Ecole de la Thrombectomie

THROMBECTOMIE :

LE STENT

- Franchir le caillot / déployer le stent
- Naviguer en sécurité ? les reflexes
- Quel micro KT, quel guide, quelle branche ?
- Quel stent pour quel caillot ? autres dispositifs…

Liang LIAO, MD
CHRU Nancy

Historique

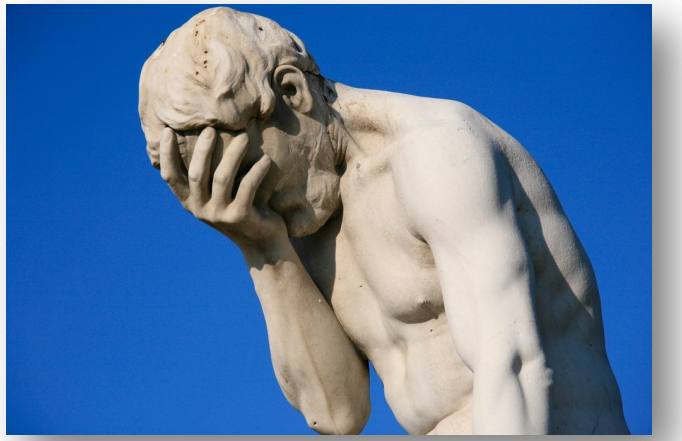
Stent retriever = outil de référence pour thrombectomies

Dispositif le plus souvent utilisé dans les RCT publiées à partir de 2015

Utilisable seul ou en combinaison avec cathéter d'aspiration

Nombreux stents retriever différents…

Déception en 2013…
3 études TIV vs TM → mise en question de l'efficacité de la TM



	IMS III (N=629)	SYNTHESIS (N=362)	MR RESCUE (N=118)
Primary Intervention:	MERCI	IA-tPA and clot fragmentation	MERCI
LVO (ICA, M1):	33%	34%	81%
Successful recanalization (TICI 2b/3):	44%	Not reported ?	27%
Good clinical outcome (mRS 0-2):	43%	42%	13%
Symptomatic ICH:	6%	6%	5%
Death (90 days):	19%	8%	19%

…MAIS :

→ Devices d'anciennes générations

→ Pas toujours des LVO…

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The NEW ENGLAND JOURNAL of MEDICINE

Thrombectomy within 8 Hours after Symptom Onset in Ischemic Stroke

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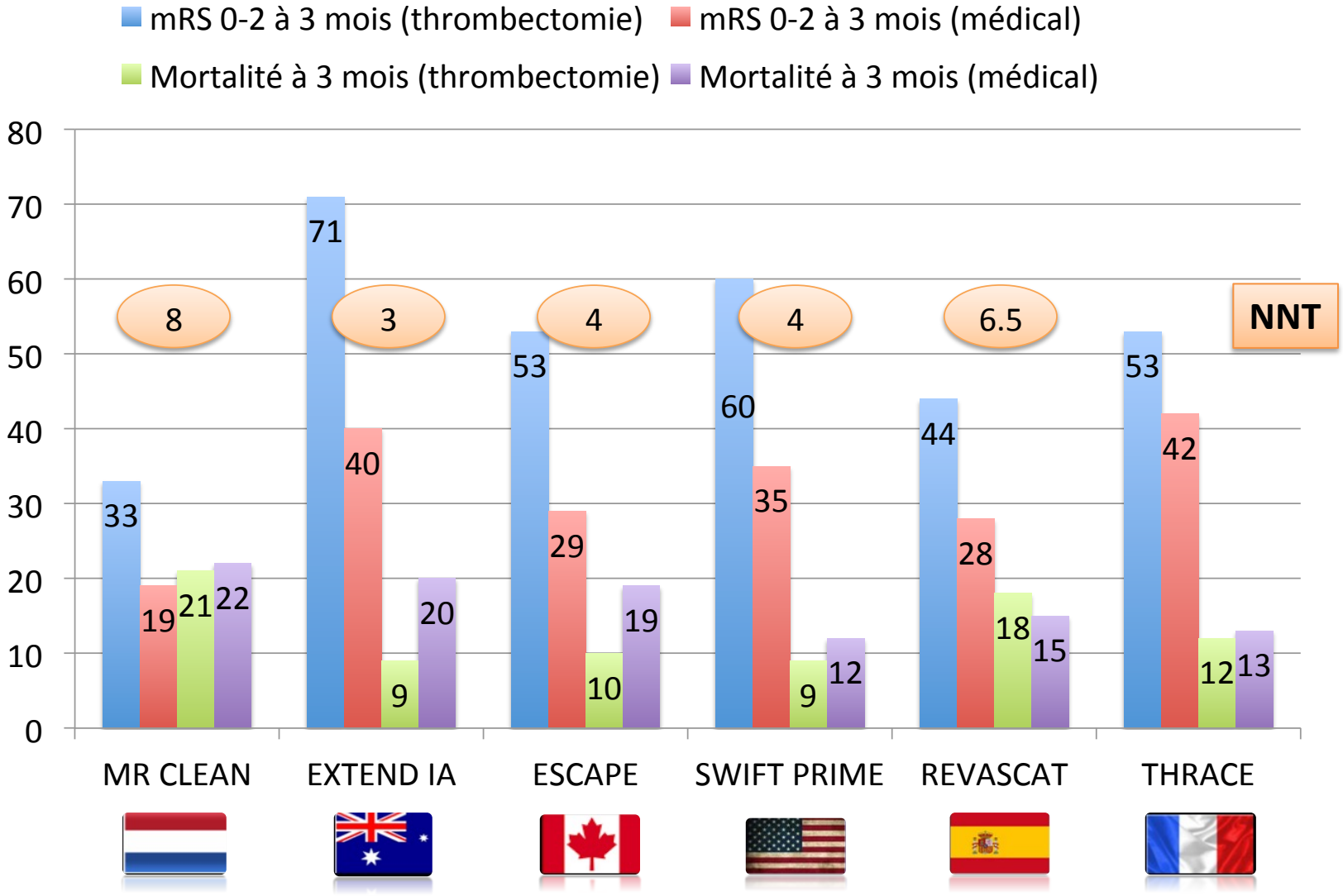
+



Thrombectomy after intravenous thrombolysis is the new standard of care in acute stroke with large vessel occlusion

Benjamin Gory[1,2,3] and Francis Turjman[1,2,3]

Interventional Neuroradiology 2015, Vol. 21(6) 691-693

Ecole de la Thrombectomie

Table 1 – Characteristics of patients at baseline and in groups receiving endovascular treatment and their controls in six selected randomized controlled trials.

Trial, Date, Countries (number of centers)	Number of patients and main selection criteria	Endovascular treatment group					Control group		
		No. of patients[a]	Stroke locations, No. (%)	IV tPA, No. (%)	Thrombectomy, No. (%)	Patients treated with retrievers among patients with thrombectomy, No. (%)	No. of patients[a]	Stroke locations, No. (%)	IV tPA, No. (%)
THRACE, 2016 France (26)	$n = 414$ - Age: 18-80 - < 5 h from onset - NIHSS: 10–25	204	ICA: 24/204 (11.8) M1 MCA: 176/204 (86.3) M2 MCA: 0/204 (0) BA: 2/204 (1.0)	204 (100)	145 (71.1)	Stent retriever: 116 (80.0)	208	ICA: 39/208 (18.8) M1 MCA: 164/208 (78.8) M2 MCA: 2/208 (1.0) BA: 2/208 (1.0)	208 (100)
ESCAPE, 2015 Canada, USA, South Korea, Republic of Ireland, UK (22)	$n = 315$ - Age ≥ 18 - < 12 h from onset - NIHSS: no restriction	165	ICA: 45/163 (27.6) M1 MCA or all M2s: 111/163 (68.1) Single M2 MCA: 6/163 (3.7)	120 (72.7)	151 (91.5)	Stent retriever: 130 (86.1) Solitaire FR: 100 (66.2)	150	ICA: 39/147 (26.5) M1 MCA or all M2s: 105/147 (71.4) Single M2 MCA: 3/147 (2.0)	118 (78.7)
REVASCAT, 2015 Spain (4)	$n = 206$ - Age: 18-85 - <8 h from onset - NIHSS ≥ 6	103	ICA: 26/102 (25.5) M1 MCA: 66/102 (64.7) M2 MCA: 10/102 (9.8)	70 (68.0)	98 (95.1)	Solitaire FR: 88 (89.8)	103	ICA: 28/101 (27.7) M1 MCA: 65/101 (64.4) M2 MCA: 8/101 (7.9)	80 (77.7)
EXTEND IA, 2015 Australia, New Zealand (10)	$n = 70$ - Age ≥18 - <6 h from onset - NIHSS: no restriction	35	- ICA: 11/35 (31.4) - M1 MCA: 20/35 (57.1) - M2 MCA: 4/35 (11.4)	35 (100)	27 (77.1)	Solitaire FR: 27 (100)	35	ICA: 11/35 (31.4) M1 MCA: 18/35 (51.4) M2 MCA: 6/35 (17.1)	35 (100)
MR CLEAN, 2015 Netherlands (16)	$n = 500$ - Age ≥ 18 - < 6 h from onset - NIHSS ≥ 6	233	- ICA: 60/233 (25.8) - M1 MCA: 154/233 (66.1) - M2 MCA: 18/233 (7.7) - A1 or A2 ACA: 1/233 (0.4)	203 (87.1)	195 (83.7)	Stent retriever: 190 (97.4)	267	ICA: 78/266 (29.3) M1 MCA: 165/266 (62.0) M2 MCA: 21/266 (7.9) A1 or A2 ACA: 2/266 (0.8)	242 (90.6)
SWIFT PRIME, 2015 USA, France, Germany, Spain, Switzerland, Denmark, Austria (39)	$n = 196$ - Age: 18-80 - < 6 h from onset - NIHSS: 8–29	98	ICA: 17/93 (18.3) M1 MCA: 62/93 (66.6) M2 MCA: 13/93 (14.0)	98 (100)	87/98 (88.8)	Solitaire FR or Solitaire 2: 87 (100)	98	ICA: 15/94 (16.0) M1 MCA: 72/94 (76.6) M2 MCA: 6/94 (6.4)	98 (100)

Stent retriever thrombectomy for acute ischemic stroke: A systematic review and meta-analysis of randomized controlled trials, including THRACE

M. Barral[a,1], *S. Boudour*[b,1], *M. Viprey*[a,c], *C. Giroudon*[c], *G. Aulagner*[b], *A.-M. Schott*[a,c], *F. Turjman*[d,e], *X. Armoiry*[b,f], *B. Gory*[g,h,i,*]

Rev Neurol (Paris). 2018 May;174(5):319-326.

Ecole de la Thrombectomie

Table. Summary of Data From the 5 Trials

Trial N IAT+/CTL	NIHSS Range CTL	NIHSS Range IAT+	r-tPA	TICI 2B/3	LSN to Groin Mdn	mRS 0–2 at 90 d CTL	mRS 0–2 at 90 d IAT+	sICH CTL	sICH IAT+	Device Complications	Mortality CTL	Mortality IAT+
MR CLEAN[12] 500 233/267	18 (14–21)	17 (14–22)	90%	59%	260	19%	33%	6.4%	7.7%	Embol. 13	22%	21%
ESCAPE[13] 315 165/150	17 (12–20)	16 (13–20)	76%	72%	200	29%	53%	2.7%	3.6%	Perfor.1	19%	10%
EXTEND IA[14] 70 35/35	13 (9–19)	17 (13–20)	100%	86%	210	40%	71%	6%	0%	Perfor.1 Embol.2	20%	9%
SWIFT PRIME[15] 196 98/98	17 (13–19)	17 (13–20)	98%	88%	224	36%	60%	3%	0%	SAH 4	12%	9%
REVASCAT[16] 206 103/103	17 (12–19)	17 (14–20)	73%	66%	269	28%	44%	1.9%	1.9%	Perfor. 5 Embol. 5	16%	18%

CTL indicates control group; Embol, distal embolization; IAT+, intra-arterial thrombectomy on top of standard treatment including r-tPA; LSN, time (minutes) from last seen normal to groin puncture in IAT+ group; Mdn, median; mRS 0–2 at 90 d, modified Rankin Scale of 0–2 at 90 days after randomization; NIHSS, baseline National Institutes of Health Stroke Scale; Perfor, vessel perforation; r-tPA, patients in trial treated with recombinant tissue-type plasminogen activator; REVASCAT, Randomized Trial of Revascularization With the Solitaire FR Device Versus Best Medical Therapy in the Treatment of Acute Stroke Due to Anterior Circulation Large Vessel Occlusion Presenting Within Eight Hours of Symptom Onset; SAH, subarachnoid hemorrhage; sICH (SITS), symptomatic intracerebral hemorrhage based on safe implementation of treatments in stroke criteria; and TICI 2b/3, patients in IAT+ group achieving thrombolysis in cerebral infarction grade 2b or 3 reperfusion.

The NEW ENGLAND JOURNAL of MEDICINE

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Endovascular Therapy for Ischemic Stroke with Perfusion-Imaging Selection

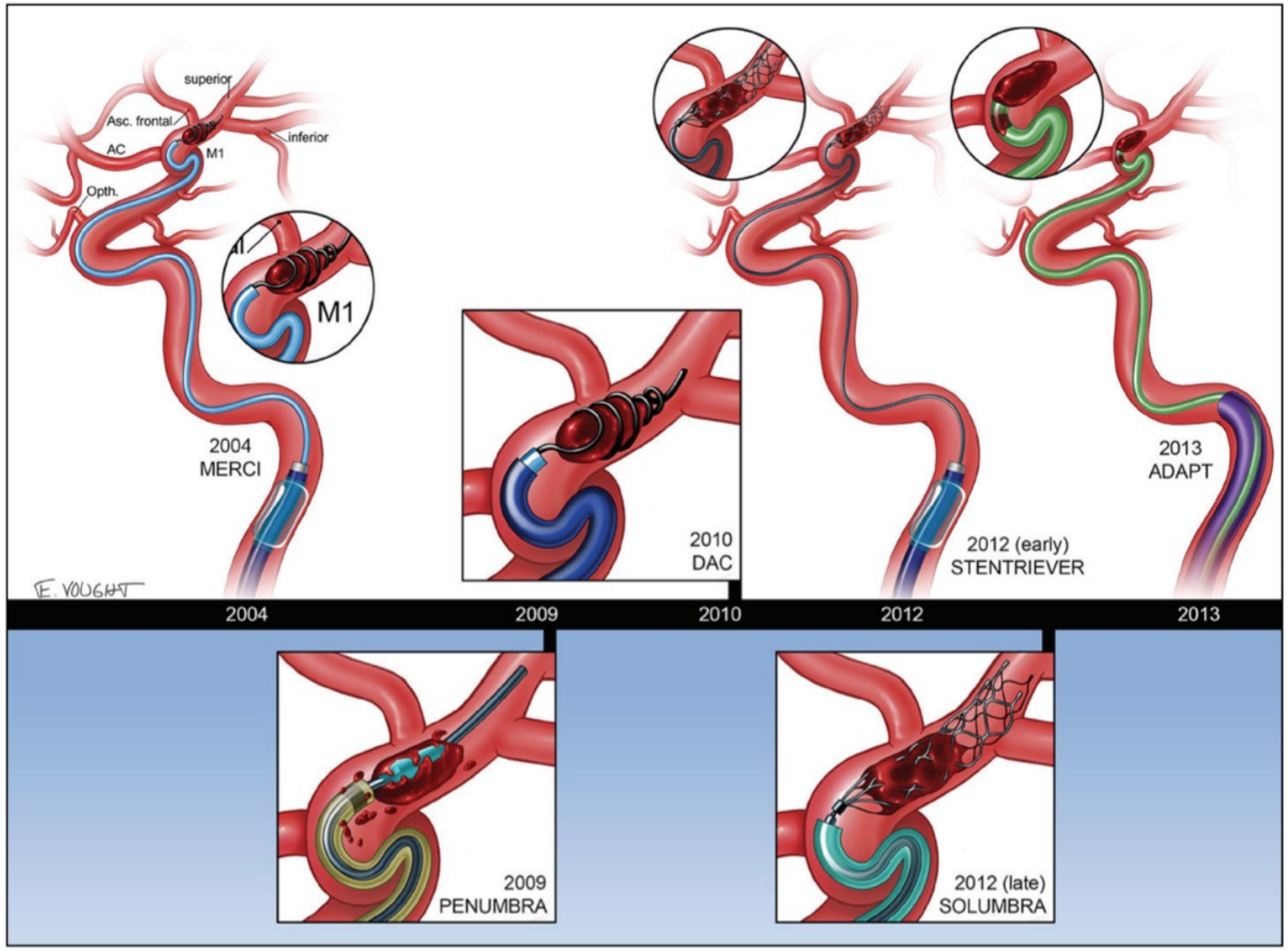
Stent-Retriever Thrombectomy after Intravenous t-PA vs. t-PA Alone in Stroke

TM → TICI 2B/3 : 59 - 88% (précédentes études : < 41%)

Bénéfice absolu (mRS 0-2 90d) : 13,5% - 31,4%

Pas plus de complication hémorragique ou de mortalité

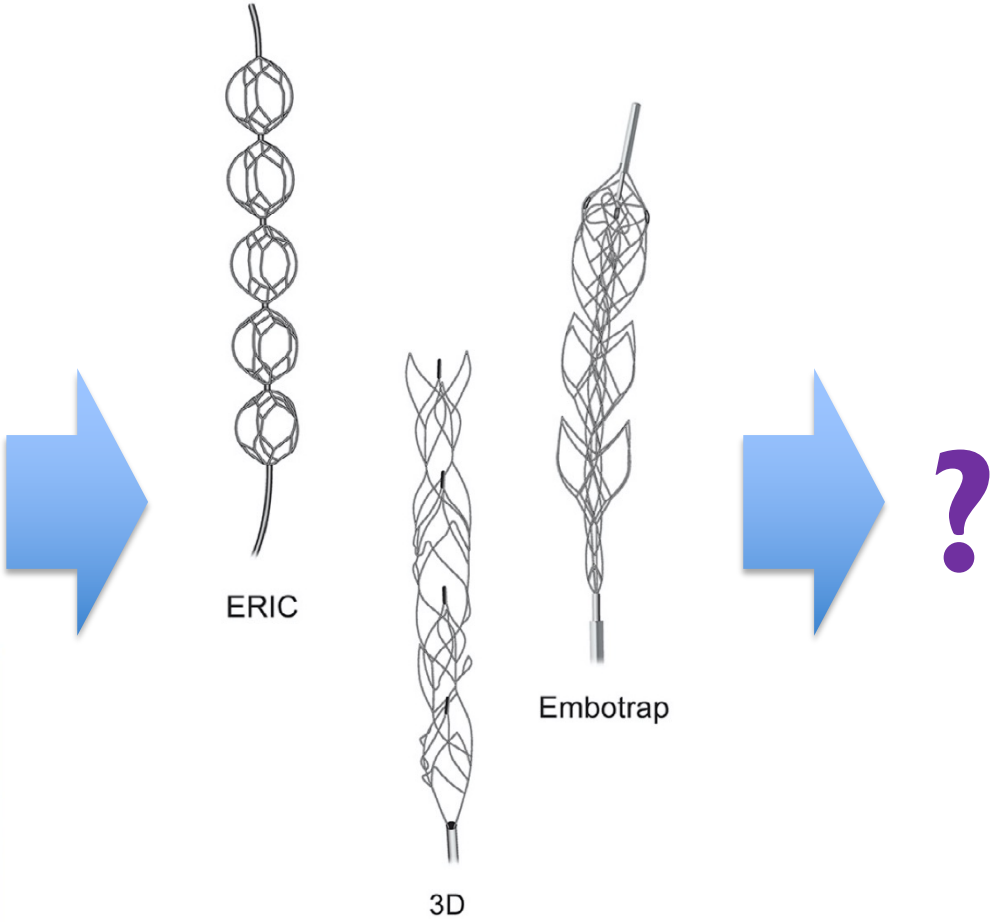
Ecole de la Thrombectomie



A Direct Aspiration First Pass Technique vs Standard Endovascular Therapy for Acute Stroke: A Systematic Review and Meta-Analysis

Kevin Phan, BSc(Adv), MPhil*
Adam A. Dmytriw, MD, MSc‡
Ian Teng, MD*

NEUROSURGERY 2018



Mechanical Thrombectomy: Emerging Technologies and Techniques

Edgar A. Samaniego, MD, MS,* Jorge A Roa, MD,† Kaustubh Limaye, MD,‡

J Stroke Cerebrovasc Dis. 2018 Oct;27(10):2555-2571.

