

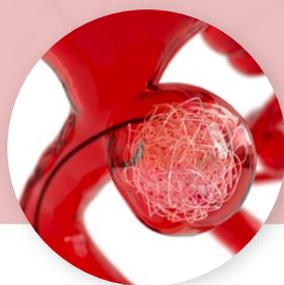
SIMULATE BLOOD VESSEL

# 3D\_VASCULAR \_SIMULATOR

BIOMIMETIC 3D VASCULAR NETWORK  
SIMULATOR FOR TRAINING



Aneurysm



Guidewire procedure



Stent procedure



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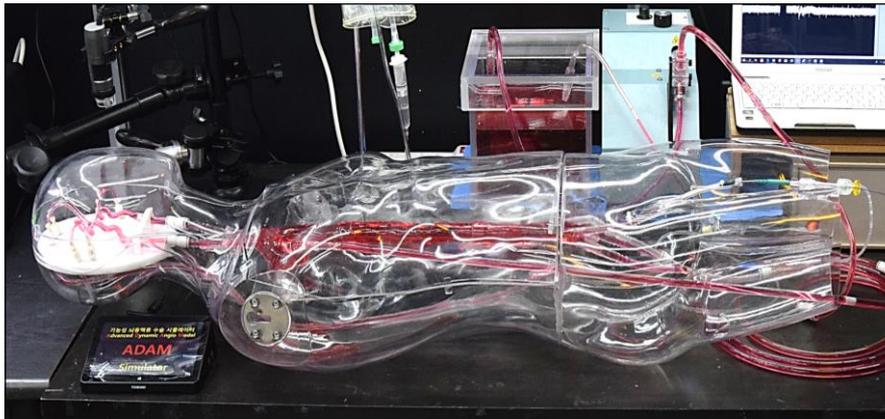
Homepage

<http://imsystem.kr>

 **IMSYSTEM**  
임시스템



## 3D Vascular Simulator



- A 3D vascular simulator is a product that reflects the structure and functional and biological characteristics of actual blood vessels, and can be manufactured in various types of blood vessel disease.
- In addition, it provides a feeling and environment similar to that of actual blood vessel procedures, so it can be used for vascular intervention training and demonstration of related medical devices.

## Features of 3D vascular simulator



### Lubricious coating

- Friction coefficient similar to that of real blood vessels
- Tactile sensation replicating real blood vessels



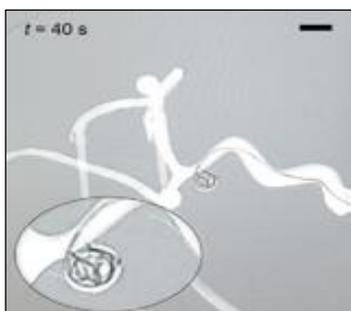
### Compatibility with X-ray

- Compatible with X-ray imaging systems
- Compatible with angiography systems

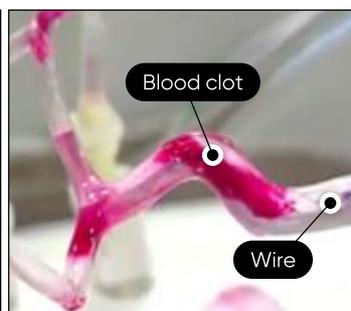


### Various applications

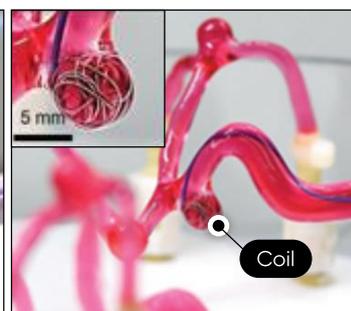
- Simulation of coil embolization
- Simulation of thrombectomy
- Equipped with a pulsatile pump



