Lung cancer: the role of the nurse in treatment and prevention

Sheila Quinn describes the pathophysiology, care and nursing management of lung cancer.

Aims and intended learning outcomes

The aim of this article is to develop nurses’ knowledge and understanding of their role in caring for patients with lung cancer, both in the acute and palliative setting. It also explores the nursing role in prevention through helping patients to stop smoking.

After reading this article you should be able to:

- Discuss the underlying pathophysiology of lung cancer.
- Describe the investigations and treatments for lung cancer.
- Account for the symptoms associated with lung cancer and highlight measures used to control them.
- Consider the role of the nurse in providing psychological and spiritual care.
- Reflect on the role of the nurse in the prevention of lung cancer.

Introduction

Lung cancer accounts for 17 per cent of all cancers, making it the most common malignancy, responsible for almost 24 per cent of all cancer deaths in the UK (Doll and Peto 1996). The death rate from lung cancer is 32,000 each year, with a male to female ratio of 4:1. Although rising mortality from the disease has levelled off in men, it continues to rise in women and accounts for one in eight of all deaths from malignant diseases in females, second only to breast cancer (Kumar and Clark 1998). Some cases of lung cancer are related to exposure to asbestos, radioactive isotopes (such as radon and chromium), arsenic, iron oxide, petroleum chemicals and coal tar products (Segal and Weaver 1987). Smoking, however, is the main cause (Forrest et al 1995) and as nurses come into contact with a wide range of both actual and potential clients, a number of opportunities exist for health education in this area.

Some 40,000 new cases of lung cancer are diagnosed every year, occurring most frequently between the ages of 50 and 60, but it is increasingly being seen in younger age groups (Forrest et al 1995). There is no effective screening test and a limited range of treatment options, resulting in lung cancer having a generally poor prognosis (Lowden 1998). The five-year overall survival rate for lung cancer patients is only 5.8 per cent (Thames Cancer Registry 1995) and only about 20 per cent are alive a year after diagnosis. According to Harpole (1995), 60 per cent of patients present in the late stages of the disease and up to 30 per cent of patients who do undergo surgery (tumour resection) have undiagnosed metastases (Muers 1994).

Whatever the prognosis, patients with lung cancer benefit from accurate information regarding their particular disease process. Studies examined by Melville and Eastwood (1998) found that 90 per cent of patients with lung cancer preferred to know the truth. Patients need to understand the range of treatment options available to them, including the potential risks and negative effects of treatments, for example the side effects of chemotherapy, to make informed choices. As a cure is not an option for most of these patients, they will need to come to terms with the fact that their treatment may only be of a palliative nature. This realisation may come soon after diagnosis (Lowden 1998), and a nurse who is willing to listen, and able to discuss the different options that may have been given to the patient, may be of great help acting both as a sounding board and a link with the medical team (Box 1).

The Calman-Hine Report (DoH 1995) focused on evidence-based practice for the commissioning of cancer services. Following on from this, the National Cancer Guidance Group (1998) looked at the effective management of lung cancer. The guidance it provides deals with seven topic areas with an emphasis on prevention and palliative care (Box 2).
Box 1. Nursing responsibilities in caring for the patient with lung cancer

- Assess own level of knowledge relative to the pathophysiology of the disease process
- Make use of current research findings and practices in the care of the patient and her or his family
- Assess the learning needs, desires and capabilities of the patient with lung cancer
- Assess the social network available to the patient
- Assess nursing problems and plan appropriate interventions with the patient and her or his family
- Assist the patient to identify their own strengths and limitations
- Assist the patient to design short and long term goals
- Implement an appropriate nursing care plan
- Foster continuity of care by collaboration within the multidisciplinary team
- Evaluate the outcome of care with the patient and his or her family, and members of the multidisciplinary team

(Adapted from Smeltzer and Bare 1996)


IMPROVING OUTCOMES IN LUNG CANCER

- Prevention
- Access, diagnosis and staging
- Multiprofessional teams
- Communication, information and support
- Radical treatment for non small-cell lung cancer
- Radical treatment for small-cell lung cancer
- Palliative care and interventions

Pathology

The most common way of designating types of lung cancer is the division between small-cell lung cancer (SCLC) and non small-cell lung cancer (NSCLC), which is based on the characteristics of the tumour and its response to treatment (Kumar and Clark 1998). In relation to histology (the structure of minute tissues), the tumour cells may be well differentiated or anaplastic (not well differentiated).

