

Actualités dans le traitement des pathologies rachidiennes

SRO, Mai 2016, Carnac

The Epidural Treatment of Sciatica: Its Origin and Evolution

Bastiaan C. Ter Meulen^{a, c} Henry Weinstein^{a, c} Raymond Ostelo^b Peter J. Koehler^d

^aDepartment of Neurology, Onze Lieve Vrouwe Gasthuis, and ^bDepartment of Health Sciences, VU University and EMGO Institute for Health and Care Research, Amsterdam, ^cDepartment of Neurology, Zaans Medisch Centrum, Zaandam, and

^dDepartment of Neurology, Atrium Medical Center, Heerlen, The Netherlands

Jean-Anasthase Sicard (1872–1929)

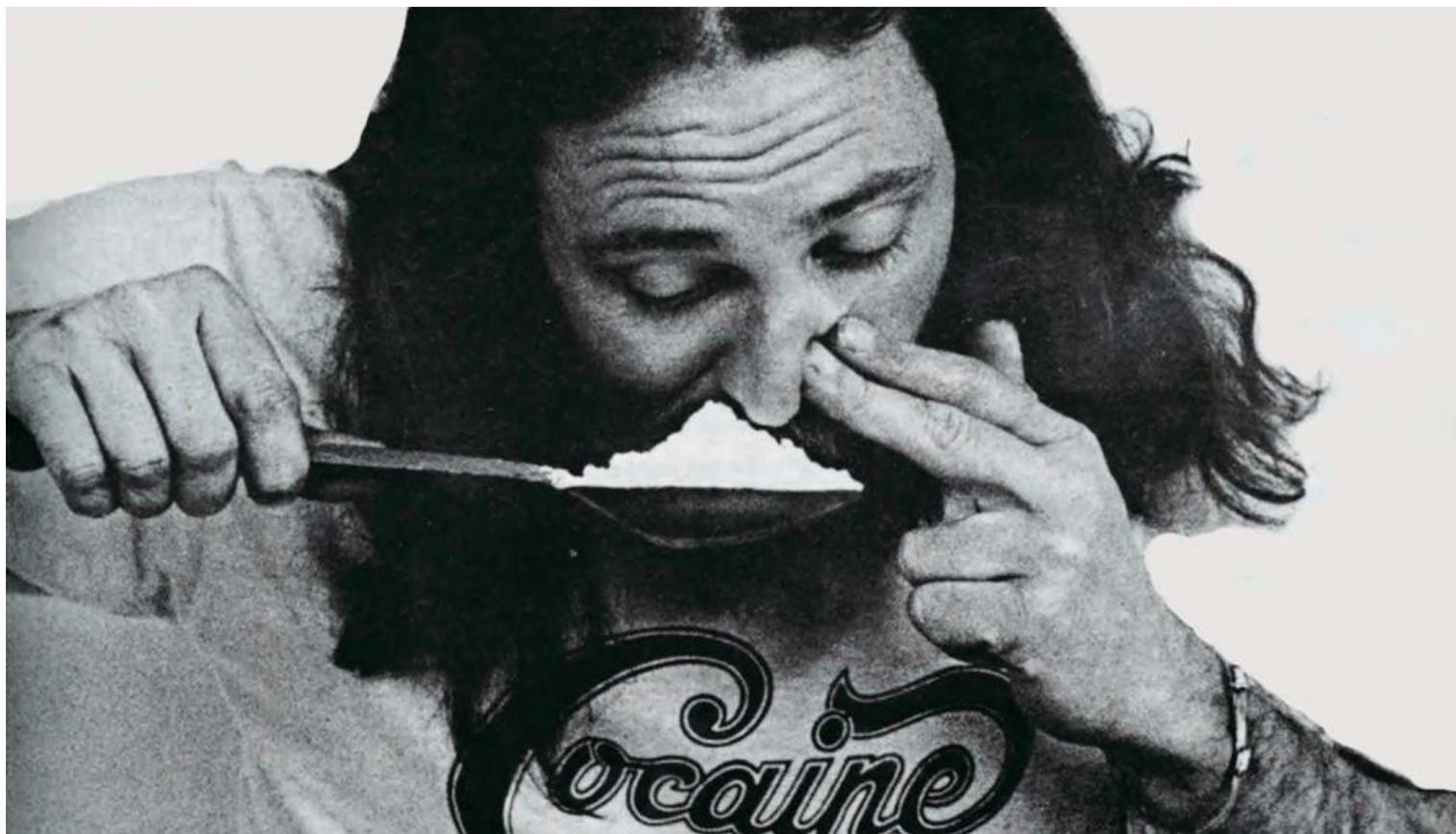


Fernand Cathelin (1873–1945)



1901 → 1^{ère} infiltration épidurale pour le traitement d'une sciatique par voie du hiatus

Produit utilisé ã ?



Résultats de l'étude de Sicard

Présentation au congrès de la société de Biologie de Paris, 1901

« Tous nos malades ont été immédiatement soulagés, **la guérison est maintenue depuis quatorze jours chez les deux maladies atteints de lumbago, ainsi que dans deux des cas de sciatique rebelle.**

Les deux autres malades atteints de sciatique **sont toujours très soulagés durant deux à trois jours à chaque nouvelle injection »**

« Nous restons donc **le premier** à avoir expérimenté cette méthode sur l'animal et **le seul** à avoir fourni un protocole complet, **le premier et le seul** à en avoir donné un théorie, **le premier** »

Depuis 1901

Table 1. Timeline of the epidural treatment of sciatica

Year	Country	Description
1885	USA	First spinal puncture by Corning
1895	Germany	Intrathecal infusion of cocaine by Bier
1901	France	First caudal epidural injections by Sicard and Cathelin
1925	Canada	Viner uses novocain to treat sciatica
1930	UK	Evans successfully treats 24/40 patients with procaine
1952	Italy	Robecchi and Capra use corticosteroids for the first time
1953	France	Lièvre et al. [21] publish a series of patients treated with epidural corticosteroids
1961	USA	Goebert et al.: first series in the USA
1960s–1970s		Uncontrolled studies
1970s–now		Randomized, controlled trials

Produits utilisés en épidural

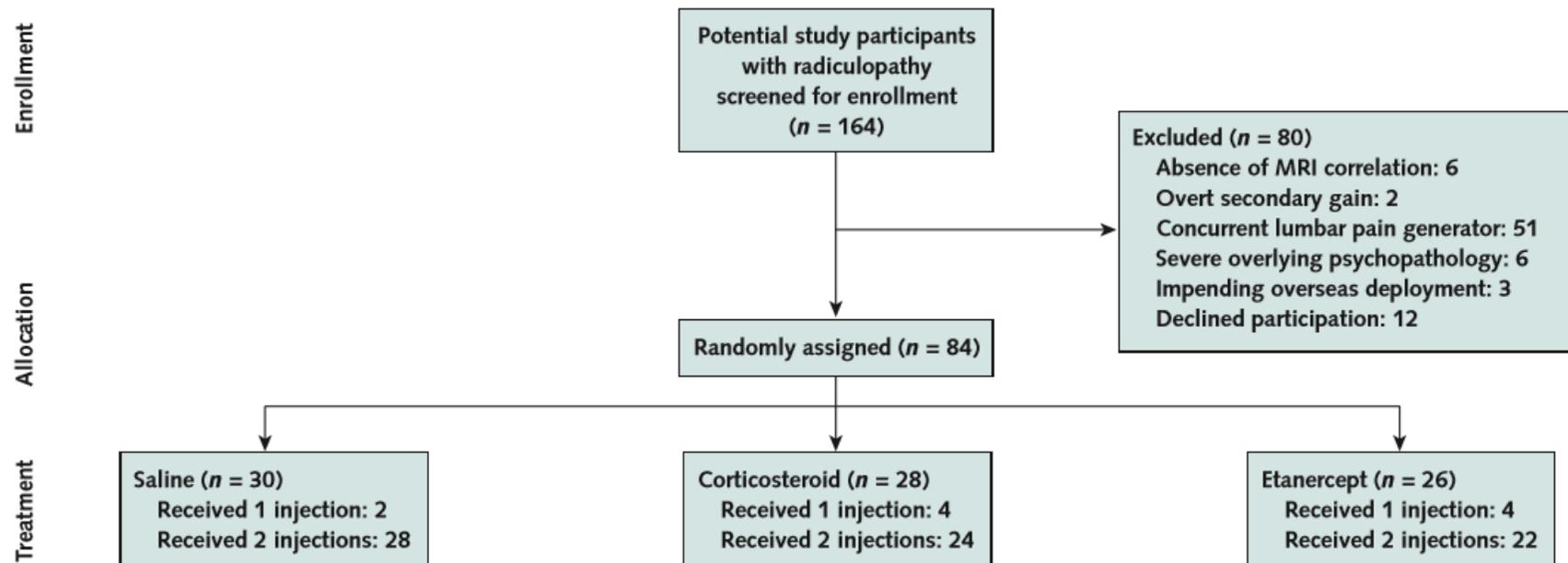
- ” Cocaine
- ” Anesthésique seul
- ” Anesthésique + corticoïde
- ” Corticoïde seuls
- ” Anti-TNF-alpha

➡ Pas de preuve formelle de l'efficacité de ces traitements

Epidural Steroids, Etanercept, or Saline in Subacute Sciatica

A Multicenter, Randomized Trial

Steven P. Cohen, MD; Ronald L. White, MD; Connie Kurihara, RN; Thomas M. Larkin, MD; Audrey Chang, PhD; Scott R. Griffith, MD; Christopher Gilligan, MD; Ralph Larkin, PhD; Benny Morlando, RN; Paul F. Pasquina, MD; Tony L. Yaksh, PhD; and Conner Nguyen, MD



Pas de différence significative **sur le long terme** des traitements versus sérum physiologique

