was reported by 25 (48%) and was severe in 14 (27%). Difficulty concentrating was reported by 10 (19%) and a reduced ability to work or loss of interest by 17 (33%). Fifteen patients (29%) were concerned about their families and 4 (8%) about work or finances. Most (41 [79%]) had good family support, and 23 (44%) found support in religion. Seven patients (13%) seemed to be coping poorly.

Conclusions: Although psychiatric illness was infrequent, symptoms of potential psychiatric significance and psychosocial concerns were common in this patient population. Attention to these symptoms and concerns should be addressed in a systematic and effective way by all health care professionals and agencies planning the care of patients with lung cancer.

Objectif : Déterminer la nature et l'incidence des troubles psychiatriques, des symptômes qui peuvent avoir de l'importance sur le plan psychiatrique, des toxicomanies et des préoccupations psychosociales parmi les patients chez qui l'on vient de diagnostiquer un cancer du poumon.

Conception : Série de cas.

Contexte : Centre régional d'oncologie de Kingston, établissement de soins tertiaires pour cancéreux ambulatoires.

Dr. Lynne Ginsburg is an assistant professor in the Department of Psychiatry at Queen's University and is the director of Community Psychiatric Services for the Elderly at the Kingston Psychiatric Hospital; Ms. Quirt is a research assistant in the Department of Oncology at the Kingston Regional Cancer Centre; Dr. David Ginsburg is a professor of oncology and of medicine at Queen's University and is a medical oncologist at the Kingston Regional Cancer Centre; and Dr. MacKillop is a professor of oncology at Queen's University and is a radiation oncologist at the Kingston Regional Cancer Centre, Kingston, Ont.

***Reprint requests to:** Dr. A. David Ginsburg, Kingston Regional Cancer Centre, 25 King St. W, Kingston ON K7L 5P9*

← For prescribing information see page 760

Patients : On a demandé à 71 patients anglophones consécutifs chez qui l'on venait de diagnostiquer un cancer du poumon et qui subissaient des traitements de radiothérapie ou de chimiothérapie de participer à l'étude; 52 des 57 patients qui y ont consenti étaient disponibles pour évaluation.

Mesures de résultats : Diagnostics psychiatriques courants et antérieurs de troubles de l'affectivité, de l'anxiété et de l'adaptation, abus d'alcool et de tabac; symptômes de tristesse, de crainte, de choc, de colère, de déni, d'acceptation, de culpabilité, tendances suicidaires, réflexions sur la mort, insomnie, perte de libido, déficience de la concentration et baisse du niveau de travail ou d'intérêt; préoccupations psychosociales au sujet de la famille, du travail et des finances; impression de faire face à la situation.

Résultats : Au moment de l'entrevue, on a constaté un trouble de l'affectivité chez deux (4 %) des patients, aucun trouble de l'anxiété et un trouble de l'adaptation chez six (12 %) d'entre eux. Auparavant, 16 patients (31 %) avaient eu des troubles de l'affectivité ou de l'anxiété, ou des deux. Deux (4 %) avaient eu, après le diagnostic de cancer du poumon, un trouble de l'adaptation qui s'est réglé avant l'entrevue. À un moment donné, 24 patients (46 %) avaient abusé de l'alcool et 7 (13 %) en abusaient au moment de l'entrevue. Tous avaient fumé et 33 (63 %) avaient été asservis au tabac. Vingt-trois (44 %) ont exprimé des sentiments de tristesse, 15 (29 %), de crainte, 2 (4 %), de colère, 9 (17 %), de choc et 4 (8 %), de culpabilité. Sept (13 %) avaient envisagé le suicide et 16 (31 %) ont fait état de réflexions sur la mort. Vingt (38 %) acceptaient le diagnostic et 5 (10 %) ont manifesté de l'optimisme. Vingt-sept (52 %) souffraient d'insomnie jugée grave par 15 (29 %). Vingt-cinq (48 %) ont fait état d'une perte de libido jugée grave par 14 (27 %). Dix (19 %) ont signalé des difficultés de concentration et 17 (33 %), une baisse de la capacité de travail ou une perte d'intérêt. Quinze patients (29 %) étaient préoccupés par leur famille et 4 (8 %) par leur travail ou leurs finances. La plupart (41 [79 %]) étaient bien appuyés par leur famille et 23 (44 %) s'en sont remis à la religion. Sept patients (13 %) semblaient accepter la situation plutôt mal.

