MIROR Surface Modification

Metal **I**nterface **R**eassembly for **O**ptimizing **R**estenosis

The implanted stent and mechanical balloons both adopt MIROR technology to reduce thrombogenicity and enhance endothelialization.



Remove unstable oxide layer | Ensure implant surface is smooth | Form self-assembled monolayers

- Smooth delivery
- Enhance endothelialization
- Reduce thrombogenicity

Without MIROR Technology, Stent with Oxide Layer



Stent surface
20X Visual microscope

Single strut scan
5500X Electron Microscope

Single strut section
50000X EM Pseudo color

Consequence 1

Oxidation dissection; Activates thrombus formation

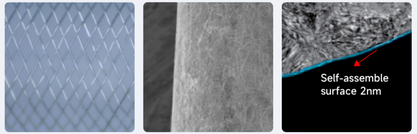
Consequence 2

Distant hemorrhage transformation & events

Consequence 3

Endothelial hyperplasia and stenosis caused by uneven stent surface

After MIROR Modification, Stent with Self-Assembled Monolayers



Stent surface
20X Visual microscope

Single strut scan
5500X Electron Microscope

Single strut section
50000X EM Pseudo color

LIFE Lattice® Intracranial Flow diverter Evaluation of clinical use

Efficacy results

91.41% Raymond 1&2 (12 months) | 86.72% Raymond 1 (12 months)

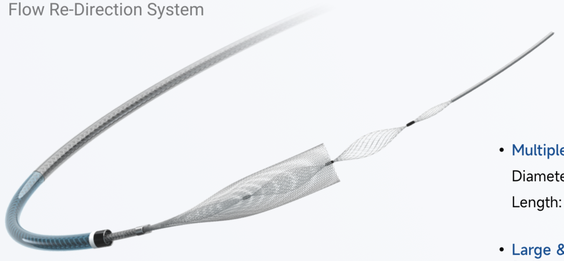
Safety results

0% Retreatment/ Reccurent Rate | 0.78% In-stent stenosis

*Data is based on LIFE (pre-market clinical trial of Lattice).

Lattice®

Flow Re-Direction System



- **Multiple Sizes** for clinical needs
  Diameter: 2.3mm~ 5.6mm
  Length: 11mm~50mm
- **Large & long sizes** to fit wide neck/ fusiform/tandem lesions' need, no need for telescoping

SKU Description:

eg. AF 23 03 FB
- 3 Mechanical Balloons
- Nominal Diameter = 2.3mm

Nominal Diameter : <3.0mm

2.3mm		2.6mm		2.9mm	
Nominal Length (mm)	Product Code	Nominal Length (mm)	Product Code	Nominal Length (mm)	Product Code
13	AF2301FB	12	AF2601FB	11	AF2901FB
20	AF2302FB	18	AF2602FB	15	AF2902FB
27	AF2303FB	25	AF2603FB	20	AF2903FB
33	AF2304FB	31	AF2604FB	25	AF2904FB
		38	AF2605FB	30	AF2905FB
		45	AF2606FB	35	AF2906FB
				40	AF2907FB
				45	AF2908FB
				50	AF2909FB

Nominal Diameter: 3.0-4.0mm

3.2mm		3.5mm		3.8mm	
Nominal Length (mm)	Product Code	Nominal Length (mm)	Product Code	Nominal Length (mm)	Product Code
11	AF3201FB	15	AF3502FB	15	AF3802FB
15	AF3202FB	20	AF3503FB	20	AF3803FB
20	AF3203FB	25	AF3504FB	25	AF3804FB
25	AF3204FB	30	AF3505FB	30	AF3805FB
30	AF3205FB	35	AF3506FB	35	AF3806FB
35	AF3206FB	40	AF3507FB	40	AF3807FB
40	AF3207FB	45	AF3508FB	45	AF3808FB
45	AF3208FB				
50	AF3209FB				

Nominal Diameter : 4.0-5.0mm

4.1mm		4.4mm		4.7mm	
Nominal Length (mm)	Product Code	Nominal Length (mm)	Product Code	Nominal Length (mm)	Product Code
15	AF4102FB	13	AF4402FB	13	AF4702FB
20	AF4103FB	15	AF4403FB	15	AF4703FB
25	AF4104FB	20	AF4404FB	20	AF4704FB
30	AF4105FB	25	AF4405FB	25	AF4705FB
35	AF4106FB	30	AF4406FB	30	AF4706FB
40	AF4107FB	35	AF4407FB	35	AF4707FB
45	AF4108FB	40	AF4408FB	40	AF4708FB
				45	AF4709FB

Nominal Diameter : ≥5.0mm

5.0mm		5.3mm		5.6mm	
Nominal Length (mm)	Product Code	Nominal Length (mm)	Product Code	Nominal Length (mm)	Product Code
13	AF5002FB	13	AF5302FB	20	AF5604FB
18	AF5003FB	18	AF5303FB	23	AF5605FB
22	AF5004FB	22	AF5304FB	27	AF5606FB
26	AF5005FB	26	AF5305FB	30	AF5607FB
29	AF5006FB	29	AF5306FB	33	AF5608FB
33	AF5007FB	33	AF5307FB	36	AF5609FB
37	AF5008FB	37	AF5308FB	39	AF5610FB
41	AF5009FB	41	AF5309FB		

Important Information:

Prior to use, refer to the instructions for use supplied with this device for indications, contraindications, side effects, warnings and precautions.

