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skin cancer following photochemotherapy for psoriasis.[1] So many centres took part that the data from each are unlikely to be miscible, it lacks proper controls, and its subgroups are hopelessly mixed. Significant changes were mostly found in those who already had skin cancer or who had been treated with ionising irradiation.

We know that 8-methoxypsoralen and UVA can be made to play nasty tricks in the laboratory, but so can the tar preparations which we quite rightly continue to use for psoriasis. Most things produce laboratory cancer if applied with sufficie determination: the question is whether they do so in real life. The excuse which I have already heard for this *N.E.J.M.* paper[1] is that it will at least stop people and make them think—untrue, alas, since those who are stopped by it are the least likely to indulge in that activity.

Photochemotherapy is the most exciting, acceptable, and cost-effective treatment for psoriasis we now have[2] but before its use can be extended we must collect real evidence about its risks. We would be making a good start by rejecting the recent paper of Stern et al.[1]

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POST-TRANSFUSION HEPATITIS AFTER PROTHROMBIN COMPLEX CONCENTRATES

SIR,—The report by Dr Wyke and colleagues (March 10, p. 520), showing a high incidence of fatal and non-fatal post-transfusion hepatitis after administration of prothrombin complex concentrates (P.C.C.) to liver-disease patients, is worrying to those who use P.C.C. for liver biopsy in patients with severe coagulation defects. Although our experience[3] is not so dramatic as that of Wyke et al. (only 1 case of post-transfusion hepatitis out of 32 treated patients) the danger emphasised by these investigators must be seriously considered. On the other hand, the clinician is often confronted with patients in whom biopsy is essential for diagnosis but in whom coagulation abnormalities make the procedure hazardous.

Swedish experience over a period of 10 years offers a reasonable solution to this dilemma. In Sweden, commercially available P.C.C. is prepared from a small pool of donors originating from Scandinavian countries characterised by a low incidence of post-transfusion hepatitis. Long-term follow-up of treated patients has shown that strict adherence to the small-pool concept has resulted in a very low incidence of post-transfusion hepatitis,[3] suggesting the usefulness of this approach in the prevention of the infection. Dr H. Kjellman tells me that further follow-up strengthens the results published in 1976.[4]

Commercial and non-commercial manufacturers of P.C.C. should be encouraged to make available, as part of their production, special preparations made from small pools of donors with low risk of transmitting hepatitis. These fractions might be electively used in liver disease, mild hæmophilia B, and in patients who, having received a small number of transfusions are not immunised against the agents of post-transfusion hepatitis and are at higher risk.[5,6] After multiple transfusions, such risk is likely to decrease[5,6] and patients could be switched to treatment with concentrations made from larger donor pools. This policy should also be applied to similar groups of patients with hæmophilia A and von Willebrand's disease. Since the cost to the community of these special fractions is outweighed by benefits, national health authorities should accept this additional financial burden.

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1. Stern, R. S., Thibodeau, L. A., Kleinerman, A. B., Parrish, J. A., Fitzpatrick, R. B. *New Engl. J. Med.* 1979, 300, 809.
2. Rogers, S., Marks, J., Shuster, S., Vella Briffa, D., Warin, A., Greaves, M. *Lancet*, 1979, i, 455.
3. Mannucci, P. M., Franchi, F., Dioguardi, N. *Lancet*, 1976, ii, 542.
4. Iwarson, S., Kjellman, H., Tegner-Nilsson, A. C. *Vox Sang.* 1976, 31, 136.
5. Kasper, C. K., Kipnis, S. A. *J. Am. med. Ass.* 1972, 221, 510.
6. Lewis, J. H., Maxwell, N. G., Brandon, J. M. *Transfusion*, 1974, 14, 203.