Emergenze Neuro-Vascolari Ischemiche

Mauro Gallitelli

Pronto Soccorso - SUEM, Ospedale "Santi Giovanni e Paolo", Venezia

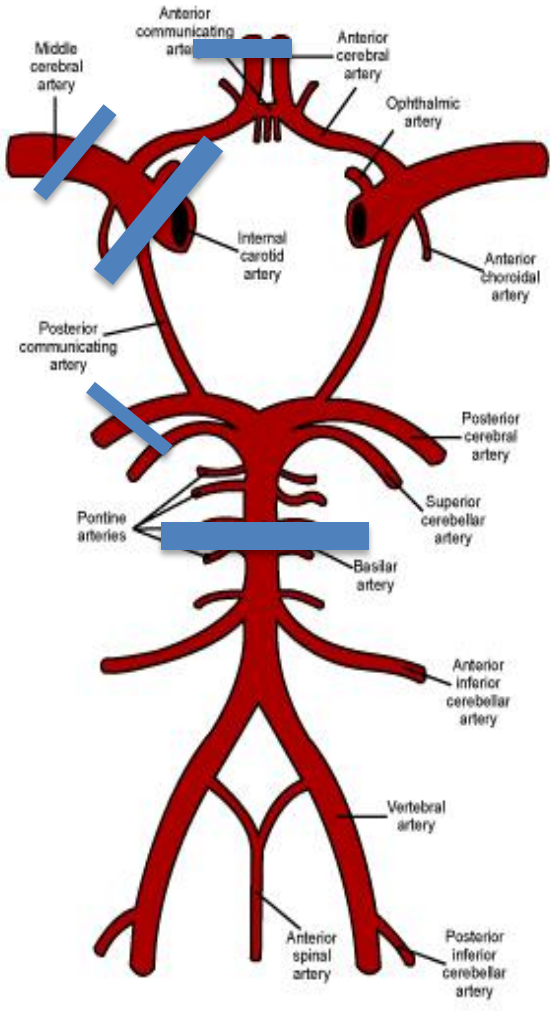
Nuovi approcci terapeutici nello **STROKE ISCHEMICO**

Mauro Gallitelli

Pronto Soccorso - SUEM, Ospedale "Santi Giovanni e Paolo", Venezia

x congresso nazionale
simeu
NAPOLI 18-20 NOVEMBRE 2016

Stroke da occlusione di **grosse arterie cerebrali**



TROMBOLISI EV

EFFICACE

- Sopravvivenza a 3 mesi
- Indipendenza funzionale a 3 mesi

PERICOLOSA

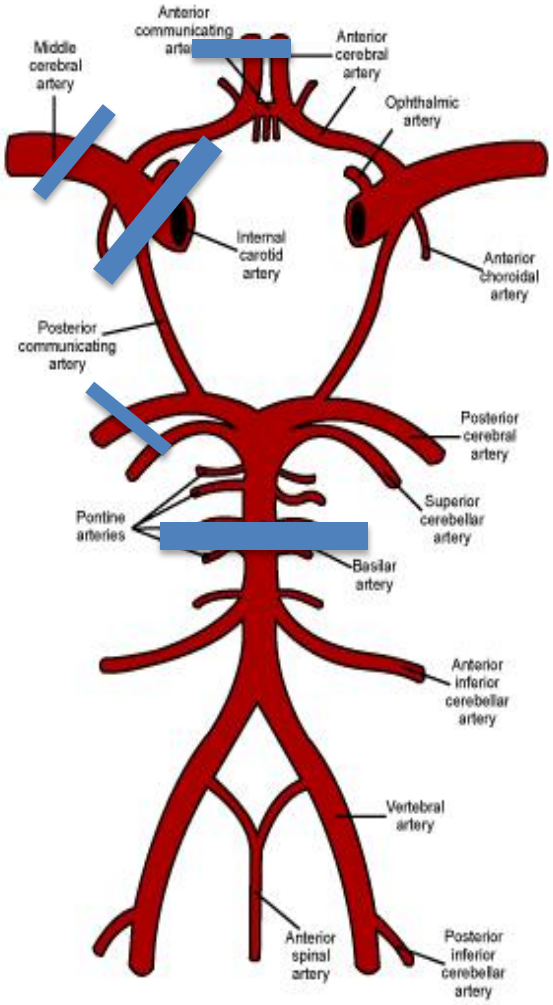
- Emorragia intracranica sintomatica

Smith WS, Lev MH, English JD et Al. ***Significance of large vessel intracranial occlusion causing acute ischemic stroke and TIA.*** *Stroke. 2009;40:3834-40.*

Rai A, Cline B, Williams E et Al. ***Intravenous thrombolysis outcomes in patients presenting with large vessel acute ischemic strokes--CT angiography-based prognosis.*** *J Neuroimaging. 2015;25:238-42.*

Porelli S, Leonardi M, Stafa A et Al. ***CT Angiography in an Acute Stroke Protocol: Correlation between Occlusion Site and Outcome of Intravenous Thrombolysis.*** *Interventional Neuroradiology. 2013;19(1):87-96.*

Stroke da occlusione di **grosse arterie cerebrali**



50%

Smith WS, Lev MH, English JD et Al. Stroke. 2009;40:3834-40.

