

Management of lung cancer

Remains surgery for cure of non-small cell and chemotherapy for small cell type

The considerable improvements seen recently in the results of treatment of some less common cancers such as the lymphomas, testicular teratoma, and some paediatric tumours has not been mirrored in the common malignancies. Lung cancer accounts for some 40 000 deaths a year in Britain—one quarter of all deaths from malignant disease in adults. Over 90% of patients presenting with lung cancer will not survive five years with current treatment. Surgery remains the main chance of cure for patients with squamous cell carcinoma, adenocarcinoma, and large cell tumours; it has little to offer in small cell cancers owing to the disseminated nature of this cell type.

Has the approach to treatment changed in the past few years to offer a better chance of cure to some patient groups? Perhaps a fifth of all patients presenting with non-small cell lung cancer are considered suitable for a resection, and in these the overall survival rate remains around one quarter after five years. The prognosis after resection still depends on careful clinical staging both before and at surgery. Patients with small peripheral lesions without spread to the hilar nodes have an 85% chance of cure; those with lesions over 3 cm in diameter (provided no nodes are affected) have a 50% five year survival, particularly if the tumour is squamous cell. The original staging classification for lung cancer described as inoperable all primary tumours extending into the chest wall, diaphragm, or the central mediastinal structures, together with central tumours originating within 2 cm of the main carina.¹ In practice, patients with these presentations may sometimes have better prospects. Patients with tumours infiltrating the chest wall and arising at or near the carina may have a five year survival rate above 50% provided that the hilar or mediastinal nodes are not affected.^{2,3} The staging system has been changed recently and now includes these presentations as potentially operable.⁴ Another change in emphasis has centred on spread to the mediastinal nodes, previously considered to represent incurable disease. Some studies of patients with disease of the mediastinal nodes (but confined to the ipsilateral nodes, usually in the low paratracheal or subcarinal regions) have reported survival ranging between 15% and 40% at five years,^{5,6} though many other reports have been less encouraging. It remains an open question whether limited spread to the mediastinal nodes might still offer a small but acceptable chance of cure. Rigorous application of clinical and surgical staging before and at resection should provide the answers in the next few years.

Postoperative radiotherapy is of no benefit to survival,

partly because of the high incidence of subsequent extra-thoracic relapse,^{7,8} especially in patients with adenocarcinoma. Patients with locally inoperable non-small cell lung cancer are often treated radically with radiotherapy. Though this may improve control of the primary site and delay relapse, survival is hardly better than with conservative management and a wait and see policy—giving five year survival rates of 3% to 14%.⁹⁻¹¹ Nevertheless, radiotherapy remains an excellent palliative treatment for symptoms such as pain, haemoptysis, local obstruction to a major airway, dysphagia, and superior vena caval obstruction. Applying a single 8 Gy fraction for pain is as effective as a more conventional 10 day course of 30 Gy, allowing the patient to have excellent palliation from a single hospital visit.¹²

The management of small cell lung cancer remains based on cytotoxic chemotherapy. A recent survey of patients entered into clinical studies within Britain found an overall survival rate two years after starting treatment of 6%. Survival was 9% in patients with disease confined to one hemithorax but only 2% in those with extensive disease at the time of diagnosis.¹³ Furthermore, six years after diagnosis only 45% of these long term survivors were alive, the causes of the later deaths being a recurrence of small cell lung cancer, the development of another malignancy, or another cause, particularly vascular disease.

Around four fifths of patients presenting with small cell lung cancer respond to chemotherapy and have their life prolonged, but the emergence of simple laboratory measurements as reliable prognostic indicators is allowing the identification of those patients who are likely to do particularly well with treatment. The early results of this approach showed that patients with a high performance status score and normal serum values of sodium, albumin, and alkaline phosphatase had a good prognosis.¹⁴ A more recent overview of prognostic factors now recommends measurement of the performance status score, disease stage; and serum values of alkaline phosphatase, sodium, aspartate amino transferase, and lactate dehydrogenase.¹⁵ Patients with normal values for these variables (about 20% of all cases of small cell lung cancer) have a two year survival of 15-20%—considerably better than for the cell type as a whole.

