because an increasing proportion of patients with Dukes's type C disease are likely to have been offered chemotherapy and not entered into a control arm of no treatment. Follow up also needs to be adequate to allow for a sufficient number of events to occur.

To my knowledge all randomised trials of fluorouracil and levamisole or fluorouracil and folinic acid for which full results are available have shown a significant survival advantage for Dukes's type C colon cancer. This must be unusual in any tumour. I focused specifically on Dukes's type C cancer and pointed out that the role of adjuvant chemotherapy in patients with type B disease remains uncertain because trials have been too small to answer the question as the number of events is much lower. Limitation of space precluded detailed discussion of the data in patients with type B cancer.

It is difficult to know how Gray and Northover have arrived at their cautious estimates of the numbers needed to treat to achieve a cure. The available data on Dukes's type C colon cancer suggest an effect similar to that achieved in breast cancer, in which adjuvant chemotherapy is now standard practice.

The benefits obtained from adjuvant chemotherapy cannot be compared to the benefits obtained from surgery in Dukes's type C colon cancer, but adjuvant chemotherapy is an addition to surgery rather than an alternative. The recent improvements in treatment, however modest, are a welcome departure from the many years of the therapeutic desert that previously characterised this disease.

MAURICE I. SLEVIN
Medical oncologist

St Bartholomew's Hospital,
Department of Medical Oncology,
London EC1A 7BE

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Getting urgent information to doctors

EDITOR,—Using electronic mail and the Internet to ensure rapid and systematic communication of urgent material from the Department of Health to general practitioners, as Rank Sullivan reports,¹ seems an obvious and long overdue move. An efficient "electronic cascade" could link many parts and functions of the health service, including departments of public health, hospitals, and colleagues in other countries. It could even make sound business sense for the NHS to form its own Internet access company, thus reducing the estimated commercial monthly access costs of £100. However, constructing and supporting an electronic cascade is a more complex issue than Sullivan suggests.

Firstly, additional costs would be borne not only by the 5-8% of practices without computers but by others who would require hardware upgrades to support email and Internet access.

Secondly, training costs are likely to be higher than the £50 estimated. Both administrative and professional staff would require additional skills, particularly where networked computer systems are in use. Training needs are likely to be continuous, rather than one off, to cover staff turnover and expanding technology and to ensure enough trained staff for coverage.

Thirdly, a major shift in the management culture of most practices would be required to move from a mail and paper driven system to an electronic system. In the interim, urgent messages could be screened by an operator, such as the practice manager, and then circulated in paper format.

Finally, anyone who uses email or works in a networked environment knows how time consuming it can be to scan through endless, often "junk," messages or to access web sites. Managing our paper-filled in trays was quicker, as paper conveyed more complex visual signals, allowing for rapid handling (toss, act, read, or file)²—it takes longer to evaluate the relevance of an item on the screen. A secure and properly monitored hotline system would need to be devised, otherwise urgent messages will be delivered but still unavailable, buried in a mounting pile of information overload.

MARY E BLACK
Visiting lecturer

Department of Health Policy and Management,
Harvard School of Public Health,
Boston, MA 02115,
USA

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Health link between countries should be global

EDITOR,—I am on the editorial board of the South African edition of the *BMJ*. In reviewing the issue of 25 November last year I rated the article on Creutzfeldt-Jakob disease and bovine spongiform encephalopathy¹ as 2 on a scale of 4 for its relevance to medical problems in South Africa. My error of judgment was due to the fact that I was not aware that South Africa imported British beef for local consumption. With this knowledge, and because of the present debate,² I would now rate the article as 4.

Disease knows no boundaries; business knows no boundaries; and a combination of both makes the so called global village (the world) a small village indeed. This emphasises the urgency of inviting developing countries to participate in the recently formed health link between the European Union and the United States.³ It is in developing countries that some of the diseases make their first appearance (for example, infection with Ebola virus), but facilities are usually inadequate to detect them early and contain them. Early inclusion of these countries in the link would improve the effectiveness of the system and make it truly global.

N A MAFOJANE
Head of department

Department of Neurology,
University of Pretoria,
PO Box 667,
0001 Pretoria,
South Africa

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One stop shopping for global health information

EDITOR,—Home pages on the Internet are a primary means to locate information. Currently there are over 70 000, and the number is increasing rapidly. These pages are like electronic catalogues—for example, the home page of the British Medical Journal (<http://www.bmj.com/bmj/>) houses the electronic version of the journal.

With help from people from the National Aeronautics and Space Administration (NASA), the Pan-American Health Organisation, the World Bank, and AT&T, we have created a

Global Health Network home page which identifies the epidemiological and public health information and data that are on the Internet. A multilingual version will soon be available with translations in Japanese, Spanish, and Portuguese. Included in the home page are specialty pages for laboratories, minority health, molecular epidemiology, reproduction and contraception, etc. Subpages continue to be added as there is considerable interest to have one's home page where people see it, and the Global Health Network's home page is being visited regularly by people around the world. It is becoming a leader in health on the Internet: almost 800 people a day come to visit. We invite people to come, visit, and potentially contribute to the development and expansion of Global Health Network home page. Global health can be improved if health workers have access to the Internet and can go to a place such as the Global Health Network home page (<http://www.pitt.edu/HOME/GHNet/GHNet.html>) to find information readily.

RONALD LAPORTE
Professor of epidemiology

rlaporte@vms.cis.pitt.edu

Monitoring the frequency of side effects of drugs

Reasons for stopping drugs could be recorded in general practice

EDITOR,—R Bracchi highlights the need for general practitioners to have more information on the frequency of adverse drug events.¹ Premarketing trials, which are limited by their small size, short duration, narrow set of indications, and exclusion criteria, provide some data but may not accurately reflect clinical practice.² Spontaneous reporting after marketing (the yellow card scheme) is an essential early warning system, but many adverse drug events remain unreported, one of the reasons being lack of confidence in diagnosing an adverse reaction.³ We describe here an alternative source of information on adverse drug events experienced in general practice.

We have studied a large, continuing survey of reported reasons for stopping drug treatment among a panel of British general practitioners (the new and changed therapy enquiry). Every quarter, a representative sample of 250 doctors records all drugs that are prescribed for a patient for the first time, all drugs that are withdrawn from a patient, and the reasons for withdrawal over a four week period. This provides 4000 doctor weeks of prescribing annually. There are several advantages to obtaining information on all adverse events sufficient to result in withdrawal of drug treatment by general practitioners: the doctors are not required to decide when such an event requires reporting; the event does not have to be causally linked to the drug; the frequency of events necessitating withdrawal of a drug in clinical practice can be calculated to provide an adverse event profile; and clusters of unexpected events can be tested for causality in conventional incidence studies.

Table 1 reports the commonest reasons given by general practitioners in the sample for stopping four non-steroidal anti-inflammatory drugs. We intend to pilot the instrument on a general practice computerised database which already collects routine prescribing, demographic, and morbidity data.⁴ This will provide more accurate information on the numbers of patients taking each drug, permit confounding factors to be considered, and allow prospective follow up of patients.

The safer use of medicines requires improved education⁵ and more information.¹ In addition, novel methods of postmarketing surveillance are required that work in conjunction with existing