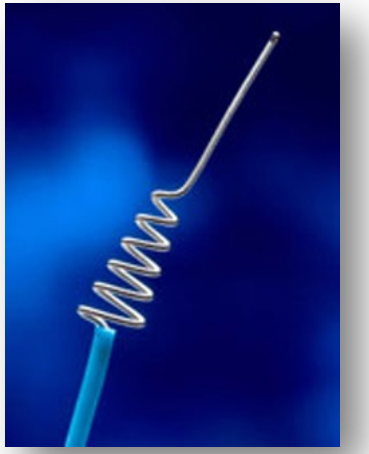
Ecole de la Thrombectomie

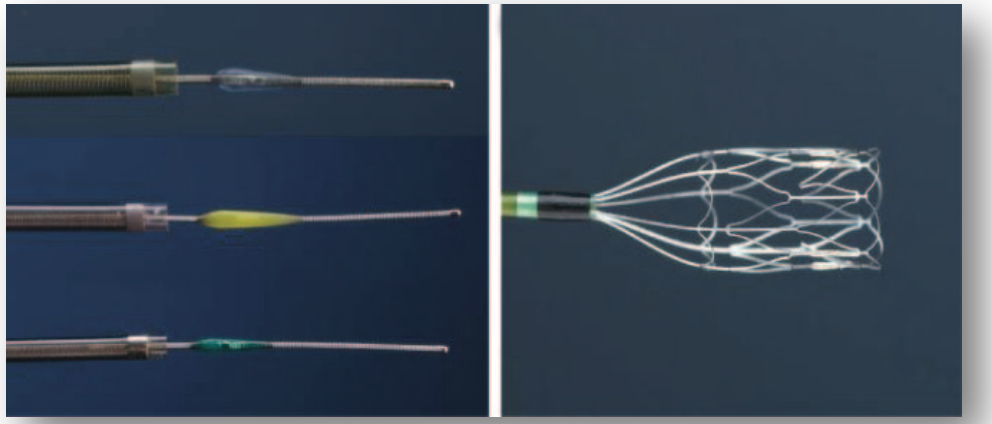
Safety and Efficacy of Mechanical Embolectomy in Acute Ischemic Stroke

Results of the MERCI Trial

Wade S. Smith, MD, PhD; Gene Sung, MD; Sidney Starkman, MD; Jeffrey L. Saver, MD

Stroke July 2005





The Penumbra Pivotal Stroke Trial

Safety and Effectiveness of a New Generation of Mechanical Devices for Clot Removal in Intracranial Large Vessel Occlusive Disease

The Penumbra Pivotal Stroke Trial Investigators

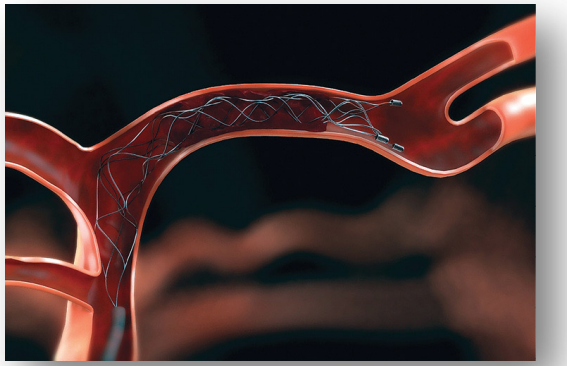
Stroke August 2009

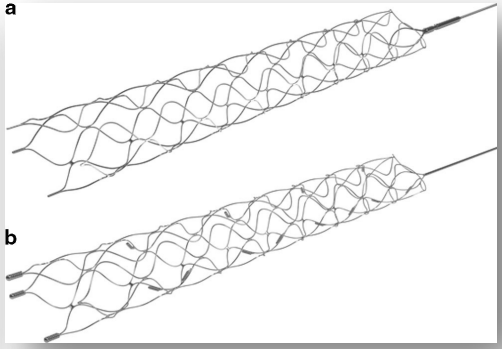
Figure. Penumbra reperfusion catheters and separators (left); thrombus removal ring (right).

Mechanical Thrombectomy Using the new Solitaire™ Platinum Stent-retriever

Johannes Pfaff[1] · Stefan Rohde[2] · Tobias Engelhorn[3] · Arnd Doerfler[3] · Martin Bendszus[1] · Markus Alfred Möhlenbruch[1,4]

Clin Neuroradiol 10 January 2018





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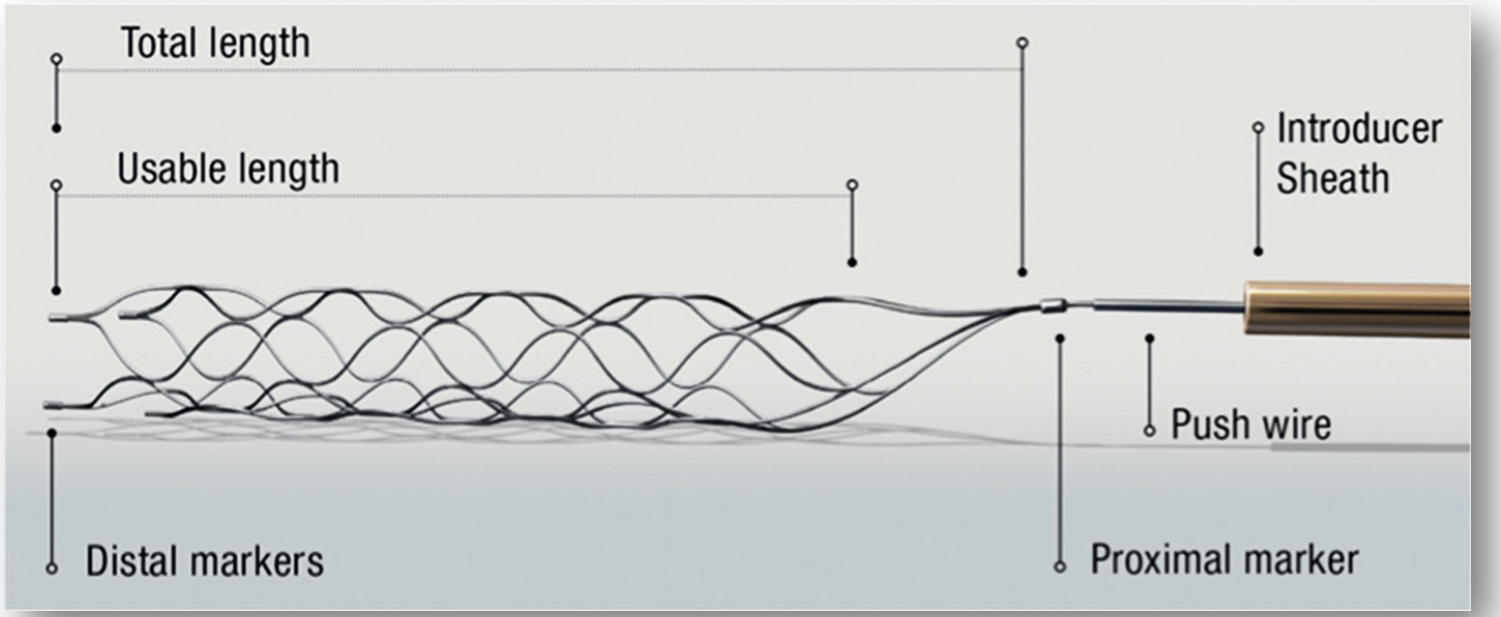
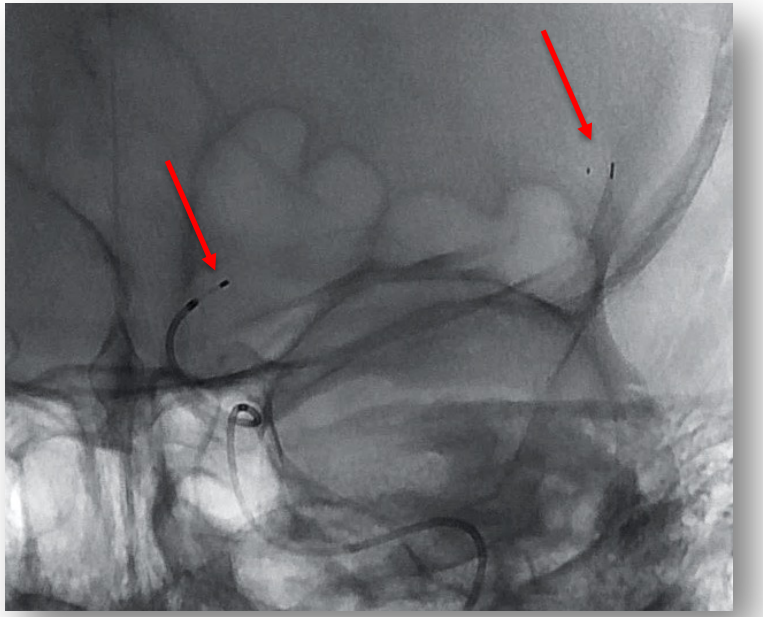
Aspect général

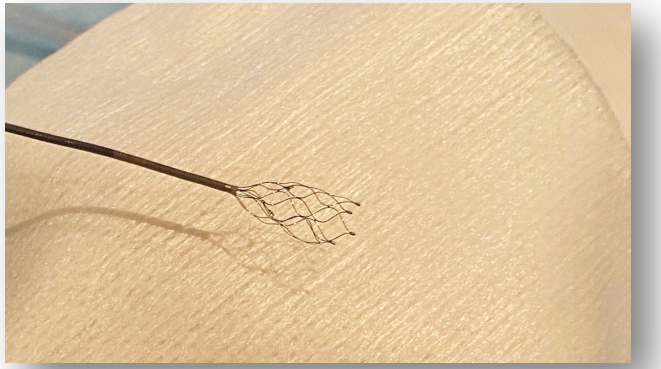


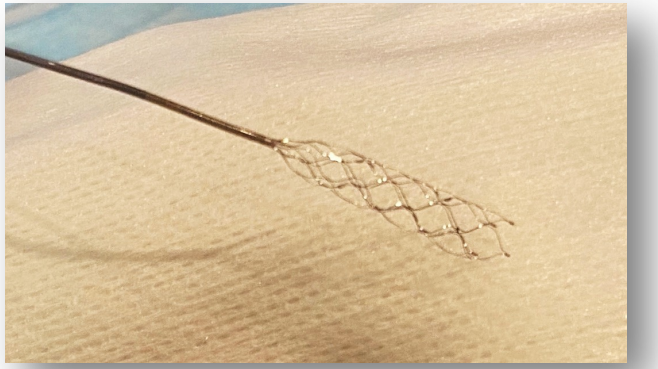
Solitaire FR thrombectomy system: immediate results in 56 consecutive acute ischemic stroke patients

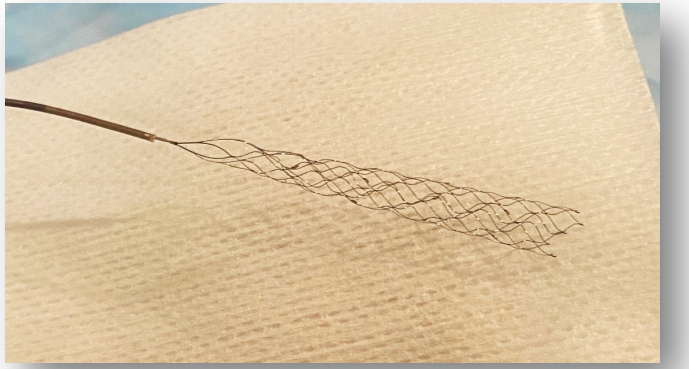
Machi P, *et al*. *J NeuroIntervent Surg* 2018;**10**:i27–i32.



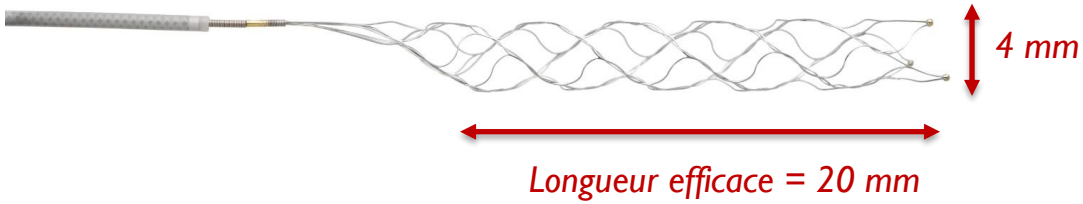
Trevo







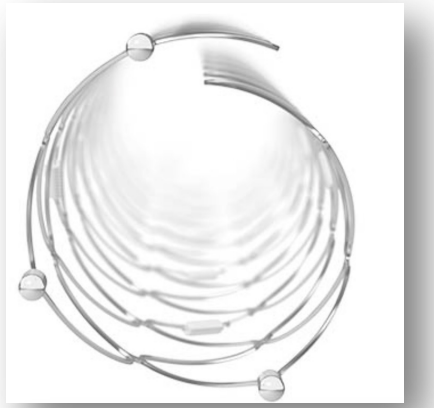
Exemple : stent de 4 x 20 mm

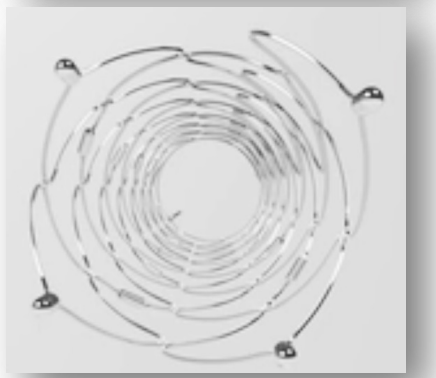


Trevo

Design en overlapping ou non

Solitaire





Disponibles en plusieurs :

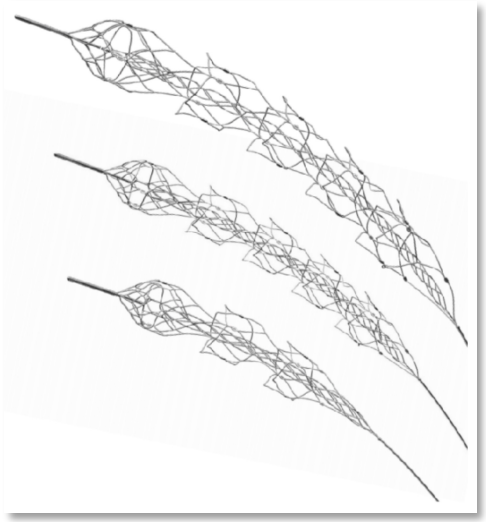
- Tailles : en général, diamètre de 3 mm, 4 mm ou 6 mm.
- Longeurs : 20 mm à 40 mm

Compatibilité stent – microcathéter :

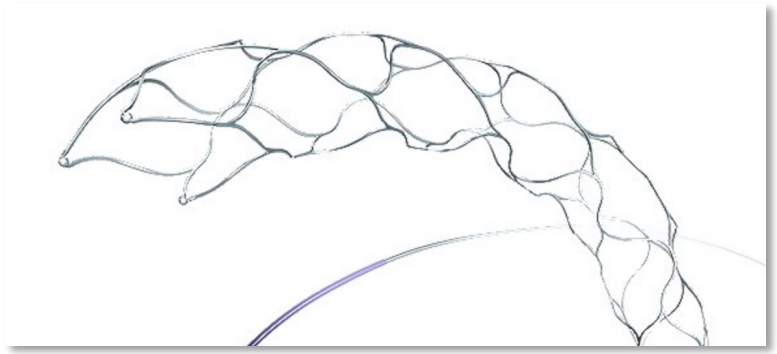
En règle générale, et jusqu'à récemment :

- diamètre < 6 mm : microKT de 21
- diamètre = 6 mm : micro KT de 27

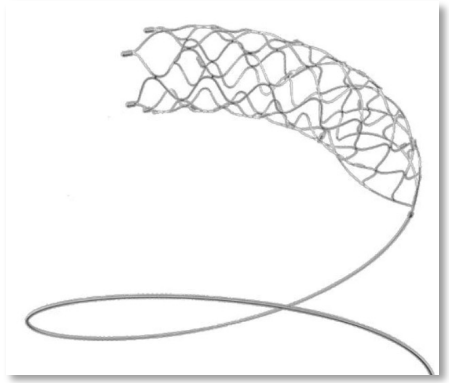
Actuellement : les stents diam. 6 mm → compatibilité avec microKT 21 +++



Embotrap III



Trevo NXT

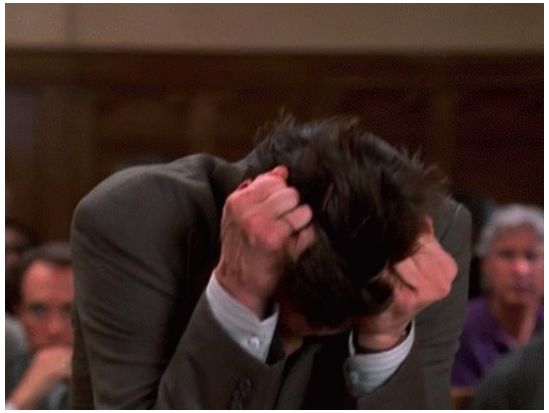


Solitaire X

Pour mémoire :

- diamètre ID micro KT = 17, 21 ou 27 … en inch x 10^{-3} ! (1 inch = 25,4 mm)
- donc e.g. microKT 21 = 0,021 in

MAIS



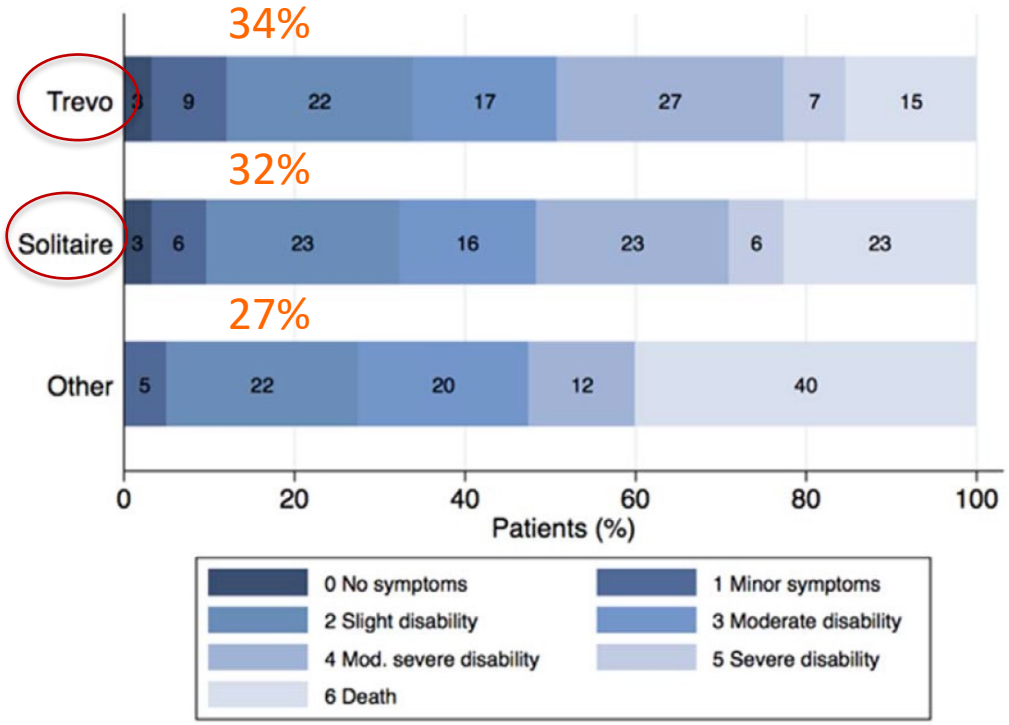
ID microKT	17	21	27
exemples	Echelon 10 Echelon 14 Headway 17	Rapid Transit Rebar 18 Headway 21	Marksman Excelsior XT 27 Headway 27

Influence of Device Choice on the Effect of Intra-Arterial Treatment for Acute Ischemic Stroke in MR CLEAN (Multicenter Randomized Clinical Trial of Endovascular Treatment for Acute Ischemic Stroke in the Netherlands)

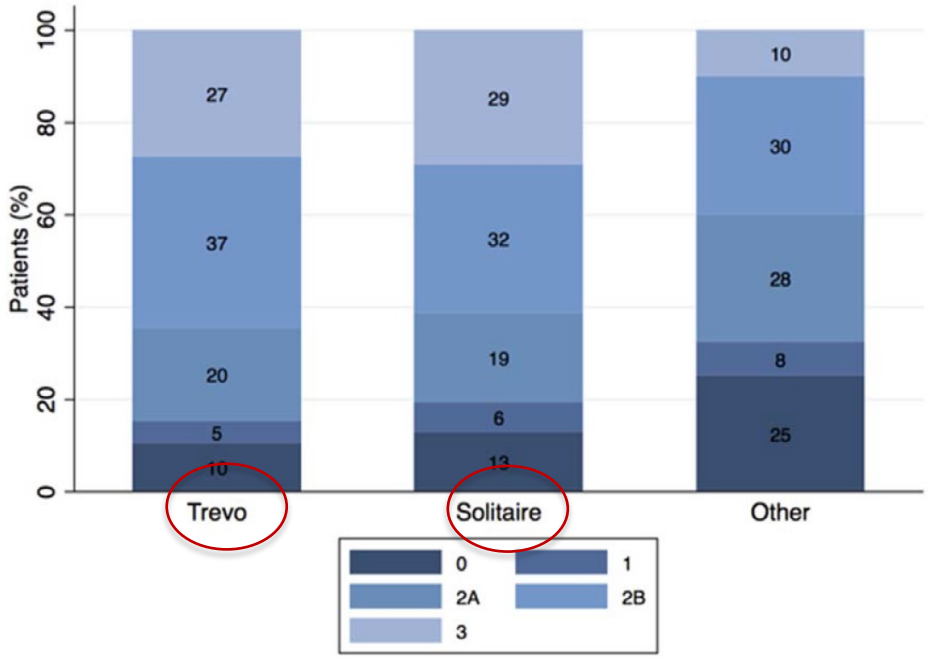
Diederik W. Dippel, MD, PhD; Charles B. Majoie, MD, PhD; Yvo B. Roos, MD, PhD; Aad van der Lugt, MD, PhD; Robert J. van Oostenbrugge, MD, PhD; Wim H. van Zwam, MD, PhD; Hester F. Lingsma, MSc, PhD; Peter J. Koudstaal, MD, PhD; Kilian M. Treurniet, MD; Lucie A. van den Berg, MD; Debbie Beumer, MD; Puck S. Fransen, MD; Olvert A. Berkhemer, MD; for the MR CLEAN Investigators*

Stroke October 2016

mRS 0-2 at 90d



TICI 2B/3 64% 61% 40%



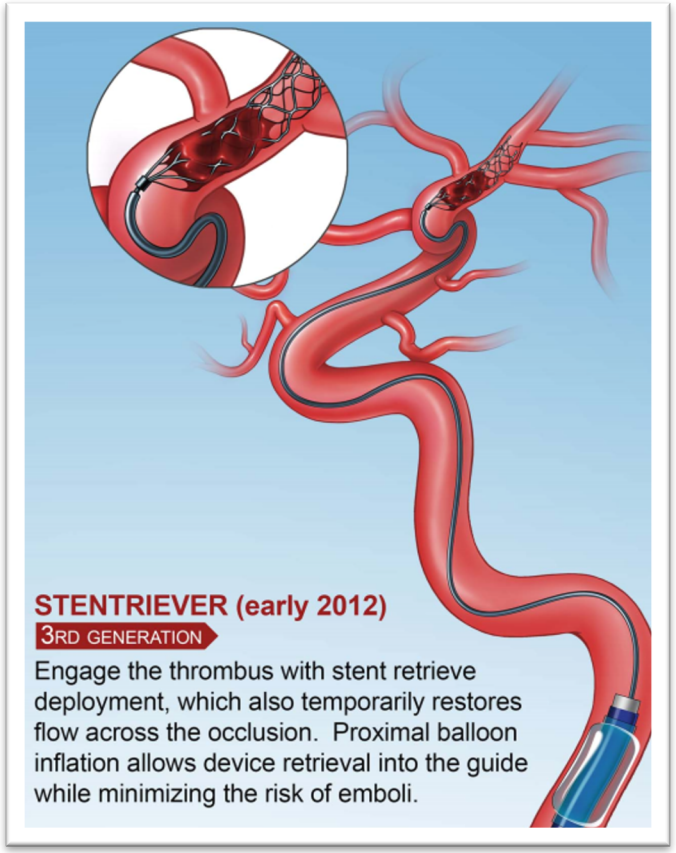
Quel type de stent choisir ?

