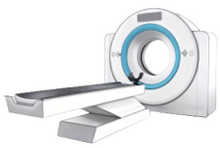
DEEPAI for NEURO

Diagnosis Evaluation Endovascular Surgery Patient Care All-Inclusive

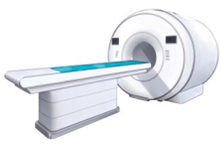
Powered by UnionStrong

www.unionstrongtech.com.cn

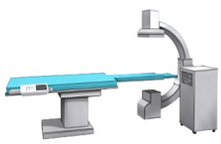
Diagnosis



NCCT
CTA
CTP

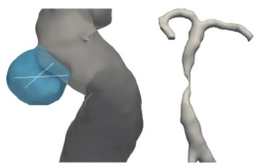


MRI
MRA
HR-MRI
Silent-MRA

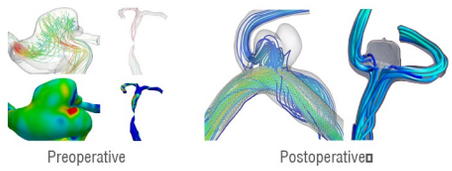


2D-DSA
3D-DSA

Evaluation



3D Morphology &
Auto-Measurement



Hemodynamics

Stability Evaluation of
Unruptured Aneurysm

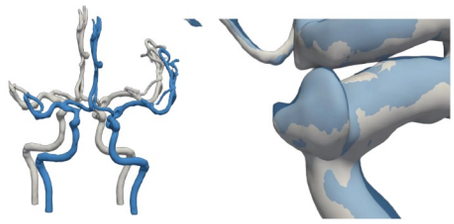
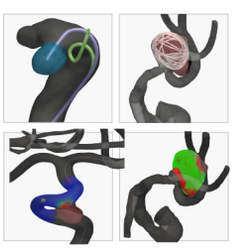


Image Fusion of Pre- and Post-Follow-up
Images

DEEPAI for NEURO

Diagnosis Evaluation Endovascular Surgery Patient Care All-Inclusive

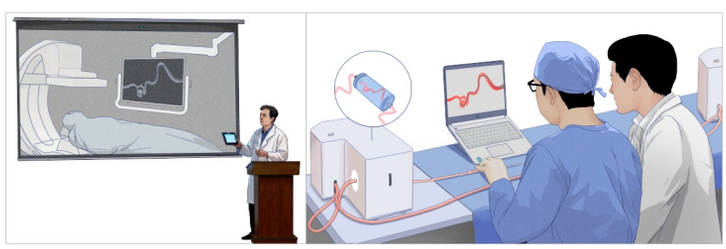
Patient Care



AI Surgical Simulation for
Catheter, Coil, Stent, FD
(Flow Diverter), IFD (Intra-
saccular Flow Disruption) etc.

AI Catheter Shaping Robot & Heating Steamer

Endovascular Surgery

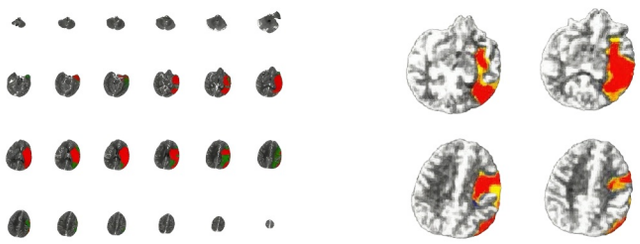


3D-Printed Silicone Cerebrovascular Simulator & Training Service

DEEPAI for NEURO

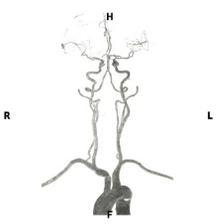
Diagnosis Evaluation Endovascular Surgery Patient Care All-Inclusive

CTP

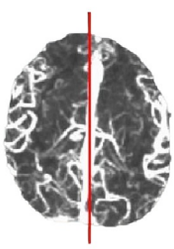


AIS rCBF, rCBV,TMax, Mismatch etc.