Conclusions : Même si les troubles psychiatriques ont été peu fréquents, les patients de ce groupe ont souvent présenté des symptômes qui pouvaient avoir de l'importance sur le plan psychiatrique et manifesté des préoccupations psychosociales. Tous les professionnels de la santé et les organismes qui planifient les soins de patients atteints de cancer du poumon devraient tenir compte de ces symptômes et de ces préoccupations de façon systématique et efficace.

The supportive care needs of patients with cancer and how they should be met are by no means clear, although it is generally accepted that the care should include the detection of and attention to psychiatric illness and emotional and social concerns.[1] This would seem to be particularly germane for patients with lung cancer. Lung cancer is common in our society: it accounted for 15.2% of the 38 412 newly diagnosed cases of cancer in Ontario in 1989.[2] Lung cancer is largely self-induced and is associated with a very poor clinical outcome irrespective of the treatment provided, be it extensive surgery, radical radiotherapy or aggressive chemotherapy.[3] The provision of optimum supportive care, including psychosocial support, must therefore become a major management goal in this patient population.

The reported incidence of psychiatric illness among patients with cancer has ranged from 4.5%[4] to 85%.[5] This wide variation may be influenced by a number of factors, including sample size, demographic characteristics, the site of the primary tumour, the extent of the disease, the physical performance status of the patient, the time since diagnosis, the stringency of the diagnostic criteria, the reasons for the psychiatric assessment, the methods of assessment and the backgrounds of the evaluators.[4,6,7]

In the absence of psychiatric illness, per se, emotional upset and symptoms of potential psychiatric significance might reasonably be expected in patients with a disease fraught with so many emotional overtones. For example, guilt was acknowledged by 42% of the 50 patients with lung cancer studied by Sell and associates,[8] who also commented that patients' denial of the close relationship between smoking and lung cancer may be important to their maintaining self-esteem. Silberfarb and collaborators[9] found that only 2 of 17 patients with lung cancer were concerned about their sleep patterns. However, in formal sleep studies they noted that in these patients sleep was interrupted by long awakenings, that there was more stage I sleep and that "in many ways they slept as poorly as did patients whose primary complaint was insomnia."

An immediate goal for us, then, was to define the extent of the psychiatric and psychosocial concerns of our patients with newly diagnosed lung cancer; the longer term goal was to use this information to define the extent and nature of the supportive care services that we should be providing to enhance their care.

A concurrent study of factors affecting the role of patients with lung cancer in medical decision making provided us with an opportunity to assess the psychiatric status of these patients and to gain an insight into some of their emotional and social concerns — in essence to begin to define the extent and nature of the psychiatric and psychosocial concerns that such patients face.

METHODS

ELIGIBILITY CRITERIA AND CONSENT

Patients were included in the study if (a) they had a diagnosis of lung cancer based on histologic evidence, (b) their diagnosis was recent (ideally within the previous 3 months), (c) they were undergoing radiotherapy or chemotherapy at the Kingston Regional Cancer Centre, a clinic for ambulatory cancer patients in Kingston, Ont., and (d) they did not need the help of an interpreter to communicate.

Patients were identified as potential candidates by the medical records staff who register new patients at the cancer centre. The coordinator of the study (C.Q.) then approached the attending physician to determine whether it would be appropriate to involve the patient in the study. Oral consent from the patient to discuss details of the study with the coordinator was obtained by the attending physician, who described the study in outline. Written consent was obtained after the patient had full disclosure of the practical aspects of the study, the study procedure and the commitment required on the patient's part. The study was approved by the Committee for Review of Ethics of Research Involving Human Subjects at Queen's University, Kingston, Ont.

