oncogene/TSG theories! Viral DNA in infected cells can be repressed by two main pathways: an intracellular pathway, which prevents the immortalisation of the cell and an intercellular pathway, which prevents the spread and rapid increase in number of such "immortal" cells. It is environmental factors, such as smoking, chronic infections, hormones, immunodeficiency and the viruses themselves, which are known to break down these pathways. Thus, this is an area in need of attention.

Innovation in the development of new therapies was demonstrated by Professor Lejeune (Lausanne, Switzerland), recipient of the 1993 ESSO Award, with his new treatment of sarcoma or malignant melanoma of the limb. The cytokine, α-tumour necrosis factor (TNF), although tumoricidal, is not often used clinically because of its high, generalised toxicity. However, Professor Leujeune and his collaborators have devised a system whereby a limb can be isolated by attaching it to a heart and lung machine, and then treated with 10 times the maximum tolerated dose of α-TNF, in addition to mephalen and low dose interferon. This "isolation perfusion" technique has produced complete remission in 91% of patients compared with a 50% response rate with mephalen alone, and the duration of the response is approximately 3.6 years so far. Randomised trials are now underway. This new development is a regional therapy and, therefore, does not affect survival, but it does prevent limb amputation, which is a drastic improvement for the patients.

The clinical use of cytokines and growth factors, specifically in relation to haematopoiesis, was the subject of a lecture by Professor Leo Sachs (Rehovot, Israel). He elegantly described their effects, emphasising the interactions which occur between all these factors as they work directly or indirectly on each other to produce the required cell population. The balance between the different factors determines cellular outcome, i.e. maintenance of viability, multiplication, differentiation or death. He stressed that this must be considered when using the factors clinically, since the timing of doses could have an enormous impact on the effectiveness of the therapy. For example, if CSFs are given with chemotherapy at the wrong time, then there may be little or no effect on the cancer because the CSFs, which are viability factors, prevent apoptosis and so the cancerous cells continue to grow, i.e. the viability factors are preventing cellular death. Thus, the aim is to selectively remove the viability factors from malignant cells but not from normal cells, so that the former but not the latter will undergo apoptosis. It was encouraging to hear Professor Sachs underline the fact that cancer cells are not immortal, but still possess suppressed mechanisms for differentiation and apoptosis, and that it is the triggering of these in malignant cells which is the key to cancer therapy.

It has been said that any scientific conference which takes more than 2 years to organise can have very little to offer that is novel or fresh. However, at ECCO7 much was presented which was innovative, both in basic research and in clinical practice, and of value to many, as indicated by the enthusiastic attendances at most sessions. It was encouraging to see so many delegates from outside western Europe, particularly from countries in which dissemination of scientific information is slow at best, and perhaps even non-existent. ECCO7 was an excellent opportunity for the experienced to teach, and the inexperienced to learn, borne out by the almost capacity attendances at the early morning teaching lectures. For most, the meeting in Jerusalem was worthwhile.

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How Long Have I Got Doctor?

E.J. Maher

IT IS a brave physician who gives an unambiguous answer to the question, "How long have I got?" Predictions of survival for patients with advanced and metastatic cancer are notoriously inaccurate [1–5].

Recent papers [5–7] suggest that with increasing experience clinicians can place patients with advanced cancer into good and bad prognostic groups, but absolute predictions tend to be overoptimistic [8]. This has important resource implications. It has been estimated that $19 million per year are spent on palliative radiation therapy alone in the U.S.A. on patients with a medical survival of < 1 year [9]. Surveys of practice, relating predicted survival of specific cases and therapy proposed, show that differences of a few months in predicted survival can be related to 2- or 3-fold differences in the number of radiation treatments offered, or whether chemotherapy is offered at all [1, 8, 10]. On the other hand, poor prognosis does not seem to be associated with less intervention, or less anti-cancer therapy in the terminal phase of illness [5].

A wide range of factors have been suggested as of predictive value in studies of patients with advanced and or 'terminal' disease [2–4, 11–16], but the only durable powerful predictive factor remains performance status [5, 11, 16]. Intriguingly, quality of life indices have been found by some workers to be important prognostic indicators [15–17] but this has not been found by all workers [18–20].

In the current economic climate, there are likely to be increasing pressures to characterise 'isoprognostic' groups of patients, to allow appropriate stratification of clinical trials, interpret audit of survival after therapy in different centres as part of comparative audit, and to assist in difficult decisions

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about resource allocation, but physicians may still not give an unambiguous answer to the question, "How long have I got?"

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Papers

Prediction of Survival in a Hospital-based Continuing Care Unit

Janet R. Hardy, Rose Turner, Margaret Saunders and Roger A'Hern

Prediction of survival can be relevant in palliative care in those units with selective admission policies and limited resources, for planning patient management and in discharge planning for those patients expected to go home. In this study, factors most predictive of prognosis were identified. Those factors shown to have no effect on survival included the performance of investigations or procedures, anti-cancer therapy, morphine dose on admission and original admitting ward. Patients admitted primarily for pain control had a significant survival advantage over those patients admitted for palliation of some other symptom. Actual survival correlated well with predicted outcome. Factors most predictive of relative risk of death in a multivariate analysis were dyspnoea, decubitus ulcers, predicted outcome, interventions and a diagnosis of lung cancer. When symptoms alone were analysed, dyspnoea and immobility carried the highest relative risk of death.
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INTRODUCTION

LENGTH OF survival is generally not an important end-point in palliative care where the emphasis is upon quality, not quantity, of life. However, some estimates of likely survival can be relevant: (1) in planning patient management, (2) in those units with selective admission policies and limited resources, (3) when formulating discharge plans, (4) when assessing patients for social security benefits.

Many hospices will only accept patients with a prognosis of weeks as their emphasis is on terminal care. Conversely, in a hospital-based palliative care unit, patients with such a poor prognosis are often best cared for in their original ward under the guidance of a palliative care team, and need not be transferred to another ward.

The Palliative Care Unit at the Royal Marsden Hospital is totally hospital-based and all referrals are from within the