Modulation of Tumor Microenvironments by Radiation Therapy with Immune Checkpoint Blockade

Radiation therapy (RT) not only directly induces programmed cell death but also activates immune signaling to elicit antitumor responses. However, tumor microenvironmental factors such as hypoxia and abnormal vasculature within solid tumors block immune infiltration and also deactivate pro-inflammatory signaling, thus reducing the therapeutic potency of radiation therapy. In this study, Dr. Kang and colleagues implemented RT with immune checkpoint blockade (ICB) to increase ‘radiosensitivity’ by re-modulating tumor microenvironments. Furthermore, the team investigated how the combination therapy of RT and ICB remodulates tumor microenvironments in solid tumors to generate antitumor immunity.