district management team for all medical laboratory investigations performed in the district."

The IMLS document on "Future Staffing in the Medical Laboratory Service" further states that "senior members of the profession decide the priority of work to be done and play a part in deciding on further and consequent tests." I assume that "profession" referred to in this paragraph means members of the IMLS.

This advice and the submission to the Royal Commission are contrary to the recommendations of HSC (IS) 16 on the "organisation of scientific and technical services" and the submission of the BMA to the Royal Commission (paragraph 3.10. 29 January, p 303).

T HARGREAVES

Area Department of Pathology,
Heavitree, Exeter

Shortage of dialysis facilities

SIR,—Your report of an interview with Dr J M Forsythe, area medical officer, Kent Area Health Authority (12 March, p 698), states that he alleges that "there would probably be enough dialysis places if more kidneys were made available; in fact the nephrologists did not think they needed more dialysis machines." I would be grateful to know which nephrologists.

The majority of patients suffering from chronic renal failure are beyond the age when transplantation is justifiable and the cadaveric kidneys of half the patients whom it is justifiable to transplant will fail within one year. If Dr Forsythe, on the other hand, had in mind transplantation from live related donors, then the position is slightly different, but only for that minority of patients who can find a related living donor. Until there is a considerable advance in the methods used to prevent graft failure of cadaveric kidneys, particularly in patients over 50 years of age, the present shortage of dialysis facilities in this country will continue.

HUGH DE WARDENER

Department of Medicine,
Charing Cross Hospital Medical School
London W6

Immunotherapy trials

SIR,—The report by Dr M B McIlmurray and others (26 February, p 540) of an apparently unfavourable effect of adjuvant immunotherapy for stage IIB malignant melanoma ends with the warning that previous reports of benefit from immunotherapy for melanoma "should not be readily accepted." However, their experience is not unique¹ and their warning will not be heeded: 69 clinical trials of immunotherapy for melanoma are currently planned or in progress, 11 using the same technique as that used by Dr McIlmurray and his colleagues (BCG + lethally irradiated autologous tumour cells) and 35 using BCG (or a derivative) alone (*Compendium of Immunotherapy Protocols*, 1976).

With an overall total of 330 immunotherapy trials now in progress it is evident that the long, inglorious history of clinical immunotherapy² is to be indefinitely prolonged. This persistent verification of uncertainty is largely due to the enormous promotion of the topic and to the irresponsible claims for the clinical

relevance of certain animal tumour studies. Approximately one-third of the contents of current cancer journals is devoted to aspects of tumour immunity. Of the animal tumour studies contributing to this enormous literature, which provide the chief stimulus to clinical trials, practically all are done using tumours which are allogeneically transplanted or which were induced by powerful chemical carcinogens or by oncogenic viruses; whole volumes of leading cancer journals contain not a single instance of the use of any other type of tumour for experiments purported to be relevant to immunotherapy. Yet it has been known for over 20 years that the immunogenicity displayed by such tumours is *artefactual* and is rarely, if ever, displayed by naturally occurring tumours suitable as models of clinical cancer.³ This information has not been emphasised to clinical workers—rather, intimations of clinical relevance very commonly enter the discussion of papers reporting successful immunotherapy using the artefactual systems. Your leading article on adjuvant therapy for lung cancer (22 January, p 187) attributes to the distinguished tumour immunologist, Professor R W Baldwin, a recent statement that "the original concept that human tumours are antigenic and that immunotherapy may aid their elimination by an immune reaction is no longer tenable." This informed judgment is courageous because it is certain to be unpopular; but it is difficult to understand what new information has been acquired to sustain it and why it was not delivered earlier.

It is our view that retrenchments about the prospects of immunotherapy for cancer are about to become fashionable among its former proponents. If this proves to be so the basis of this expensive promotion and *volte face* deserves inquiry. We believe that research funding bodies have assisted this imbalance by too ready acceptance of the customer/contractor principle of assessing projects and programmes whereby generous facilities and encouragement are extended to those who rashly promise the early clinical application of investigations not yet done. There have been periods when no young cancer researcher could afford to deny his "belief" in immunotherapy or to supply interpretations of his data which were discouraging to it. This is an unhealthy influence, immensely dispiriting to uncommitted endeavour and unduly helpful to politic careerism. New ideas are outrageous and tend to come from sceptics and iconoclasts. Funding agencies could assist the inquiring spirit of youth by marking down those whose pioneering is to be done from the security of the bandwagon of the moment. Tumour immunology may well have important long-term implications for cancer biology and should be relieved of any need to promote premature and iterative clinical trials.

H A S VAN DEN BRENK

Dimbleby Department of
Cancer Research,
St Thomas's Hospital Medical
School,
London SE1

H B HEWITT

Cancer Research Council
Gray Laboratory,
Mount Vernon Hospital,
Northwood, Middx

¹ van den Brenk, H A S, *British Medical Journal*, 1969, 4, 171.

² Currie, G A, *British Journal of Cancer*, 1972, 26, 141.

³ Hewitt, H B, et al, *British Journal of Cancer*, 1976, 33, 241.

Toxic effects of depot tranquillisers in mental handicap

SIR,—Through your columns may I ask any doctors with experience of severe toxic reactions with the above to communicate with me?

Following reports of fatal hyperthermia with mentally handicapped inpatients on fluphenazine enanthate during an Australian heat wave the two UK drug companies marketing fluphenazine decanoate (Modectate) and flupenthixol decanoate (Depixol) advise doctors not to use these with the mentally handicapped. A check of original reports shows that most fatalities occurred among those also on anti-Parkinsonian agents, which decrease sweating, apart from other drugs such as for epilepsy. Under the auspices of the Royal College of Psychiatrists a small working party of consultants in mental handicap met on 15 February to review UK experience. From a background of up to seven years' practice among 4910 UK inpatients and 213 currently on depot medication no fatalities and only five severe toxic reactions were reported, each responding rapidly to anti-Parkinsonian drugs. The doses used were in general up to 100 mg of fluphenazine decanoate and 400 mg of flupenthixol monthly.

The rationale of not using depot preparations among the mentally handicapped was that it was believed that some brain-damaged patients were particularly sensitive to phenothiazines and there is evidence that this may well be so. The working party believed that, used with caution, depot preparations were both effective and valuable, but before attempting to set the record straight we would be grateful to hear from other doctors in community and hospital practice who work with child and adult mentally handicapped patients.

M J CRAFT

Bryn y Neuadd Hospital,
Llanfairfechan, Gwynedd

Use of depot tranquillisers in disturbed adolescent girls

SIR,—We have been treating girls in a secure home for disturbed adolescents with the intramuscular depot preparations fluphenazine decanoate and flupenthixol decanoate. Most of the girls admitted to this home have already been in care, all come from broken or severely disrupted homes, and all the girls have been uncontrollable in their previous situations. Many have been in conflict with the law. The environment of the home is extremely caring but with firmly defined limits of what is acceptable and what is not. The effect of maternal deprivation on many of these children is clearly observable and understood by the staff, and as far as possible the staff try to compensate for this. Oral medication is used with some of these girls, but tablet-taking default often occurs.

Over the past year 10 of these girls who were extremely disturbed, violent, and aggressive and who were not influenced by tender, loving care or by psychological strategies were started on depot tranquillisers. Five girls were treated with fluphenazine decanoate, the dose range being from 12.5 to 25 mg at weekly to monthly intervals, while five girls were treated with flupenthixol decanoate, the dose range being from 20 to 40 mg at weekly to monthly intervals. The ages of the girls ranged from