CTA



3D Reconstruction
& Auto-Measurement

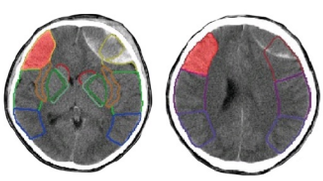


LVO & Collateral

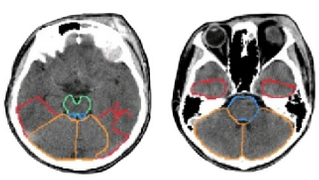
One-Stop AI Diagnosis Compatible with Multimodal Imaging Data

- Accelerate analysis and processing of multimodal imaging data including CTP, CTA, NCCT, MRI, DSA, etc.
- Assist in the precise and quantitative identification of various lesion characteristics of AIS, ICH, IA, etc.
- Enable accurate and rapid diagnosis, and prognostic prediction for cerebrovascular diseases.

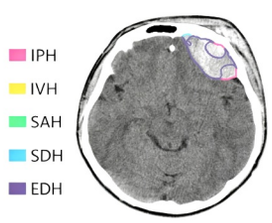
NCCT



ASPECTS

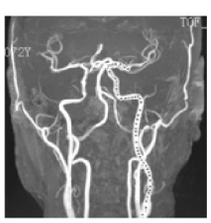


PC-ASPECTS

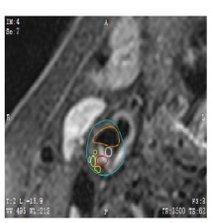


ICH Volume, Subtypes etc.

MRI



Intracranial Vascular Stenosis
& Plaque Analysis



Carotid Artery Stenosis
& Plaque Analysis

DSA

3D Reconstruction
& Auto-Measurement

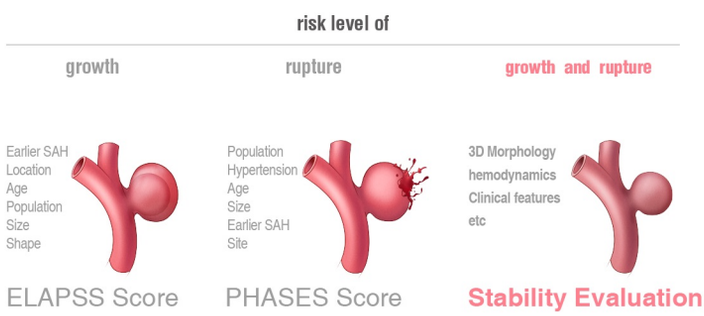
DEEPAI for NEURO

Diagnosis Evaluation Endovascular Surgery Patient Care All-Inclusive

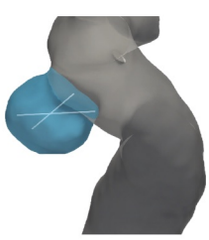
Comprehensive Functional Evaluation for Personalized Treatment Plan

- Deliver evaluation and monitoring activities through multiple AI-powered modules including 3D morphology, hemodynamics etc.
- Formulate personalized treatment plans and follow-up strategies based on patient's actual conditions.
- Enable objective and comprehensive decision-making for neurosurgeons.

