In their review of the glutathione S-transferase theta 1 (GSTT1) gene and lung cancer, Raimondi et al. conclude that “GSTT1 appeared to modulate occupational-related lung cancer, at least for asbestos exposure” (1, p. 1039). The data in their study, taken at face value, do support such a conclusion: A history of asbestos exposure was associated with an approximately twofold reduction in risk among persons who were GSTT1-null but only a 15 percent reduction among other persons. These data notwithstanding, however, is asbestos exposure truly associated with a reduction in risk of lung cancer?

Given the opposite results obtained in many prior studies of this question, it is unlikely that Raimondi et al.’s observations pertaining to asbestos are valid. The fact that a finding is unexpected is not an adequate reason to dismiss it or suppress its presentation; but in this instance, the potential contribution of this review to our understanding of a possible gene-environment interaction in lung cancer risk is diminished by the absence of any description as to how asbestos exposure was ascertained and defined for purposes of analysis. (The authors do say that their information on occupational exposure is “very limited” and that “no information on amount or length of exposure is available” (1, p. 1036).) I believe that most readers, seeing the reported reduced risk of lung cancer associated with asbestos exposure and seeing no information on the means by which that exposure was ascertained, will simply choose to regard as untrustworthy that part of the analysis dealing with asbestos—both the main effect and the potential interaction with GSTT1 genotype.

Alvan Feinstein may no longer be alive, but the skepticism he expressed (2) regarding the results of epidemiologic studies continues to be felt by many persons outside our field. One of Feinstein’s explicitly stated concerns was the lack of “high-quality data” in many studies. I suggest that when we (including the 42 (!) authors of the article by Raimondi et al., as well as the Journal reviewers and editors who dealt with this manuscript prior to its publication) submit or review a manuscript describing an epidemiologic study, we consider whether the exposure has been adequately measured. If it has not been well measured, and if the ensuing misclassification would severely compromise the interpretation of the results, we may choose to not present these data. Feinstein’s descendants are ready and waiting to take potshots at the results of epidemiologic studies that are of limited value: Let’s not provide them with any extra targets!

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REFERENCES

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