background: The patients of the ABSORB Cohort B trial were divided into 2 groups, Cohort B1 (45 patients, enrolment from March 19 to August 20, 2009) having angiographic follow-up performed at 180 days and 2 years and Cohort B2 (56 patients, enrolment from August 21 to November 6, 2009) having angiographic follow-up performed at 1 and 3 years. Key clinical endpoints include ischaemia driven MACE (ID-MACE) and its components at 30 days, 6 months, 12 months, 2 years, and 3 and 5 years.

Results: In Cohort B, clinical data up to 2 years for the full cohort of 101 patients (Group B1: 45 patients, B2: 56 patients) are currently available and are summarized hereafter. The mean age was 62 years, 72% of patients were male, 17% of patients were current tobacco users. Patients with diabetes: 17%, hypertension: 66%, hypercholesterolemia: 85%, family history of CAD: 55%, stable angina: 68%, of which 21% having stable angina with CCS classification of III or IV. Patients with unstable angina: 15%, 2% with unstable angina of Braunwald Class III. Lesion location was RCA (33%), LAD (43%), LCX (22%) and Ramus (1%), with ACC/AHA lesion classification of A for 1% of patients, B1 for 55%, B2 for 40% and C for 4%. In these 101 patients, 2 years results showed an ID-MACE rate of 9.0% and no scaffold thrombosis. The angiographic results for Cohort B1 demonstrated an angiographic late loss at 180 days of 0.19 mm and at 2 years of 0.27 mm. This value of 0.27 mm at 2 years was similar to the late loss in Cohort B2 at 1 year (0.27 mm). The 3-year clinical results for Cohort B1 will be presented. Clinical and imaging results at 3-year for all patients in Cohort B will be available in 2013.

Conclusions: Three year clinical follow-up data of Cohort B1 is pending.

TCT-36
Circumferential distribution of the neointima tissue at 6 months and 2 at years follow-up after a bioresorbable scaffold implantation. A serial optical coherence tomography study

Christos Bourantas1, Vassil Farooq2, Hector M. Garcia-Garcia2, Yoshinobu Onuma3, Patrick Serruys3, Yaojun Zhang4
1Thoraxcenter, Erasmus Medical Center, ROTTERDAM, Netherlands, 2Thoraxcenter, Rotterdam, Rotterdam, 3Thoraxcenter, Erasmus MC, N/A, 4ThoraxCenter, Rotterdam, Rotterdam, 5Thoraxcenter, Erasmus MC, Rotterdam, 6Thoraxcenter, Rotterdam, Rotterdam

Background: Recent reports have demonstrated that the healing process after the deployment of a bioresorbable scaffold (BRS) leads to the development of fibromuscular tissue that covers the vessel wall. However the distribution of the neointima over the vessel wall remains unclear. In this study we evaluated the circumferential distribution of the neointima tissue to evaluate the vessel wall. However the distribution of the neointima over the vessel wall remains unclear. In this study we evaluated the circumferential distribution of the neointima tissue. The release of scaffold implantation at 6 months and at 2 years follow-up. In the acquired sequences an experienced operator detected the luminal and the neointima evolution and its circumferential distribution. It was found that a thick neointima tissue develops which at 2 years covers, in most of the frames, the whole circumference of the vessel wall. Hence, the Abbott Vascular BRS 1.1 can be regarded as a potentially useful device for the passivation of high-risk plaques.

Results: The lumen area decreased at 6 months but there was no difference between the 2 follow-up time points [7.56 (6.37-7.98)mm² vs. 6.28 (4.89-7.05)mm² at 6 months, P<0.0001; vs. 6.06 (5.01-7.11)mm² at 2 years, P=0.851]. The mean neointima thickness increased at 2 years [192 (174-232) µm vs. 254 (230-280) µm, P<0.0001 and the symmetry index of the neointima was higher [0.06 (0.02-0.09) vs. 0.27 (0.24-0.34), P<0.0001] at this time point suggesting a more homogenous distribution. Full circumferential coverage of the vessel wall by neointima tissue was seen in 90% of the studied frames, at 2 years. In 79% of the analyzed frames the minimum neointima thickness was >0.27 mm at this time point.

Conclusions: We analyzed, for the first time serial OCT data, to investigate the neointima evolution and its circumferential distribution after a BRS implantation. It was found that a thick neointima tissue develops which at 2 years covers, in most of the frames, the whole circumference of the vessel wall. Hence, the Abbott Vascular BRS 1.1 can be regarded as a potentially useful device for the passivation of high-risk plaques.