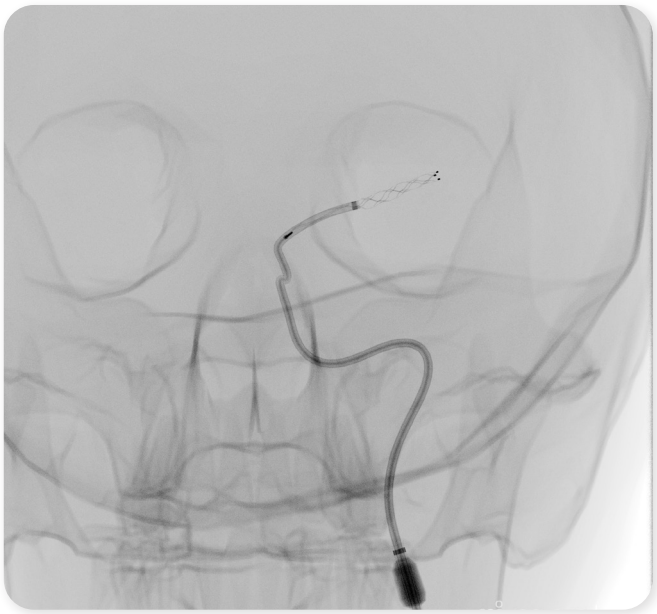
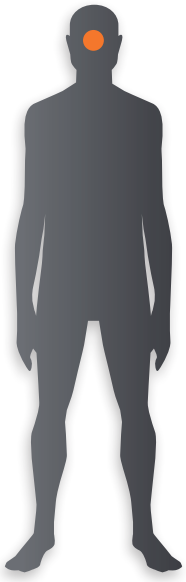
Neurovascular Thrombectomy

Proficiency-based Training & Assessment of Thrombectomy skills



Mentice Neurovascular Thrombectomy uses state-of-the-art training methodology[1] and validated[2] performance metrics to provide a safe and effective training and assessment platform for improving, maintaining and assessing mechanical thrombectomy skills. The module is intended for self-learning where the user is guided and given immediate feedback in the form of warnings at the fluoro screen throughout the procedure. The software also comes with an extended possibility to configure each case to adapt to specific training needs.

To support the proficiency-based training paradigm and the need for quality assessment, the module comes with a built-in benchmarking system that makes use of the wide range of performance metrics to set assessment levels alongside the learning path and to set common quality standards.



Key Training Objectives

- Safe access to left and right carotid arteries in a range of aortic arches and carotid take-offs
- Safe and appropriate handling of multi-purpose and reverse shaped catheters during the access
- Safe tri-axial access to and crossing of thrombus with a proper use of microwire, microcatheter and intermediate catheter
- Safe and effective extraction of thrombus with stentriever, flow reversal and adjunctive aspiration

[1] Proficiency-based training method has been proven superior to standard training*
[2] Developed together with NV experts and confirmed by an international panel of more than 20 international experts
[3] Face and construct validity studies published confirming validity of procedural protocol and performance metrics used. Protocol and metrics have been developed together with leading experts in the field and validated by more than 20 international experts.

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Key Benefits

- Effectively learn how to correctly, safely and efficiently perform neurovascular thrombectomy
- Enforce best-practice[3] procedural protocol at your EVT service
- Set your own quality benchmark and make sure everyone in the service complies to offer best-in-class EVT for the patients
- Unprecedented realism to train complex device handling skills such as tri-axial carotid access, forming of reverse shaped catheters and tri-axial navigation in the cerebral arteries
- Highly configurable for different training needs

Features and Functionalities

- Fully guided cases allowing self-learning/training and enforcing best practices
- High-fidelity performance metrics enabling advanced benchmarking, assessment and proficiency-based training (more than 200 unique metric parameters over 10 phases and more than 35 steps)
- Editable options to allow for exercise-specific setting of parameters such as table orientation and c-arm joysticks, enabling or disabling of guidance and visual feedback, what part of the procedure to run and automatic selection of devices
- High-fidelity device behavior ensuring that complex maneuvers can be accurately trained and learned

This module is designed for:

Healthcare professionals, responsible for improving and maintaining the level of practical skills of neurovascular thrombectomy, which might include but not limited to:

