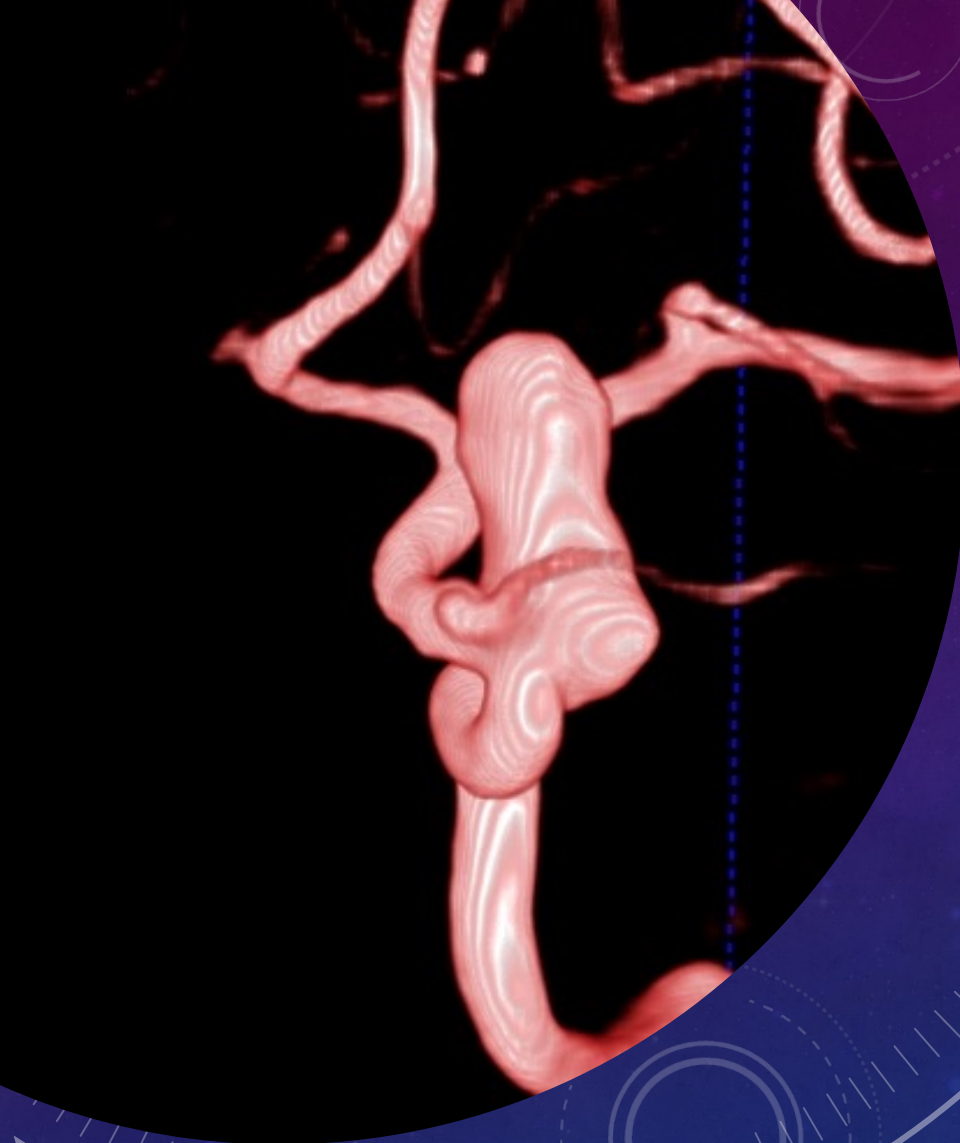
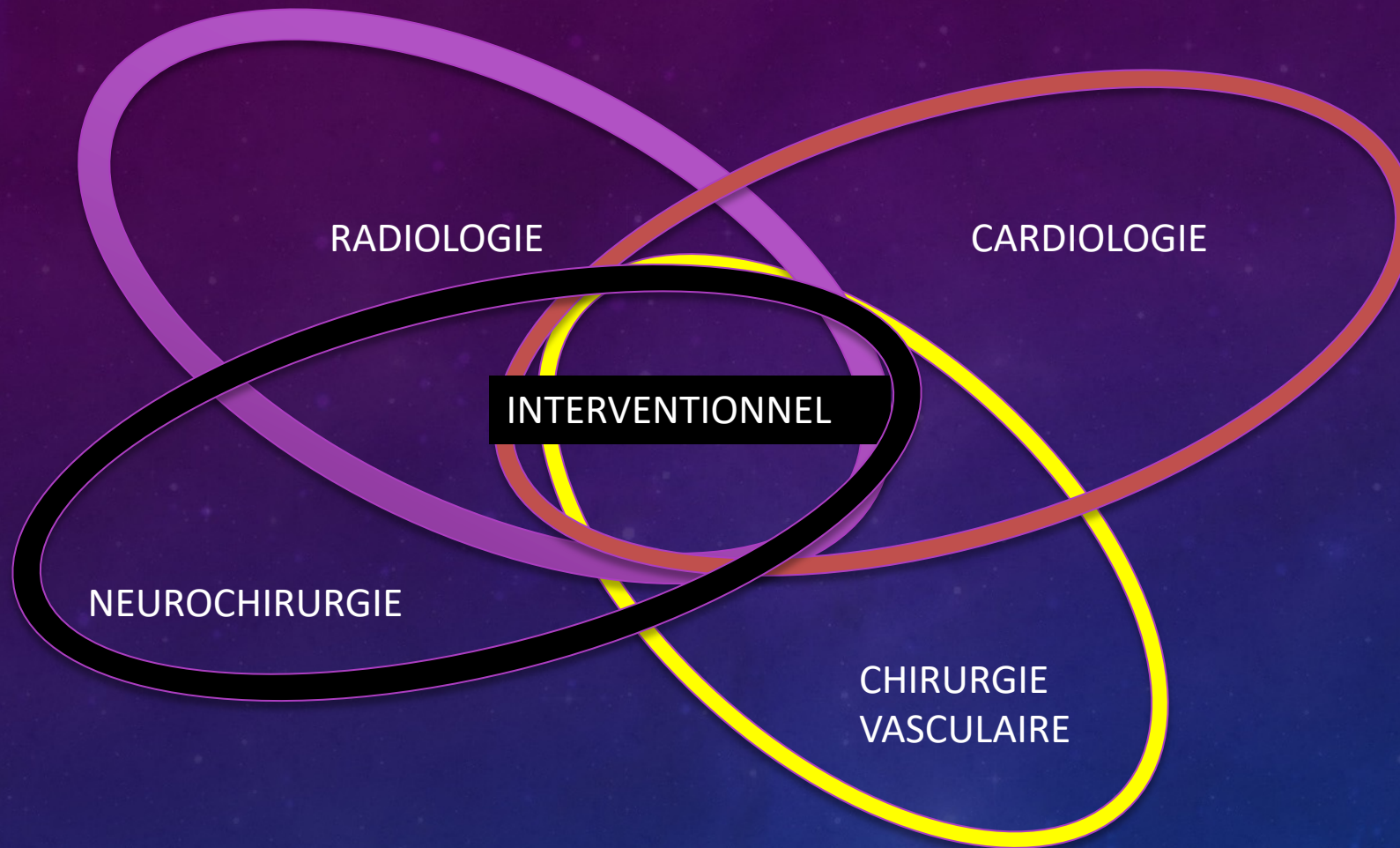




LA NEUROINTERVENTIONNELLE VASCULAIRE EN 2024

LA MEDECINE A CHANGE: notre métier aussi

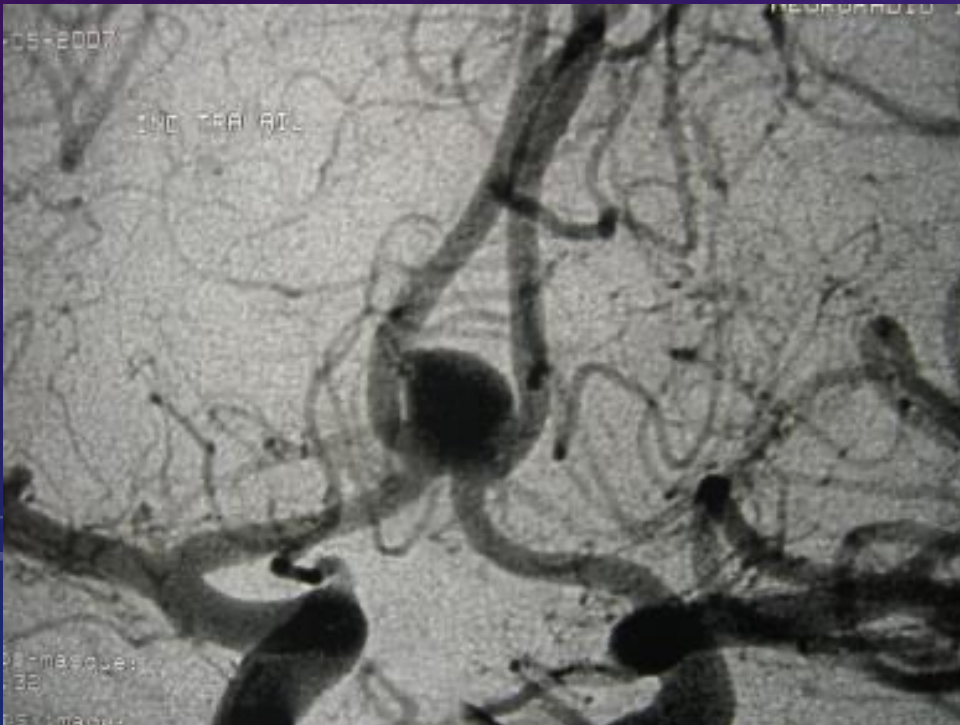
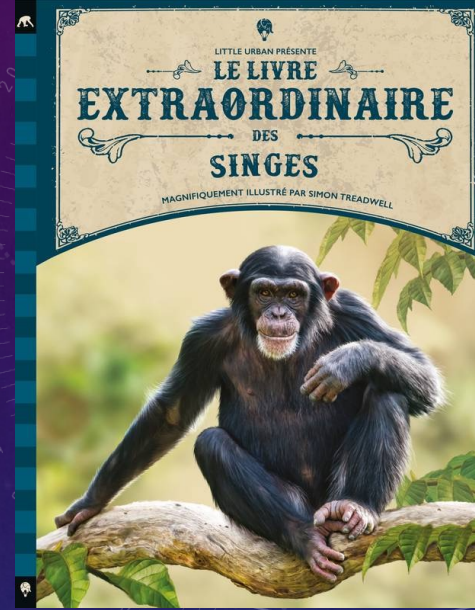


**2024 : Création (enfin) du SERVICE D'INTERVENTIONNEL NEUROLOGIQUE ET
GENERALE DU CHU**

SERVICE D'INTERVENTIONNEL NEUROLOGIQUE ET GENERALE: le SINGe

1 Passé: il y a 30 ans: = Actes héroïques (Contre-indications chirurgicales)

2 Présent: Actes = traitement de premier intention dans plusieurs pathologies vasculaires cérébrales



ANEVRYSMES INTRACRANIENS:

➤ ISAT 2002,...

(International Subarachnoid Aneurysm Trial *Lancet*)



AVC: phase aigue depuis 2015, ...



Présent: Réglementation- décret ministériel

- Le décret n° 2005-434 du 6 mai 2005 a inscrit la neurochirurgie et les activités interventionnelles par voie endovasculaire en neuroradiologie dans les activités de soins soumises à autorisation.
- Conditions: Une unité d'hospitalisation, bloc d'interventionnel spécifique; une unité de neurochirurgie autorisée; Une UNV;
Une unité de réanimation autorisée ;
Un plateau technique d'imagerie permettant de pratiquer des examens de neuroradiologie 24h/24.
- Conditions: médecins avec formation spécifique. activité minimum (>80 actes /an). Consultations. Permanence des soins.



REGION PACA: autorisation pour deux sites :
PASTEUR 2 + LA TIMONE (+ St ANNE)

PRISE EN CHARGE DES ANEVRYSMES CEREBRAUX

Traitement endovasculaire de l'anévrysme
(recommandation 1 Stroke 2023)
traitement de première intention des anévrysmes rompus
depuis 2002.

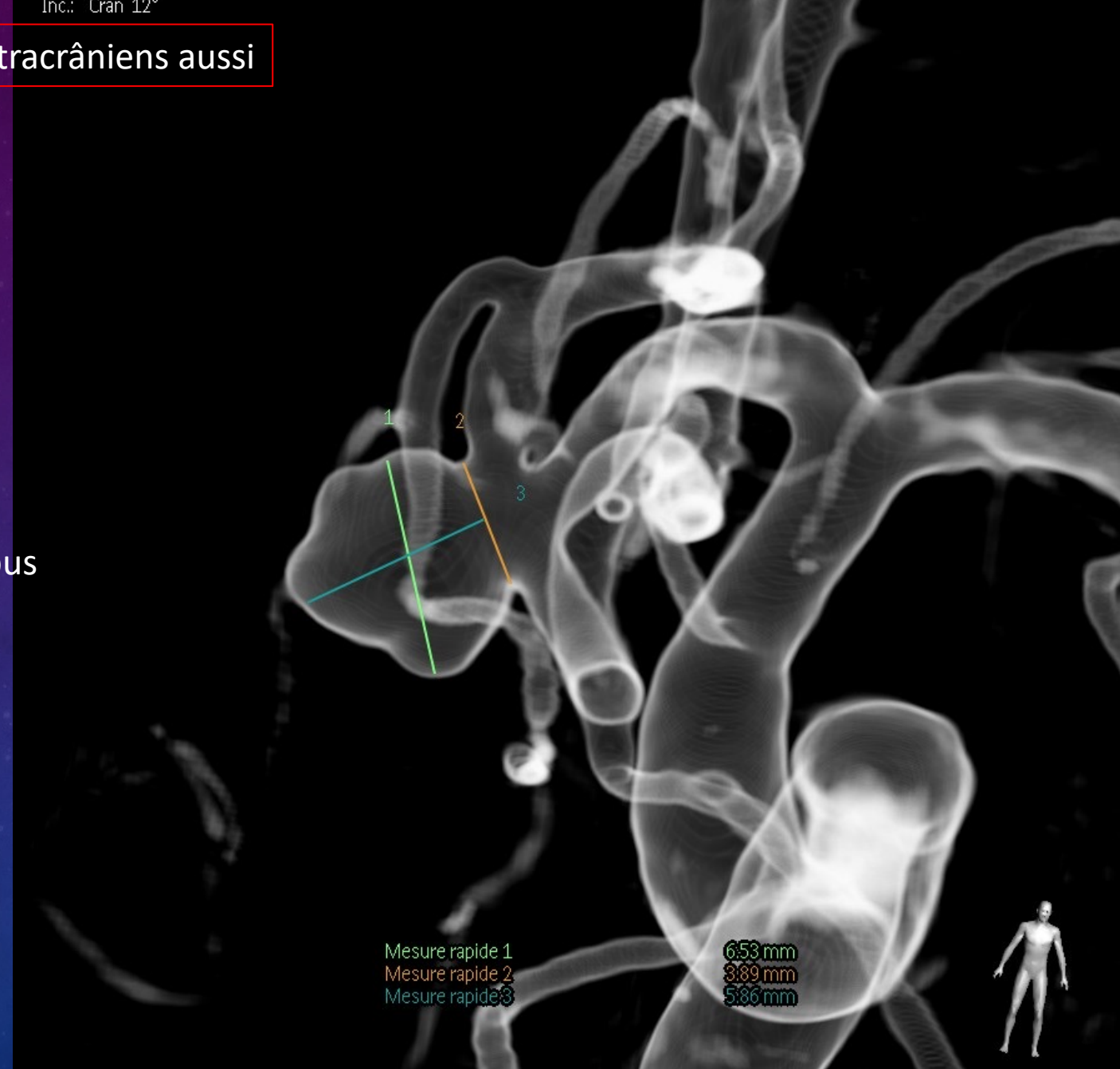
Endovasculaire >> chirurgie ouverte
ISAT (International Subarachnoid Aneurysm Trial)
Lancet 2002 Lancet 2005: **endovasculaire>chirurgie**