Table 2. Outcome Variables Stratified by Treatment Group 1 Month After the Second Injection

Variable	Adjusted Mean (95% CI)*			Omnibus P Value
	Saline (n = 30)	Steroids (n = 28)	Etanercept (n = 26)	
NRS score for leg pain	3.78 (2.72 to 4.85)	2.54 (1.36 to 3.69)	3.56 (2.35 to 4.72)	0.24
NRS score for back pain	4.01 (3.08 to 4.93)	3.49 (2.48 to 4.50)	4.41 (3.37 to 5.44)	0.40
ODI score	30.00 (23.2 to 36.69)	24.10 (16.64 to 31.55)	40.26 (32.91 to 47.61)	0.006



Effet significatif des corticoïdes sur l'Oswestri à 1 mois

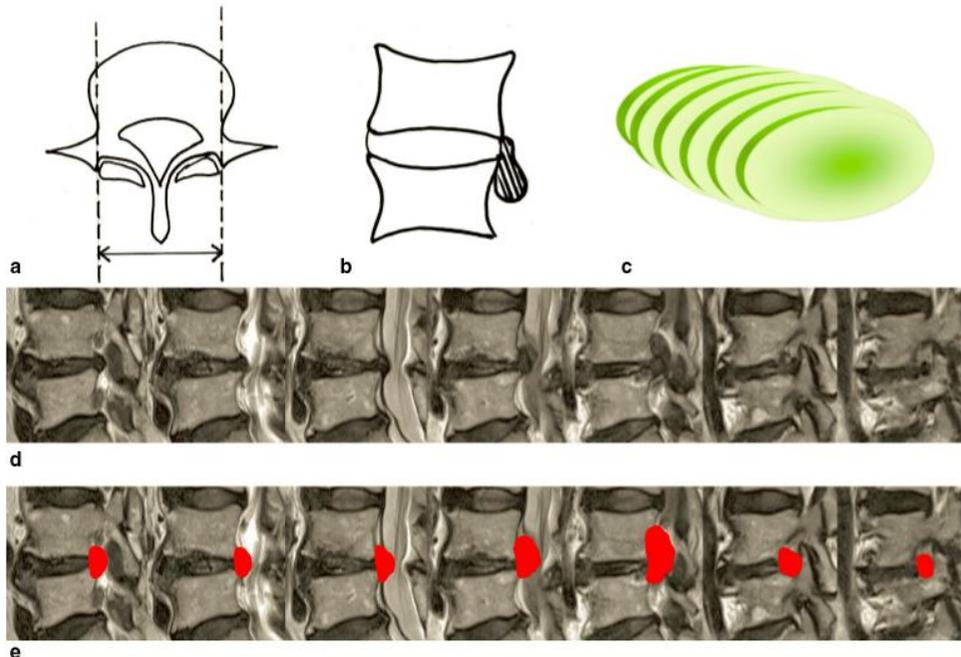
Autre traitement local : activer la résorption des hernies discales?

ORIGINAL ARTICLE

Three-dimensional analysis of volumetric changes in herniated discs of the lumbar spine: does spontaneous resorption of herniated discs always occur?

Eur Spine J (2016) 25:1393–1402

Jun-Yeong Seo · Young-Ho Roh · Young-Hoon Kim · Kee-Yong Ha



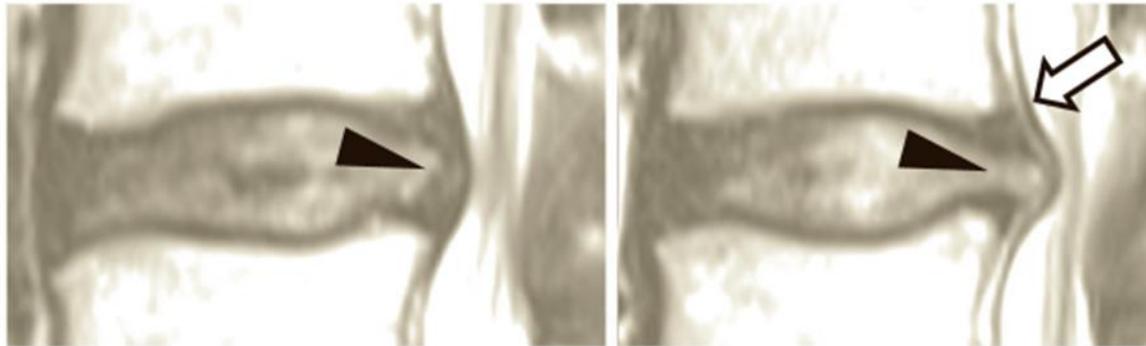
Inclusion



6 mois

Variation du volume ?

Exemple de modification de hernies



Aggravation
35 patients



Régression
21 patients

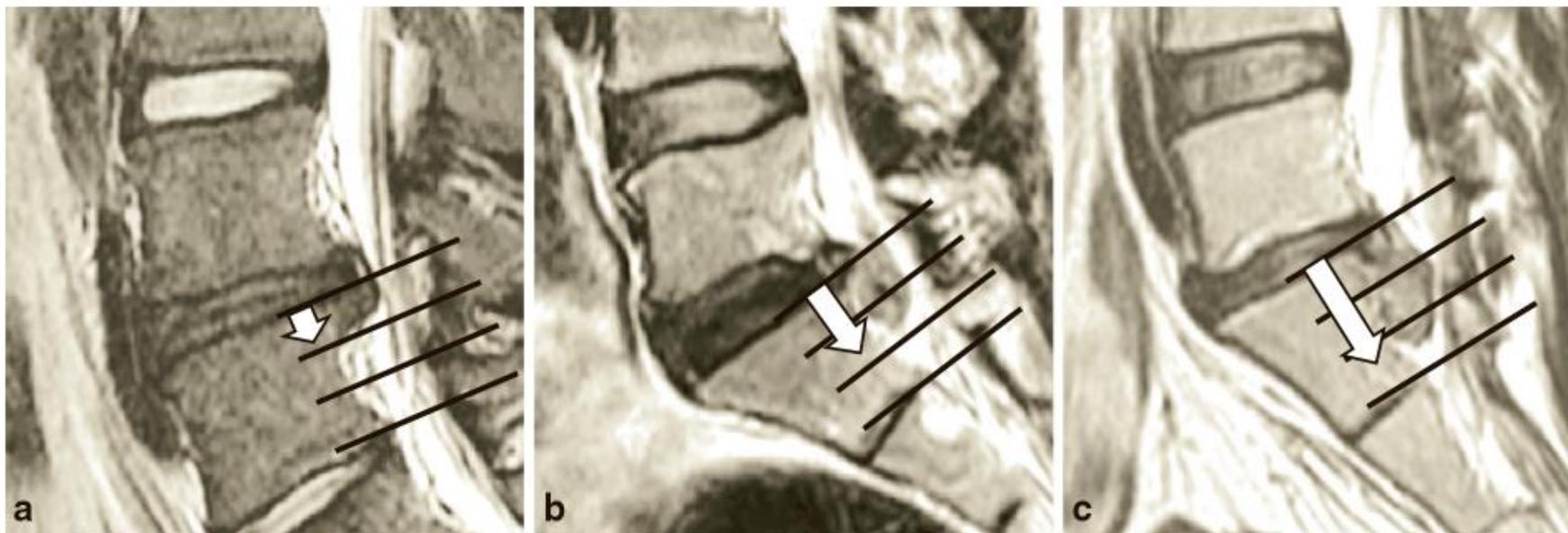
Inclusion

6 mois



56 patients

Exemple de migration vers le bas



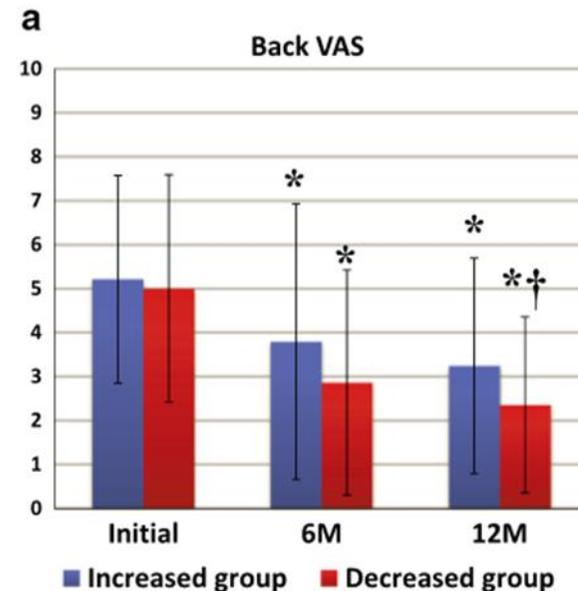
Facteurs associés à la disparition de la hernie



- “ Transligamentaire
- “ Taille
- “ Migration importante vers le bas
- “ Exclues



Tendance à la ~~à~~ amélioration plus importante chez les patients chez qui la hernie a disparue



Effet des tractions vertébrales sur les hernies discales

Herniated Lumbar Disks: Real-time MR Imaging Evaluation during Continuous Traction¹

