

Some Implications of the Reported Effects of *Johrei* on the Viability and Proliferation of Cultured Cancer Cells *In Vitro*

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THE PAPER BY YAMAMOTO et al. on the “Effect of a Japanese Energy Healing Method Known as *Johrei* on the Viability and Proliferation of Cultured Cancer Cells *In Vitro*” indirectly points to some potentially profound questions that to date have been inadequately addressed by researchers of “energy healing.” After at least a half century of research, it is no longer either necessary or particularly interesting to demonstrate the simple *fact* of healing. Only those ignorant of the voluminous data on the subject, and those who for one reason or another refuse to look, can at this point question whether “energy healing” is real, as fair-minded readers of JACM and other journals that publish articles on alternative and complementary medicine surely know.

Real progress in energy healing research must address what could be called “second generation” questions about healing efficacy along a wide variety of parameters: dose-response, differential outcomes, the role of states of mind on the part of the healer and healee, and even whether “energy healing” is a misnomer, to name a few. Is there really “energy” involved with healing? If so, what are its salient attributes? If energy, why doesn’t healing efficacy diminish with distance? You get the idea. The Yamamoto article directly addresses the question of differential outcomes to the same treatment, and indirectly raises some profound questions about the place of intention in healing. The latter also carries with it some interesting data analytic implications.

First, differential outcomes will be discussed. Dose-response questions are notoriously difficult to address for two reasons: the basic inability of an operational measurement of a healing unit *per se*, and the human problem of healer reliability. Does healer X deliver the same dose upon each application in a way analogous to drug dosage? In the present article, the researchers do not address dose-response, but instead expose seven different cancer cell lines to the same *Johrei* healing, whatever the dosage. Also, they get different outcomes across the different cell lines. The human gastric cancer cell line AGS and the uterine cervix epitheloid carcinoma HeLa proved most susceptible to *Johrei*, while the prostate carcinomas PC-3 and PPC-1 the least susceptible. Somewhere in between were the human malignant lymphoma U937, the prostate carcinoma ALVA-41, and the mouse melanoma B16. All of these cell lines received treatment by the same healers. This is really interesting.

Why the differential response? The authors state that

It is generally considered that the number of viable cancer cells depends on a balance between the *Johrei* energy to induce the viability loss of cancer cells and their proliferation activity. Therefore, if the *Johrei* energy exceeds the proliferation potency of cancer cells, the number of viable cells could be decreased. If the latter is superior to the former, on the contrary, the viable cell number could be increased.

I’m not sure what this means, nor why it is “generally considered.” But what a potential set of clues! What is different about human gastric cancer cells that make them more susceptible to *Johrei* than human prostate carcinomas? Is it possible that gastric cells already have more “energy” within the system to proliferate, and therefore under *Johrei* treatment more potential to change? Is it “energy” that is being passed to the cells, or “information”? These are the kinds of questions for second-generation healing researchers to address, as well as the ancillary questions of the differential response of the same cell lines to different healing techniques.

I think the most important question indirectly raised by this work is whether intention matters, and whether this was in fact an experiment in healing or killing. The authors state:

The results clearly indicate that *Johrei* treatments induce not only the reduction of the number of viable cells but also the increase of dying and/or dead cells.

Ah, where to begin? The healing practitioners were not informed about the type (either normal or abnormal cells) and nature (malignancy) of cells used until the end of the experiment. Instead, they were asked simply to transmit a purported universal healing energy (*Johrei*) to the cells. It is fair to say that their intention was to “heal.” Yet the results indicate that cancer cells differentially died in response to treatment.

Was this an experiment in producing cell healing or cell death? And, if the healers intended to “heal,” yet the outcome of their treatment was cell “death,” where is the healing? Should cancer cell death be considered “healing”? Had the experiment been conducted *in vivo*, presumably the

cancer cell death would be to the benefit of the host organism. But *in vitro*? Shouldn't healing have been accompanied by increased cell proliferation? And, if death occurs when the intention is to heal, what does that say about the role of intention? Would the outcome have been different if the healers had deliberately intended cell death?

On a more technical note, researchers who posit a directional hypothesis (i.e., healing) generally perform one-tailed statistical analyses. One-tailed hypothesis confirmation requires not only statistical significance, but also *confirmation in the predicted direction*. If healing is predicted, and cell death is significantly increased, should the experiment be considered successful even if one-tailed statistical significance is reached?

This very interesting article is useful as much for what is unstated and implied as for what is directly stated. I hope that readers will also ponder some of its unstated implications.

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