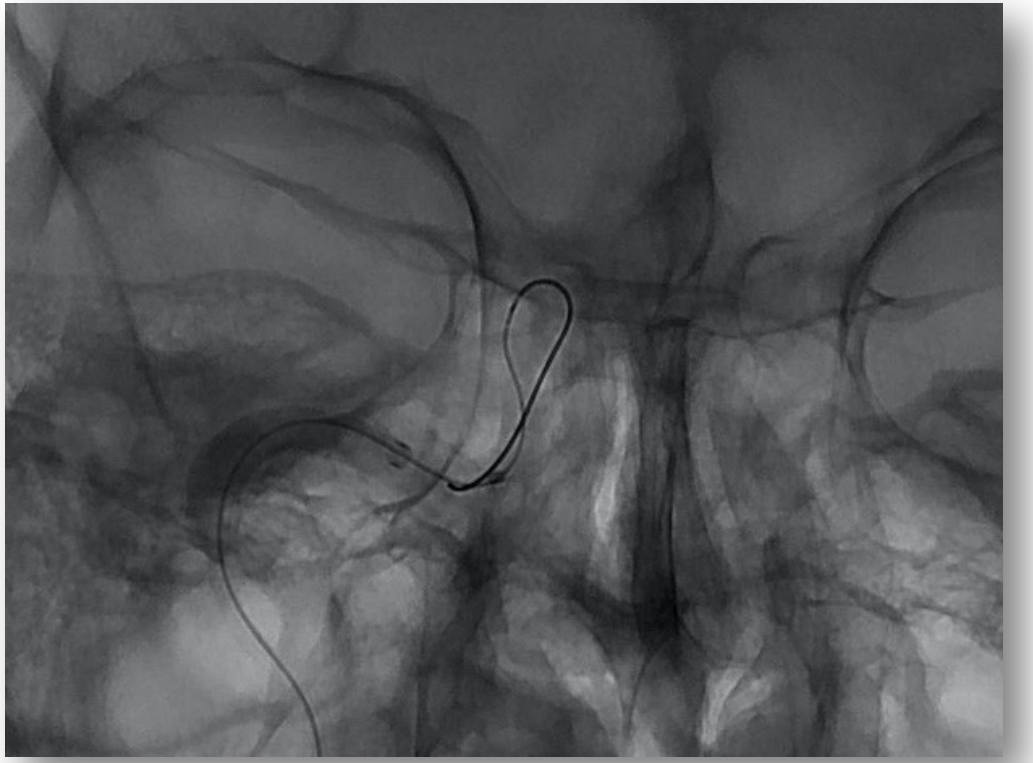
→ Pas de différence significative entre les stents Trevo et Solitaire en terme de résultat clinique ou de recanalisation…

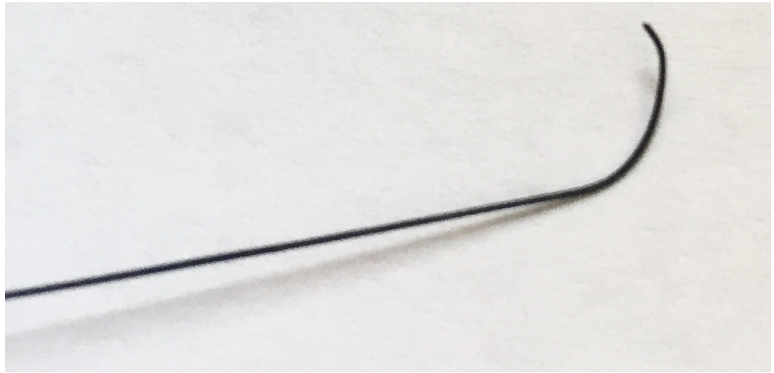
Ecole de la Thrombectomie

Navigation – déploiement du stent

- KT guide à ballon à large lumière
- MicroKT de 21 ou 27 + microguide de 14
- Franchissement du caillot avec microguide, suivi du microKT
- Montée du stent
- Déploiement du stent en regard du caillot
- Attendre quelques minutes après ouverture du stent
- Gonfler le ballon du KT guide
- Retrait du stent sous aspiration dans le KT guide
- Compléter l'aspiration dans le KT guide pour rammener des caillots résiduels

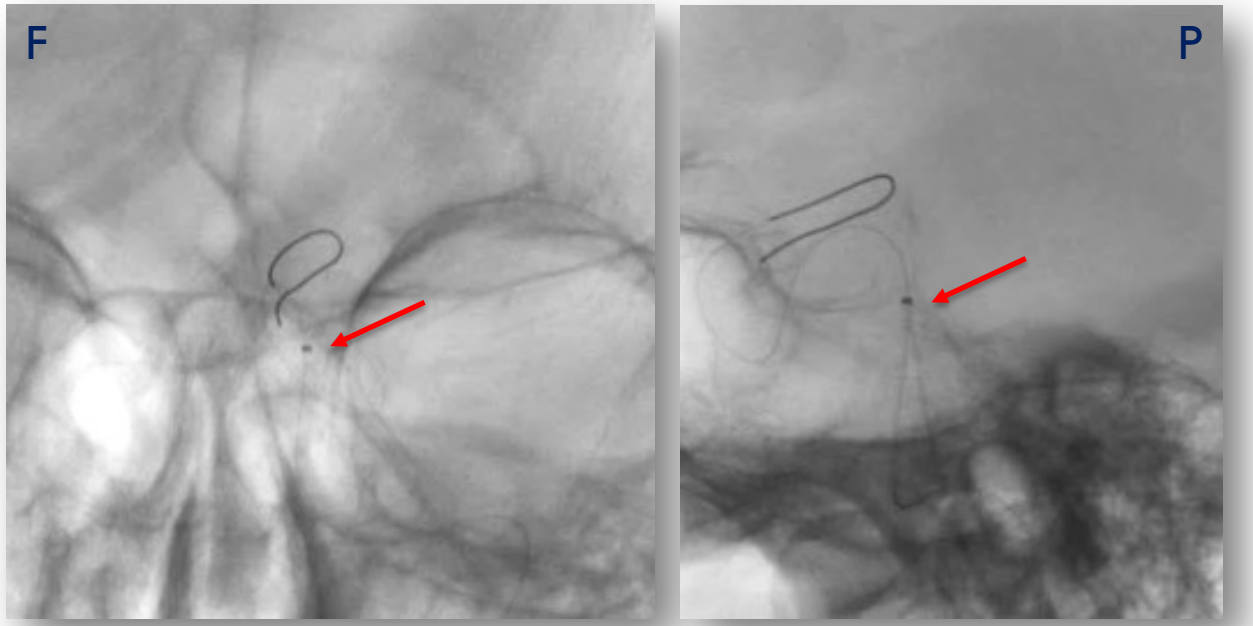


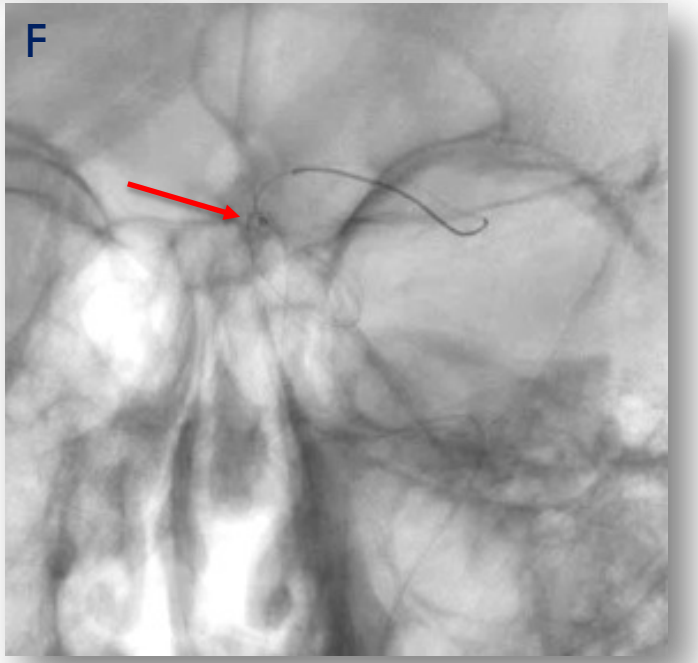


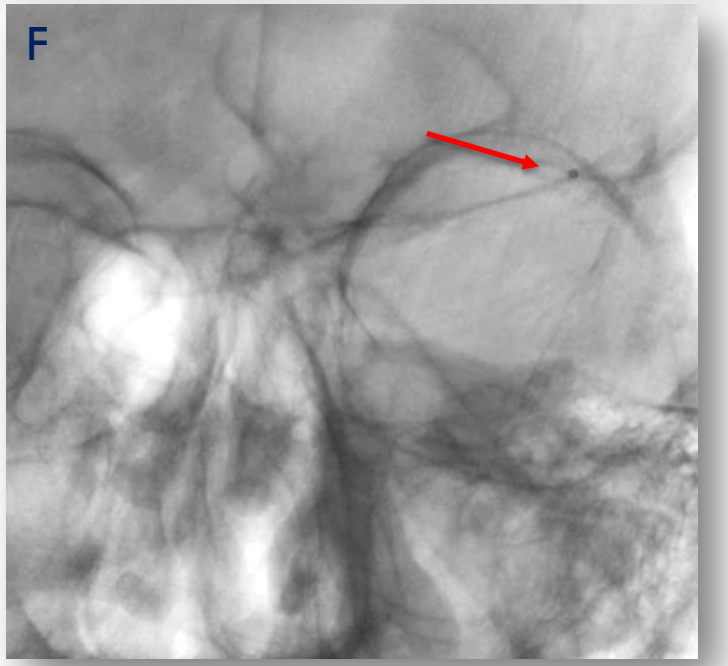


Pré-former le microguide si besoin.
J-shape.

