Efficacy and Safety of Everolimus in Advanced, Progressive, Nonfunctional Neuroendocrine Tumors (NET) of the Lung: A Subgroup Analysis of the Phase 3 RADIANT-4 Study

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Background: In the phase 3, RADIANT-4 study, everolimus (EVE) improved median progression-free survival (PFS) by 7.1 months in patients (pts) with advanced, progressive, nonfunctional NET of lung or GI tract compared to placebo (PBO); HR, 0.48; 95%CI, 0.35-0.67; P<0.00001. This subgroup analysis evaluated efficacy and safety of EVE in pts with lung NET from RADIANT-4.

Methods: In RADIANT-4 study, pts were randomized (2:1) to EVE 10 mg/d or PBO, both with best supportive care. The present analysis reports subgroup of lung NET.

Results: Of 302 pts, 90 had lung NET (EVE, n=63 and PBO, n=27). Median age, 65 years; males: 52%; most pts (99%) had well-differentiated disease; WHO PS 0/1/2: 71%/28%/1%; Caucasian: 86%. Prior therapies (EVE vs PBO) included: somatostatin analogues (mostly for tumor growth control; 43% vs 41%), surgery (52% vs 67%), and chemotherapy (40% vs 48%).

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Median PFS (95% CI) by central review (EVE vs PBO) was 9.2 (6.8-10.9) vs 3.6 (1.9-5.1) months with tumor progression risk-reduction by 50% in EVE (HR, 0.50; 95% CI, 0.28-0.88). Most frequent (≥5%) G3/4 adverse events irrespective of drug-relationship (EVE vs PBO) were stomatitis (11% vs 0), hyperglycemia (10% vs 0), diarrhea (7% vs 0), hypophosphatemia (7% vs 0), dyspnea (5% vs 7%), and hypertension (0 vs 7%).

Conclusion: EVE treatment improved PFS by 6 months and reduced tumor progression risk by 50% in pts with advanced, progressive, nonfunctional lung NET compared to PBO. EVE safety profile was similar to overall RADIANT-4 population.