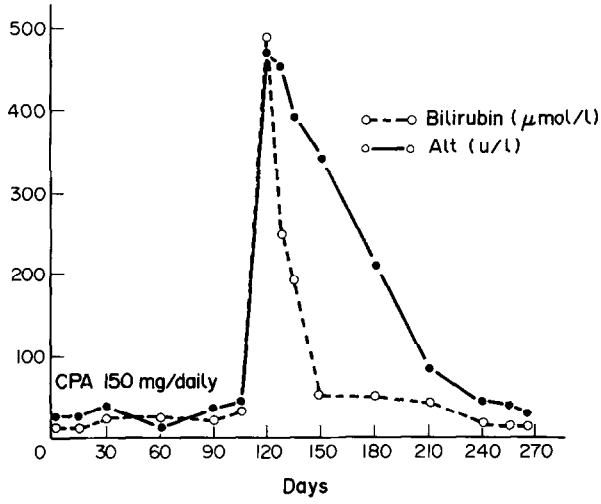

Fig. 1.

1. Holdaway IM, Groxson MS, Ibbertson HK, Sheehan A, Knox B, France J. Cyproterone acetate as initial treatment and maintenance therapy for hirsutism. *Acta Endocrinol* 1985, **109**, 522–525.
2. Willemse PH, Dikkeschel LD, Mulder NH, Ploeg ED, Sleijfer DT, De Vries EE. Clinical and endocrine effects of cyproterone acetate in postmenopausal patients with advanced breast cancer. *Eur J Clin Oncol* 1988, **24**, 417–421.
3. Goldenberg LS, Bruchovsky N. Use of cyproterone acetate in prostate cancer. *Urol Clin North Am* 1991, **18**, 111–122.
4. Meijers WH, Willemse PH, Sleijfer DT, Mulder NH, Grond J. Hepatocellular damage by cyproterone acetate. *J Cancer Clin Oncol* 1986, **22**, 1121–1122.
5. Kaiser E, Gruner HS. Liver structure and function during long term treatment with cyproterone acetate. *Arch Gynecol* 1987, **240**, 217–223.
6. Levesque H, Manchon ND, Moore H, *et al.* Fulminant hepatitis due to cyproterone acetate. *Lancet* 1989, **1**, 215–216.
7. Dore B, Orget J, Izani I, Aubert J. Hepatitis after treatment with cyproterone acetate. *J Urol Paris* 1990, **96**, 169–171.
8. Blake JC, Sawyer AM, Dooley JS, Scheuer PJ, McIntyre N. Severe hepatitis caused by cyproterone acetate. *Gut* 1990, **31**, 556–557.
9. Parys BT, Hamid S, Thomson RG. Severe hepatocellular dysfunction following cyproterone acetate therapy. *J Urol* 1991, **67**, 312–313.
10. Kapolowitz N, Aw TY, Simon FR, *et al.* Drug induced hepatotoxicity. *Ann Intern Med* 1986, **104**, 816–830.

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Ductal Carcinoma *in situ*

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DUCTAL CARCINOMA *in situ* (1992) **28**, 630–634. While Silverstein *et al.*'s study is not randomised and the patients in the three treatment groups (mastectomy, lumpectomy and radiation and lumpectomy alone) are not comparable, the report permits evaluation of the natural behaviour of the disease and its response to various modalities.

Small ductal carcinomas *in situ* (DCIS) were treated by lumpectomy alone. I am not aware of any study correlating the size of the tumour to multicentricity. In this and other series, the frequency of multifocal disease in the mastectomy specimen was 35–50%, and that of multicentric disease was 15–35%. Hence, lumpectomy alone may not be optimum. DCIS thus treated will most likely have the same recurrence rate as invasive cancer treated similarly. In the NSABP randomised study B-06, that rate was 40% [1]. Silverstein *et al.*'s study has an 8% local recurrence rate with a median follow-up of only 19 months.

The actuarial local recurrence rate following lumpectomy and radiation at 7 years was 10%. Half the failures were invasive, hence the risk of invasive cancer in DCIS patients treated with breast preservation (lumpectomy and radiation) is 5%. This is less than the risk of invasive breast cancer in US women (12–15%). The same risk applies to the contralateral breast in women with DCIS. Radiobiologists may question the 'recurrence' of DCIS as being irradiated normal cells or non-viable tumour cells. The difficulty in interpretation and lack of significance of abnormal or positive biopsy specimens following radiation is documented in pap smears for cancer of the cervix, and after random biopsies in prostate cancer [2].

Granted that the distinction between viable and non-viable tumour cells is difficult and it may be best to do 'salvage mastectomy', 90% of patients with DCIS treated by lumpectomy and radiation have their breasts preserved, compared with none of the group treated with the alternative option of initial mastectomy. Both groups had the same ultimate disease-free survival and overall survival at 7 years.

The risk of invasive cancer (5%) and death from the cancer (1%), in DCIS patients treated with lumpectomy and radiation needs to be placed in context. Of course, a patient can always be coaxed into a particular decision. In the general population, the risk of invasive breast cancer is 12–15%; half the patients die from the disease. Silverstein *et al.*'s recommendation of mastectomy is more prophylactic to prevent invasive cancer, than therapeutic for the DCIS. Hence, based on statistical risk, all women over 60 should be recommended for mastectomy.

A prophylactic basis for extirpative surgery could be used for many other cancers and diseases. Furthermore, as the study demonstrated, even with experienced, sub-speciality oncological surgeons, a prophylactic mastectomy does not eliminate the risk of invasive breast cancer in the ipsilateral chest wall.

Neither extreme, lumpectomy or bilateral mastectomy is optimum treatment. This may be even more important in a disease with a low malignant potential. The availability of increasingly higher resolution mammography units can give a clinician significant information and/or lead-time.

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1. Fisher B, Redmond C, *et al.* Eight year results of a randomized clinical trial comparing total mastectomy and lumpectomy with or without irradiation in the treatment of breast cancer. *N Engl J Med* 1989, **320**, 822–828.
2. Prestidge BR, Kaplan I, Bagshaw MA. The clinical significance of a positive post-radiation prostatic biopsy without distant metastases. Proceedings of the American Society for Therapeutic Radiology and Oncology, 33rd Annual meeting, 1991.