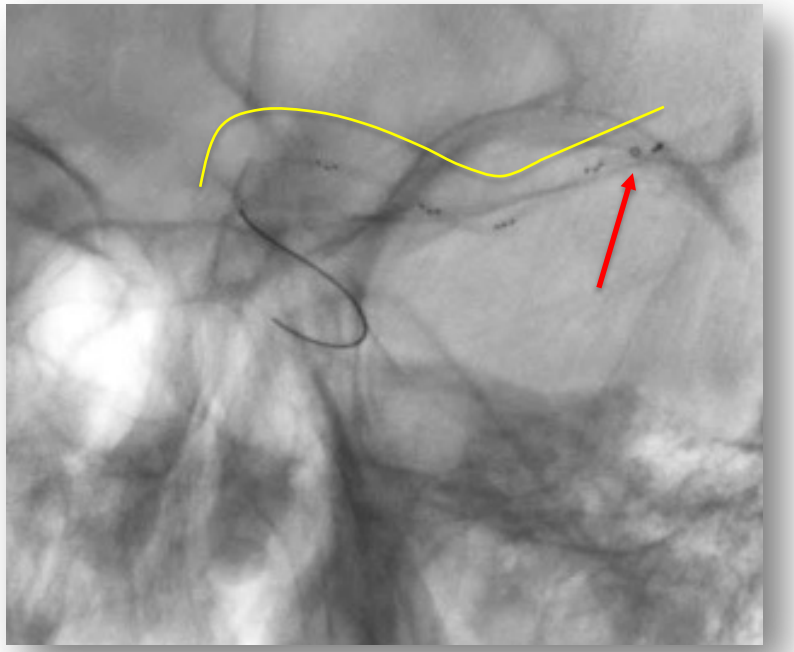
Montée du microguide et microKT

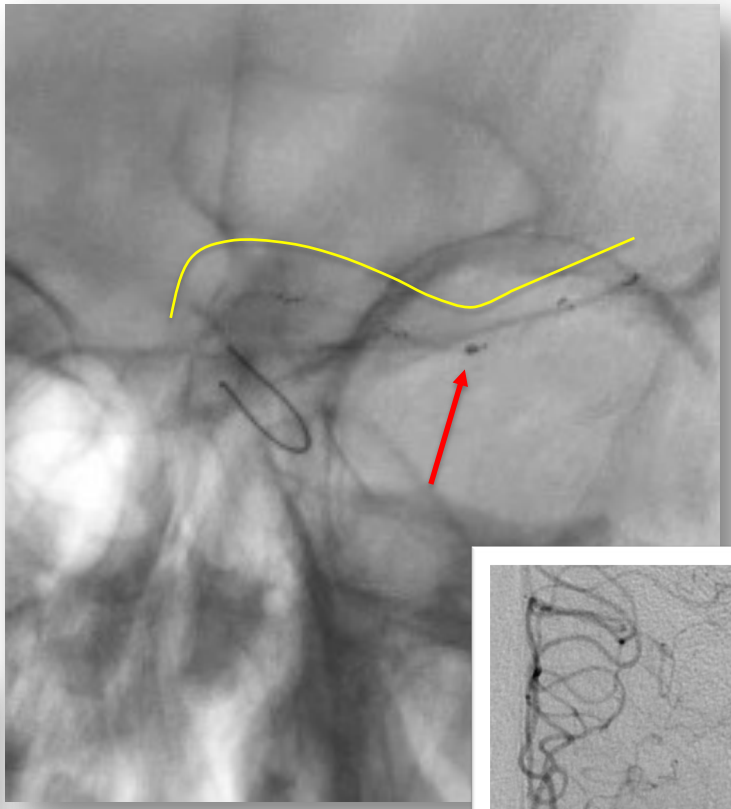


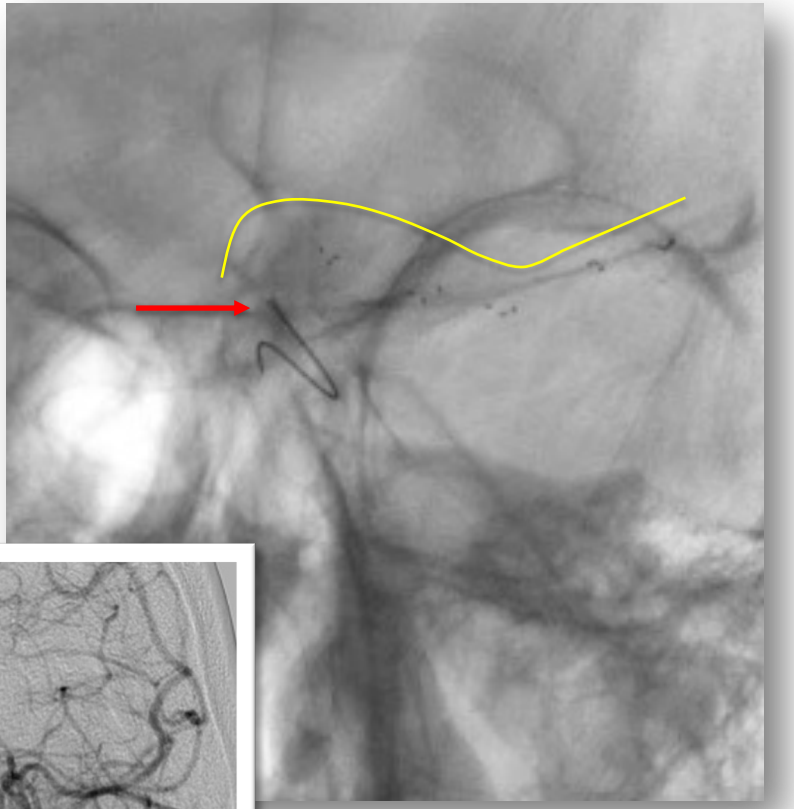


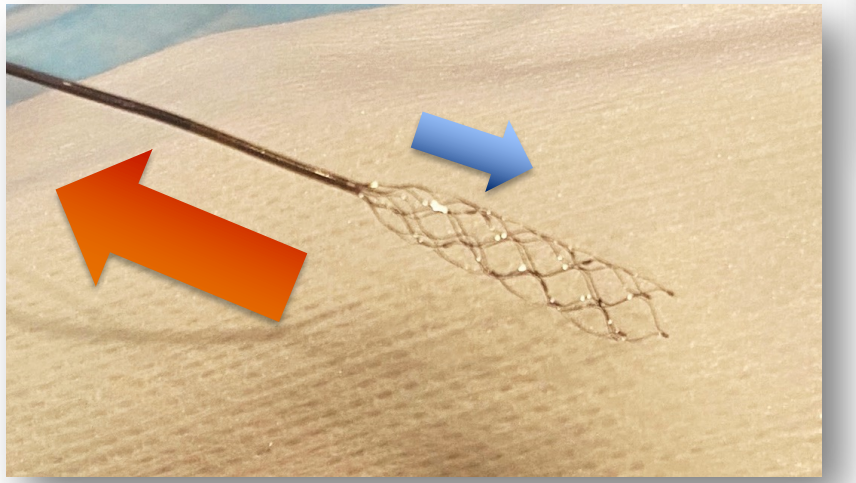


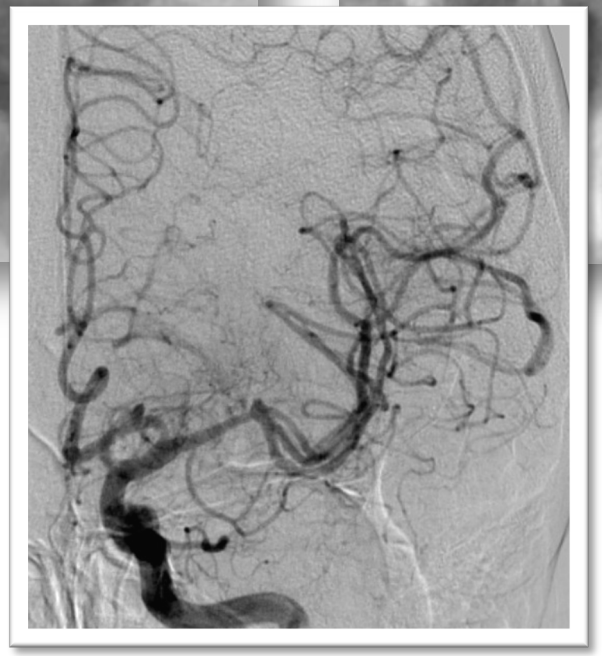
Déploiement du stent









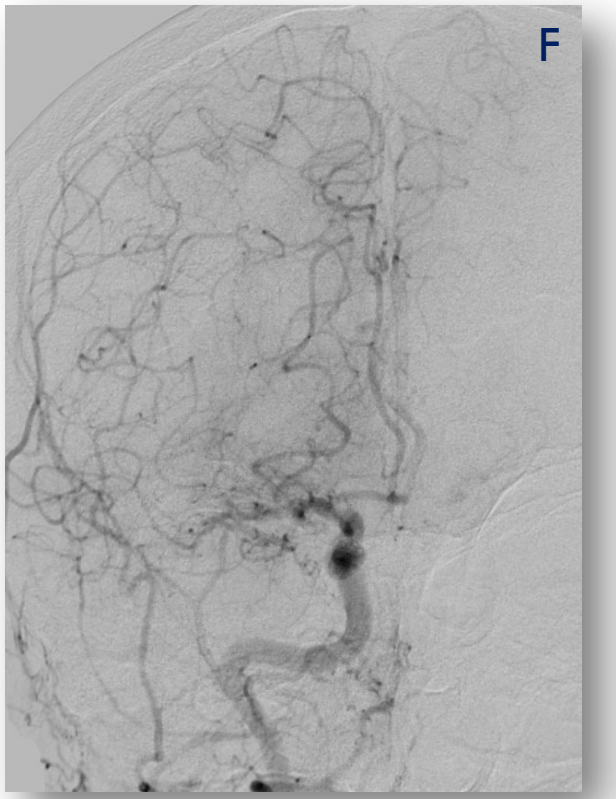


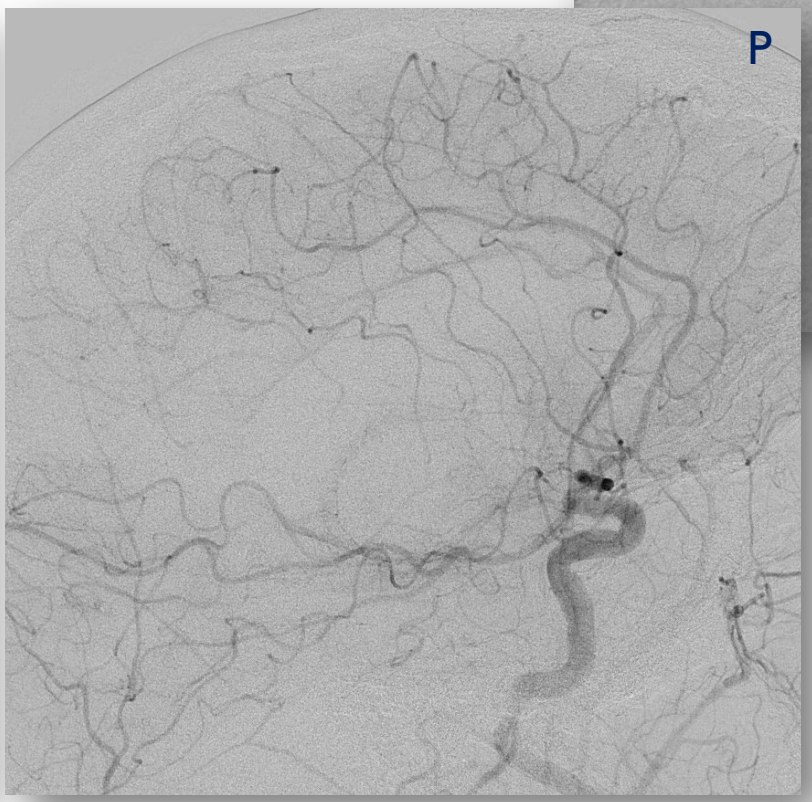
Ecole de la Thrombectomie

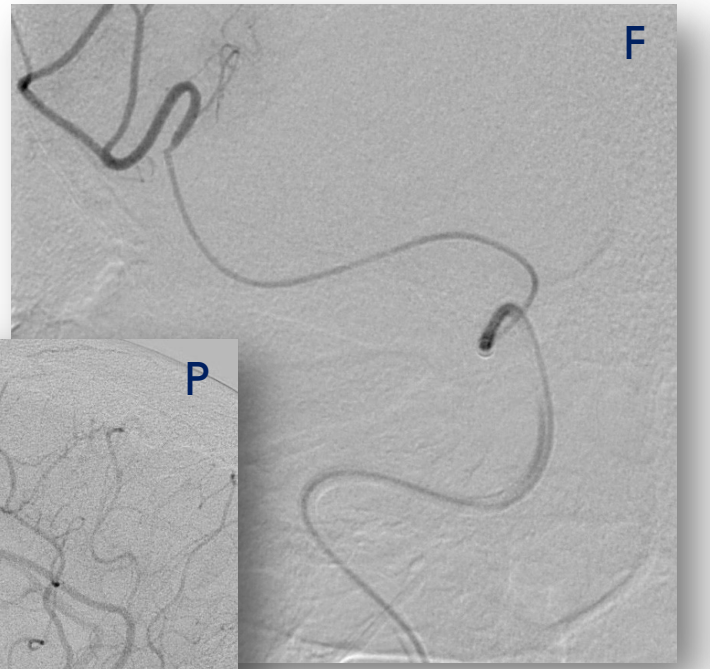
+/- Intérêt de l'injection par micro KT ?

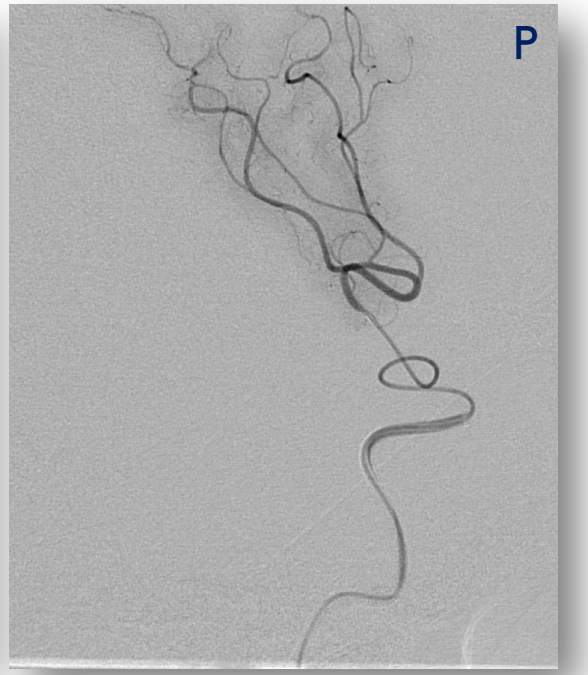
→ Vérifier l'absence de complication distale lors du cathétérisme

→ En cas d'occlusion M2

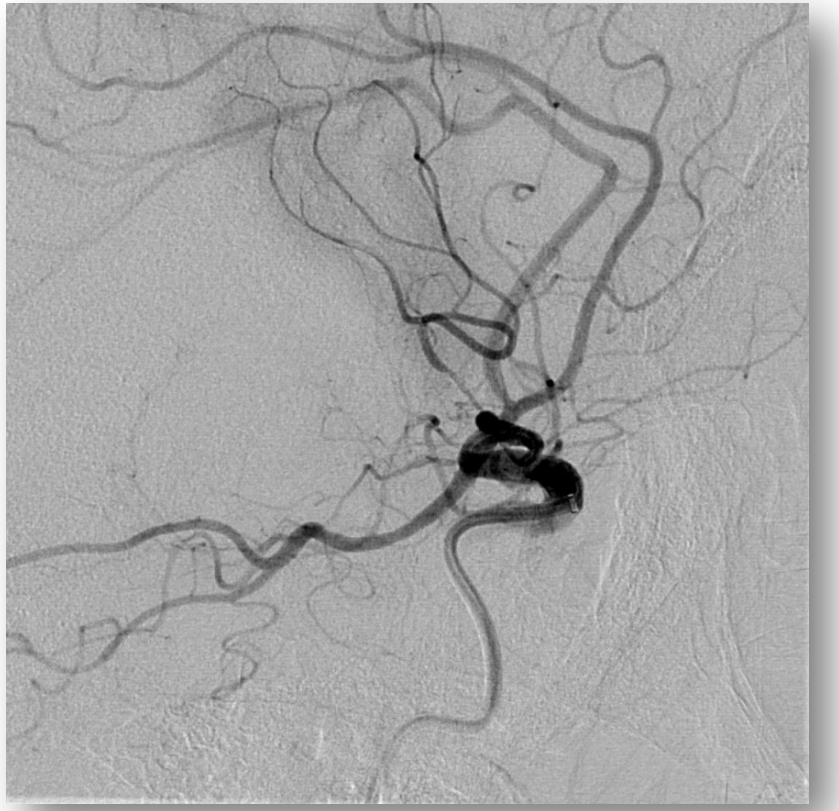








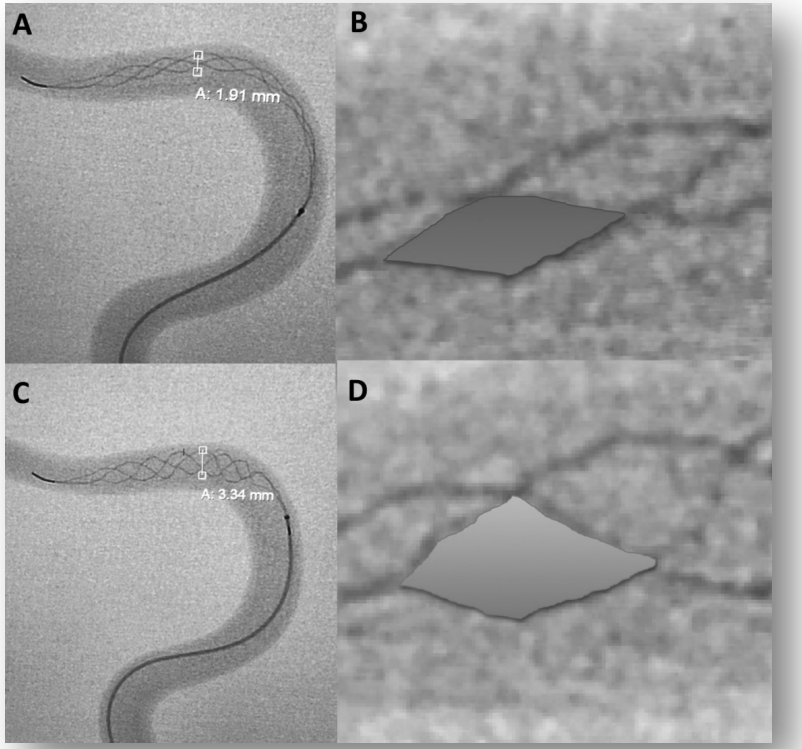
…localisation plus précise du caillot ?



Optimizating Clot Retrieval in Acute Stroke

The Push and Fluff Technique for Closed-Cell Stentrievers

Diogo C. Haussen, MD; Leticia C. Rebello, MD; Raul G. Nogueira, MD

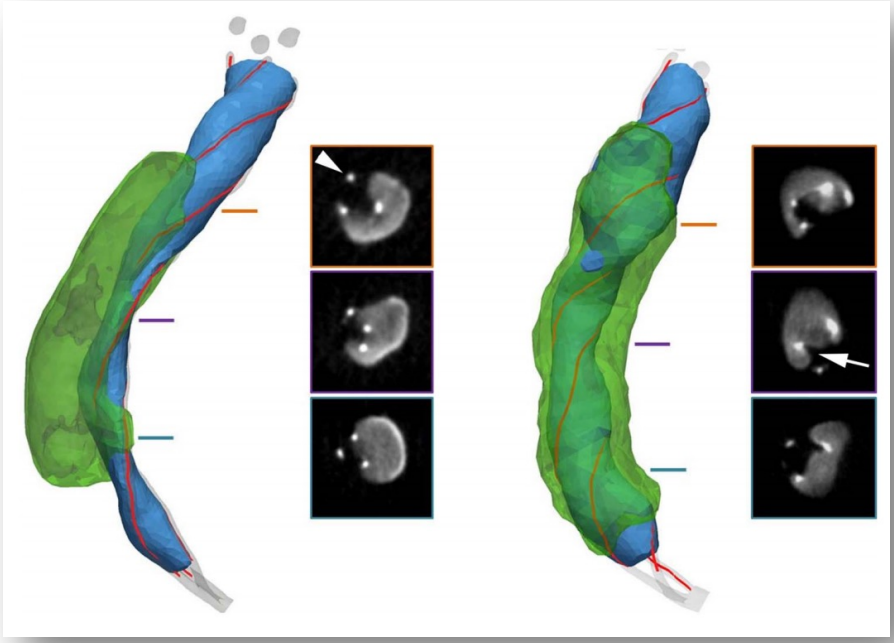


Conclusions—The PFT is safe and leads to optimization of wall apposition and cell size/configuration, resulting in higher chances of first-pass reperfusion, lower number of passes, and better rates of complete reperfusion. **(*Stroke*. 2015;46:2838-2842. DOI: 10.1161/STROKEAHA.115.010044.)**

Quantitative assessment of device–clot interaction for stent retriever thrombectomy

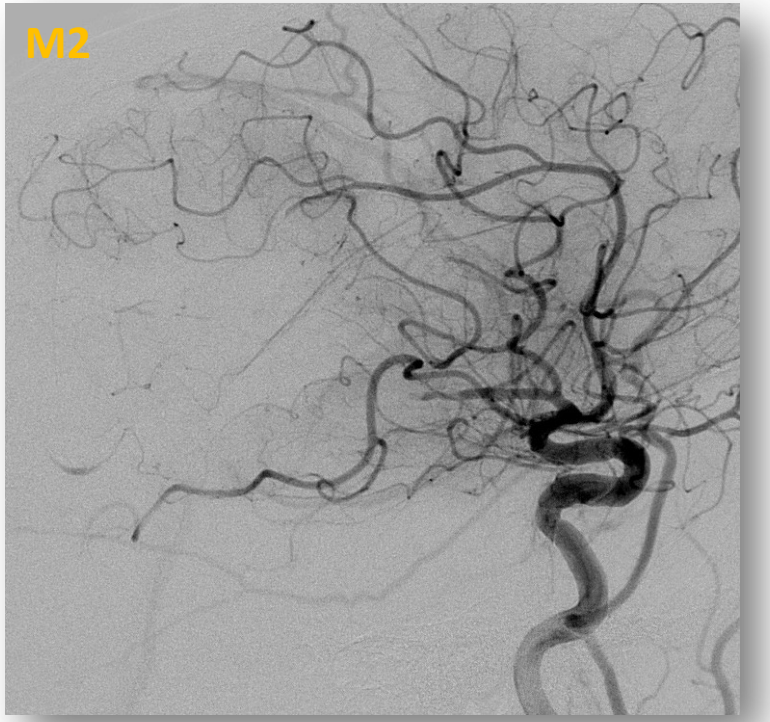
Kajo van der Marel,[1] Ju-Yu Chueh,[1] Olivia W Brooks,[1] Robert M King,[1] Miklos G Marosfoi,[1] Erin T Langan,[1] Sarena L Carniato,[2] Matthew J Gounis,[1] Raul G Nogueira,[3] Ajit S Puri[1]

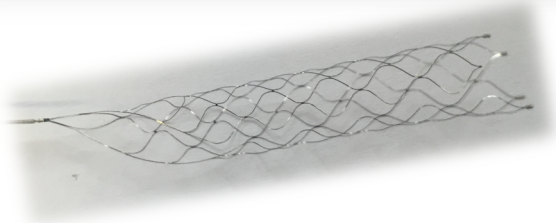
J NeuroIntervent Surg 2016;**0**:1–6.



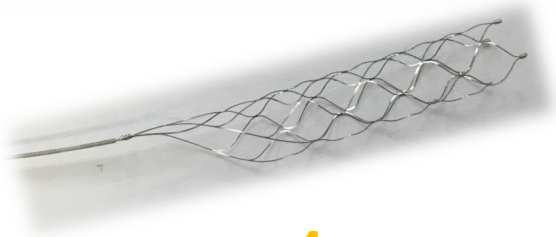
Ecole de la Thrombectomie

Choix de la taille du stent

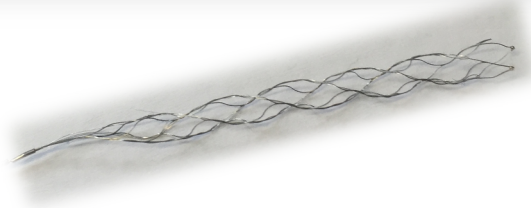




6 mm

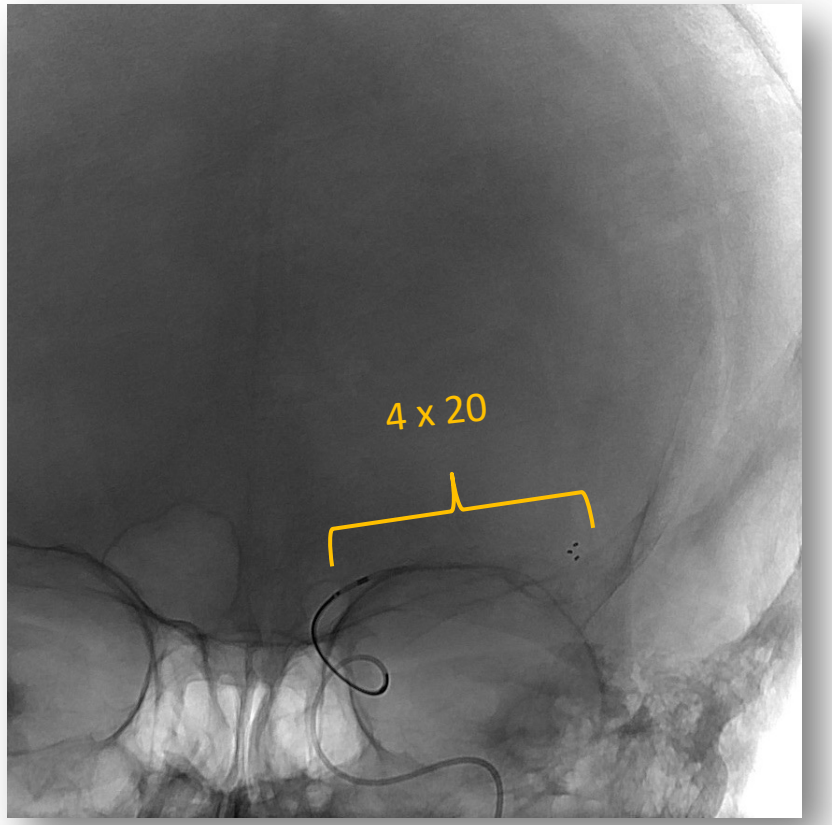


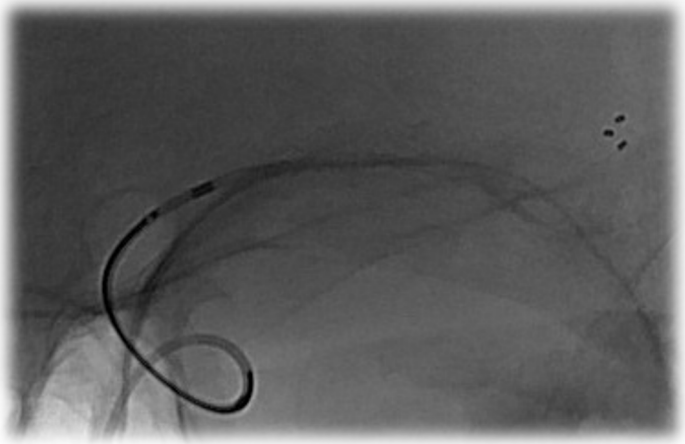
4 mm



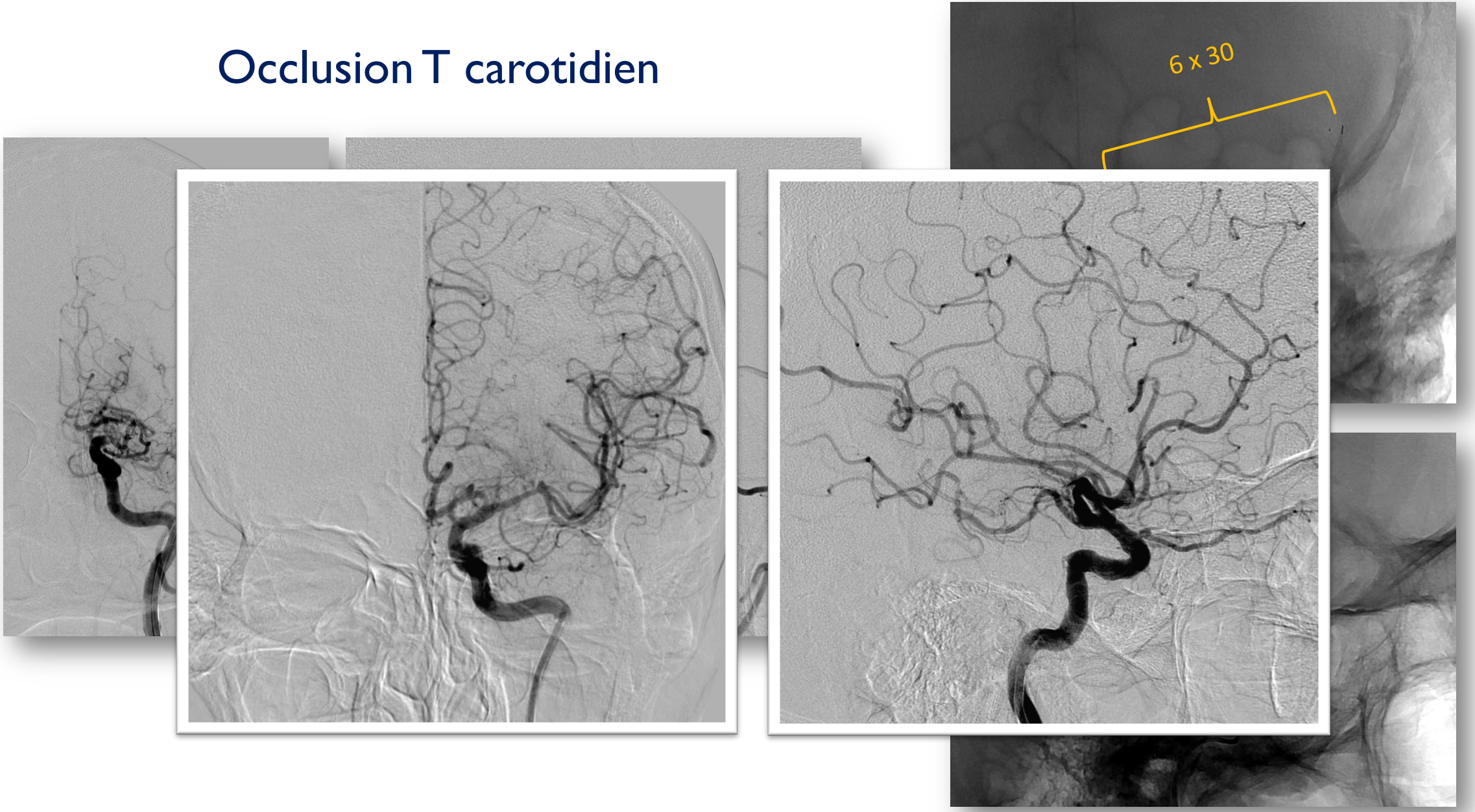
3 mm

Occlusion M1





Occlusion T carotidien



Quelle longueur de stent ?

