

Mr Joe Mihevc

Chair of Toronto Public Health Committee

West Tower, City Hall 100 Queen Street West Toronto, ON M5H 2N2

Re: November 4th meeting, Item 5  Prudent Avoidance Policy for Radiofrequency Emissions from Cell Towers

My attention has been drawn to the recommendation to Toronto City Council from the Medical Officer of Health that “City Council discontinue the prudent avoidance policy wherein the City requests that radiofrequencies from cellular phone base stations are kept 100 times below Safety Code 6 in areas where the public normally spends time.”

I respectfully submit that this recommendation is premature. My reasons are as follows:

First, although I agree that the health risk to the public from cell towers and other telecommunications sources of radiofrequency fields (RF) is low, this does not imply that the health risk is known to be negligible. Rather, given the widespread and somewhat uniform nature of the exposure, the recognized difficulty of establishing health risks from widespread environmental exposures (Committee on Environmental Epidemiology, 1991), and the impossibility of excluding confounding from the ecologic studies performed to date, we cannot be certain that there is no risk. A small risk spread over a large population may result in many cases of disease, but their presence would be very difficult to determine.

Second, as is acknowledged in the report of the Medical Officer of Health, radiofrequency fields have been accepted by a working group of the International Agency for Research on Cancer as a Class 2B carcinogen (IARC 2011). This designation, though based on epidemiological studies largely of brain tumors induced by radiofrequency field exposure from cell phones, is a designation that extends to all radiofrequency fields. Since the IARC Monograph 102 was published, the evidence the working group considered has been reinforced by a new study emanating from the Hardell Group in Sweden (Hardell et al 2013). Further, I, and several of my colleagues, feel that insufficient attention was paid by the IARC Working Group to the component of the IARC coordinated Interphone study that addressed the risk in those who had used mobile phones for 10 years or more (Cardis et al, 2011), with the tumors in the site of the brain with maximal radiofrequency exposure (Cardis et al, 2008) and that the correct designation for radiofrequency fields should be a category 2A carcinogen (Davis et al, 2013).

In my opinion, therefore, it would be wise for the City of Toronto to maintain its Prudent Avoidance Policy towards the radiofrequency field exposure caused by cell towers. To relax this now would risk a new generation of towers emanating more powerful radiofrequency fields and would potentially seriously endanger the health of the citizens of Toronto.

I regret that other commitments make it impossible for me to appear personally at the hearing on November 5, 2013. I should however, be pleased to expand on this presentation if you deem it desirable.



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**References**

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Cardis E, Deltour I, Mann S et al. Distribution of RF energy emitted by mobile phones in anatomical structures of the brain. Phys Med Biol 2008; 53: 2771-2783.

Davis DL, Kesari S, Soskolne CL, Miller AB, Stein Y. Swedish review strengthens grounds for concluding that radiation from cellular and cordless phones is a probable human carcinogen. Pathophysiology 2013: 20: 123–129.

Hardell L, Carlberg M, Söderqvist F, Mild KH. Case-control study of the association between malignant brain tumours diagnosed between 2007 and 2009 and mobile and cordless phone use. Int J Oncol. DOI: 10.3892/ijo.2013.2111

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans, Volume 102, Non-Ionizing radiation, Part II: Radiofrequency Electromagnetic Fields. IARC Press, Lyon, France, 2011.

**Appendix**

My experience that qualifies me to render this opinion is that I am a cancer epidemiologist, with many years spent conducting research, including studies of occupational and home exposure to electrical and magnetic fields, and of occupational studies of exposure to ionizing radiation.

I was chairman of the US National Research Council Committee on Environmental Epidemiology 1990-97.

Although I have not personally participated in studies of radiofrequency fields, I had the opportunity to review the studies considered by the IARC Working Group when I served as a Visiting Senior Scientist in the Monographs programme in IARC September 2011-January 2012. One of my duties during this period was to check the papers cited in Section 2 of Monograph 102 and to edit the text.