The number of subjects needed for the study was arbitrarily set at 50, and these were accrued between June 1988 and April 1990.

Patients' physical performance status was assessed with the use of the Karnofsky scale,[10] a score above 70% suggesting a reasonable level of functioning. Patients were classified according to their principal occupation with the use of Brockington's criteria for social stratification.[11]

PSYCHIATRIC EVALUATION

One of us (M.L.G.) performed the psychiatric evaluations, which comprised a rigidly structured interview and a less rigid, but still structured, interview, both conducted at one session lasting about 1.5 hours.

The rigidly structured interview followed the Diagnostic Interview Schedule (DIS),[12] a standardized formal diagnostic instrument that is based on the *Diagnostic and Statistical Manual of Mental Disorders*, 3rd edition (DSM-III).[13] It permits a diagnosis of current and previous psychiatric disorders. It does not address the diagnosis of an adjustment disorder — a diagnosis that has frequently been established in patients with cancer.[6,7] Since our main goal was to assess the emotional impact of the diagnosis of lung cancer rather than to perform an in-depth psychiatric assessment, only aspects of the DIS that deal with anxiety, depression, alcohol use and tobacco use were incorporated into the interview. Other psychiatric diagnoses are infrequently documented in patients with cancer.[7] The anxiety components that were assessed deal with the diagnosis of generalized anxiety disorder, panic disorder, phobic disorder and obsessive compulsive disorder. The affective disorders assessed include major depression, dysthymic disorder and manic disorder.

The less structured interview was used to determine the presence of an adjustment disorder according to the criteria of the revised DSM-III.[14] Patients were asked to speak relatively freely about their emotional responses to the lung cancer, its diagnosis and treatment, their concerns about family, work and finances, and the support systems available to them. This stage of the evaluation allowed both the patients and the psychiatrist an opportunity to assess how the patients were coping.

RESULTS

Seventy-three eligible patients were considered. The attending physicians of two patients deemed that it would be inappropriate for them to participate. Of the 71 patients approached, 57 (80%) agreed to participate. Of the 14 patients who declined, 6 did not want to take the time, 3 thought that the study would be too stressful for them, and 5 gave other reasons such as difficulties with transportation. Of the 57 who consented, 2 died and 3 withdrew before they could be interviewed.

The median time from diagnosis to the date of the psychiatric evaluation was 45 (range 6 to 150) days. The general patient characteristics are shown in Table 1. According to the Karnofsky scores most of the patients were still fairly active physically.

PSYCHIATRIC DIAGNOSES AND SYMPTOMS

Current psychiatric diagnoses

The results of the DIS portion of the interview revealed that two (4%) of the patients had a current affective disorder, 1 having major depression and the other a dysthymic disorder. None of the patients had an overt anxiety disorder, and none had a manic disorder. From the less structured interview we found that six (12%) of the patients had features of an adjustment disorder, 5 having predominantly an adjustment disorder with depressed mood and 1 an adjustment disorder with anxious mood. Overall, therefore, a psychiatric illness at the time of the interview was diagnosed in 15% of the patients.

Previous psychiatric diagnoses

Of the 52 patients several had evidence of a previous psychiatric illness before the diagnosis of lung cancer

(Table 2). Sixteen (31%) had had symptoms that met the criteria for either an affective disorder (11 [21%]) or an anxiety disorder (9 [17%]), or both (4 [8%]). Of the last four, all had had major depression, three had also had a dysthymic disorder and one a bipolar disorder, and two had also had a generalized anxiety disorder, one a phobic disorder and one a phobic and panic disorder.

Two patients (4%) had had symptoms meeting the criteria for an adjustment disorder that had developed following the diagnosis of their lung cancer, but these had resolved by the time of the interview.

Substance abuse

Twenty-four patients (46%) reported alcohol abuse or dependence at some point in their lives. Seven (13%) were currently abusing alcohol.

All of the patients had been smokers at some point, and 33 (63%) reported tobacco dependence. Seventeen (33%) were still smoking at the time of the study.

