Consultant and proctor for:

- Covidien/Medtronic
- AB Medica (Balt)
- Microvention
- Codman Neurovascular
- Phenox
- Crossmed (Penumbra)
- Stryker
Key points for ischemic stroke

- Organization
- Selection (Indication)
- Technique
Some myths to be debunked

- Time
- CT and go
- Just recanalize an artery
- Transportation is dangerous
I principle of acute ischemic stroke endovascular treatment

Hurry up
Recanalize as soon as possible

II principle of acute ischemic stroke endovascular treatment
III principle of acute ischemic stroke endovascular treatment

Outcome depends upon collaterals
• Not just “typical” occlusions

...Scenarios are very different...
Crescendo TIAs

Surgery

Stenting

Medical therapy
Heparin
Technique

• The technical evolution and the endovascular procedures go toward a quick mechanical recanalization.
History...

- ????, microguidewire e microcatheter
- ????, pta, stent, goose-neck
- 2004, Merci \textsuperscript{TM}
- 2005, Catch \textsuperscript{TM}
- 2007, Penumbra Aspirator \textsuperscript{TM}
- 2009, Solitaire \textsuperscript{TM}
The idea of a thrombectomy instead of a thrombolysis gets stronger in the last years.
Incidentally, the use of a stent, born for the treatment of cerebral aneurysms (Solitaire™), turns out to be a revolution.
Pros...

- Easy to use
- Quick flow restoration (transient by-pass)
- High rate of success
This is thrombectomy through stent retrievers
Penumbra Separator 3D
Catch
There’s another way...

Thrombectomy through thromboaspiration
Thromboaspiration...

- Large size but very flexible and atraumatic catheters (up to .070” ID) made for navigation in intracranial arteries
- Aspiration pump
NIHSS 23
Phone call 18.18.
Angio suite 19.50.
First run 20.05
M1 occlusion
Good collaterals
Which is the best approach?
Aspiration

• Avoid distal embolization
• Direct aspiration of the thrombus
• Painless
• Very fast and straightforward
• More efficient in large occlusions or long thrombi
• Good to start with if possible (switch to stent-retrieving fast and easy)
Stent-retrieving

- Normal microcatheterization of cerebral arteries
- More efficient in small vessels
- Anatomy is not a problem
- Good for sub-occlusion as well
- Only proven procedure
But......
Thank you

Luca.valvassori@ospedaleniguarda.it