There's a clear cell phone-canc link, but FDA is downplaying it

BY RONALD MELNICK, OPINION CONTRIBUTOR — 11/13/18 07:00 PM EST
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A recent study by the National Toxicology Program/National Institutes of Health (NTP/NIH) shows clear evidence of a causal link between cancer and exposure to wireless cell phone signals. Results from the $30 million NTP studies demonstrated that cell phone radiation caused Schwann cell cancers of the heart and brain gliomas in rats, as well as DNA damage in the brain.

In NIH's news release, NTP senior scientist John Bucher said, "We believe that the link between radio frequency radiation and tumors in male rats is real and the external experts agreed." But, amazingly, the FDA says it disagrees with this carefully conducted, peer-reviewed study's finding of clear evidence of carcinogenicity.

According to Jeffrey Shuren, Director of the FDA's Center for Devices and Radiological Health, "these findings should not be applied to human cell phone usage," adding that "we believe the existing safety limits for cell phones remain acceptable for protecting the public health."

While expressing this opinion, Dr. Shuren neglects to note that the International Agency for Research on Cancer (IARC), a part of the World Health Organization, classified radio-frequency radiation from wireless devices as a "possible human carcinogen" based largely on findings of increased risks of gliomas and Schwann cell tumors in the brain near the ear in humans after long term use of cellphones. Thus, the same tumor

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types are elevated in both animals and humans exposed to cell phone radiation.

This FDA's position is quite unusual because it was this agency that nominated cell phone radiation emitted from wireless communication devices to the NTP for toxicity and carcinogenicity studies in experimental animals so as to "provide the basis to assess the risk to human health."

At that time, the FDA reasoned that "existing exposure guidelines are based on protection from acute injury from thermal effects of RFR [radiofrequency radiation] exposure and may not be protective against any non-thermal effects of chronic exposure." By adopting this new position and ignoring the NTP's results, the FDA is clearly shirking its responsibility of assessing the impact on human health of radio-frequency radiation.

Simply claiming that conclusions about human risk cannot be drawn from animal studies runs counter to standard practices of evaluating human cancer risks by public health agencies including the U.S. EPA, NTP, IARC and even the FDA. Every chemical known to cause cancer in humans is also carcinogenic in animals when adequately tested.

The NTP studies were conducted to test the widely-held assumption that cell phone radiofrequency radiation could not cause cancers or other adverse health effects (other than by tissue heating) because this type of radiation (non-ionizing) did not have sufficient energy to break chemical bonds. The NTP findings that cell phone radiation caused cancers in the heart and brain, DNA damage in brain cells, heart muscle disease and reduced birth weights clearly demonstrate that the assumption that non-ionizing radiation cannot cause cancer or other health effects is wrong.

Exposure levels in the brains of rats in the NTP study were similar to or only slightly higher than the FCC's limit for maximum permissible exposure to local tissue exposures from cell phones held next to the head. This point is most important because, when an individual uses a cell phone, body tissues located nearest to the cell phone antenna receive much higher exposures than parts of the body that are located distant from the antenna.

The selection of the highest exposure levels in the NTP studies was based on the same criterion used by the Federal Communications Commission (FCC) to establish exposure guidelines for radio-frequency radiation. Misleading statements by Dr. Shuren about the utility of the NTP studies for evaluating human cancer risk were debunked in my previous publication.

The FDA needs to fulfill the intent of their nomination to the NTP and conduct a quantitative risk assessment so that the FCC can develop health-protective exposure standards. For example, what is the level of exposure associated with cancer risk of one per thousand or one per million people?

Also, health concerns for children may be greater than that for adults due to increased penetration of cell phone radiation within the brains of children. Simply ignoring the cancer data from the NTP studies is not in the interest of public health. Because of the widespread use of cell phones among the general public, even a small increase in cancer risk would have a serious public health impact.

An important lesson that should be learned from the NTP studies is that we can no longer assume that any current or future wireless technology, including 5G, is safe without adequate testing.

Ronald Melnick PhD, is an independent consultant and was a senior toxicologist and director of special programs in the Environmental Toxicology Program at the National Institute of Environmental Health Sciences (NIEHS), National Institutes of Health. Melnick led the design of the National Toxicology Program Carcinogenesis Studies of Cell Phone Radiofrequency Radiation in Rodents.

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