Potentially significant psychiatric symptoms

Although most of the patients did not have a formal psychiatric diagnosis, many experienced a variety of symptoms of potential psychiatric significance in association with the diagnosis of their lung cancer. In some instances the symptoms preceded, often by years, the diagnosis of the cancer. Table 3 shows the incidence of these symptoms in the patients with and in those without a formal psychiatric diagnosis. In only 3 of the 52 patients were we unable to detect any evidence of psychiatric symptoms. Patients without a formal psychiatric diagnosis experienced, although less frequently, the same psychiatric symptoms and psychosocial problems as did those with a psychiatric diagnosis.

Table 1: Characteristics of 52 patients with newly diagnosed lung cancer

Characteristic	No. (and %) of patients
Sex	
Male	39 (75)
Female	13 (25)
Age, yr	
< 50	3 (6)
50–70	36 (69)
> 70	13 (25)
Marital status	
Single	3 (6)
Married	40 (77)
Divorced	3 (6)
Widowed	6 (12)
Occupation/social class	
Professional or director	2 (4)
Intermediate (initiates policy)	11 (21)
Skilled worker	21 (40)
Partly skilled worker	16 (31)
Unskilled worker	2 (4)
Educational level	
Elementary school	17 (33)
Some high school	21 (40)
High school	10 (19)
Some postsecondary school	2 (4)
College or university	2 (4)
Nature of lung cancer	
Small cell	13 (25)
Other	39 (75)
Squamous cell	16 (31)
Large cell anaplastic	11 (21)
Adenocarcinoma	10 (19)
Not specified	2 (4)
Extent of disease	
Local	19 (37)
Regional metastases	21 (40)
Distant metastases	12 (23)
Type of therapy	
Radiotherapy	39 (75)
Chemotherapy	13 (25)
Karnofsky score, %†	
90	11 (21)
80	11 (21)
70	21 (40)
60	6 (12)
50	2 (4)
40	1 (2)

†A score above 70% suggests a reasonable level of physical functioning.

Sadness, fear, shock, anger and denial

Twenty-three patients (44%) used terms such as "sad," "crying," "tearful," "low," "rotten" and "depressed" to describe the way they had felt at some time since the diagnosis. Terms such as "frightened," "scared," "worried," "frantic," "tense," "anxious" and "stressed" were used by 15 (29%). Nine (17%) described themselves as having been "shocked" or "stunned." Seven (13%) used terms such as "angry," "mad" and "cheated." Denial was apparent in 8 (15%).

A degree of acceptance was related by 20 (38%) of the patients, 5 of whom even used terms indicating optimism.

Guilt

A feeling of guilt was expressed by only 4 (8%) of the patients. One man felt that he had "brought this on [himself] because of [his] lifestyle of drinking and smoking" and felt remorse for the way he had treated his family, spending money on alcohol rather than on food. Another felt that he had "betrayed [his] wife by smoking behind her back" and that he had "broken a pledge to the Lord by continuing smoking." One man felt guilty because it was now necessary for his wife to care for him. One woman was concerned about letting her husband down by denying him a much-needed annual holiday — for the second time — because of her illnesses (breast cancer had been diagnosed 1 year previously). Another patient, although apparently not feeling guilty, did wonder about what he had done "to end up like this" and about the role smoking, drinking and painting cars without a mask had in his lung cancer.

Table 2: Previous psychiatric diagnoses

Diagnosis	No. (and %) of patients
Affective disorder*	11 (21)
Major depression	9 (17)
Dysthymic disorder	5 (10)
Bipolar disorder	1 (2)
Anxiety disorder*	9 (17)
Generalized anxiety disorder	5 (10)
Simple phobia	7 (13)
Adjustment disorder	2 (4)
Alcohol abuse	24 (46)
Tobacco dependence	33 (63)

*Several patients had more than one form of affective or anxiety disorder. Four patients had both an affective disorder and an anxiety disorder.

