AN ALGORITHM CANNOT BE JUSTIFIED BY RATES

Dear Sir,

I refer to the article by Lim et al.[1]

In a matrix using symptom and carcinoembryonic antigen (CEA) level, one would get four cells, as illustrated in Fig. 1. Cell 1 (with symptom, raised CEA) would be expected to have patients with the highest rate of malignancies and conversely, cell 2 (no symptom, normal CEA), the lowest.

The authors have computed the rate for cell B in their institution to be 36/217 or 17%. They then compared it with the rate of cancer for the general population. As the general population was known to be ageing but not aged, and the median age of cell B was 54 years, the rate was expectedly higher.

It might be more meaningful to compare this rate with the rate for cell A.

Suppose the rate for cell A was five times greater, would their algorithm be different from what they have proposed for cell B? Suppose the rate for cell A was five times lower, would they change the proposed algorithm for cell B?

When the algorithm for cell 1 is no different from that for cell 2, despite the great difference in rates, it is indicative that rates have little relevance in an algorithm. Similarly, if the algorithm for cell A is no different from that of cell B, a prospective study to obtain a more accurate rate for cell B would have limited value.

I thought the authors, in the introduction, agreed that serum CEA is of no value in the screening of colorectal cancer, as it lacks specificity and sensitivity. Their pilot study has provided further evidence that this is indeed the case. Hence, I could not understand why they preferred to commit resources to a prospective study of cell B as the next step rather than retrospectively study cell A or something else.

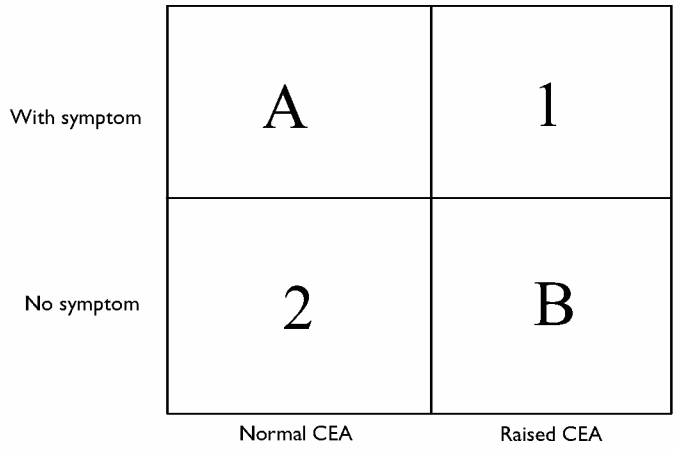

Fig. 1 2 × 2 Matrix

Yours sincerely,

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REFERENCE

1. Lim YK, Kam MH, Eu KW. Carcinoembryonic antigen screening: how far should we go? Singapore Med J 2009; 50:862-5.