18 OCTOBRE 2024

COLLOQUE NEUROVASCULAIRE 2024

Thrombectomie et changements ischémiques prononcés (ASPECTS bas): où tracer la ligne?

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Présentateur

- Dr Yan Deschaintre
  - Formé à l'Université de Montréal (1995-2005)
  - Fellowship en troubles cognitifs vasculaires avec Pr Pasquier à Lille (2005-2007)
  - Neurologue vasculaire au CHUM (depuis 2007, nouveau CHUM depuis nov. 2017)
  - Participe en moyenne à une thrombectomie / semaine
- Pas de conflit d'intérêt à déclarer depuis fin 2017
  - Présentateur pour le CPASS, l'UdeM, l'ANQ et la SSVQ

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Objectifs

- Revoir les dernières études avec ASPECTS bas
- Apprécier les limites de ces études
- Intégrer ces données dans nos critères de décision pour la thrombectomie

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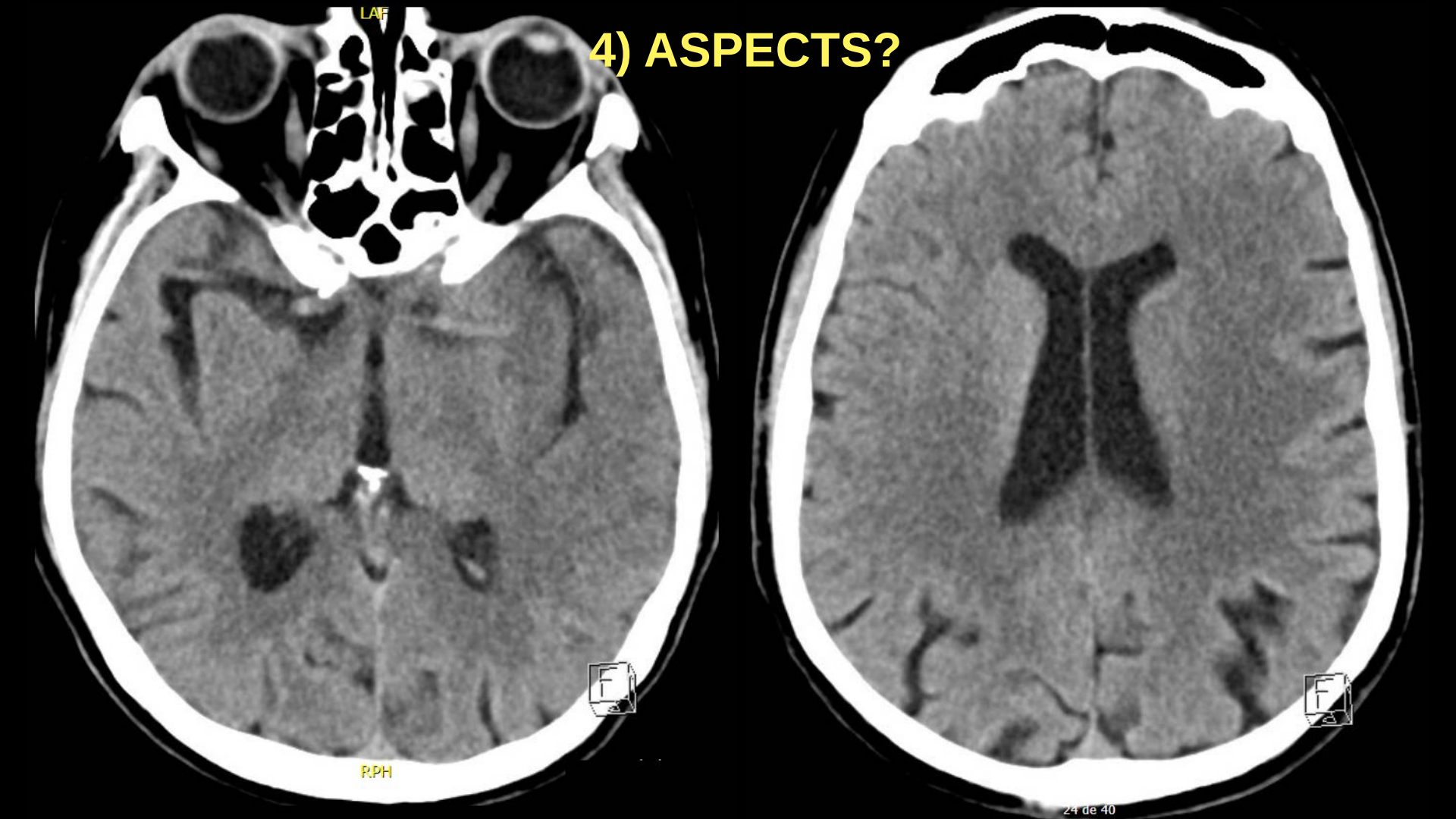
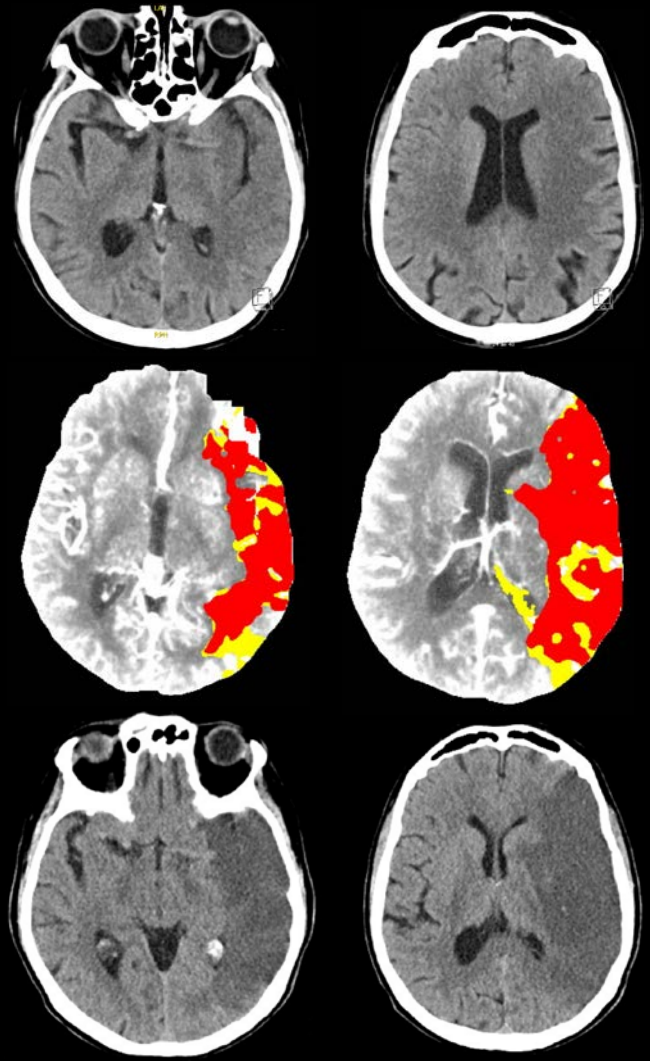
4) ASPECTS?



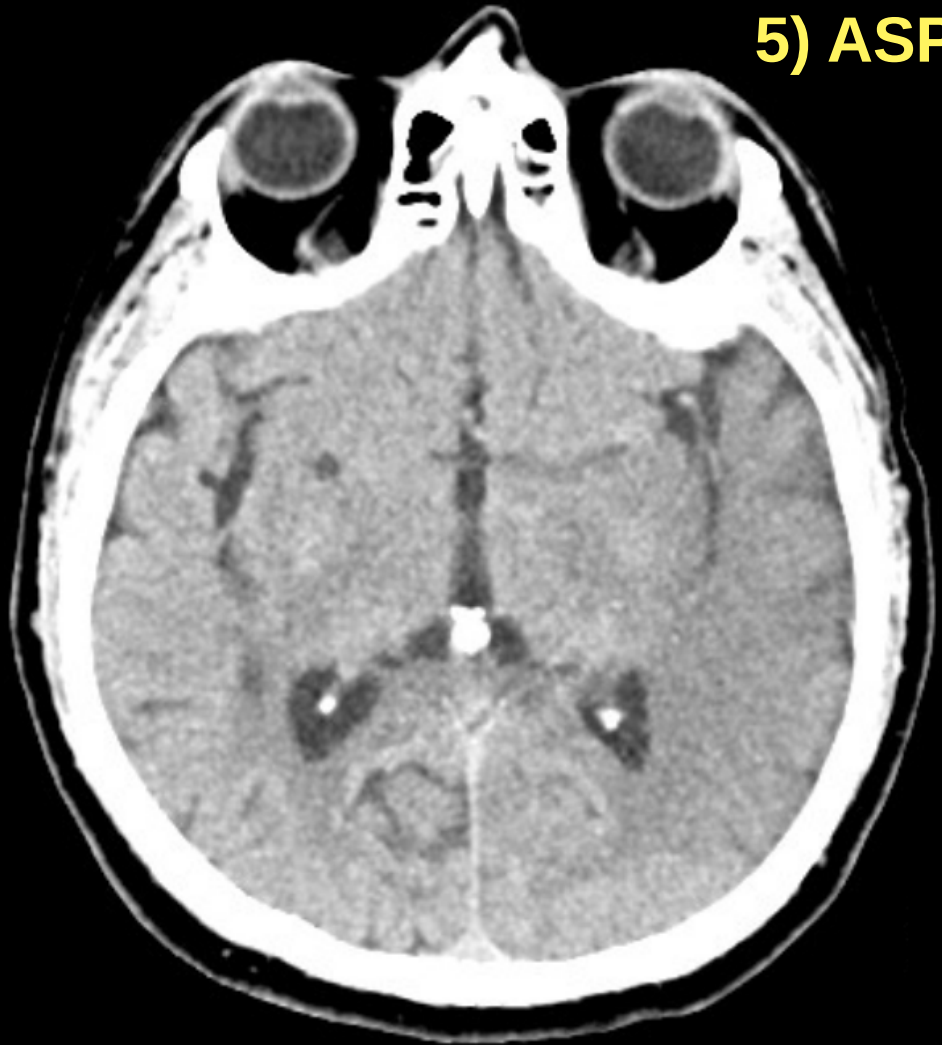
Femme de 78 ans
mRS 1, NIH 25
DFVN la veille x >9h
Bruit de chute il y a 5h?
PFVS x 1h15 au réveil