- Interventional neuroradiologists
- Residents and fellows in interventional radiology and neuroradiology
- Other specialties that need to improve the practical skills and knowledge of neurovascular thrombectomy

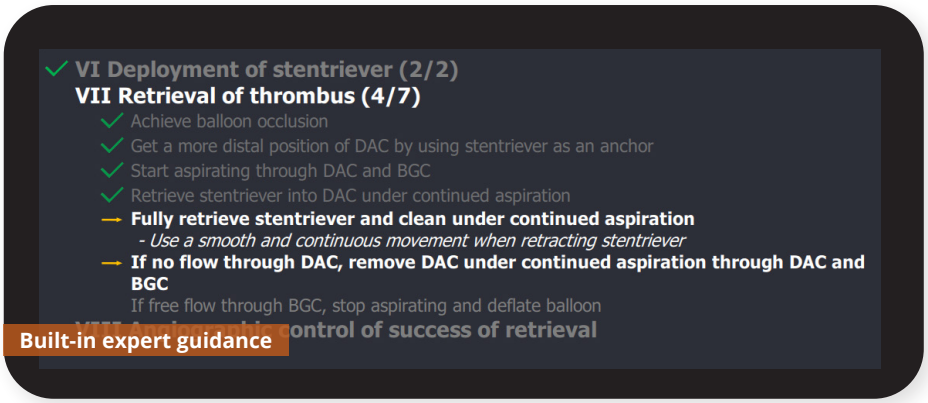
Related Modules

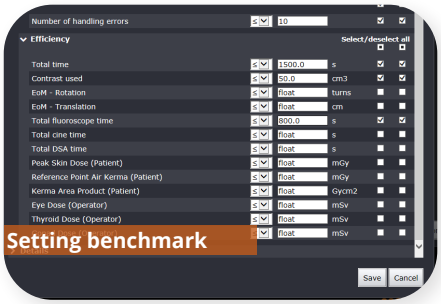
- Acute ischemic stroke intervention
- Carotid intervention

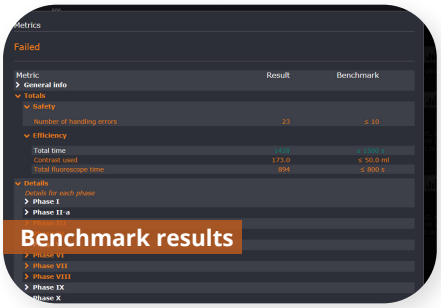
Case Layout

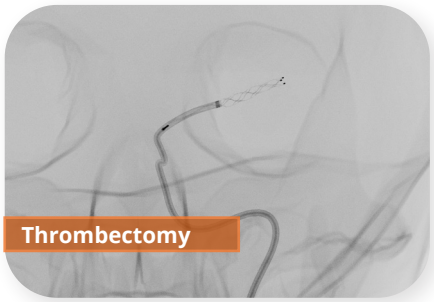
- Total of 9 configurable and fully guided mechanical thrombectomy cases
- Occlusions on both left and right side, MCA (M1)
- 5 unique anatomies (Aortic arches type I, II, III, Bovine and type I-II), featuring challenging anatomical tortuosities (tonsillar loops)

For case descriptions please contact us.









*References

[1] Cates CU, Lönn L, Gallagher AG. Prospective, randomised and blinded comparison of proficiency-based progression full-physics virtual reality simulator training versus invasive vascular experience for learning carotid artery angiography by very experienced operators. BMJ Simulation and Technology Enhanced Learning 2016;2:1–5

[2] Crossley R, Liebig T, Holtmannspoetter M, Lindkvist J, Henn P, Lonn L, et al. Validation studies of virtual reality simulation performance metrics for mechanical thrombectomy in ischemic stroke. J Neurointerv Surg 2019;11:775-80

[3] Liebig T, Holtmannspötter M, Crossley R, Lindkvist J, Henn P, Lönn L, et al. Metric-based virtual reality simulation: A paradigm shift in training for mechanical thrombectomy in acute stroke. Stroke 2018;49:e239-42

For more information, please send us an email or visit mentice.com/neurovascular-thrombectomy

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