**Key point summary**

- Services can be rationalised (amalgamated) to address financial concerns, while still maintaining and even improving quality of service
- A start budget needs to be accurate: identify all component costs, including hidden support costs
- Centralise or rationalise staff and equipment for specialist tests
- To increase efficiency, computerise where possible, and consider lease rather than purchase of equipment
- Introduce zero based, flexible budgeting for selected services instead of a fixed budget allocated on the basis of previous demand
- Reduce staff costs, often one of the largest overheads, by cross discipline working patterns and a change in the skills mix of staff

detailed aspects of budget management being the responsibility of the directorate's business manager. What is more demanding at clinical director level is the management skill required to implement change and achieve a synergy between the directorate and hospital management to ensure purposeful implementation of agreed strategy.


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"Every Doctor is a Manager" is a conference being run by the *BMJ*, BMA, and British Association of Medical Managers to explore the issues around doctors in management. It takes place on 16 February 1994 in London; details from the BMA Conference Unit, BMA House, Tavistock Square, London WC1H 9JR. Tel: 0171 383 6605.

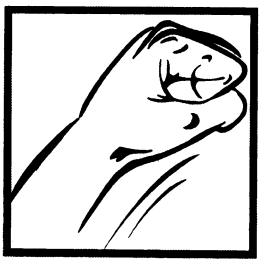
A book of the series, entitled *Management for Doctors*, will be published on 16 February to coincide with the conference; price UK £12.95; Overseas £14.00 (BMA members £11.95; £13.00). Order from the BMJ Publishing Group (tel 0171 383 6185/6245; fax 0171 383 6662).

# *Controversies in Management*

## Chemotherapy for solid tumours

### Routine treatment not yet justified


G M Mead

*This is the eighteenth in a series of articles examining some of the difficult decisions that arise in medicine*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Most patients with advanced or metastatic cancer will at some point be considered for chemotherapy or, occasionally, biological therapy—for example, interferon. These treatments are of limited specificity and commonly result in short term toxicity; they may also be expensive. If cure or increased survival is a realistic possibility these considerations are important but do not alter the treatment approach. However, most cancers are incurable once metastatic and often respond poorly to chemotherapy, which can result in side effects, inconvenience, and financial costs without improvements in symptoms or survival. In practice, partly because of the limited resources available in Britain, chemotherapy is often not discussed with, much less given to, many such patients. Increasingly, however, patients demand access to all available options, and the issue then is should treatment be considered, and if so with single or multiple drugs (with of course variable toxicity and cost) given intensively or non-intensively? Common examples of these diseases include metastatic non-small cell lung cancer, colorectal and upper gastrointestinal cancer, and renal cell cancer. The table shows some of the treatments used.

Though no systematic reviews have been published, anecdotal experience suggests that management policies for these diseases vary widely between surgeons, radiotherapists, and oncologists and also within these groups. Approaches vary considerably between institutions and nations, and in the public and private sector. Desperate patients who seek second opinions may also expose these differences, as will enthusiastic forays into the media by patients or colleagues. The media often highlight new and untested therapies without the tempering effects of peer review or trials. How should we judge treatment efficacy, and is it possible to achieve a consensus with regard to standard therapy for these diseases?

#### Assessing efficacy

Medical oncologists assess chemotherapy regimens by measuring clinical and radiological response rates together with "time to treatment failure" and survival. Additional and potentially very important end points are control of symptoms and quality of life, as assessed by the patient, and financial cost. In practice all of these variables require interpretation—and naturally patients and their families will have their own views on treatment goals.[1]

Response rates are perhaps the most commonly used method of assessing efficacy of chemotherapy. Though these give data on the proportion of patients receiving treatment with no benefit, radiological shrinkage of solid tumours should not be overinterpreted, as it often has little or no survival benefit.[2] Toxic, expensive drugs such as aldesleukin for renal cell cancer[3] and,

*Treatments for metastatic cancer*

| Metastatic cancer | Standard therapy | Common alternatives used with uncertain advantage |
|---|---|---|
| Non-small cell lung | None | Any chemotherapy |
| Stomach | Fluorouracil | Cisplatin containing combination |
| Pancreas | None | Fluorouracil or combination |
| Colon | Fluorouracil | Fluorouracil plus folinic acid with or without interferon |
| Kidney | None | Interferon<br>Interleukin 2 |


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more recently, paclitaxel for ovarian carcinoma, have surprisingly, been licensed on the basis of response rate without published randomised trial data that allow clinicians to place the efficacy of these drugs in an understandable clinical context. Media and patient pressure for such new and expensive therapies seems in danger of dominating clinical science and sense.

