

TARGETED THERAPIES

Risk of heart failure with sunitinib

The small-molecule tyrosine kinase inhibitor (TKI) sunitinib has provided a treatment option to patients with imatinib-resistant gastrointestinal stromal tumors and metastatic renal-cell carcinoma (RCC). Unfortunately, although it has been approved for use in these patients, emerging data have indicated that there is an association between the drug and cardiotoxicities, including congestive heart failure (CHF).

Researchers led by Toni Choueiri decided to quantify the problem because, as he states: “CHF has important clinical implications and has been described with drugs that target the VEGF axis—most reports with sunitinib, a strong VEGF TKI have not been consistent and systematic.”

The investigators decided to conduct a comprehensive meta-analysis of the available data regarding the safety of sunitinib. Choueiri explains the selection of this method as, “meta-analysis of all publicly available phase II–III trials that look at all-grade and high-grade CHF is

subject to low bias.” There were 16 clinical trials included in the meta-analysis, which accounted for 6,935 patients; 5,683 of these patients had RCC and 1,252 had other malignancies.

The results of the analysis showed that in randomized studies, there was a significantly increased risk of all-grade and high-grade CHF associated with receiving treatment with sunitinib, compared with placebo or other therapies. “Interestingly, there was no difference based on the tumor type, quality of studies or cardiac monitoring,” says Choueiri.

So what are the implications of this finding? It seems that treatment with sunitinib should be accompanied by cardiac monitoring and close collaboration between oncologists and cardiologists.

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Original article Richards, C. J. *et al.* Incidence and risk of congestive heart failure in patients with renal and nonrenal cell carcinoma treated with sunitinib. *J. Clin. Oncol.* doi:10.1200/JCO.2010.34.4309