AHA/ASA Guideline

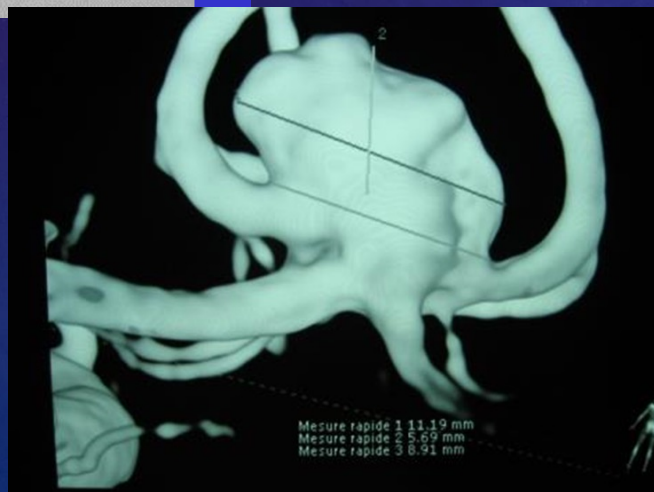
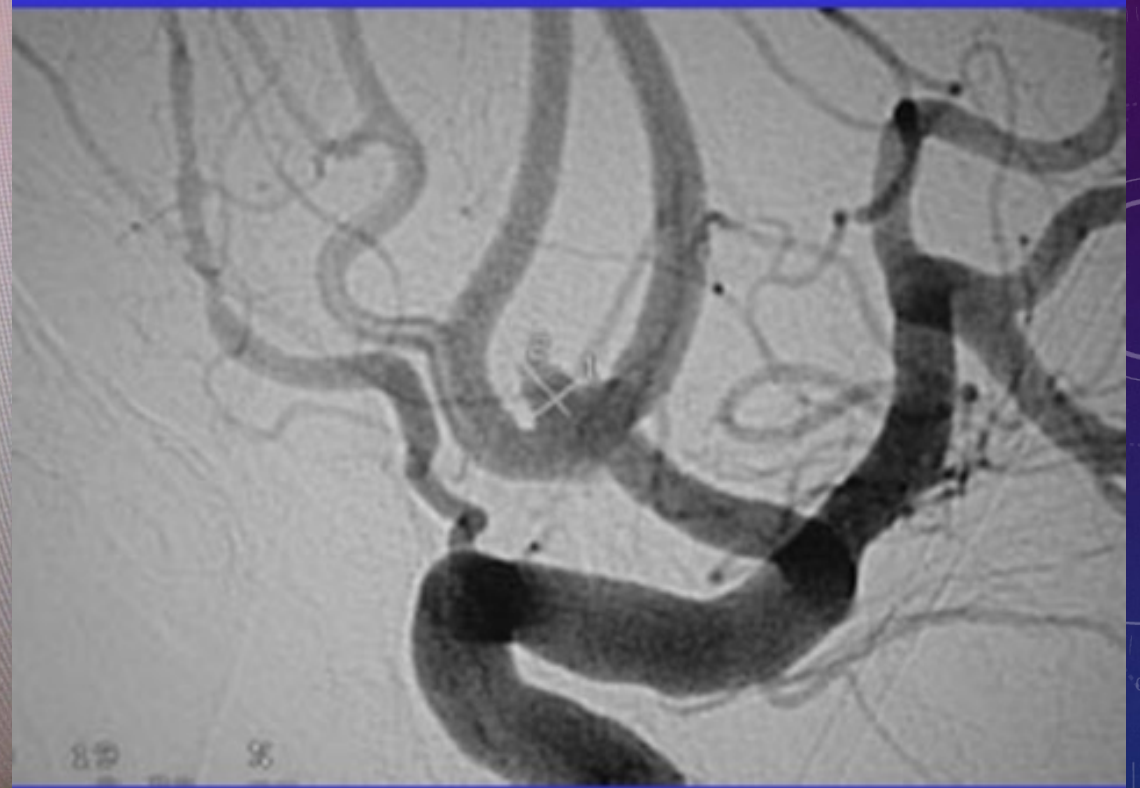
Guidelines for the Management of Aneurysmal Subarachnoid Hemorrhage
A Guideline for Healthcare Professionals From the American Heart Association/American Stroke Association
The American Academy of Neurology affirms the value of this statement as an educational tool for neurologists.
Endorsed by the American Association of Neurological Surgeons and Congress of Neurological Surgeons, and by the Society of NeuroInterventional Surgery
E. Saver, MD, FAHA, Chair; Abraham A. Rabinstein, MD, Vice Chair

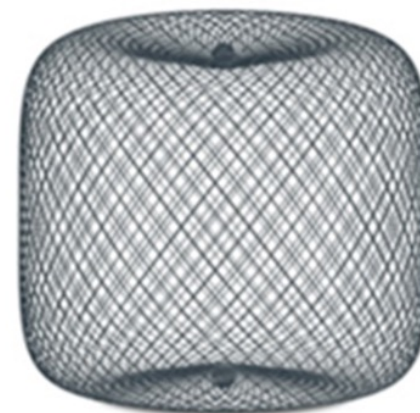
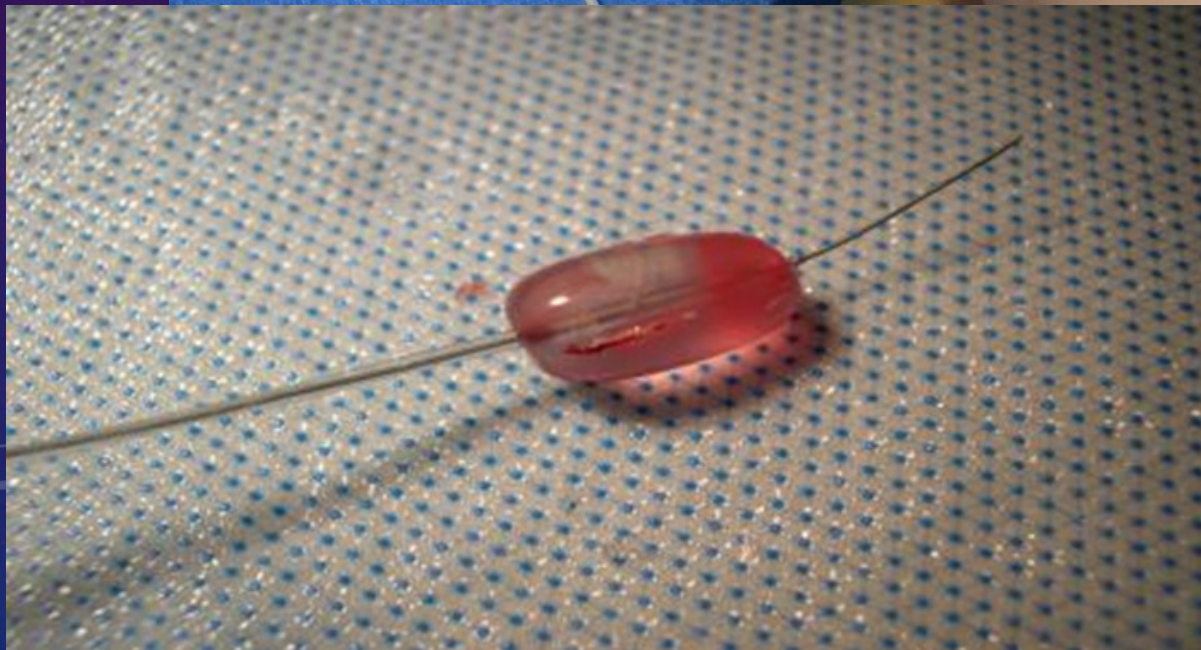
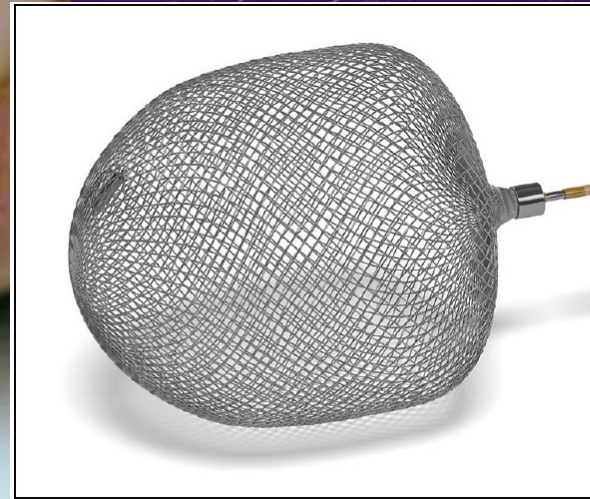
Higher incidence of in-hospital complications in patients with clipped versus coiled ruptured intracranial aneurysms.
Chaturvedi SD, Fang J, Gerschlager W, Sankaranarayanan S, Rabinstein A, Rabinstein A. *Stroke*. 2014;45(11):3005-8. Epub 2014 Aug 25.

Abstract
BACKGROUND AND PURPOSE: After aneurysmal subarachnoid hemorrhage (SAH), patients with clipped aneurysms have a higher incidence of neurologic deficits and seizures compared with patients with coiled aneurysms. It remains unknown if patients with clipped aneurysms also have a higher incidence of other in-hospital complications.

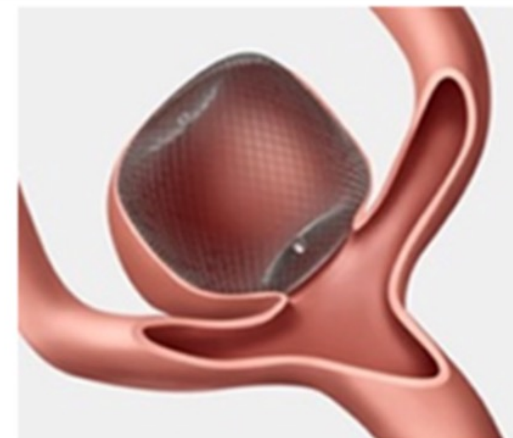


BILAN ANGIOGRAPHIQUE

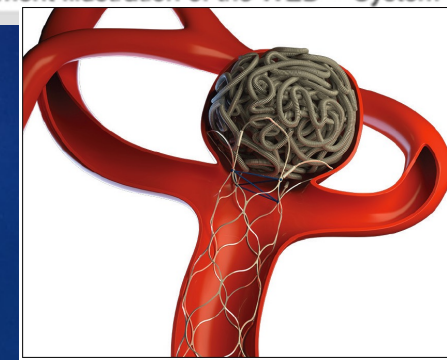


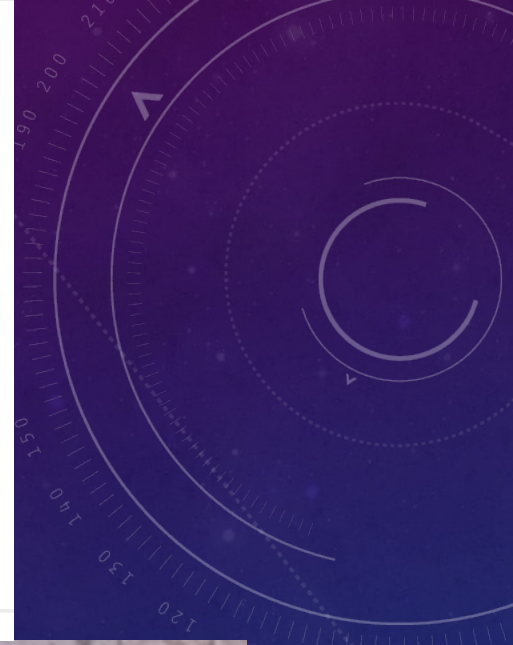
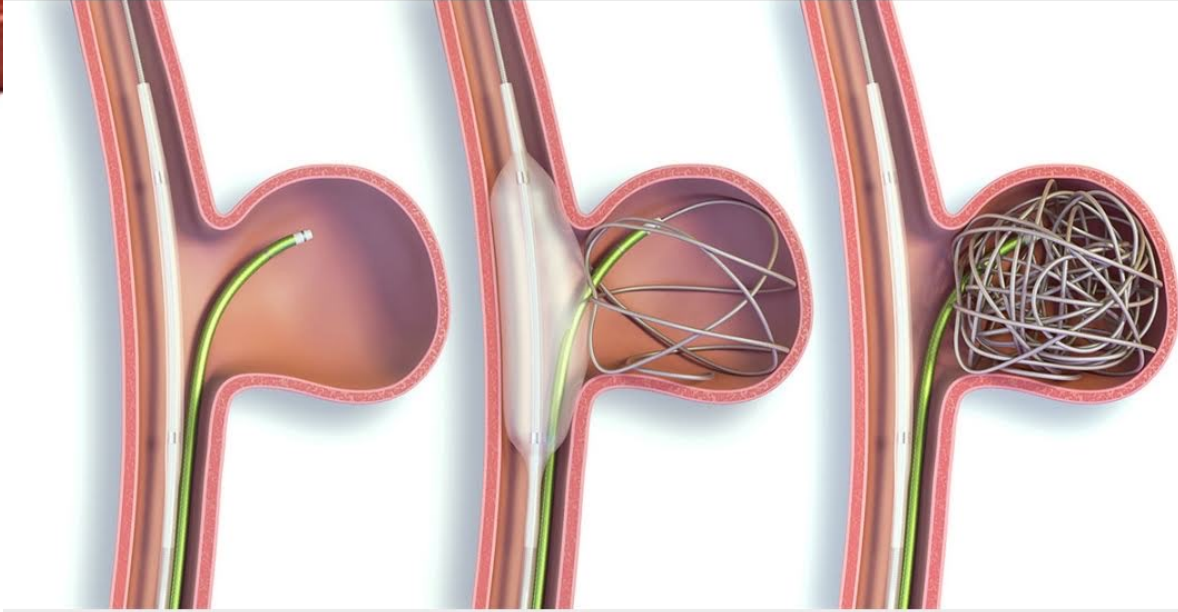