Figure 1

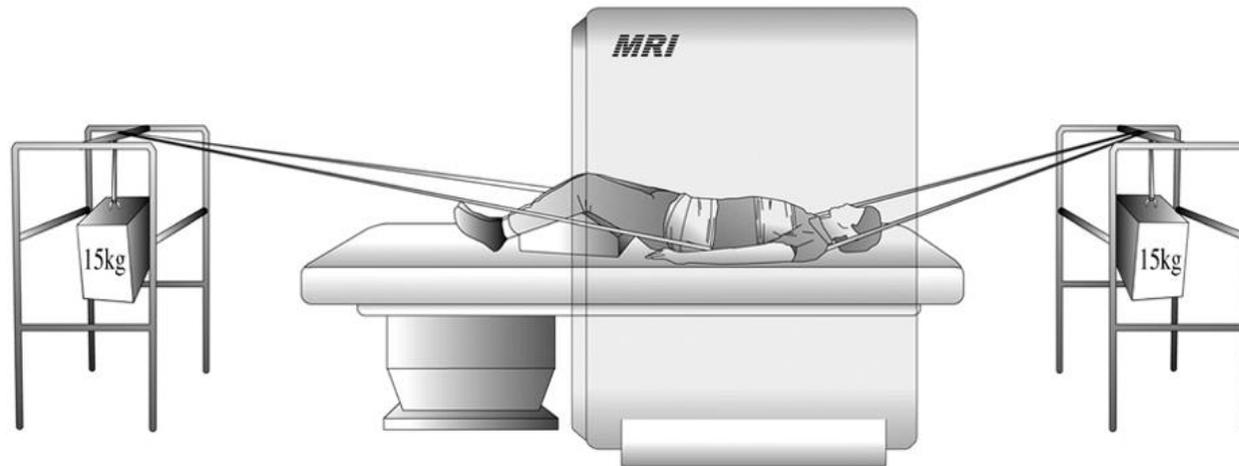
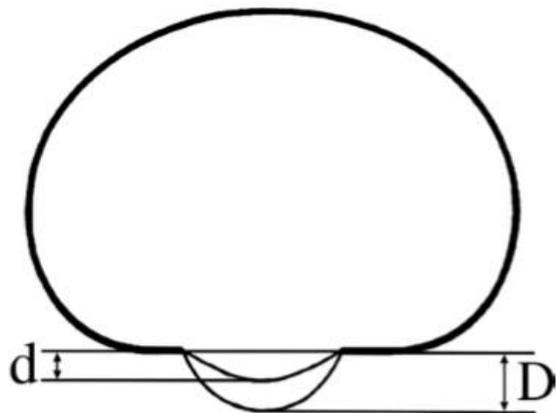


Figure 1: The application of lumbar traction during MR imaging.

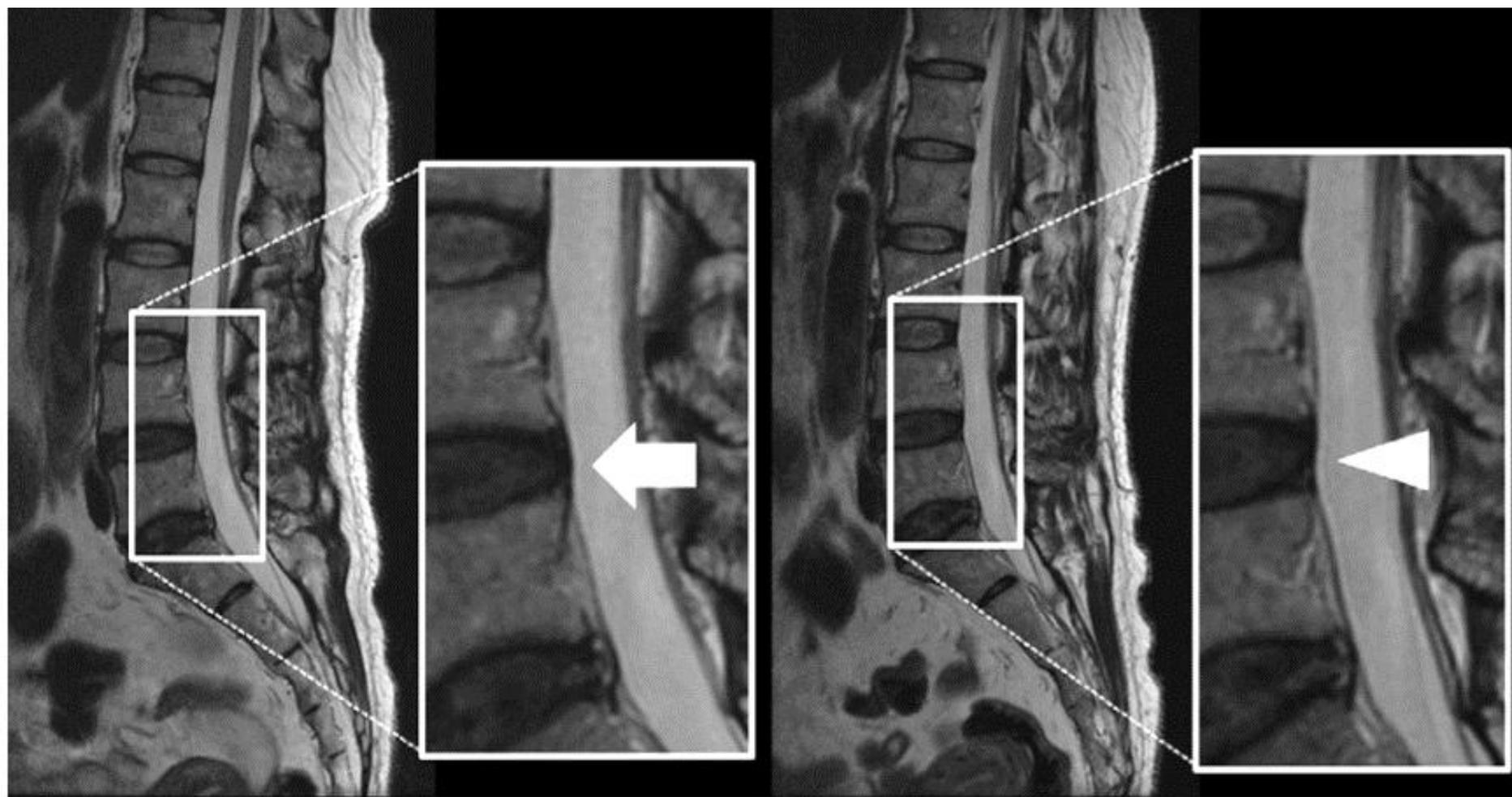
Evolution après traction

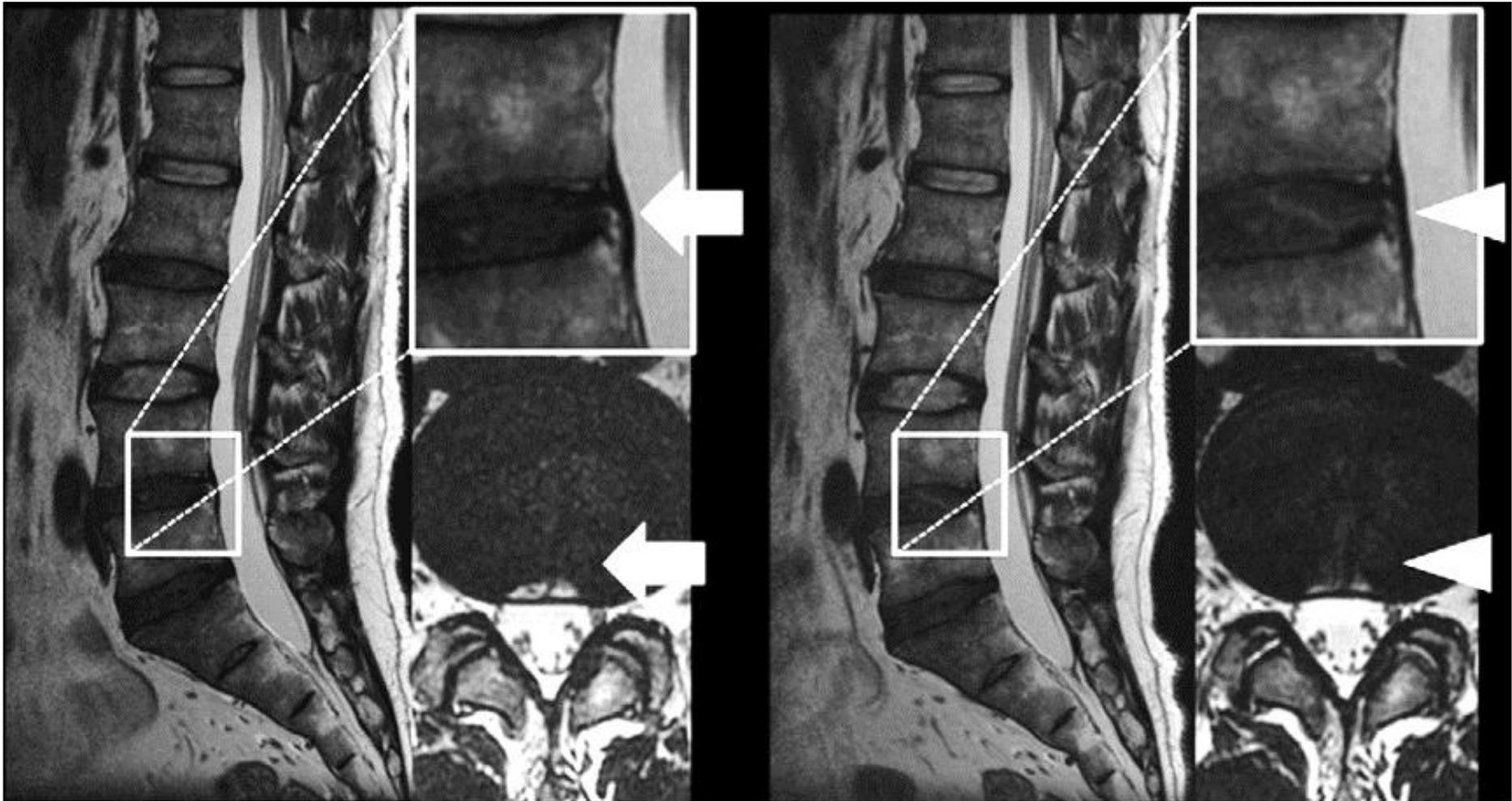
- " 48 patients avec lombalgies
- " Traction de 30 minutes avec acquisitions à 10, 20 et 30 minutes