Rai A, Cline B, Williams E et Al. J Neuroimaging. 2015;25:238-42.

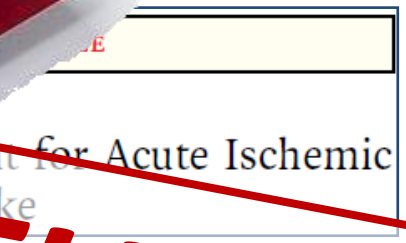
APPROCCI ALTERNATIVI?


SIEMENS
Artis

Interventional Management of Stroke III (**IMS III**)

N Engl J Med. 2013;368:8

xpansion



ied. 2013;368:904-

FUTILITY

N Engl J Med. 2013;368:914-23.

Le (verosimili) motivazioni del fallimento…

1. **Pochi pazienti trattati con stent retrievers**

2. **Disegno dei trials (selezione dei pazienti)**

IMS III, Synthesis Expansion

No Angio-TC o Angio-RM

MR RESCUE

Arruolamento di pazienti con un grosso core infartuale

3. **Tempi da inizio di trombolisi ev a trattamento endovascolare molto lunghi**

IMS III

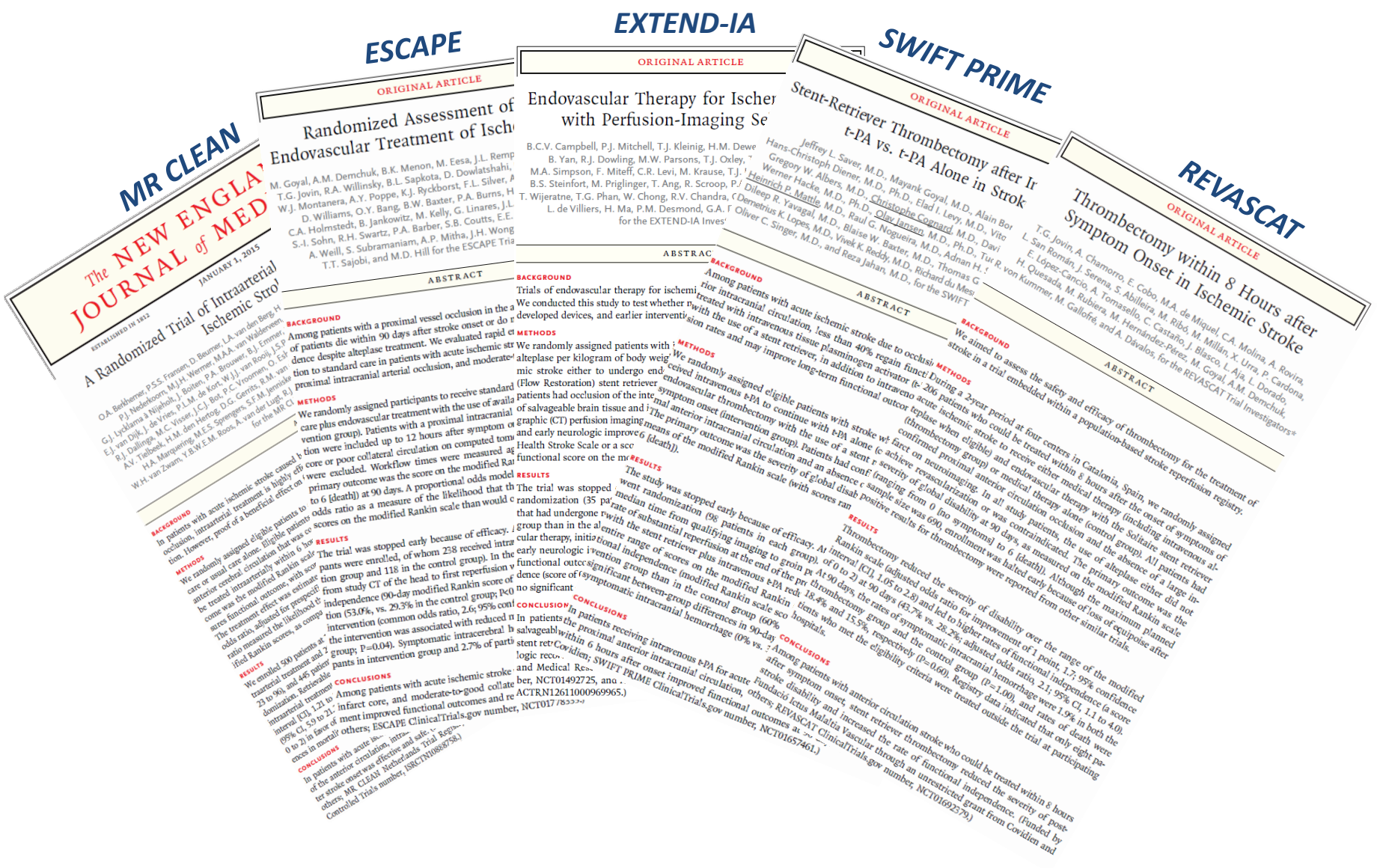
Endovascular treatment of acute ischemic stroke: the end or just the beginning?