Longer stent retrievers enhance thrombectomy performance in acute stroke

Diogo C Haussen, Alhamza R Al-Bayati, Jonathan A Grossberg, Mehdi Bouslama, Clara Barreira, Nicolas Bianchi, Michael R Frankel, Raul G Nogueira

J NeuroIntervent Surg 2018;**0**:1–4.

Table 1 Univariate analysis comparing long versus short retrievers

	Long (n=221)	Short (n=199)	P value
Primary outcome			
First-pass reperfusion	138 (62%)	101 (50%)	0.01
Secondary outcomes			
First-pass full reperfusion	91 (41%)	66 (33%)	0.10
Parenchymal hematoma type 2	5 (2%)	6 (3%)	1.00
Subarachnoid hemorrhage	15 (6%)	12 (6%)	0.72

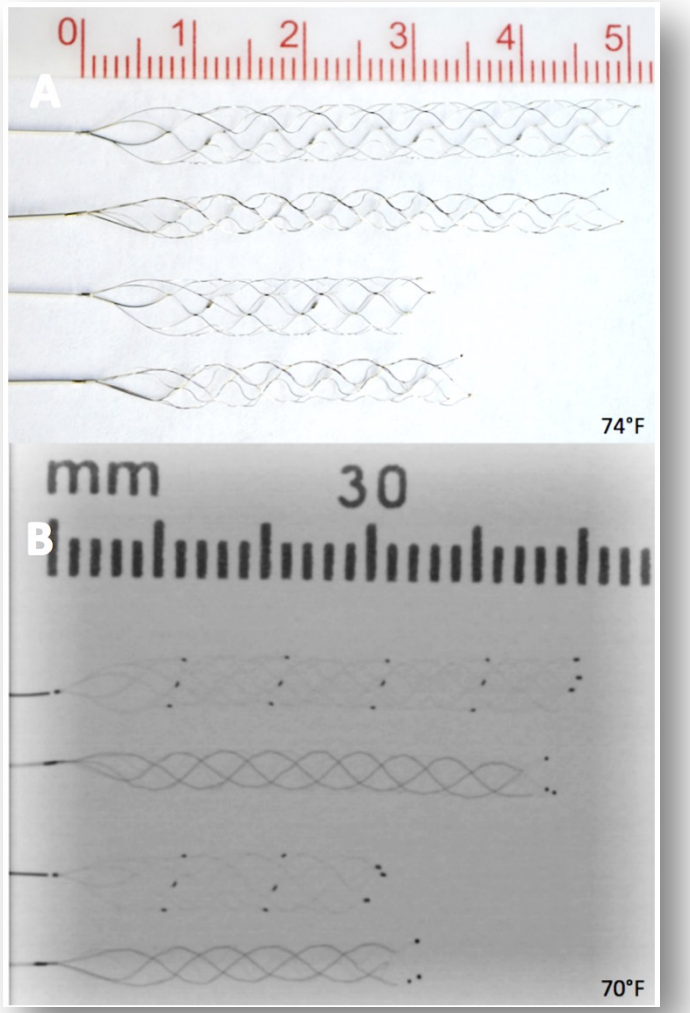


Figure 1 Illustrative image of the different 4 mm stent retriever lengths and fluoroscopic characteristics. (A) Macroscopic and (B) fluoroscopic appearance of the devices. From top to bottom: Solitaire 4×40 mm; Trevo 4×30 mm; Solitaire 4×20 mm; Trevo 4×20 mm.

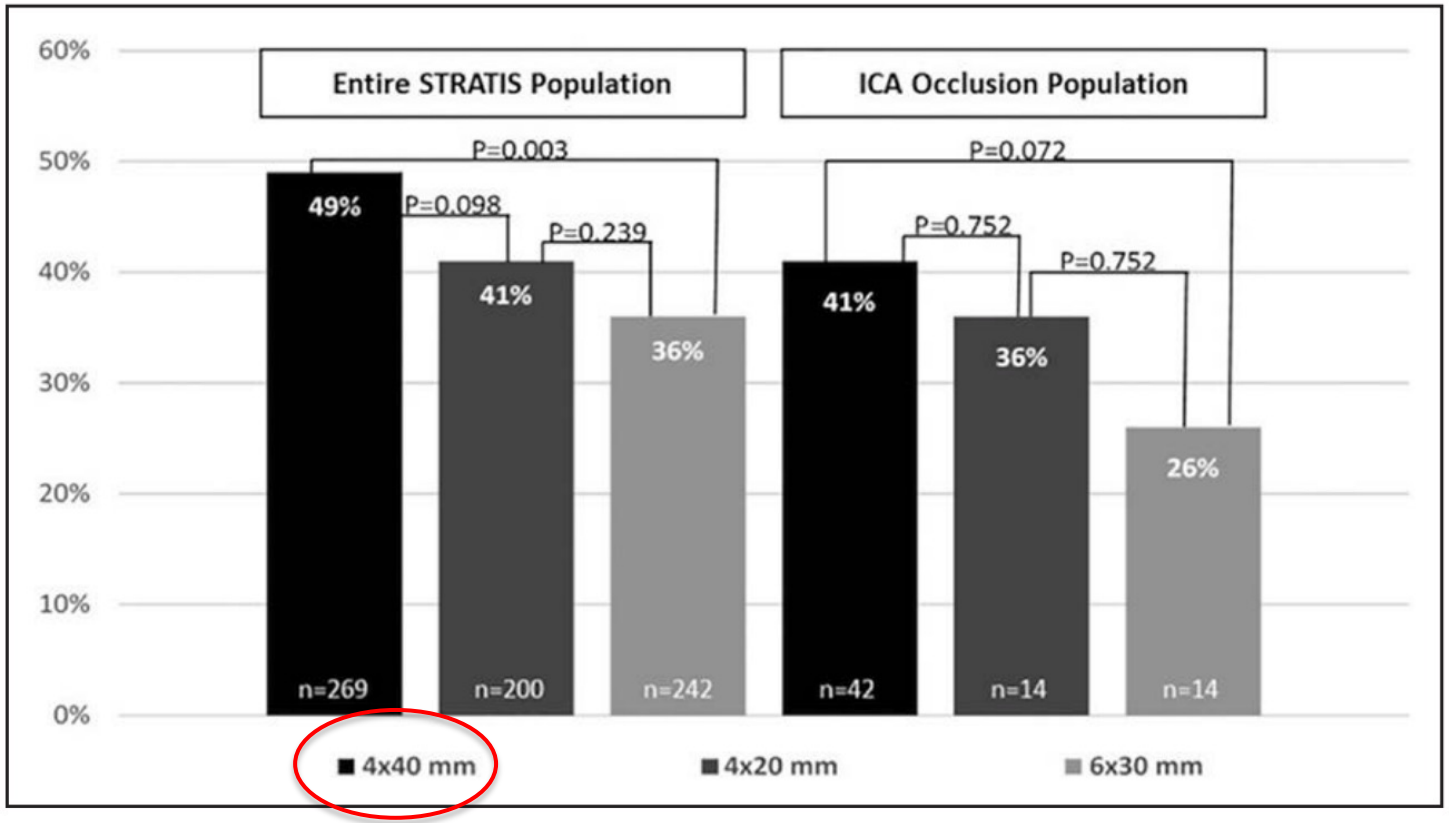
Ecole de la Thrombectomie

The longer, the better…

Impact of Stent Retriever Size on Clinical and Angiographic Outcomes in the STRATIS Stroke Thrombectomy Registry

Osama O. Zaidat, MD; Diogo C. Haussen, MD; Ameer E. Hassan, DO; Ashutosh P. Jadhav, MD, PhD; Brijesh P. Mehta, MD; Maxim Mokin, MD, PhD; Nils H. Mueller-Kronast, MD; Michael T. Froehler, MD, PhD

Stroke February 2019

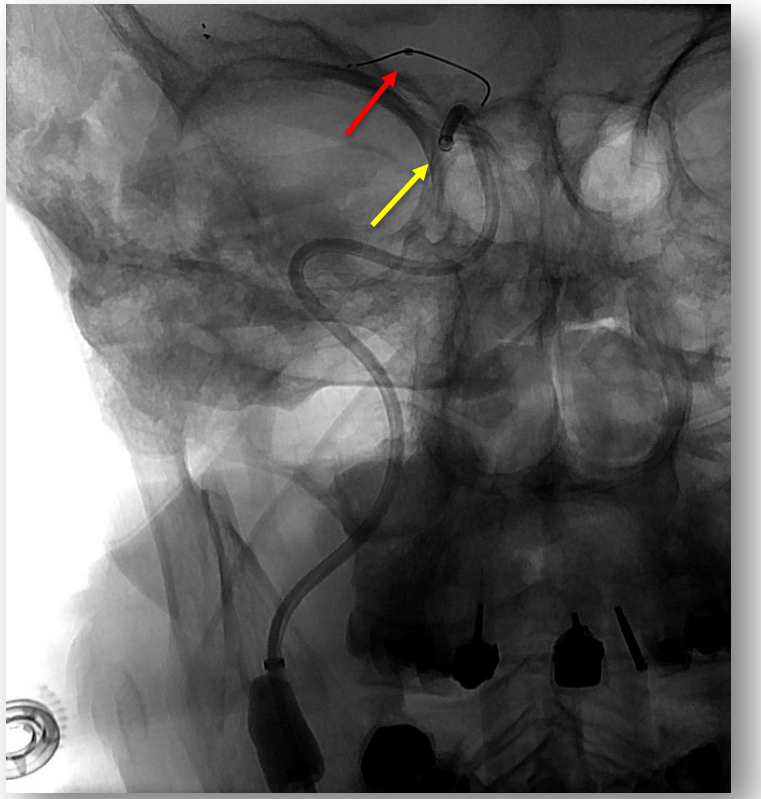


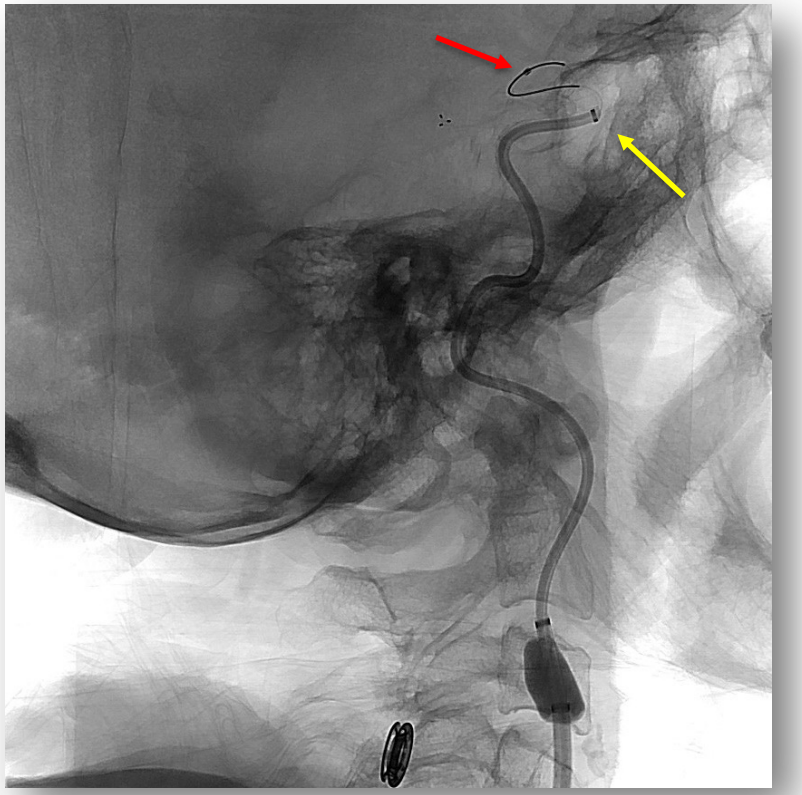
Taux de first-pass effect, avec stents solitaires de tailles différentes, dans les occlusions de la circulation antérieure.

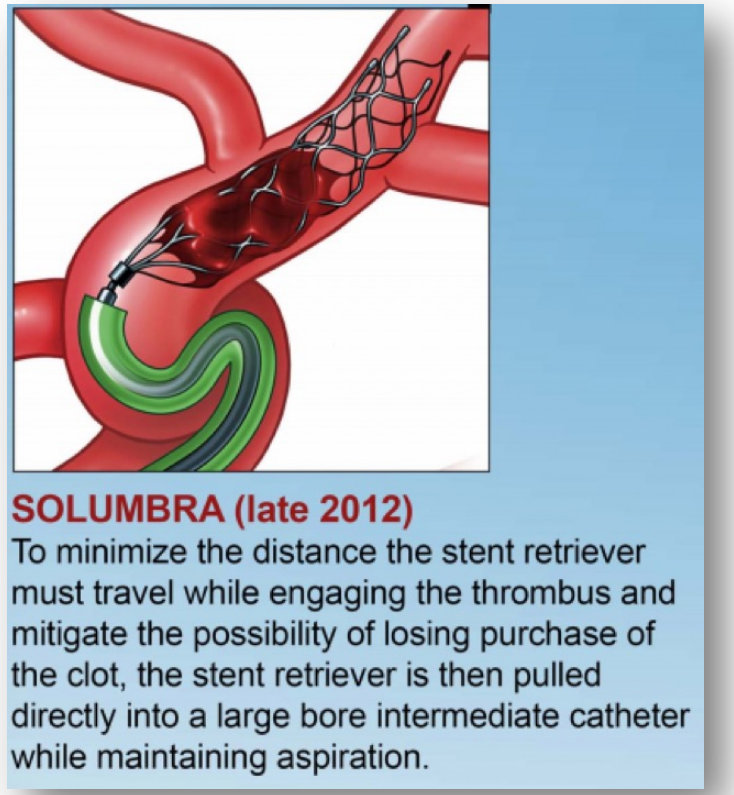
Ecole de la Thrombectomie

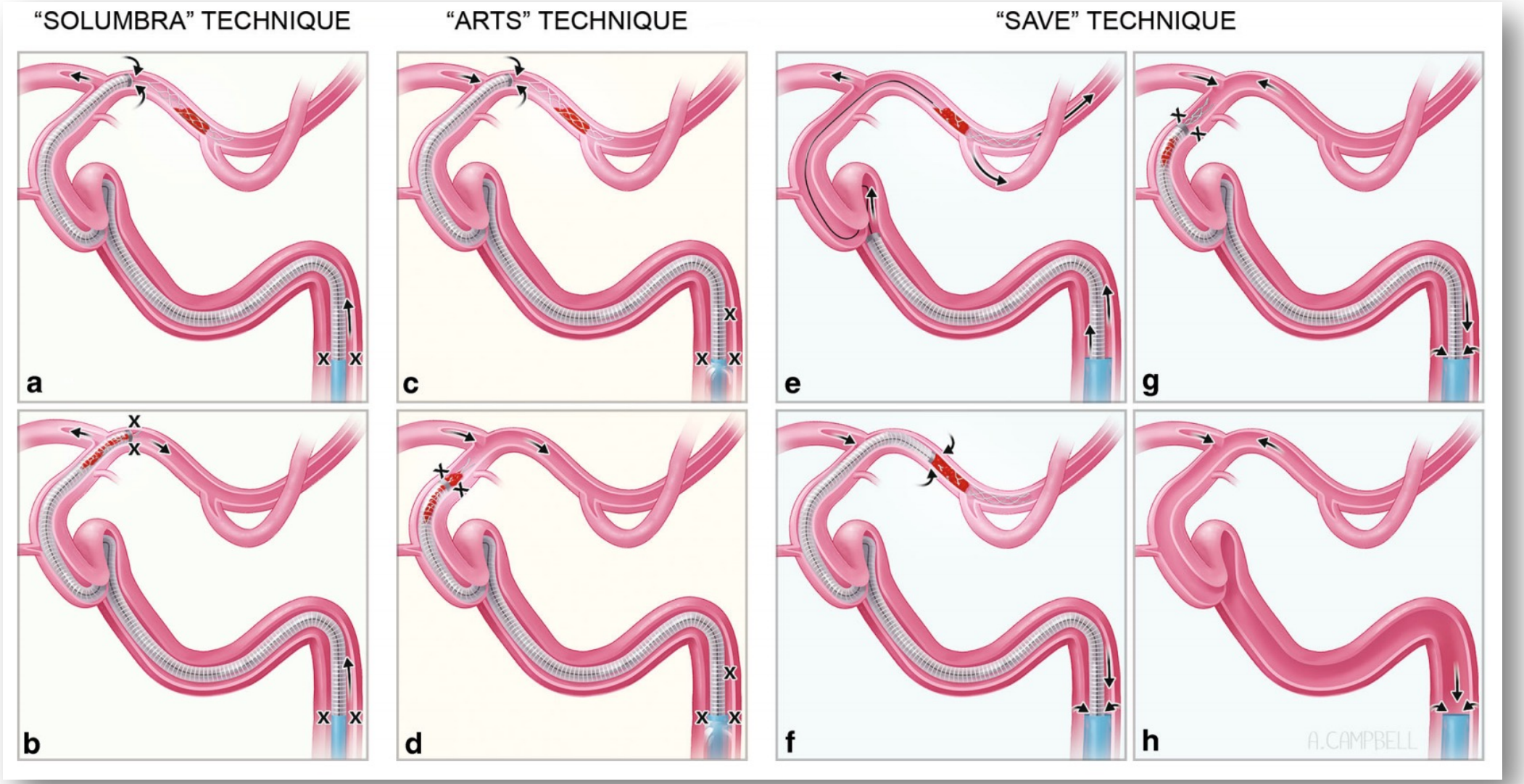
Methode combinée

Utilisation combinée du stent retriever + cathéter intermédiaire d'aspiration
Historiquement = « solumbra »







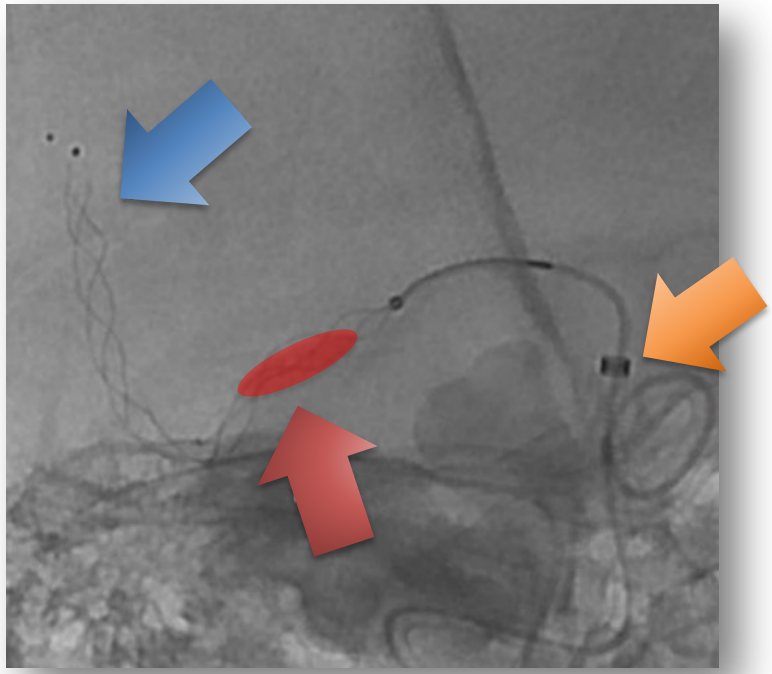


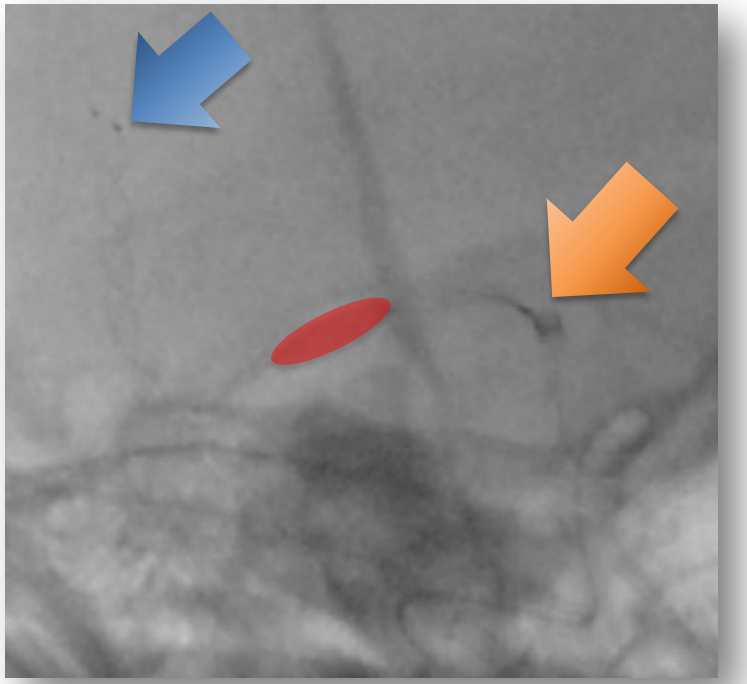
Nombreuses variantes décrites…

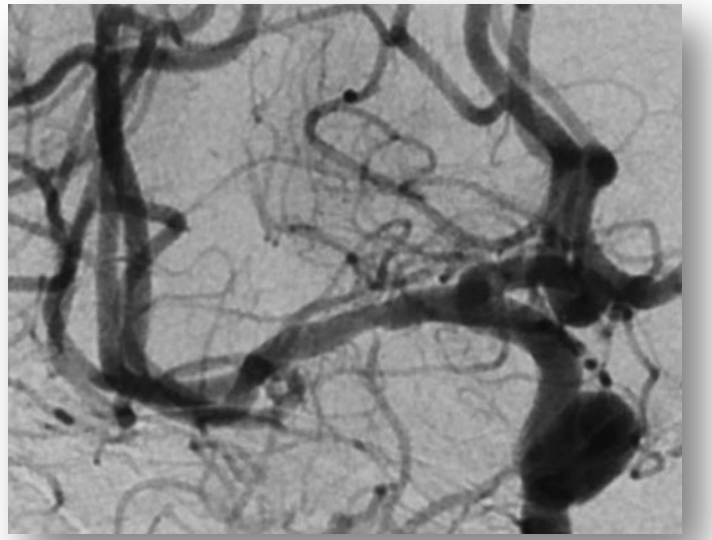
Maximizing First-Pass Complete Reperfusion with SAVE

