[gw22-e0699] **PACLITAXEL-COATED BALLOON STUDY: QUANTITATIVE CORONARY ANGIOGRAPHY AND OPTICAL COHERENCE TOMOGRAPHY EVALUATION IN A SWINE IN-STENT STENOSIS MODEL**

Arihiro Sumida,[1] Alexander Nikanorov,[2] Toshiro Shinke,[1] Jinsheng Li,[1] Spencer King,[1] Nicolas Chronos,[1] Dongming Hou *[1]Sjtri; [2]Abbott*

Background Drug coated balloons (DCBs) have shown efficacy for treatment of coronary artery disease. In PEPCAD II ISR trial, paclitaxel-coated balloon (PCB) reduced in-stent restenosis (ISR) compared with paclitaxel-eluting stent (PES). Here we evaluated the efficacy of PCB in porcine ISR model.

Materials and methods 32 coronary arteries (LAD: n=12, LCX: n=11, RCA: n=9) of 12 Yorkshire pigs were assigned to two (2) groups randomly. PCB (SeQuent, length 20 mm, n=16) or non-coating balloon (NCB, length 20 mm n=16) were inflated for 60 s with B:A 1.2:1 followed by BMS (length 12 mm) implantation (S/A 1.5:1) within the target region. At 28 days, animals underwent restudy for the assessment of quantitative coronary angiography (QCA) and optical coherence tomography (OCT).

Results There were no differences between groups among all of the parameters measured by QCA and OCT. QCA late luminal loss was 1.27±0.57 mm for PCB and 1.11±0.52 mm for NCB (p=NS). Similarly, the percent of in-stent stenosis was 34.5±15.0% for PCB and 36.2±13.6% for NCB (p=NS). OCT image analysis, showed that the mean thickness of neointimal hyperplasia (NIH) on stent strut was 585±219 μm for PCB compared to 661±183 μm for NCB (p=NS), and the percent of in-stent area stenosis was 43.2±14.9% for PCB, and 49.5±11.5% for NCB (p=NS).

Conclusions In the current experimental setting, we didn't observed inhibition of neointimal formation response to PCB therapy as determined by both QCA and OCT measurement.