The WEB™ Aneurysm Embolization Device

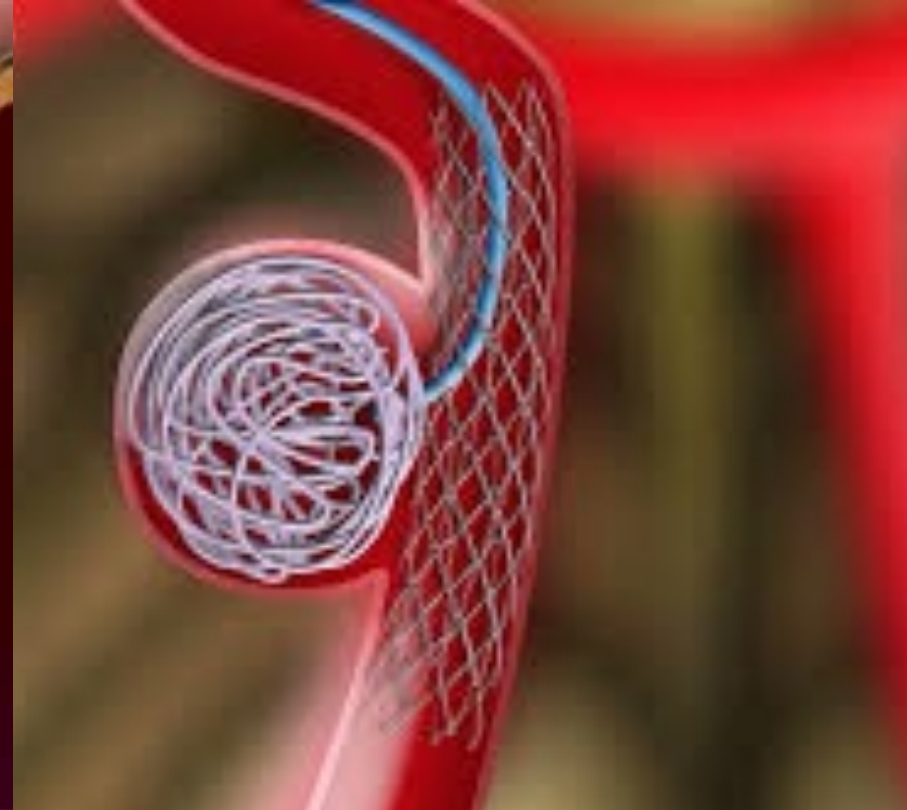
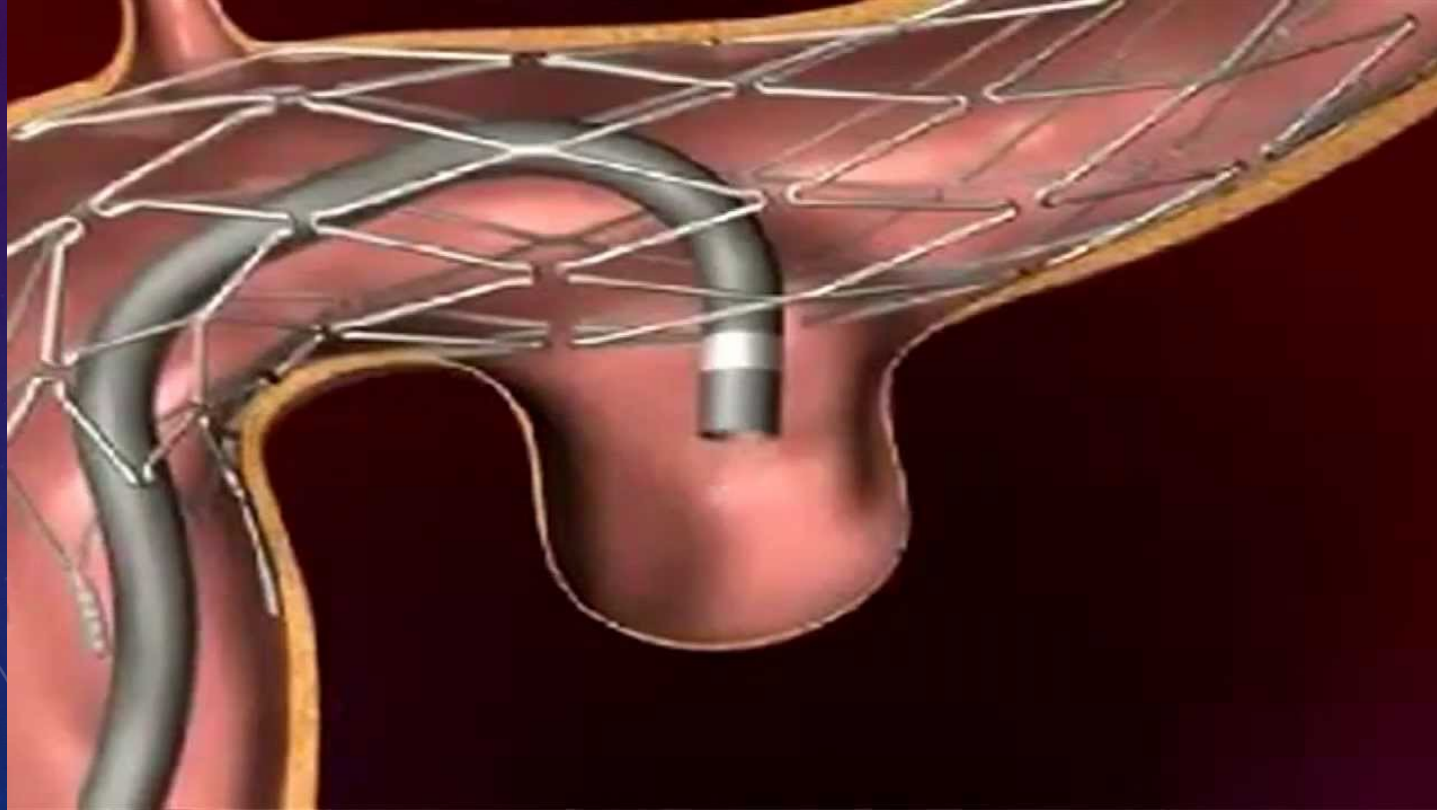
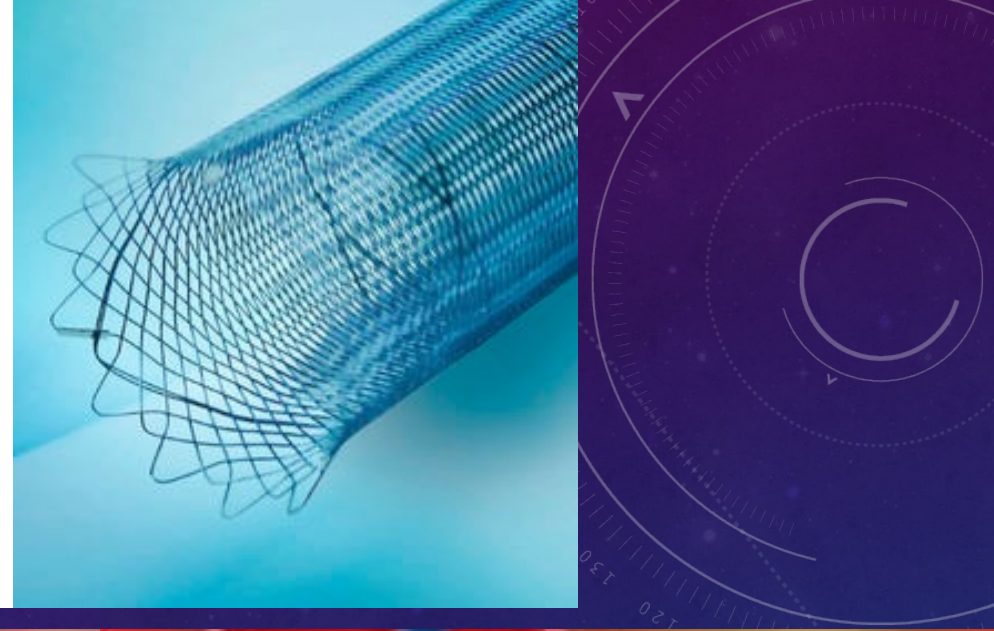
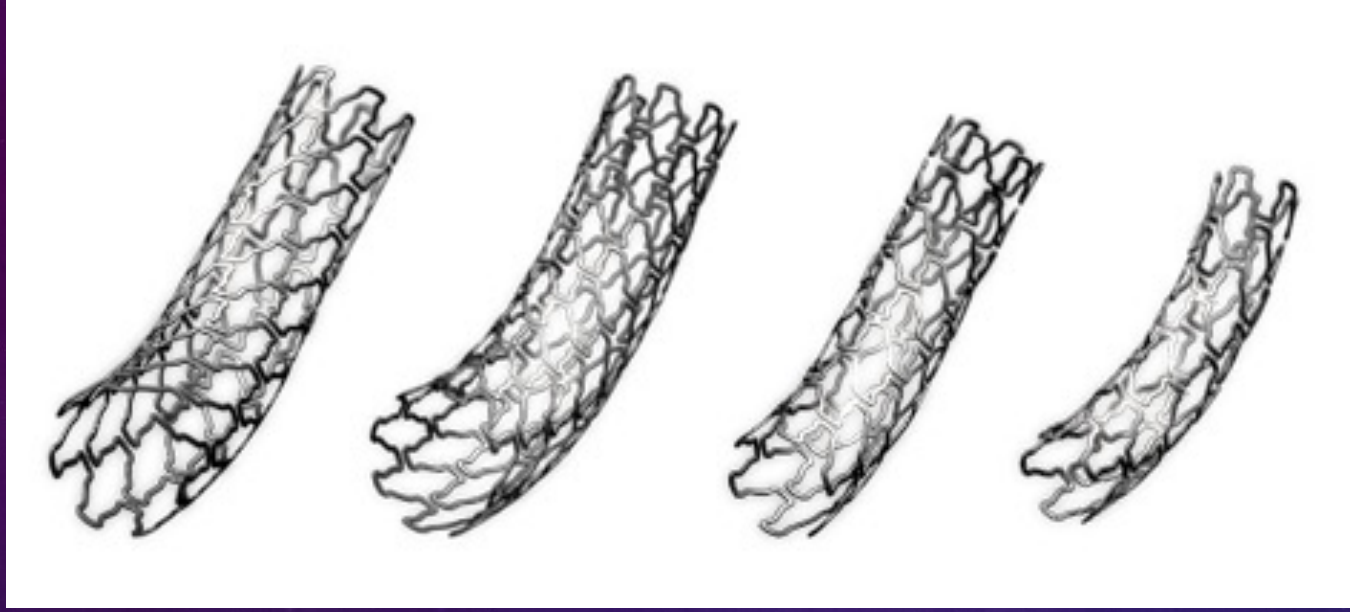


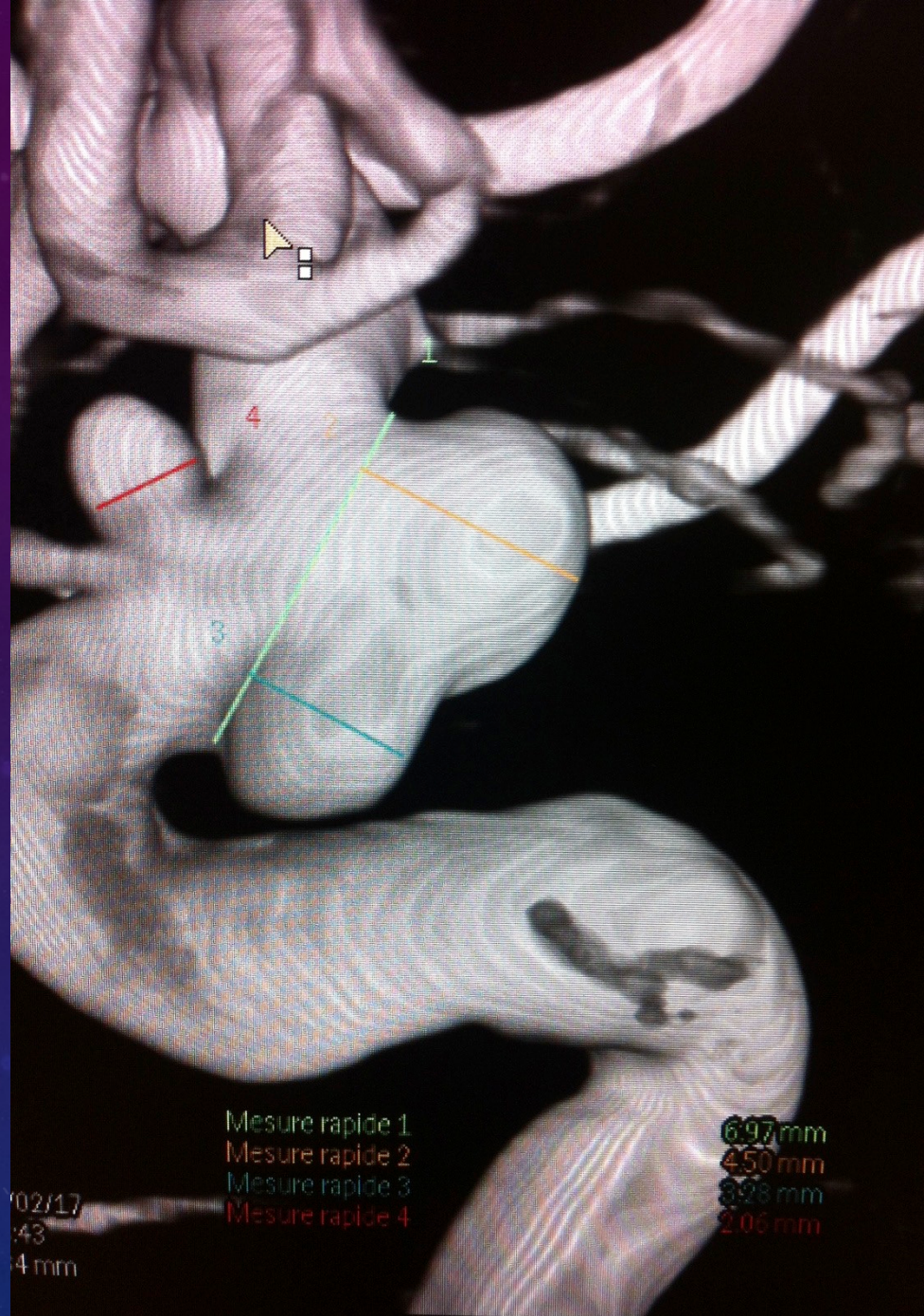
Deployment Illustration of the WEB™ System