ASPECTS 5
CTP core 84
pénombre 22
ratio 1,26
Pas de TNK
Pas de TEV

Mauvaise évolution
Soins palliatifs et décès à l'hôpital à 24 jours



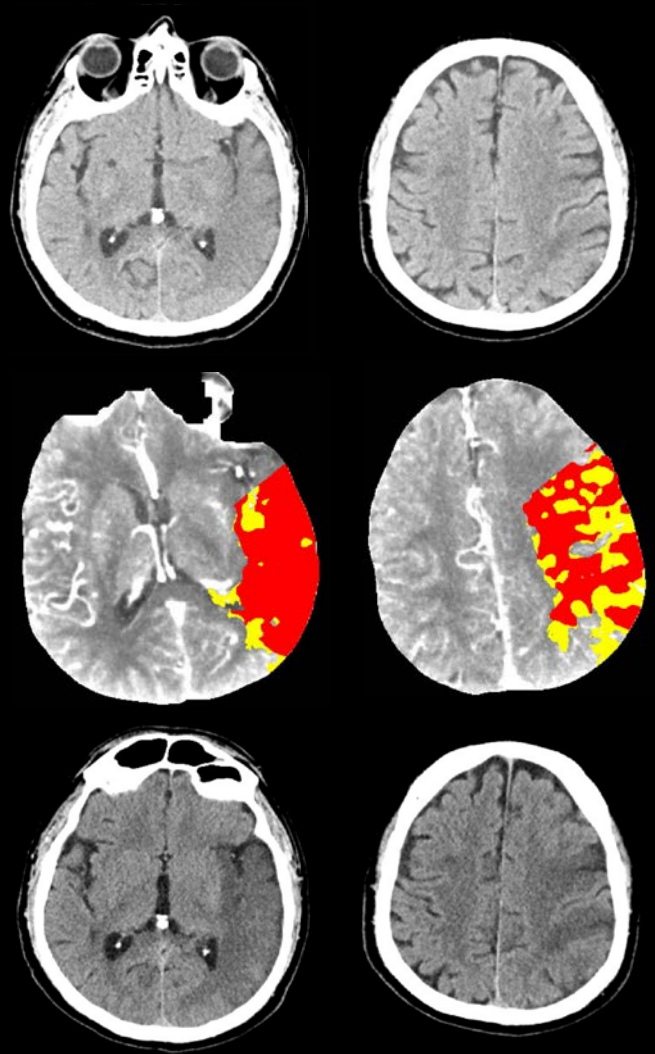
5) ASPECTS?



Homme de 59 ans
mRS 0, NIH 25
DFVN x 7h
PFVS x 4h au réveil

ASPECTS 3
CTP core 82
pénombre 24
ratio 1,29
Pas de TNK
TEV TICI 3 1 passage
8h20 post-DFVN

NIH 24h 24
Réadaptation prévue



Early CT changes in patients admitted for thrombectomy

Intrarater and interrater agreement

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ABSTRACT

Objective: To systematically review the literature and assess agreement on the Alberta Stroke Program Early CT Score (ASPECTS) among clinicians involved in the management of thrombectomy candidates.

Methods: Studies assessing agreement using ASPECTS published from 2000 to 2015 were reviewed. Fifteen raters reviewed and scored the anonymized CT scans of 30 patients recruited in a local thrombectomy trial during 2 independent sessions, in order to study intrarater and interrater agreement. Agreement was measured using intraclass correlation coefficients (ICCs) and Fleiss kappa statistics for ASPECTS and dichotomized ASPECTS at various cutoff values.

Results: The review yielded 30 articles reporting 40 measures of agreement. Populations, methods, analyses, and results were heterogeneous (slight to excellent agreement), precluding a meta-analysis. When analyzed as a categorical variable, intrarater agreement was slight to moderate (κ = 0.042–0.469); it reached a substantial level (κ > 0.6) in 11/15 raters when the score was dichotomized (0–5 vs 6–10). The interrater ICCs varied between 0.672 and 0.811, but agreement was slight to moderate (κ = 0.129–0.315). Even in the best of cases, when ASPECTS was dichotomized as 0–5 vs 6–10, interrater agreement did not reach a substantial level (κ = 0.561), which translates into at least 5 of 15 raters not giving the same dichotomized verdict in 15% of patients.

Conclusions: In patients considered for thrombectomy, there may be insufficient agreement between clinicians for ASPECTS to be reliably used as a criterion for treatment decisions.
Neurology® 2016;87:249–256

GLOSSARY

ASPECTS = Alberta Stroke Program Early CT Score; **EASI** = Endovascular Acute Stroke Intervention Trial; **ICC** = intraclass correlation coefficient; **NIHSS** = NIH Stroke Scale score; **PACS** = Picture Archiving and Communication System.

Kappa
Interrater = 0,129-0,315
Intrarater = 0,042-0,469
0-5 vs 6-10 = 0,561

Value of Kappa	Level of Agreement	% of Data that are Reliable
0-.20	None	0-4%
.21-.39	Minimal	4-15%
.40-.59	Weak	15-35%
.60-.79	Moderate	35-63%
.80-.90	Strong	64-81%
Above .90	Almost Perfect	82-100%