There are three types of cancers designated as NSCLC. The first of these, which is the most common, is squamous cell or epidermoid cancer, which arises from the cells that line the airways. The second type, adenocarcinoma, develops from the mucous producing cells. The third type is an anaplastic tumour, a large-cell carcinoma, which gets its name from the large, rounded cells that are seen when examined under a microscope. This type of cancer often originates in the periphery of the lung, but can occur anywhere with rapid growth and widespread metastases.

The second type of anaplastic tumour is the small-cell cancer of the lung (SCLC). This is also known as oat-cell carcinoma, which accounts for 20 per cent of all lung cancers. It arises from endocrine cells in the lungs and secretes a number of polypeptide hormones. These polypeptides can act in an autocrine way, creating a feedback loop on the cells leading to a rapid cellular growth. It is considered a systemic disease, and historically the only one of the bronchial cancers which respond to chemotherapy (Kumar and Clark 1998). SCLC is strongly associated with smoking and often originates centrally in the lungs. It is virulent and metastases rapidly appear in lymph nodes, bones, brain, adrenal glands and the liver.

When pulmonary carcinogens such as smoke and asbestos particles are inhaled, they bind to cellular DNA, damaging it. It is possible that they activate growth stimulating genes (oncogenes), and switch off tumour suppressing genes. The result is atypical cell growth which leads to the formation of malignant cells (Chiramannil 1998). As the genetic transformation continues, the normal pulmonary epithelium changes histologically through various stages to carcinoma in situ, and eventually, invasive cancer. Specific proto-oncogenes (C, L, and N-Myc), which when activated produce oncogenes, have been associated with SCLC (Kumar and Clark 1998).

Clinical manifestations

Signs and symptoms arise from local intrathoracic and metastatic tumour growth, extrathoracic metastases and indirect effects of the tumour. The tumour spreads by local invasion or along lymphatic channels. It can invade adjacent organs such as the pericardium and heart, oesophagus, chest wall or diaphragm.

A lung cancer may be located centrally, in a major bronchus, and hence visible with bronchoscopic examination. However, depending on the type of tumour it might be on the periphery of the lung, (especially adenocarcinomas) and not visible during this type of examination. Some tumours may be asymptomatic and are picked up with routine chest X-rays. More commonly, if the malignancy is in a major airway, there may be a reflexive cough due to the stimulation of nerve endings, and because these tumours are vascular and tend to bleed, haemoptysis. Often, a new cough, or change in a chronic cough spurs the patient to seek medical advice. The investigations for lung cancer are summarised in Table 1.

Airway occlusion can cause dyspnoea, lead to a silent collapse (atelectasis) in the affected area, or infection in the distal airways with a resultant pneumonia or lung abscess. Pneumonia that fails to resolve, or which re-occurs in the same area of the lung is a suspicious sign and may require bronchoscopic examination (Forrest et al 1995).

Central invasion of the tumour may affect the laryngeal nerve and cause hoarseness from paralysis of the vocal cord. The phrenic nerve, controlling the movement of the diaphragm, may be affected, resulting in a decrease in lung volume and ventilation. Enlarged lymph nodes in the mediastinum may compress the superior vena cava and cause engorgement of the face and arms (SVC syndrome). This is a potential medical emergency. Involvement of the oesophagus may cause dysphagia.

If there is invasion of the chest wall and ribs, the brachial plexus may become involved (Pancoast’s tumour) causing severe shoulder pain which extends down the inner surface of the arm. Bony metastases are common, causing severe pain and pathological fractures (Kumar and Clark 1998).
Distal metastases most commonly affect the liver. Deposits in the brain may cause personality changes, epilepsy or a focal neurological lesion. Secondary deposits may occur in the adrenal glands in SCLC, resulting in the endocrine manifestations such as the syndrome of inappropriate secretion of anti-diuretic hormone (SIADH) or adrenocorticotropic hormone syndrome. Hypercalcaemia, usually as a result of squamous cell carcinoma, can also occur.

Systemic manifestations include fatigue, anorexia and weight loss. Cachexia, which is the result of malnutrition and increases the patient’s basal metabolic rate (BMR), arises from the stressors effects of a major illness on metabolism. This leads to the breakdown of fat reserves and lean muscle mass which is a common effect of lung cancer (Lowden 1998). Finger clubbing, and rarely, a form of arthritis, may occur as a result of extra pulmonary manifestations.