### Patients' perspective

What is meaningful to the patient is an improvement in survival, symptoms, or quality of life. Unfortunately, few studies have compared chemotherapy with supportive care alone. Few, if any of the trials of chemotherapy for metastatic solid tumours, have shown a survival benefit when comparing standard single drugs with more complex combination chemotherapy. A good example of the problems that can occur has been the widespread adoption of potentially toxic cisplatin containing chemotherapy for advanced gastrointestinal malignancy—on the basis of preliminary experience—and where randomised trials have shown no benefit.[4,5] In diseases such as non-small cell lung cancer meta-analysis of studies comparing chemotherapy with no chemotherapy are under way—though even here conclusions are open to interpretation and conflict.[6-8]

Measurement of quality of life or control of symptoms in chemotherapy trials seem to be an inherently sensible approach.[9] But these data may be difficult to understand and can be marred by denial and the hope given to patients by new or more intensive treatments. Interestingly, in a study in which patients were asked to define what chance of cure, increase in survival, or alleviation of symptoms would make intensive treatment worth while[10] quite minimal chances were avidly sought, despite toxicities. This perception was not shared by health care professionals or surrogates, though these people are of course not threatened by loss of life.

### Selective treatment

It is clearly neither necessary nor possible to formulate an explicit policy whereby all or none of these patients should receive chemotherapy. Many trials do suggest with some regularity certain prognostic features for longer survival, such as younger age, better performance status, and no major organ dysfunction. Thus it should be possible to be selective when recommending treatment, excluding patients for whom the potential benefit is thought to be low. In this regard, oncologists should be no different from any other clinician practising good medicine.

Cancer chemotherapy can be a burdensome approach to treatment, and it has to justify its role in the context of overall health care. Only intelligently designed prospective studies performed in large patient populations can assess the true impact of these treatments when given with palliative intent. New treatments need to be designed and tested in large centres but should not be widely adopted without supporting data from randomised clinical trials comparing them with a standard treatment. We need trials that assess the benefits of non-toxic single drugs compared with intensive combination chemotherapy; these studies should measure not only survival but also more meaningful end points such as control of symptoms and quality of life. With such objective data it will be possible to plan resource allocation and make more intelligent recommendations about treatment to our patients.


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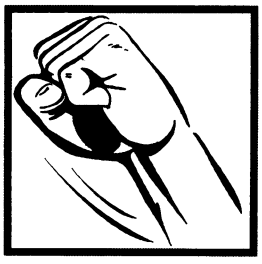
## Important progress in treatment


D Cunningham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Sometimes I think that the treatment of cancer in the United Kingdom has lost its way; there are just over 400 clinical and medical oncologists in Britain. Some may consider this an advantage. The proportion of patients receiving cytotoxic drugs for cancer is probably less here than any other Western country. Is this approach justified? Recently, the trial of global utilisation of streptokinase and tissue plasminogen activator for occluded coronary arteries (GUSTO) showed that tissue plasminogen activator reduced the absolute death rate after myocardial infarction by 1% compared with streptokinase.[1] The authors described it as "a major stepwise increment in survival beyond that of the established standard."[2] When the difference between the two treatments was analysed it was calculated to cost $220 000 to save a single life.[3] Although real progress in medicine is relatively slow, a reassessment of the role of cytotoxic drugs in the management of common solid tumours is long overdue. Where better to start than colonic cancer, a tumour in which chemotherapy is widely regarded as ineffective.

### Evidence of benefit

In 1990 a study of over 900 patients in the United States showed that systemic chemotherapy with fluorouracil and levamisole given for 12 months after surgery produced an absolute reduction in cancer deaths of 12% in patients with Dukes's C carcinoma of the colon.[4,5] The National Cancer Institute of the United States issued an alert stating that this treatment should now be part of the standard management of Dukes's C colonic cancer. The response in Britain was more conservative. The study was criticised for not having included treatment with fluorouracil alone, and the debate became side tracked into the role (if any) of levamisole, why the treatment had been ineffective in patients with Dukes's $B_2$ tumours, and the need for further comparative studies.


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