

MIMICS^{3D} Two-Year Results

Summary

A prospective observational registry evaluating the BioMimics 3D Vascular Stent System in a real-world clinical population with a dedicated subgroup analysis of device performance as a complementary treatment in procedures involving drug-coated balloons. MIMICS-3D enrolled 507 patients across 23 clinical sites in Europe.

24% of subjects enrolled in MIMICS-3D had Critical Limb Ischemia

38% of lesions had moderate to severe calcification

Baseline Patient Demographics		N=507 Subjects
Age	Mean years ± SD (N)	70.1 ± 10 (507)
Gender	% Male	65.5% (332/507)
Risk Factors	Diabetes Mellitus	36.9% (187/507)
	Smoker Current	37.7% (191/507)
Rutherford category	0	0.4% (2/504)
	1	1.2% (6/504)
	2	17.1% (86/504)
	3	57.3% (289/504)
	4	7.5% (38/504)
	5	14.3% (72/504)
Ankle Brachial Index	Mean ± SD (N)	0.6 ± 0.3 (417)

Baseline Lesion Characteristics		N=507 Subjects (518 lesions)
Reference Vessel Diameter (mm)	Mean ± SD (N)	5.3 ± 0.6
Lesion Location (%)	Mid to Distal SFA	62.9% 326/518
	Prox. Pop	7.3% (38/518)
Diameter Stenosis (%)	Mean ± SD	94.6 ± 8 (518)
Occlusions	Total	56.8% (294/518)
Lesion Length (mm)	Mean ± SD	127 ± 92.4
	Grade 0	17.6% (91/518)
Calcification	Grade 1	29.3% (152/518)
	Grade 2	24.1% (125/518)
	Grade 3	14.7% (76/518)
	Grade 4	13.9% (72/518)

Study Principal Investigator:

Michael Lichtenberg MD, Arnsberg, Germany

Enrolment complete:

N=507

Clinical Sites: 23 Pan European

Follow Up: 3 Years

Primary Endpoints:

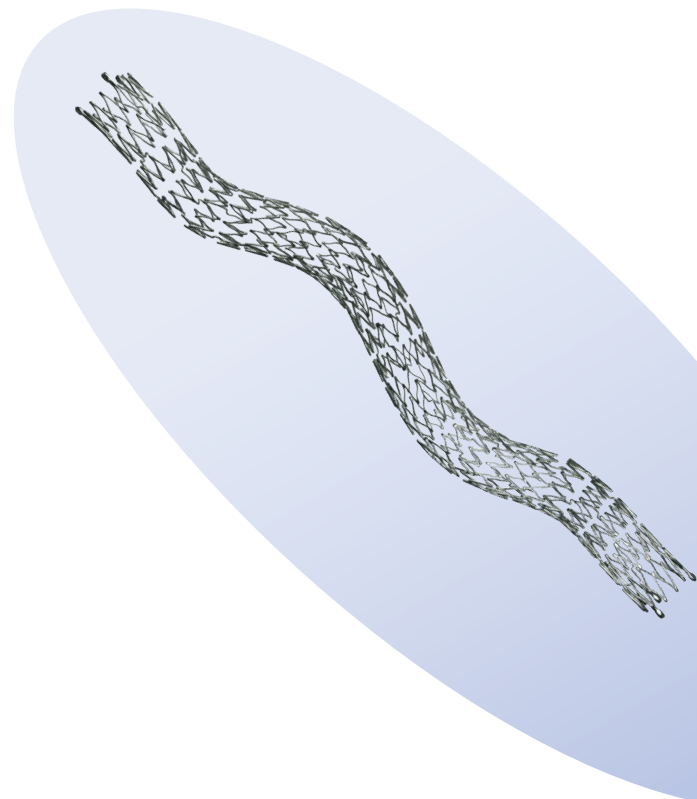
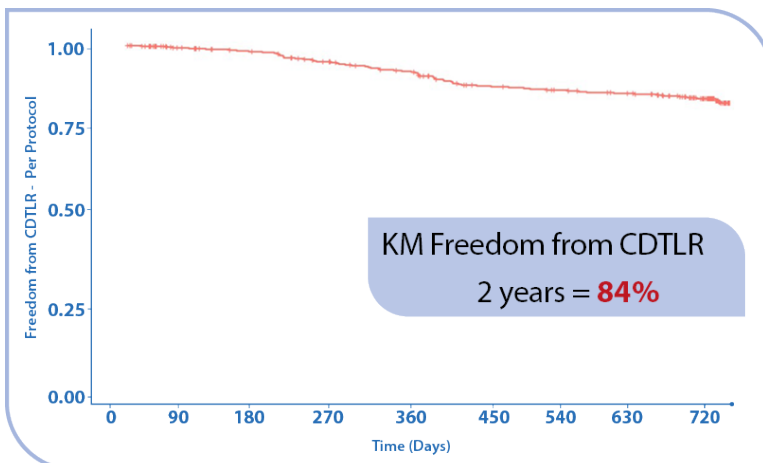
Safety – Composite of major adverse events (MAE), death, major amputation performed or CDTLR through 30 days.