### Disease staging

Before a decision about treatment can be made, the type of tumour and its extent and distribution needs to be ascertained (Kumar and Clark 1998). Various ‘staging investigations’ will be carried out before the treatment decision (Plant and Muers 1996). The TNM (tumour, node, metastases) classification can be applied to most tumours, including lung cancer (Smeltzer and Bare 1996). The staging for lung cancer is shown in Table 2.

### Treatment

#### Surgical treatment

The complete resection of tumours remains the best chance of cure (Morgan 1996). NSCLC tumours are considered less aggressive and up to 30 per cent may be amenable to surgery. It is the treatment of choice for Stage 1 and 2 NSCLC (Table 2). Morgan (1996) suggests that certain subgroups of Stage 3(a) may also be suitable for resection – SCLC tumours at Stage 1 and 2 may be managed by surgery and chemotherapy.

However, for reasons that have yet to be fully explained, the UK surgical resection rates (<10 per cent) remain lower than those achieved in Europe and the US (>20 per cent) (Larouche et al 1998). Even with apparently curative resections, only 35-40 per cent of patients survive for five years (Forrest et al 1995). Exploring surgical options, if offered, may be confusing for patients. It is important that the patient is assessed by a specialist respiratory team to promote the best decision between the options of surgical, or palliative and supportive care (Lowden 1998).

The principle aim of surgical treatment is the removal of the anatomical unit containing the tumour; whether it be a segment, lobe or whole lung, along with its associated lymphatic drainage. Lung cancer occurs mainly in older and middle-aged smokers, and cardiovascular and chronic lung disease are common in these patients. This can create problems and makes it more difficult as cardiorespiratory status is an important determinant of operative risk (Morgan 1996).

Patients need to stop smoking pre-operatively. Fitness for surgery will be assessed by clinical examination, spirometry, chest X-ray and ECG. A predicted post-operative forced expiratory volume in one second (FEV1) of at least 0.8 litres is a minimum requirement (Morgan 1996). In patients with borderline pulmonary function, more limited surgery, for example wedge resection, may be considered.

#### Chemotherapy

Although traditionally, NSCL has been regarded as chemo-resistant, improved rates with platinum-based agents have increased interest in combined surgery and pre-operative (neoadjuvant) or post-operative (induction) chemotherapy (Morgan 1996, Lowden 1998).

Small-cell tumours metastasise early and are responsive to chemotherapy, with or without radiotherapy. SCLC differs from other histological types by its sudden onset – there is usually a symptom history of less than three months. The chemotherapy regime for these patients may be a single agent, for example etoposide, for older patients or those with other medical or physical disabilities (Kumar and Clark 1998).

### Table 1. Investigations used for the diagnosis and staging of lung cancer

<table>
<thead>
<tr>
<th>Sputum cytology</th>
<th>Tumour needs to be at least 1-2 cm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fibre optic bronchoscopy</td>
<td>Used for identifying pathological changes in the mediastinum and secondary spread to opposite lung</td>
</tr>
<tr>
<td>Lung biopsy</td>
<td>For staging of disease process</td>
</tr>
<tr>
<td>Chest X-ray</td>
<td></td>
</tr>
<tr>
<td>CT scan</td>
<td></td>
</tr>
<tr>
<td>MRI scan</td>
<td></td>
</tr>
<tr>
<td>Bone scan</td>
<td></td>
</tr>
<tr>
<td>Liver function tests</td>
<td></td>
</tr>
<tr>
<td>Ultrasound</td>
<td></td>
</tr>
</tbody>
</table>

### Table 2. TNM classification system applied to lung cancer

<table>
<thead>
<tr>
<th>Stage</th>
<th>Tumour (T), Node (N), Metastases (M)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage 1 (NSCLC)</td>
<td>T1 or T2, N0, M0</td>
</tr>
<tr>
<td>Stage 2 (NSCLC)</td>
<td>T1 or T2, N1, M0</td>
</tr>
<tr>
<td>Stage 3(a)</td>
<td>any T3 or N2, M0</td>
</tr>
<tr>
<td>Stage 3(b)</td>
<td>T4, any N3, M0</td>
</tr>
<tr>
<td>Stage 4</td>
<td>distant metastases</td>
</tr>
</tbody>
</table>

(Adapted from Mountain 1986)
Combination therapy includes the use of agents such as mitomycin, ifosfamide, and cisplatin. A number of promising newer drugs which have reduced toxicity are undergoing clinical trials (Giaccone 1996).

