the difference in any summary where a difference is stated to be significant in the statistical sense? This is not perhaps always possible, because some experiments are planned to tell only whether A is better than B with some predetermined probability, and not how much better. However, when the difference is given in the summary the skimming reader in his bee-like flight can better judge where to pause for the sort of honey he likes.—I am, etc.,

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Lipid Lowering Agents

SIR,—In the Today's Drugs article "Lipid Lowering Agents" (10 June, p. 642) your contributor misses an important point. In the common type II hyperlipoproteinaemia (Fredrickson classification), unless reduction of saturated fats in the diet is matched with an increased amount of polyunsaturated fat (cod liver oil, or polyunsaturated plant oils), therapeutic effects are minimal, even if lipid lowering agents are used.¹ In type I and type V hyperlipoproteinaemias drug therapy is not indicated, and in type III dietary restrictions alone will produce normal lipoprotein levels.

Clearly lipoprotein typing is obligatory before commencing treatment.—I am, etc.,

ERIC J. TRIMMER

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Middx

¹ Betro, M. C., *New Zealand Medical Journal*, 1972, 75, 131.

Ankylosing Spondylitis

SIR,—It is with dismay that I read this "Second Opinion, Please" exchange of letters (13 May, p. 400) about a boy aged 19 who presented his ankylosing spondylitis to his general practitioner and his consultant in physical medicine in an unusual way. One cannot take issue with the management until the definitive diagnosis of ankylosing spondylitis is reached six or seven months after the onset of knee joint pain. At that time his E.S.R. became elevated and the radiologist was confident of the diagnosis on the appearances in the sacroiliac joint.

The treatment suggested ranged through phenylbutazone, oxyphenbutazone, to ACTH and steroids. X-ray therapy was dismissed as too risky and temporary in its effects, but from the correspondence this assessment does not appear to have been made by a radiotherapist. During the course of the illness the boy had a bout of diarrhoea with blood and pus which was referred to a surgeon for management. One is entitled to ask why referral to a radiotherapist to consider the place for irradiation in the management of the disease was not considered necessary. The drugs used and indeed all therapeutic manipulations carry their own risks. Radiotherapist are, if anything, more self critical than any other specialists (after all the irradiation/leukaemia story was elucidated by a radiotherapist), and I would have thought they would have been better able to weigh the benefits against the pos-

sible sequelae in any particular case. Would his apparently prolonged period off work and his continued discomfort have been shortened by judicious radiation? Is this worth raising the natural incidence of leukaemia from 1:10,000 to 1:1,000?

Finally and possibly more important, has either of the writers done a rectal examination in this case? Prostatic massage and culture of his urine for mycoplasma might have been instructive.—I am, etc.,

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Lead Poisoning in Rural Wales

SIR,—I would agree with Dr. Beattie and his colleagues (27 May, p. 488) that the true incidence of lead poisoning in rural areas must be determined.

A farmer, born in 1914, had lived on a Carmarthenshire hill farm since the age of 8. He was admitted to hospital in 1951 complaining of abdominal pain and vomiting, and when readmitted in 1955 was also anaemic: Hb 10 g/100 ml. A gastric ulcer demonstrated radiologically healed in response to treatment, and though he was then free of pain for some time he remained anaemic and in two years was transfused with 21 pints of blood. In 1958 gastrectomy was performed. A benign ulcer was found on the lesser curvature of the stomach and in another part of the gastrectomy specimen there was a shallow malignant ulcer with metastasis into glands. In 1964 he had gout and thereafter became increasingly disabled with pain in many joints. In June 1970 he was admitted urgently with colicky abdominal pain and vomiting, was also uraemic—blood urea 104 mg/100 ml—and during admission he had a grand mal fit. Pain, however, disappeared, only to return at home in attacks of increasing severity.

Lead poisoning was diagnosed when it was found that water to the farm house was conveyed through lead pipes from a remote well. Water drawn from the kitchen tap on separate days contained 18.8 mg lead/litre and 12.7 mg lead/litre; the patient's urine on separate days contained 540 µg lead/litre and 880 µg lead/litre, and a sample of the patient's blood contained 114 µg lead/100 ml. The pipes were replaced and when the patient was seen in June 1972 he had no symptoms apart from an occasional mild joint pain, and he had gained 42 lb (19.1 kg) in weight. His blood urea was still raised.

The farmer's wife, born in 1912, was admitted in 1949 for blood transfusion after an abortion. Recurring abdominal pain and constipation were attributed to a spastic colon and she also complained of backache, nervousness, insomnia, headache, and fatigue, which were considered to be largely psychosomatic. In May 1970 laparotomy was performed because pain and constipation were now associated with anaemia. A small Meckel's diverticulum was excised, but she remained anaemic—Hb 9 g/100 ml in August, and on one occasion stippled cells were seen in a blood film. Her husband's illness had now been diagnosed, and it was decided that she too had lead poisoning. Her blood contained 143 µg lead/100 ml, and urine 418 µg lead/litre. In June

1972 she felt better, had gained 28 lb (12.7 kg) in weight, and her haemoglobin was 12 g/100 ml.

