We thank Girschik et al. (1) and Erren et al. (2) for their comments on our work (3). We read with great interest the thoughtful discussions by Girschik et al. and appreciate their sharing of a provocative hypothesis with regard to racial differences in melatonin levels in response to light exposure. The Shanghai Women’s Health Study did not collect overnight or first-morning-void urine samples to adequately capture nocturnal melatonin levels. We did collect spot urine samples at the time of interview, including the time of day when urine samples were provided. We are conducting pilot tests to determine whether melatonin levels in an early morning spot urine sample may distinguish women employed in shift work.

Erren et al. (2) raised the concern that shift-work history was based on questionnaire information and that exposure details, such as the frequency and timing of night shifts, might not have been appropriately considered. We share Erren et al.’s concern that existing studies to date, including the Shanghai Women’s Health Study, might not have sufficiently captured facets of night-shift work that are biologically relevant for cancer and other disease risks. Hence, we are making plans to collect additional information on shift-work patterns for each job reported by Shanghai Women’s Health Study participants. Unlike Erren et al., we believe that an in-person interview with a structured questionnaire is a well-tested method for collecting epidemiologic data. In particular, an exposure such as night-shift work that follows a schedule and occurs with relative consistency should be captured with reasonable accuracy and with minimal recall bias, especially in our study population in which participants held an average of only 1.5 jobs in their lifetime.
We agree that industry-based studies may have the advantage of incorporating additional data from industry records on shift work and related light conditions. However, these studies also have limitations, as industry records typically do not include adequate data on other risk factors. We believe that replication in a variety of studies in different settings, using different study designs, including industry-based and population-based cohorts and experimental investigations, is necessary for establishing a causal link between shift work and cancer risks.

ACKNOWLEDGMENTS
Conflict of interest: none declared.

REFERENCES

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DOI: 10.1093/aje/kwq276; Advance Access publication August 23, 2010