Letter to the Editor: Low-dose whole body irradiation: a potential therapeutic modality?

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In another interesting study, Yamaoka and Komoto (10) reported that the Misasa Hot Spring treatment with radon significantly improved vasodilation and alleviated diabetic symptoms. In animal studies, WB-LDR has been found not only to decrease the incidence and percentage of developing diabetic mice, but also to enhance the survival rate of type 1 and type 2 diabetic animals (4, 5). It is clear that none of the medications used in clinical practice is absolutely nontoxic. Therefore, there is a need to evaluate the application of non-invasive technology like WB-LDR to be as realistic and parallel as is done for other therapeutic modalities. If WB-LDR really can play a critical role in the prevention or treatment of certain disorders such as diabetes, then we should accept the same without any radiation phobia in the mind.

DISCLOSURES
No conflicts of interest are reported by the authors.

REFERENCES
8. United Nations. United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR) report in 1986 (8), acute radiation doses above 2.0 Gy, between 0.2 and 2.0 Gy, and below 0.2 Gy are regarded as high, intermediate, and low, respectively. Generally, damaging or lethal effects are observed following high radiation doses, while cellular stimulatory effects are observed following low-dose short-term exposures in the range of 0.01–0.5 Gy (2). Since the LD50/30 (radiation dose at which 50% of the animals die within 30 days of exposure) in the case of Swiss albino mice has been reported to be 7.86 Gy (7), the application of moderate doses (between 3 and 6 Gy) for therapeutic purposes appears to be unacceptable by the scientific community. With the application of higher radiation doses, acute toxic effects and potentially late long-term effects are expected. Furthermore, the earlier reports also suggest that preexposure of mice to WB-LDR reduces the incidence of alloxan-induced diabetes (6) and delays the onset of hyperglycemia in diabetes-prone nonobese diabetic mice (5).