Comments on "Sorafenib in locally advanced or metastatic patients with radioactive iodine-refractory differentiated thyroid cancer: the phase III DECISION trial"

Martin Schlumberger

Gustave Roussy, Villejuif, France

Correspondence to: Martin Schlumberger. Gustave Roussy, Villejuif, France. Email: Martin.SCHLUMBERGER@gustaveroussy.fr.

Keywords: Refractory thyroid cancer; sorafenib

Submitted Dec 10, 2013. Accepted for publication Jan 08, 2014.

doi: 10.3978/j.issn.2304-3865.2014.01.02

Scan to your mobile device or view this article at: http://www.thecco.net/article/view/3491/4341

Patients with locally advanced or metastatic differentiated thyroid cancer (DTC) that is radioactive iodine (RAI)-refractory and progressive have a poor prognosis due to the lack of effective treatment options. Several phase 2 trials have shown that some tyrosine kinase inhibitors with antiangiogenic effects are able to induce tumor responses in some patients, but there is yet no demonstration in a phase 3 trial that they may prolong progression free survival.

DECISION trial (NCT00984282) is a multicenter, randomized (1:1), double-blind, placebo-controlled phase 3 study of sorafenib (400 mg administered orally twice-daily) in patients with RAI-refractory locally advanced or metastatic DTC that had progressed within the past 14 months. The primary endpoint was progression-free survival assessed by central independent review. A total of 417 patients were randomized to sorafenib (n=207) or placebo (n=210). Sorafenib treatment significantly improved progression-free survival compared with placebo (HR 0.587; 95% CI: 0.454-0.758; P<0.0001; median 10.8 versus 5.8 months, respectively). The improvement in progression-free survival was seen in all clinical subgroups and in all biomarker subgroups irrespective of BRAF and RAS mutation status. The objective response rate was 12%, all partial responses. Median thyroglobulin levels rose in the placebo group and decreased and then paralleled progression in the sorafenib-treated group. The safety profile of sorafenib was as expected, with most adverse events being grade 1 and 2. The most common treatment-emergent adverse events in the sorafenib arm were hand-foot skin reaction (76%), diarrhea (69%), alopecia (67%) and rash/desquamation (50%). Dose interruptions, reductions or withdrawals due to AEs occurred in 66%, 64% and 19% of patients, respectively, with sorafenib, and in 26%, 9% and 4% of patients, respectively, with placebo.

In conclusion, sorafenib significantly improved progression-free survival compared with placebo in patients with progressive RAI-refractory DTC. Adverse events were consistent with the known sorafenib safety profile. This is the first demonstration that a tyrosine kinase inhibitor improves PFS in this population of patients. These results led to the approval by FDA of the use of sorafenib for treatment of patients with progressive RAI-refractory DTC.

Acknowledgements

Disclosure: The author received research grant and honorarium from Bayer.

Cite this article as: Schlumberger M. Comments on "Sorafenib in locally advanced or metastatic patients with radioactive iodine-refractory differentiated thyroid cancer: the phase III DECISION trial". Chin Clin Oncol 2014;3(1):8. doi: 10.3978/j.issn.2304-3865.2014.01.02