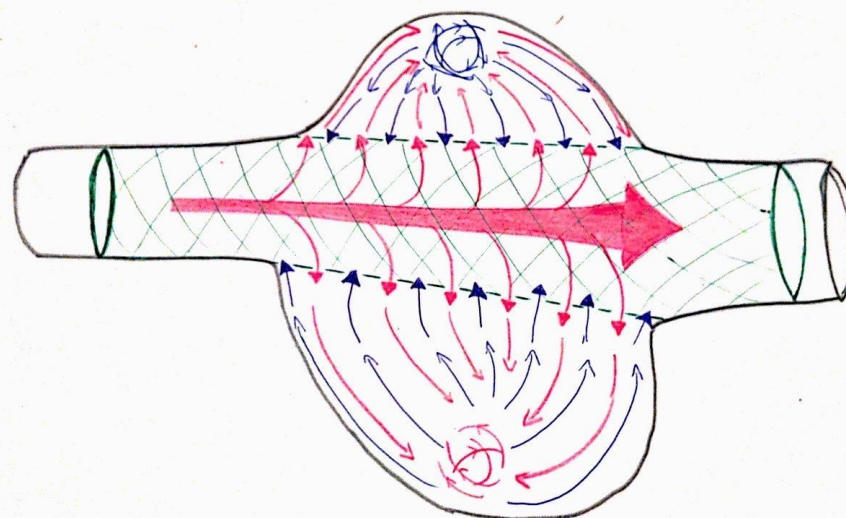
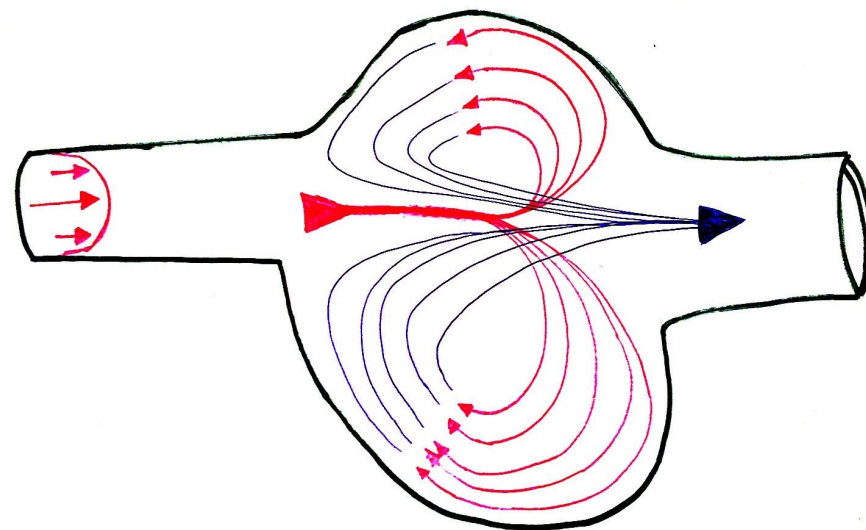
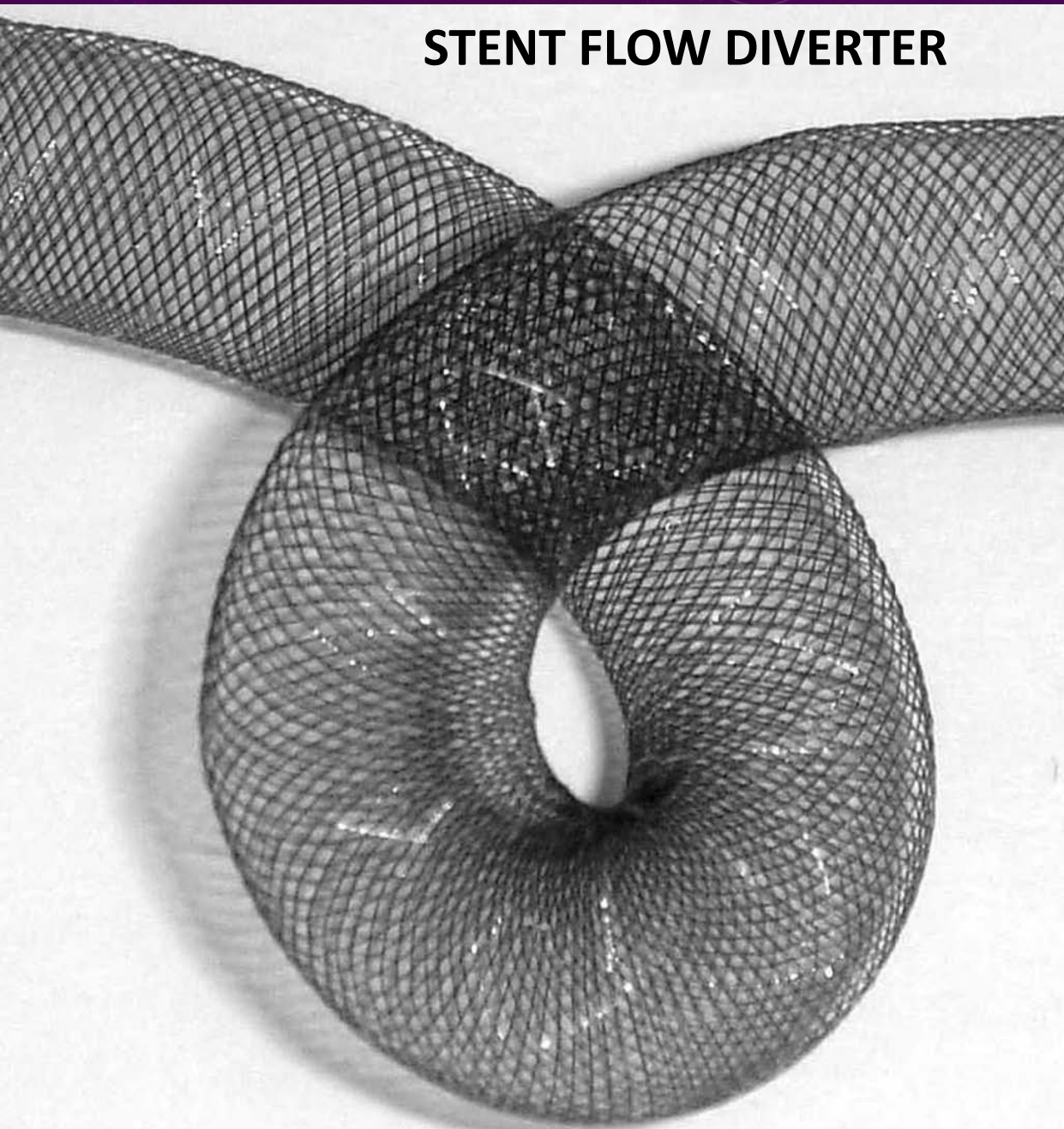


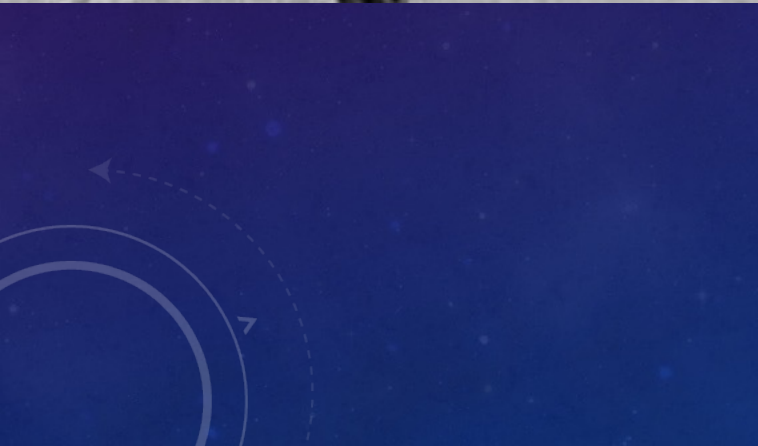
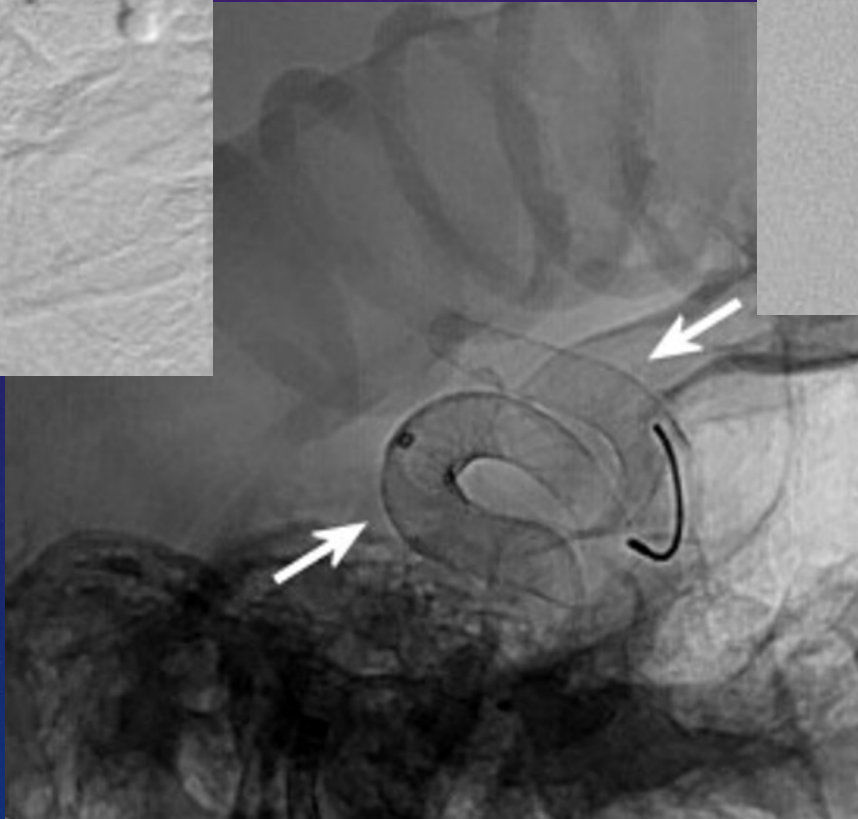
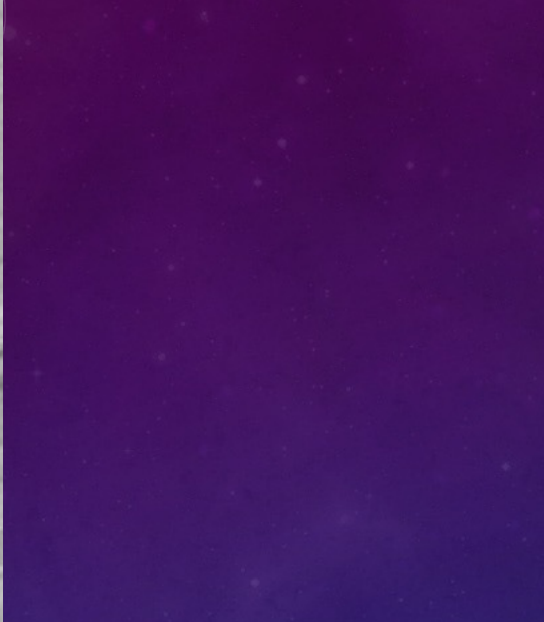
REMODELLING TECHNIQUE





STENT FLOW DIVERTER





LA MEDECINE A CHANGE: la pris en charge des AVC aussi

1 la prise en charge des AVC dépend d’une équipe (Neurologue, Radiologue, Anesthésiste, Interventionnel, 15, ... Rééducateur, Cardiologue... Les transports +++)

2 On réinvente ce que vous avez fait il y a plusieurs années
création des UNV + Thrombolyse IV + désobstruction artérielle

3 La thrombectomie mécanique endovasculaire révolutionne la prise en charge des AVC ischémiques

THROMBECTOMIE PHASE AIGUE AVC ISCHEMIQUE

🏠 Espace Santé Nutrition Nature Animaux High-tech

TEMPS FORTS ▶ Virus Zika Cancer Autisme Cholestérol e-cigarette

À LA UNE

● Error 53 : le coup de Trafalgar d'Apple ?

Sciences > Santé > AVC sévère : vers une révolution dans le traitement

AVC sévère : vers une révolution dans le traitement



Par Hugo Jalinière
Voir tous ses articles

Publié le 22-12-2014 à 13h30
Mis à jour le 23-12-2014 à 09h24

A+ A

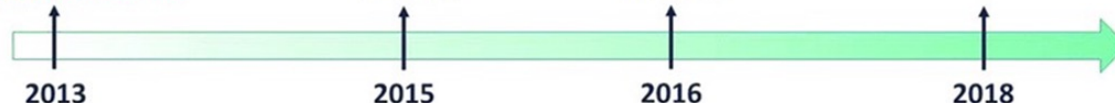
Une étude montre que la thrombectomie mécanique dans le traitement des AVC sévères permettrait bien de réduire significativement les risques de handicaps. Une nouvelle pleine d'espoir.

IMS, MR RESCUE,
SYNTHESIS expansion
(N Engl J Med, 2013)
TM : aucun bénéfice

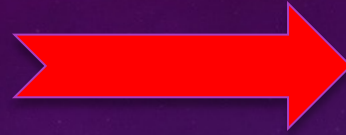
MR CLEAN, ESCAPE,
SWIFT-PRIME,
EXTEND-IA, REVASCAT
(N Engl J Med, 2015)
TM ≤ 6h

THRACE
(Lancet Neurol, 2016)
TM ≤ 6h

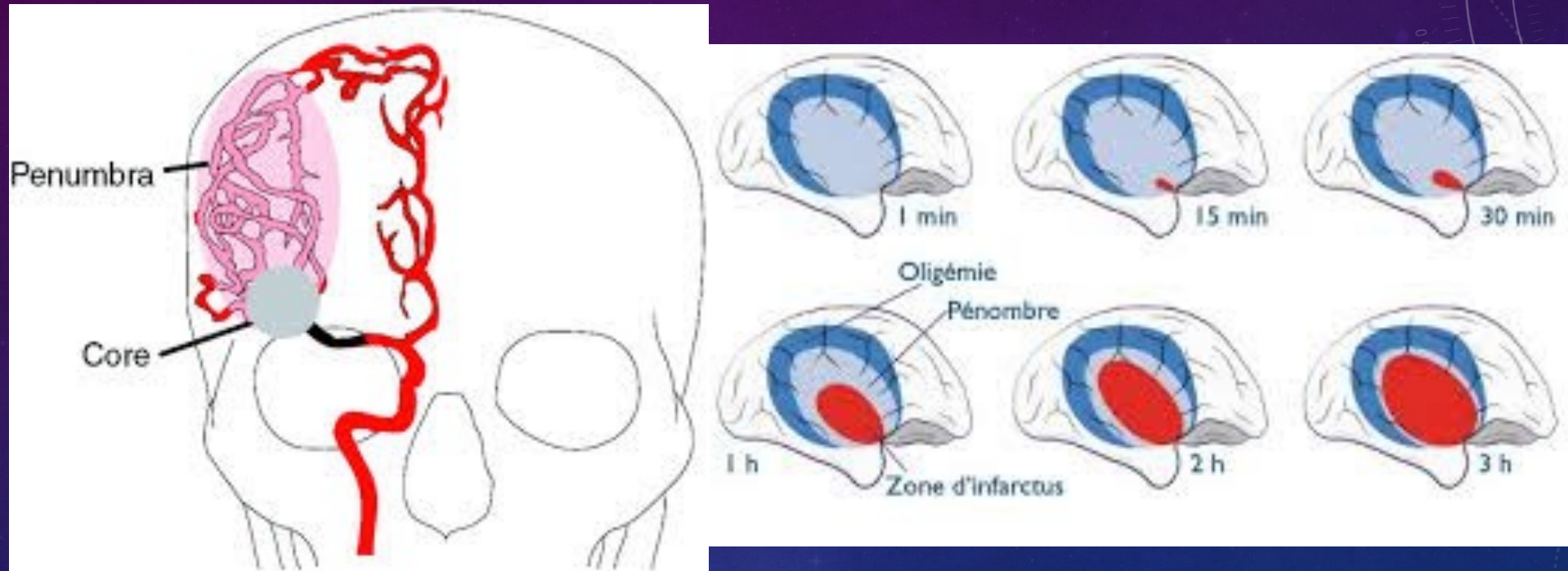
DAWN, DEFUSE 3
(N Engl J Med, 2018)
TM ≤ 24h



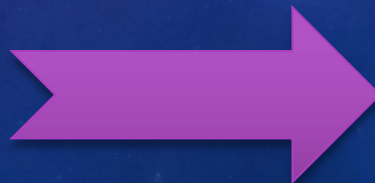
LA RECANALISATION ARTERIELLE: POURQUOI?