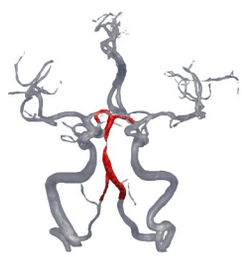
Stability Evaluation of UIA



3D Morphology

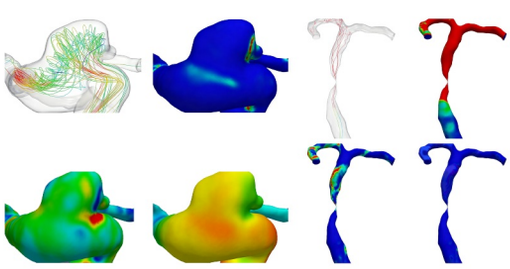


Parameters Auto-Measurement

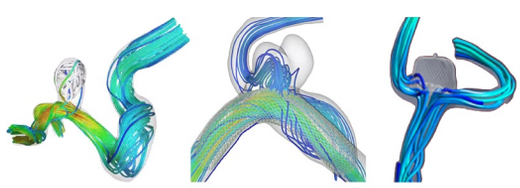


Stenosis

Hemodynamics

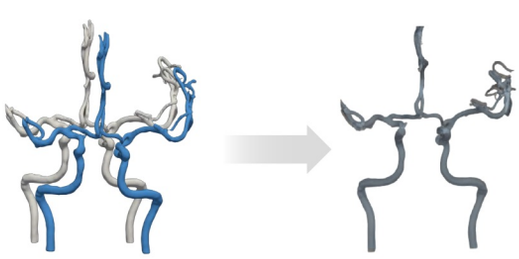


Preoperative

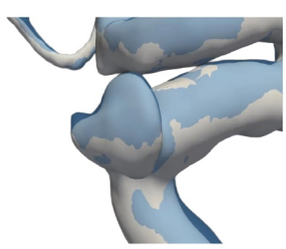


Postoperative

Image Fusion



2 Phase 3D Construction



Auto-Morphology Analysis

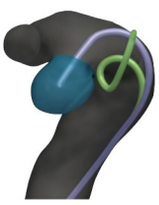
DEEPAI for NEURO

Diagnosis Evaluation Endovascular Surgery for Patient Patient Care AI-Inclusive

AI-Powered Procedures in Interventional Surgery From Planning to Operation

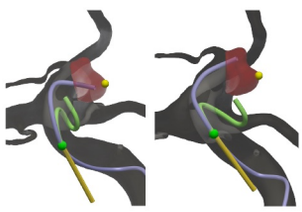
- Simulate the deployment of various interventional devices for preoperative planning, and automatically compute the optimal 3D microcatheter and mandrel shaping, compatible with different brands of microcatheters and surgical strategy.
- Automate 3D microcatheter shaping operations through AI surgical robot.
- Enhance the safety, efficiency and cost-effectiveness of interventional surgery for patients.

AI Surgical Planning

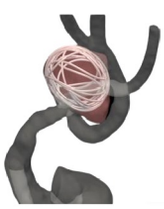


Catheter and Mandrel

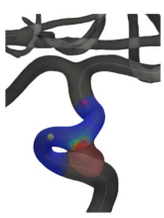
Adjustable Catheter
Rebound Coefficients