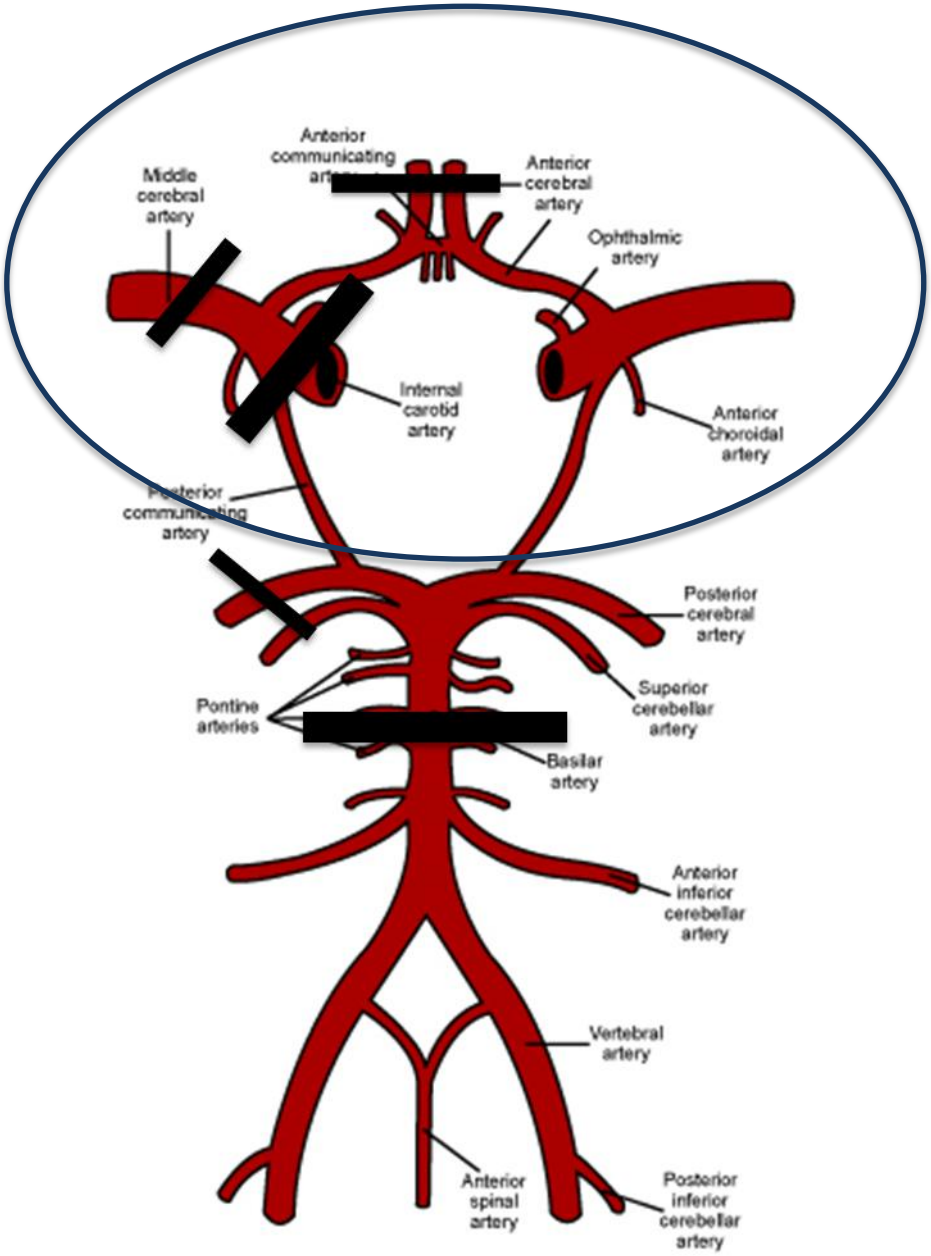
Maxim Mokin, M.D., Ph.D.,[1] Alexander A. Khalessi, M.D., M.S.,[3] J Mocco, M.D., M.S.,[4] Giuseppe Lanzino, M.D.,[5] Travis M. Dumont, M.D.,[1] Ricardo A. Hanel, M.D., Ph.D.,[6] Demetrius K. Lopes, M.D.,[7] Richard D. Fessler II, M.D.,[8] Andrew J. Ringer, M.D.,[9] Bernard R. Bendok, M.D.,[10] Erol Veznedaroglu, M.D.,[11] Adnan H. Siddiqui, M.D., Ph.D.,[1,2] L. Nelson Hopkins, M.D.,[1,2] and Elad I. Levy, M.D., M.B.A.[1,2]