NOTION DE PENOMBRE ISCHEMIQUE



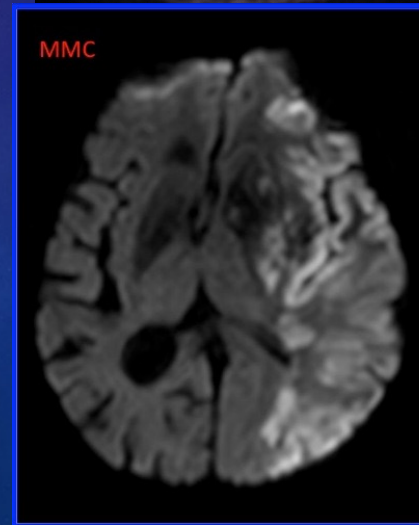
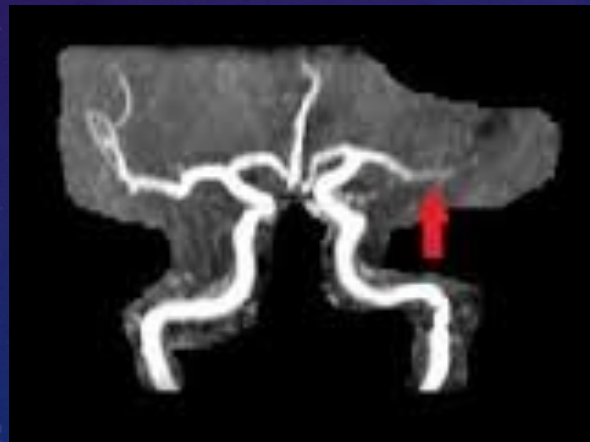
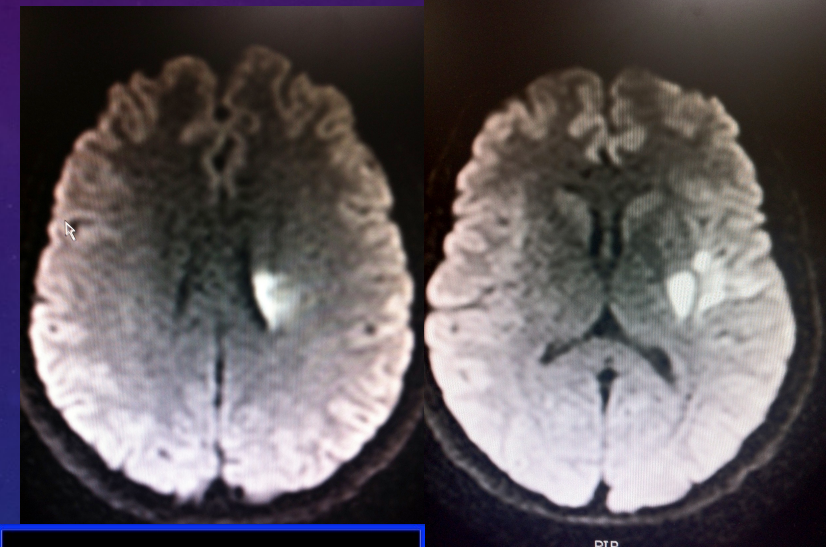
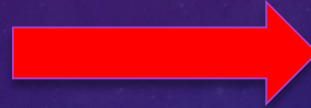
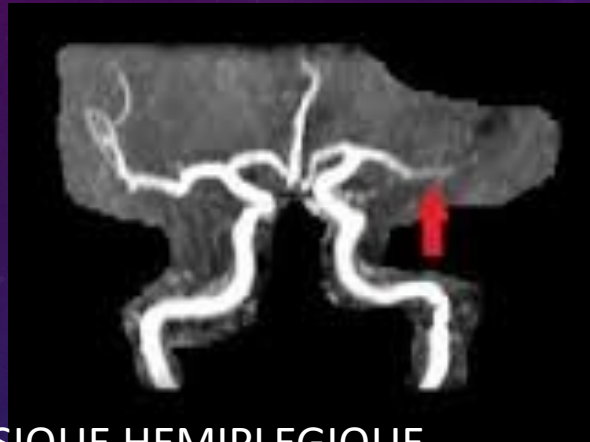
DEBOUCHER LES ARTERES: EST CE (TOUJOURS) UTILE ?



SELECTION DES
PATIENTS

2 IMAGERIE: IRM SCANNER

- 1 ELIMINE HEMORRAGIE CEREBRALE
- 2 CONFIRME DIAGNOSTIC D'ACCIDENT ISCHEMIQUE
- 3 OCCLUSION DU SITE (proximal versus distal)
- 4 NOTION DE MISMATCH RADIOCLINIQUE



PATIENT APHASIQUE HEMIPLEGIQUE

DANS LES 6 HEURES DE L'AVC

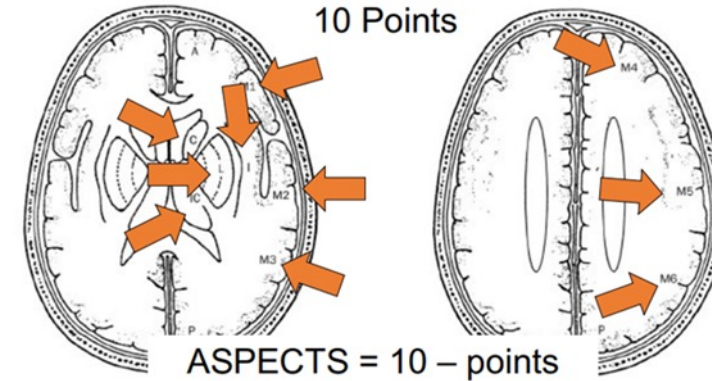
Score NIHSS

Id	Intitulé	Cotation
1a	Vigilance	0 vigilance normale, réactions vives 1 trouble léger de la vigilance : obnubilation, éveil stimulations environnantes 2 coma : réactions adaptées aux stimulations nocives 3 coma grave : réponse stéréotypée ou aucune réponse
1b	Orientation (mois, âge)	0 deux réponses exactes 1 une seule bonne réponse 2 pas de bonne réponse
1c	Commandes (ouverture des yeux, ouverture du poing)	0 deux ordres effectués 1 un seul ordre effectué 2 aucun ordre effectué
2	Oculomotricité	0 Oculomotricité normale 1 Optomotricité partielle ou déviation réductible 2 Optomotricité horizontale complète ou déviation
3	Champ visuel	0 Champ visuel normal 1 Quadrantopie latérale homonyme ou hémianopsie négligence visuelle unilatérale 2 Hémianopsie latérale homonyme franche 3 Cécité bilatérale ou coma (1a = 3)
4	Paralysie faciale	0 Motricité faciale normale 1 Asymétrie faciale modérée (1/3 unilatérale incon- 2 Paralysie faciale unilatérale centrale franche 3 Paralysie faciale périphérique ou diplopie faciale

Etendue de l'AVC

-Evaluation du volume en diffusion: [logiciel spécifique](#)

- Score **ASPECTS**



La TIV doit TOUJOURS être administrée si le patient est éligible

Ne pas attendre de voir si le patient s'améliore après la TIV pour prendre la décision de thrombectomie

La thrombectomie est RECOMMANDÉE si tous les critères suivants sont réunis:

- Rankin pré-AVC 0 ou 1 = parfaitement AUTONOME
- Occlusion terminaison Carotide interne ou M1
- Age > 18 ans
- NIHSS ≥ 6
- ASPECTS ≥ 6
- Ponction artérielle dans les 6h qui suivent le début des symptômes

III (harm)

IA

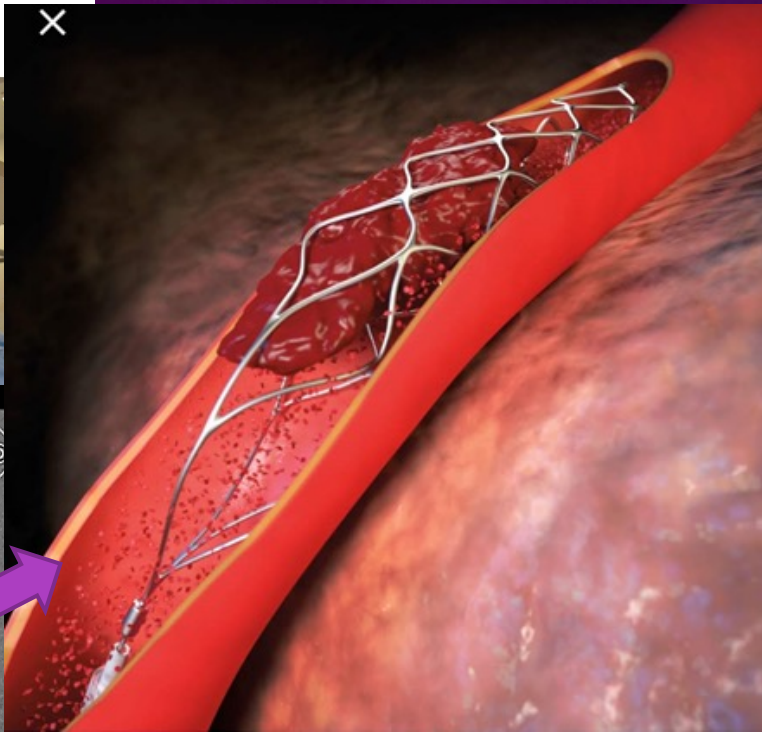
Standards

European Stroke Organisation (ESO) - European Society for Minimally Invasive Neurological Therapy (ESMINT) Guidelines on Mechanical Thrombectomy in Acute Ischemic Stroke

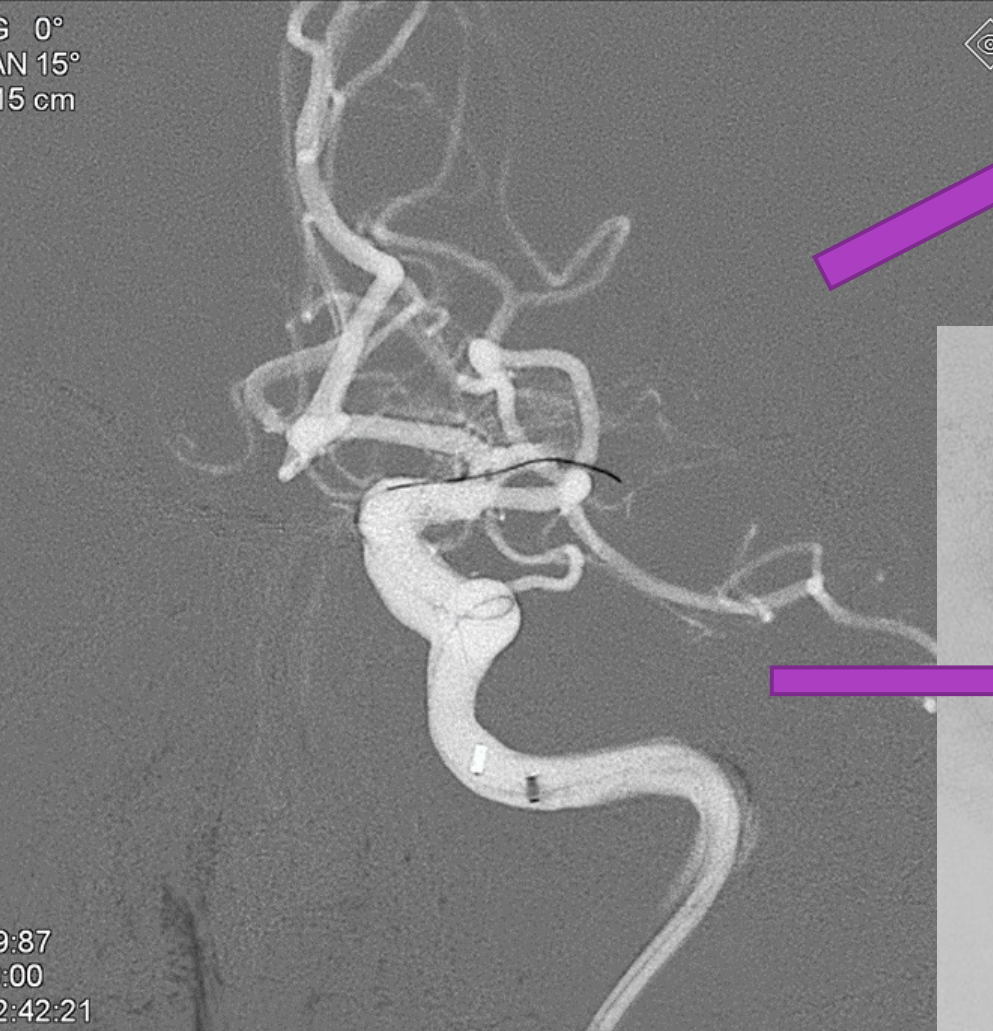
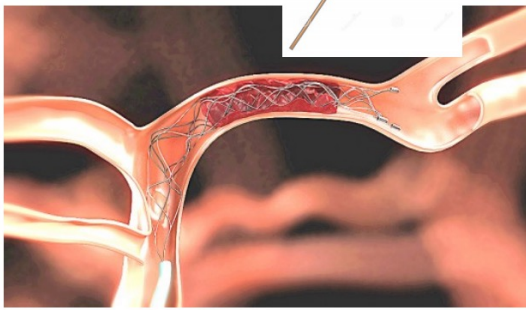
Guillaume Turc^{1,2,3,4}, Pervinder Bhogal⁵, Urs Fischer⁶, Pooja Khatri⁷, Kyriakos Lobotesis⁸, Mikael Mazighi^{3,9,10,11}, Peter D. Schellinger¹², Danilo Toni¹³