Compatibility with X-ray



Demonstration of thrombus removal



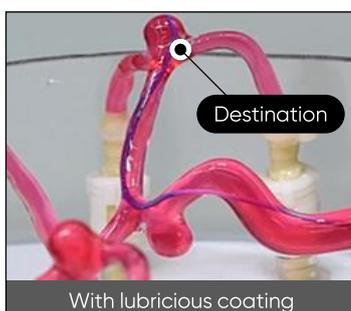
Coil embolization demonstration



Pulsatile Pump

## Lubricious coating

### Differences with or without internal lubricious coating of blood vessels



With lubricious coating



Without lubricious coating

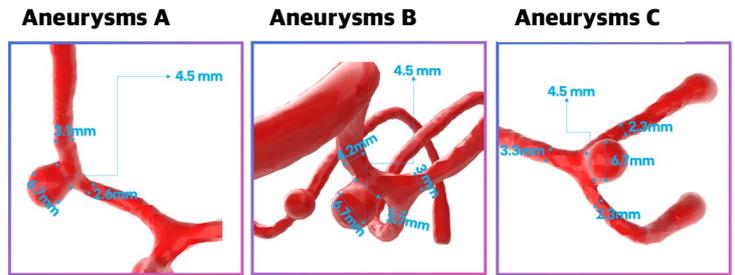
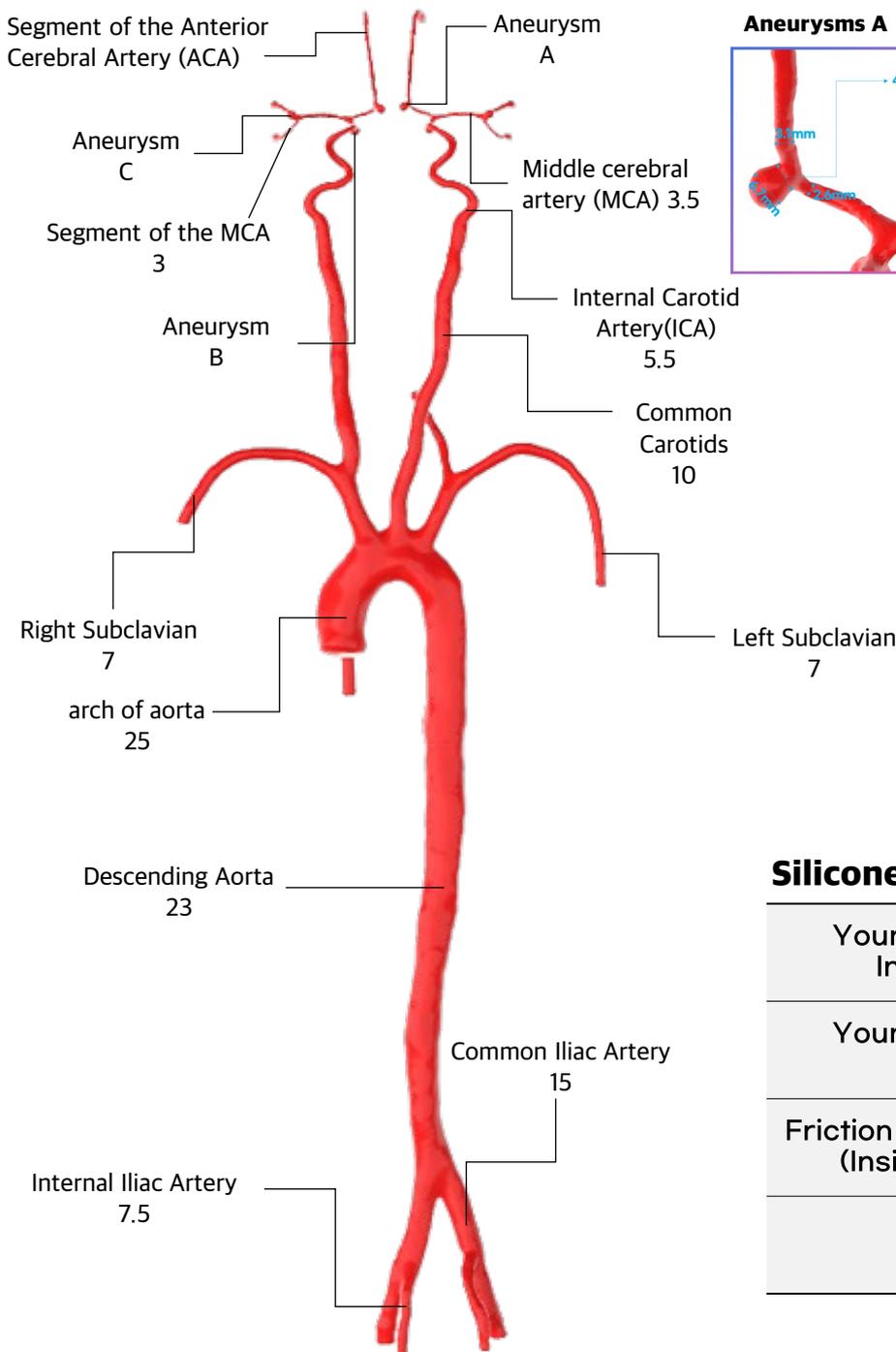
- The internal lubricious coating prevents the buckling phenomenon that does not advance due to bending of the vascular treatment tool.
- Provides a feeling similar to actual vascular intervention due to the internal coating