Adjustable Catheter
Tip Position



Coil

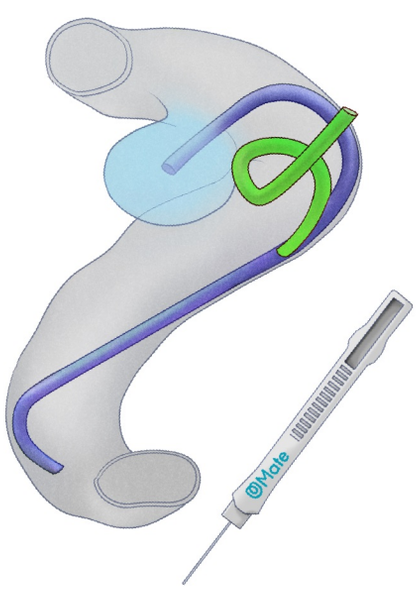


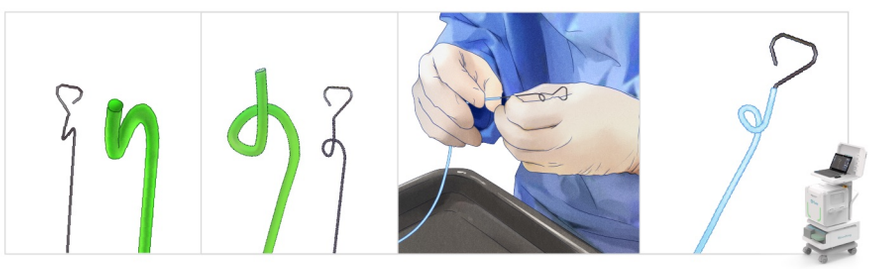
Stent & FD

IFD

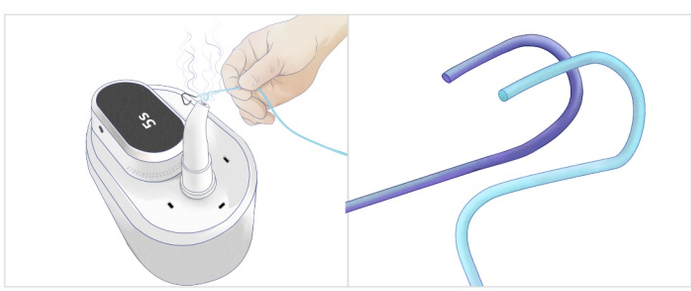
by UKnow® Aneurysm

AI 3D Catheter Shaping





by UMate™ Shape and UMate™ Mandrel



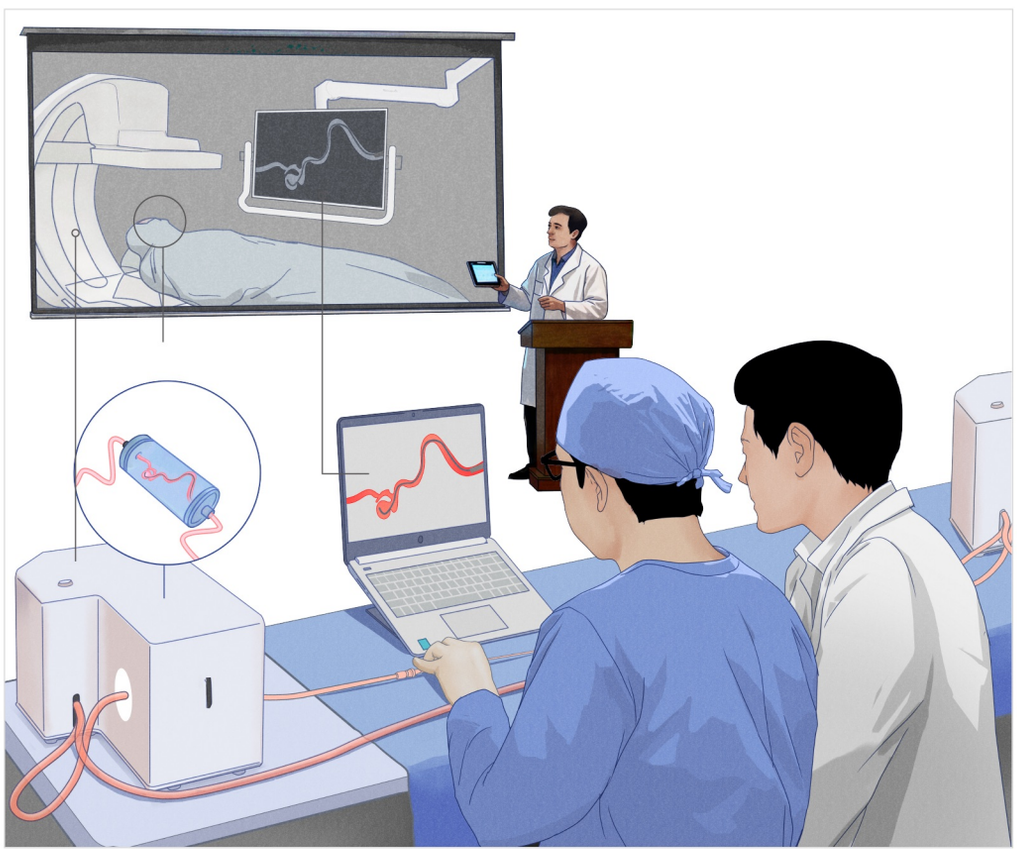
by Steam Heating Unit

UnionStrong www.unionstrongtech.com.cn

DEEPAI for NEURO

Diagnosis Evaluation Endovascular Surgery ——for Doctor Patient Care All-Inclusive

Training Service: From Apprentice to Endovascular Master




Coil Embolization


Stent-assisted
Coil Embolization


FD


Thrombectomy

Comprehensive Training Curriculum

Developed in collaboration with leading neurointerventional specialists to provide a robust foundation in both theory and hands-on practice.

