

The Influence of Distance to Cell phone Base Stations on the Cancer Risk

German title: Einfluss der räumlichen Nähe von Mobilfunksendeanlagen auf die Krebsinzidenz, Horst Eger, Klaus Uwe Hagen, Birgitt Lucas, Peter Vogel, Helmut Voit, umwelt medizin gesellschaft, 17, 4/2004, 326-332.

Keywords: Cell phone, mobile phone, base station, cell tower, health, cancer, epidemiology

Summary

Following the call by Wolfram König, President of the Bundesamt Für Strahlenschutz (Federal Agency for radiation protection), to all doctors of medicine to collaborate actively in the assessment of the risk posed by cellular radiation, the aim of our study was to examine whether people living close to cellular transmitter antennas were exposed to a heightened risk of taking ill with malignant tumors.

The basis of the data used for the survey were PC files of the case histories of patients between the years 1994 and 2004. While adhering to data protection, the personal data of almost 1,000 patients was evaluated for this study, which was completed without any external financial support. It is intended to continue the project in the form of a register.

The result of the study shows that the proportion of newly developing cancer cases was significantly higher among those patients who had lived during the past ten years at a distance of up to 400 meters from the cellular transmitter site, which has been in operation since 1993, compared to those patients living further away, and that the patients fell ill on average eight years earlier.

In the years 1999-2004, i.e. after five years' operation of the transmitting installation, the relative risk of getting cancer had tripled for the residents of the area in the proximity of the installation compared to the inhabitants of Naila outside the area.

Comments by website editor

The original article is only available in German, except for the English language summary provided above. The following details are from the German article.

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The article describes an epidemiological study which took place in the small town of Naila in southern Germany. A GSM cell phone transmitter was erected in 1993, with a transmission power of 15 watts per channel. A second tower was erected nearby in late 1997.

Germans tend to live in the same place for many years, making it feasible to conduct such a study over ten years. The exposed group (307 people) are those living within 400 meters (1200 ft) of the transmitters. The control group (639 people) are the townspeople living outside the 400 meter perimeter.

The radiation levels were measured, but not specified in the article. It only states that the ambient levels were a hundred times higher for the exposed group, compared to the controls, and that all levels were well within legal limits.

The table below lists the number of newly diagnosed cancers for the first and second five-year periods after the transmitter was installed. As cancer takes time to develop, a delay is to be expected. The table shows an unchanged rate of cancer in the control group, while the rate nearly triples in the exposed group.

Period	Exposed group	Control group
1994 – 1999	5	8
1999 – 2004	13	8

This gives an odds-ratio of 3.38 (95% CI = 1.39 – 8.25), which is statistically significant. Even a 99% confidence-interval (99% CI = 1.05 – 10.91) is supported by the data. It thus appears that living within 400 meters (1200 ft) of a cell tower increases the risk of cancer.

People in the exposed group contracted cancer an average of 8.5 years earlier than the control group.