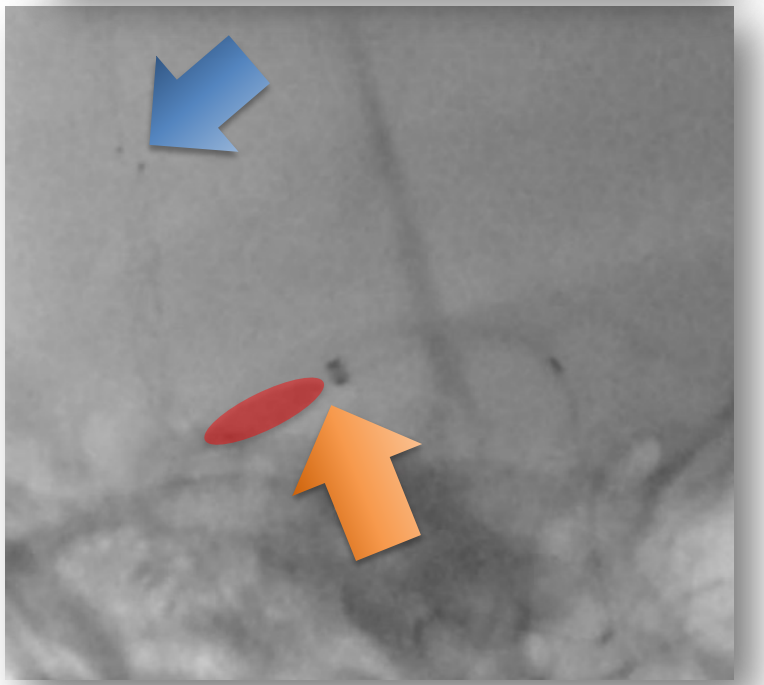
Volker Maus[1] · Daniel Behme[2] · Christoph Kabbasch[1] · Jan Borggrefe[1] · Ioannis Tsogkas[2] · Omid Nikoubashman[3] · Martin Wiesmann[3] · Michael Knauth[2] · Anastasios Mpotsaris[1] · Marios Nikos Psychogios[2]

Clin Neuroradiol
13 February 2017

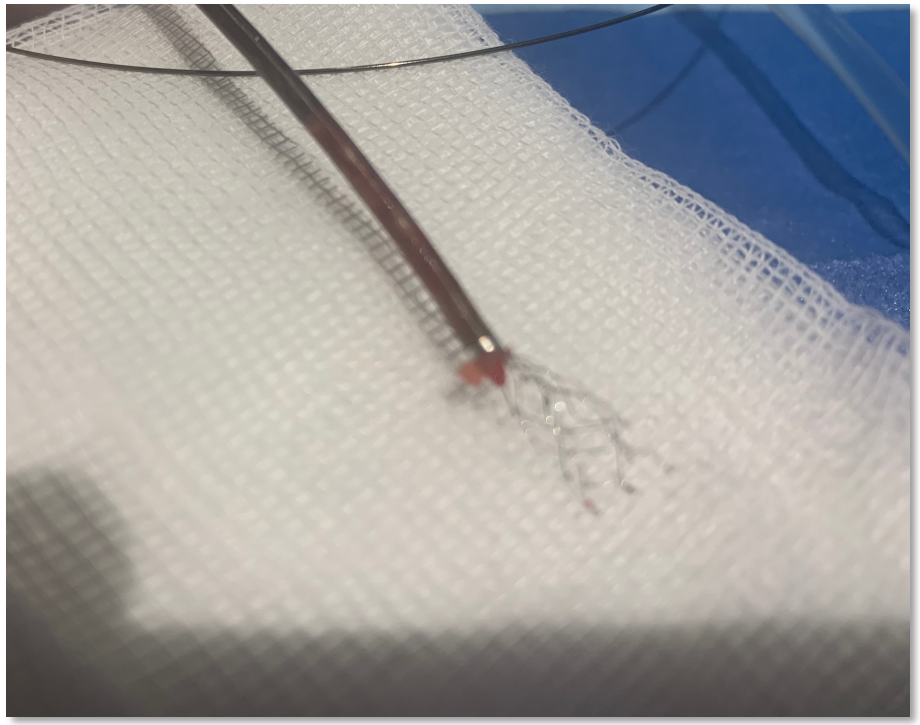








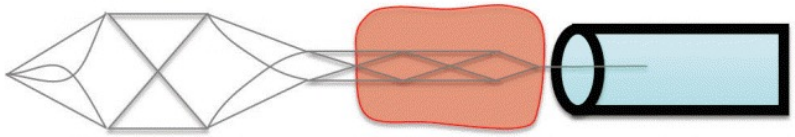
Ecole de la Thrombectomie



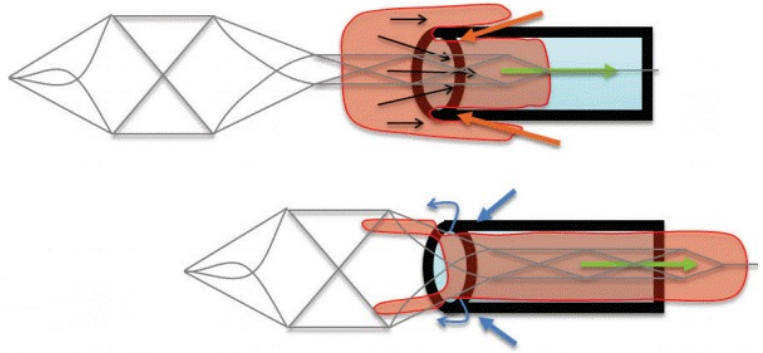
Thrombectomy in Acute Ischemic Stroke: Challenges to Procedural Success

Albert J. Yoo,[a] Tommy Andersson[b,c,d] Journal of Stroke 2017;19(2):121-130

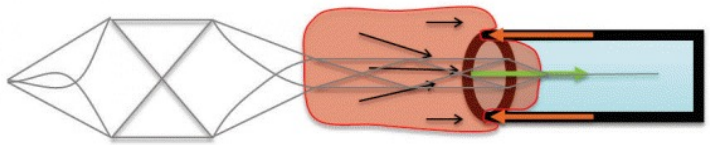
Quelle position du stent par rapport au KT d'aspiration ?



Pas de contact caillot – KT aspiration

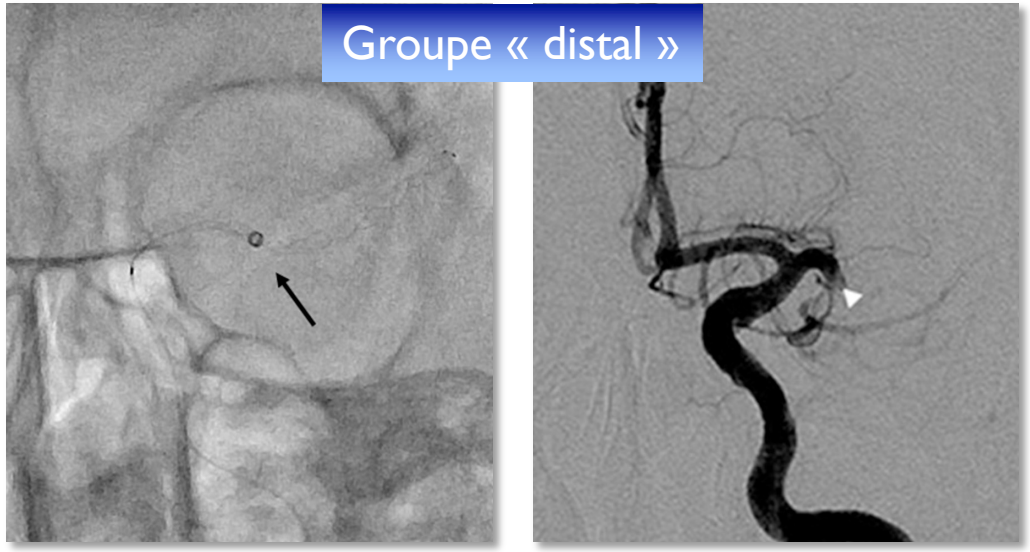


Stent trop retiré dans le KT aspiration



Position satisfaisante du stent/KT aspiration

Ecole de la Thrombectomie



RESEARCH ARTICLE

Effect of distal access catheter tip position on angiographic and clinical outcomes following thrombectomy using the combined stent-retriever and aspiration approach

Sang Hun Baek[1], Sanghyeon Kim[1]*, Myongjin Kang[1], Jae-Hyung Choi[2], Hee Jin Kwon[1], Dong Won Kim[1]

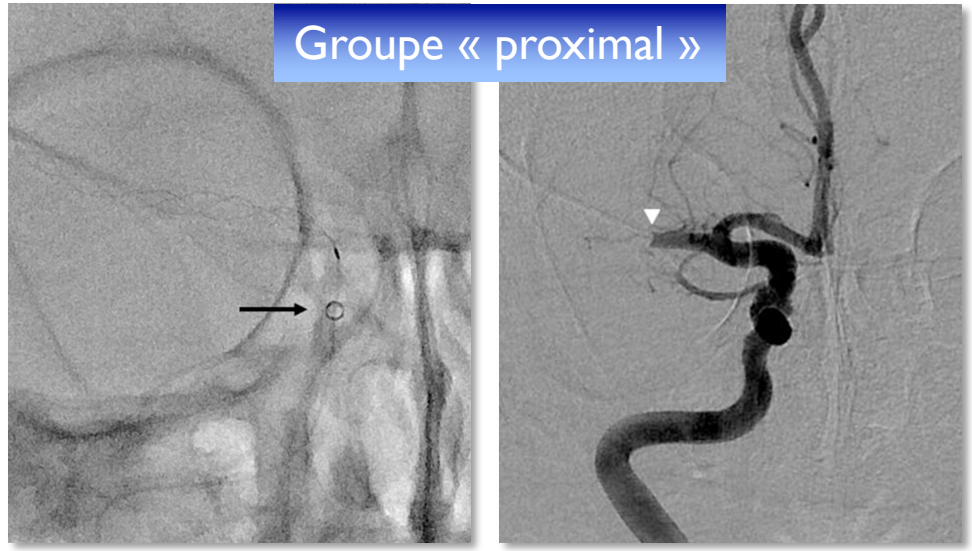


Table 2. Comparison of the outcomes between the distal and proximal DAC groups.

	Unweighted analysis		
	Distal DAC group (n = 45)	Proximal DAC group (n = 38)	P value
Number of passes	1.64 ± 0.7	1.50 ± 0.8	0.406
Puncture-to-recanalization time (min)	64.887 ± 12.53	64.05 ± 10.81	0.755
Successful reperfusion (modified TICI≥2b)	39 (86.7%)	31 (81.6%)	0.525
Complete reperfusion (modified TICI = 3)	30 (66.7%)	16 (42.1%)	0.025
Favorable clinical outcome (mRS≤2 at 3 month)	28 (62.2%)	21 (55.3%)	0.521
Early neurological improvement	27 (60.0%)	19 (50.0%)	0.361
Arterial dissection	4 (8.9%)	1 (2.6%)	0.369
Symptomatic ICH	3 (6.7%)	0 (0%)	0.246
Emboli to new territory	0 (0%)	0 (0%)	1.000
Mortality	3 (6.7%)	2 (5.3%)	1.000

Influence de la position du KT d'aspiration sur la safety ?

Ecole de la Thrombectomie

ASTER 2 COMBINED

Combined Use of Contact Aspiration and the Stent Retriever Technique Versus Stent Retriever Alone for Recanalisation in Acute Cerebral Infarction (ASTER2 Combined)

Bertrand Lapergue, Raphaël Blanc , Julien Labreuche,, Xavier Barreau, Jérome Berge, Arturo Consoli, Georges Rodesch, Susanna Saleme, Vincent Costalat, Serge Bracard, Hubert Desal, Alain Duhamel, Mikael Mazighi, Laurent Spelle, Emmanuel Houdart, Frédéric Clarençon, Jean Christophe Ferré , Maalek Ben Maacha, C Prevot, Benjamin Gory, Michel Piotin.

On behalf of the ASTER2 Trial Investigators.

→ Méthode combinée Stent + KT aspiration

vs

Stent seul

Frontline Treatment	TICI 2c/3 % Patients
Combined CA+SR	131 (64.5%)
STENT RETRIEVER	117 (57.9%)

P value = 0.17

Pas de différence statistiquement significative entre les 2 méthodes

Ecole de la Thrombectomie

First-line thrombectomy strategy for anterior large vessel occlusions: results of the prospective ETIS egistry

Benjamin Maïer,[1,2] Stephanos Finitsis,[3] Romain Bourcier,[4] Panagiotis Papanagiotou,[5,6]

JNIS 2021

Registre ETIS
Rétrospective, 2643 patients
KT à ballon ou non
SR vs **CA** vs **SR+CA**

Table 1 Baseline characteristics, MT procedure, radiological and clinical endpoints; mTICI, modified treatment in cerebral infarction

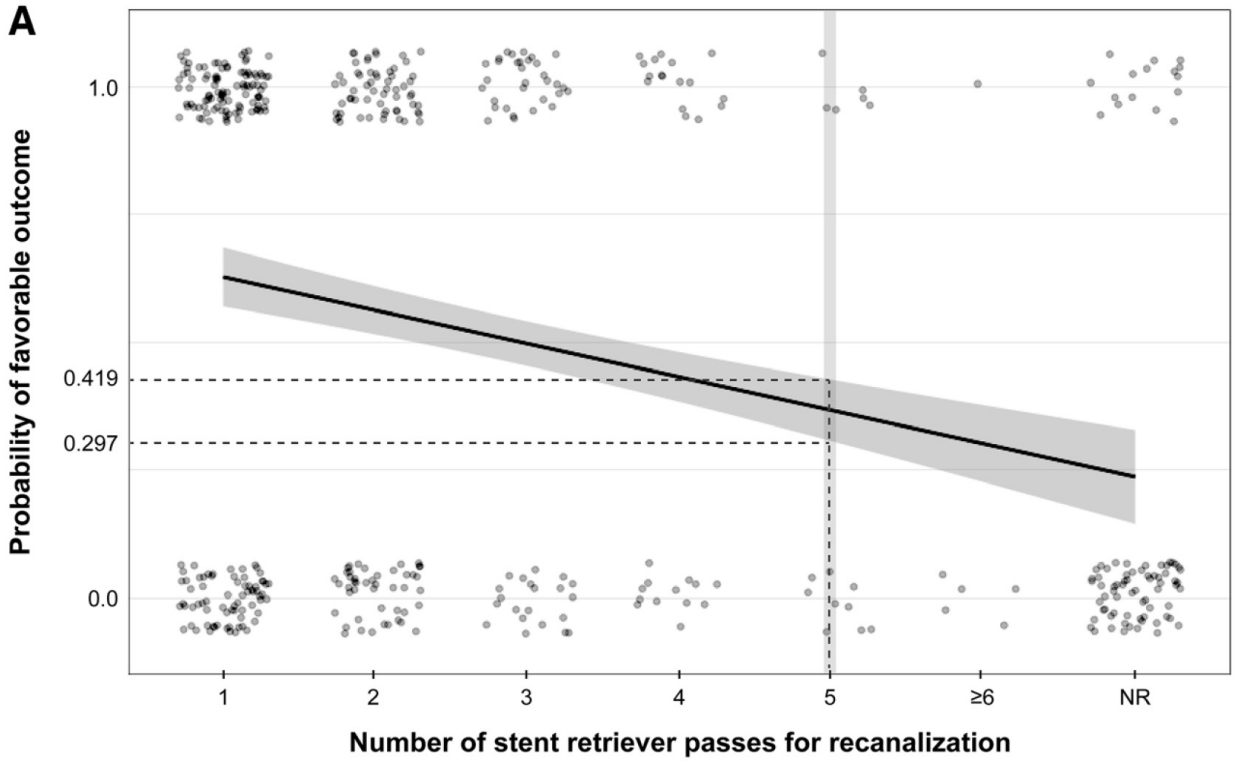
Characteristics	First-line SR (n=406)	First-line CA (n=1126)	First-line combined (n=1111)	Total (n=2643)	P value
Radiological endpoints					
mTICI 2b/3 (%)	311 (77.0)	980 (87.6)	961 (88.2)	2252 (86.2)	<0.001
mTICI 2c/3 (%)	131 (32.4)	721 (64.4)	703 (64.6)	1555 (59.5)	<0.001
mTICI 3 (%)	96 (23.8)	531 (47.5)	506 (46.5)	1133 (43.4)	<0.001
First pass mTICI 3 recanalization	29 (7.9)	171 (18.2)	239 (23.8)	439 (19)	<0.001
First pass mTICI 2c/3 recanalization	42 (10.3)	224 (20.0)	304 (27.6)	570 (21.7)	<0.001
First pass mTICI 2b/3 recanalization	55 (13.6)	281 (25.1)	402 (36.7)	738 (28.2)	<0.001
Clinical endpoints					
mRS score 0–2 at 3 months	179 (49.0)	417 (41.6)	306 (33.7)	902 (39.6)	<0.001
mRS score 0–1 at 3 months	118 (32.3)	264 (26.3)	192 (21.1)	574 (25.2)	<0.001
All-cause mortality at 3 months	75 (20.5)	213 (21.3)	274 (30.1)	562 (24.7)	<0.001
Parenchymal hematoma	44 (12.2)	126 (13.2)	122 (16.0)	292 (14.1)	0.139
sICH	28 (7.7)	64 (6.6)	82 (10.6)	174 (8.3)	0.009

Échecs après plusieurs passages de retriever…

Ecole de la Thrombectomie

Number of Stent Retriever Passes Associated With Futile Recanalization in Acute Stroke

Baek et al *Stroke* 2018



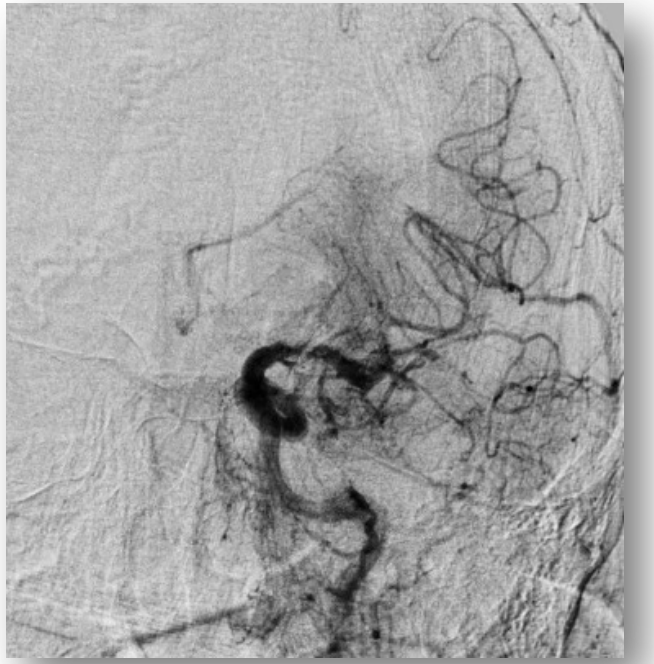
More than three passes of stent retriever is an independent predictor of parenchymal hematoma in acute ischemic stroke

Bourcier R, *et al. J NeuroIntervent Surg* 2019

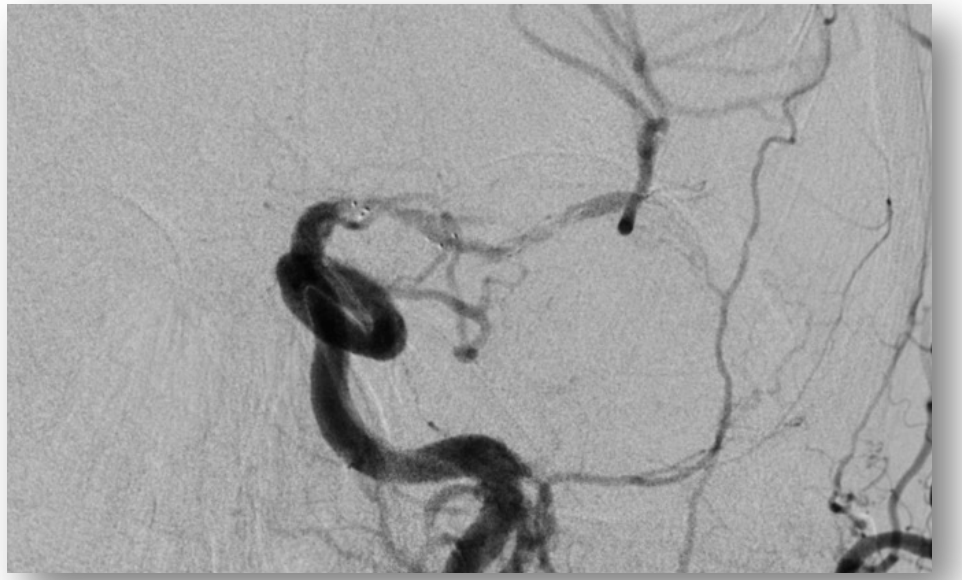
≥ 5 passages : PAS de bénéfice :
- 5,5% de recanalisation TICI 2b/3
- Pas de différence sur l'évolution clinique

> 3 passages : surrisque de transfo hémorragique
(OR 9,24 ; IC95% 2,65-32,13)

En vue d'un rescue stenting ?



