SPIRE 1 and SPIRE 2: Safety and Cardiovascular Event Efficacy of Bococizumab Among 27,000 High Risk Patients

Purpose: To evaluate whether major cardiovascular events will be reduced in high-risk patients with the addition of bococizumab, a PCSK9 inhibitor, to current lipid medications.

Trial Design: Two phase 3 parallel, double blinded, randomized efficacy and safety trials comparing bococizumab 150 mg SQ every 2 weeks to placebo. [SPIRE I: for patients with LCL-C >/= 70 mg/dL or non-HDL-C > / = 100 mg/dL or SPIRE II: for patients with LDL-C >/= 100 mg/dL or non-HDL-C >/=130 mg/dL]. N=27,438. 10-month median f/u.

Primary Endpoint: time to major cardiovascular event - composite

Trial Results @ 14 weeks	Major Cardiovascular Event		P value
	bococizumab	placebo	
Lower risk – 7 month median f/u	173 patients	173 patients	0.94
Higher risk – 12 month median f/u	179 patients	224 patients	0.02

Conclusions: In both trials, bococizumab did not reduce major cardiovascular events in lower-risk patients, but did reduce major cardiovascular events in higher-risk patients. Antidrug antibody rates were high with bococizumab. The trial was stopped early and development of this drug was discontinued.

Presented by: Paul M. Ridker,ACC17, Washington, DC, USA