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THE AUTHORS REPLY

We thank Delzell (1) for her interest in our recent article (2), in which we reported an association between occupational exposure to organic lead and stomach cancer risk. In her letter, she commented that despite a thorough presentation of the general limitations of our study, 2 specific issues were not discussed in depth.

When addressing the possibility of confounding by other substances, we considered several possible coexposures such as monoaromatic and polyaromatic hydrocarbons, alkanes, solvents, and carbon monoxide. Our data did not demonstrate associations between these substances and stomach cancer. As mentioned by Delzell (1), we did not address possible coexposure and confounding due to exposure to metalworking fluids. She rightfully pointed out that some studies suggest an association between metalworking fluids and stomach cancer (3). However, we do not agree that the study by Zeka et al. (4) was in support of such an association. Because exposure to metalworking fluids was assessed in our study, we have since evaluated the impact of exposure to this group of substances on the associations that we originally reported. Results regarding the association between organic lead exposure and stomach cancer from our original Table 4 (2, p. 1010) remain unchanged. As for our analysis of the separate and joint effects of exposure to organic lead and lead in gasoline emissions on stomach cancer presented in our original Table 6 (2, p. 1011), we observed a negligible increase in risk estimates when comparing cases with population controls and no difference when comparing them with cancer controls. Although metalworking fluids theoretically could have confounded the observed association between organic lead and stomach cancer, our empirical results suggest that it did not occur.

Delzell (1) also pointed out, justly so, that we did not discuss another potential confounder of the association: history of *Helicobacter pylori* infection. Data for our study were collected before the causal association between this infection and stomach cancer was established; thus, we did not collect data on this variable. Our data set includes several variables that may well be associated with *H. pylori* infection and could be seen as partial proxy measures, such as birthplace, yearly income, ethnocultural origin, and educational level. In our paper (2), we used the first 2 as covariates and potential confounders, partly to control for *H. pylori* infection. As a check, we have now added the latter 2 covariates and found that they did not modify the strength of the association for organic lead exposure.

Delzell (1) further suggested that *H. pylori* infection may differ by occupation. Rosenstock et al. (5) observed that

semiskilled or unskilled workers had a higher prevalence of chronic *H. pylori* infection than skilled workers, civil servants, or independent tradesmen. We repeated our analyses, adjusting for type of worker (white or blue collar), and the results remained unchanged. In our opinion, associations between occupation and *H. pylori* are most likely due to the effects of birthplace, ethnicity, education, and income, variables for which we already adjusted. Given these analyses, it seems unlikely that occupation-specific differences in *H. pylori* infection would explain the full extent of the observed associations between exposure to organic lead and stomach cancer (odds ratio = 2.0, 95% confidence interval: 1.1, 3.8 with cancer controls; odds ratio = 3.0, 95% confidence interval: 1.2, 7.3 with population controls).

#### ACKNOWLEDGMENTS

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Marie-Claude Rousseau<sup>1</sup>, Marie-Elise Parent<sup>1</sup>, Louise Nadon<sup>1</sup>, Benoît Latreille<sup>1</sup>, and Jack Siemiatycki<sup>2</sup>  
(e-mail: marie-claude.rousseau@iaf.inrs.ca)

<sup>1</sup> INRS–Institut Armand-Frappier, University of Quebec, Laval, Quebec, Canada

<sup>2</sup> Department of Social and Preventive Medicine, Faculty of Medicine, University of Montreal, Montreal, Quebec, Canada

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