Dosing Targeted Melanoma Treatment Intermittently Doesn't Help

An early study in mice had suggested the on-again, off-again dosing strategy would help shrink tumors.

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People receiving targeted therapy for melanoma do not benefit from receiving the treatment intermittently, Science magazine reports.

A 2013 study in mice had raised hopes that this on-again, off-again dosing strategy would help address a persistent problem in targeted cancer treatment: the proliferation of tumor cells that are resistant to the treatment.

The disappointing findings from the new five-year study, led by the National Cancer Institute, were presented at the American Association for Cancer Research's virtual annual meeting.

Perhaps half of people with melanoma have a BRAF gene mutation that gives rise to a protein that drives cancer growth. Targeted treatments go after this protein as a means of shrinking tumors—until resistant cells strike back.

In the new study, about 250 people with advanced melanoma received a BRAF inhibitor drug and an MEK inhibitor, which blocks another protein involved in the same tumor-cell growth pathway.

The 206 participants whose tumors were either shrinking or stable after eight weeks of this combo treatment were randomized into two groups. One stayed on the treatment until their tumors did grow, and the other received daily treatment for cycles of five weeks on and three weeks off.

Among those who received intermittent treatment, the tumors started to grow an average of 5.5 months after the randomization, compared with 9 months among those on uninterrupted treatment.

The overall survival rate was comparable between the two groups. Some four in 10 of the participants survived past the study's four-year mark. Most of the participants ultimately went on to receive immunotherapy.

"What works in preclinical studies doesn't always work in real-world clinical studies," Alain Algazi,

MD, an associate professor in the Department of Medicine at the University of California San Francisco and the study chair with SWOG Cancer Research Network, which led the research, said in a press release.

“In melanoma research, we’re all trying to figure out ways to optimize these targeted drugs and find a way around resistance so people live longer,” Algazi continued. “We’re going to have to keep at it because the current standard of continuous dosing seems to hold the most benefit.”

To read the conference abstract, click here.

To read the Science article, click here.

To read a press release about the study, click here.

To learn more about melanoma, click here.

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