The cause of these patients' early symptoms is uncertain, though it could be argued that lead had played a part. More recently they were clearly the victims of severe lead poisoning.—I am, etc.,

EIRIAN WILLIAMS

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Discharge from Psychiatric Hospitals

SIR,—Dr. D. A. Spencer's account (10 June, p. 653) of the position of long-stay patients is timely and, for the most part, beyond dispute. The conclusion reached in his final paragraph, however, is not borne out by my experience.

He advises us to review cases and notify local authorities when patients are fit for discharge, and tells us that this will avoid giving the public the impression that we wish to keep people in hospital unnecessarily. I had done exactly this. I did review the cases. I did again notify the local authorities in this area, in December of 1971, about 190 cases who no longer required hospital treatment, including the two patients who were the subject of considerable press publicity (*Sunday Times*, 21 May). This hospital and its staff were berated in that article and others, and this gave the public the impression that the staff of subnormality hospitals are incompetent. It seems extraordinary that a story like this could have been distorted, and so little effort made to find out the facts.—I am, etc.,

M. QUINN

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Treatment of Tumour Metastases by Defibrination

SIR,—Your leading article on "Fibrin and Cancer" (11 December 1971, p. 641) reviewed attempts to interfere with the relationship between malignant cells and their surrounding latticework of fibrin with anticoagulants and fibrinolytic agents but did not discuss the effect of defibrination. It has been shown that complete defibrination in mice with anacrod (Arvin) retards growth of the experimental sarcoma¹ and we report here results of a preliminary trial of this agent in patients with tumour metastases.

Six patients with extensive malignant disease were treated with anacrod, which was administered at 2 units/kg every 12 hours by intravenous infusion for induction and maintenance. After two days maintenance was continued for a further five to seven days by twice daily intravenous injections of the same dose. No cytotoxic or irradiation therapy was given to these patients before or during the anacrod treatment.

Defibrination was complete in each case, fibrin degradation product (F.D.P.) levels were high and large monomer fragments such as fibrin X were demonstrated by a modified Ratnoff and Menzies fibrinogen assay, which included all thrombin clottable or precipitable degradation products.

Temporary regression of a primary anaplastic carcinoma of the breast was obtained in one patient and of a single peripheral

lung metastases of adenocarcinoma of the colon in another. A temporary improvement in neurological signs occurred in another patient with spinal deposits of adenocarcinoma of the colon. In a patient with lung and liver metastases of rectal adenocarcinoma there was a reduction in the size of the liver, but this may have been due to treatment of congestive cardiac failure with digoxin and diuretics. There was no improvement in two patients with metastases of anaplastic carcinoma of the breast and ovary although the latter showed exceptionally high F.D.P. levels (1,500 $\mu\text{g}/\text{ml}$) during treatment.

Fibrin degradation products have been observed in women with malignant ovarian metastases,^{2,3} and may be derived from breakdown of plasma fibrin following release of thromboplastic substances into the circulation. We suggest that some of the F.D.P. occurring during anrod therapy may be derived not only from the expected breakdown of microclots in the circulation but also from degradation of fibrin filaments in the tumour.

It may well be that the malignant cells are exposed free from their surrounding sheath of fibrin filament and may perhaps be more susceptible to cytotoxic therapy.—We are, etc.,

J. R. B. WILLIAMS
ELIZABETH MAUGHAN

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¹ Austin, J. P., and Glaser, E. M., *Clinical Science*, 1969, 37, 878.

² Astedt, B., Svanberg, L., and Nilsson, I. M., *British Medical Journal*, 1971, 4, 458.

³ Astedt, B., Svanberg, L., and Nilsson, I. M., *British Medical Journal*, 1972, 2, 47.

Future of Postgraduate Medical Centres

SIR,—It is a pity that your leader writer (3 June, p. 547) allowed his indignation to get the better of him in springing to the defence of Drs. John Lister and David Ferriman (3 June, p. 589). A leader in the *B.M.J.* may have widespread influence, and it is particularly important at the present time that postgraduate education in hospitals should not be seen as a narrow sectarian interest of the medical profession. Besides, have doctors forgotten the debt they owe nursing schools for help in the days before there were postgraduate centres?

Our own centre, built eight years ago, is bursting at the seams. Our policy has been that the building should be used by any discipline for educational purposes, but it is increasingly difficult to accommodate all comers, with the so-called radiography and midwifery schools, for example, having inadequate accommodation and groups like physiotherapists, laboratory technicians, and administrative staff none at all. Our personal opinion is that an adequate institute, far from being a tidy administrative arrangement, would bridge the gap between medical, nursing, technical, and administrative staff. Successful treatment of patients in hospital depends on teamwork. Sharing facilities for education must surely help to unify the team and improve its performance. It should also promote friendly relations between all types of staff, and under such circumstances pleas from doctors to preserve their independence would be unthinkable.