Effectiveness – Freedom from clinically-driven target lesion revascularisation through 12 months.

KM Freedom from CDTLR at 2 years

Data from a challenging real-world population continues to demonstrate therapeutic value of swirling flow in the BioMimics 3D stent.

KM Freedom from CDTLR (per protocol)	1 Year	92%
	2 Years	84%



Conclusions

MIMICS-3D data contribute real-world experience to the evolving database supporting the therapeutic value of swirling flow in the BioMimics 3D stent:

More challenging population than typically enrolled in registry studies:

- 24% CLI; longer, more complex lesions; >50% with DCB.
- 84% Freedom from CDTLR at 2 Years.
- Rate of CDTLR was independent of concomitant DCB use, lesion calcification and stent length.

The BioMimics 3D Vascular Stent System reduces the burden of re-intervention for the patient and the health care system.^{1,2}



The MIMICS Clinical Programme: An evolving database of the safety and effectiveness of the BioMimics 3D Vascular Stent System.

Gathering clinical evidence from a “real world” patient population from single de novo to complex, long and severely calcified lesions.

1750+
patients and
growing

MIMICS FIH	MIMICS RCT	MIMICS 2	MIMICS ^{3D}	MIMICS ^{3D} USA	MIMICS <i>et seq</i>
N = 10 1 site Germany	N = 50 8 sites Germany	N = 271 43 sites USA/Japan/Germany	N = 507 23 sites Pan European	N = c. 500 c. 40 sites USA	N = c. 400 Multiple sites Europe
<ul style="list-style-type: none"> • First in Human • FU - 1 year • Completed 	<ul style="list-style-type: none"> • Randomised controlled trial • FU - 2 years • Completed 	<ul style="list-style-type: none"> • IDE Registry • FU - 3 years • Completed 	<ul style="list-style-type: none"> • Prospective Registry • FU - 3 years • 2 years complete 	<ul style="list-style-type: none"> • Prospective Registry • FU - 3 years • Enrolment ongoing 	<ul style="list-style-type: none"> • Physician initiated prospective and retrospective registries • Enrolment ongoing

MIMICS RCT
A randomised study comparing safety and effectiveness of the BioMimics 3D Vascular Stent System to a straight stent control. Freedom from loss of primary patency through 2 years for BioMimics 3D Vascular Stent System was superior (P = 0.05) to straight control stents (72% vs 55%). There were no stent fractures at 2 years for patients treated with the BioMimics 3D stent.³

MIMICS 2
A multicentre, international (USA, Japan and Germany) IDE study. At 3 years follow-up BioMimics 3D demonstrated continuing benefit with CDTLR showing comparable outcomes to DES/DCB. Core Lab X-ray imaging review confirmed 0% stent fracture in any MIMICS-2 subject treated with BioMimics. MIMICS-2 represents a more challenging patient population than in DES/DCB pivotal trials.^{4,5}

MIMICS^{3D}
A prospective observational registry evaluating the BioMimics 3D Vascular Stent System in a real-world clinical population with a dedicated subgroup analysis of device performance as a complementary treatment in procedures involving drug-coated balloons. MIMICS-3D enrolled 507 patients across 23 clinical sites in Europe.

MIMICS^{3D} USA
A prospective, multicentre observational study evaluating the safety, effectiveness and device performance of the BioMimics 3D Vascular Stent System within a real-world clinical population of patients undergoing femoropopliteal intervention. MIMICS-3D USA will enrol a minimum of 500 patients in up to 40 sites across the United States.

1. Data on file at Veryan Medical
 2. Kearns BMJ 2016
 3. Zeller T et al; Circ Cardiovasc Interv. 2016;9
 4. Kenneth Rosenfield et al :N Engl J Med 2015;373:145-53. DOI: 10.1056/NEJMoa1406235
 5. Michael D. Dake et al : Circ Cardiovasc Interv. 2011;4:495-504

The BioMimics 3D Vascular Stent System has CE Mark approval.
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For additional information please contact your local representative.

GERMANY
 T +49 3222 999 0027
 E veryanmedical@healthlinkeurope.com
 W veryanmed.com

ALL OTHER EUROPEAN COUNTRIES
 T +31 (0)73 303 5510
 E veryanmedical@healthlinkeurope.com
 W veryanmed.com