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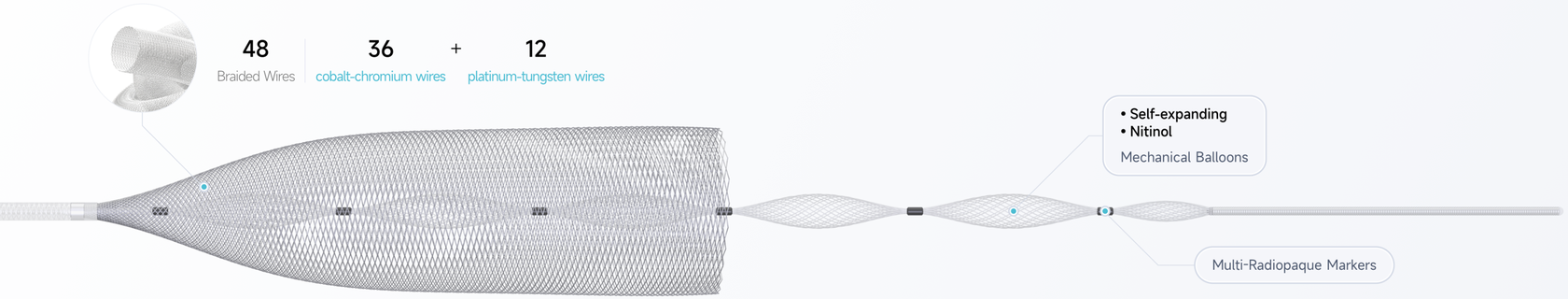
Lattice®

Flow Re-Direction System

Self-expanding Implanted Stent

Lattice® Approved Indication in China:

The Lattice® Re-Direction System is indicated for the use in the internal carotid artery from the petrous up to the terminus and the vertebral artery for the endovascular treatment of adults with unruptured saccular or fusiform intracranial aneurysm (neck width ≥ 4 mm or dome-to-neck ratio < 2) arising from a parent vessels with a diameter ≥ 2.0 mm and ≤ 5.6 mm.



- **Cobalt-Chromium Alloy**
  Superior wall apposition, proven efficacy & safety

- **Fully Re-sheathable**
  Able to be re-sheathed completely into introducer and removed from microcatheter; Reuse when losing distal access

- **MIROR* Surface Modification**
  To reduce mid/post-operative thrombotic complications

*MIROR refers to "Metal Interface Reassembly for Optimizing Restenosis"

Lattice®
Flow Re-Direction System

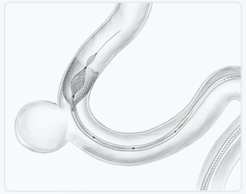
Unique Delivery System

Mechanical Balloons

Original Innovation

Five advantages of Mechanical Balloons

① **Facilitate** Flow Diverter (FD) **opening** at tortuous segments and challenge curve
② **Enhance wall apposition** of Flow Diverter (FD)
③ **Prevent kinking** of Flow Diverter
④ **Minimize movement of distal wire tip**
⑤ **Balloon Massage** for better wall apposition



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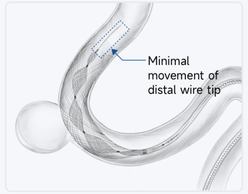

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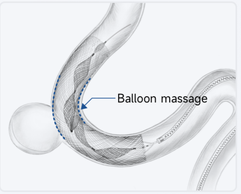


⑤

Unique Delivery System

Multi-Radiopaque Markers

Original Innovation

Intraluminal measurement

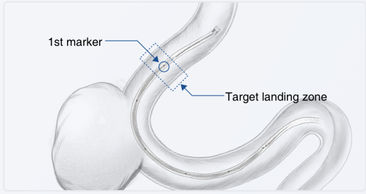
Indicate **distal landing point** accurately

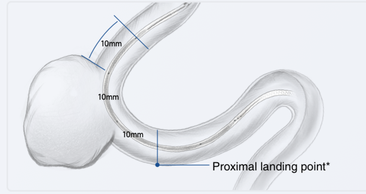
1st marker ≈ Distal landing zone of FD

Indicate **proximal landing point**

- Distance between 2 markers = 10mm (undeployed in microcatheter)
- Markers are like the scale of the ruler to indicate proximal landing zone

* Assuming the target coverage distance is 30 mm



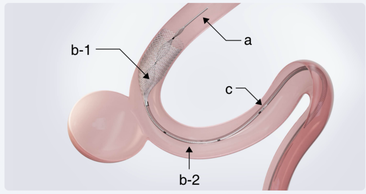


Multi-Radiopaque Markers under-fluoroscopy

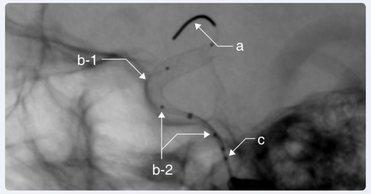
(a): Distal wire tip

(b-1): Expanded Mechanical Balloon; (b-2): Mechanical Balloon in sheath

(c): Full-detachment Marker



Diagrammatic Sketch



Under-fluoroscopy