Conflict of Interest Disclosures: The authors have completed and submitted the ICMJE Form for Disclosure of Potential Conflicts of Interest. Drs Thomas and Lee are investigators of the Australasian Malignant Pleural Effusion–2 trial for which Rocket Ltd provided the drainage supplies without charge. Dr Lee reported receiving grants, nonfinancial support, personal fees, and/or other funding from the Cancer Council of Western Australia, Dust Diseases Board of New South Wales, Sir Charles Gairdner Research Advisory Committee, National Health and Medical Research Council Australia, Rocket (unrestricted educational grant), CareFusion/BD (advisory board), and Sequana Medical (advisory board). No other disclosures were reported.

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Fracking and Climate Change

To the Editor Drs Wilke and Freeman provided a helpful discussion of air and water contamination related to fracking.[1] However, they omitted key parts of the fracking story.

First, methane leaks from fracked wells, sometimes in high quantities, likely accounting in part for recent observed increases in atmospheric methane.[2] Atmospheric methane contributes both to ozone formation and to climate change, belying claims that natural gas is an environmentally friendly energy source.

Second, the authors stated that "Ongoing oversight by the petroleum industry and regulatory agencies should help mitigate potential health problems." Faith that the petroleum industry will self-regulate is surely misplaced; the authors provided no evidence to support it. Faith in government regulatory agencies may once have been credible, but not now: the Trump administration is distinguished by its antiregulatory fervor and its obeisance to the fossil fuel industry.[3]

But the most important omission in the article is climate change. Fracking is a technology for producing natural gas and petroleum. Combustion of such fossil fuels is the principal human contributor to climate change. Climate change is a major threat to human health.[4] Any health assessment of fracking must address this issue; failure to do so is akin to writing on child abuse and considering only how best to treat bruises.

The needed public health strategies are well defined. Prudence requires that nearly all fossil fuels now in the ground be left in the ground and that conservation be aggressively promoted and renewable energy sources be rapidly developed. The costs of delay, including the health costs, are enormous. The energy transition is realistic, practical, and well under way, with wind and solar power being the fastest-growing segments of the US energy market. Not only will clean energy turn the tide of climate change, it yields immediate health cobenefits such as improved air quality and increased physical activity.[5]

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Conflict of Interest Disclosures: The authors have completed and submitted the ICMJE Form for Disclosure of Potential Conflicts of Interest. Drs Frumkin and Patz report serving on advisory committees for the Global Consortium on Climate and Health Education (Columbia University), the Planetary Health Alliance (Harvard University), the Medical Society Consortium on Climate and Health (George Mason University), and EcoAmerica's Climate for Health initiative. Dr Frumkin also reported serving on the Wellcome Trust initiative Our Planet, Our Health, the external advisory board for the Yale Climate and Energy Institute (Yale University), and he has agreed to serve as an expert witness on the health impacts of climate change in a pending federal lawsuit, *Juliana vs US*. Dr Patz also reported being a member of the American Public Health Association's environmental health section.

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In Reply Drs Frumkin and Patz extend the dialogue begun in our Viewpoint on the potential health implications of fracking to include a discussion about climate change. We agree that regulatory agencies monitoring compliance need to be supported. We also agree with the need to further the dialogue about fossil fuel combustion as a major contributor to climate change and an influence on human health.[1] There is growing concern about the potential effect of climate change on the behavioral and socioeconomic well-being of communities, particularly in the agricultural sector.[2-4] The ongoing development and expansion of clean renewable energy resources, including solar and wind power, represent key factors optimizing the health of the US population.

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Conflict of Interest Disclosures: The authors have completed and submitted the ICMJE Form for Disclosure of Potential Conflicts of Interest and none were reported.

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Diagnosing Acute Mountain Sickness

To the Editor The systematic review by Dr Meier and colleagues[1] demonstrated that most research on acute mountain sickness (AMS) conducted during the last 2 decades used either the self-reported Lake Louise Questionnaire Score (LLQS) or the Acute Mountain Sickness-Cerebral (AMS-C) score for diagnosing AMS. Because no criterion standard exists, the authors used the LLQS as a reference for comparison with the AMS-C score. Compared with an LLQS of 5 or greater, using an AMS-C score of 0.7 or greater to indicate AMS had a sensitivity of 67% and a specificity of 92%, with a positive likelihood ratio (LR) of 8.2 and a negative LR of 0.36. Two recent field studies found better agreement of the AMS-C score with the LLQS.[2,3] In the first study, 235 participants completed both questionnaires at an altitude of 3450 m; the sensitivity of the AMS-C score was 91%, specificity was 94%, positive LR was 15.2, and negative LR was 0.1.[3] In the second study, 191 participants answered questionnaires at an altitude of 4559 m; the sensitivity of the AMS-C score was 80%, specificity was 98%, positive LR was 40, and negative LR was 0.2.[2] In contrast to the pooled data analysis from Meier et al,[1] which showed significant data heterogeneity (I^2 = 98%), data from the 2 studies were obtained by the same investigators with the same methods and in comparable study populations.[2,3]

The data further suggest that sensitivity and specificity of the AMS-C score compared with an LLQS of 5 or greater as reference changed with altitude. This finding is in line with previous studies in which data were collected from 490 climbers at various altitudes (range, 2850 m-4559 m).[4,5] The change in diagnostic accuracy of a given AMS criterion score with altitude was not addressed by Meier et al[1] but should be considered when the rate of AMS at various altitudes is investigated. It is unlikely that the increase of AMS prevalence with altitude is linear as concluded by Meier et al.[1]

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Conflict of Interest Disclosures: The authors have completed and submitted the ICMJE Form for Disclosure of Potential Conflicts of Interest and none were reported.

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In Reply Dr Macholz and colleagues report better agreement of the AMS-C score with the LLQS in 2 recent field studies[1,2] compared with the results of our pooled analysis. These data were not included in our publication because they were published after the period covered by the systematic review (from inception until May 2017).

It should come as no surprise that results obtained by the same investigators with the same methods show better performance and homogeneity than those derived from a pooled analysis of multiple studies. As mentioned in our review, the lack of experimental standards and complete data on potential confounding factors (such as previous altitude experience, speed of ascent, preacclimatization, or AMS prophylaxis) play major roles in the heterogeneity of the data resulting from the pooled analysis. Similarly, we were unable to assess the accuracy of different diagnostic instruments for AMS at variable altitudes due to the lack of sufficient data.

Macholz and colleagues speculate that the variation in diagnostic accuracy of a given AMS diagnostic instrument with altitude[1,2] would result in a nonlinear increase in AMS prevalence with increasing altitude. The linear correlation reported in our pooled analysis was the best relationship that we could find between AMS prevalence and altitude. Although not perfect (as depicted in the Figure in the article), this correlation suggests an increasing prevalence of AMS with altitude. Given that the underlying cause of altitude sickness is hypoxia, a nonlinear relationship between AMS prevalence and altitude might be expected because the relationship between partial pressure of oxygen in the atmosphere and altitude is not linear, and, more importantly, the fixed partial pressure of water vapor in the lungs (47 mm Hg) causes a nonlinear drop in inspired oxygen tension and altitude. We do not have enough data to argue for or against a linear or nonlinear correlation between these 2 variables.