

Laser therapy can aggravate skin cancer

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High irradiances of low-level laser therapy (LLLT) should not be used over melanomas. Researchers writing in the open access journal *BMC Cancer* studied the pain relieving, anti-inflammatory 'cold laser', finding that it caused increased tumour growth in a mouse model of skin cancer.

Jan M. Bjordal from Bergen University College, Norway worked with a team of Brazilian researchers to carry out the in vitro and in vivo experiments. He said, "LLLT has gained increasing popularity as a treatment for soft tissue injuries and joint conditions. However, there is a shortage of evidence, especially in vivo evidence, about the effects of LLLT in malignant conditions such as [melanoma](#)".

Bjordal and his colleagues applied LLLT to [cancer](#) cultures and to mice injected with melanoma cells. Although the treatment did not cause any significant changes in the cell cultures, direct irradiation of the tumor with high-dose LLLT caused a significant increase in tumor mass volume and considerable histological alterations, indicating a worsening of the cancer, in the mice. The researchers write, "A high irradiance (2.5W/cm²) combined with high dose of 1050 J/cm², can stimulate melanoma [tumor growth](#) with distinct histological features in vivo".

"It is important that this contraindication is implemented into clinical practice so that LLLT can remain a safe treatment", says Bjordal.

LLLT was pioneered in the 1970s, when it was discovered that light from low-intensity lasers causes cells to proliferate more rapidly. It is marketed as a treatment for hair-loss, pain management, sports medicine

and skin care - among many other things. Home-treatment sets are available online for unsupervised use.

More information: The effect of low-level laser irradiation (Ga-Al-AsP - 660nm) on in vitro and in vivo melanoma, Lucio Frigo, Juliana SS Luppi, Giovanni M Favero, Durvanei A Maria, Socrates C Penna, Jan M Bjordal, Rene J Bensadoun and Rodrigo Alvaro Lopes Martins, *BMC Cancer* (in press), www.biomedcentral.com/bmccancer/

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