% de réduction de la hernie
discale/bombement du disque

Elongation du rachis





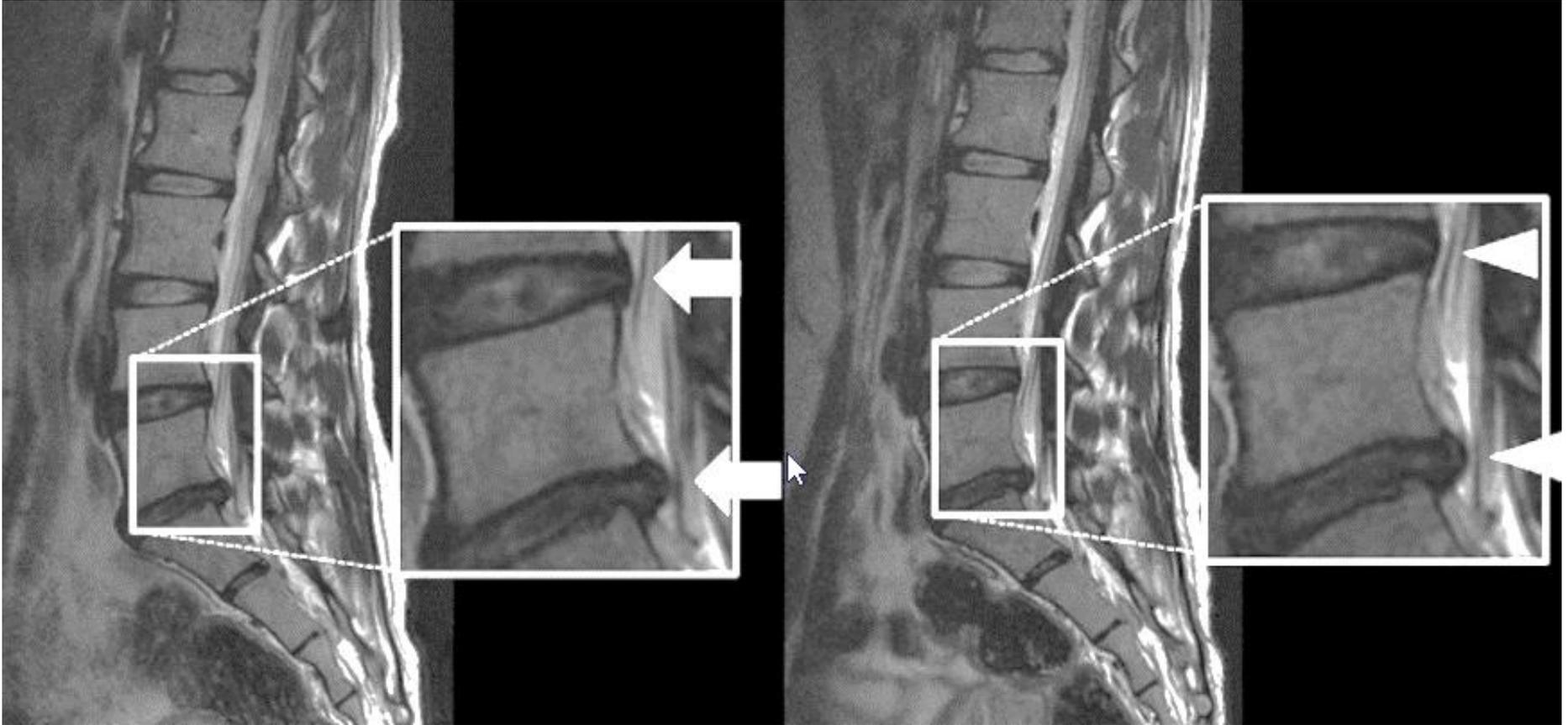
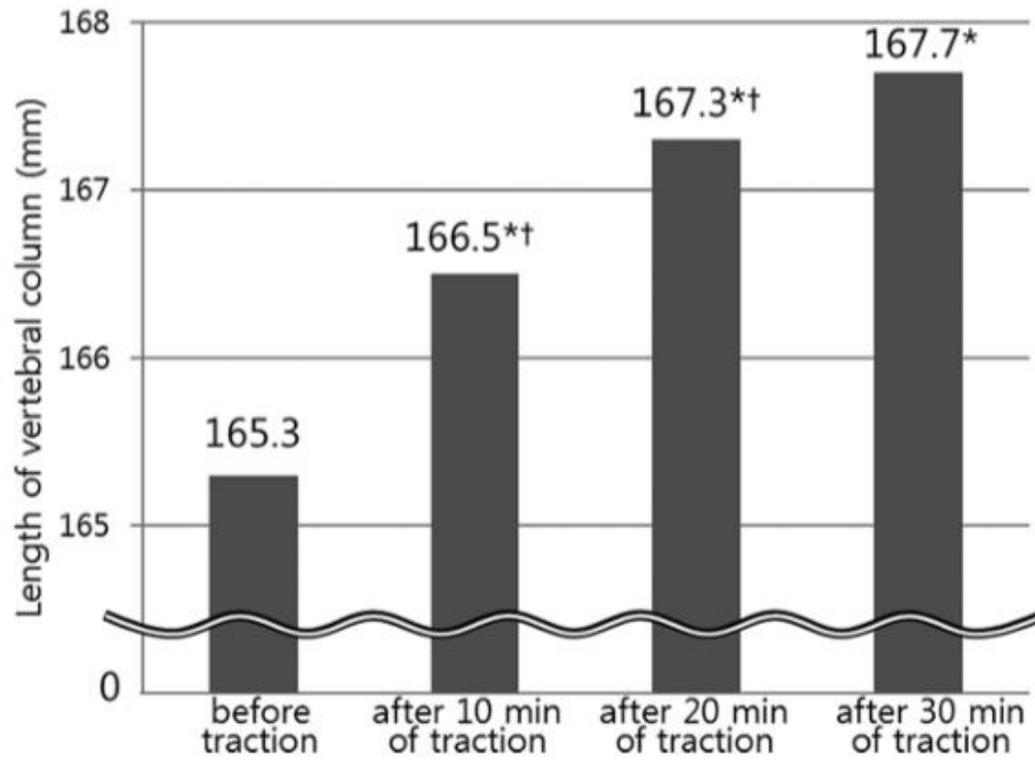
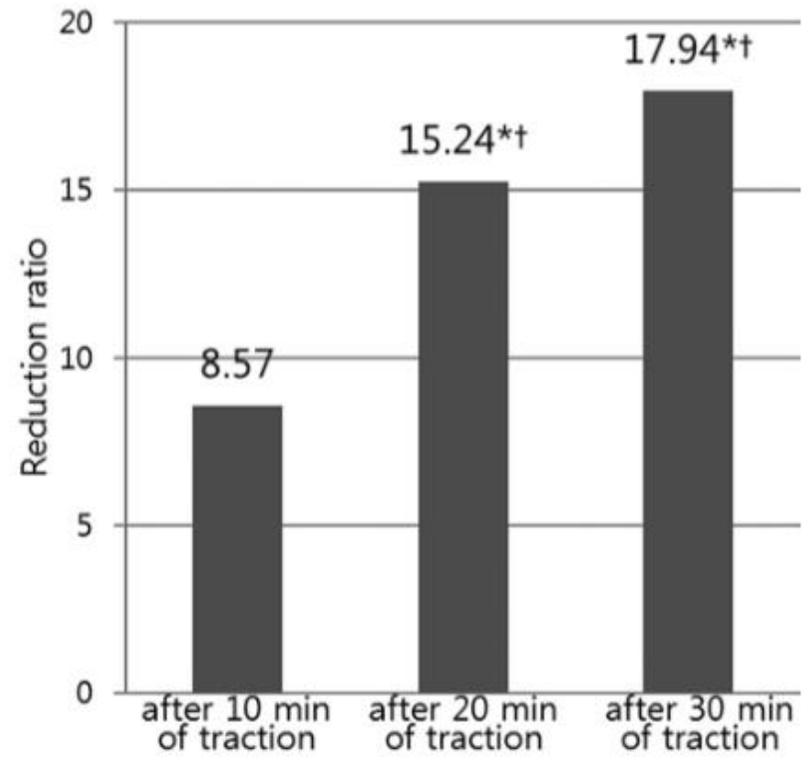


