

Preliminary Research Suggests Means of Fighting Ovarian Cancer



By Ruth Kava — September 19, 2016



Ovarian cancer
Test

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Ovarian cancer is hard to detect and, according to the [American Cancer Society](#) [2], "Ovarian cancer accounts for about 3% of cancers among women, but it causes more deaths than any other cancer of the female reproductive system."

This year it is expected that over 22,000 women will receive a new diagnosis of ovarian cancer, and over 14,000 will die of the disease. There are no reliable tests to alert patients or care-givers of the disease in its early stages. In fact, in 2012 the United States Preventive Services Task Force [recommended against](#) [3] the then-current techniques for screening; this recommendation is currently under review, and updated ones should be published in the near future.

In the meantime, there is some hope that effective treatments will be developed for this insidious disease. Researchers from the Wistar Institute in Philadelphia and the Dana Farber Cancer Institute in Boston, led by Dr. Hengrui Zhu, [investigated](#) [4] a means of limiting tumor progression in mouse models of ovarian cancer. Their report was published in the journal *Cell Reports*.

The investigators explored the use of anti-tumor immunity to halt tumor growth. Specifically, they used small molecule inhibitors that would stop the interaction between the programmed cell death-1 (PD-1) protein and its ligand (PDL-1). Interaction between the two inhibits the activity of immune cells (T-cells) against tumors. Thus, they wanted to inhibit that inhibition.

This study focused on a class of drugs called bromodomain and extraterminal domain (BET) inhibitors because they were particularly effective at suppressing the activity of PDL-1 activity in ovarian cancer cells in the lab. And this efficacy was also demonstrated in mouse model of ovarian cancer — T-cell activity was significantly increased.

To be sure, this is very preliminary work — much remains to be done to substantiate this means of inhibiting ovarian cancer growth. And human trials will be needed to determine efficacy, safety, and any adverse effects of such treatments. This is, however, a mechanism that could be promising for halting the progression of this occult type of cancer.

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