http://www.biochemia-medica.com/2012/22/276

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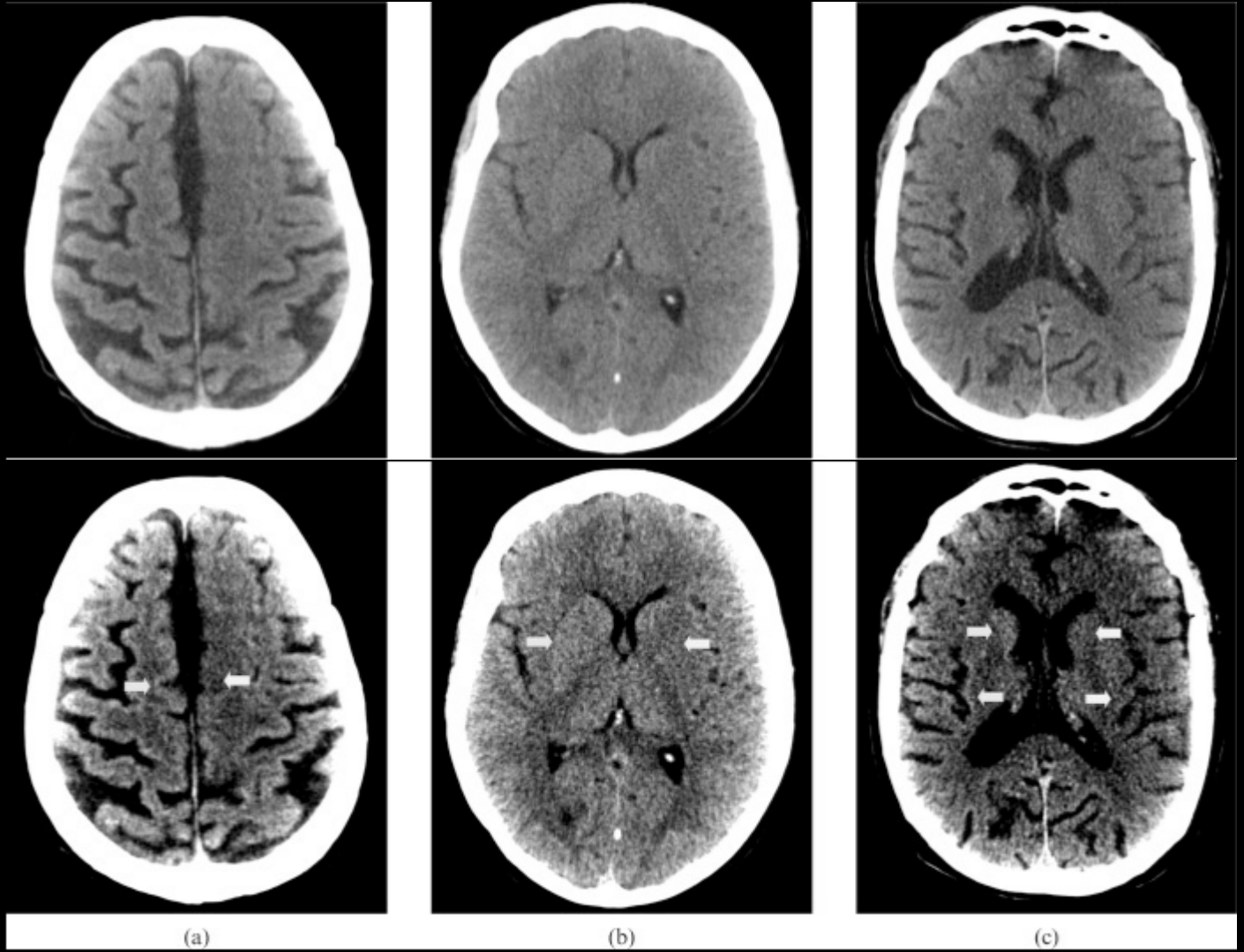
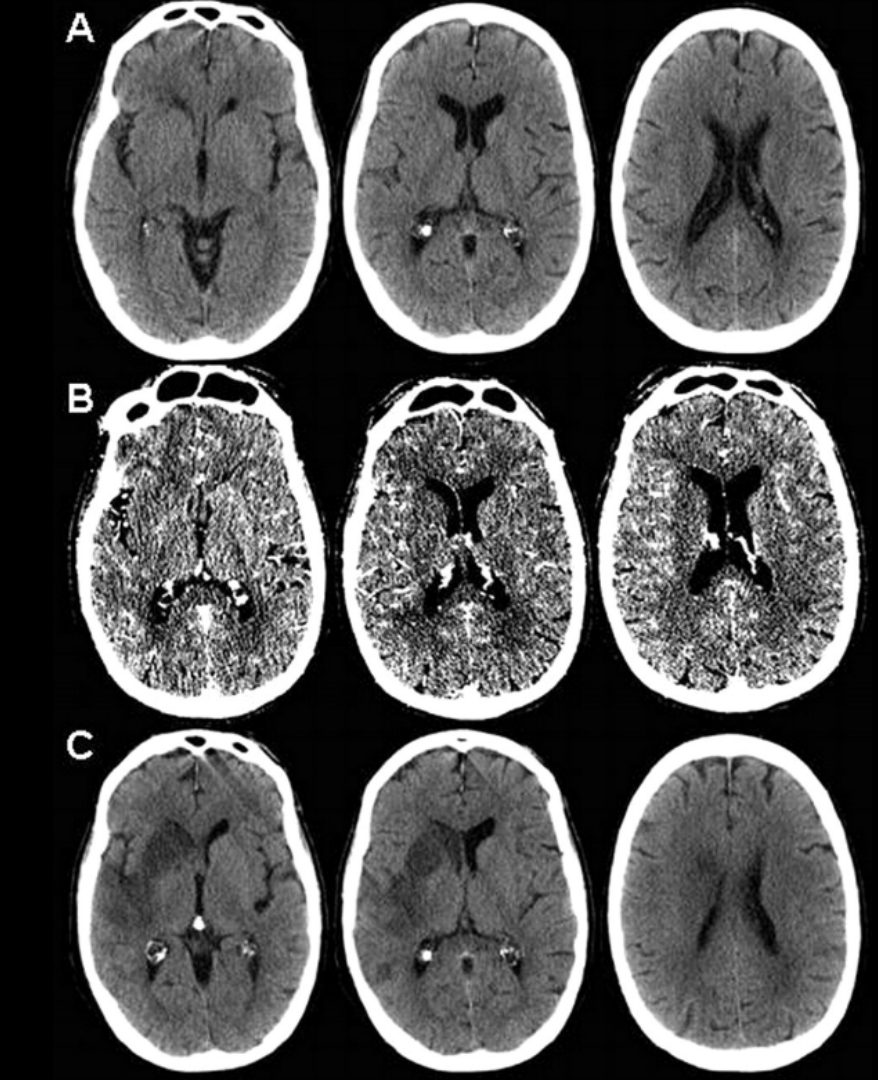
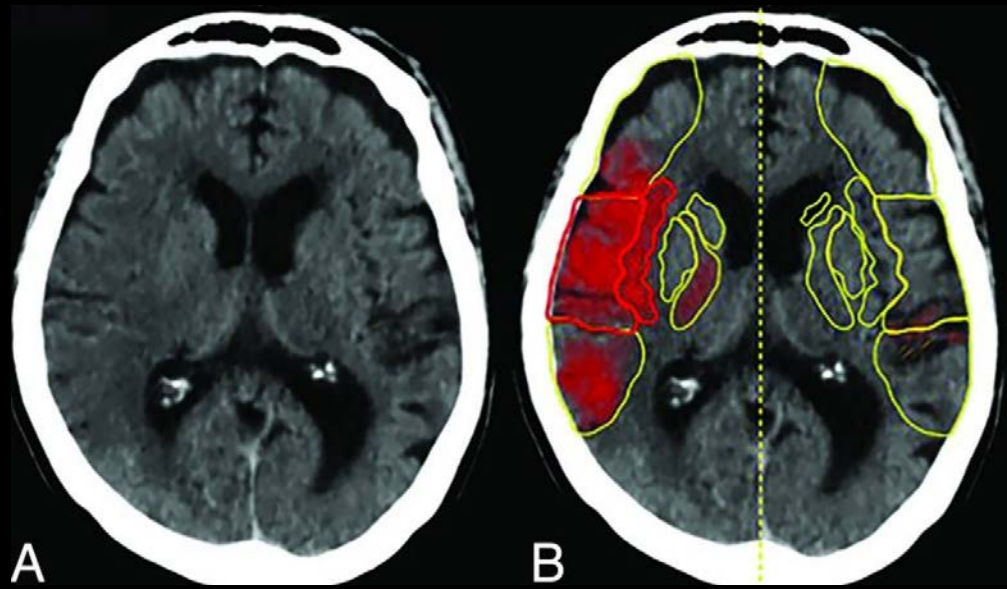
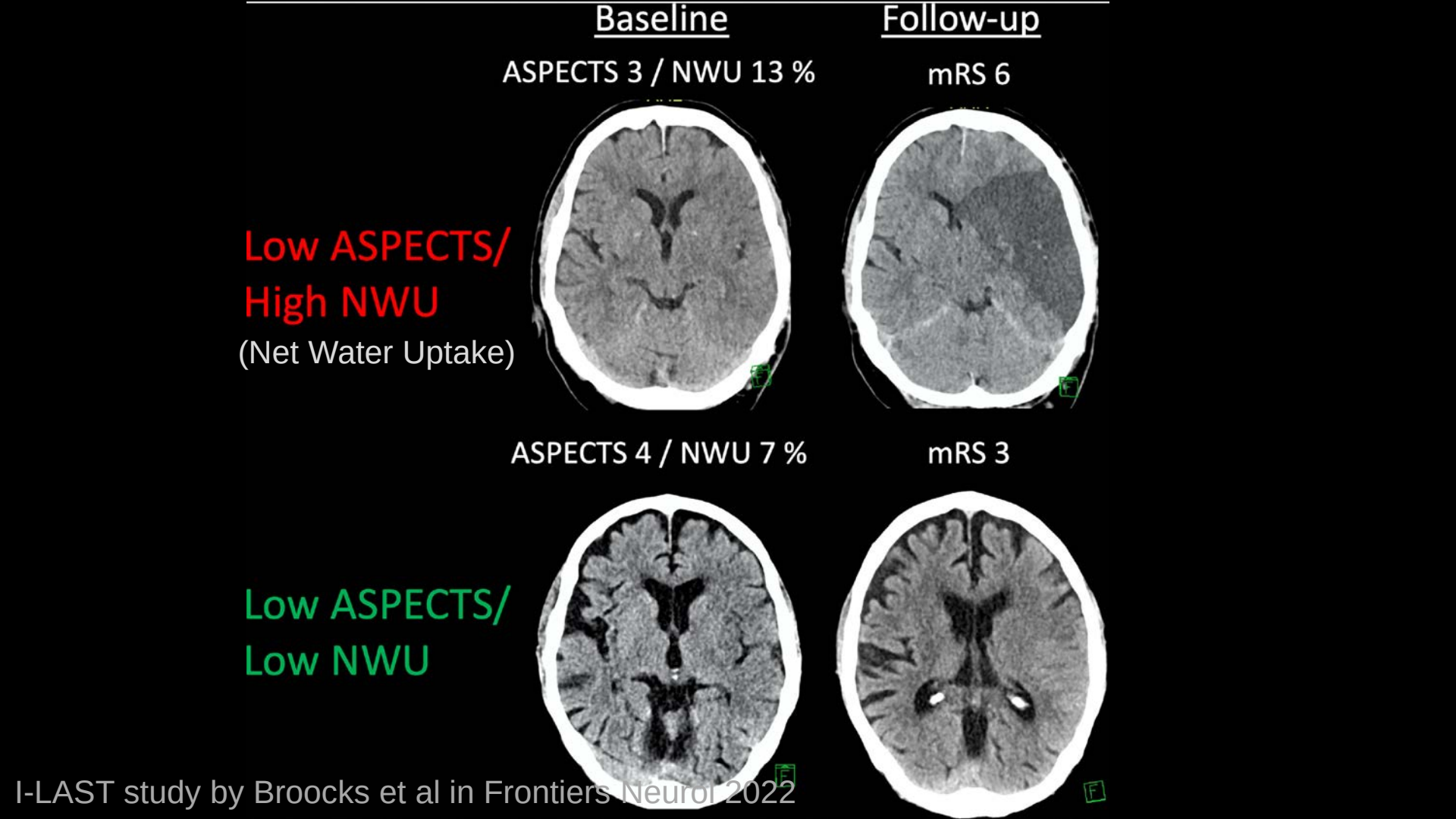
Faciliter l'interprétation de l'ASPECTS