Hands-On Training for Key Procedures

Supports training for a wide range of procedures, including coil embolization, stent-assisted coil embolization, FD implantation, intrasaccular flow disruption, ischemic thrombectomy and stenosis treatment, etc.

Realistic Simulation with Integrated Feedback

High-Fidelity Simulation: Precisely replicates pathologies and provides authentic surgical haptic feedback for efficient practice.

Dynamic Circulation System: Features an integrated hemodynamic system to mimic the physiological vascular environment.

Procedural Review: Simulates the interventional imaging view and supports procedure recording and playback for performance analysis.

UAlpha® Series

UnionStrong www.unionstrongtech.com.cn

DEEPAI for NEURO

Diagnosis Evaluation Endovascular Surgery Patient Care All-Inclusive

Powered by UnionStrong

Clinical Evidence

Diagnosis

0.92

UGuard and RAPID showed strong agreement in ischemic core volume measurement (ICC=0.92, 95% CI 0.89–0.94, P<0.001)[1]

0.84

UGuard and RAPID showed strong correlation in penumbra volume measurement (Spearman r=0.84, P<0.001)[1]

Higher Specificity

In predicting good prognosis for endovascular treatment (EVT) and better predictive ability compared with RapidAI[1]

Evaluation

Reduced up to 94%

Maximum aneurysm morphology measurement error reduced from 19.1% to 1.2%[2]

Reduced 69%

The average evaluation time decreased from 10.96 min using 2D manual measurement to 3.44 min using 3DRT[3]

100% Consistency

Computer-assisted 3DRT achieved perfect measurement consistency (ICC = 1.00, 95% CI 1.00–1.00)[3]

Endovascular Surgery

Increased 45%

AI-assisted microcatheter shaping increased the first-trial success rate from 66% to 96%[4]

Increased 88%

For surgeons with less than five years of experience, the successful positioning rate within five minutes increased from 50% to 94%[4]

Reduced 77%

The average time to successful positioning decreased from 184 s to 43 s[4]

Class I, level B

Recommended in Guideline: AI microcatheter shaping has been validated and applied in clinical practice

1. Chen D, Chen W, Nguyen TN, et al. Validation of a novel CT perfusion software compared to RAPID in stroke patients receiving endovascular therapy. Sci Rep. 2025;15(1):12907. Published 2025 Apr 15. doi:10.1038/s41598-025-96340-9

2. Geng J, Hu P, Ji Z, et al. Accuracy and reliability of computer-assisted semi-automated morphological analysis of intracranial aneurysms: an experimental study with digital phantoms and clinical aneurysm cases. Int J Comput Assist Radiol Surg. 2020;15(10):1749-1759. doi:10.1007/s11548-020-02218-8

