

Author's response to reviews

Title: No effects of GSM-modulated 900 MHz electromagnetic fields on survival rate and spontaneous development of lymphoma in female AKR/J mice.

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Author's response to reviews:

Dear Mrs. Puebla,
Enclosed please find a revised version of the MS: 1412239474311845:

No effects of GSM-modulated 900 MHz electromagnetic fields on survival rate and spontaneous development of lymphoma in female AKR/J mice.
by Angela M. Sommer, Joachim Streckert, Andreas K. Bitz, Volkert W. Hansen and Alexander Lerchl
for publication in BMC Cancer.

We thank the reviewer for his repeated efforts and comments. The following points have been amended accordingly.

Major points

2. This is a very important and interesting question about the achievable accuracy of the dosimetric analysis for experiments with non-restrained rodents exposed in cages. First of all, any dosimetric analysis, by computation or by measurement, is based on a limited number of positions of the rodents inside the cage (absolute and relative to each other) and their postures. This results in a finite set of exemplary configurations of the real exposure scenarios. Obviously, a complete dosimetric analysis requires the investigation of a huge number of different configurations. Since the computation time of each configuration takes many hours, even on a well-equipped workstation, it is obvious that only a small number of computations can be performed in the framework of a study that is mainly focused on biological endpoints.

Therefore, the standard deviation of the whole body SAR given in the paper is estimated on the basis of five configurations that are assumed to be uniformly distributed in time, as it is the usual procedure in published papers concerning the exposure of non-restrained animals.

The authors agree that a more complete statistical dosimetry including time variation would have been desirable. However, this requires a much larger budget as it is available in Europe today. Such an investigation would be worth to be done in a separate study.

However, in the section "field exposure and monitoring" this was specified.

5. As the reviewer stated in his letter (email through the Editorial Office from Aug 20) "other experiments" would be required to show an effect on tumor onset kinetics. In that case exposed or sham-exposed animals must be sacrificed at fixed time points to study histologically tumor onset before signs of disease become evident. The endpoint of our study, however, was lymphoma-associated mortality. Therefore, additionally data distinguishing between tumor onset and mortality are not available. Correspondingly, in the discussion it was added that no information about tumor onset or the kinetics of tumor development were available.

Minor points

The Discussion about the increment of body weight was shortened.

We think that the ms has been improved with the referee's comments and hope it is now acceptable for publication.

Sincerely,

Angela Sommer