Suicidal ideation, thoughts of death

Seven patients (13%) discussed having considered suicide after hearing the diagnosis of lung cancer: it was considered fleetingly at the time of diagnosis (two patients), for a prolonged period (one), in the presence of postoperative pain (one), in the event the pain became severe (one), in the event the patient became a burden to his wife (one) and if lingering ill health proved to be a problem (one).

Sixteen patients (31%) had thoughts of death since the diagnosis of lung cancer. In the remaining 36 (69%) the diagnosis of lung cancer did not seem to provoke undue thoughts of death. Four of the 36 had had thoughts of death before the diagnosis: at the time of death of a daughter and several friends, of a mother, of a son in a motor vehicle accident and of a husband.

Insomnia

Twenty-seven patients (52%) reported experiencing some degree of insomnia associated with the diagnosis of their lung cancer. The insomnia was severe in 15 (29%): 7 described it as prolonged periods of wakefulness during the night, 2 as early morning awakening, 1 as a combination of difficulty falling asleep and prolonged and frequent periods of wakefulness in the night, 1 as both excessive wakefulness and early morning awakening and 4 as all of these aspects.

Of the patients with severe insomnia three ascribed it to anxiety, three to "receiving radiation therapy" and one to depression and guilt associated with the diagnosis of the lung cancer. Five of the 15 patients reported that the insomnia had preceded the diagnosis of their cancer; 4 associated it with a long history of anxiety and depression, and 1 stated that the insomnia, previously associated with heavy drinking, had worsened since the diagnosis.

One patient ascribed his insomnia to the use of diuretics, one awoke to urinate and then could not get back to sleep, and one blamed it on daytime naps taken since starting chemotherapy.

Six patients (11.5%) had experienced excessive drowsiness, which they attributed to their chemotherapy or radiotherapy or their analgesic and antiemetic therapy, or a combination.

Loss of libido

Reports of decreased libido were given by 25 (48%) of the patients (18 men, 7 women). In 14 (27%) the decrease was profound. In 12 of the 25 patients (8 men, 4 women) loss of libido was longstanding and preceded the diagnosis of the lung cancer. Several explanations

Table 3: Characteristics and symptoms of potential psychiatric significance among patients with and those without a current psychiatric diagnosis

Characteristic/symptom	Current psychiatric diagnosis; no. (and %) of patients* Yes (n = 8)	No (n = 44)	All (n = 52)
Demographic characteristic			
Mean age, yr	59	63	63
Sex			
Male	4 (50)	35 (80)	39 (75)
Female	4 (50)	9 (20)	13 (25)
Marital status			
Married	6 (75)	34 (77)	40 (77)
Divorced	1 (12)	2 (5)	3 (6)
Widowed	1 (12)	5 (11)	6 (12)
Single	0	3 (7)	3 (6)
Previous psychiatric illness			
Affective disorder	4 (50)	7 (16)	11 (21)
Anxiety disorder	3 (38)	6 (14)	9 (17)
Alcohol abuse	4 (50)	20 (45)	24 (46)
Symptoms of possible psychiatric relevance			
Sadness	6 (75)	17 (39)	23 (44)
Fear	4 (50)	11 (25)	15 (29)
Shock	2 (25)	7 (16)	9 (17)
Anger	0	2 (5)	2 (4)
Denial	0	8 (18)	8 (15)
Calm acceptance	1 (12)	19 (43)	20 (38)
Optimism	0	5 (11)	5 (10)
Guilt	2 (25)	2 (5)	4 (8)
Suicidal ideation	2 (25)	5 (11)	7 (13)
Thoughts of death	4 (50)	12 (27)	16 (31)
Insomnia	6 (75)	21 (48)	27 (52)
Severe	4 (50)	11 (25)	15 (29)
Loss of libido	5 (62)	20 (45)	25 (48)
Severe	3 (38)	11 (25)	14 (27)
Impaired concentration	3 (38)	7 (16)	10 (19)
Reduced work/interest	4 (50)	13 (30)	17 (33)
None	0	3 (7)	3 (6)
Psychosocial concerns			
Family	3 (38)	12 (27)	15 (29)
Work/finances	2 (25)	2 (5)	4 (8)
Support systems			
Family	6 (75)	35 (80)	41 (79)
Religion	3 (38)	20 (45)	23 (44)
Coping ability			
Poor	5 (62)	2 (5)	7 (13)

*Unless otherwise stated.

were proposed by the 12 patients. For example, two attributed it to aortic bypass surgery, two to cardiac disease and "heart pills," one to a hysterectomy during which the "nerves had been cut," one to the pain of rheumatoid arthritis and one to a poor marital relationship. One patient had "not been interested" for 35 years.

