## 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.