

# Indications et résultats de la stabilisation arthroscopique antérieure de l'articulation gléno-humérale

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Hôpital Saint Antoine Paris

# Conclusion



- Le Latarjet est la meilleure opération pour stabiliser l'épaule instable récidivante
- Oui !

[J Shoulder Elbow Surg.](#), 2019 Feb;28(2):e33-e39. doi: 10.1016/j.jse.2018.08.028. Epub 2018 Dec 11.

## Long-term outcomes of the Latarjet procedure for anterior shoulder instability: a systematic review of studies at 10-year follow-up.

[Hurley ET](#)<sup>1</sup>, [Jamal MS](#)<sup>2</sup>, [Ali ZS](#)<sup>2</sup>, [Montgomery C](#)<sup>3</sup>, [Pauzenberger L](#)<sup>3</sup>, [Mullett H](#)<sup>3</sup>.

### Author information

#### Abstract

**BACKGROUND:** This study systematically reviewed the evidence in the literature to ascertain the functional outcomes, recurrences rates, and subsequent revision rates after the open Latarjet procedure at a minimum of 10 years of follow-up.

**METHODS:** Two independent reviewers performed the literature search based on Preferred Reporting Items for Systematic Reviews and Meta-Analyses guidelines, using the Embase, MEDLINE, and The Cochrane Library Databases. Studies that reported a minimum of 10 years of clinical follow-up after the Latarjet procedure were included.

**RESULTS:** Our review found 13 studies including 822 patients (845 shoulders) meeting our inclusion criteria. Patients (82% men) were an average age of 27.4 years, and mean follow-up was 199.2 months (16.6 years). The commonly used functional outcome score was the Rowe score with a weighted mean average of 88.5. The overall rate of return to play sports was 84.9%, with 76.3% returning to the same level of play. The rate of good/excellent outcomes was 86.1%. The recurrent instability rate was 8.5%, with 3.2% of patients having recurrent dislocations. The revision rate was 3.7%, with 1.6% of patients undergoing revisions due to recurrence. There were arthritic changes in 38.2% of patients and residual shoulder pain in 35.7%, with 4.8% experiencing daily pain.

**CONCLUSIONS:** The Latarjet procedure for anterior shoulder instability results in excellent functional outcomes at long-term and a high rate of return to sport among athletes. However, varying rates of recurrence, residual pain, and progression of instability arthropathy are still of concern.



# Conclusion...



- Le Latarjet est la meilleure opération pour stabiliser l'épaule instable chronique
- Mais ... !

J Shoulder Elbow Surg (2013) 22, 286-292



REVIEW ARTICLE

JOURNAL OF  
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SURGERY  
www.elsevier.com/locate/ymse

## Complications and re-operations after Bristow-Latarjet shoulder stabilization: a systematic review

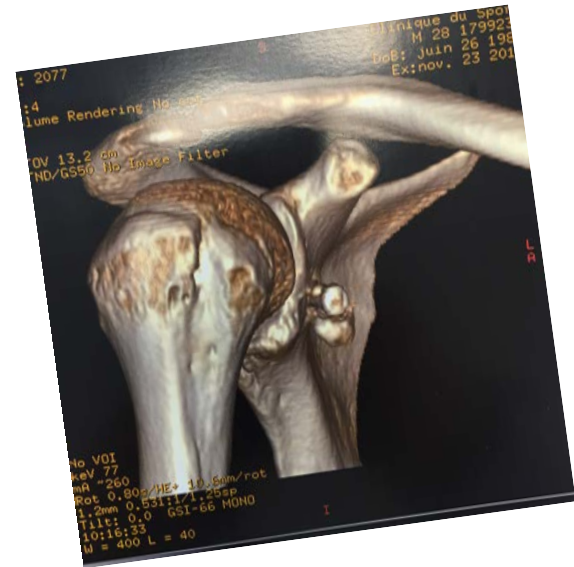
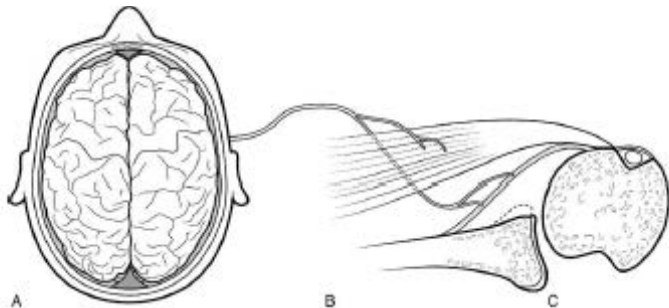
Michael J. Griesser, MD<sup>a</sup>, Joshua D. Harris, MD<sup>b</sup>, Brett W. McCoy, MD<sup>a</sup>,  
Waqas M. Hussain, MD<sup>a</sup>, Morgan H. Jones, MD<sup>a</sup>, Julie Y. Bishop, MD<sup>b</sup>,  
Anthony Miniaci, MD, FRCS<sup>c,\*</sup>

