

Metformin exerts antitumor activity via induction of multiple death pathways in tumor cells and activation of a protective immune response.

Pereira FV, et al. *Oncotarget*. 2018 May 25; 9(40): 25808-25825.

- The antitumor effect of metformin has been demonstrated in several types of cancer; however, the mechanisms involved are incompletely understood.
- Preclinical data shows that in certain tumors, **metformin can act directly on the tumor microenvironment and stimulate immune responses** (apoptosis, autophagy). Metformin also prevents tumor metastasis, which may be mediated by T-lymphocytes.
- Metformin in combination with metabolic agents rapamycin and sitagliptin showed a higher antitumor effect.

Metformin induces a strong protective immune response in the tumor microenvironment, leading to tumor growth control. Combination with other metabolic agents may increase this effect.