- Ajuster les fenêtre ("window width" et "center level")
  - Passer de W80 / L40 à W8 / L32 ou W40 / L40
  - Radiology 1999, https://doi.org/10.1148/radiology.213.1.r99oc10150
  - British J Radiol 2011; 84(1008): 1061-66, DOI: 10.1259/bjr/99730184
- Images avec produit de contraste
  - Stroke 2004 doi.org/10.1161/01.STR.0000145330.14928.2a
- Outils automatisés
  - Am J Neuroradiol 2019 40:2033–38
- Net Water Uptake (NWU)
  - I-LAST study by Broocks et al in Frontiers Neurol 2022


(a)
(b)
(c)


A
B
C


A
B


Baseline
Follow-up
ASPECTS 3 / NWU 13 %
mRS 6
Low ASPECTS/
High NWU
(Net Water Uptake)
ASPECTS 4 / NWU 7 %
mRS 3
Low ASPECTS/
Low NWU
I-LAST study by Broocks et al in Frontiers Neurol 2022

Objectifs

- Revoir les dernières études avec ASPECTS bas
- Apprécier les limites de ces études
- Intégrer ces données dans nos critères de décision pour la thrombectomie

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Point de départ

mRS 0-2 avec TEV 46,6% *vs* 26,8%, NNT 5

Étude	Année	n	mRS	NIHSS	Délais	ASPECTS
MR CLEAN	2015	500	91% 0-1	≥2 (17)	<6h (3,3)	0-10 (9)
ESCAPE	2015	316	100% 0-1	(16)	<12h (2,8)	≥6 (9) + collatérales
EXTEND-IA	2015	70	100% 0-1	(13)	<4,5h (2,4)	CTP
REVASCAT	2015	206	100% 0-1	≥6 (17)	<8h (3,75)	≥7 (9)
SWIFT Prime	2015	196	99% 0-1	(17)	<6h (3,2)	≥6 (9)
Total		1288	**>96% 0-1***	**≥6** (17)	**<6h** (3,2)	**≥6** (9)

* Pratiques optimales AVC canadiennes retiennent mRS 0-2

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Critères de thrombectomie (mRS 0-2)

mRS 0-2

NIHSS ≥6

Délais <6h

C- ≥6

CTA LVO

CTP

47% - 27% NNT 5

Critères de thrombectomie (mRS 0-2)

mRS 0-2	NIHSS ≥6	Délais <6h	C- ≥6	CTA LVO	*CTP*	47% - 27% NNT 5
mRS 0-2	NIHSS ≥6	Délais <6h	C- 0-5	CTA LVO	*CTP*	?

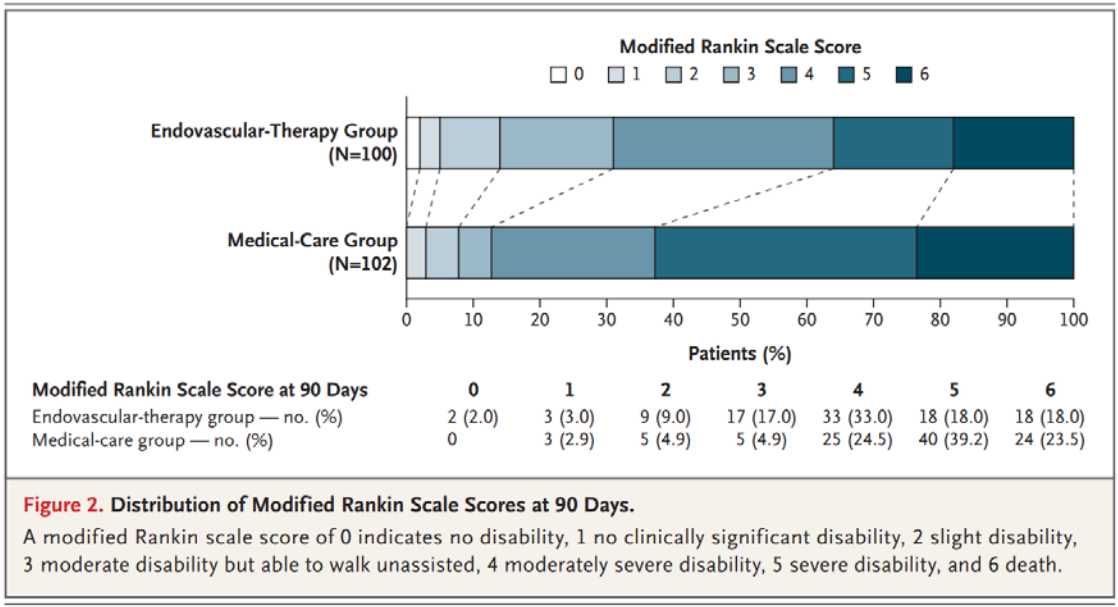
Nouvelles études (CI / M1)

Étude	Journal	Année	Pays	n	%F	ASPECTS
RESCUE-Japan LIMIT	NEJM	2022	Japon	203	43%	3-5
SELECT 2	NEJM	2023	USA, Canada, N-Z, Australie, Europe	352	41%	3-5 ou core ≥50ml
ANGEL-ASPECT	NEJM	2023	Chine	456	39%	3-5 ou core 70-100ml
TENSION	Lancet	2023	Europe, Canada	253	49%	3-5
LASTE	NEJM	2024	Europe, USA	333	48%	0-5
TESLA	JAMA	2024	USA	300	46%	2-5

RESCUE-Japan LIMIT

Étude	Âge	mRS	NIH	Délais (LSW-R)	Délais ?	Scan	Core	tPA	Issue 1aire	mRS 0-3	HICs	Décès
RESCUE-Jap LIMIT	≥18 (76)	0-1	≥6 (22)	0-24h* (3h42)		3-5* (4)	(102)	28%	mRS 0-3	31 *vs* 9	9 *vs* 5# (S 48h)	18 *vs* 24

- 6-24h seulement si FLAIR –
  - >70% <6h
  - Médiane 3h42
- 86% IRM
  - Plus sensible qu'au scan
  - IRM 3-5 = scan 5-8?



Modified Rankin Scale Score at 90 Days	0	1	2	3	4	5	6
Endovascular-therapy group — no. (%)	2 (2.0)	3 (3.0)	9 (9.0)	17 (17.0)	33 (33.0)	18 (18.0)	18 (18.0)
Medical-care group — no. (%)	0	3 (2.9)	5 (4.9)	5 (4.9)	25 (24.5)	40 (39.2)	24 (23.5)

Figure 2. Distribution of Modified Rankin Scale Scores at 90 Days.
A modified Rankin scale score of 0 indicates no disability, 1 no clinically significant disability, 2 slight disability, 3 moderate disability but able to walk unassisted, 4 moderately severe disability, 5 severe disability, and 6 death.

Mitomi et al.
J Stroke Cerebrovasc Dis 2014; 23(1):37-42

SELECT 2

Étude	Âge	mRS	NIH	Délais (LSW-R)	Délais ?	Scan	Core	tPA	Issue 1aire	mRS 0-3	HICs	Décès
SELECT2	18-85 (66)	0-1	(19)	0-24h (9h46)	(29%)	3-5 (4)	≥50 (80)	19%	mRS méd	20 *vs* 7	1 *vs* 1 (S 24h)	38 *vs* 42

- ASPECTS bas ou core défavorable mais garde pénombre favorable au CTP ?

	Core	Pénombre	Ratio
DEFUSE 3	70 (10)	15 (105)	1,8 (12,5)
SELECT 2	≥50 (80)	(90)	(2,1)

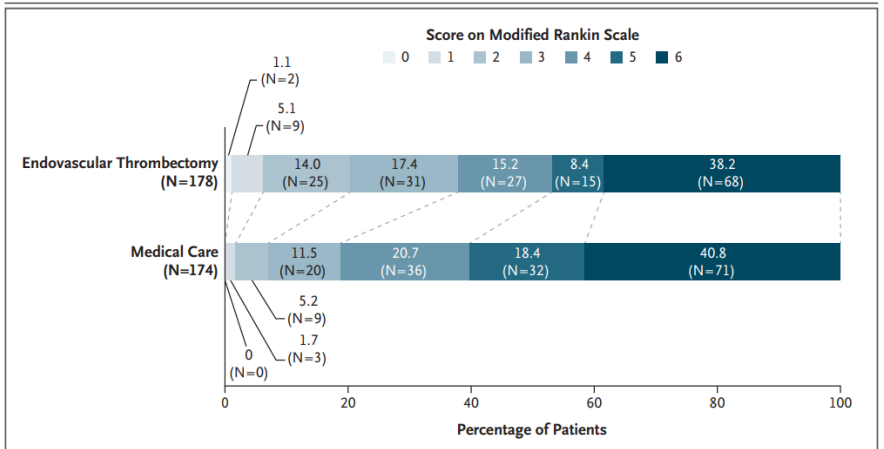


Figure 1. Distribution of Scores on the Modified Rankin Scale at 90 Days (Intention-to-Treat Population).