For 13 (25%) of the patients (10 men, 3 women) the loss of libido was specifically associated with the diagnosis of their lung cancer. Three of these patients had also experienced loss of libido previously: after renal artery surgery (one), after a divorce years before the diagnosis (one) and after previous admissions to a psychiatric facility because of panic attacks (one). Again, several explanations were proposed by the patients: one man was concerned about transmitting the cancer to his wife, one patient related the problem to the general ill health associated with the lung cancer, and two attributed it to therapy. One man was experiencing increased libido, but his wife was scared and had lost interest in sex.

Impaired concentration and reduced level of work

Ten patients (19%) felt that they had been unable to concentrate or think clearly since the diagnosis; two blamed this on their medication. One patient described being unable to relax, and lying in bed and worrying. Seventeen patients (33%) reported experiencing a reduced ability to work and reduced interest in other activities; 9 described this effect as severe.

Psychosocial concerns

Fifteen patients (29%) had concerns about their families and how they would cope, especially how their spouses would manage. One patient had specific concerns for a divorced daughter, and another patient was worried about an ill daughter. Four patients (8%) reported being concerned about their work and finances: one was worried about his pension and an income for his wife, one owed taxes and had quit work, one had no source of income, and the fourth was concerned because her husband was out of work.

Support systems

Most of the patients had good family support systems. Religion was important to almost half of the patients.

Inability to cope

Seven (13%) of the patients (four men, three women) did not seem to be coping well with their illness. One had an affective disorder according to the DSM-III criteria; four were found to have an adjustment disorder (three had previously abused alcohol and one was currently abusing alcohol); one was lonely and bored, felt cutoff from his family and was currently abusing alcohol; and one was in an abusive marriage with no support but had no previous or current psychiatric disorder.

Discussion

We found a low incidence of formal psychiatric illness (15%) in our study population; only 2 (4%) of the 52 patients in the study had an affective disorder and 6 (12%) an adjustment disorder. Seven patients (13%) seemed to be coping poorly with their illness, and seven (13%) were abusing alcohol. We also documented a significant incidence of symptoms of potential psychiatric importance (Table 3) that affected not only the patients with psychiatric illness but also those without a documented psychiatric illness. Such symptoms might well be expected to affect adversely the quality of life of these patients. By contrast, acceptance, and even optimism, was expressed by 38% of the patients.

We found a high incidence of previous psychiatric disturbance and symptoms, often preceding the diagnosis of lung cancer by years. This finding supports our frequent clinical observation that cancer often occurs against a background of coexistent psychopathology, which must itself be recognized and managed.

The study population reflects a relatively homogeneous group of patients: all outpatients being treated for newly diagnosed lung cancer, studied consecutively with the use of a standardized interview format over 1 year. The group was fairly representative of patients with lung cancer in general. The incidence rate of 25% for small cell lung cancer in the study group was identical to that previously published.[3] Also, 75% of our patients were men and 94% were 50 years of age or more, rates that were similar to those of 67% and 94% reported in the total lung cancer population in Ontario.[2]

All of our patients were interviewed by a single psychiatrist. This raises the possibility of observer bias. However, the use of the rigidly applied DIS, with its computer analysis of the data, would seem to ensure consistency. The systematic method of questioning patients on topics such as thoughts of death and sleep patterns, part of the DIS, would help to ensure accuracy in the assessment of at least the incidence of these symptoms. The assessment of mood and coping and the diagnosis of an adjustment disorder, although also based on a structured interview, are more liable to interpretation and subjectivity. This does not seem in any way, however, to preclude the need to consider and seek such disturbances in all patients with newly diagnosed lung cancer.