- n= 1904 (90% open)
- Récidive: 2,9%
- Subluxations: 5,8%
- Complications neurologiques: 1,8%
- Infection <2%
- Hématome 1%
- Fracture coracoïde 1,5%
- Total 30%



# Conclusion...

- Le Latarjet est la meilleure opération pour stabiliser l'épaule instable chronique
- Mais ... !
  - Récidives 4%
  - Subluxations: 6%
  - Appréhension : 10%





# Comment choisir ?



**Table II** Stability outcomes of the Bankart (B) and Latarjet (L) procedures

	B	L	RR
Recurrence	21.10%	11.60%	1.81
Revision	4.48%	3.40%	1.32
Dislocation	9.52%	5.06%	1.89
ER ROM loss	20.93 <sup>o</sup>	11.47 <sup>o</sup>	—
Rowe score	79.03	85.4	—
Complications	3.1%	5.0%	0.62

RR, relative risk; ER ROM, external rotation range of motion.

A systematic review and meta-analysis of clinical and patient-reported outcomes following two procedures for recurrent traumatic anterior instability of the shoulder: Latarjet procedure vs. Bankart repair

Vincent Vinh Gia An, BSc (Adv)<sup>a,b,\*</sup>,  
 Brahman Shankar Sivakumar, MBBS BSc(Med) MS<sup>b</sup>, Kevin Phan, BSc (Adv)<sup>a</sup>,  
 John Trantalis, MBBS FRACS (Ortho) FAOrthA<sup>c</sup>

# Indications de Bankart?

- Instabilité aigue:
  - premier épisode de luxation sans lésion osseuse
- Instabilité chronique:
  - Pas de lésion engageante
  - Lésion récente du LGHI
  - Encoche off track....

# Bankart arthroscopique : peut-on améliorer les résultats?

- 1) Chronique = récidivante  $\neq$  ancienne
- 2) Mieux comprendre le LGHI
- 3) Mieux analyser les lésions osseuses



# Chronique = récidivante ≠ ancienne

## Defining the Terms *Acute* and *Chronic* in Orthopaedic Sports Injuries

### A Systematic Review

James H. Flint,<sup>\*†‡</sup> MD, Alana M. Wade,<sup>‡</sup> MD,  
Jeffrey Giuliani,<sup>†‡</sup> MD, and John-Paul Rue,<sup>§</sup> MD  
*Investigation performed at the United States Naval Academy, Annapolis, Maryland*

TABLE 1  
Definition of Injuries as Acute or Chronic<sup>a</sup>

	Acute	Chronic
Achilles tendon rupture	<1	>4
Distal biceps tendon rupture	<6	>12
Pectoralis major tendon rupture	<6	>6
Anterior cruciate ligament tear	<6	>27
Anterior shoulder instability	<2	>27
Acromioclavicular joint dislocation	<3	>6

<sup>a</sup>Data are expressed as number of weeks.

