Targeted therapy for metastatic renal cell carcinoma / Andika Afriansyah, Agus Rizal AH. Hamid, Chaidir A Mochtar, Rainy Umbas

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Abstrak

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In the past 10 years, recent development of targeted therapy in metastatic renal cell carcinoma (mRCC) has provided a new hope and significantly enhanced the prognosis of the disease. Three class of targeted therapy were developed, including multi-targeted tyrosine kinase inhibitors (TKI), the mammalian target of rapamycin (mTOR) complex-1 kinase inhibitors, and the humanized antivascular endothelial growth factor (VEGF) monoclonal antibody. Hence, the objective of this article was to critically examine the current evidence of targeted therapy treatment for patients with mRCC. In the majority of trials evaluating targeted therapy, patients were stratified according to Memorial Sloan Kattering Cancer Center (MSKCC) risk model and the recommendation of targeted treatment based on risk features. In first-line setting (no previous treatment), sunitinib, pazopanib, or bevacizumab plus IFN-α were recommended as treatment options for patient with favorable- or intermediate- risk features and clear cell histology. Patients who progressed after previous cytokine therapy would have sorafenib or axitinib as treatment options. Clear-cell mRCC with favorable- or intermediate- risk features and failure with first-line TKI therapy might be treated with sorafenib, everolimus, temsirolimus or axitinib. However, the current evidence did not show the best treatment sequencing after first-line TKI failure. In patients with poor-risk clear-cell and non-clear cell mRCC, temsirolimus was the treatment option supported by phase III clinical trial. In addition, several new drugs, nowadays, are still being investigated and waiting for the result of phase II or III clinical trial, and this might change the standard therapy for mRCC in the future.