Multi-Center Phase II Trial Of Temsirolimus (TEM) and Bevacizumab (BEV) in Pancreatic Neuroendocrine Tumor (PNET): Results of a Planned Interim Efficacy Analysis

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Background
PNETs have long been considered difficult to treat, but recent advances have offered new therapeutic options. In this trial, we evaluated the combination of the mTOR inhibitor Temsirolimus and the VEGF-A antibody Bevacizumab in this patient population.

Methods
A multi-center phase II trial of Temsirolimus and Bevacizumab was conducted in patients with advanced pancreatic neuroendocrine tumors. Patients received Temsirolimus (25 mg IV q week) and Bevacizumab at a dose of 15 mg/kg IV weekly. The trial was activated on 09/08/2009. The trial was to enroll a total of 50 patients, with planned interim analysis after the first 25 patients had evaluable disease. The primary endpoint was progression-free survival (PFS) at 6 months.

Results
For 36 evaluable patients, the 6-month PFS was a notable 84% in a population of patients with pancreatic neuroendocrine tumors (PNET), well in excess of single targeted agents in PNET. Both co-primary endpoints exceeded the protocol-defined criteria to continue enrollment. 21 of 25 evaluable patients (84%) were progression-free at 6 months. Both endpoints were superior to historical controls in single-agent studies for each agent.

Conclusions
The remarkable preliminary efficacy data is encouraging and supports the ongoing study of combined targeted therapy with Temsirolimus and Bevacizumab. The results of this trial will set the stage for further evaluation of combination therapy for patients with advanced pancreatic neuroendocrine tumors.

References