A modified Rankin scale score of 0 indicates no symptoms; a score of 1, no clinically significant disability (patients are able to perform usual work, leisure, and school activities); a score of 2, slight disability (patients are able to look after their own affairs without assistance but are unable to carry out all previous activities); a score of 3, moderate disability (patients require some help but are able to walk unassisted); a score of 4, moderately severe disability; a score of 5, severe disability (patients are bedridden and require constant care); and a score of 6, death. Percentages may not total 100 because of rounding.

ANGEL-ASPECT

Étude	Âge	mRS	NIH	Délais (LSW-R)	Délais ?	Scan	Core	tPA	Issue 1aire	mRS 0-3	HICs	Décès
ANGEL-ASPECT	18-80 (68)	0-1 (0)	6-30 (16)	0-24h (7h30)	(30%)	3-5 (3)	70-100 (62)	28%	mRS	47 *vs* 33	6 *vs* 3# (H 48h)	22 *vs* 20

- ASPECTS bas ou core défavorable
- Quid de la pénombre et du ratio?

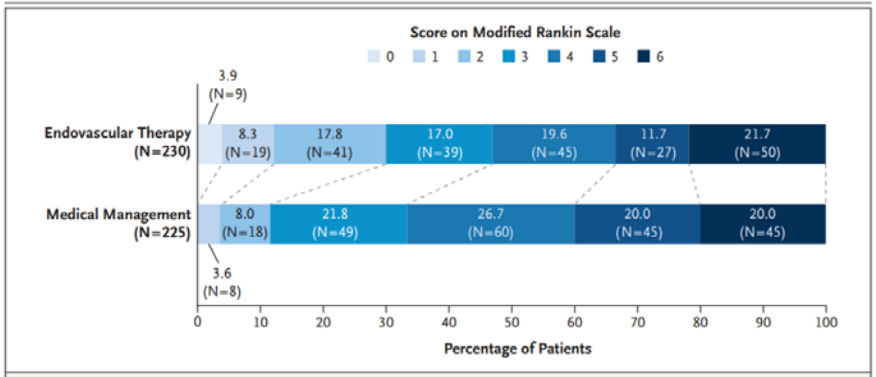


Figure 2. Distribution of Scores on the Modified Rankin Scale at 90 Days among Patients Presenting with a Large Infarct Core within 24 Hours after Symptom Onset.

A score of 0 on the modified Rankin scale indicates no symptoms; a score of 1, no clinically significant disability; a score of 2, slight disability (patients are able to look after their own affairs without assistance but are unable to carry out all previous activities); a score of 3, moderate disability (patients require some help but are able to walk unassisted); a score of 4, moderately severe disability (patients are unable to attend to bodily needs without assistance and are unable to walk unassisted); a score of 5, severe disability (patients require constant nursing care and attention); and a score of 6, death. In the primary outcome analysis, a shift in the distribution of scores on the modified Rankin scale at 90 days toward better outcomes was observed in favor of endovascular therapy over medical management alone (generalized odds ratio, 1.37; 95% CI, 1.11 to 1.69; P=0.004). Percentages may not total 100 because of rounding.

Étude post-hoc d'ANGEL-ASPECT

	Délais	Hypo-perfusion (T max >6 sec)	Core (rCBF <30%)	Pénombre (hypo-core)	Ratio (hypo / core)	mRS 0-3
DEFUSE 3	6-16h (10h48)	(115)	70 (10)	15 (105; ≈ 67-143)	1,8 (11,5)	59 *vs* 32
SELECT 2	0-24h (9h46)	(≈ 170)	≥50 (80)	(90; ≈ 47-141)	(≈ 2,1)	20 *vs* 7
ANGEL-ASPECT	0-24h (7h30)	(≈ 179)	70-100 (≈ 60)	(≈ 120; ≈ 72 -167)	(≈ 3,0)	47 *vs* 33

Core large mais pénombre reste favorable?

Zheng et al. Lancet 2024; 72: 102595
(Sarraj et al. JAMA 2024; 331(9): 750-763 SELECT 2 substudy with penumbra profiles)

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TENSION

Étude	Âge	mRS	NIH	Délais (LSW-R)	Délais ?	Scan	Core	tPA	Issue 1aire	mRS 0-3	HICs	Décès
TENSION	≥18 (74)	0-2 (0)	<26 (18)	0-11 (4h12)	(43%)	3-5		37%	mRS méd	31 *vs* 13	5 *vs* 5 (H 24h)	40 *vs* 51

- ASPECTS bas mais bons délais
- (Pas de CTP)

	Délais	ASPECTS	mRS 0-2	mRS 0-3
Méta-analyse	<6h (3h12)	≥6 (9)	47 *vs* 27	approx. 69 *vs* 46
TENSION	0-11 (4h12)	3-5	17 *vs* 3	31 *vs* 13

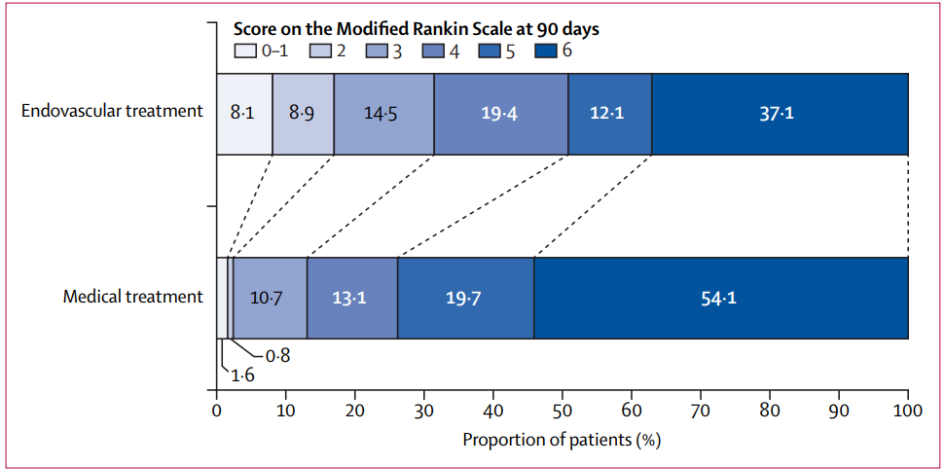


Figure 2: **Distribution of Modified Rankin Scale scores at 90 days**
Intention-to-treat population analysis. A score of 0 on the modified Rankin Scale indicates no symptoms, a score of 1 indicates no clinically significant disability, a score of 2 indicates slight disability, a score of 3 indicates 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.

LASTE

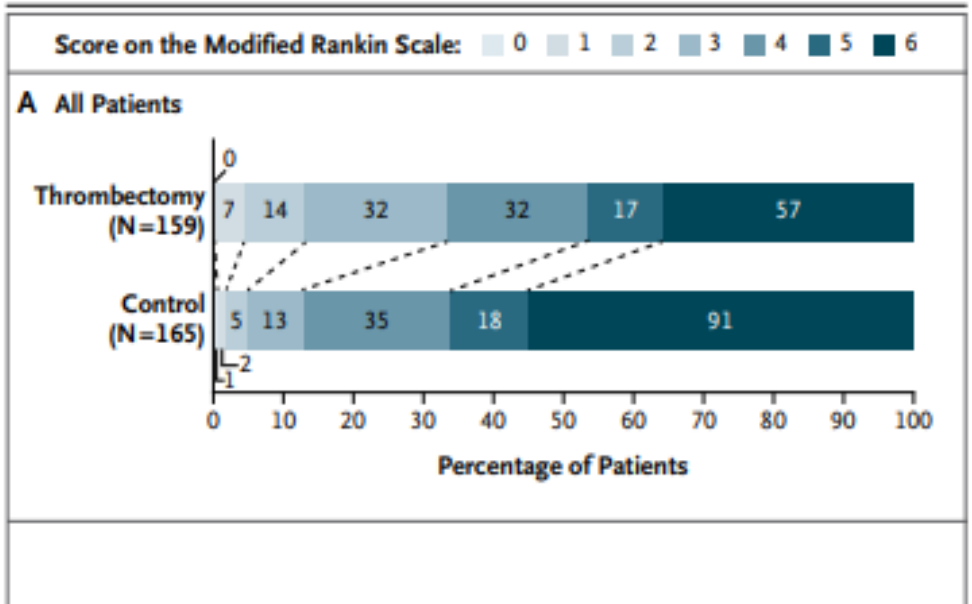
Étude	Âge	mRS	NIH	Délais (LSW-R)	Délais ?	Scan	Core	tPA	Issue 1aire	mRS 0-3	HICs	Décès
LASTE	≥18 (74)	0-1 (0)	≥6 (21)	0-6h30 (4h30)	(29%)	0-5** (2)		35%	mRS méd	34 *vs* 12	10 *vs* 6 (H 24h)	36 *vs* 56

