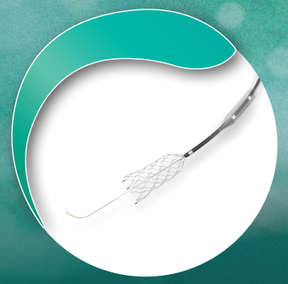
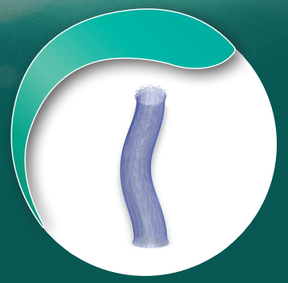
**ACCERO® heal Stent**

**DERIVO® 2heal® Embolisation Device**

**ACCLINO® heal Stent**



**CREDO® heal Stent**



**CARESTO® heal Stent**

09-000219 EN 08/2023

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acandis®
ENGINEERING STROKE SOLUTIONS

# HEAL TECHNOLOGY

Next Generation of
Antithrombogenic Coating

Antithrombogenic

Anti-inflammatory

Endothelialisation-promoting

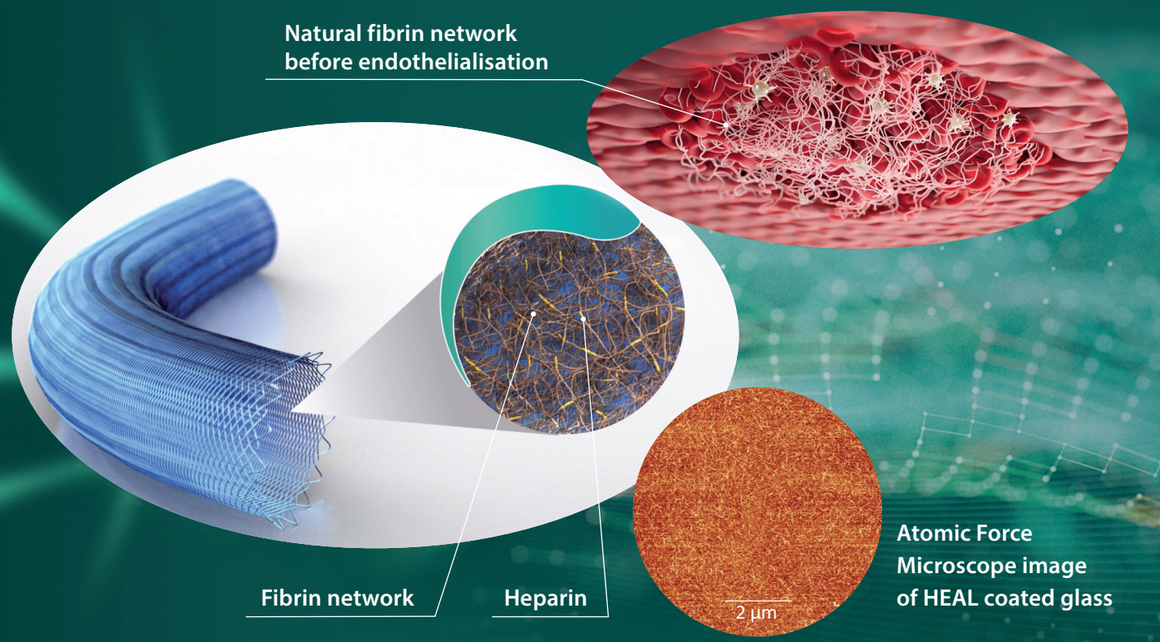
acandis®
ENGINEERING STROKE SOLUTIONS

# HEAL TECHNOLOGY

## An entirely new approach for rapid healing of vascular lesions after device implantation

**The HEAL Technology imitates the last step of natural haemostasis by forming a thin and fully cured fibrin network on the implant surface.**

**In conjunction with covalently bound heparin to the fibrin network, the HEAL coating exhibits an unique combination of antithrombogenic, anti-inflammatory and endothelialisation-promoting properties.**

