BEST TRIAL – 2009 ASCO Annual Meeting
Phase IIb Head and Neck Study

A phase IIb 4-arm open-label randomized study to assess the safety and efficacy of h-R3 (nimotuzumab) monoclonal antibody against EGFR in combination with chemoradiation therapy or radiation therapy in patients with advanced (stage III or IVA) inoperable head and neck cancer.

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Summary:

Although chemoradiotherapy and anti-EGFR/radiotherapy are standard of care for patients with locally advanced SCCHN, the majority of patients present with recurrences leading to death within three years after treatment. Alternatives to improve the outcomes of these patients have been pursued. However, the efficacy is often counterbalanced by prohibitive toxicity and a reduced quality of life due to noticeable side effects of EGFR inhibitors.

A Phase IIb, 4-arm, open-label, randomized, multicentric study was designed to assess the safety and efficacy of the novel, humanized anti-EGFR monoclonal antibody, h-R3/nimotuzumab, in combination with radiation or chemoradiation in patients with inoperable (stage III or IVa) head and neck cancer. Nimotuzumab is a humanized EGFR expression-driven monoclonal antibody that has been postulated to deliver the same clinical benefit as other EGFR inhibitors but without the pronounced toxicity of the class.

The study initiated in September 2004 and was ongoing at June 2009. Here we have analyzed 30 month follow-up survival data for a total of 92 patients who were randomized (safety population), of which 76 were considered evaluable (evaluable population). Nimotuzumab did not add toxicity to any regimen. Below is a summary of the efficacy parameters after 30 months of follow up:

PARAMETER	GROUP A		GROUP B	
	RT + Nimo	**RT**	**CRT + Nimo**	**CRT**
Locoregional response (CR+PR)	76%	37%	100%	70%
Survival rates at 30 months	39.10%	21.70%	69.50%*	21.70%
Median Overall Survival (months)	NR	15.07	NR	25
Progression Free survival (months)	20.71	6.90	NR	21.30

**Statistically significant, # Per protocol analysis, NR: Not yet reached*

In conclusion, the addition of nimotuzumab improved ORR, PFS and OS in both groups. Notwithstanding the limited sample size with slight differences in the population, a statistical benefit was observed in favor of nimotuzumab in the CRT arm. No severe toxicities, characteristic of the class were seen, challenging the adopted relationship of EGFR class toxicities to the clinical benefit. Well-designed clinical trials comparing nimotuzumab with other CRT regimens are warranted.

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