Thrombectomie

Occlusion des gros troncs



Stents retriever



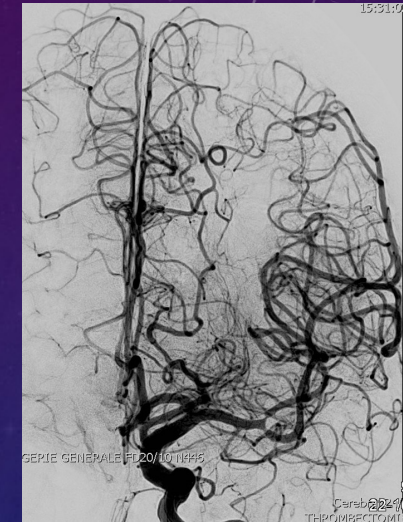
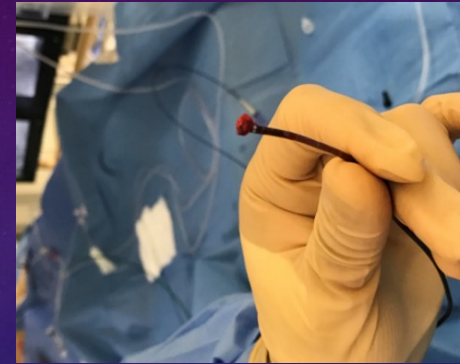
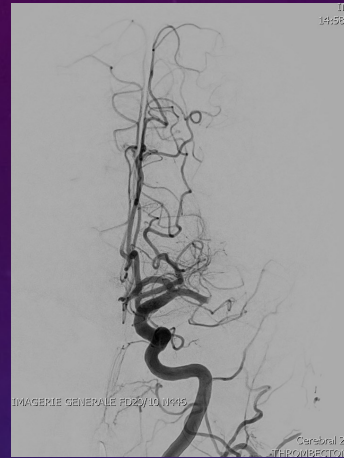
Thrombo-aspiration



Difficulté et rapidité de la procédure:

Désobstruction artérielle: 75 à 85%

Cas 1 : Embol M1 sur artère saine: aspiration premier passage. Procédure < 15 minutes



Cas 2 : occlusion en tandem carotide cervicale + sylvienne (a priori artères pathologiques)



AVC ENTRE 6 ET 24 HEURES

- | | |
|--|-----|
| • La thrombectomie est RECOMMANDÉE pour les patients entre 6 et 16h qui remplissent les critères de DAWN et DEFUSE 3 | IA |
| • La thrombectomie est RECOMMANDÉE pour les patients entre 6 et 24 h qui remplissent les critères de DAWN | Ila |

- Critères d'éligibilité pour la thrombectomie mécanique au-delà de 6h
 - Rankin avant l'AVC = 0 ou 1 => Parfaitement autonome
 - Score NIHSS ≥ 10 => AVC sévère
 - Petite lésion ischémique constituée (< 21 à 51 mL dans DAWN, < 70 mL dans DEFUSE 3)
- Avertir le stroke
- Faire sans délai une imagerie cérébrale et des TSAo
- En cas d'occlusion de la terminaison carotidienne ou de la sylvienne proximale (M1) , Faire une IRM cérébrale avec séquence de perfusion
- Décision de thrombectomie mécanique au cas par cas

DEOBSTRUCTION ARTERIELLE

TIMI

Table 1. Thrombolysis in Myocardial Ischemia Scale

TIMI Grades	Definitions
Grade 0	Absence of any antegrade flow beyond the target occlusion (no perfusion)
Grade 1	Any faint antegrade flow beyond the target occlusion, with incomplete filling of the distal branches (penetration without perfusion)
Grade 2	Delayed or sluggish antegrade flow with complete filling of the distal M2 branches flow (partial perfusion)
Grade 3	Normal flow that fills all distal branches, including M3 and M4 (complete perfusion)

TIMI indicates thrombolysis in myocardial ischemia.

TICI

Trial Design and Reporting Standards for Intra-Arterial Cerebral Thrombolysis for Acute Ischemic Stroke

Randall T. Higashida, MD; Anthony J. Furlan, MD; for the Technology Assessment Committees of the American Society of Interventional and Therapeutic Neuroradiology and the Society of Interventional Radiology

TABLE 2. Thrombolysis in Cerebral Infarction (TICI) Perfusion Categories

Grade 0:	No Perfusion. No antegrade flow beyond the point of occlusion.
Grade 1:	Penetration With Minimal Perfusion. The contrast material passes beyond the area of obstruction but fails to opacify the entire cerebral bed distal to the obstruction for the duration of the angiographic run.
Grade 2:	Partial Perfusion. The contrast material passes beyond the obstruction and opacifies the arterial bed distal to the obstruction. However, the rate of entry of contrast into the vessel distal to the obstruction and/or its rate of clearance from the distal bed are perceptibly slower than its entry into and/or clearance from comparable areas not perfused by the previously occluded vessel, eg, the opposite cerebral artery or the arterial bed proximal to the obstruction.
Grade 2a:	Only partial filling (<50%) of the entire vascular territory is visualized.
Grade 2b:	Complete filling of all of the expected vascular territory is visualized, but the filling is slower than normal.
Grade 3:	Complete Perfusion. Antegrade flow into the bed distal to the obstruction occurs as promptly as into the obstruction and clearance of contrast material from the involved bed is as rapid as from an uninvolved other bed of the same vessel or the opposite cerebral artery.

Stroke. 2003;34:e109-e137

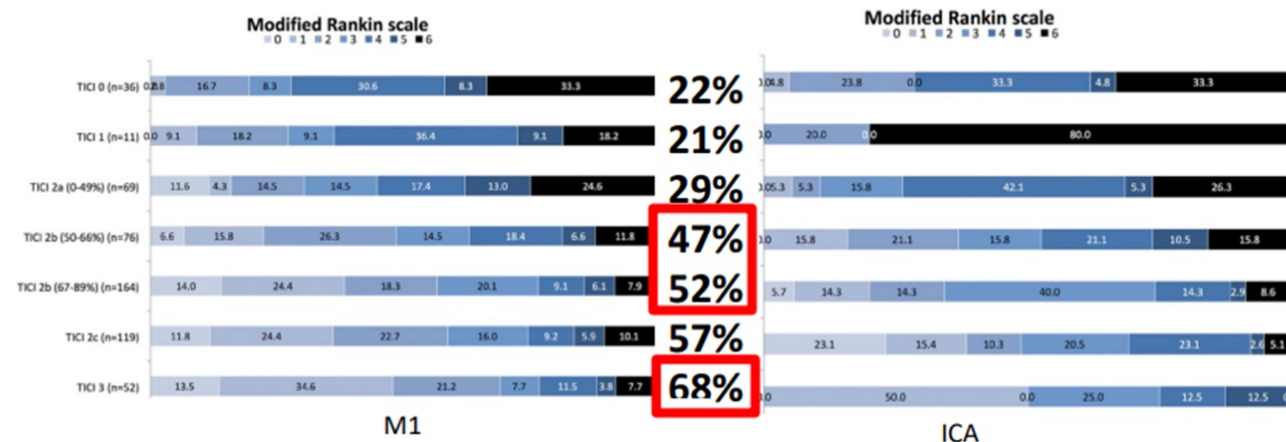
2C or not 2C: defining an improved revascularization grading scale and the need for standardization of angiography outcomes in stroke trials

Mayank Goyal¹, Kyle M Fargen², Aquilla S Turk³, J Mocco⁴, David S Liebeskind⁵, Donald Frei⁶, and Andrew M Demchuk⁷

Proposed revised Thrombolysis In Cerebral Infarction scale (TICI) scale including a 2C designation

Score	Revised TICI
0	No perfusion or antegrade flow beyond site of occlusion
1	Penetration but not perfusion. Contrast penetration exists past the initial obstruction but with minimal filling of the normal territory
2	Incomplete perfusion wherein the contrast passes the occlusion and opacifies the distal arterial bed but rate of entry or clearance from the bed is slower or incomplete when compared with non-involved territories
2A	Some perfusion with distal branch filling of <50% of territory visualized
2B	Substantial perfusion with distal branch filling of ≥50% of territory visualized
2C	Near-complete perfusion except for slow flow in a few distal cortical vessels or presence of small distal cortical emboli
3	Complete perfusion with normal filling of all distal branches

Seven degrees of reperfusion success



- Benefit of thrombectomy strongly associated with increasing reperfusion
- eTICI identified meaningful distinctions in clinical outcomes

DUREE DE LA PROCEDURE:

Nombre d'essais: corrélé au pronostic fonctionnel ++++

Reperfusion en une aspiration (15minutes): +++++

Durée de la procédure: corrélée au pronostic fonctionnel ++

Procédure > 60 minutes : moins efficace, plus de complications
Mais nettement supérieure à l'échec de reperfusion

Guo X, Miao Z. Advances in mechanical thrombectomy for acute ischaemic stroke from large vessel occlusions. Stroke Vasc Neurol 2021;6:649–657

Spiotta AM, Vargas J, Turner R, et al.. The golden hour of stroke intervention: effect of thrombectomy procedural time in acute ischemic stroke on outcome. J Neurointerv Surg 2014;6:511–6.

> Clin Neurol Neurosurg. 2022 Aug;219:107314. doi: 10.1016/j.clineuro.2022.107314.
Epub 2022 May 31.

Predictors of first-pass reperfusion for mechanical thrombectomy in acute ischemic stroke

Richard F Schmidt ¹, Ahmad Sweid ², Nikolaos Mouchtouris ², Lohit Velagapudi ²,
Nohra Chalouhi ³, M Reid Gooch ², Robert H Rosenwasser ², Pascal M Jabbour ²,
Stavropoula I Tjoumakaris ²

> J Neurointerv Surg. 2020 Jun;12(6):548-551. doi: 10.1136/neurintsurg-2019-015330.
Epub 2019 Nov 1.

Successful reperfusion, rather than number of passes, predicts clinical outcome after mechanical thrombectomy

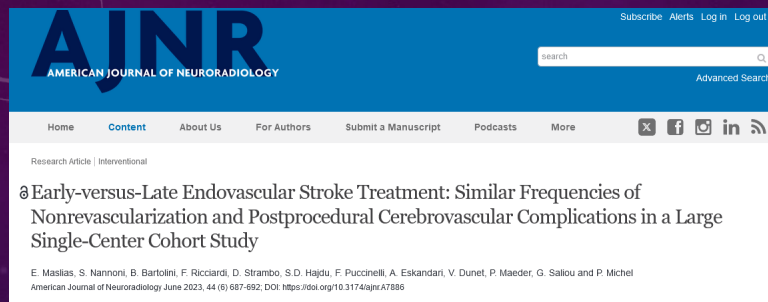
Daniel A Tonetti ^{1 2}, Shashvat M Desai ², Stephanie Casillo ³, Jeremy Stone ^{3 2}, Merritt Brown ⁴,
Brian Jankowitz ⁵, Tudor G Jovin ^{5 6}, Bradley A Gross ^{3 2}, Ashutosh Jadhav ^{2 7}

Complications de la procédure:

~ 18 %

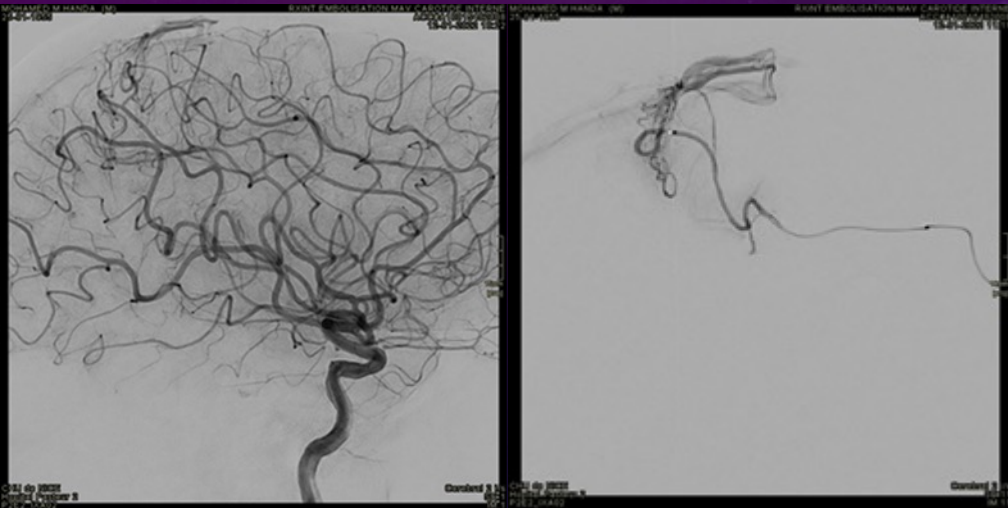
Dissection, perforation, hémorragie cérébrale,
embol distal ou dans autre territoire, spasme,
complication du point de ponction.

Facteurs de risque: haut NIHSS; retard de prise en charge; diabète;
carotide, segment M2 sylvienne



Complication		% in RCTs
Extracranial or access site	Groin hematoma	2–10% ^{3 4 6 8}
	Vasospasm	3,9–23% ^{5 6 8}
	Dissection	0,6–3,9% ^{2 3 6}
Hemorrhagic	Vessel perforation	0,6–4,9% ^{2–6}
	Distal embolization	4–6% ⁴⁰
Ischemic	De novo stenosis of target vessel (long term)	3,4% ⁵¹

Thrombectomie distale:



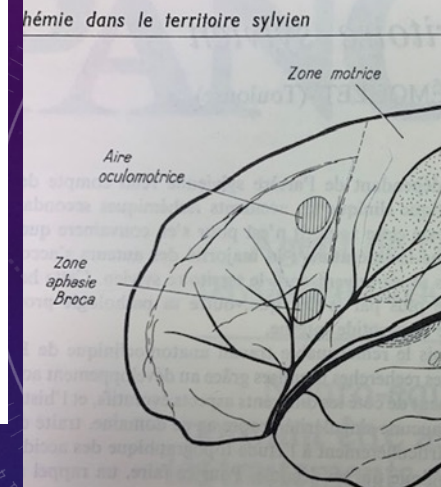
Thrombectomy for Distal, Medium Vessel Occlusions

A Consensus Statement on Present Knowledge and Promising Directions

Jeffrey L. Saver, MD; Rene Chapot, MD; Ronit Agid, MD; Ameer Hassan, DO; Ashutosh P. Jadhav, MD; David S. Liebeskind, MD; Kyriakos Lobotesis, MD; Dan Meila, MD; Lukas Meyer, MD; Guy Raphaeli, MD; Rishi Gupta, MD; for the Distal Thrombectomy Summit Group*

Endovascular thrombectomy (EVT) is well established as a highly effective treatment for acute ischemic stroke (AIS) due to proximal, large vessel occlusions (PLVOs). With iterative further advances in catheter technology, distal, medium vessel occlusions (DMVOs) are now

and thromboaspiration devices suggest EVT for DMVOs is safe, technically efficacious, and potentially clinically beneficial. Collaborative investigations are desirable to enhance imaging recognition of DMVOs; advance device design and technical efficacy; conduct large registry stud-



B Middle Cerebral Artery				
Branch Artery	Course	Territory	Selected Clinical Manifestations	
Orbitofrontal			Behavioral disinhibition, contralateral grasp reflex	Angular
Precentral			Apathy, abulia, disorganized motor planning, motor perseveration or hyperkinesia, poor attention, defective strategy application, initiation and execution behavior, disorganized verbal behavior, disorganized verbal fluency, perseveration, motor speech, motor apraxia	Supramarginal
Precentral			Motor weakness, sensory deficit, homonymous hemianopia, motor apraxia, ideomotor apraxia, pure apraxia	Posterior temporal
Central			Contralateral weakness, sensory impairment, or both, including homonymous hemianopia, motor apraxia, ideomotor apraxia, motor speech, motor apraxia	Middle temporal
Anterior parietal			Syndromes of pure sensory deficit, with small UI (unilateral) deficit, homonymous hemianopia, contralateral homonymous hemianopia, contralateral homonymous hemianopia	Anterior temporal
Posterior parietal			Contralateral homonymous hemianopia, contralateral homonymous hemianopia, contralateral homonymous hemianopia, contralateral homonymous hemianopia	Supramarginal

REVIEW

Neuroanatomy of the middle cerebral artery: implications for thrombectomy

Maksim Shapiro,¹ Eytan Raz,² Erez Nossek,³ Breehan Chancellor,¹ Koto Ishida,⁴ Peter Kim Nelson¹

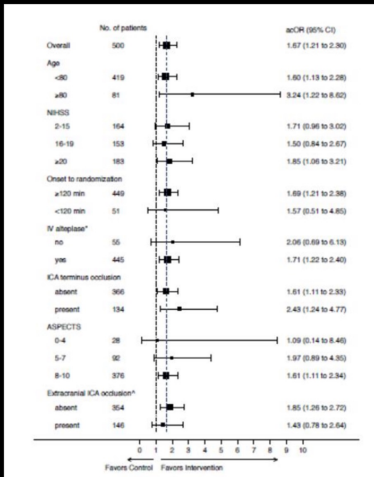
ABSTRACT

Comprehensive understanding of anatomy frequently depends

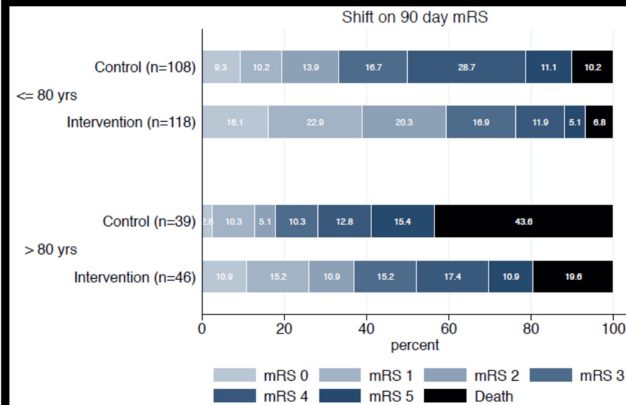
vessels from either the ACA or MCA and the relative

■ Les questions dans l'avenir :

■ L'âge: jusqu'à quand ?