**Radiotherapy** Radiotherapy may be used with curative intent for patients with lesions that are technically resectable and who refuse, or are unable to undergo surgery. However, it is generally used to reduce the symptoms of intrathoracic disease and metastases. It is an important part of the treatment of advanced SCLC, since these tumours are very radiosensitive and respond well to short courses of radiotherapy (Macbeth 1996).

**TIME OUT 1**

Dee, 58 years old, has been diagnosed with SCLC following a routine chest X-ray, as the result of a referral to the allergy clinic for a persistent, troublesome cough. She thought it was a recurrence of TB which she had in her 20s. How might you help her decide about treatment options and making future plans?

**Symptom control**

Lung cancer produces a wide range of symptoms that need to be managed creatively to reduce their effect on the patient's life (Lowden 1998). Those that relate directly to the tumour include dyspnoea, coughing, increase in sputum production and haemoptysis. The pain associated with chest wall involvement, speech problems associated with laryngeal nerve involvement, and dysphagia when the oesophagus is affected, can also create problems for these patients. Fatigue and weight loss associated with the disease process can also be significant.

**Dyspnoea** Up to 70 per cent of patients with lung cancer experience breathlessness (Twycross and Lack 1990). Breathlessness is a feature of panic attacks and hyperventilation (Rees 1996) which can be a distressing symptom creating a sense of powerlessness (MacDonald 1998). Patients need to express the emotions associated with breathlessness, otherwise their physical symptoms may be exacerbated by panic attacks as they ‘fight for breath’. Its successful treatment is dependent on a person's psychological, as well as physical, state (Ley 1994).

The exact physiological mechanisms that cause dyspnoea are not yet clear, as many complex neuroanatomical pathways are involved (Cowcher and Hanks 1990). Under normal circumstances, respiration is initiated by vital centres in the medulla oblongata and pons, which co-ordinate the afferent pathways (intercostal and phrenic nerves) that supply the chest wall, intercostal muscles and diaphragm; this is an involuntary process. Higher centres, in the cerebral cortex, can put respiration under the control of emotions such as anxiety, fear, anger and wakefulness; these can influence higher centres and over-ride the medulla. Pyrexia can also increase the respiratory rate.

Central chemoreceptors located in the medulla are affected by the pH (acidity) of the blood passing through it. Hypercapnia (retention of carbon dioxide) can lead to a respiratory acidosis which increases the respiratory rate as the body tries to restore a homeostatic balance. Profound hypoxia can lead to suppression of these chemoreceptors, as seen with the toxic effects of opiates. Peripheral chemoreceptors located in the carotid bodies and the aorta are sensitive to the levels of oxygen in the blood. Patients with chronic obstructive airways disease are dependent on their hypoxic drive (low levels of oxygen) to maintain respiratory effort.

A number of local receptors in the lung also influence the respiratory centres. These receptors can be stimulated by tracheobronchial irritants, and over inflation of the lung. J-receptors (juxta pulmonary capillaries) are affected by pulmonary oedema and carcinomatous lymphangitis, both of which can result from lung cancer (Twycross and Lack 1990).

Breathless patients exacerbate their dyspnoea and use up energy by trying to improve their air exchange through increased expiratory effort. Generally, when an individual exercises and sufficiently increases minute volume (volume of air, in litres, expelled per minute), he or she will feel short of breath. In a person with airway disease, the sensation of dyspnoea is usually the result of the increased respiratory work made necessary by the disease. The effort made in response to messages from the respiratory centre produces less air movement and ventilation than would be expected (Rees 1996). This leads to an increased oxygen demand. The patient also increases his or her respiratory rate, which leads to a decrease in tidal volume (volume of air inspired at each breath), which in turn leads to a decreased ventilation of the lung alveoli. Panic attacks are the consequence of the interaction between hyperventilation and dyspnoeic fear. Given a constant production of carbon dioxide (CO2), a sudden increase in ventilation will cause the partial pressure of CO2 (PaCO2) in the blood to drop, and a corresponding increase in blood pH (acute respiratory alkalosis). If the hypocapnea persists and the intensity of the dyspnoea is perceived to be out of control, dyspnoeic fear and hypocapneic sensations – tachycardia and dizziness – will be experienced, and a respiratory panic attack will occur (Ley 1994).