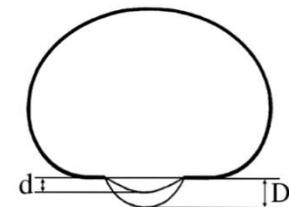
Figure 8



+ 2 cm



- 18%



Les traitements systémiques

Corticoïdes

Original Investigation

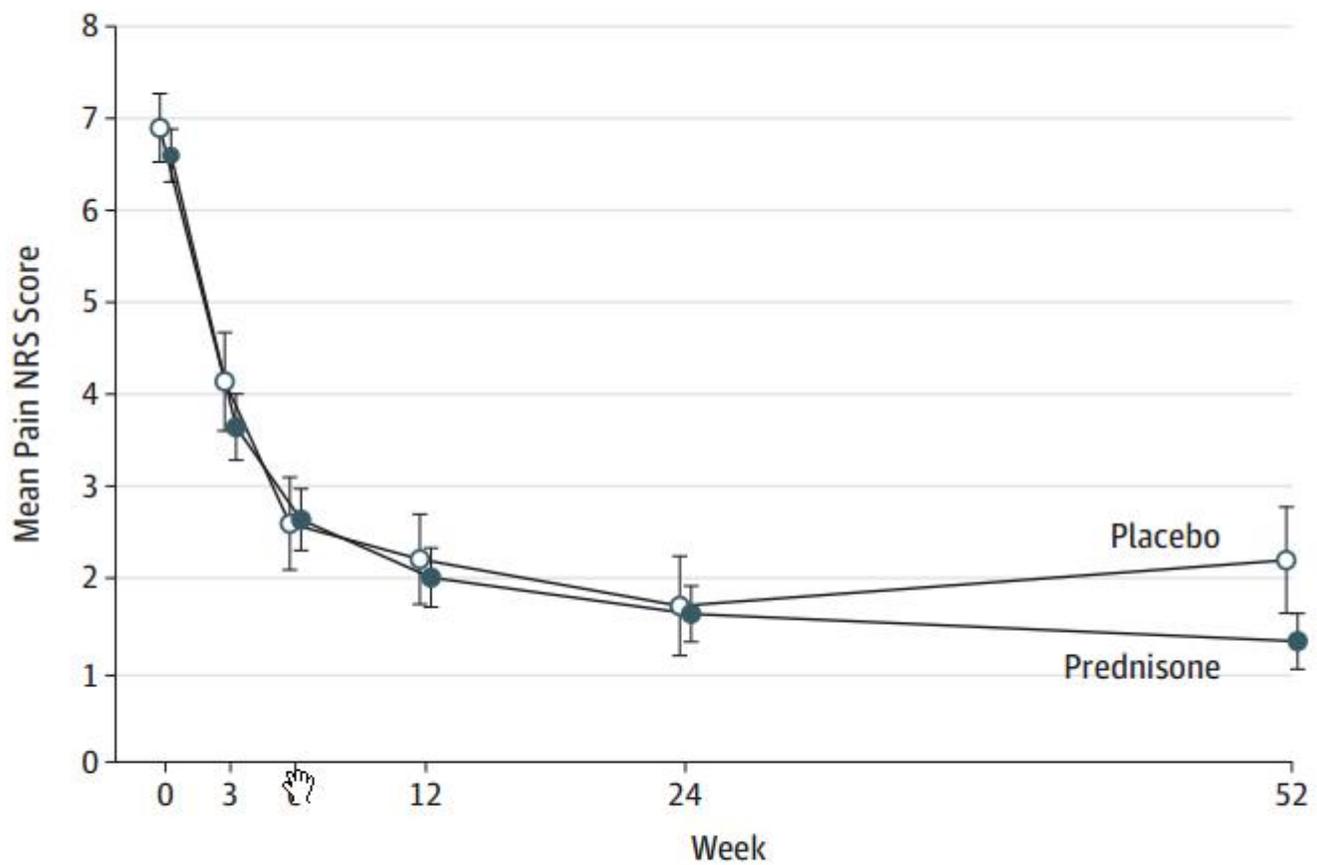
Oral Steroids for Acute Radiculopathy Due to a Herniated Lumbar Disk A Randomized Clinical Trial

Harley Goldberg, DO; William Firtch, MD; Mark Tyburski, MD; Alice Pressman, PhD, MS; Lynn Ackerson, PhD; Luisa Hamilton, MD; Wayne Smith, MD; Ryan Carver, MD; Annu Maratukulam, MD; Lawrence A. Won, MD; Eugene Carragee, MD; Andrew L. Avins, MD, MPH

JAMA. 2015;313(19):1915-1923. doi:10.1001/jama.2015.4468

- ” Sciatique depuis moins de 3 mois
- ” Hernie discale à l'IRM
- ” 60 mg 5 jours, 40 mg 5 jours, puis 20 mg 5 jours
- ” Dose cumulée de 600 mg