Departments of [1]Neurosurgery and [2]Radiology, School of Medicine and Biomedical Sciences, University at Buffalo, State University of New York, Buffalo, New York; [3]Division of Neurosurgery, University of California, San Diego, California; [4]Department of Neurosurgery, Vanderbilt University, Nashville, Tennessee; [5]Departments of Neurologic Surgery and Radiology, Mayo Clinic, Rochester, Minnesota; [6]Department of Neurosurgery, Mayo Clinic, Jacksonville, Florida; [7]Department of Neurosurgery, Rush University Medical Center, Chicago, Illinois; [8]Department of Neurosurgery, St. John Providence Health System, Detroit, Michigan; [9]Department of Neurosurgery, Mayfield Clinic, University of Cincinnati, Ohio; [10]Department of Neurosurgery, Northwestern University, Chicago, Illinois; and [11]Department of Neurosurgery, Capital Health Institute for Neurosciences, Trenton, New Jersey

Neurosurg Focus. 2014 Jan;36(1):E5.

2015


MR CLEAN
The NEW ENGLAND JOURNAL of MEDICINE
ESTABLISHED IN 1812
JANUARY 1, 2015
A Randomized Trial of Intraarterial Ischemic Stroke
ESCAPE
ORIGINAL ARTICLE
Randomized Assessment of Endovascular Treatment of Isch
EXTEND-IA
ORIGINAL ARTICLE
Endovascular Therapy for Ischer with Perfusion-Imaging Se
SWIFT PRIME
ORIGINAL ARTICLE
Stent-Retriever Thrombectomy after Ir t-PA vs. t-PA Alone in Strok
REVASCAT
ORIGINAL ARTICLE
Thrombectomy within 8 Hours after Symptom Onset in Ischemic Stroke
ABSTRACT
BACKGROUND
METHODS
RESULTS
CONCLUSIONS



Grossi vasi

Circolo anteriore


Alteplase

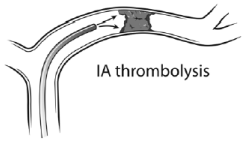

Alteplase


PHILIPS

Trombectomia meccanica con stent-retrievers!

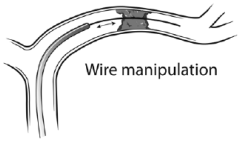
Tecniche endovascolari nello stroke ischemico acuto