Lésion récente?  
Lésion dont la réparation directe permet d'obtenir un résultat clinique satisfaisant

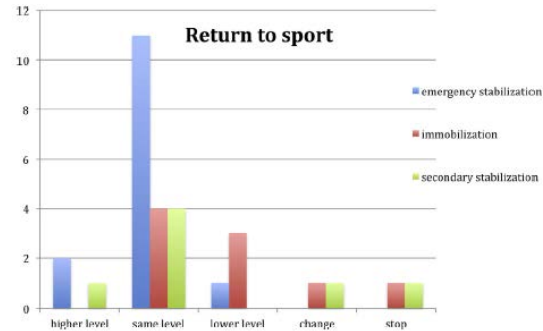
Flint AJSM 2013

# Chronique = récidivante ≠ ancienne

## Interest of emergency arthroscopic stabilization in primary shoulder dislocation in young athletes

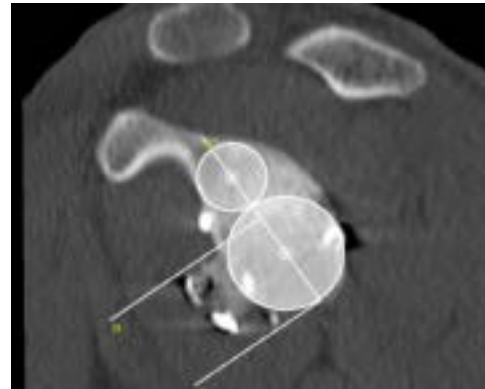
J. Uhring\*, P.-B. Rey, S. Rochet, L. Obert

Service d'orthopédie, de traumatologie, de chirurgie plastique, reconstructrice et assistance main, CHRU Jean-Minajac, université de Franche-Comté, boulevard Fleming, 25030 Besançon, France



## An arthroscopic bone block procedure is effective in restoring stability, allowing return to sports in cases of glenohumeral instability with glenoid bone deficiency

Ettore Taverna<sup>1</sup> · Guido Garavaglia<sup>2</sup> · Carlo Perfetti<sup>1</sup> · Henri Ufenast<sup>3</sup> · Luca Maria Sconfienza<sup>1,4</sup> · Vincenzo Guarrella<sup>1</sup>



Lésion <3 ans

## Outcomes After Arthroscopic Bankart Repair

### Patients With First-Time Versus Recurrent Dislocations

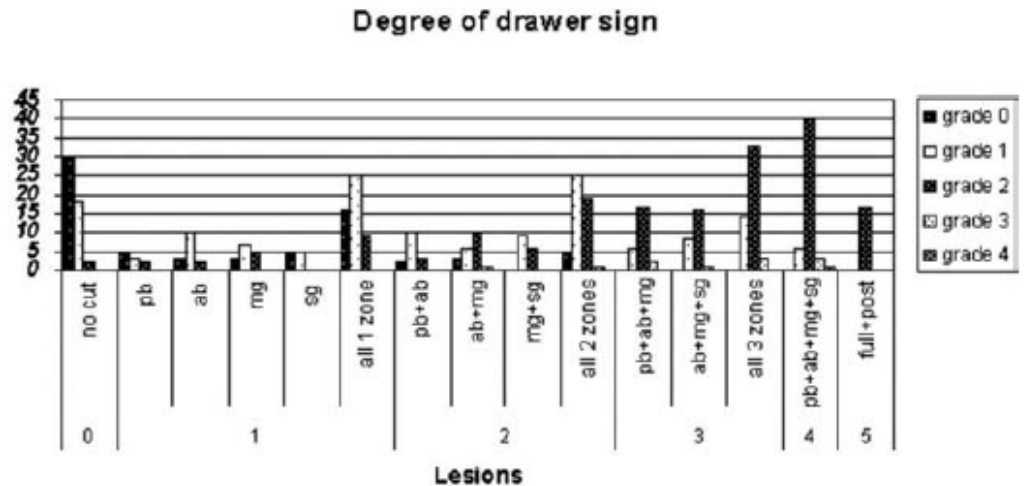
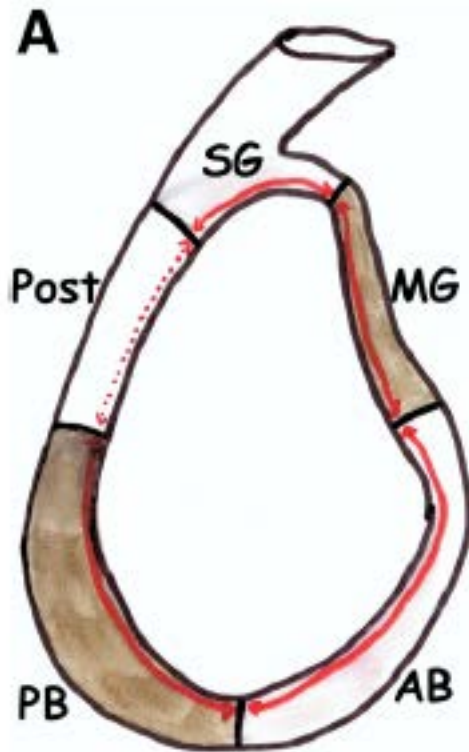
Tyler Marshall,<sup>\*\*†</sup> MD, Jose Vega,<sup>‡</sup> MA, Marcelo Siqueira,<sup>‡</sup> MD, Robert Cagle,<sup>‡</sup> MD, Jonathan Gelber,<sup>§</sup> MD, and Paul Saluan,<sup>||</sup> MD  
Investigation performed at the Cleveland Clinic, Cleveland, Ohio, USA

