V. Venugopalan, N. S. Nishioka and B. B. Mikić. 1996. Biophys. J. 70: 2981-2993.

In the original version of the article, Eq. 9 was incorrect. It should read:

$$q_{\rm sp}^{""} \gg \rho_{\rm v} h_{\rm fg} \Omega V(t_{\rm p}) / t_{\rm p} \tag{9}$$

In addition, a systematic error was made in the heat transfer mediated bubble growth calculations. This resulted in incorrect values for both the bubble radii R(t) and volumetric power density necessary to achieve the spinodal $q_{\rm sp}^{\prime\prime\prime}$ for the heat transfer mediated bubble growth case shown in Fig. 11. A corrected version of this figure is shown.

One consequence of the error is that under the experimental conditions, bubble growth is limited by heat transfer and not inertial considerations. Accordingly, the estimate for the density of nucleation centers in tissue Ω listed in the upper right column on p. 2990 in the original article is incorrect. Recalculating Ω for the heat transfer mediated case using Eq. 13 instead of Eq. 12 to get V(t) yields $\Omega = 4 \times 10^{16}$ m⁻³. Thus in the revised figure, the volumetric power density necessary to achieve spinodal conditions $q_{\rm sp}^{\prime\prime\prime}$ vs. pulse duration $t_{\rm p}$ is shown for values of the density of nucleation centers varying between $\Omega = 5 \times 10^{15}$ and 5×10^{17} m⁻³. While the error resulted in inaccurate estimates of volumetric power densities necessary to achieve spinodal conditions, the corrected results do not invalidate any of the basic arguments or conclusions put forward in the article.

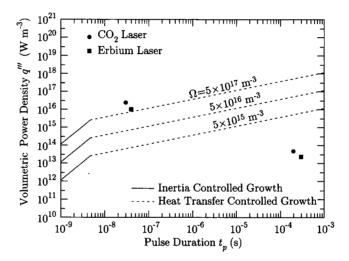


FIGURE 11 The solid and dotted lines represent the volumetric power density $q_{sp}^{"}$ necessary to achieve flash boiling of tissue water versus laser pulse duration t_p with the number density of nucleation sites Ω as a free parameter. The data points represent the volumetric power density achieved at the ablation threshold $q_{th}^{"}$ for different pulse durations. See text for further details.