crease in size within a 35-day period. Furthermore, it is incorrect to say that "the tumours appear to lose their property of metastasizing in the system." In June 1974 my colleagues and I reviewed our work at a Royal Society of Medicine meeting, during which we reported a case of metastatic growth of a melanoma to a mouse para-aortic node. We believe this was the first reported case of metastases in the T− B+ mouse.[4] We have subsequently reported metastases from human colon, rectum, and HeLa tumours, all to mouse lung.[5] These observations are comparatively recent and may in part be due to the use of mice from the specific-pathogen-free unit at Mill Hill.

In conclusion, I cannot in principle see the objection to using this system for chemotherapeutic sensitivity studies of tumours. Why should it be necessary to establish that actual growth is occurring? After all, the T− B+ mouse can be used to maintain tissues in vivo without having actual growth. In a pilot study my colleagues and I examined the sensitivity of a breast tumour to chemotherapeutic agents and compared the treated mice with untreated mice. During the study period, in excess of 40 days, the implanted tumours gradually regressed (we have demonstrated growth in other studies), but we compared the regression rates between the treated and untreated mice. Nobody would be foolish enough to suggest at this stage that the system should be used as the ultimate criterion for chemotherapeutic treatment. However, it can provide very useful guidelines. Anything which can do that in a branch of medicine, which largely relies on trial and error cannot be a bad thing.—I am, etc.,

C. R. FRANKS

I.C.R.F. Breast Cancer Unit,
Guy's Hospital,
London S.E.1

1 Franks, C. R., Curtis, K., and Perkins, F. T., *British Journal of Cancer*, 1973, **7**. 390.
2 Franks, C. R., Perkins, F. T., and Holmes J. T., *Nature*, 1973, **243**. 91.
3 Castro, J. E., *Nature New Biology*, 1972, **239**. 83.
4 Franks, C. R., Perkins, F. T., and Holmes, J. T., *Proceedings of the Royal Society of Medicine*. In press.
5 Franks, C. R., *et al.*, British Association for Cancer Research Meeting, September 1974.

Lassa Fever

SIR,—Your leading article on Lassa fever (25 January, p. 173) draws attention to the highly infectious nature of this dangerous disease and to the difficulty in diagnosing and treating it. After quoting the W.H.O. recommendation that patients suspected of having the disease should not be moved out of the endemic area you go on to qualify this by adding, "if for medical reasons the patient must be moved to another country. . . ." I find it very difficult to visualize in the light of the information given in the rest of your article what these medical reasons might be.

On the question of movement by air it would be interesting to know what "available apparatus" is referred to which can diminish the risk of airborne contamination. There is no equipment available to the Royal Air Force which will isolate a patient completely from the rest of the aircraft cabin environment. In any simple patient isolator air circulation would be to the aircraft cabin and therefore to the crew and medical attendants. I know of only two occasions on which patients suffering from Lassa fever have been intentionally moved by air. In the first a German aircraft was fitted with a simple isolation fitment. It is surely incautious to conclude from this single experience that air transport of Lassa fever patients is safe when, for all we know, the patient may not have been infective. In the second case the complex Apollo astronaut isolation system was used. This would hardly be available to us and we could not airlift it if it were. I am of course aware that aircraft exist—for example, the U.S.A.F. C-9A Nightingale—in which the patient isolation facility ventilates to the atmosphere. Aircraft of this kind are specially adapted wholly for aeromedical use and are unfortunately not available to the Royal Air Force.

Given the nature of the disease we are dealing with and the present state of our knowledge, surely air transport would be better utilized in taking whatever skills and therapy we possess to the patient.—I am, etc.,

D. W. ATKINSON
Director of Health and Research (R.A.F.)

Ministry of Defence,
London W.C.1

Proton Beam Therapy for Acromegaly

SIR,—We were interested to see your leading article on "Assessment and Management of Acromegaly" (7 December, p. 549) and are writing about your comments on proton beam therapy. We agree that the results reported for this form of treatment[1] seem to be at least as satisfactory as those of invasive techniques currently in use. We suggest, however, that proton beam therapy may therefore be *superior*, for it lacks the inevitable complications of invasive procedures and involves very little time in hospital. The matter will not be resolved until controlled trials have been undertaken.

The synchrocyclotron at Harwell is of similar design to that used at Harvard for proton beam therapy, and the Medical Research Council has agreed to support the development of its use for controlled trials of the treatment of pituitary disorders. There are still a number of problems to overcome, but we are hopeful that eventually this treatment will become available in Britain.—We are, etc.,

T. D. R. HOCKADAY

Radcliffe Infirmary,
Oxford

A. H. LAING

Churchill Hospital,
Oxford

R. B. WELBOURN
Chairman

Royal Postgraduate Medical School,
London W.12

M. HARTOG
Secretary,
M.R.C. Working Party on Proton Beam Therapy

Bristol Royal Infirmary,
Bristol

1 Kjellberg, R. N., and Kliman, B., in *Diagnosis and Treatment of Pituitary Tumours*, ed. P. O. Kohler and G. T. Ross, p. 234. International Congress Series No. 303. Amsterdam, Excerpta Medica, 1973.

Children's Worms

SIR,—In your leading article (5 October, p. 3) you state that "it is hard to believe that worms 2-12 mm long would cause abdominal pain." I most respectfully disagree.

In 54 years of clinical practice of paediatrics I have seen several patients with heavy infestations with oxyuris who have episodes of severe abdominal pain which promptly disappeared after effective vermifuge treatment. The latest of these was my own 6-year-old grandchild, who would come home from school and lie down screaming of abdominal pain. (She did have considerable histrionic ability but the pain was undeniable.) Physical examination was negative, but a stool specimen was a solid mass of pinworms, literally thousands. Symptoms promptly and permanently disappeared following appropriate oral therapy.

Surely some of your readers have had similar experiences.—I am, etc.,

EDWARD B. SHAW

University of California Medical Center,
San Francisco

Other Health Services

SIR,—I was interested to read the letter from Dr. N. Kaye (21 December, p. 722) on the Canadian Health Service. I should like to make one or two comments on this statement that "hospital outpatients have virtually disappeared." In Ontario this is not the case, especially for those who work in a university setting. The outpatient service in university-affiliated hospitals is much the same as in the U.K., the patient being referred by the general practitioner to the consultant (specialist). However, there is one important difference. There is an unwritten rule that when a new patient is seen by a specialist in internal medicine, for example, the time spent on examination and initiating treatment will be *at least an hour*. The Ontario Government has taken this into account when fixing the rate of payment at $40 for each new consultation by the internal medicine specialist, the fee for a follow-up visit being approximately half that amount. The most important benefit from allowing an unhurried consultation is that the patient receives first-class treatment.

I would agree with Dr. Kaye that there is very little abuse of the fee for item of service system of payment, and very high earners have their billing procedures investigated. In the university hospitals full-time consultant staff are paid a salary plus an additional earnings ceiling from seeing patients. Money earned in excess of that ceiling usually goes to the university or to a special fund from which such "perks" as car rental and subscriptions to professional bodies are met. Needless to say, the "average" consultant's earnings are some four to five times that of his contemporaries in the U.K.—I am, etc.,

A. J. RICHARDS

Department of Medicine,
McMaster University Medical Centre,
Hamilton, Ontario, Canada