## Whole Body Model

### Product Information

Whole Body Model from IMsystem Co., Ltd. includes cerebral and cardiovascular artery. Cerebrovascular system includes three cerebral aneurysms that run from the carotid artery, and cardiovascular system includes primary artery such as the aorta arch, descending aorta and carotid artery. The structures and designs of Whole Body Model can be altered according to preferences. Its internal lubrication coating provides a realistic sensation and environment alike the actual blood vessels.



**Aneurysms (Height X Width X Neck)**

Aneurysms A	3.4X3.4X4.5
Aneurysms B	3.4X3.4X4.5
Aneurysms C	3.4X3.4X4.5

### Silicone Properties

Young's modulus, Indentation	~20 kPa
Young's modulus, Tensile	~1.8 Mpa
Friction coefficient, COF (Inside of model)	0.07~0.15
Color	Transparent

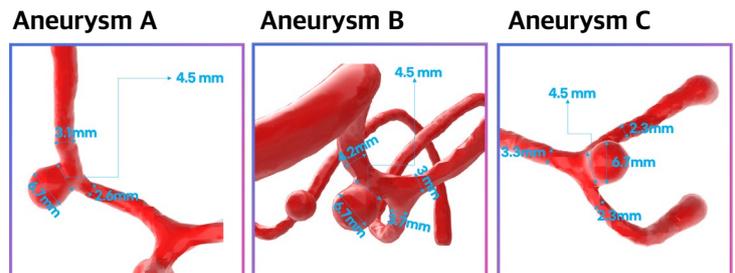
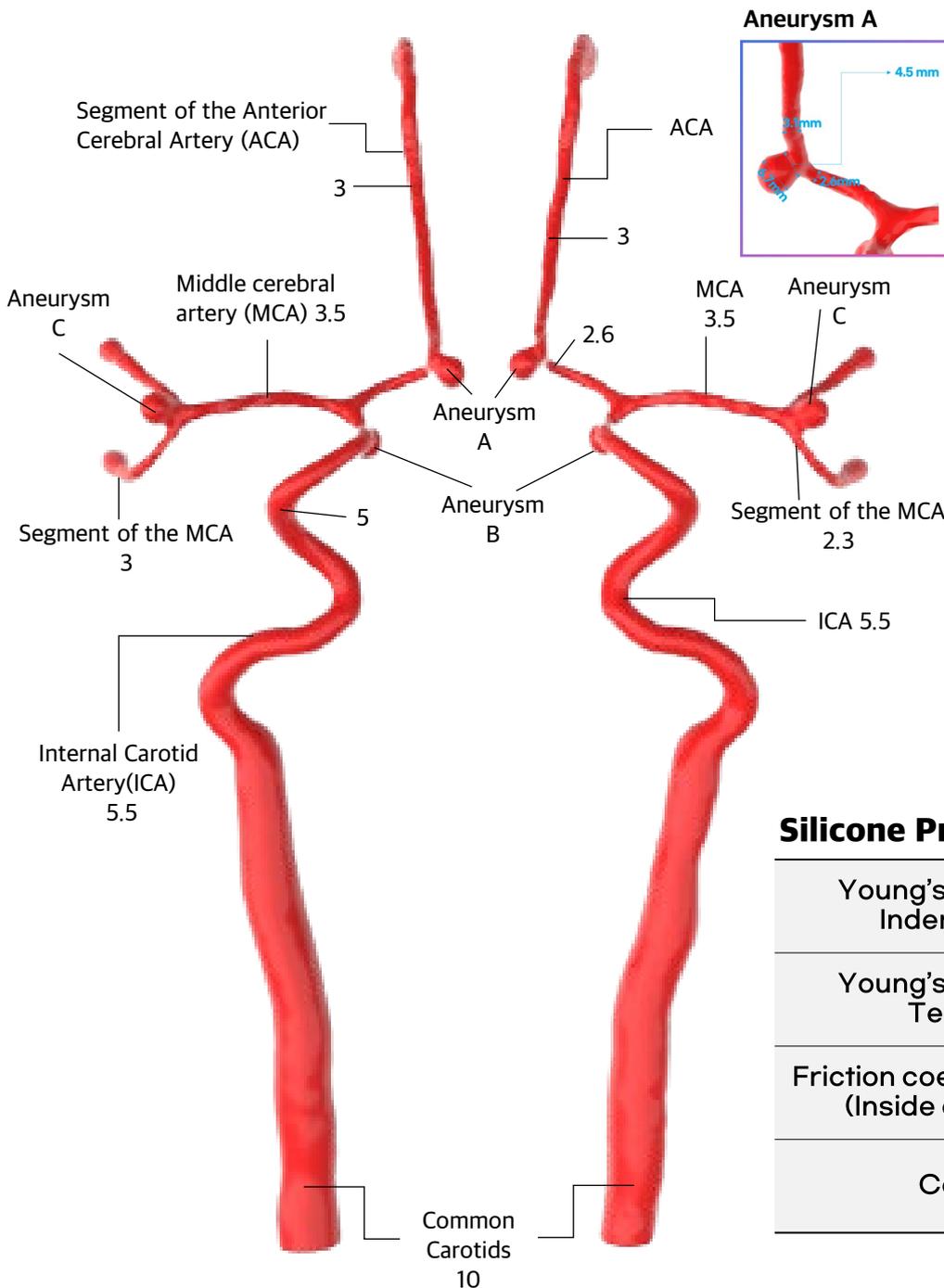
\* This model is for demonstration and research, its size could differ from actual blood vessel