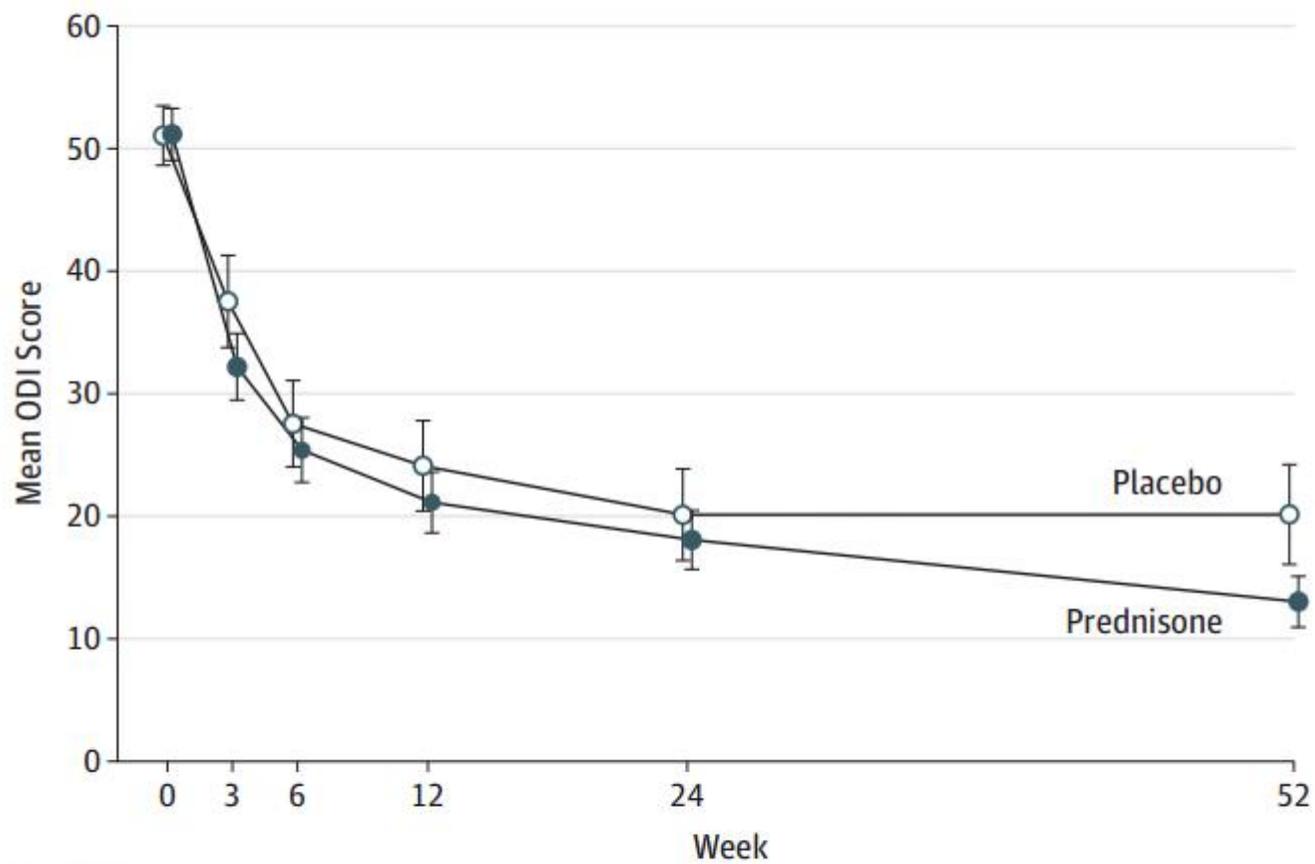
B Pain numerical rating scale



No. of patients

Placebo	88	88	86	83	76	77
Prednisone	181	179	173	168	159	157

A Oswestry Disability Index



No. of patients

Placebo	88	88	86	83	76	77
Prednisone	181	179	173	168	159	157

Toujours le rationnel du TNF alpha

RESEARCH ARTICLE

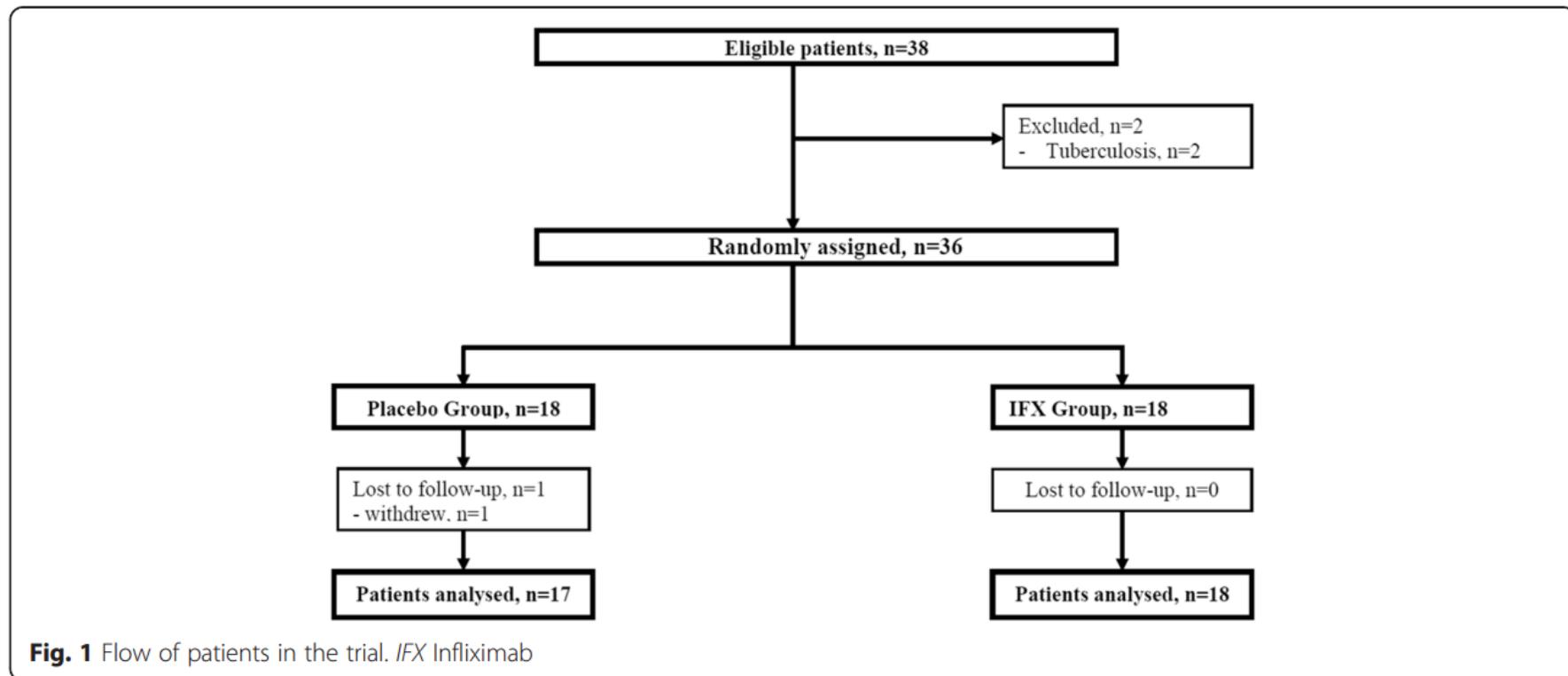
Open Access



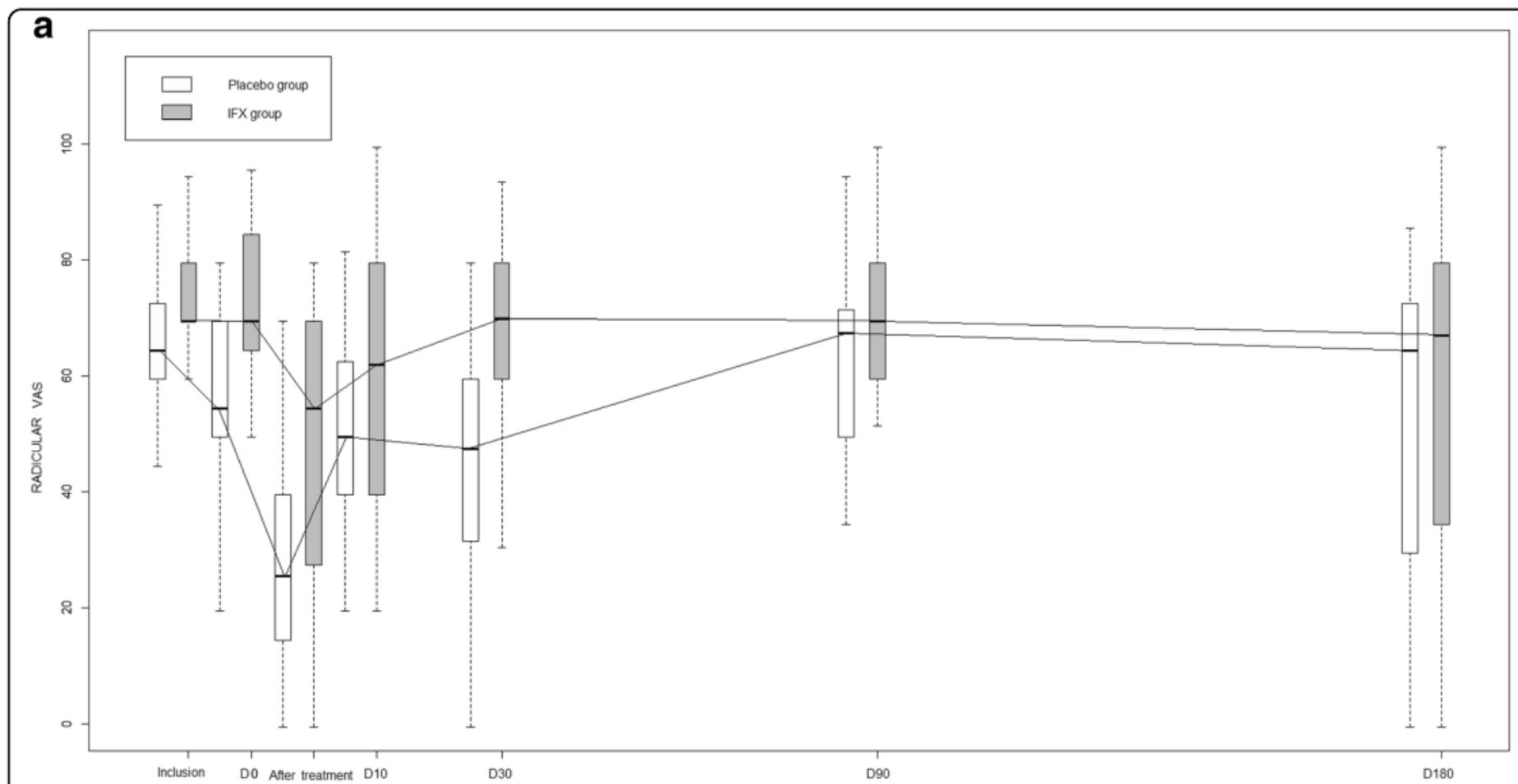
Tumor necrosis factor- α blockade in recurrent and disabling chronic sciatica associated with post-operative peridural lumbar fibrosis: results of a double-blind, placebo randomized controlled study

Christelle Nguyen^{1,2*}, Clémence Palazzo^{1,3}, Sophie Grabar^{4,5}, Antoine Feydy⁶, Katherine Sanchez¹, Nathalie Zee⁶, Laurent Quinquis⁴, Myriam Ben Boutieb⁴, Michel Revel¹, Marie-Martine Lefèvre-Colau¹, Serge Poiraudau^{1,3} and François Rannou^{1,2}

Inclusion de patients avec lombosciatique post-chirurgicales



Résultats



A venir : le Lyrica ò ?

UPDATE

Open Access



PRECISE — pregabalin in addition to usual care: statistical analysis plan

Stephanie Mathieson^{1*}, Laurent Billot¹, Christopher G. Maher¹, Andrew J. McLachlan², Jane Latimer¹, Bart W. Koes³, Mark J. Hancock⁴, Ian Harris⁵, Richard O. Day⁶, Justin Pik⁷, Stephen Jan¹ and Chung-Wei Christine Lin¹

A required sample size of 204 participants

Les traitements chirurgicaux

Fusion ou non dans le traitement des sténoses canalaire

The NEW ENGLAND
JOURNAL *of* MEDICINE

ESTABLISHED IN 1812

APRIL 14, 2016

VOL. 374 NO. 15

A Randomized, Controlled Trial of Fusion Surgery for Lumbar Spinal Stenosis

Peter Försth, M.D., Ph.D., Gylfi Ólafsson, M.Sc., Thomas Carlsson, M.D., Anders Frost, M.D., Ph.D.,
Fredrik Borgström, Ph.D., Peter Fritzell, M.D., Ph.D., Patrik Öhagen, Karl Michaëlsson, M.D., Ph.D.,
and Bengt Sandén, M.D., Ph.D.

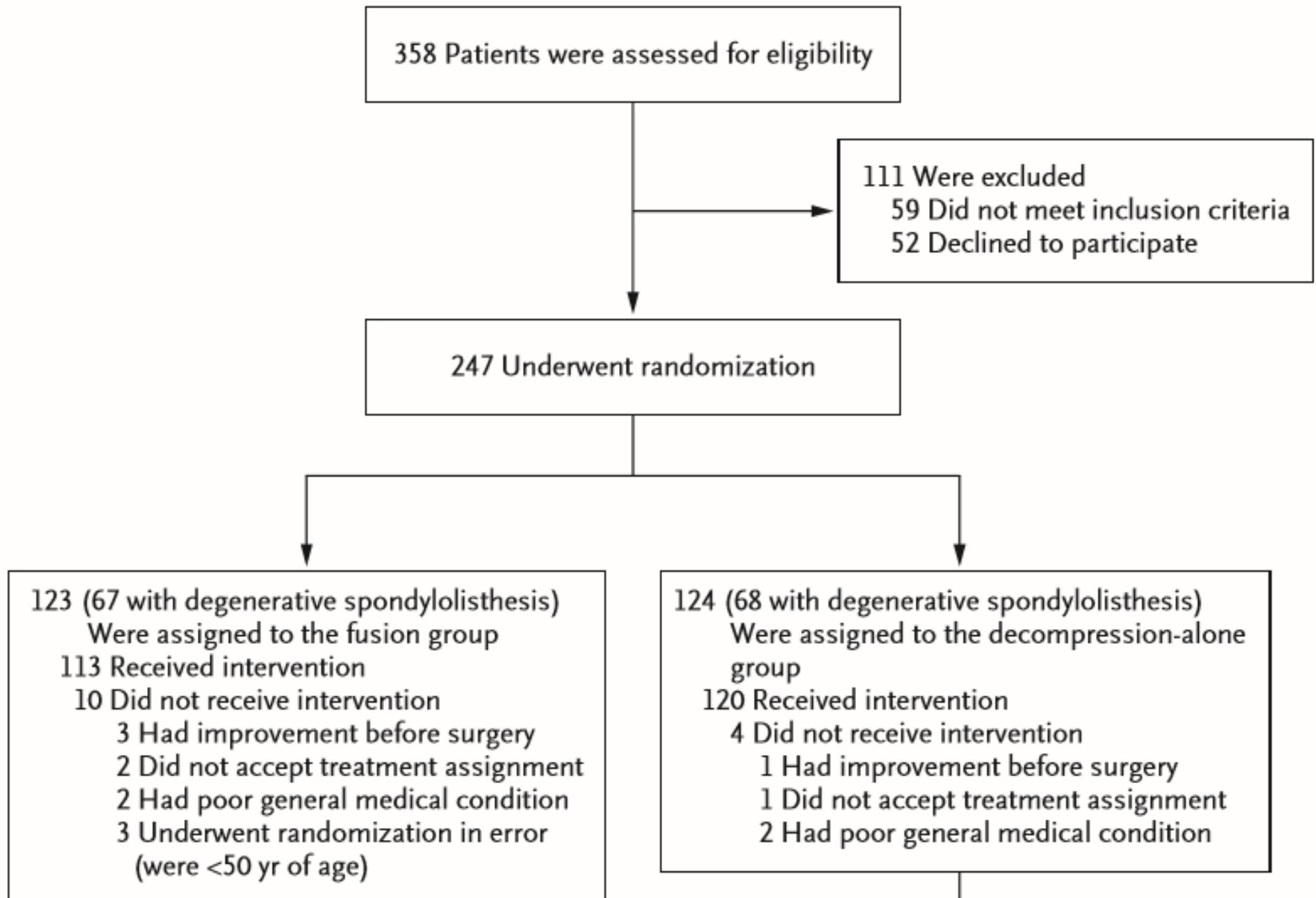
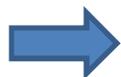


