

Eradication of metastatic mouse cancers by suppression of myeloid-derived cell



Although our immune system protects us well against infection it is less successful against cancer. In part, this is because cancer cells have developed immune evasive techniques. A therapeutic strategy called “immune checkpoint blockade” thwarts these escape tactics and renders cancer cells vulnerable to immune attack. Although remarkably effective, only a subset of patients’ respond to it. Seeking possible explanations for this limited response, this study identified a specific immune cell population – myeloid derived suppressor cells (MDSC) that interfere with the therapy in mouse tumor models. The study found that when they coadministered epigenetic-modulating drugs and checkpoint inhibitors, drugs that reduced the levels of MDSC, the efficacy of immune checkpoint blockade therapy greatly improved. Thus concluding that cancers resistant to immune checkpoint blockade can be cured by eliminating MDSCs.

[Kim, K. et al. 2014. Eradication of metastatic mouse cancers resistant to immune checkpoint blockade by suppression of myeloid-derived cells. PNAS.](#)