# Neuro-vascular Model with Aneurysms

## Product Information

Model A from IMsystem Co., Ltd. imitates the carotid artery and major cerebral vessels. It has three cerebral aneurysms of cerebral blood vessels leading from the carotid artery, so it is suitable for demonstration and research using cerebral aneurysms. All aneurysms can be removed or added at a desired location. In addition, our internal lubrication coating technology provides blood vessel models with an internal feeling and environment similar to actual blood vessel procedures, so the brain blood vessel model is used for vascular interventional procedure training and demonstration and research of medical devices.



### Aneurysms (Height X Width X Neck)

Aneurysm A	3.4X3.4X4.5
Aneurysm B	3.4X3.4X4.5
Aneurysm C	3.4X3.4X4.5

### Silicone Properties

Young's modulus, Indentation	~20 kPa
Young's modulus, Tensile	~1.8 Mpa
Friction coefficient, COF (Inside of model)	0.07~0.15
Color	Transparent

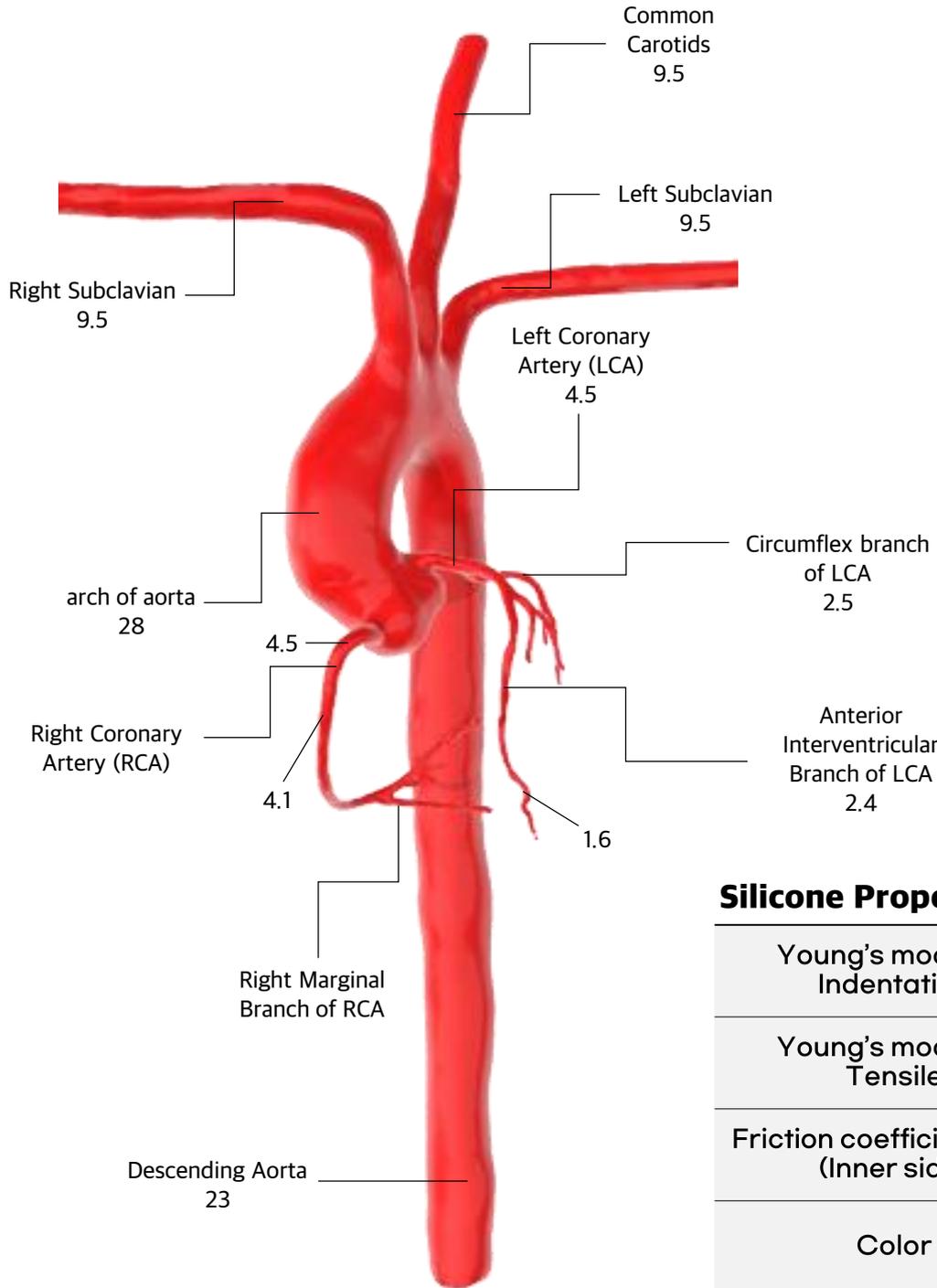
\* The model is for demonstration and research purposes and may differ from the actual blood vessel size.



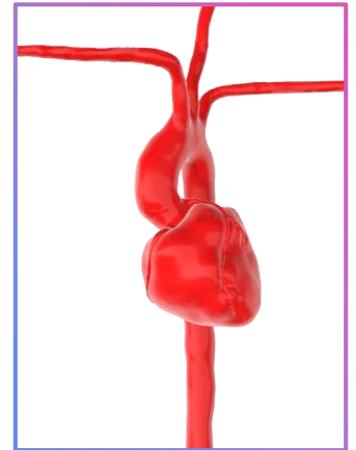
## Aortic Arch + Coronary Arteries

### Product Information

Heart and coronary artery model from IMSYSTEM Co., Ltd. imitates the primary artery. It includes primary aortas interconnecting aortic arch, suitable for demonstrations and research with coronary artery. Diameters for each arteries can be manipulated to desire. In addition, its internal lubrication coating provides a realistic sensation and environment alike the actual blood vessels.



### Heart Silicone Sample



### Silicone Properties

Young's modulus, Indentation	~20 kPa
Young's modulus, Tensile	~1.8 MPa
Friction coefficient, COF (Inner side)	0.07~0.15
Color	Transparent

\* This model is for demonstration and research, its size could differ from actual blood vessel