Trombolisi Intra-arteriosa

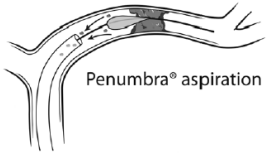


Trombectomia meccanica

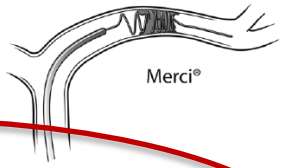
- Frammentazione meccanica



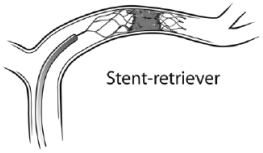
- Aspirazione del trombo



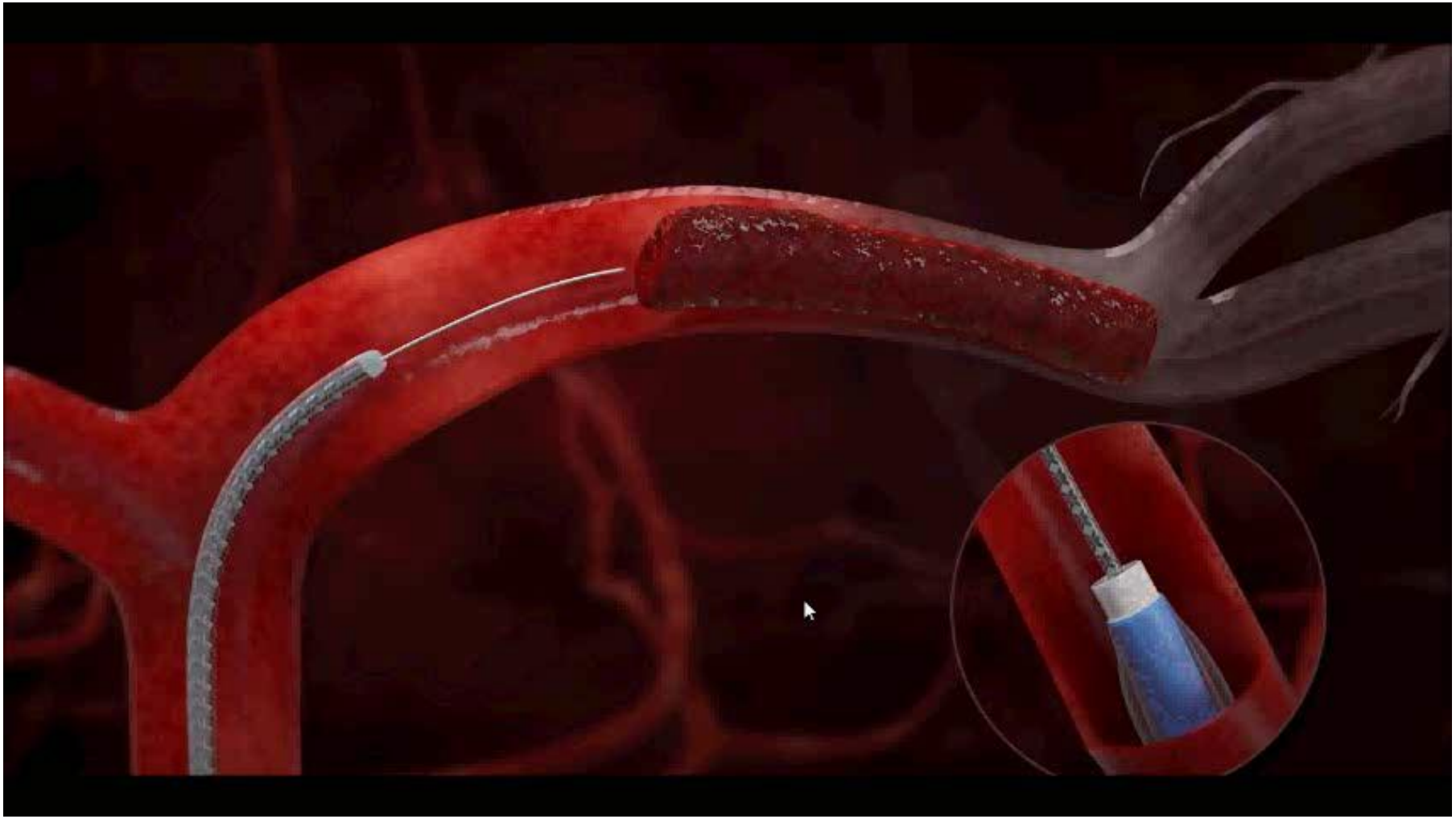
- Merci® retriever



- Stent retrievers



Neurosurg Focus. 2014 Jan;36(1):E5.



Thrombectomy works!

	Recanalization		Death at 90 days		Independence (mRS 0-2) at 90 days	
	MT	Control	MT	Control	MT	Control
MR CLEAN [1]	75%	32%	21%	22%	33%	19%
ESCAPE [2]	72%	31%	10%	19%	53%	29%
EXTEND IA [3]	100%	37%	9%	20%	71%	40%
SWIFT PRIME [4]	83%	40%	9%	12%	60%	36%
REVASCAT [5]	66%	-	18%	15%	44%	28%
***TOTAL*[6]**	***71%***	***-***	***15%***	***19%***	***46%***	***27%***

1. Berkhmeer et al. *NEJM* 2015
2. Goyal et al. *NEJM* 2015
3. Campbell et al. *NEJM* 2015
4. Saver et al. NEJM 2015
5. Jovin et al. NEJM 2015
6. Goyal et al. Lancet 2016

Trombectomia Meccanica

standard of care

Consensus

International Journal of Stroke WSO

Mechanical thrombectomy in acute ischemic stroke: Consensus statement by ESO-Karolinska Stroke Update 2014/2015, supported by ESO, ESMINT, ESNR and EAN

International Journal of Stroke
2016, Vol. 11(1) 134–147

DOI: 10.1177/1747493015609778
wso.sagepub.com
SAGE

Nils Wahlgren[1,2], Tiago Moreira[1,2], Patrik Michel[3], Thorsten Steiner[4,5], Olav Jansen[6], Christophe Cognard[7], Heinrich P Mattle[8,9], Wim van Zwam[10], Staffan Holmin[1,11], Turgut Tatlisumak[12,13,14], Jesper Petersson[15,16], Valeria Caso[17], Werner Hacke[4], Mikael Mazighi[18], Marcel Arnold[8,9], Urs Fischer[8,9], Istvan Szikora[19], Laurent Pierot[20], Jens Fiehler[21], Jan Gralla[22], Franz Fazekas[23]; Kennedy R Lees[24,25] for ESO-KSU, ESO, ESMINT, ESNR and EAN