Table 3. Outcomes in the Per-Protocol Population.*

Outcome	Absence of Degenerative Spondylolisthesis				Presence of Degenerative Spondylolisthesis			
	Fusion Group (N=44)	Decompression- Alone Group (N=51)	P Value	Relative Risk (95% CI)	Fusion Group (N=67)	Decompression- Alone Group (N=66)	P Value	Relative Risk (95% CI)
During the procedure								
Operating time — min	150±47	80±28	<0.01		149±44	95±40	<0.01	
Amount of bleeding — ml	648±498	288±319	<0.01		686±434	311±314	<0.01	
At 2 yr								
ODI score	29±20	27±18	0.70		25±19	21±18	0.11	
EQ-5D score	0.62±0.31	0.59±0.35	0.85		0.63±0.31	0.69±0.28	0.20	
VAS score for back pain	41±32	45±31	0.66		36±29	26±25	0.15	
VAS score for leg pain	35±31	34±33	0.46		32±30	29±31	0.60	
ZCQ score								
Symptom severity	2.6±1.0	2.5±1.1	0.41		2.4±0.9	2.4±1.0	0.56	
Physical function	1.9±0.7	1.8±0.8	0.20		1.8±0.8	1.7±0.7	0.53	
Patient satisfaction	2.2±0.9	2.1±0.9	0.65		2.1±0.9	1.9±0.8	0.22	
Result of 6-minute walk test — m	417±163	416±130	0.38		382±152	396±144	0.60	
Reporting satisfaction with the surgery — no. (%)†	23 (52)	27 (53)		0.99 (0.67–1.45)	43 (64)	45 (68)		0.94 (0.74–1.20)
Reporting decrease in back pain — no. (%)‡	33 (75)	33 (65)		1.16 (0.89–1.51)	53 (79)	54 (82)		0.97 (0.82–1.14)
Reporting decrease in leg pain — no. (%)§	36 (82)	35 (69)		1.19 (0.94–1.50)	52 (78)	48 (73)		1.07 (0.88–1.30)
Reporting increase in walking distance — no. (%)¶	40 (91)	41 (80)		1.13 (0.96–1.33)	59 (88)	57 (86)		1.02 (0.90–1.16)



Aucun intérêt à 2 ans de réaliser une fusion associée à la décompression

Evaluation médico-économique

Table 4. Resource Use.*

Variable	Fusion Group	Decompression- Alone Group	P Value
During the procedure	(N=113)	(N=119)	
Length of hospital stay (days)	7.4±8.4	4.1±6.1	<0.001
Mean operation costs (U.S. \$)†	12,200	5,400	
At 2 yr	(N=104)	(N=109)	
No. of visits to doctors	1.3±3.3	1.8±5.3	0.49
No. of visits to other health care professionals	13±32	22±45	0.13
Total no. of days receiving benefits of any kind	61±172	41±117	0.35
No. of patients using analgesics for back problems at 2 yr (%)	42 (40)	40 (37)	0.57

Pas de différence entre rééducation et chirurgie

Ann Intern Med. 2015;162:465-473. doi:10.7326/M14-1420 www.annals.org
For author affiliations, see end of text.

Annals of Internal Medicine

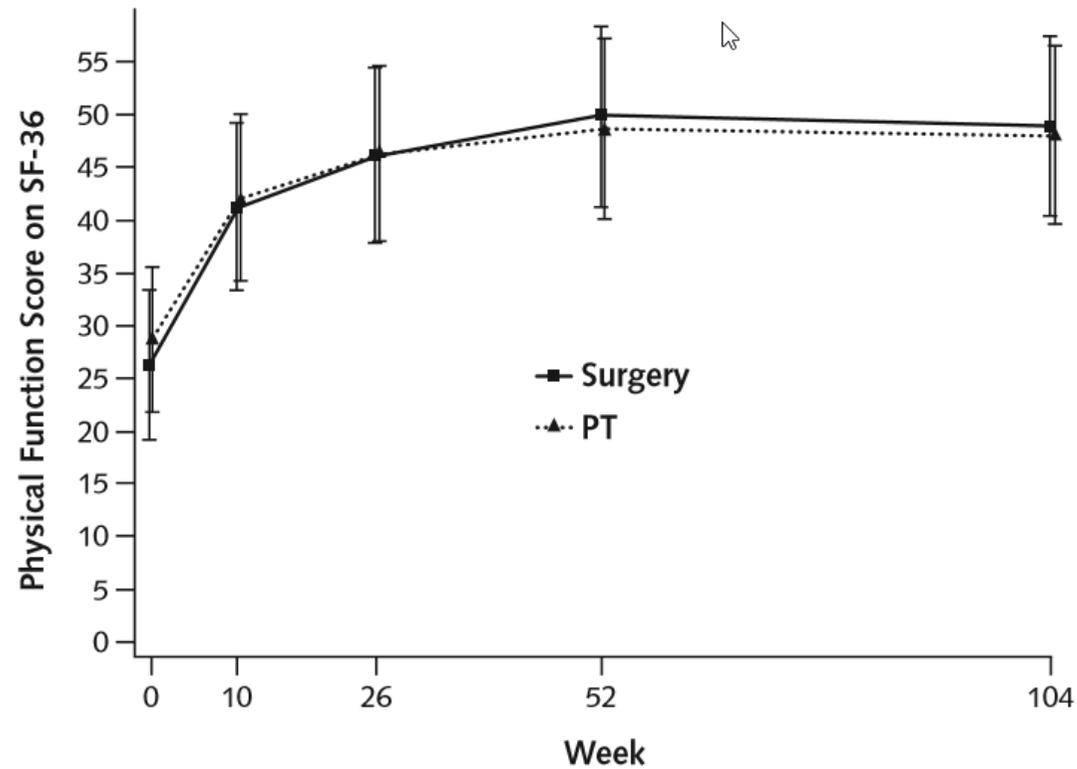
ORIGINAL RESEARCH

Surgery Versus Nonsurgical Treatment of Lumbar Spinal Stenosis **A Randomized Trial**

**Anthony Delitto, PT, PhD; Sara R. Piva, PT, PhD; Charity G. Moore, PhD, MSPH; Julie M. Fritz, PT, PhD;
Stephen R. Wisniewski, PhD; Deborah A. Josbeno, PT, PhD; Mark Fye, MD; and William C. Welch, MD**

Aucune différence sur le SF36

Figure 2. Adjusted means for physical function over time in the surgery and PT groups.

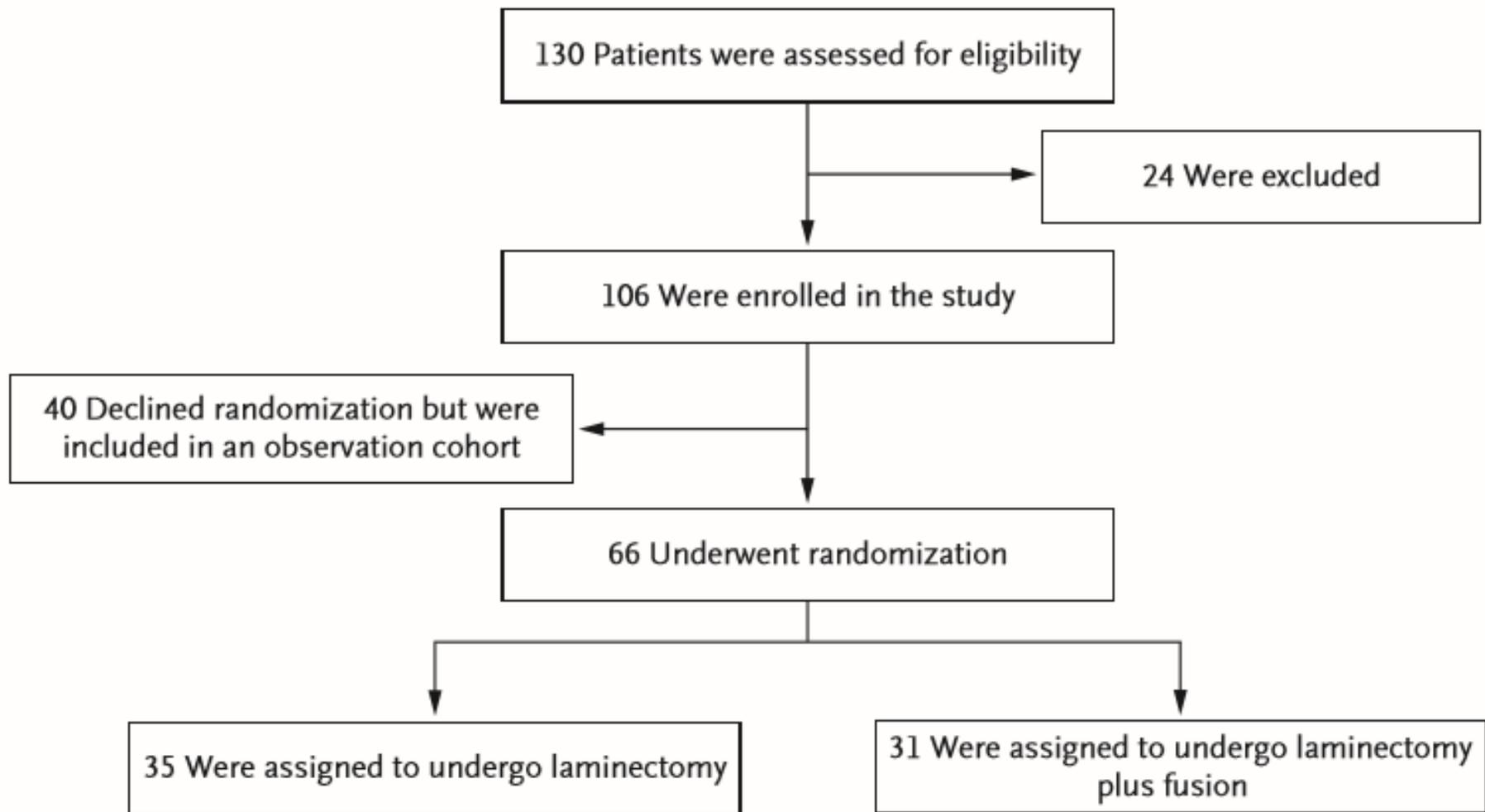


Une étude « positive »

