

KIDNEY CANCER LENVATINIB SHOWS PROMISE

Lenvatinib, alone or in combination with everolimus, has a survival benefit above that of everolimus alone in patients with metastatic renal cell carcinoma (mRCC).

The results of a randomized, phase II, open-label, multicentre study have been published in the *Lancet Oncology*. Results of *in vivo* investigations had shown that combining lenvatinib with everolimus resulted in significantly greater tumour-volume reductions than either drug alone.

Patients whose disease had progressed to mRCC were recruited to this study; in total 153 participants were enrolled and randomly assigned 1:1:1 to receive lenvatinib plus everolimus, lenvatinib alone or everolimus alone.

“Lenvatinib is a novel tyrosine kinase inhibitor with an inhibitory profile that includes vascular endothelial growth factor and fibroblast growth factor receptors.” Robert Motzer, lead author on the paper, told *Nature Reviews Urology*. “Both lenvatinib and the combination met the primary end point, showing improvement in progression-free survival (PFS) over everolimus.” Median PFS for the combination was 14.6 months and for lenvatinib alone was 7.4 months, whereas median PFS for everolimus was 5.5 months. He continued “with mature follow-up duration, the combination showed improvement in overall survival.”

In her accompanying commentary on this study, Melissa Bersanelli highlighted that “the proportion of patients achieving an objective response is noteworthy (43% with the combination, 27% with lenvatinib alone, and 6% with everolimus alone).” However, she noted that “despite the promising efficacy results, the two reported deaths in the lenvatinib groups from toxic effects are alarming” continuing “the frequency of grade 3–4 diarrhoea with combination therapy (20%) and of grade 3–4 proteinuria with lenvatinib alone (19%) suggest that careful reflections are needed about appropriate dose reductions and management of toxic effects.”

Nevertheless, both Bersanelli and Motzer are encouraged, with Motzer concluding “These results are very exciting, particularly the magnitude of benefit in PFS and the benefit in overall survival observed with the combination. Further study of lenvatinib is warranted in patients with mRCC.”

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Original article Motzer, R. J. *et al.* Lenvatinib, everolimus, and the combination in patients with metastatic renal cell carcinoma: a randomised, phase 2, open-label, multicentre trial. *Lancet Oncol.* doi:10.1016/S1470-2045(15)00290-9