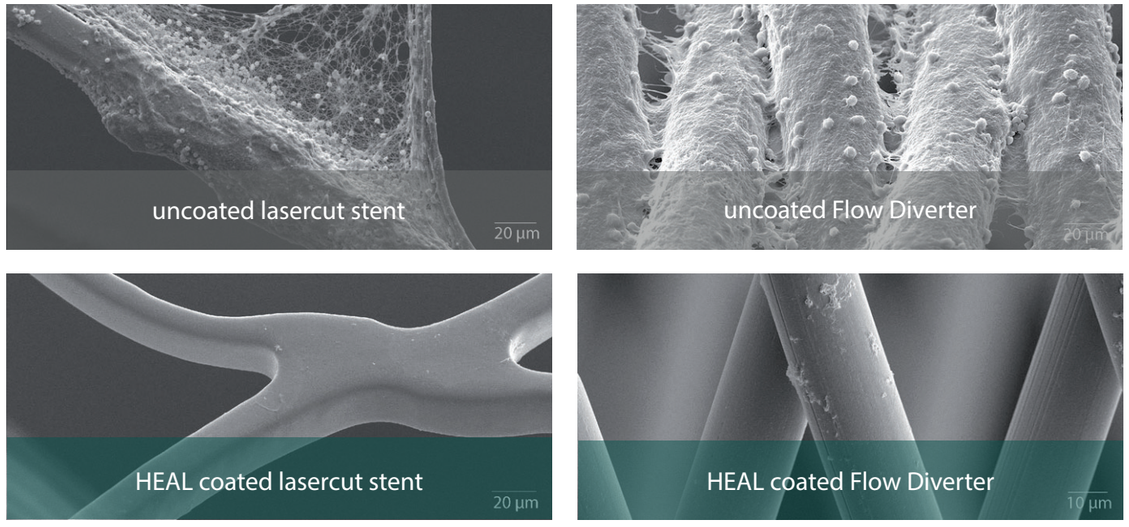



**Prof. Dr. Meltem Avci-Adali**
**Research Director**
**Thoracic and Cardiovascular Surgery, University Hospital Tübingen, Germany**

*"In preclinical studies, HEAL coated devices have shown significant minimisation of thrombogenic and inflammatory responses. Together with the simultaneous potential to promote endothelialisation, HEAL technology represents a promising strategy to improve the treatment of patients with endovascular diseases, such as intracranial aneurysms."*

### Antithrombogenic
### - reduced risk of device thrombosis

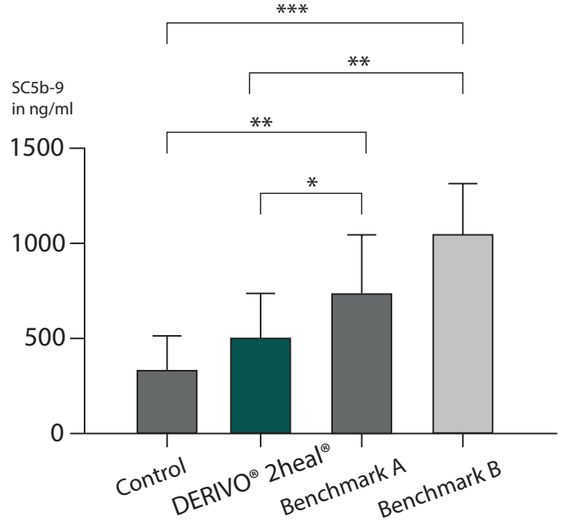
The fibrin-heparin coating passivates the surface and reduces platelet activation and coagulation cascade.
Deposits from the blood and thrombogenicity of vascular devices are significantly reduced. Thereby the coating is non-eluting and has no pharmacological effect.




*SEM images of uncoated and HEAL coated devices after incubation in a Chandler Loop with human blood*

### Anti-inflammatory
### - reduced risk of inflammatory reactions

SC5b-9 is a plasma protein from the complement system. *In vitro* investigations indicate a very low activation of the immune system with HEAL coated devices comparable to the control group (blood without device).
The complement system is significantly less activated by DERIVO® 2heal® compared to other commercially available coated flow diverters.

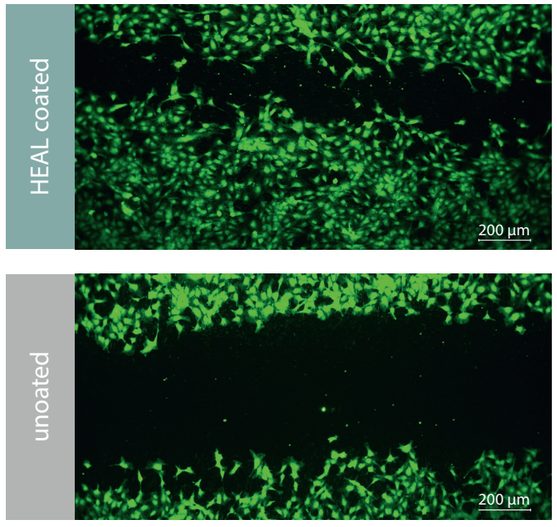



*In vitro investigation of SC5b-9*

### Endothelialisation-promoting
### - accelerates healing of implant lesion

Wound healing assay using HUVECs* indicate that HEAL coated nitinol surfaces do not impede endothelial cell proliferation compared to an uncoated TiO2 surface. Moreover, the fibrin-heparin coating promotes endothelial cell covering.

*Human Umibical Vein Endothelial Cells.




*Wound healing assay using HUVECs*