

# MeRes-1 Study

## Study Highlights

- Principal Investigator: Dr. Ashok Seth
- The MeRes-1 was first-in-human, single-arm, prospective, multicentre trial of MeRes100™ sirolimus-eluting BioResorbable vascular Scaffold system (BRS) in treating de novo native coronary artery lesions
- Three year clinical follow-up including QCA, OCT and IVUS analysis at 6 and 24 months; CTA imaging at 12 months
- MeRes-1 study demonstrated the favourable safety and effectiveness of MeRes100 BRS at 24 months post-procedure



## ❖ Study Design

First-in-human, single-arm, prospective, multicentre study



A total of 108 patients were enrolled at 13 sites

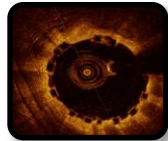


Clinical follow-up at 30 days, 6 months, 12 months, 24 months and 36 months post-procedure



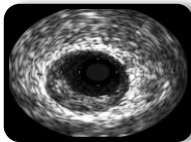
Angiographic follow-up at 6 and 24 months

Analysed by: Cardiovascular Research Centre, Sao Paulo, Brazil



OCT at 6 and 24 months

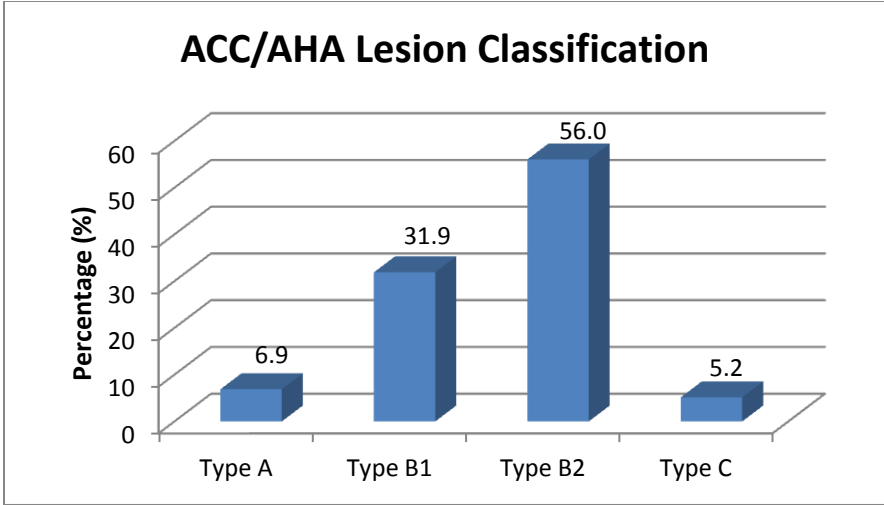
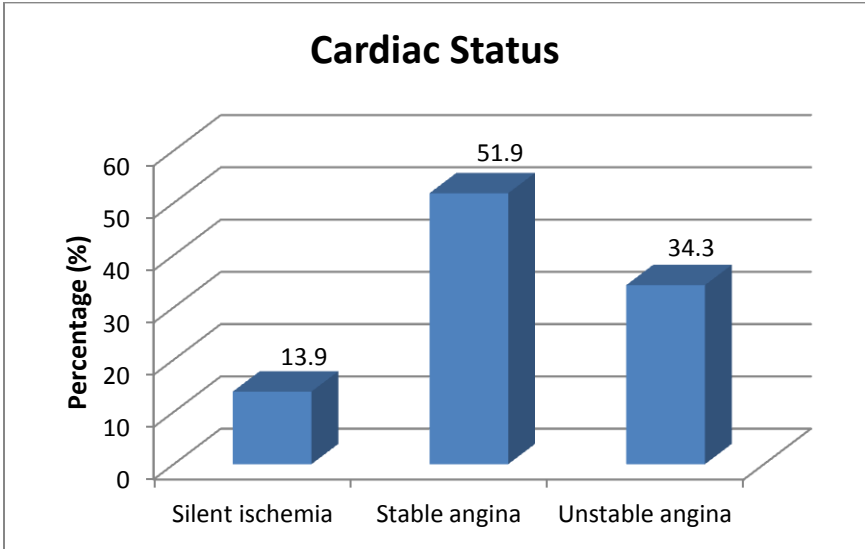
Analysed by: Cardialysis BV, Rotterdam, the Netherlands



IVUS at 6 and 24 months

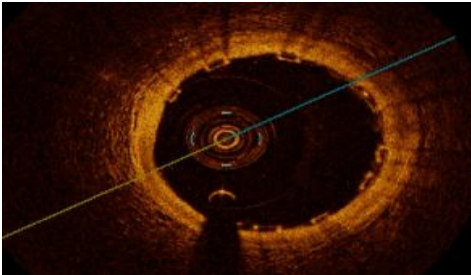
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❖ Clinical presentation

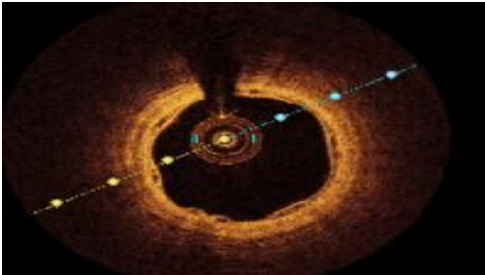


Lesion Characteristics (ACC/AHA Classification)