In a respiratory panic attack, patients may be convinced that they are suffocating to death. Shortness of breath with a concurrent lack of understanding of what is happening and a fear of not coping increases anxiety and the sensation of the shortness of breath. This creates a vicious cycle of increasing dyspnoea (Twycross and Lack 1990).

Patients need to be taught new breathing patterns to help them manage their dyspnoea. Slow deep breaths coming from the diaphragm help to regulate breathing, and breathing through pursed lips helps to control the rate and depth of respiration. Patients can be helped to do this by being advised to make a soft whistling noise during exhalation (Grey 1995). Inspiration via the nose and expiration through pursed lips, a technique used for patients with emphysema, with expiration lasting twice as long as inspiration can also be useful.
Relaxation techniques which involve the family and relatives can provide reassurance and support and help promote a sense of calm (Foote et al 1996). Alternative approaches such as meditation, guided imagery, therapeutic touch, acupuncture, massage and aromatherapy have also been shown to have an effect in controlling dyspnoea in some cases (Grey 1996).

The calming presence of a nurse can provide reassurance. Patients fear choking or suffocation and may be afraid to take much needed rest in case they stop breathing. Cool air via an open window or a fan may be of benefit. The psychological problems that dyspnoea can create should not be underestimated. A study by Corner et al (1996) demonstrated the usefulness of intervention strategies such as counselling, and the teaching of coping and adaptation strategies in patients experiencing breathlessness as a result of lung cancer.

Routine measures such as positioning the patient with arms resting on pillows and positioned forward over a bed table can help chest expansion. Oxygen is physiologically only of benefit when hypoxia is present, but its placebo effect can help reduce anxiety (Grey 1995). Many of these patients will have had a history of chronic airways disease and may have had oxygen prescribed in the past. Oxygen must be used with caution in these patients as it may decrease their hypoxic drive; it must be humidified to prevent the retention of secretions.

Local anaesthetics may be inhaled or nebulised (Twycross and Lack 1990, Kumar and Clark 1998). They are thought to work by blocking J-receptors, leading to a reduced sensitivity to congestion and are used for lymphangitis carcinomatosa. Because of the anaesthetic nature of these drugs, eating and drinking must be avoided for several hours after use.

Bronchodilators such as salbutamol or aminophylline may help dyspnoea by improving ventilation. These drugs have cardiac effects, including potential arrhythmias, and their use needs to be carefully monitored.

Anxiolytic drugs such as diazepam or lorazepam are used for their sedative effects, and morphine also reduces anxiety, leading to a reduction of panic attacks.

**TIME OUT 2**

Think of patients you have cared for who have been dyspnoeic. What measures did you find to be most helpful in relieving their distress?

Steroids can also provide symptomatic relief, as well as helping to prevent the transient oedema seen with radiotherapy (Lowden 1998). Radiotherapy may be used palliatively to relieve obstructed airways, and to help reduce the compression of blood and lymph vessels.

Endobronchial therapies such as brachytherapy (localised irradiation), the implantation of radioactive gold grains via bronchoscopy, may be used to relieve airway obstruction (Grey 1995). Laser therapy passed through a fibre-optic bronchoscope can be used to vaporise inoperable fungating intra-luminal carcinoma involving short segments of the trachea or bronchi (Kumar and Clark 1998).

Tracheobronchial stents made of silicone or expandable metal springs are used for strictures caused by the tumour or from external compression, or where there is a weakness or collapse in the tracheobronchial wall.

In relation to coughs, addressing the causal agent, for example draining a pleural effusion or radiotherapy and steroids to shrink the tumour, may be most effective. Dry unproductive coughs may be treated with codeine linctus, morphine or methadone linctus. Routine measures such as ‘pushing fluids’ are important in preventing retained secretions.

Any management plan for dyspnoea needs to take account of the patient’s personal goals for treatment as well as the stage and rate of progression of the disease.

**TIME OUT 3**

Are there any other symptoms that you can think of that have not been mentioned?

Mouth infections, for example Candida albicans, are common and observation for these should be a routine part of the nursing assessment of these patients.

**Palliative care**

The diagnosis and treatment of cancer often causes adverse effects on the patient’s quality of life. Cooley (1998) suggests the use of the term ‘health-related quality of life’ based on the dimensions of functional status, physical symptoms, affective state and interpersonal relationships. The involvement of the family and significant others in the care of the patient, based of course on the wishes of the patient, are paramount.

Much can be done to make the patient’s remaining life symptom free and as active as possible. Pain must be managed and the involvement of a pain control specialist nurse may be necessary to help the nursing team devise a plan of management.