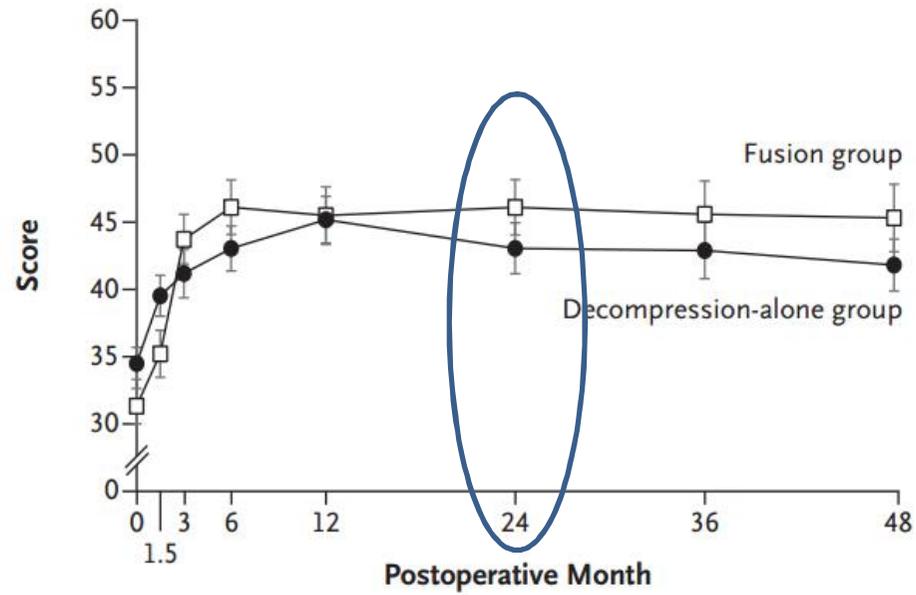
ORIGINAL ARTICLE

Laminectomy plus Fusion versus Laminectomy Alone for Lumbar Spondylolisthesis

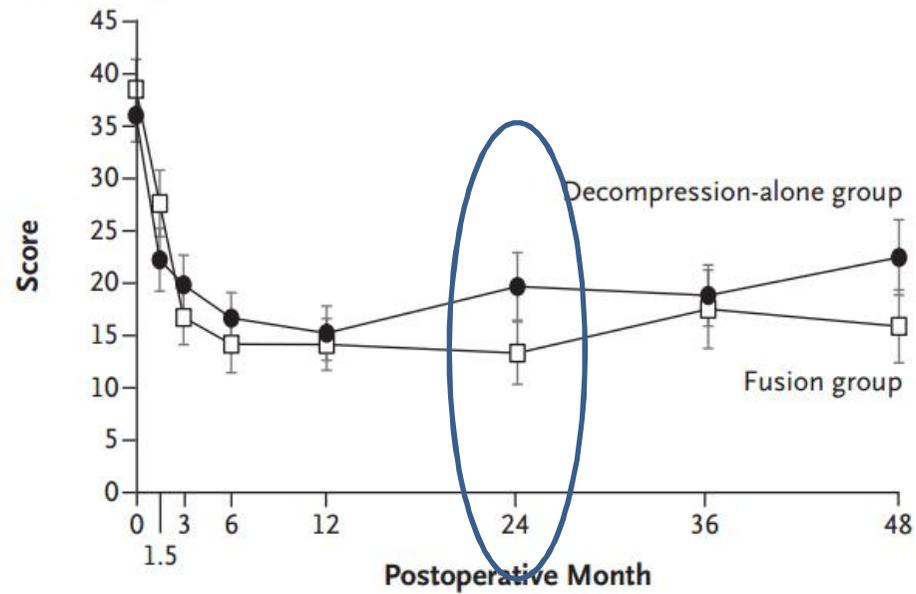
Zoher Ghogawala, M.D., James Dziura, Ph.D., William E. Butler, M.D.,
Feng Dai, Ph.D., Norma Terrin, Ph.D., Subu N. Magge, M.D.,
Jean-Valery C.E. Coumans, M.D., J. Fred Harrington, M.D.,
Sepideh Amin-Hanjani, M.D., J. Sanford Schwartz, M.D., Volker K.H. Sonntag, M.D.,
Fred G. Barker, II, M.D., and Edward C. Benzel, M.D.



A SF-36 Physical-Component Summary

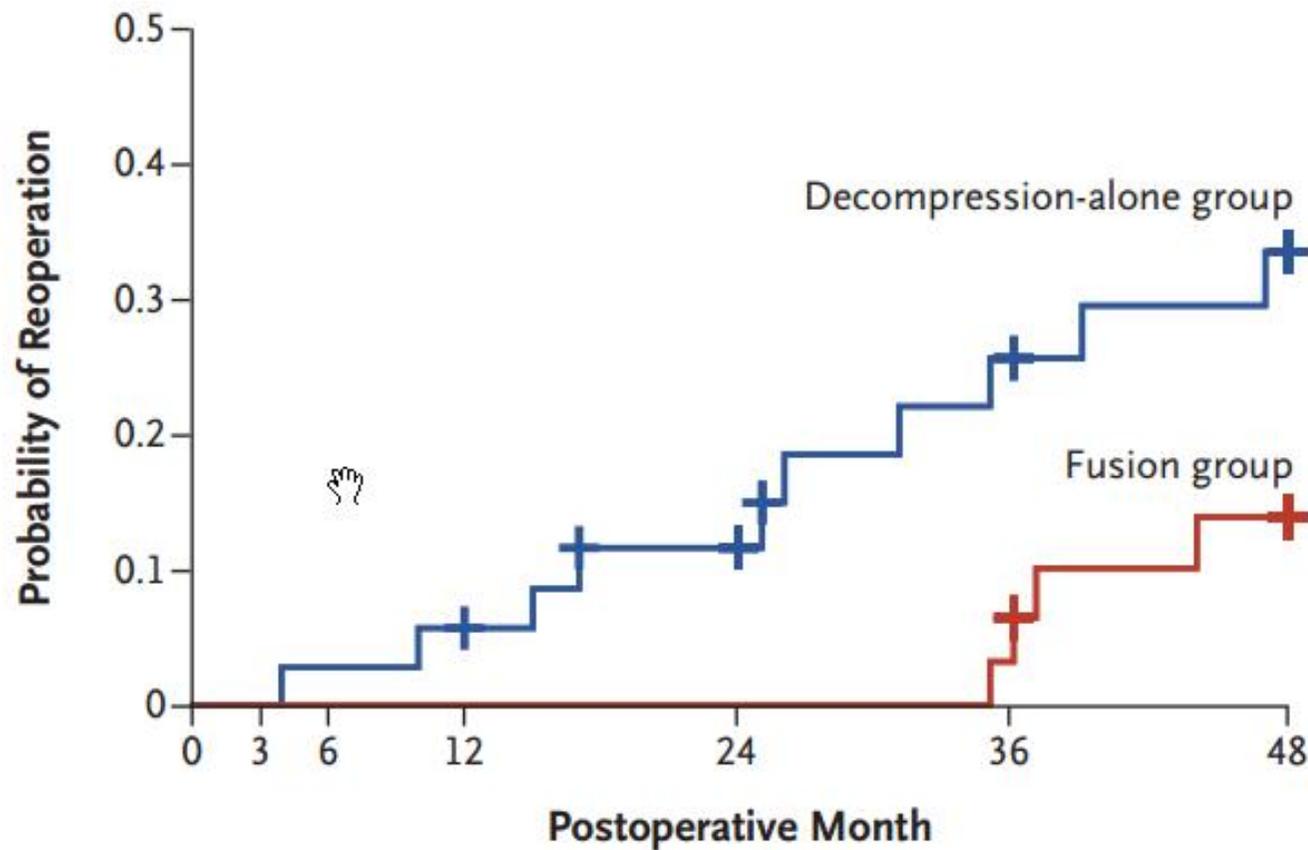


B Oswestry Disability Index



Plus de nouvelle chirurgie chez les patients n'ayant pas eu de fusion

C Cumulative Risk of Reoperation over Time



Avec plus de complications

Table 3. Surgical Complications.*

Variable	Decompression- Alone Group (N=35)	Fusion Group (N=31)	P Value
Estimated blood loss			
No. of patients with data	34	31	
Mean — ml	83.4±63.5	513.7±334.4	<0.001
Length of stay in the hospital			
No. of patients with data	33	30	
Mean — days	2.6±0.9	4.2±0.9	<0.001
Duration of operation			
No. of patients with data	34	30	
Mean — min	124.4±34.2	289.6±66.3	<0.001
Major complications — no./total (%)	2/35 (6)†	1/31 (3)†	1.0

Conclusion