Mr CLEAN



ESCAPE

=> Patients âgés ?



We recommend that **patients aged ≥80 years** with large vessel occlusion-related acute ischemic stroke **within 6 hours** of symptom onset **should be treated** with mechanical thrombectomy plus best medical management, including intravenous thrombolysis whenever indicated. Application of an upper age limit for mechanical thrombectomy is not justified.

Quality of evidence: Moderate ⊕⊕⊕; **strength of recommendation: Strong** ↑↑

We suggest that **patients aged ≥80 years** with large vessel occlusion-related acute ischemic stroke **between 6 and 24 hours** from time last known well should be treated with mechanical thrombectomy plus best medical management if they meet the eligibility criteria of the DEFUSE-3* or DAWN** trials.

Quality of evidence: Low ⊕⊕; **strength of recommendation: Weak** ↑?

⇒ **Age ≥80 years: infarct core ≤20mL and NIHSS score ≥10.**

⇒ Faut il traiter les patients déments?

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DOI: 10.1111/ane.13328

ORIGINAL ARTICLE

Acta
Neurologica
Scandinavica

WILEY

Ischemic stroke patients with prestroke dependency: Characteristics and long-term prognosis

Stefan Sennfalt^{1,2} | Mats Pihlgård³ | Bo Norrving^{1,2} | Teresa Ullberg^{1,2} | Jesper Petersson^{1,2}

¹Stroke Policy and Quality Register Research Group, Lund University, Lund, Sweden

²Department of Neurology, Skåne University Hospital, Lund, Sweden

³Division of Geriatric medicine, Lund University, Lund, Sweden

Correspondence

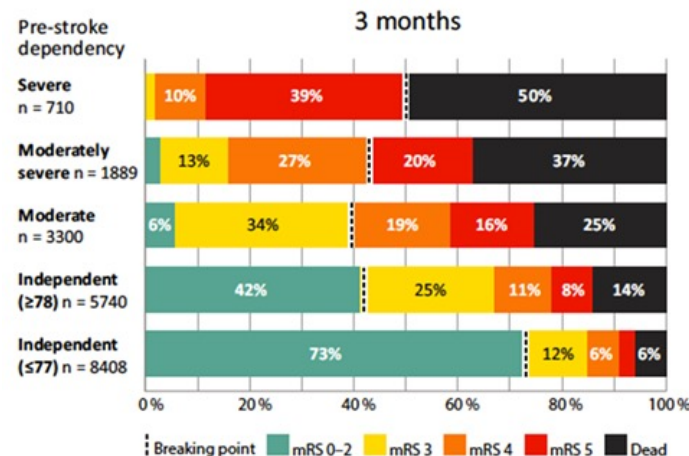
Stefan Sennfalt, Skånes universitetssjukhus, Neurologimottagningen, Getingevägen 4, Lund 222 41, Sweden.
Email: Stefan.sennfalt@med.lu.se

Funding information

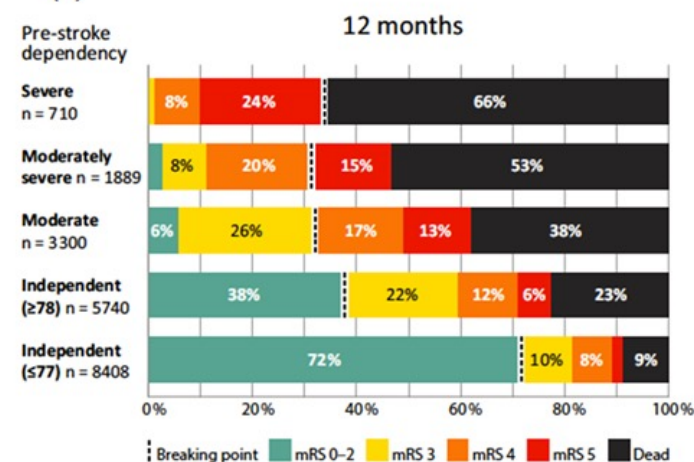
Objective: This paper aims at examining the clinical characteristics of ischemic stroke patients with different levels of prestroke functional dependency, their long-term outcome, and determinants of five-year mortality.

Materials and methods: We describe demographics, comorbidity, treatment, as well as long-term mortality, and functional status of 5899 prestroke-dependent ischemic stroke patients stratified by dependency level and compared to a concurrent cohort of 14 148 prestroke-independent patients. The study was based on 2016 survey data from Riksstroke, the Swedish national stroke register, and patients were followed up at three months, 12 months, and either at three or five years. We used Cox regression for mortality predictor analysis and multiple imputation was performed to minimize

(A)



(B)



⇒ Occlusion d'un gros tronc avec faible NIHSS:

We recommend that patients with low stroke severity (NIHSS score 0–5) and large vessel occlusion stroke within 24 hours from time last known well be included in randomized controlled trials comparing mechanical thrombectomy plus best medical management versus best medical management alone

> JAMA Netw Open. 2020 Aug 3;3(8):e2012476. doi: 10.1001/jamanetworkopen.2020.12476.

Cost-effectiveness of Mechanical Thrombectomy More Than 6 Hours After Symptom Onset Among Patients With Acute Ischemic Stroke

Anne-Claire Peultier¹, Ankur Pandya², Richa Sharma³, Johan L Severens^{1 4}, W Ken Redekop^{1 4}

Affiliations + expand

PMID: 32840620 PMCID: PMC7448828 DOI: 10.1001/jamanetworkopen.2020.12476



267 514 ischemic stroke victims in 32 European nations qualified for MT therapy.

> J Med Econ. 2018 Aug;21(8):799-809. doi: 10.1080/13696998.2018.1474746. Epub 2018 May 30.

Cost-effectiveness of mechanical thrombectomy for acute ischemic stroke: an Australian payer perspective

Nimita Arora¹, Koji Makino¹, Dominic Tilden¹, Kyriakos Lobotesis², Peter Mitchell³, John Gillespie⁴

Affiliations + expand

PMID: 29741126 DOI: 10.1080/13696998.2018.1474746



MT has been demonstrated to be more effective, cost-effective, and less expensive than conventional treatment in two-thirds of the countries (21/32).

MT augmente coût prise en charge de 10,000\$



Estimation du coût global par patient traité par TM par rapport aux traitements habituels : 8000 \$ d'économie

Et les enfants?

2 à 13 pour 100,000 /an pays développés
Rare mais aussi fréquent que les tumeurs et dans le top ten des maladies léthales de l'enfant
Étiopathogénèse/ Particularité selon âge

Arteriopathies (intra and extracranial) 21-53%	Moya Moya
	Sickle cell arteriopathy
	Post - varicella arteriopathy
	Arterial dissection
	Primary CNS vasculitis
	Para-/post infectious vasculitis
	Fibromuscular dysplasia
Cardiac 24-31%	Congenital/ acquired heart diseases
	Patent foramen ovale (PFO)
	Arrhythmia
	Previous cardiac surgery/ catheterization
	Endocarditis
Hypercoagulable state 28-13%	Other
	Protein C deficiency
	Protein S deficiency
	Factor V Leiden mutation (G1691A)
	Prothrombin mutation (PTG20210A)
	MTHFR (C677T polymorphism)
	Antithrombin III deficiency
	Increased factor VIII
	Hyperlipoproteinemia (alpha)
	Lupus anticoagulant

INCLUSION CRITERIA FOR THROMBECTOMY

1. Persistent neurological deficit (PedNIHSS >6)
2. Onset of symptoms < 6 hours
3. Radiologically confirmed large vessel occlusion (anterior or posterior circulation)
4. Age 2 years



Retard diagnostic ++++ problèmes organisation+++++

JAMA Neurology | Original Investigation

Association Between Thrombectomy and Functional Outcome in Pediatric Patients With Acute Ischemic Stroke From Large Vessel Occlusion

Kartik D. Bhatia, MBBS, PhD; Samyami Chowdhury, MBChB; Ian Andrews, MBBS; Robert Goetti, MBBS; Richard Webster, MBBS; Christopher Troedson, MBBS; Russell C. Dale, MBBS, PhD; Prakash Muthusami, MD; Carmen Parra-Farinas, MD; Nomazulu Dlamini, MD; Mahendra Moharir, MD; Christina Miteff, MBBS; Ferdinand Miteff, MBBS; John Worthington, MBBS; Kylie Tastula, RN; Timothy Ang, MBBS; Romain Briest, MBBS; Elizabeth Pulcine, MD

IMPORTANCE Pediatric large vessel occlusion (LVO) stroke has a poor natural history. However, uptake of mechanical thrombectomy is hindered by a lack of clinical trial data in children. A randomized clinical trial is not feasible due to small sample sizes and absence of equipoise.

OBJECTIVE To evaluate whether pediatric patients with acute LVO stroke who undergo thrombectomy have better clinical outcomes than matched patients managed conservatively.

DESIGN, SETTING, AND PARTICIPANTS This matched case-control study used pooled stroke registry data from 5 tertiary referral hospitals in Australia and Canada from January 2011 to April 2022. Patients were aged 1 month to younger than 18 years with acute LVO stroke. Pooled data identified 31 thrombectomy patients and 46 control patients. Five patients undergoing thrombectomy with basilar artery occlusion were excluded due to insufficient controls. Using a hierarchical matching system (site of occlusion, age group, side of occlusion, and sex), deidentified consensus matching of patients and controls was undertaken while blinded to clinical outcome. Data were analyzed from July to November 2022.

EXPOSURE In the case cohort, mechanical thrombectomy was undertaken for management of acute LVO stroke. The control cohort received medical treatment only.

DELAI DE PRISE EN CHARGE

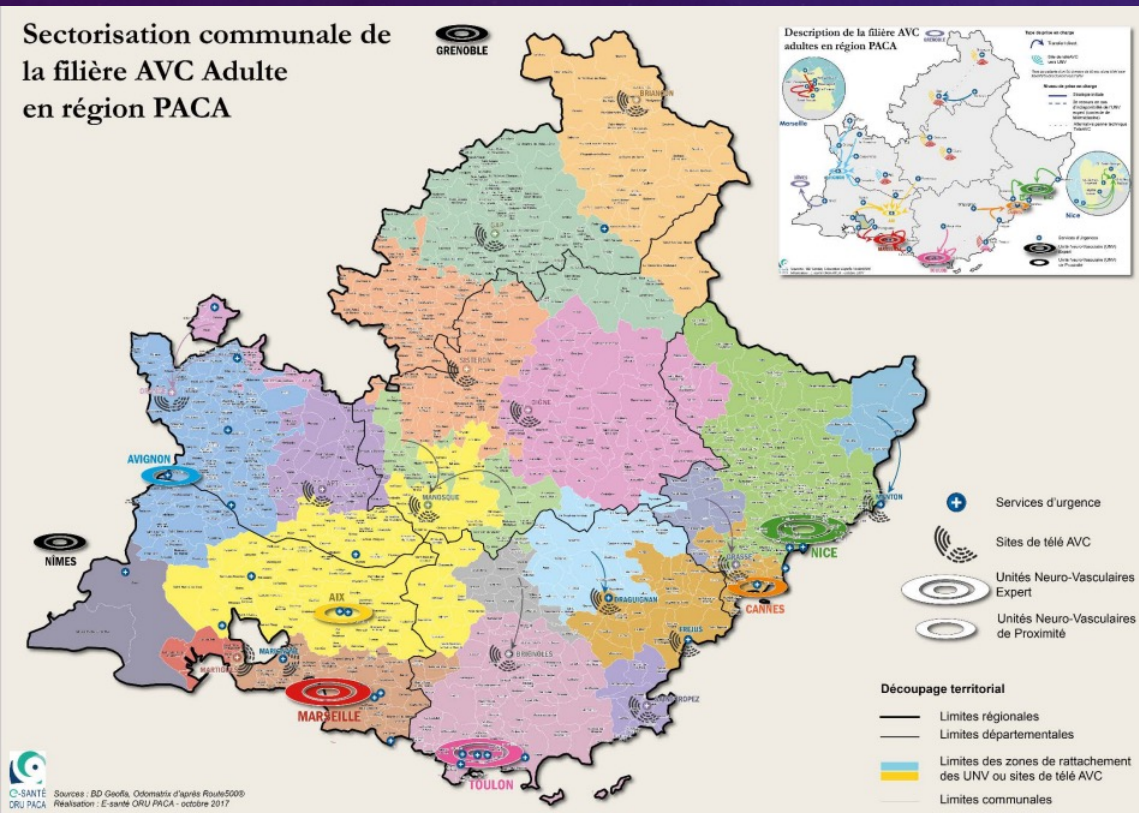
.Chaque demi heure de retard dans reperfusion cérébrale= 15 % de chance en moins d'être autonome à 3 mois +++++ (Goyal M Menon BK van Zwam WH et al.. HERMES collaborators). Endovascular thrombectomy after large-vessel

ischaemic stroke: a meta-analysis of individual patient data from five randomised trials. Lancet 2016;387:1723–31.

.Temps de transfert vers bloc endovasculaire très variable : distance, transport, trafic routier

⇒ **Un centre de thrombectomie pour la région Est PACA décentré à l'est!!!**

⇒ Les patients de Fréjus et Cannes sont ils défavorisés ? +++++ et que penser de l'ARS ?



