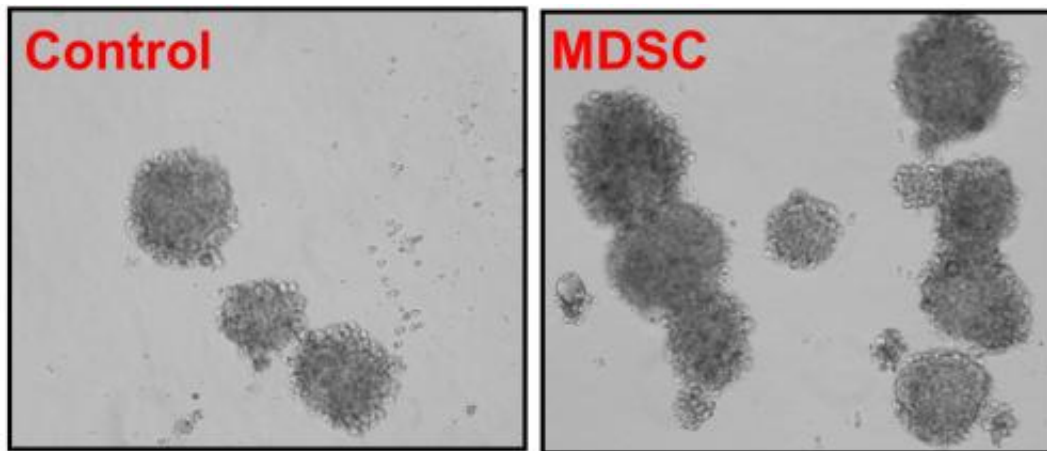


Some immune cells appear to aid cancer cell growth, study finds

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Compared to control (left), immune cells (right) promoted tumor sphere formation, an indication of cancer stemness. Credit: University of Michigan Comprehensive Cancer Center

The immune system is normally known for protecting the body from illness. But a subset of immune cells appear to be doing more harm than good.

A new study from researchers at the University of Michigan Comprehensive Cancer Center found that these cells, called myeloid derived [suppressor cells](#), provide a niche where the cancer stem cells survive.

Cancer stem cells are thought to be resistant to current chemotherapy and radiation treatments, and researchers believe that killing the cancer stem cells is crucial for eliminating cancer.

At the same time that these immune cells help the cancer, they also are suppressing the immune system.

"This cell and its mechanisms are not good for your body and it helps the cancer by allowing the stem cells to thrive. If we can identify a therapy that targets this, we take away the [immune suppression](#) and the support for cancer stem cells. Essentially, we kill two birds with one stone," says senior study author Weiping Zou, M.D., Ph.D., Charles B. de Nancrede Professor of surgery, immunology and biology at the University of Michigan Medical School.

The researchers believe the [immune cells](#) give the [cancer cells](#) their "stemness" – those properties that allow the cells to be so lethal – and that without this immune cell, the cancer [stem cells](#) may not efficiently progress.

The study, which was led by Tracy X. Cui, Ph.D., and Ilona Kryczek, Ph.D., looked at cells from the most common and lethal type of ovarian cancer, a disease in which patients often become resistant to chemotherapy, causing the cancer to return.

Targeting the immune system for cancer treatment, called immunotherapy, has been well-received with many potential therapeutics currently being tested in clinical trials for a variety of [cancer types](#). The U-M team is a worldwide leader in the field of tumor immunology.

More information: *Immunity*, Vol. 39, No. 3, Sept. 19, 2013

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