** 84% IRM

- ASPECTS bas mais bons délais
- (Pas de CTP)

} Comme TENSION

	Délais	ASPECTS	mRS 0-2	mRS 0-3
Méta-analyse	<6h (3h12)	≥6 (9)	47 *vs* 27	approx. 69 *vs* 46
TENSION	0-11 (4h12)	3-5	17 *vs* 3	31 *vs* 13
LASTE	0-6h30 (4h30)	0-5** (2)	13 *vs* 5	34 *vs* 12



Gradient d'issue favorable (mRS 0-2) selon l'ASPECTS

Étude	n	ASPECTS	TEV	Mx
Méta-analyse HERMES	223 (186)	3-5*	31%	16%
	(126)	0-4	25%	14%
	(37)	0-2	0%	12%
Méta-analyse Montpellier	1378	6	38%	-
		5	33%	-
		4	22%	-
		0-3	14%	-
LASTE	(143)	3-5	14%	5%
	(181)	0-2	7%	3%

Méta-analyse HERMES par Roman et al Lancet Neurol 2018
Montepellier - Cagnazzo et al J NeuroInterv Surg 2019

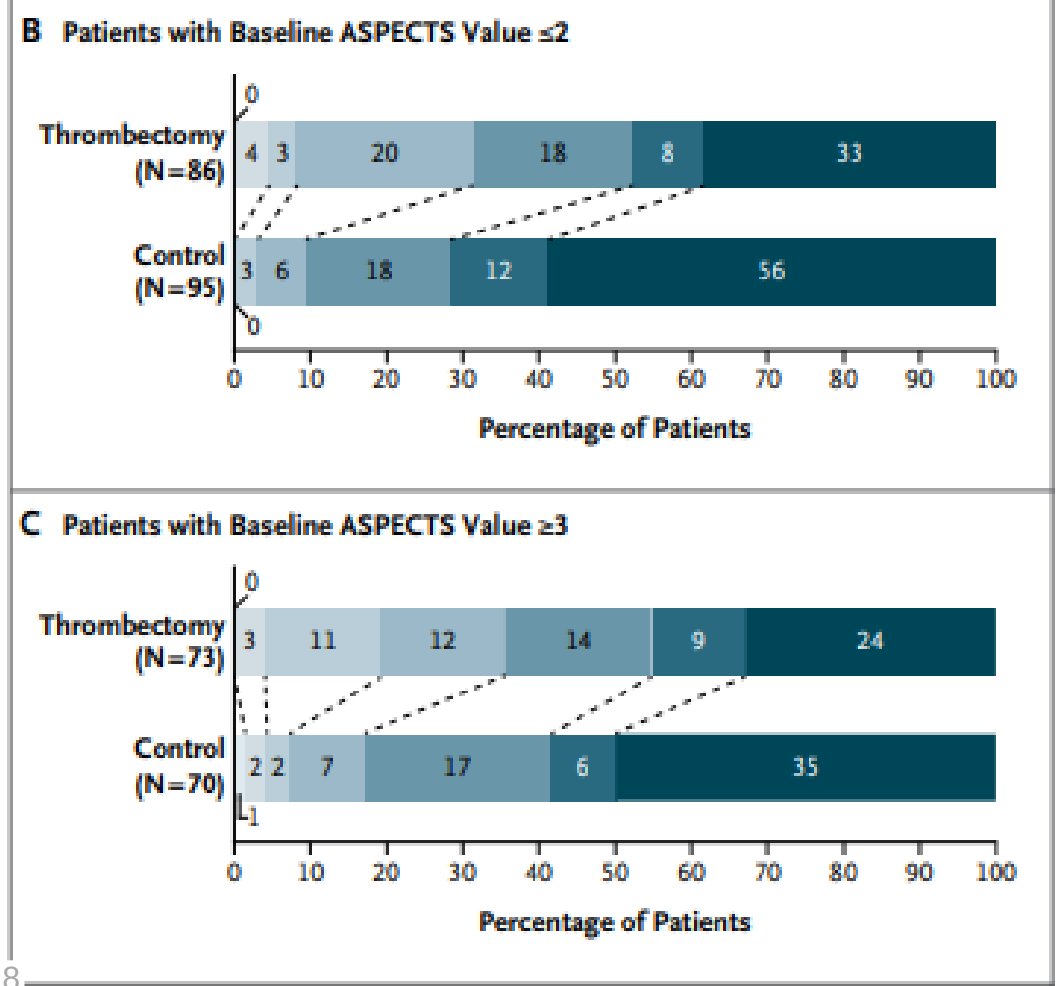


Figure 2. Modified Rankin Scale Scores at 90 Days Overall and According to Baseline ASPECTS Value.

Critères d'HICs

- Heidelberg
  - Classe 1: transformation hémorragique au sein d'un infarctus
    - 1a: HI1 (hemorrhagic infarction): pétéchies dispersées, sans effet de masse
    - 1b: HI2: pétéchies confluentes, sans effet de masse
    - 1c: PH1 (parenchymatous haematoma): hématome au sein de l'infarctus, <30%, sans effet de masse significatif
  - Classe 2: hémorragie intracérébrale au sein et dépassant l'infarctus
    - PH2: Hématome ≥30% de l'infarctus, avec effet de masse évident
  - Classe 3: hémorragie intracérébrale hors de l'infarctus […]
- Symptomatique (48h) – plus probable avec PH2
  - ≥4 au NIH
  - ≥2 dans un des item du NIH
  - Nécessitant une intervention majeure (intubation, hémicraniectomie, DVE…)

- SITS-MOST
- Symptomatique (24h)
  - PH2
  - ≥4 au NIH

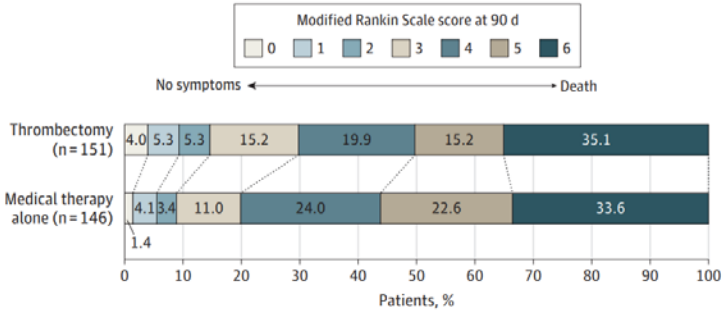
LASTE	HICs
Heidelberg	10 *vs* 6 (H 24h)
SITS-MOST	3,2 vs 2,5 (S 24h)

TESLA

Étude	Âge	mRS	NIH	Délais (LSW-R)	Délais ?	Scan	Core	tPA	Issue 1aire	mRS 0-3	HICs	Décès
TESLA	18-85 (66)	0-1 (0)	≥6 (19)	0-24h (11h43)		2-5*** (4-5)		20%	UW-mRS	30 *vs* 20	4 *vs* 1# (S 24h)	35 *vs* 33

- Issue primaire négative
- Combine long délais et ASPECTS bas
- (Pas de CTP)

Figure 2. Modified Rankin Scale Scores at 90 Days in the Primary Efficacy Analysis Population



The 90-day ordinal modified Rankin Scale (mRS) score was a secondary efficacy end point. The distribution of the scores is shown by treatment group. Scores range from 0 to 6, with 0 indicating no symptoms, 1 no clinically significant disability, 2 slight disability (patient is able to look after own affairs without assistance but is unable to carry out all previous activities), 3 moderate disability (patient requires some help but is able to walk unassisted), 4 moderately severe disability (patient is unable to attend to bodily needs without assistance and unable to walk unassisted), 5 severe disability (patient requires constant nursing care and attention), and 6 death. The unadjusted common odds ratio for improvement on the mRS score at 90 days with intervention was 1.40 (95% CI, 0.91 to 2.16). In the thrombectomy group, 1 participant was lost to follow-up at 90 days, yielding 151 patients with available 90-day mRS scores. For the primary analysis, this participant's 30-day mRS score was imputed for the 90-day analysis. In the medical therapy alone group, 1 participant was lost to follow-up at 90 days, and 1 participant withdrew consent at the day-6 visit, yielding 146 patients with available 90-day mRS scores.

