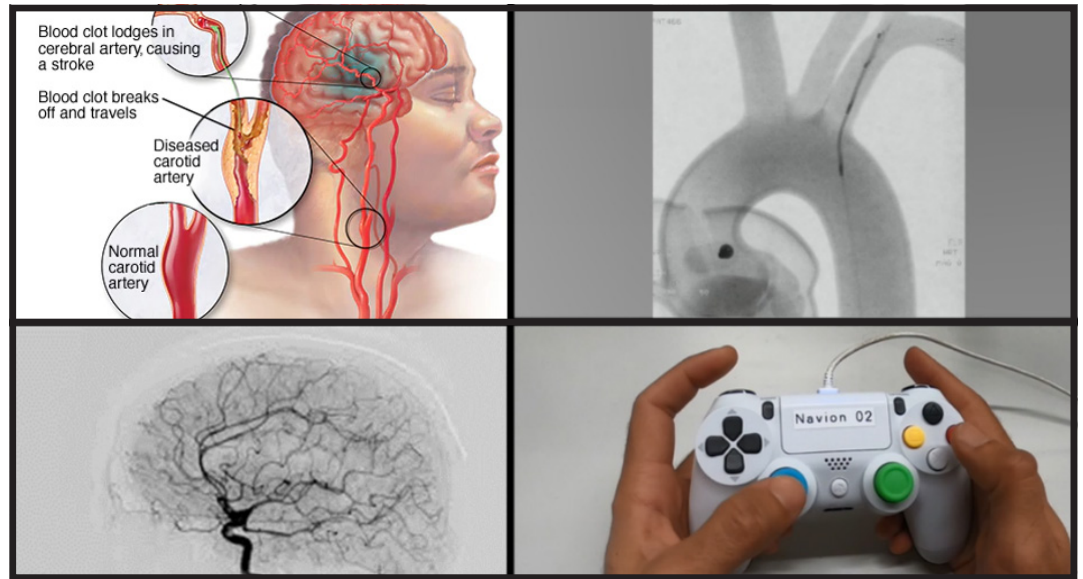


Nanoflex

Advancing medical robotic interventions

Nanoflex



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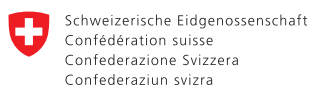
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Nanoflex
is a Wyss Zurich project
www.wysszurich.ch

Advancing medical robotic interventions

Stroke is the second most common cause of death and the number one cause of long-term disability globally. One in four adults over 25 years old will suffer a stroke during their lifetime. There have been numerous significant advances in the treatment of stroke, both pharmaceutically and mechanically. For mechanical interventional treatments, which have shown clear clinical benefits over pharmaceutical-only approaches in certain patient groups, the doctor physically removes the blood clot from the patient's brain. These are highly specialized, difficult, and delicate procedures.

With Nanoflex, researchers from ETH Zurich have developed a soft robotic system that precisely inserts specially made catheters deep into the brain. These new types of catheters are softer, more maneuverable, safer, and easier to use than anything currently available. The technology can simplify and shorten procedure time and reduce the risk of accessing the brain for interventional stroke treatment.

The physicians operating this soft robotic system are not required to stand by the patient during the procedure, which dramatically reduces their x-ray exposure. It is even possible for the physician controlling the robot to treat patients remotely. As a result, patients can be treated in local hospitals rather than being transferred to larger, specialized centers. This is particularly important for ischemic stroke treatment, as the longer it takes to remove the clot after it forms, the more damage may be caused to brain tissue.