### Postoperative Instability Additional Surgery

Term	Estimated Odds Ratio	Estimated Odds Ratio
Intercept	1.13	0.998
Recurrent dislocation (vs first time)	4.14	6.01
Age (per 1-y increase)	0.916	0.878
Male (vs female)	2.86	4.02
Smoker (vs nonsmoker)	2.12	0.937
Anchors (per 1-unit increase)	0.908	

# Bankart : back to the basic...

- Le labrum et les ligaments



Lésion isolée antérieur= pas de luxation  
 4 zones: 66%  
 Atteinte combinée avec PB= 34%

Pouliart JSES 2006

# Long-term, Prospective, Multicenter Study of Isolated Bankart Repair for a Patient Selection Method Based on the Instability Severity Index Score

Hervé Thomazeau,\* MD, Prof, Tristan Langlais,† MD, Alexandre Hardy,‡ MD, Jonathan Curado,§ MD, Olivier Herisson,|| MD, Jordane Mouton,¶ MD, Christophe Charousset,# MD, Olivier Courage,\*\* MD, French Arthroscopy Society, and Geoffroy Nourissat,†††† MD, PhD  
Investigation performed at Rennes University, Clinical Research Unit, Rennes, France

TABLE 3  
Studies of Arthroscopic Bankart Repair With a Minimum of 10 Years of Follow-up

Study	No. of Shoulders	Loss to Follow-up, %	Mean Follow-up, y (range)	Recurrence Rate, %
Flinkkilä et al <sup>5</sup>	167	19	12.2 (10-16)	30
Zimmermann et al <sup>14</sup>	271	38	12.2	13
Aboalata et al <sup>1</sup>	143	37	13.3	18.2
Zaffagnini et al <sup>13</sup>	49	28	13.7 (10-17)	12.5
Kavaja et al <sup>6</sup>	81	14	13 (11-15)	22
Privitera et al <sup>8</sup>	20	12	13.5 (10.75-17.5)	25
Castagna et al <sup>4</sup>	31	12	10.9 (9.8-14.3)	22
van der Linde et al <sup>12</sup>	68	2	9 (8-10)	35
Total	830	30 (n = 252)	12.2	22.2

