NCCN Task Force Report: Optimizing Treatment of Advanced Renal Cell Carcinoma With Molecular Targeted Therapy

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Target Audience
This educational program is designed to meet the needs of oncologists, advanced practice nurses, and other clinical professionals who treat and manage patients with cancer.

Educational Objectives
After completion of this CME/CE activity, participants should be able to:
• Outline the molecular biology of RCC.
• Describe the mechanism of action of the individual therapeutic agents.
• Discuss optimal selection of therapy and sequencing strategies for treatment of RCC.
• Outline the safety profile of targeted therapies used in treatment RCC and strategies used to effectively manage the toxicities.
• Review the ongoing clinical trials and novel therapeutic agents in clinical development for treatment of RCC.

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Participants will read all portions of this monograph, including all tables, figures, and references. To receive your continuing education credit and certificate, visit http://guest.event.com/d/xdqbs to complete the post-test and evaluation. A minimum passing score of 70% is required on the post-test to be eligible for credits. If a minimum score is not achieved, you will be sent an e-mail with the opportunity to retake the test.

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Post-test

1. The current targeted therapies for advanced renal cell carcinoma act by which of the following mechanisms?
   a. Enhancement of immune response
   b. Inhibition of angiogenesis
   c. Interruption of DNA replication
   d. All of the above

2. Everolimus and temsirolimus are inhibitors of:
   a. Vascular endothelial growth factor receptor
   b. Mammalian target of rapamycin
   c. Mitogen-activated kinase
   d. Vascular endothelial growth factor

3. High-dose IL-2 immunotherapy may be offered as first-line therapy to all patients with advanced renal cell carcinoma since it produces long and sustainable duration of response. Is this statement true or false?
   a. True
   b. False

4. High dose IL-2 therapy can be safely administered after TKI therapy. Is this statement true or false?
   a. True
   b. False

5. The use of adjuvant therapy to prevent or delay renal cell carcinoma recurrence,
   a. is recommended for all patients following surgery.
   b. is currently being evaluated in large global clinical trials.
   c. is never appropriate, as it has been shown to worsen outcomes.

6. For patients with predominantly clear cell histology whose disease has progressed after first-line cytokine therapy, which of the following are category 1 treatment options listed in the current NCCN Guidelines? Category 1 means that the recommendation is based on high-level evidence (e.g., randomized controlled trials) and there is uniform NCCN consensus.
   a. Sorafenib, sunitinib, and pazopanib
   b. Sorafenib, sunitinib, and everolimus
   c. Sorafenib, sunitinib, and bevacizumab
   d. Sorafenib, sunitinib, and temsirolimus

7. Toxicities of temsirolimus include:
   a. Hyperglycemia, hyperlipidemia, and hypercholesterolemia
   b. Hypertension, stomatitis, and hand–foot syndrome
   c. Cardiac disease and hypothyroidism
   d. All the above

8. Dermatologic toxicities occur commonly with sunitinib, sorafenib, and pazopanib. Is this statement true or false?
   a. True
   b. False

9. Hepatic toxicity is more frequently seen with pazopanib than with any other tyrosine kinase inhibitors. Is this statement true or false?
   a. True
   b. False

10. Which of the following statement is not true?
    a. Axitinib is a small molecule inhibitor of a specific inhibitor of VEGFR-1, -2, and -3.
    b. A phase III trial, called AXIS, compared axitinib with sorafenib as first-line treatment in patients with advanced renal cell carcinoma.
    c. Patients on the AXIS trial treated with axitinib had significantly greater progression-free survival compared with those receiving sorafenib.

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