The Emergence of Thalidomide in Treating Advanced Renal Cell Carcinoma

Laura S. Wood, RN, MSN, OCN®, Cherie Perez, RN, CCRA, and Dana Monroe, RN, OCN®, BSN

Purpose/Objectives: To review standard and investigational treatments in advanced renal cell carcinoma, with a focus on thalidomide.

Data Sources: Published articles, conference proceedings, treatment guidelines, and textbooks.

Data Synthesis: The prognosis for advanced renal cell carcinoma when treated with standard regimens is poor; therefore, new treatments are needed.

Conclusions: Treatment with thalidomide, alone and in combination with other therapies, may improve survival for patients with advanced renal cell carcinoma.

Implications for Nursing: Proactive management of adverse effects associated with thalidomide, alone and in combination, may increase patient tolerance and compliance.

Renal cell carcinoma is the tenth leading cause of cancer death among men in the United States, accounting for 3% of malignancies (Jemal et al., 2003). Of the forms of kidney cancer, renal cell carcinoma accounts for 85% of diagnosed cases (Motzer, Bander, & Nanus, 1996). The average age at diagnosis is 50–70 years, with a 2:1 male to female predominance (Bukowski & Novik, 1997). An estimated 31,900 new cases of kidney cancer are projected to be diagnosed in the United States in 2003 (Jemal et al.), and 25%–33% of these patients will present with metastatic or advanced disease. Although the overall survival is approximately 50% for renal cell carcinoma, the median survival rate for patients with metastatic disease is 7–11 months (Amato, 2000).

Renal cell carcinoma historically has been considered a single cancer expressing multiple possible histologic appearances. Currently, the disease is viewed as a group of cancers resulting from different genetic abnormalities that have distinct morphologic features, all derived from renal tubular epithelium (Pantuck, Zisman, & Belldegrun, 2001). The size of the tumors can range from a few centimeters to very large tumors that fill the peritoneal space (Early & Poquette, 2000). Clear cell carcinoma (also known as conventional or nonpapillary) is the most common type of renal tumor, accounting for approximately 70%–80% of cases. Clear cell renal cell carcinoma is believed to begin in the proximal renal tubule in a hereditary or sporadic form (Pantuck et al.).

Papillary renal cell carcinoma is the second most common histologic type of renal cell carcinoma, accounting for approximately 10% of cases (Mancilla-Jimenez, Stanley, & Blath, 1976). Like clear cell tumors, papillary renal cell carcinoma is believed to begin in the proximal renal tubular epithelium in

Key Points . . .

- Despite extensive investigation of systemic chemotherapy, hormonal therapy, and immunotherapy, the survival rate for patients with advanced renal cell carcinoma remains low.
- Immunotherapy, including treatment with interferon-a and interleukin-2, is currently the most common treatment for advanced renal cell carcinoma.
- Renal cell carcinoma is a highly vascular tumor, and angiogenesis is central to its growth. Antiangiogenic agents such as thalidomide may inhibit tumor growth.
- The most common side effects of thalidomide are somnolence, constipation, peripheral neuropathy, and rash.

Goal for CE Enrollees:

To further enhance nurses' knowledge regarding the treatment of advanced renal cell carcinoma.

Objectives for CE Enrollees:

On completion of this CE, the participant will be able to

1. Describe the current treatment options available for patients with renal cell carcinoma.
2. Describe the most common side effects of thalidomide for renal cell carcinoma.
3. Discuss the nursing management of the side effects of thalidomide.

Laura S. Wood, RN, MSN, OCN®, is a clinical research coordinator in the Experimental Therapeutics Program at Cleveland Clinic Taussig Cancer Center in OH; Cherie Perez, RN, CCRA, is a research nurse supervisor at the University of Texas M.D. Anderson Cancer Center in Houston; and Dana Monroe, RN, OCN®, BSN, is a research nurse at the California Kidney Cancer Center in San Francisco. Wood is a consultant for Celgene Corporation, the manufacturer of Thalomid®. Monroe is a stockholder of Celgene Corporation. *The authors received an honorarium provided by an unrestricted educational grant to OmegaMed, Inc., a medical education company. (Submitted August 2002. Accepted for publication December 17, 2002.) (Mention of specific products and opinions related to those products do not indicate or imply endorsement by the* Oncology Nursing Forum *or the Oncology Nursing Society.)*

Digital Object Identifier: 10.1188/03.ONF.501-511