**TIME OUT 4**

Before reading further, list the psychological factors that might affect patients who have lung cancer. Then compare your list with the information that follows.

Consider ways that you can provide optimum psychological and spiritual support in your working environment.

REFERENCES


Psychological and spiritual care

Nurses can play an important part in addressing the fears that surround a potentially terminal disease, given an opportunity, most patients will express the anger, frustration and despair associated with their symptoms (Boadella 1994). Allowing patients to talk, without necessarily trying to provide answers, can be of great benefit.

Up to 60 per cent of patients with a terminal cancer will die in a general ward, as opposed to a hospice (Kumar and Clark 1998). An important part of the care of any seriously ill patient is the fostering of hope. According to Gamlin and Kinghorn (1995) facilitating hope presents a great challenge to health care, whereas ignoring it only strengthens an already pessimistic outlook on advanced illness. Hope is a dynamic concept. It should not be a question of whether it exists, rather how it is to be found and what form will it take. It may change from day to day as the patient’s condition worsens, from hope of a cure, to hope of a peaceful and dignified death. Gamlin and Kinghorn (1995) suggest a useful series of questions that may be used to elicit hope in patients with advanced illness.

Included in the psychological aspects of care is the need to address the spiritual nature of humans. This is not necessarily just an acknowledgment of religious beliefs and the need to support patients in their personal worship, important as this aspect of care is. However, spirituality is particularly important to those confronted with the end of life, or with the crisis of a serious illness. At these times a person is most likely to try to ‘weigh and evaluate the essential and ultimate significance and intrinsic value of his life’ (Reed 1991).

Nurses can help patients to gain a new awareness and acceptance of a particular aspect of existence and for them to grapple with all the questions that this raises. Dosseny et al (1995) suggest a spiritual assessment tool that provides the development of an increased awareness of spiritual processes, and Stoll (1979) provides a series of useful questions that can be integrated as part of the usual nursing assessment. When people are terminally ill, they may experience spiritual pain that can be as distressing as physical symptoms. Nurses need to be able to recognise this pain and to use the resources available to help patients. Eldson (1995) provides some practical suggestions that can be used in the general setting. These include encouragement of reminiscing, the use of appropriate music, or just ‘being with someone’ as opposed to ‘doing’ something to them. Giving complete attention to someone is a form of spiritual care that can be easily overlooked.

Conclusion

This article has provided a review of the pathophysiology, treatment, symptom management and the psychological aspects of care of a disease that has a generally poor prognosis. The relevance of prevention, in the form of smoking cessation has also been highlighted as part of nursing knowledge relevant to the care of patients or potential patients.

Prevention

The Health of the Nation Targets for lung cancer (DoH 1993) aim to reduce the death rate from lung cancer by at least 30 per cent in men under 75, and 15 per cent in women under the age of 75, by 2010. In reviewing what it terms ‘themes of good practice’, the report highlights that the primary focus of nurses is concerned with influencing individual behaviours by means of health promotion, education and screening. It is unlikely in the near future that an effective screening programme will exist for lung cancer (Kumar and Clark 1998, Morgan 1996). It has also been argued that it would be quite simple to prevent the majority of cases, since cigarette smoking is responsible for 90 per cent of cases (Melville and Eastwood 1998). Smoking prevalence is increasing among young people and women under 35 (Melville and Eastwood 1998). Sarna (1999) suggests that in the next century, tobacco will become the number one cause of preventable disease throughout the world.

Continued smoking after a cancer diagnosis is associated with decreased survival, increased risk of recurrence, of a secondary tobacco-related cancer, and postoperative morbidity, as well as increased side effects of chemotherapy and radiation therapy (Sarna 1999).

Melville and Eastwood (1998) suggest that health professionals should be trained to use effective interventions to reduce the uptake of smoking and promote quitting. They argue that a ‘strong body of research’ exists to show that encouragement advice and structured support from health professionals is effective in promoting smoking cessation and that brief, five minute, advice sessions can result in a cessation rate of about 2 per cent at one year follow up. Although this may appear a low success rate, this intervention can be given to many people.

There are many issues that surround the debate about nurses’ role in promoting smoking cessation which are beyond the scope of this article. However, an important aspect of the nursing role with any patient is health promotion that is appropriate and well timed. Lung cancer, with its close association with smoking, suggests that this is an area where prevention is everyone’s business.