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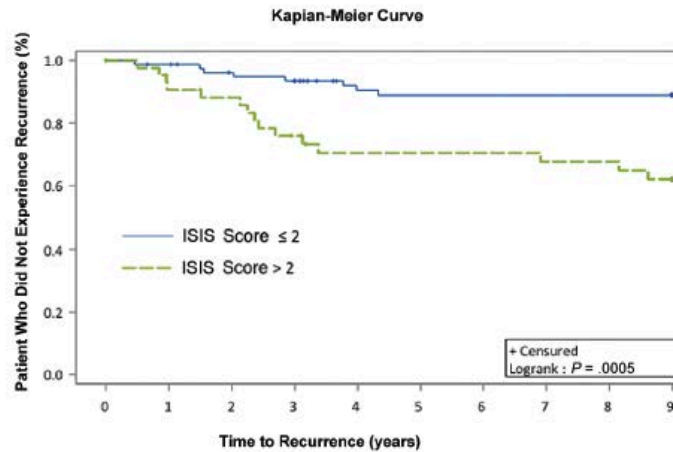
## Studies of Arthroscopy

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Castagna et al <sup>4</sup>	31
van der Linde et al <sup>12</sup>	68
Total	830

## Recurrence Rates Related to Preoperative Instability Severity Index Score<sup>a</sup>

	0, 1, and 2 points	3 and 4 points	Recurrence Rate, %
Recurrence rate ( $P = .0005$ )	10%	35.6%	
			30
			13
			18.2
			12.5
			22
			25
			22
			35
			22.2

<sup>a</sup>Rates are expressed as percentages. The highest possible Instability Severity Index Score is 10 points.



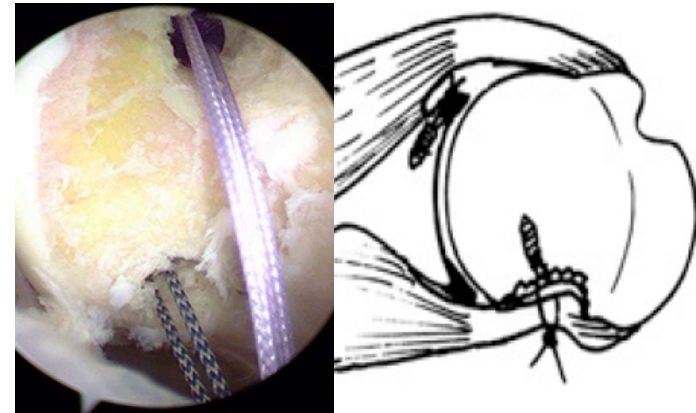
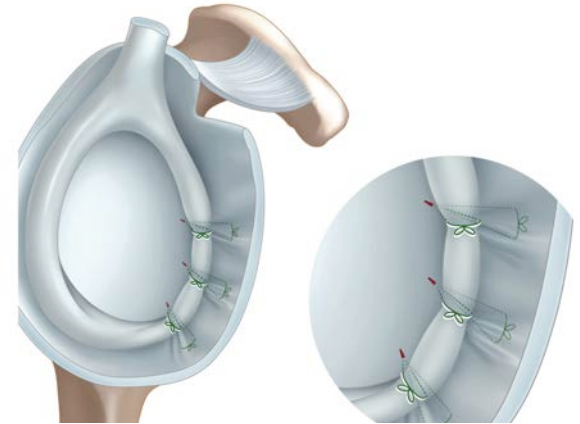
# Bankart et remplissage?

- Littérature : bankart vs bankart + remplissage

Auteurs	Journal	Patients	FU	Differences
Nourissat et al.	AJSM 2011	30/34	2 y	1/3 pain in ABER
Franceschi et al.	AJSM 2012	25/25	2 Y	Problem with big HS
Garcia et al.	HSS J 2015	14/10	3 y	More recurrence in Bkt alone
Cho et al.	KSSTA 2016	37/35	2 y	More recurrence in Bkt alone Limitation ER

# Bankart et remplissage?

- Revue à 10 ans
  - Récidives
  - Résultats fonctionnels
  - Patients mono-centriques
  - Même technique chirurgical
- Patients :
  - Défect glénoïdien : Latarjet
  - HS en Rx: Bkt +Remplissage
  - Pas de HS sur les rx:
    - lésion non engageante : Bankart
    - lésion engageante : Remplissage + Bankart



# Impact of Remplissage on Global Shoulder Outcome A Long-Term Comparative Study

*Arthroscopy: The Journal of Arthroscopic and Related Surgery*

Claire Bastard, M.D., Olivier Herisson, M.D., Julien Gaillard, M.D., and  
Geoffroy Nourissat, M.D., Ph.D.

