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Gambling with patients' well-being

It takes time, a great deal of time, to discover all the properties of a drug in routine use. Take *thalidomide* as an example (this issue page 49), a drug sold as a sedative in the 1950s. Once it was finally realised that it had devastating teratogenic effects, the indication was withdrawn and attention was switched to its immunosuppressant effects, especially in myeloma patients. Finally, in 2008, it was granted marketing authorisation for first-line treatment of myeloma in elderly patients.

This decision was mainly based on 2 clinical trials. The first trial showed a survival advantage of about 18 months. An interim analysis of the second trial yielded similar results. This was far more robust evidence of efficacy than is generally required for approval of a new oncology drug. However, thorough drug evaluation consists of more than just a few clinical studies carried out in order to obtain marketing authorisation.

In any case, the full results of the second trial did not show a survival advantage. In addition, only one out of three subsequent trials showed a survival advantage. Initial enthusiasm has faded somewhat: when adverse effects are taken into account, *thalidomide* probably provides only modest benefits for elderly myeloma patients.

When drug regulatory agencies grant marketing authorisation on the basis of initial data, they are betting that subsequent trials will confirm these results. And if they do not demand follow-up studies or at least one confirmatory trial, they are gambling with the well-being of the patients they are supposed to protect.

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