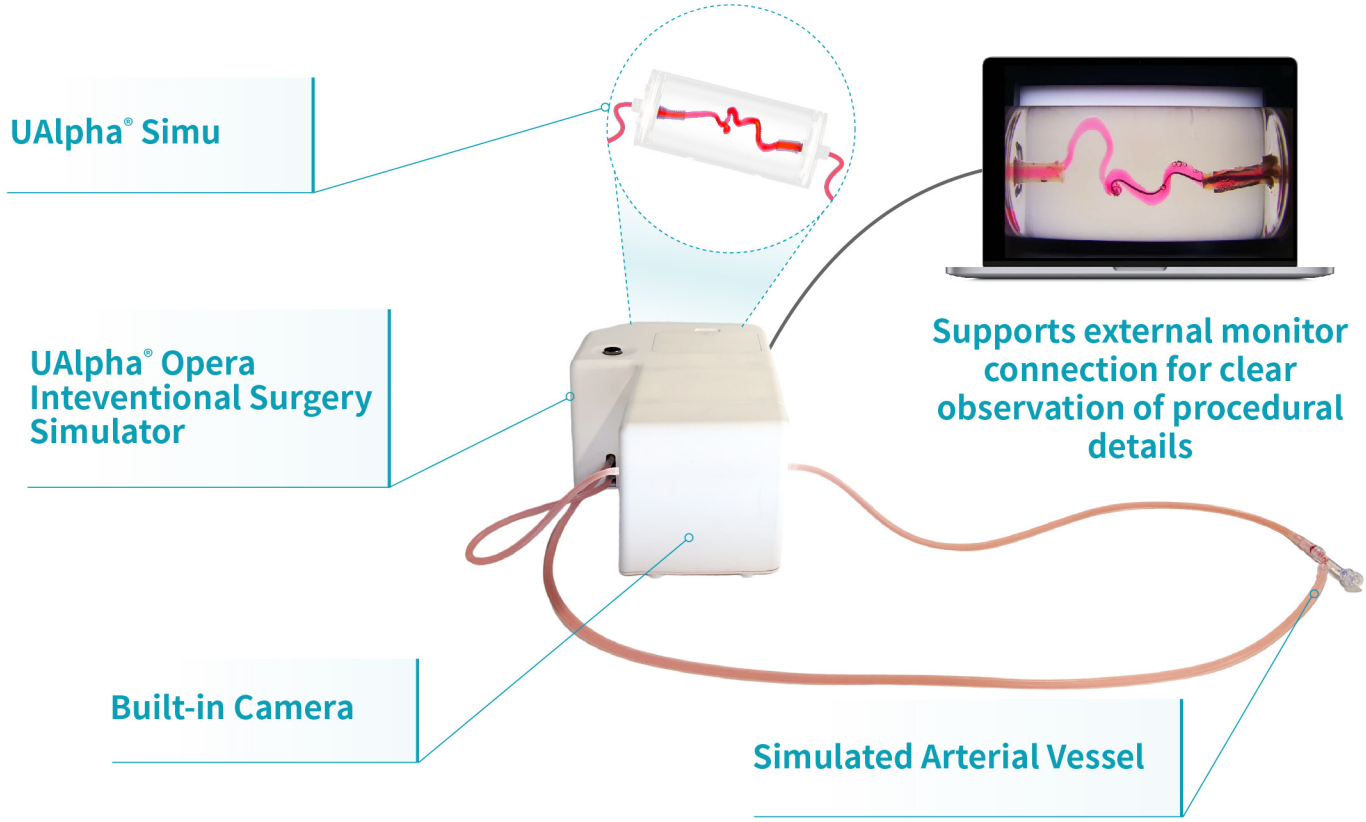
3. Geng J, Wang Y, Ji Z, et al. Advantages of 3D registration technology (3DRT) in clinical application of unruptured intracranial aneurysm follow-up: A novel method to judge aneurysm growth. J Neuroradiol. 2023;50(2):209-216. doi:10.1016/j.neurad.2022.08.004

4. Yang H, Ni W, Xu L, et al. Computer-assisted microcatheter shaping for intracranial aneurysm embolization: evaluation of safety and efficacy in a multicenter randomized controlled trial. J Neurointerv Surg. 2024;16(2):177-182. Published 2024 Jan 12. doi:10.1136/jnis-2023-020104

UnionStrong

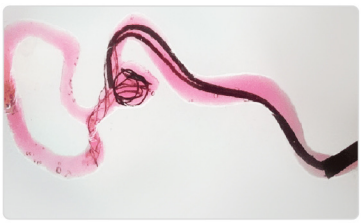
From Apprentice to Endovascular Master

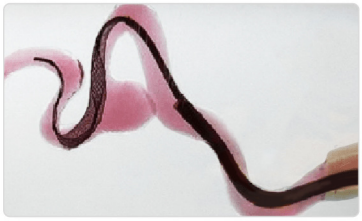
UAlpha® Opera Surgery Simulator



Suitable for Simulation of Various Neurointerventional Procedures

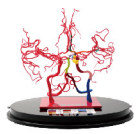

Coil Embolization


Stent-assisted Coil Embolization


Flow Divertor


Thrombectomy

UAlpha® Model



- Endovascular Interventional surgery Simulation
- In-vitro Procedures Surgeons Practice
- Neurointerventional Training

UnionStrong www.unionstrongtech.com