Après 3 passages de SR



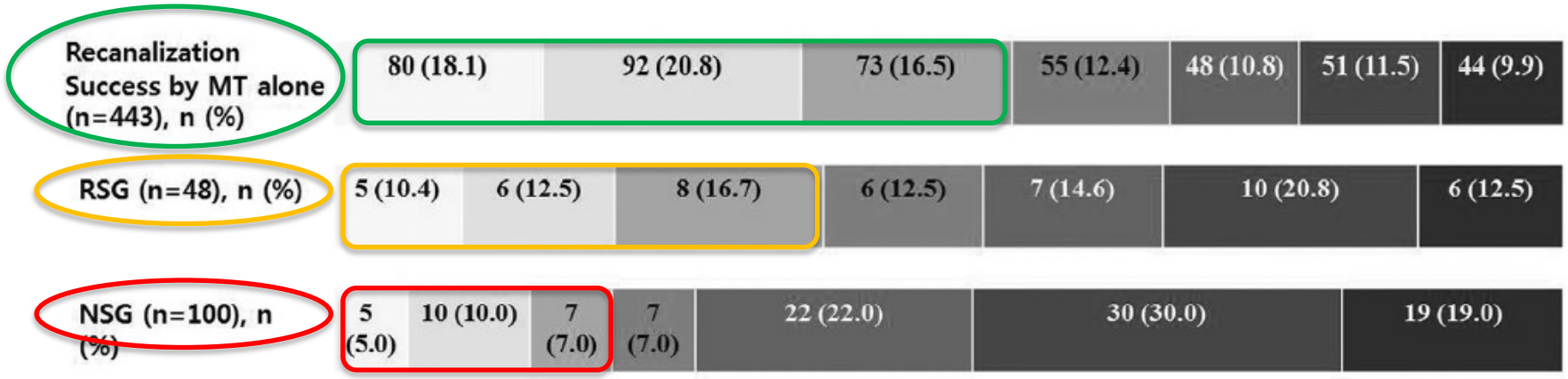
Série avec stent retriever ouvert

Rescue Stenting for Failed Mechanical Thrombectomy in Acute Ischemic Stroke
A Multicenter Experience

Chang et al *Stroke* 2018

Intracranial Rescue Stent Angioplasty After Stent-Retriever Thrombectomy

R. Forbrig et al. Clin Neuroradiol (2019)



M3 mRS 0-2 : 55,4%

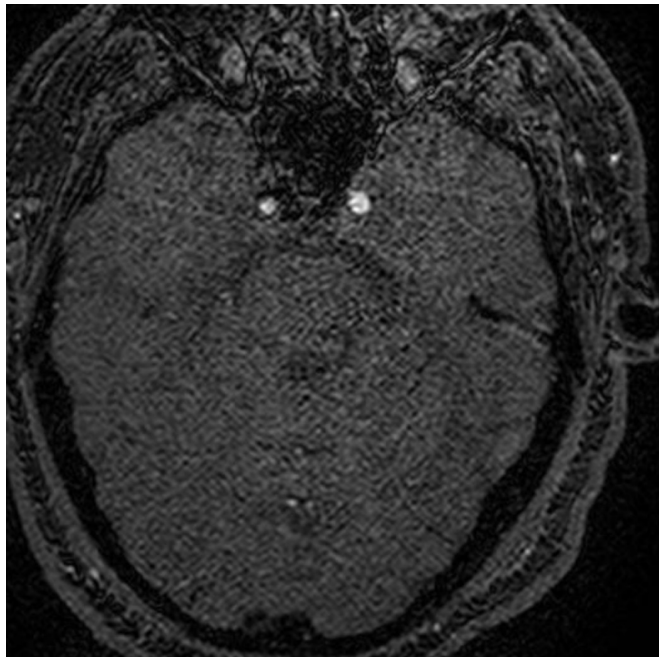
M3 mRS 0-2 : 39,6%

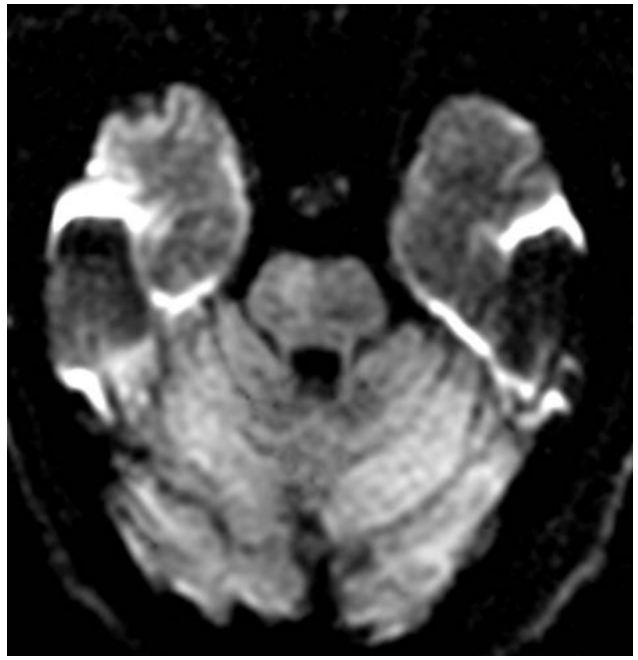
M3 mRS 0-2 : 22%

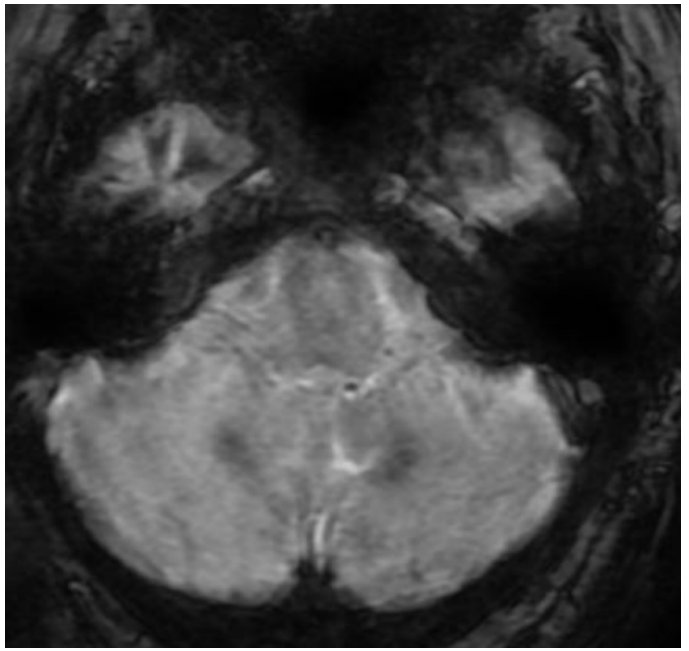
Rescue stenting :

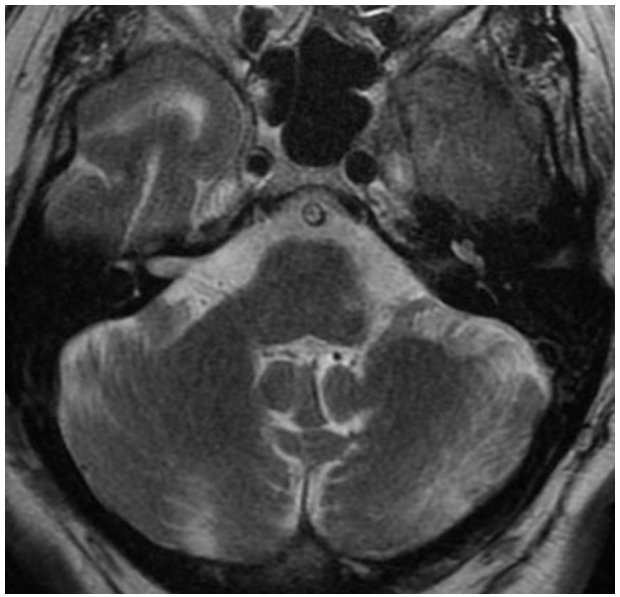
- Recanalisation dans 64,4% des cas
- Meilleure évolution clinique que les cas sans rescue stenting
  (M3 mRS 0-2 de 39,6% versus 22% ; *p*=0,031)

Femme de 69 ans. HTA, diabétique.
Hémiplégie gauche, dysarthrie il y a 3 heures.
TIV.
Thrombectomie sous AG.

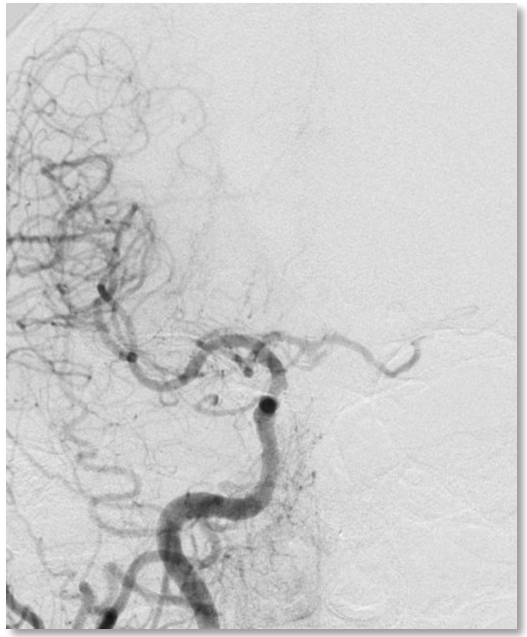


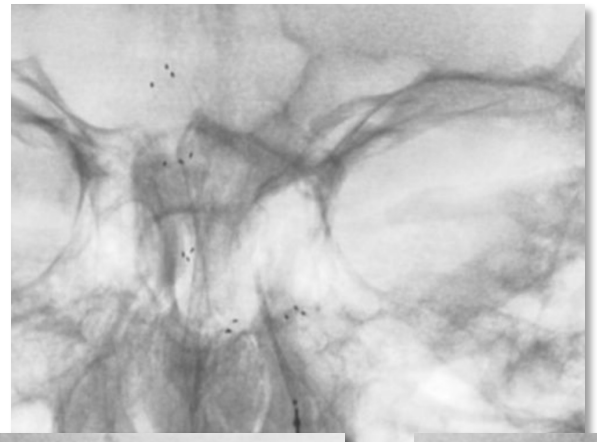


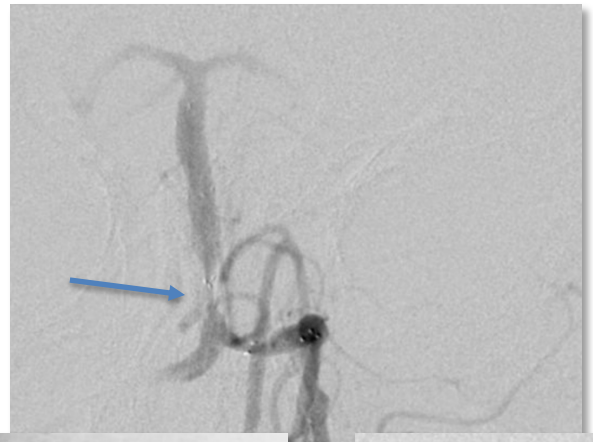


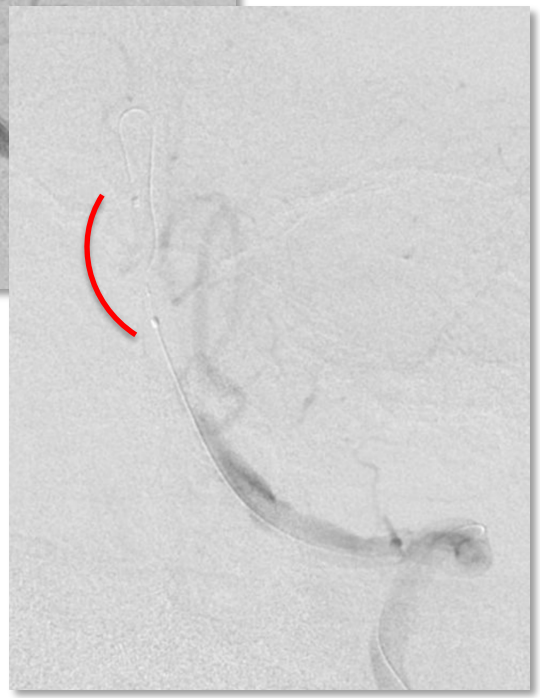


Occlusion persistante du TB, après 3 passages



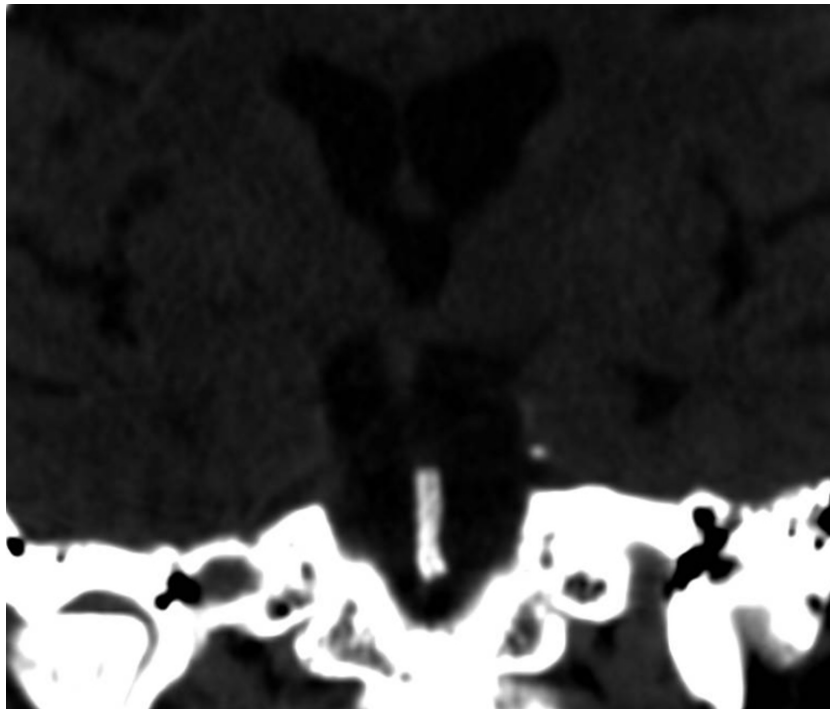


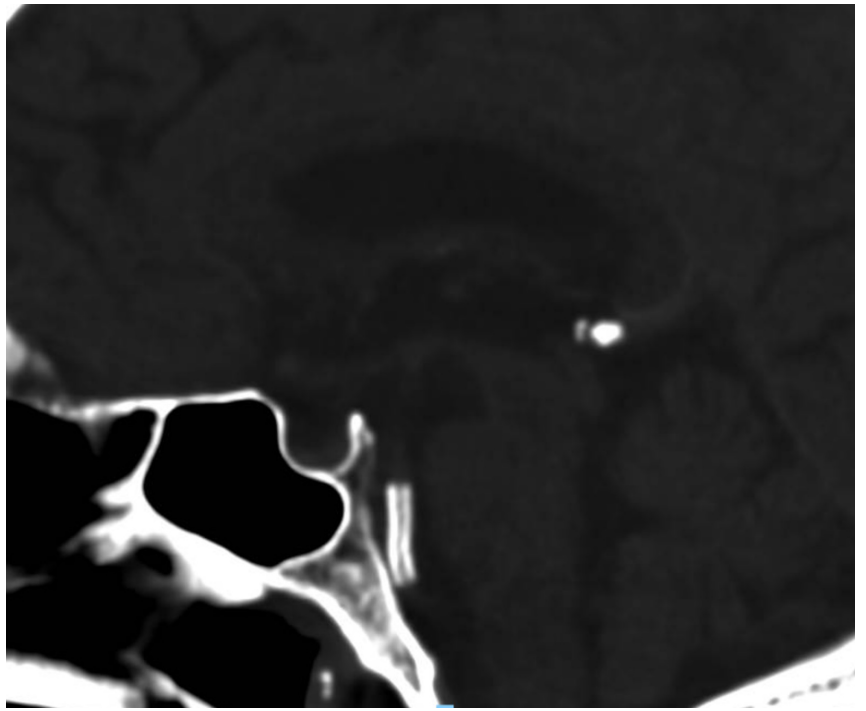




Stent Prokinetic 3x15 mm.
Aspirine IV + Cangrelor.

Ecole de la Thrombectomie





- Extubation après le geste
- Relais du Cangrelor par dose de charge de Brilique
- Bonne évolution clinique (régression du déficit moteur, persistance de quelques troubles arthriques)

CAS PARTICULIERS

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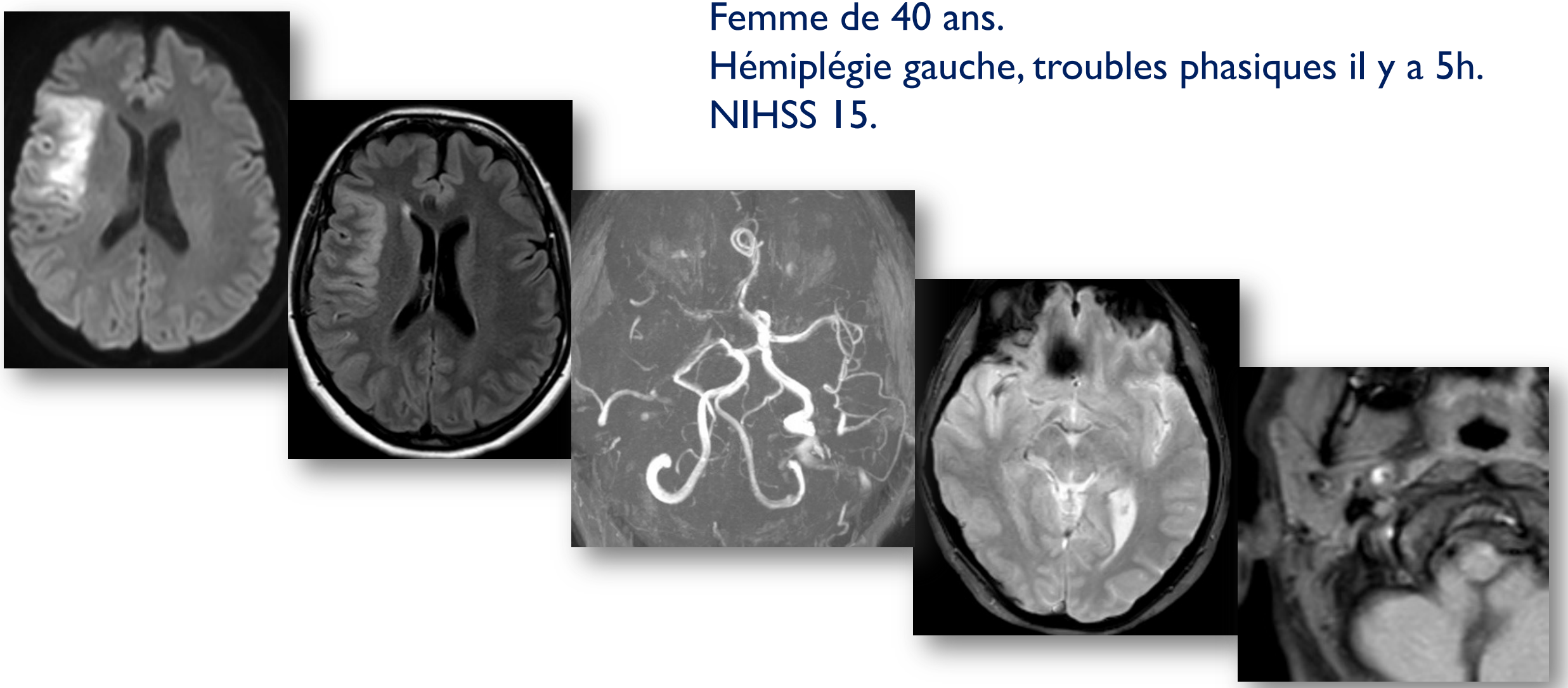
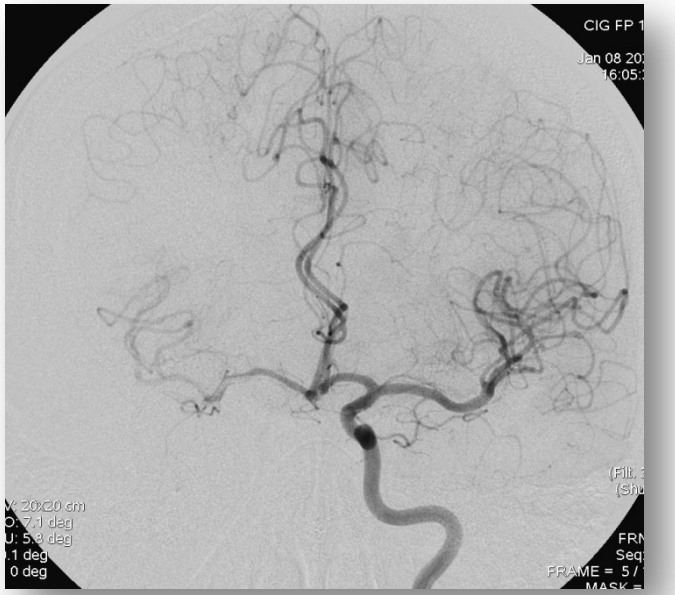
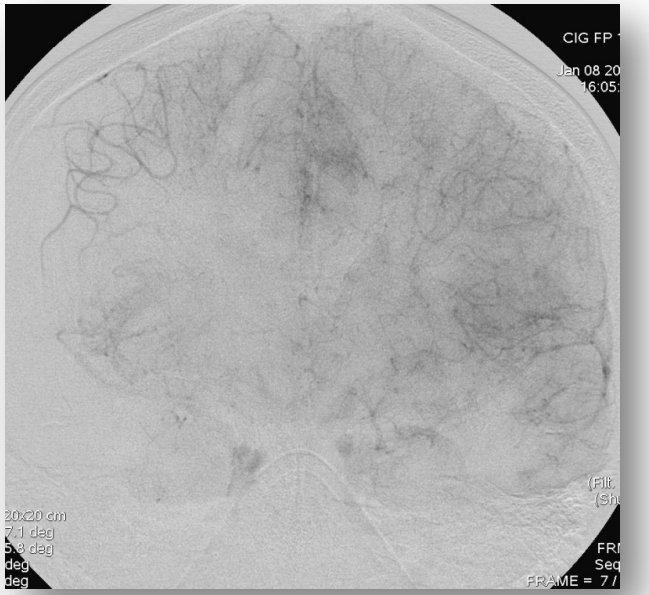
Femme de 40 ans.