Although most patients who respond to chemotherapy improve their quality of life, further courses may have the opposite effect. Recent studies have shown no survival disadvantage for six courses versus 12¹⁶ or any advantage for adding maintenance chemotherapy.¹⁷

Cure is possible in small cell lung cancer, albeit in only a small proportion of patients mostly within a good prognosis category. This, and the chemosensitivity of the tumour imply that an unknown proportion of other patients in whom a complete response is obtained are nearly cured. Priority should, therefore, be given to exploring methods of increasing the intensity of chemotherapy.

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General practice fundholding

The benefits and risks have not been carefully weighed

Most worthwhile interventions in medicine carry risks. In deciding whether or not an intervention is worth while the doctor balances the risks against the benefits. Logically, a similar balancing of risks and benefits should be applied to managerial or policy changes in the NHS, such as the voluntary scheme whereby large general practices can opt to manage the funds that pay for their patients' elective procedures, drugs and appliances, paramedical services, outpatient appointments, and investigations. Most of the discussion surrounding the scheme, however, emphasised either the benefits or the risks, and not their balance. Worse still, there are no data from controlled experiments to assess the balance, as is usually the case for new medical interventions.^{1,2} Another issue is to whom benefits and risks might accrue. Much of the debate has centred on the consequences for the general practitioner, but those affected include the patient; the district health authority in which the general practitioner practises; local providers, including NHS trusts; the family health services authority; and the community at large.

The main benefits for the patient stem from the wider range of choice offered to the fundholding general practitioner. In an ideal world a knowledgeable patient could review the care options with his or her general practitioner and decide on the optimum plan. Evidence on consumer choice in health care comes mainly from the United States, where it has been found that "consumers understand clearly that there are trade offs among choices and have no difficulty in articulating their preferences."³ The key to securing these benefits, however, is knowledge about the available options by either the patient or the general practitioner. This will require a greater commitment than in the past to producing relevant information, although how much difference this will make is unclear. One American study found that the availability of statistics on hospital mortality had only limited impact on patients' choices, more influential was the preference of doctors, tradition, convenience, and word of mouth.⁴ The other main benefits to patients are likely to come from improvements in services delivered by the practices themselves and the greater access to hospital services that fundholding practices may negotiate. There are already signs that hospital providers plan to offer improved reporting after hospital based investigations, special deals for drugs, and free bus services.

The main risk to patients is that the fund, once agreed, will not be sufficiently generous and that care will have to be rationed. Since the funds are likely to be set as a high level, at least initially, this risk is minor. A greater long term risk is that fundholding may harm the doctor-patient relationship if patients become sensitised to the potential conflicts doctors face in weighing up options for care when some of the options demand expenditure from the fund. Evidence from the United States suggests that these conflicts exist in health maintenance organisations,^{5,6} but the impact on the doctor-patient relationship and on the quality of care is uncertain.

The benefits and risks to the general practitioner largely mirror those to the patient. Fundholding will enable practitioners more easily to maintain freedom of referral, and any savings can be used to improve the range and quality of services provided by the practice. Such improvements are already being made with the grants made for information systems in practices contemplating fundholding. There is, of course, the possibility of financial embarrassment if, because of an unexpected demand for services or a major change in treatment technology, the budget is stretched. With a list of 11 000, large year to year variations in need could easily occur. Probably the greatest risk for practitioners is that they will be placed in the unenviable role of rationers of care. Currently general practitioners refer to the hospital and have little influence over, or accountability for, waiting times. If they hold the funds patients may also hold them responsible for waiting lists.

Although patients and general practitioners are most affected by fundholding, others have an interest. The purchasing authority (often the district health authority) could benefit if fundholding prompts general practitioners to scrutinise more closely the care received by their patients. This benefit may, however, be far outweighed by the risk that health care priorities will be changed. The general practice's funds will be directly transferred from the authority's budget so it will have less scope to determine the level of resources to be devoted to particular health care needs. The tacit view of the act is that the long waiting times for certain elective procedures are the result of inefficiency. What if those waiting times reflect a higher priority, appropriately given, to other care groups in the light of budgetary constraints?