**Table 3.** Comparison of the Functional Score of the 2 Groups

	Group B	Group BR	P
Preoperative Rowe score	46.8 [25-65]	51.8 [20-65]	.07
Rowe score after 10 years	85.6 [70-100]	93 [70-100]	<.05
Preoperative Walch-Duplay	54.3 [25-75]	58.7 [30-75]	.07
Walch-Duplay after 10 years	83.8 [70-100]	91.4 [70-100]	<.05
Walch-Duplay after 10 years, sport/25	22.8	24.3	.3
Walch-Duplay after 10 years, instability/25	22.6	25	.19
Walch-Duplay after 10 years, pain/25	22.2	19.6	.08
Walch-Duplay after 10 years, mobility/25	17.4	22.8	<.01

NOTE. Bankart + remplissage provides global better clinical outcomes in global shoulder function. Mobility evaluation is significantly better in the remplissage group. Even if pain is still more significant in this group 10 years later, it is not any more significant than it was in short- to middle-term follow-up studies.

3 récives

0 récive



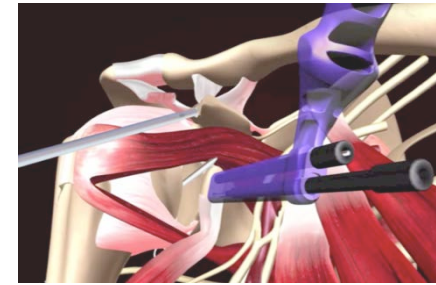
# Conclusions

- A 10 ans de recul
  - Plus de récurrences dans le groupe Bankart isolé
  - Meilleure fonction globale dans le groupe remplissage
  
- Indications du Remplissage?
  - Pas chez les patients jeunes ou avec une épaule de travail (douleur & perte de mobilité à 2 ans)
  - Les autres... : à 10 ans ils vont mieux.

# Latarjet

- Lésions « chroniques » du LGHI > 1 an
- Lésions osseuses bipolaires
- Sport violents
- Métiers dangereux...

# Arthro-Latarjet ?



[Mini-open arthroscopically assisted Bristow-Latarjet procedure for the treatment of patients with anterior shoulder instability: a cadaver study.](#)

**Nourissat G**, Nedellec G, O'Sullivan NA, Debet-Mejean A, Dumontier C, Sautet A, Doursounian L.  
Arthroscopy. 2006 Oct;22(10):1113-8.  
PMID: 17027410

[The arthroscopic Latarjet procedure for the treatment of anterior shoulder instability.](#)

**Lafosse L**, Lejeune E, Bouchard A, Kakuda C, Gobezie R, Kochhar T.  
Arthroscopy. 2007 Nov;23(11):1242.e1-5. Epub 2007 Oct 3.

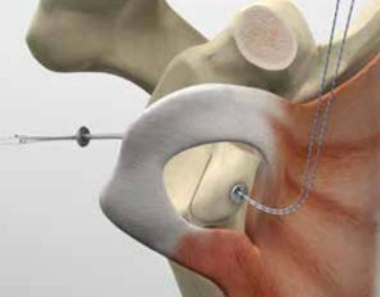
J Shoulder Elbow Surg (2010) 19, 2-12



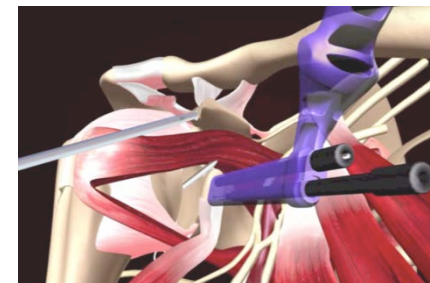
## Arthroscopic Latarjet procedure

Laurent Lafosse, MD\*, Simon Boyle, MSc FRCS (Tr & Orth)