Hémiplégie gauche, troubles phasiques il y a 5h.

NIHSS 15.







Dissection ACI

+

occlusion M1-M2

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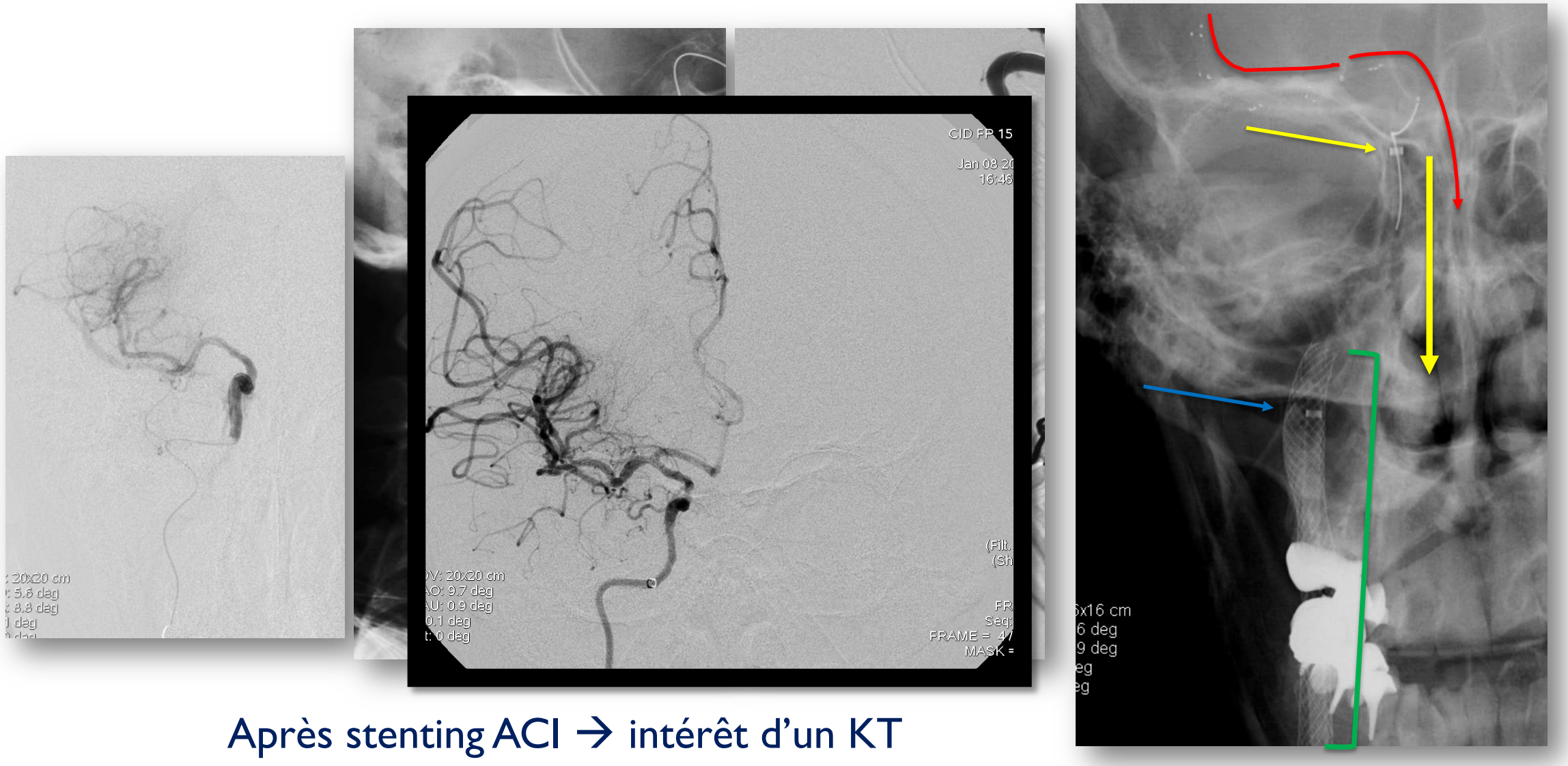


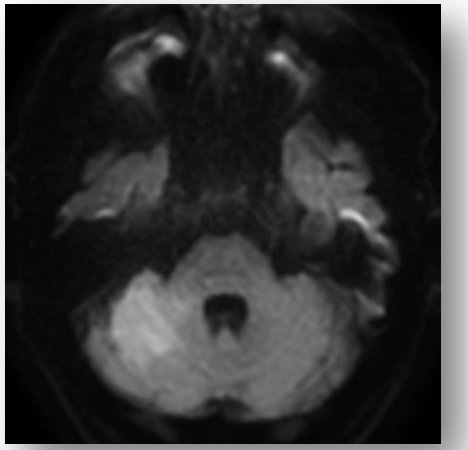
Après stenting ACI → intérêt d'un KT d'aspiration intermédiaire

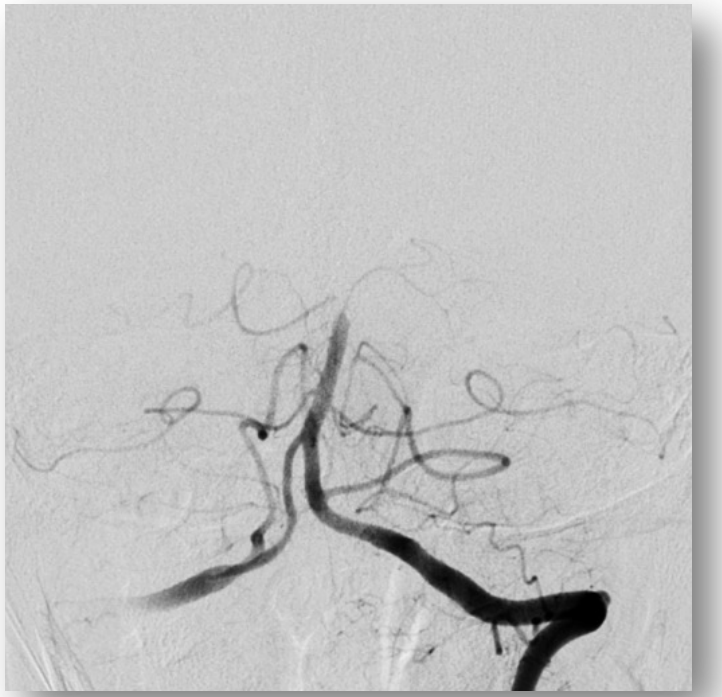
Ecole de la Thrombectomie

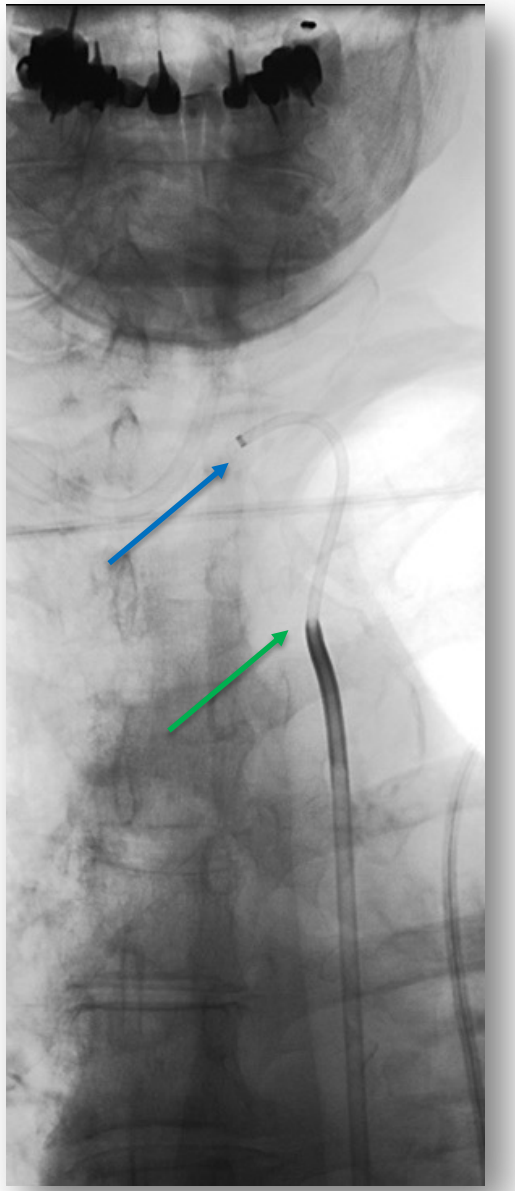
CAS PARTICULIERS

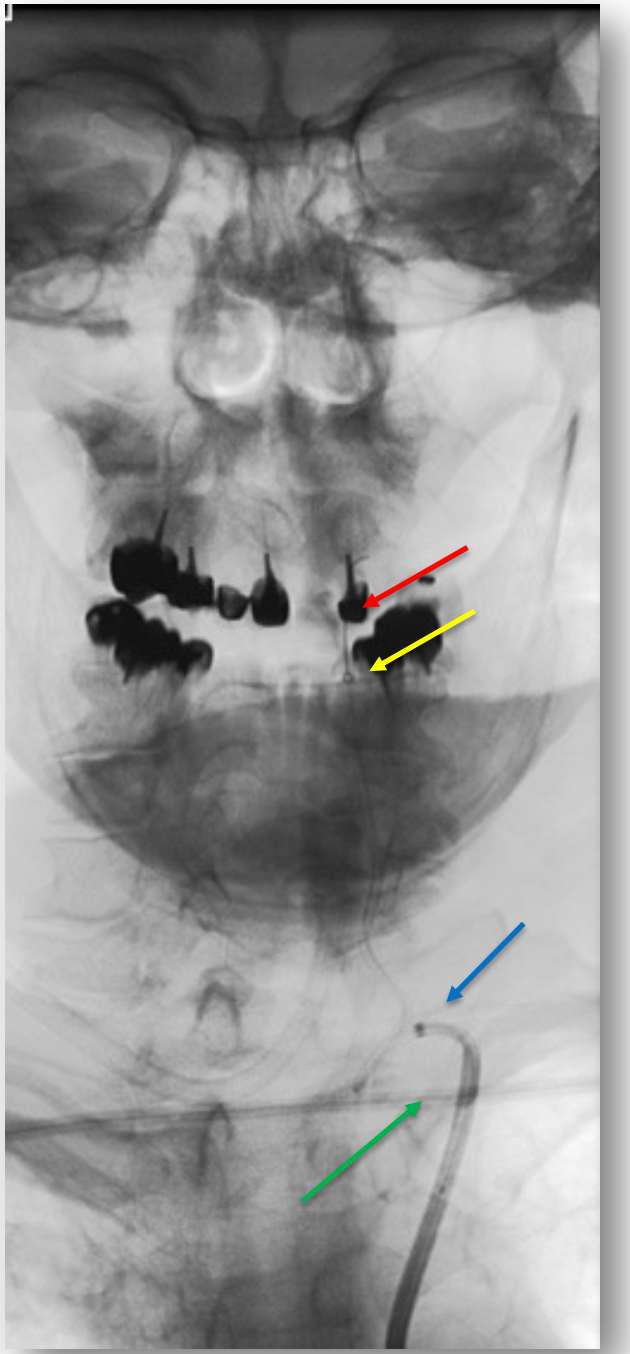
Ex : occlusion du tronc basilaire avec accès difficile…

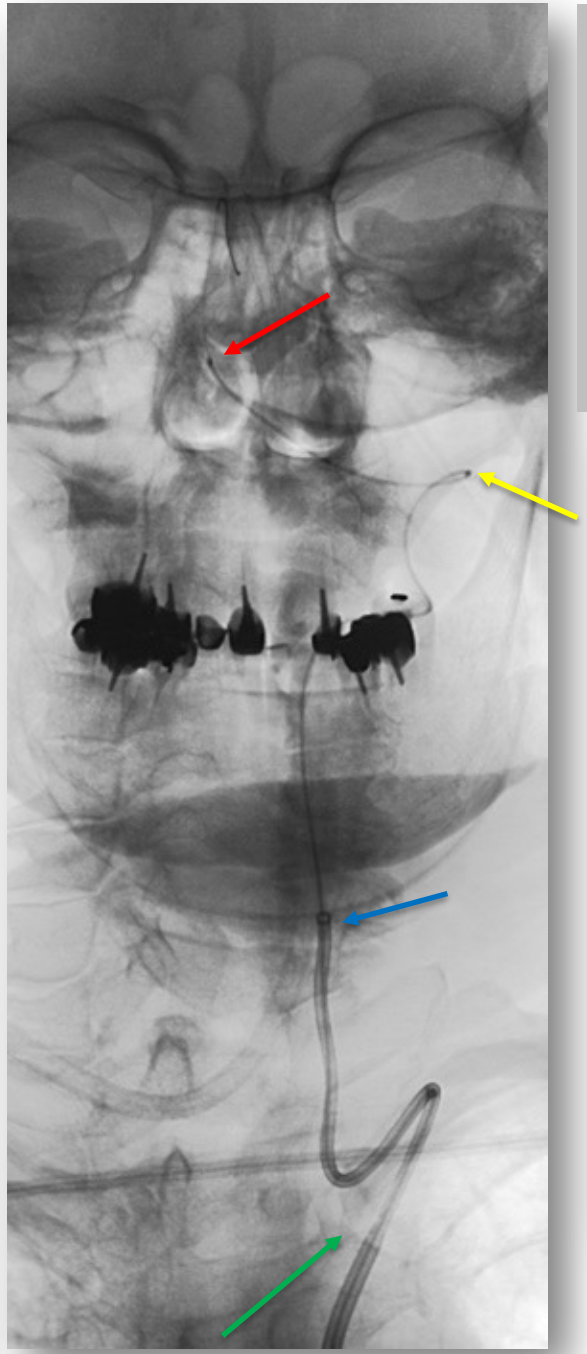
S'aider d'autres moyens pour monter le stent : *stratégie coaxiale, intro long, KT guide plus souple, KT intermédiare etc.*



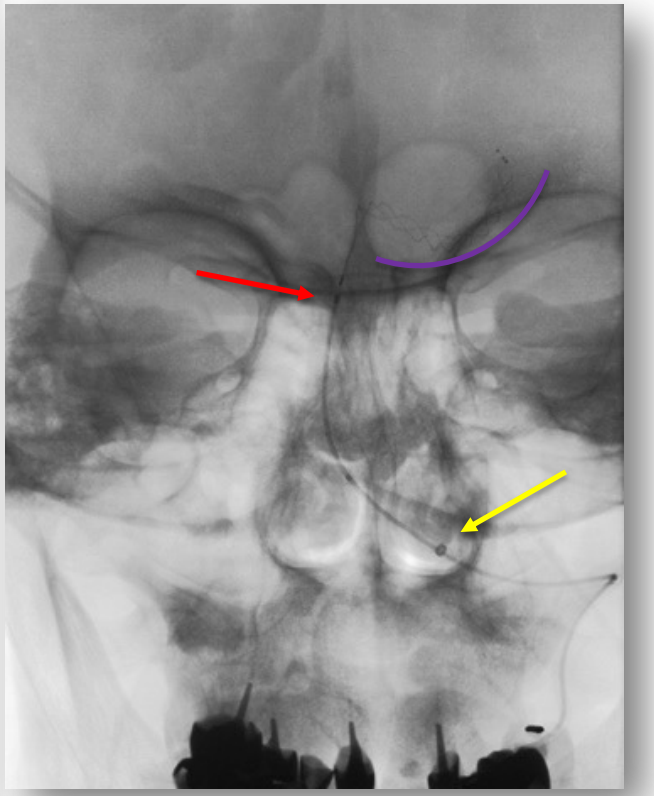


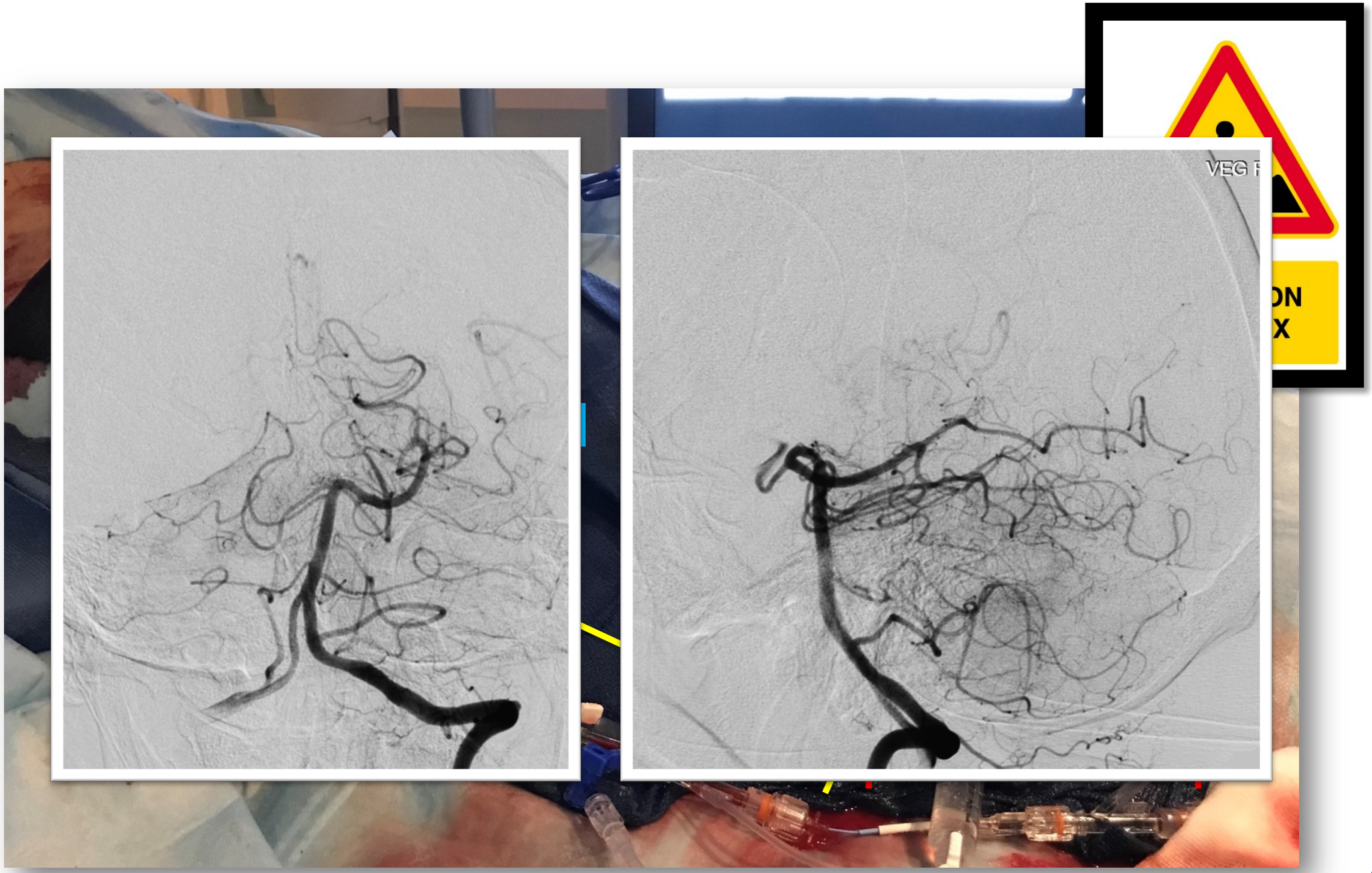






Intro long 6F
Neuron 0.70
Sofia 5F
Rapid Transit
Trevo 4x20





TAKE HOME MESSAGE

SR seul vs combiné vs CA ?

Stratégie standardisée/systématique : améliore le workflow

Connaître quelques méthodes alternatives dans les cas difficiles

…et penser à récupérer les caillots !

MERCI !

Ecole de la Thrombectomie