

Abstract

Principles of targeted biological treatment of metastatic renal cell carcinoma include mainly inhibitors of the tyrosine kinase receptors VEGFR and inhibitors of intracellular mTOR kinase. Across the new healing regimes there are the blockades of immune checkpoints of the immune system cell. Detailed molecular characterization of tumor is necessary not for only application of medicaments, but also for the development of drugs that target specific molecular pathway of cell signalization of the carcinoma cells.

The work is focused on the description of the signaling pathway mTOR and VEGF in metastatic renal cell carcinoma. It summarizes all validated clinical biomarkers which are used to diagnose and stratify patients for the treatment of mRCC. It also offers insight into the present experiments that are finding new specific molecular markers. That may be the future solution for customized approach in the treatment of renal carcinoma an tumors in general.