Congrès SFNR 2021

Les centres de thrombectomie se déploient en France mais des décrets se font attendre

La thrombectomie mécanique pour le traitement de l'AVC ischémique poursuit son déploiement, grâce à l'ouverture de nouveaux centres et à la formation de praticiens. Les professionnels attendent la publication de décrets d'autorisation et de formation pour maintenir la dynamique.

Article réservé aux abonnés

Le 29/06/21 à 15:00, mise à jour le 11/09/23 à 13:22 | Lecture 3min.

Version PDF



01/09/2023

Auteur(s) : Sandrine Deltour,
CERC de la SRLF



ORIGINAL ARTICLE

Endovascular Therapy for Acute Stroke with a Large Ischemic Region

Shinichi Yoshimura, M.D., Ph.D., Nobuyuki Sakai, M.D., Ph.D., Hiroshi Yamagami, M.D., Ph.D., Kazutaka Uchida, M.D., Ph.D., et al.

Endovascular therapy for acute stroke with a large ischemic region.

Yoshimura S, Sakai N, Yamagami H, et al.

N Engl J Med 2022;386:1303-13.

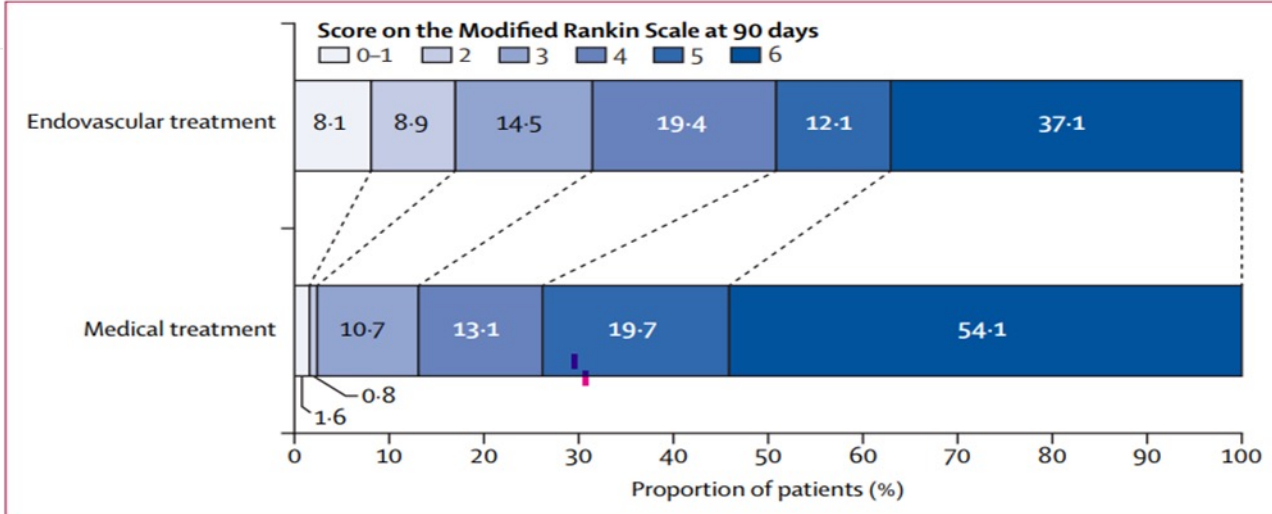


Figure 2: Distribution of Modified Rankin Scale scores at 90 days

Intention-to-treat population analysis. A score of 0 on the modified Rankin Scale indicates no symptoms, a score of 1 indicates no clinically significant disability, a score of 2 indicates slight disability, a score of 3 indicates moderate disability, a score of 4 indicates moderately severe disability, a score of 5 indicates severe disability, and a score of 6 indicates death. Information on the primary outcome measure was missing in one patient in the endovascular thrombectomy group and six patients in the medical treatment group. Missing values were imputed.

=> CHANGEMENT PROBABLE DES RECOMMANDATIONS DANS LES MOIS QUI VIENNENT!!!

FUTUR:

Arrivée direct du patient en salle de cathétérisme comme en cardio ?

Amélioration du maillage des centres de thrombectomie dans notre région (deshéritée...): centre de TM à l'OUEST de la région ??

Médicaments cérébro-protecteurs...

ORIGINAL RESEARCH

Direct transfer to angiosuite to reduce door-to-puncture time in thrombectomy for acute stroke

Marc Ribo,^{1,2} Sandra Boned,^{1,2} Marta Rubiera,^{1,2} Alejandro Tomasello,³ Pilar Coscojuela,³ David Hernández,³ Jorge Pagola,^{1,2} Jesús Juega,^{1,2} Noelia Rodriguez,^{1,2} Marian Muchada,^{1,2} David Rodriguez-Luna,^{1,2} Carlos A Molina^{1,2}

¹The Stroke Unit, Department of Neurology, Vall d'Hebron University Hospital, Vall d'Hebron Research Institute

ABSTRACT

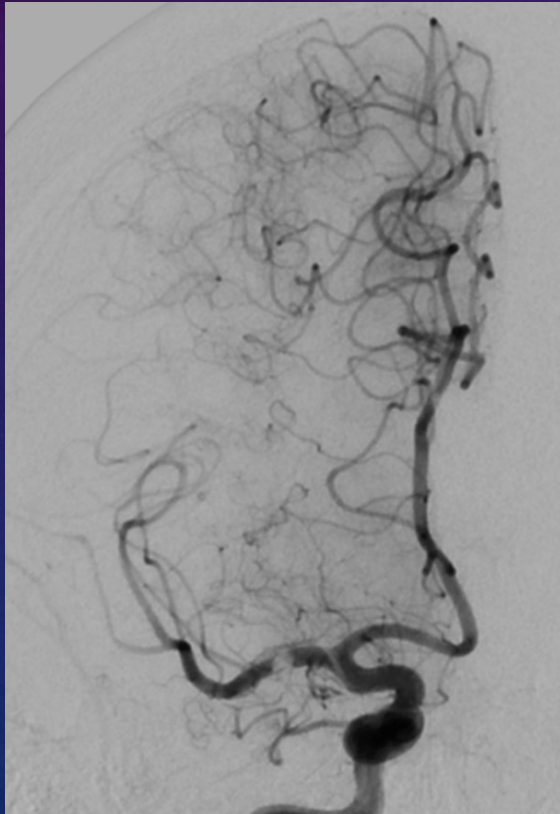
Objective To evaluate direct transfer to the angiosuite protocol of patients with acute stroke, candidates for

reperfusion.³ In 2015 several clinical trials stratified the efficacy of reperfusion induced by vascular treatment (EVT) to reduce dis

Cardiologie interventionnelle

Protocoles (et discussion)
Indispensables ?

NeuroInterventionnelle



LA MEDECINE A CHANGE

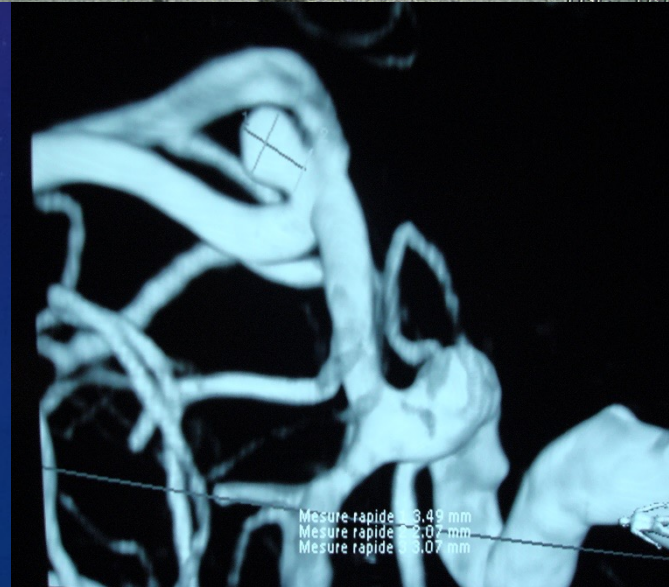
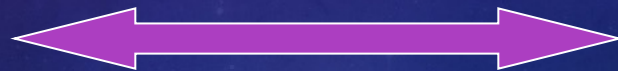
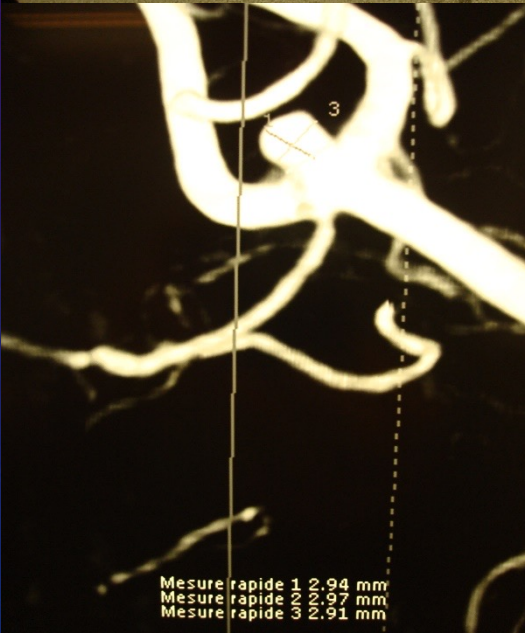
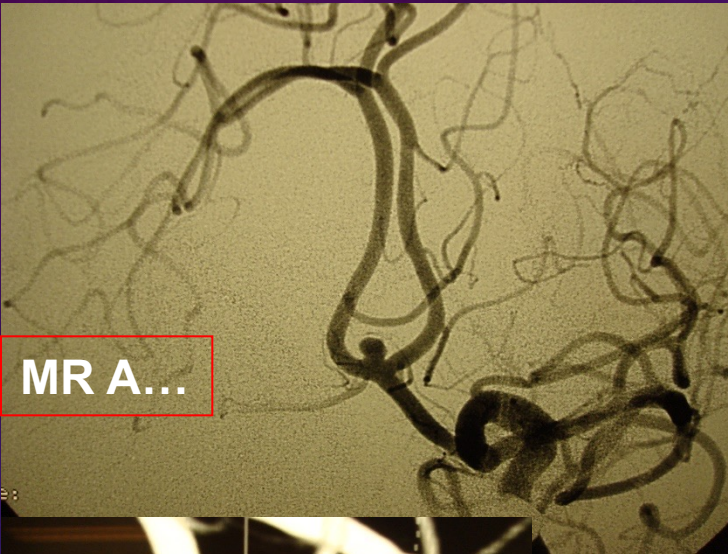
Ne dites plus que je suis radiologue !

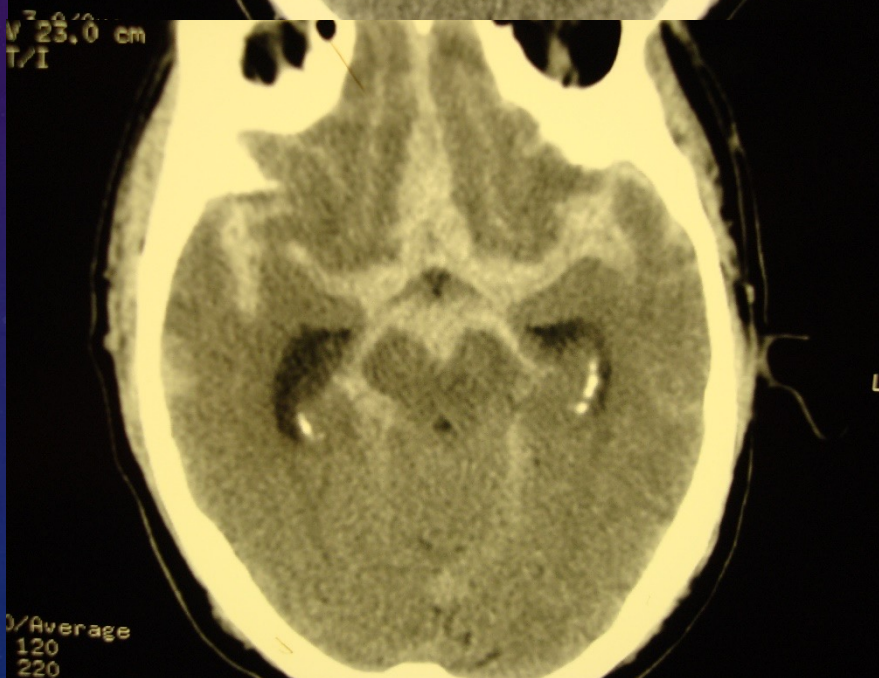
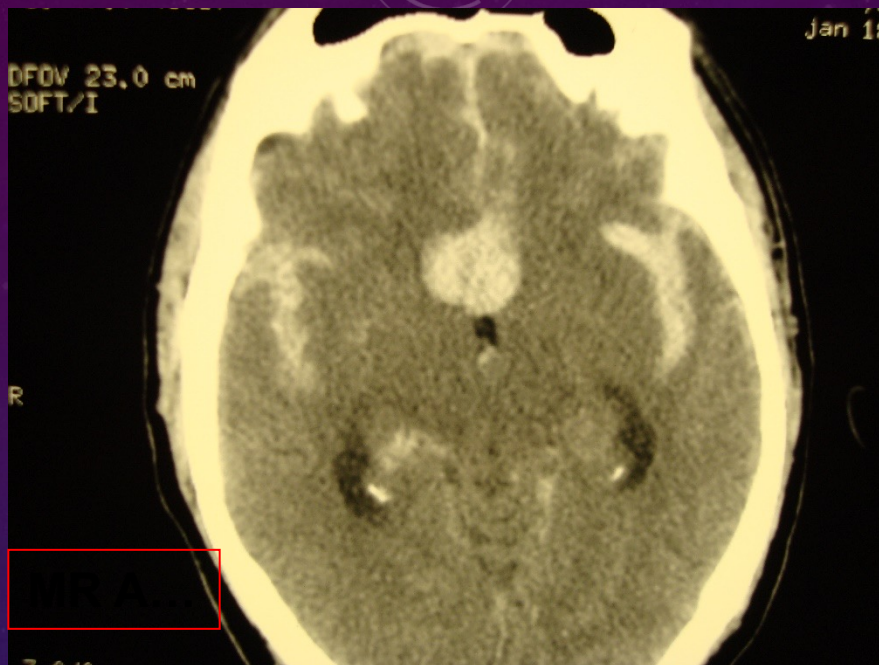


Anévrisme de découverte fortuite

1 « Docteur, je viens car j' ai une bombe dans la tête... »

2 Peut on reconnaître un anévrisme « à risque » ?





DECISION THERAPEUTIQUE :

RISQUE DE RUPTURE ?

RISQUE DU TRAITEMENT (Mortalité/ morbidité:

- 1.4%/1.7% Atena 2008
- 0.2%/0.8% Oishi et col. AJNR 2012
- _entre 2 et 4 %

FACTEURS DECISIONNELS

Taille +
Aspect forme, vésicule fille
Localisation (com ant Tronc basilaire ??)
HTA tabac
symptomatique (compression , embols)
associé à anévrisme rompu
f familiale et PKF +
Difficulté du geste +
AGE +
STRESS +

Consultation

Service Interventionnel