- Mechanical thrombectomy, in addition to intravenous thrombolysis within 4.5 h when eligible, is recommended to treat acute stroke patients with large artery occlusions in the anterior circulation up to 6 h after symptom onset (Grade A, Level 1a, KSU Grade A). – *new*

AHA/ASA Guideline

2015 American Heart Association/American Stroke Association Focused Update of the 2013 Guidelines for the Early Management of Patients With Acute Ischemic Stroke Regarding Endovascular Treatment

A Guideline for Healthcare Professionals From the American Heart Association/American Stroke Association

The American Academy of Neurology affirms the value of this guideline as an educational tool for neurologists.

Endorsed by the American Association of Neurological Surgeons (AANS); Congress of Neurological Surgeons (CNS); AANS/CNS Cerebrovascular Section; American Society of Neuroradiology; and Society of Vascular and Interventional Neurology

2. Patients should receive endovascular therapy with a stent retriever if they meet all the following criteria *(Class I; Level of Evidence A)*. (New recommendation):

a. Prestroke mRS score 0 to 1,

b. Acute ischemic stroke receiving intravenous r-tPA within 4.5 hours of onset according to guidelines from professional medical societies,

c. Causative occlusion of the ICA or proximal MCA (M1),

d. Age ≥18 years,

e. NIHSS score of ≥6,

f. ASPECTS of ≥6, and

g. Treatment can be initiated (groin puncture) within 6 hours of symptom onset

Guidelines

International Journal of Stroke WSO

International Journal of Stroke
2016, Vol. 11(6) 701–716

DOI: 10.1177/1747493016647735
wso.sagepub.com
SAGE

European Recommendations on Organisation of Interventional Care in Acute Stroke (EROICAS)

Jens Fiehler[1], Christophe Cognard[2], Mauro Gallitelli[3], Olav Jansen[4], Adam Kobayashi[5], Heinrich P Mattle[6], Keith W Muir[7], Mikael Mazighi[8], Karl Schaller[9] and Peter D Schellinger[10]