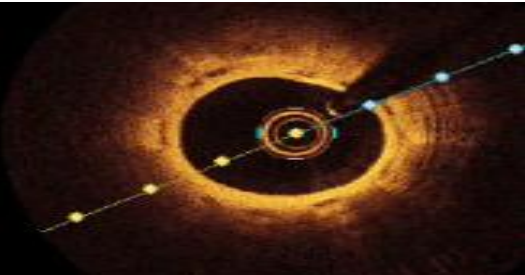
❖ Study Results



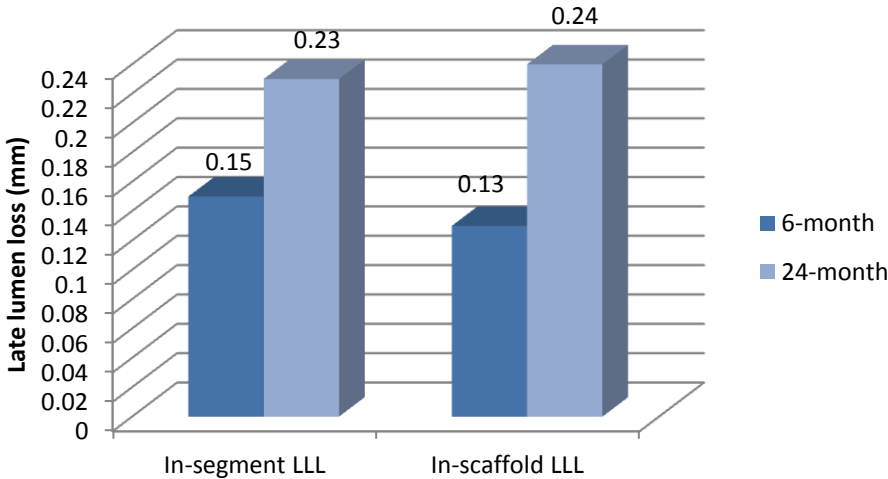
Post-procedure OCT



6 – Month OCT FU



2 – Year OCT FU



Late lumen loss at 6 and 24 months

## ❖ References

1. ClinicalTrials.gov – CTRI/2015/04/005706  
<http://ctri.nic.in/Clinicaltrials/showallp.php?mid1=7887&EnchId=&userName=CTRI/2015/04/0057061>
2. Seth A, Onuma Y, Costa RA, Chandra P, Bahl VK, Manjunath CN, et al. First-in-human evaluation of a novel poly-L-lactide based sirolimus-eluting bioresorbable vascular scaffold for the treatment of de novo native coronary artery lesions: MeRes-1 trial. *EuroIntervention*. 2017;13(4):415-23.
3. Seth A, Onuma Y, Costa R, Chandra P, Bahl V, Manjunath C, et al. TCT-64 Two-year clinical and imaging outcomes of thin strut sirolimus-eluting bioresorbable vascular scaffolds in de novo coronary artery lesions: The MeRes-1 trial. *Journal of the American College of Cardiology*. 2018;72(13 Supplement):B28.
4. Costa R, Seth A, Chandra P, Bhal V, Nanjappa M, Rath P, Kalaricka M, Wander G, Mahajan A, Kumaran A, Koshy A. 1968 Quantitative angiographic analysis in patients with de novo native coronary artery lesions treated with novel poly-l-lactide based sirolimus-eluting bioresorbable vascular scaffold: MeRes-1 Trial. *European Heart Journal*. 2017 Aug 1;38(supplement):ehx502
5. Seth A, Nanjappa MC, Mahajan AU, Kumar V, Goel PK, Chandra P, Wander GS, Bahl VK, Kalarickal MS, Kumaran AV, Kaul U. TCTAP A-003 First-in-human evaluation of a novel poly-l-lactide based sirolimus-eluting bioresorbable vascular scaffold for the treatment of de novo native coronary artery lesions: MeRes-1 trial. *Journal of the American College of Cardiology*. 2017 Jan 1;69(16 Supplement):S2.
6. Seth A, Chandra P, Mahajan AU, Nanjappa MC, Kumar V, Goel PK, Wander GS, Bahl VK, Kalarickal MS, Kumaran AV, Kaul U. TCTAP A-058 Favorable outcomes for systemic pharmacokinetic study of sirolimus-eluting bioresorbable vascular scaffold system in treating de novo native coronary artery lesion: A sub study of MeRes-1 trial. *Journal of the American College of Cardiology*. 2017 Jan 1;69(16 Supplement):S31.
7. Ortega M, Medrano M, Lopez R, Navarrete M, Llorente J, Quiñonez P, Costa JR. TCT-328 Real world performance of the novel MeRes100. *Journal of the American College of Cardiology*. 2017 Oct 31;70(18 Supplement):B135.
8. Costa Jr JR, Abizaid A. Bioresorbable coronary scaffolds: deployment tips and tricks and the future of the technology. *Methodist DeBakey Cardiovascular Journal*. 2018 Jan;14(1):42.
9. Mishra S. A fresh look at bioresorbable scaffold technology: Intuition pumps. *Indian Heart Journal*. 2017;69(1):107-11.

10. Seth A, Ezhumalai B, Bhatt S, Vasani P. MeRes100™—A sirolimus eluting bioresorbable vascular scaffold system. In CRC Press. Bioresorbable scaffolds from basic concept to clinical applications. 2017;pp. 494-499.