Récapitulatif

Étude	Âge	mRS	NIH	Délais (LSW-R)	Délais ?	Scan	Core	tPA	Issue 1aire	mRS 0-3	HICs	Décès
RESCUE-Jap LIMIT	≥18 (76)	0-1	≥6 (22)	0-24h* (3h42)		3-5* (4)	(102)	28%	mRS 0-3	31 *vs* 9	9 *vs* 5# (S 48h)	18 *vs* 24
SELECT2	18-85 (66)	0-1	(19)	0-24h (9h46)	(29%)	3-5 (4)	≥50 (80)	19%	mRS méd	20 *vs* 7	1 *vs* 1 (S 24h)	38 *vs* 42
ANGEL-ASPECT	18-80 (68)	0-1 (0)	6-30 (16)	0-24h (7h30)	(30%)	3-5 (3)	70-100 (62)	28%	mRS	47 *vs* 33	6 *vs* 3# (H 48h)	22 *vs* 20
TENSION	≥18 (74)	0-2 (0)	<26 (18)	0-11 (4h12)	(43%)	3-5		37%	mRS méd	31 *vs* 13	5 *vs* 5 (H 24h)	40 *vs* 51
LASTE	≥18 (74)	0-1 (0)	≥6 (21)	0-6h30 (4h30)	(29%)	0-5** (2)		35%	mRS méd	34 *vs* 12	10 *vs* 6 (H 24h)	36 *vs* 56
TESLA	18-85 (66)	0-1 (0)	≥6 (19)	0-24h (11h43)		2-5*** (4-5)		20%	UW-mRS	30 *vs* 20	4 *vs* 1# (S 24h)	35 *vs* 33

* 6-24h seulement si FLAIR - ; 87% IRM
** 84% IRM, seulement ASPECTS 4-5 si >80 ans
*** 12% relus >5

Plus d'HIC

CHUM

<6h

Récapitulatif

Étude	Âge	mRS	NIH	Délais (LSW-R)	Délais ?	Scan	Core	tPA	Issue 1aire	mRS 0-3	HICs	Décès
RESCUE-Jap LIMIT	≥18 (76)	0-1	≥6 (22)	0-24h* (3h42)		3-5* (4)	(102)	28%	mRS 0-3	31 *vs* 9	9 *vs* 5# (S 48h)	18 *vs* 24
SELECT2	18-85 (66)	0-1	(19)	0-24h (9h46)	(29%)	3-5 (4)	≥50 (80)	19%	mRS méd	20 *vs* 7	1 *vs* 1 (S 24h)	38 *vs* 42
ANGEL-ASPECT	18-80 (68)	0-1	6-30 (16)	0-24h (7h30)	(30%)	3-5 (3)	70-100 (62)	28%	mRS	47 *vs* 33	6 *vs* 3# (H 48h)	22 *vs* 20
TENSION	≥18 (74)	0-2 (0)	<26 (18)	0-11 (4h12)	(43%)	3-5		37%	mRS méd	31 *vs* 13	5 *vs* 5 (H 24h)	40 *vs* 51
LASTE	≥18 (74)	0-1 (0)	≥6 (21)	0-6h30 (4h30)	(29%)	0-5** (2)		35%	mRS méd	34 *vs* 12	10 *vs* 6 (H 24h)	36 *vs* 56
TESLA	18-85 (66)	0-1 (0)	≥6 (19)	0-24h (11h43)		2-5*** (4-5)		20%	UW-mRS	30 *vs* 20	4 *vs* 1# (S 24h)	35 *vs* 33

* 6-24h seulement si FLAIR - ; 87% IRM
** 84% IRM, seulement ASPECTS 4-5 si >80 ans
*** 12% relus >5

#Plus d'HIC

CHUM

Récapitulatif

<6h

>6h + CTP?

Étude	Âge	mRS	NIH	Délais (LSW-R)	Délais ?	Scan	Core	tPA	Issue 1aire	mRS 0-3	HICs	Décès
RESCUE-Jap LIMIT	≥18 (76)	0-1	≥6 (22)	0-24h* (3h42)		3-5* (4)	(102)	28%	mRS 0-3	31 *vs* 9	9 *vs* 5# (S 48h)	18 *vs* 24
SELECT2	18-85 (66)	0-1	(19)	0-24h (9h46)	(29%)	3-5 (4)	≥50 (80)	19%	mRS méd	20 *vs* 7	1 *vs* 1 (S 24h)	38 *vs* 42
ANGEL-ASPECT	18-80 (68)	0-1	6-30 (16)	0-24h (7h30)	(30%)	3-5 (3)	70-100 (62)	28%	mRS	47 *vs* 33	6 *vs* 3# (H 48h)	22 *vs* 20
TENSION	≥18 (74)	0-2 (0)	<26 (18)	0-11 (4h12)	(43%)	3-5		37%	mRS méd	31 *vs* 13	5 *vs* 5 (H 24h)	40 *vs* 51
LASTE	≥18 (74)	0-1 (0)	≥6 (21)	0-6h30 (4h30)	(29%)	0-5** (2)		35%	mRS méd	34 *vs* 12	10 *vs* 6 (H 24h)	36 *vs* 56
TESLA	18-85 (66)	0-1 (0)	≥6 (19)	0-24h (11h43)		2-5*** (4-5)		20%	UW-mRS	30 *vs* 20	4 *vs* 1# (S 24h)	35 *vs* 33

* 6-24h seulement si FLAIR - ; 87% IRM
** 84% IRM, seulement ASPECTS 4-5 si >80 ans
*** 12% relus >5

Plus d'HIC

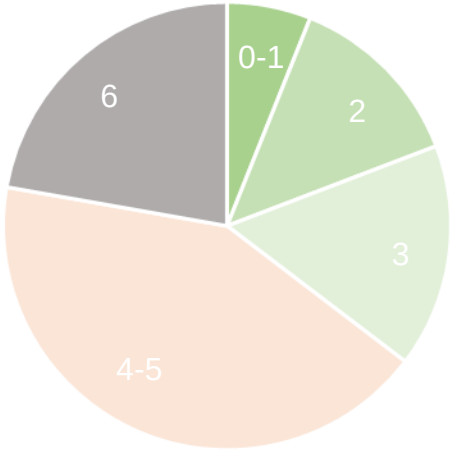
CHUM

mRS à 3 mois

Étude \ Bras	0-1		0-2		0-3		4-5		6	
	TEV	Mx	TEV	Mx	TEV	Mx	TEV	Mx	TEV	Mx
RESCUE-Japan LIMIT	5	3	14	8	31	13	51	64	18	24
SELECT 2	6	2	20	7	38	18	24	39	38	41
ANGEL-ASPECT	12	4	30	12	47	33	31	47	22	20
TENSION	8	2	17	2	32	13	32	33	37	54
LASTE	4	2	13	5	33	13	31	32	36	55
TESLA	9	6	15	9	30	20	35	47	35	34
Moyenne pondérée	**7**	**3**	**18**	**7**	**35**	**18**	**34**	**44**	**31**	**38**