Such an institute would have the added advantage of ensuring a decent-sized lecture theatre (which no postgraduate centre can provide on its own), proper dining facilities, a large multidisciplinary library, and a

common room for all staff. Overnight accommodation for visitors might also be considered, and it has been suggested that recreational facilities, quite inadequate in most district hospitals, might be added. Of course we would expect separate facilities for individual users, and if there has been dispute in the past between medical staff and others over the use of an educational institute, it is surely interpersonal relationships rather than the principle that should be questioned. Our worry is that the Department of Health will not think big enough, because such an institute will cost several hundred thousand pounds compared with the £12,000 spent on our centre eight years ago.—We are, etc.,

P. GILROY BEVAN
A. PATON

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SIR,—I would be grateful for an opportunity to comment in your columns on the issue of postgraduate medical centres and the related subject—the training of doctors in management.

I agree entirely with the sentiments expressed by Dr. C. P. B. Brook and Dr. A. Keep (24 June, p. 769), and would like to add that in my view the education of doctors in methods of administration and insight into the role of others in the paramedical fields in the patient-care situation should begin as early as possible in their careers, even in their undergraduate days should the curriculum allow. A knowledge and understanding of the functions and responsibilities of the lay (non-medical) administrator, especially in the hospital environment, will break down barriers of contention and open the way to a situation where the roles are clearly identified and regarded with that degree of deference that the important discipline of management deserves. The complete and total care of the patient with a multidisciplinary approach to the problem is, I believe, the only answer in an increasingly complicated social structure such as ours and the development of multidisciplinary postgraduate centres where forward-looking attitudes can be fostered must surely encourage this concept, with ultimate benefit to the patient which is, after all, the primary object. Should the converse situation be perpetuated—that is, that the medical profession remains in splendid isolation, as it were, and the doctor, and only the doctor, is the person who treats the patient and thus knows best—this is a concept out of keeping with modern trends where community and preventive medicine, including psychiatry, are practised with no small measure of success.

I trust, therefore, that in the future postgraduate medical centres will in fact have a multidisciplinary orientation, and that the doctor will continue to spearhead the team.

To those critics who would suggest that doctors have little if any role to play in management, I would remind my colleagues that if the medical profession does not manage its affairs and take an active interest and participate fully in administrative matters as it concerns them, then others will do it in their stead and without the benefit of their expert advice.—I am, etc.,

DENIS CRONIN

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Adenovirus Demonstrated by Immunofluorescence

SIR,—Many acute respiratory virus infections have been rapidly diagnosed by immunofluorescence^{1,4} and this technique has now been applied to the diagnosis of adenovirus infection. Sixty-five adenoviruses were isolated from nasopharyngeal secretions of 1,028 children admitted to hospital with acute respiratory infections. Staining of cells in these 65 secretions by the indirect immunofluorescent technique showed that 42 were negative for adenovirus and only 23 (35%) were positive. Fluorescent positive cells occurred most frequently in upper respiratory tract infections (18 out of 23) but rarely in croup, bronchitis, bronchiolitis, or pneumonia.

It would appear, therefore, that although 6.5% (65 out of 1,028) of acute respiratory infections of childhood were associated with adenovirus, only 2% could be diagnosed by immunofluorescence. This small number of patients that could be diagnosed and the mildness of the illness caused by the majority of adenoviruses would suggest that immunofluorescence for the diagnosis of respiratory infections by this group of viruses is uneconomical. The reason for only one-third of adenovirus infections being visualized by immunofluorescence in cells of the respiratory tract is, at the moment, unknown, but may reflect active infection in those cases with positive cells in contrast to the other patients in whom the infection may be of longer standing and not necessarily related to the current acute illness.—We are, etc.,

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¹ McQuillin, J., and Gardner, P. S., *British Medical Journal*, 1968, 1, 602.

² Hers, J. F. Ph., van der Kuip, L., and Masurel, N., *Lancet*, 1968, 1, 510.

³ McQuillin, J., Gardner, P. S., and McGuckin, R., *Lancet*, 1970, 2, 690.

⁴ Gardner, P. S., McQuillin, J., McGuckin, R., and Ditchburn, R. K., *British Medical Journal*, 1971, 2, 7.

Total Hip Replacement

SIR,—I was very interested to read the articles by Dr. Jacqueline Harris and others (24 June, p. 750) and Mr. R. C. Todd and others (24 June, p. 752). I have recently carried out a review on 778 patients over the age of 70 years, with various types of hip lesions¹ treated by the Charnley method at the Centre for Hip Surgery, Wroughton, and I thought it might be interesting to note a few of the results for comparison.

My review was aimed at discovering the complications of the procedure rather than assessing the actual functional results, which of course, has been done by Mr. Charnley himself.² In this series only one patient had a deep infection which required removal of the prosthesis, and 3.2% (25 patients) had superficial wound sepsis, which cleared up before the patient was discharged from the hospital. There appeared to be no significant difference in the sepsis rates according to aetiology, although it is well known that revision operations carry a higher risk than primary procedures.

I did not review trochanter detachments,