Please see the acknowledgements for the list of participating societies

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[2]Department of Neuroradiology, University Hospital of Toulouse, Toulouse, France
[3]Emergency Department, Ospedale "Santi Giovanni e Paolo", Venice, Italy
[4]Department of Radiology and Neuroradiology, University Medical Center of Schleswig-Holstein, Campus Kiel, Germany
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[7]Institute of Neuroscience and Psychology, University of Glasgow, Queen Elizabeth University Hospital, Glasgow, Scotland, United Kingdom
[8]Department of Neurology and Stroke Center, AP-HP, Lariboisière Hospital, Paris, France
[9]Department of Neurosurgery, University of Geneva, Medical Center, Geneva, Switzerland
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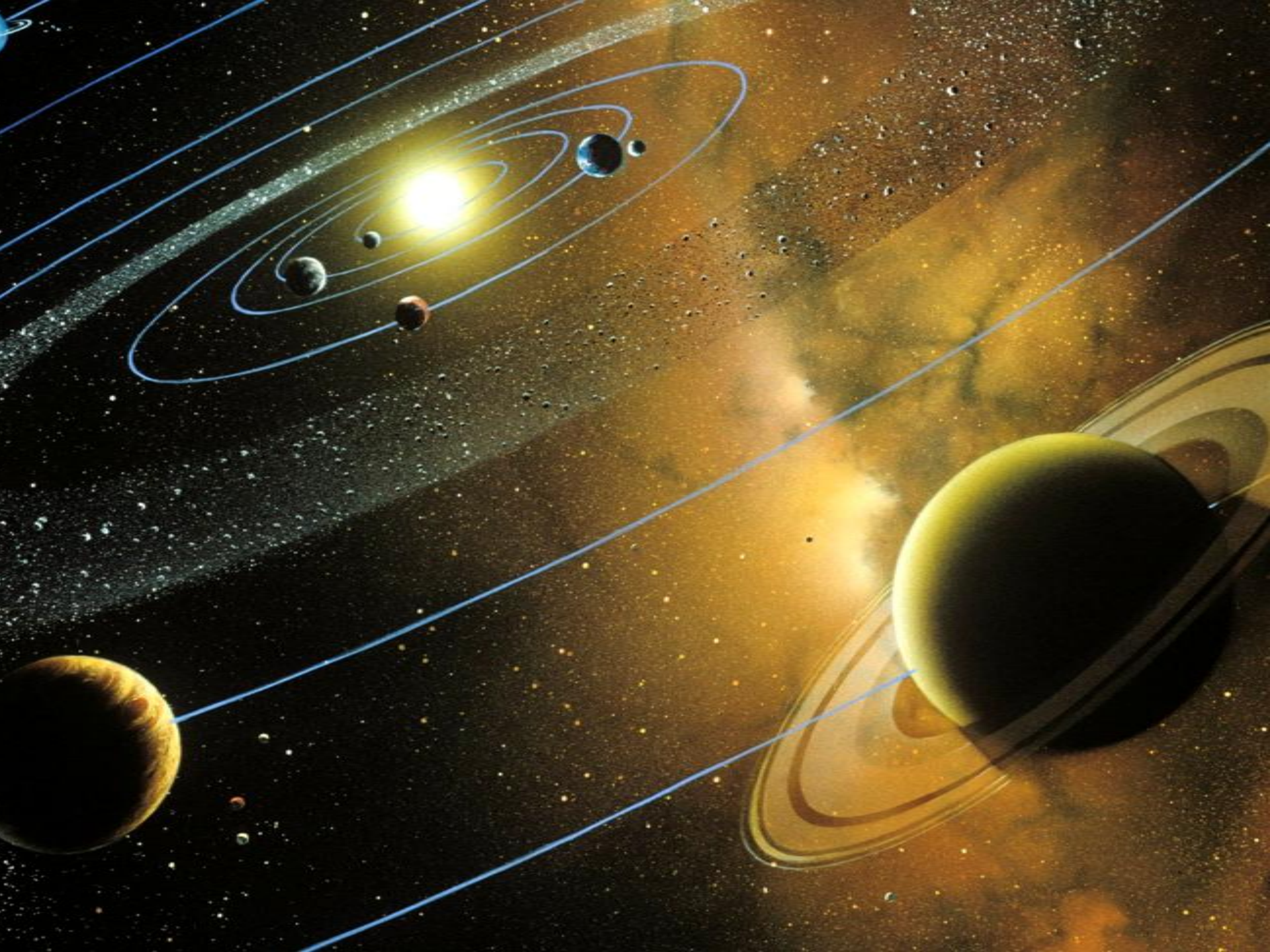
The recommendations were developed by the European Academy of Neurology (EAN), the European Association of Neurosurgical Societies (EANS), the European Society of Emergency Medicine (EuSEM), the European Society of Minimally Invasive Neurological Therapy (ESMINT), the European Society of Neuroradiology (ESNR), and the European Stroke Organisation (ESO).


HOSPITAL
EMERGENCY



La scelta di fare/non fare la trombolisi sarà condivisa da neurologo e medico dell'urgenza…

…imparare a maneggiare l’alteplase

…un farmaco dell’urgenza…

…inserirlo nei budget di reparto…

…trasferire un paziente con infusione di trombolitico in corso…

CLINICO

ORGANIZZATIVO

Comprehensive Stroke Center
(hub)

Come selezionare i pazienti da inviare in Neuroradiologia?

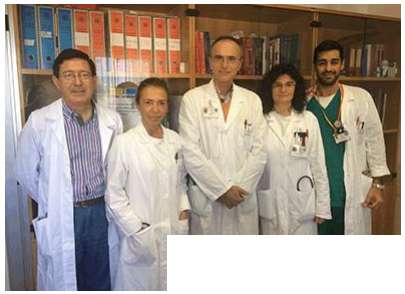
Utilizzo di score clinici?

La Radiologia del centro spoke può aiutare con angio-TC cerebrale?

Alcuni pazienti centralizzati direttamente dal territorio?

Chi trasferisce il paziente con trombolisi in corso? Il neurologo o il medico dell'urgenza?

Il cardiologo interventista può intervenire sul circolo cerebrale?



X CONGRESSO NAZIONALE SIMEU - ABSTRACTS

18 NOVEMBRE 2016 SALA PANAREA

16:00 Trombolisi locoregionale nell'ictus ischemico. Costruzione di un percorso hub-spoke