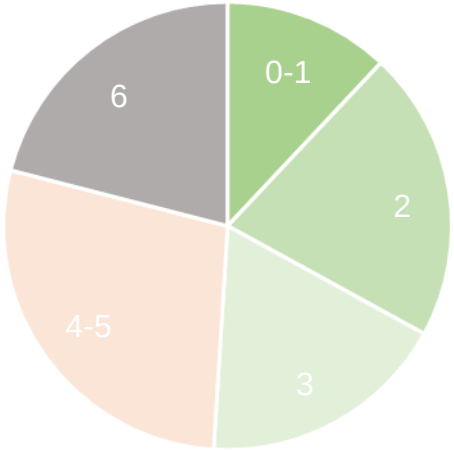
CHUM

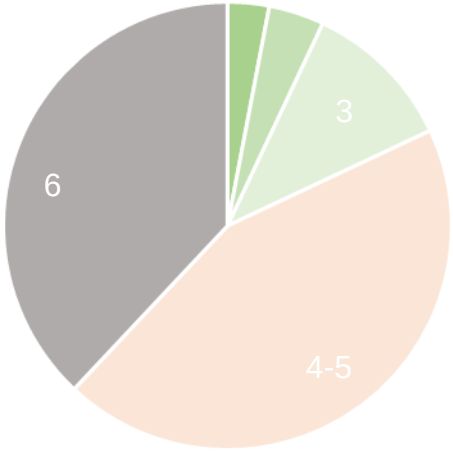
Mx



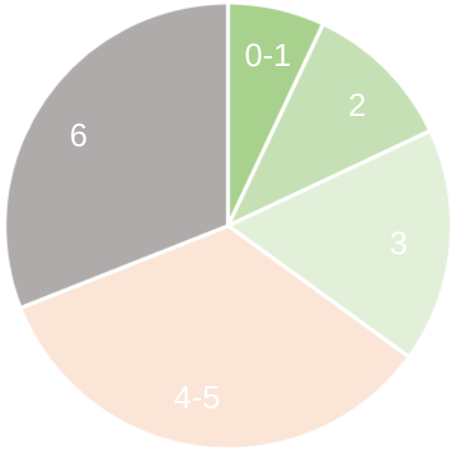
MR CLEAN

TEV



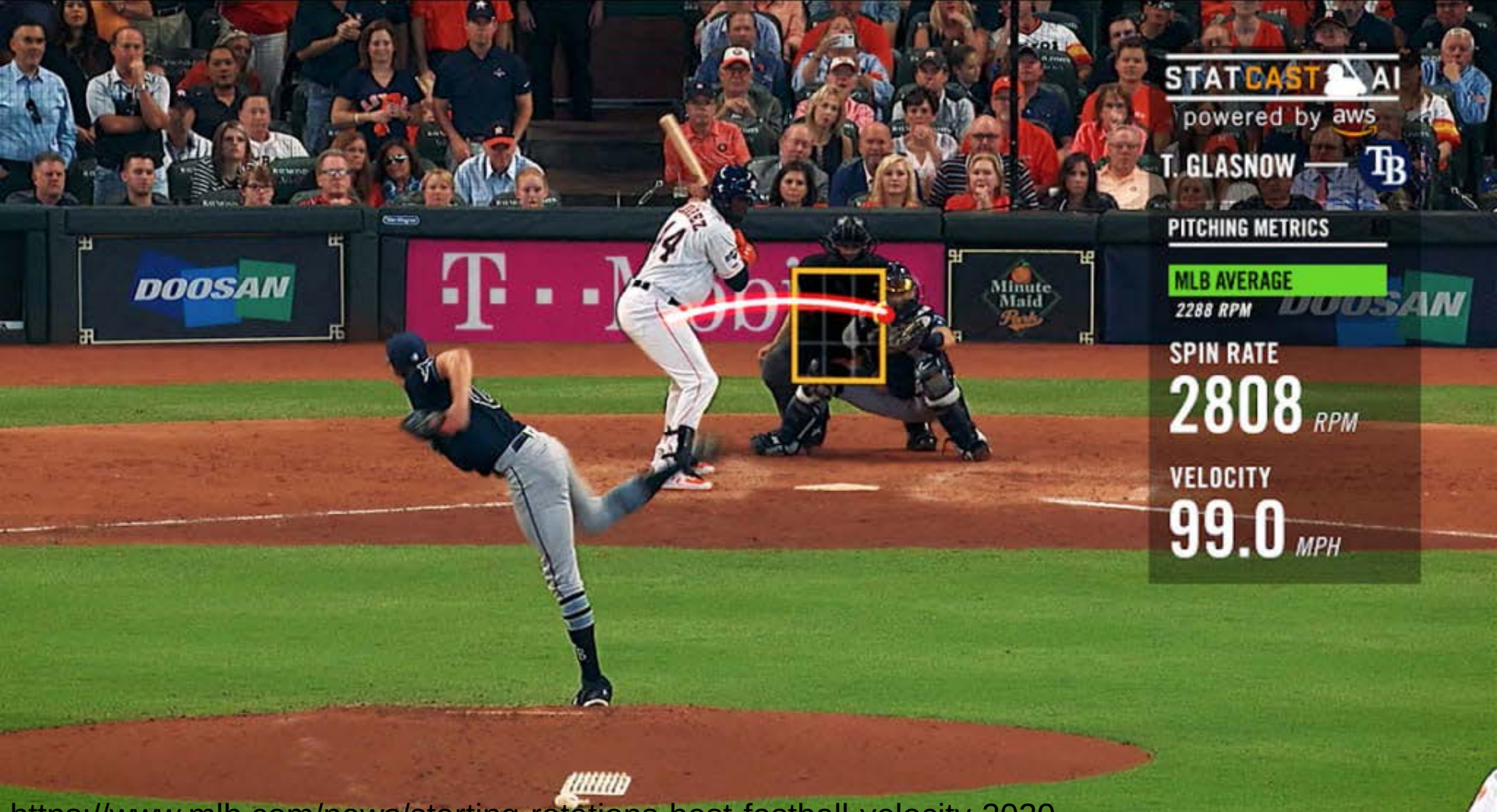


« ASPECTS bas »



Objectifs

- Revoir les dernières études avec ASPECTS bas
- Apprécier les limites de ces études
- Intégrer ces données dans nos critères de décision pour la thrombectomie



https://www.mlb.com/news/starting-rotations-best-fastball-velocity-2020

Critères de thrombectomie (mRS 0-2)

mRS 0-2	NIHSS ≥6	Délais <6h	C- ≥6	CTA LVO	*CTP*	47% - 27% NNT 5
mRS 0-2	NIHSS ≥6	Délais <6h	C- 0-5	CTA LVO	*CTP*	?

Critères de thrombectomie (mRS 0-3)

mRS 0-2	NIHSS ≥6	Délais <6h	C- ≥6	CTA LVO	*CTP*	≈ 69% - 46% NNT 4
mRS 0-2	NIHSS ≥6	Délais <6h	C- 0-5	CTA LVO	*CTP*	?

Critères de thrombectomie (mRS 0-3)

mRS 0-2	NIHSS ≥6	Délais <6h	C- ≥6	CTA LVO	*CTP*	≈ 69% - 46% NNT 4
mRS **0-1**	NIHSS ≥6	Délais <6h	C- 0-5	CTA LVO	*CTP*	?

Critères de thrombectomie (mRS 0-3)

mRS 0-2	NIHSS ≥6	Délais <6h	C- ≥6	CTA LVO	*CTP*	≈ 69% - 46% NNT 4
mRS **0-1**	NIHSS ≥6	Délais <6h	C- 0-5	CTA LVO	*CTP*	≈ 31% - 12% NNT 5

Critères de thrombectomie (mRS 0-3)

mRS 0-2	NIHSS ≥6	Délais <6h	C- ≥6	CTA LVO	*CTP*	≈ 69% - 46% NNT 4
mRS **0-1**	NIHSS ≥6	Délais <6h	C- 0-5	CTA LVO	*CTP*	≈ 31% - 12% NNT 5
mRS **0-1**	NIHSS <6	Délais ≥6h	C- 0-5	CTA LVO	*CTP*	TESLA 30 - 20% NNT 10

Critères de thrombectomie (mRS 0-3)

mRS 0-2	NIHSS ≥6	Délais <6h	C- ≥6	CTA LVO	*CTP*	≈ 69% - 46% NNT 4
mRS **0-1**	NIHSS ≥6	Délais <6h	C- 0-5	CTA LVO	*CTP*	≈ 31% - 12% NNT 5
mRS **0-1**	NIHSS ≥6	Délais ≥6h	C- 0-5	CTA LVO	*CTP*	TESLA 30 - 20% NNT 10
mRS **0-1**	NIHSS ≥6	Délais ≥6h	C- 0-5	CTA LVO	CTP fav.?	20 - 7% 47 - 33% NNT 8

Critères de thrombectomie (mRS 0-2)

mRS 0-2	NIHSS ≥6	Délais <6h	C- ≥6	CTA LVO	*CTP*	47% - 27% NNT 5
mRS 0-2	NIHSS ≥6	Délais ≥6h	C- ≥6	CTA LVO	*CTP*	?

Critères de thrombectomie (mRS 0-2)

mRS 0-2	NIHSS ≥6	Délais <6h	C- ≥6	CTA LVO	*CTP*	47% - 27% NNT 5
mRS **0-1**	NIHSS ≥6	Délais ≥6h	C- ≥6	CTA LVO	*CTP*	?

Critères de thrombectomie (mRS 0-2)

mRS 0-2	NIHSS ≥6	Délais <6h	C- ≥6	CTA LVO	*CTP*	47% - 27% NNT 5
mRS **0-1**	NIHSS ≥6	Délais ≥6h	C- ≥6	CTA LVO	*CTP*	

Critères de thrombectomie (mRS 0-2)

mRS 0-2	NIHSS ≥6	Délais <6h	C- ≥6	CTA LVO	*CTP*	47% - 27% NNT 5
mRS **0-1**	NIHSS ≥6	Délais ≥6h	C- ≥6	CTA LVO	*CTP*	MR CLEAN-LATE
mRS **0-1**	NIHSS ≥6	Délais ≥6h	C- (7-10)	CTA LVO + coll. >0%	CTP défav.	39% - 34% NNT 20

Critères de thrombectomie (mRS 0-2)

Critères de thrombectomie (autres prises)

mRS 0-2	NIHSS ≥6	Délais <6h	C- ≥6	CTA LVO	*CTP*	47% - 27% NNT 5
mRS 3+	NIHSS ≥6	Délais <6h	C- ≥6	CTA LVO	*CTP*	26-28% - 19-20% NNT 13
mRS 0-2	NIHSS <6	Délais <6h	C- ≥6	CTA LVO	*CTP*	69-73% - 80-82% ns
mRS 0-2	NIHSS ≥6	Délais <6h	C- ≥6	CTA MeVO	*CTP*	58% - 40% NNT 5-6

Benali et al. MR CLEAN registry J Neurointerv Surg 2023; 15(5): 433-438

Ducroux et al. Journal of Neuroradiology 2023; 50: 59–64

Volny et al. Méta-analyse des cohortes SITS-TBY, INTERRSeCT et PROVE-IT. Neurology 2020; 95(24):e3364-72

Menon et al. Méta-analyse HERMES J NeuroIntervent Surg 2019; 11(11): 1065-69

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Critères de thrombectomie (mRS 0-3)

mRS 0-2	NIHSS ≥6	Délais <6h	C- ≥6	CTA LVO	*CTP*	≈ 69% - 46% NNT 4
mRS **0-1**	NIHSS ≥6	Délais <6h	C- 0-5	CTA LVO	*CTP*	≈ 31% - 12% NNT 5
mRS **0-1**	NIHSS <6	Délais ≥6h	C- 0-5	CTA LVO	*CTP*	TESLA 30 - 20% NNT 10
mRS **0-1**	NIHSS ≥6	Délais ≥6h	C- 0-5	CTA LVO	CTP fav.?	20 - 7% 47 - 33% NNT 8