Our study was specifically designed to detect a variety of psychiatric and psychosocial problems. It is uncertain whether such problems would have been identified in the ordinary course of events. We believe that it is important, therefore, for primary caregivers (family physicians, oncologists, oncology nurses, radiation technologists) to consider the possibility of psychiatric illness, to enquire about symptoms of potential psychiatric relevance and to enquire about psychosocial concerns when caring for patients with lung cancer. The management of such psychosocial problems falls, and will continue to fall, largely on the shoulders of primary caregivers. They should therefore have, or acquire, the necessary time, skills and attitudes in order to detect the problems and to provide the appropriate care. The effective management of insomnia, for example, can be no less important to the patient than the effective management of pain, hemoptysis or dyspnea.

Our findings also suggest a need for agencies planning the delivery of cancer care to ensure the development of appropriate referral services for the provision of supportive care beyond the expertise of primary caregivers. These agencies will need mechanisms to identify patients in particular need of help, to determine the nature and extent of the help that these patients and their families should be receiving, be it psychiatric, social, legal or financial, and to determine how the people providing the supportive care should be trained. All of these questions will need to be answered through appropriately designed studies, with careful monitoring of the effectiveness of any measures that may be introduced.

We thank Leslie Cole, RN, ward supervisor at the Forensic Rehabilitation Services, Kingston Psychiatric Hospital, for preparing the computer-generated data from the Diagnostic Interview Schedule.

References

1. Ginsburg AD: Psychosocial oncology — an overview. *Cancer in Ontario* 1990; [annual]: 30–38

2. Clarke EA: Cancer incidence, mortality and treatment in Ontario. *Cancer in Ontario* 1991; [annual]: 7–28

3. Ginsberg RJ, Kris MG, Armstrong JG: Cancer of the lung. In DeVita VT, Hellman S, Rosenberg SA (eds): *Cancer Principles and Practice of Oncology*, JB Lippincott Company, Philadelphia, 1993: 673–758

4. Lansky SB, List MA, Herrman CA et al: Absence of major depressive illness in female cancer patients. *J Clin Oncol* 1985; 3: 1553–1560

5. Hamid MA, Munib AA, Ahmed SK: Psychiatric morbidity in cancer patients. *Bangladesh Med Res Counc Bull* 1993; 19: 15–20

6. Derogatis LR, Morrow GR, Fetting J et al: The prevalence of psychiatric disorders among cancer patients. *JAMA* 1983; 249: 751–757

7. Massie MJ, Holland JC: Overview of normal reactions and prevalence of psychiatric disorders. In Holland JC, Rowland JH (eds): *Handbook of Psychooncology*, Oxford University Press, New York, 1989: 273–282

8. Sell L, Devlin B, Bourke SJ et al: Communicating the diagnosis of lung cancer. *Respir Med* 1993; 87: 61–63

9. Silberfarb PM, Hauri PJ, Oxman TE et al: Assessment of sleep in patients with lung cancer and breast cancer. *J Clin Oncol* 1993; 11: 997–1004

10. Karnofsky DA, Burchenal JH: The clinical evaluation of chemotherapeutic agents in cancer. In Macleod CM (ed): *Evaluation of Chemotherapeutic Agents*, Columbia University Press, New York, 1949

11. Brockington CF: *The Health of the Community: Principles of Public Health for Practitioners and Students*, J & A Churchill Ltd, London, 1954: 391–403

12. Robins LN, Helzer HJ, Croughen A et al: Diagnostic Interview Schedule. *Arch Gen Psychiatry* 1981; 38: 381–389

13. Spitzer RL, Andreasen N, Arnstein RL et al (eds): *Diagnostic and Statistical Manual of Mental Disorders*, 3rd ed, American Psychiatric Association, Washington, 1980

14. *Diagnostic and Statistical Manual of Mental Disorders*, 3rd ed, rev, American Psychiatric Association, Washington, 1987