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Wales are also shown in the figure.¹ The downward trend is not due to changes in the size of the population or its age structure, since standardised registration ratios—calculated on the basis of the 1971 age specific rates—followed an almost identical pattern. A considerable proportion of cases of scrotal cancer are probably caused by exposures to chemicals,² and the decline in incidence is, therefore, a likely consequence of improvements in occupational hygiene introduced in engineering industries over the past 20 years. It would be unreasonable, though, to assume that no new cases arise from current working practices.

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Influence of design characteristics on the outcome of retrospective cohort studies

SIR,—I read with interest this article by Swaen and

Meijers (1988;45:624-9). They report that 76% of the retrospective cohort studies conducted by governmental agency epidemiologists are positive compared with 36% of the studies conducted by industry based epidemiologists. When the source of funding was considered, 77% of the studies funded by governmental agencies or universities were positive compared with 53% of the studies funded by industry. Swaen and Meijers indicate that studies conducted in the chemical industry are more likely to be negative than those conducted in other industries, irrespective of the funding source.

In discussing their research Swaen and Meijers state that "one possible explanation for this finding may be that those industries that employ epidemiologists are also more aware of the potential risks involved and have put greater effort into improving the occupational environment." I agree that this represents a possible explanation for the proportionally lower number of positive retrospective cohort studies of workers employed in the chemical industry or conducted by industry based epidemiologists. Those companies with inhouse epidemiology also tend to be those with long standing occupational medicine, industrial hygiene, and toxicology programmes. The more favourable health statistics suggest that the programmes have been effective in protecting employees.

I believe, however, that Swaen and Meijers failed to consider other alternative explanations for their findings. For example, they fail to consider the underlying reasons for undertaking a study. Academic and government epidemiologists may be more likely to conduct ad hoc studies. Often these studies are triggered by a pre-existing concern about an excess of disease in an occupational group. Such studies can arise because of a cluster of cases of a rare disease, unusual findings of a medical surveillance programme, or the results of other positive studies of the same or similar occupational exposures. These studies often quantify an association between an exposure and a health effect already supported by other data.

By contrast, several retrospective cohort studies conducted by industry based epidemiologists (or funded by industry) are mortality surveillance studies. These mortality surveillance studies are a part of company supported occupational health programmes and are conducted to help assure that safeguards implemented to protect the health of employees are adequate. In that context, it is not surprising that research findings are negative.

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