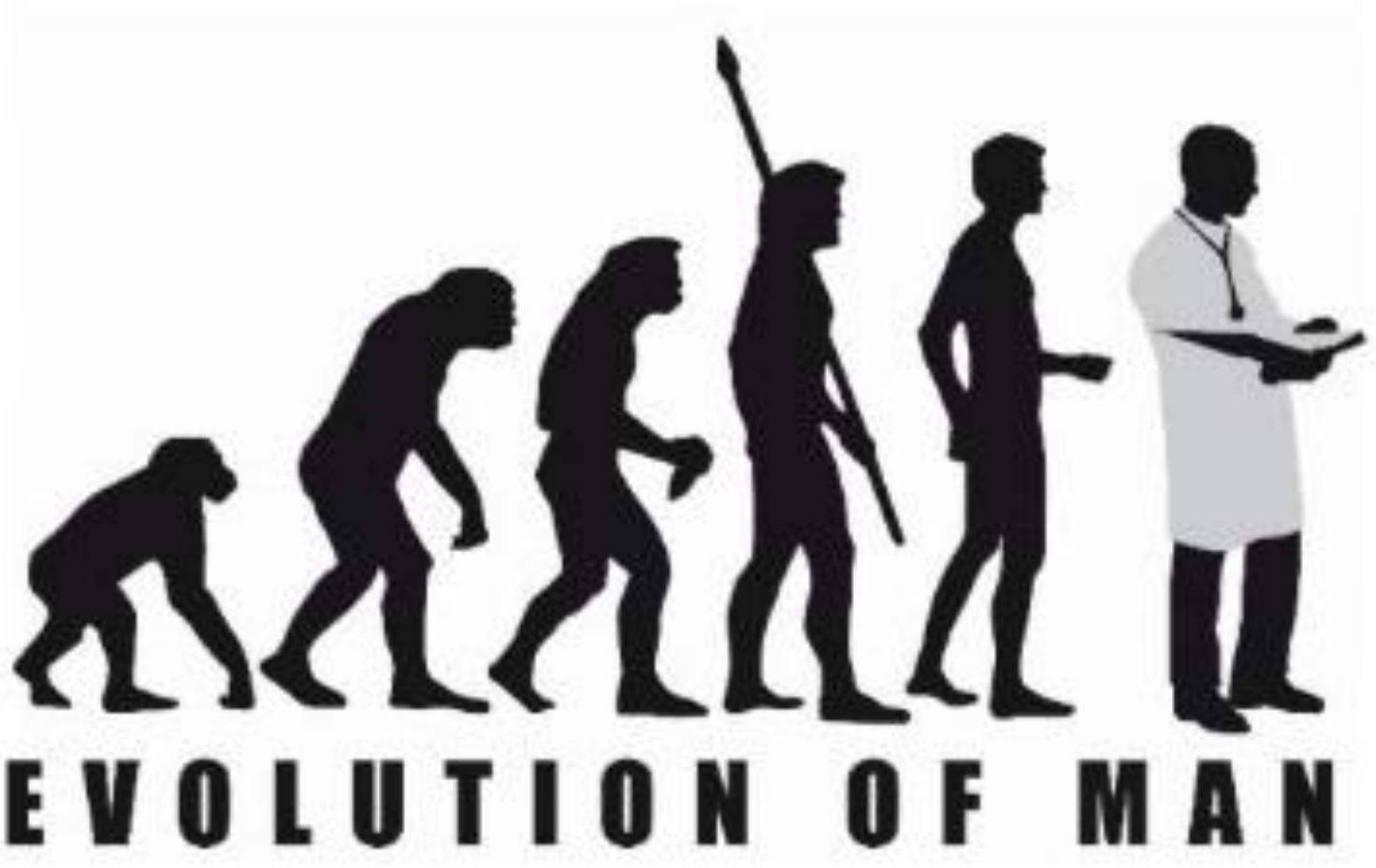
Riccardo De Pasquale, S.C. Medicina d'Urgenza e Pronto Soccorso, ASL 4 Chiavarese

Colombo Rinaldo, Neurologo, S.C. Neurologia, ASL 4 Chiavarese; Pizio Nicola, direttore della S.C. Neurologia, ASL 4 Chiavarese; Giuseppina Fera, Medico, DEA ASL 4 Chiavarese; Stefania Moretti, responsabile S.S. OBI, DEA ASL 4 Chiavarese; Sanna Roberto, direttore 118 Tigullio Soccorso; Devoto Gianluigi, direttore S.C. Patologia Clinica, ASL 4 Chiavarese; Silvia Cantoni, direttore Radiologia ASL 4 Chiavarese; Lucio Castellan, direttore U.O. Neuroradiologia, IRCCS San Martino di Genova; Iannone Primiano, direttore Dipartimento di Emergenza e Accettazione-Pronto Soccorso ASL 4 Chiavarese.

TAKE HOME MESSAGES

Trombectomia Meccanica

standard of care


EVOLUTION OF MAN

C’era un volta…

…quando prendevamo atto dello stroke e si ricoverava il paziente

Poi venne il tempo…

…quando dovevamo allertare il neurologo tempestivamente

Ora…

…dobbiamo condividere con i neurologi indicazioni e controindicazioni alla **trombolisi**

Grazie.

Mauro Gallitelli

x congresso nazionale
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NAPOLI 18-20 NOVEMBRE 2016

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