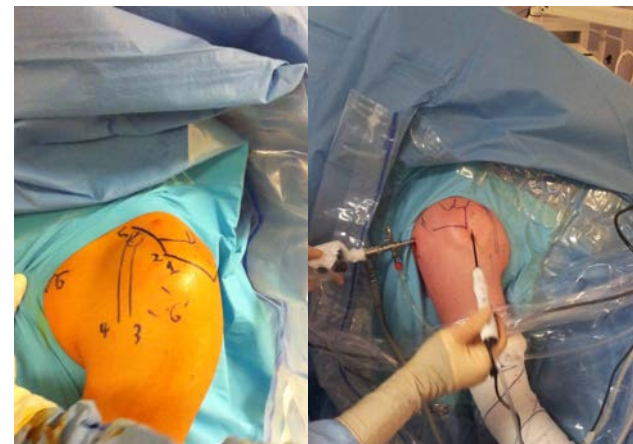
- n=100
- 2 hématomes
- 1 fracture de coracoïde
- 1 lésion neurologique transitoire
  
- Le Latarjet arthroscopique pourrait-il permettre de diminuer les risque et complications?



# Arthro-Latarjet



- Expérience personnelle:
  - $\approx$  200 cas
  - Satisfait des résultats
  - Pas de lésion nerveuse
  - Conversions 7
  - Reprise: 15 pour raisons classiques



# Arthro-Latarjet ?

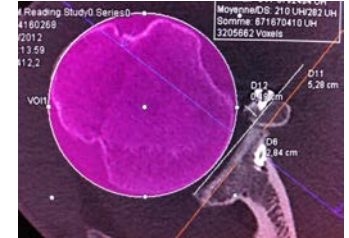
## [A Prospective Comparative Study of Arthroscopic Versus Mini-Open Latarjet Procedure With a Minimum 2-Year Follow-up.](#)

Marion B, Klouche S, Deranlot J, Bauer T, Nourissat G, Hardy P.

Arthroscopy. 2017 Feb;33(2):269-277. doi: 10.1016/j.arthro.2016.06.046. Epub 2016 Sep 8.

PMID: 27617665

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## [Arthroscopic Latarjet Techniques: Graft and Fixation Positioning Assessed With 2-Dimensional Computed Tomography Is Not Equivalent With Standard Open Technique.](#)

Neyton L, Barth J, Nourissat G, Métais P, Boileau P, Walch G, Lafosse L.

Arthroscopy. 2018 Jul;34(7):2032-2040. doi: 10.1016/j.arthro.2018.01.054. Epub 2018 May 19.

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Metais P, Clavert P, Barth J, Boileau P, Brzoska R, Nourissat G, Leuzinger J, Walch G, Lafosse L; French Arthroscopic Society.

Orthop Traumatol Surg Res. 2016 Dec;102(8S):S271-S276. doi: 10.1016/j.otsr.2016.08.003. Epub 2016 Oct 19. Erratum in: [Orthop Traumatol Surg Res. 2017 May;103\(3\):475.](#)

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Nourissat G, Neyton L, Metais P, Clavert P, Villain B, Haeni D, Walch G, Lafosse L; French Arthroscopic Society.

Orthop Traumatol Surg Res. 2016 Dec;102(8S):S277-S279. doi: 10.1016/j.otsr.2016.08.004. Epub 2016 Sep 27.

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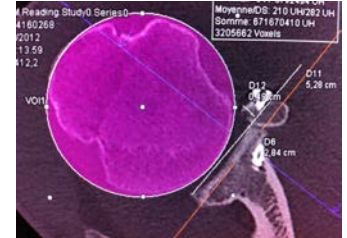
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Aucune différence  
donc  
Aucun bénéfice

# Arthro-Latarjet ?



Courtesy Dr Aswad – Marseille - France

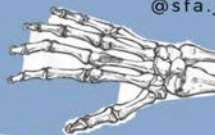
Peut-être pas plus de complications... mais plus graves!

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# JJA 2020

JOURNÉE DES JEUNES ARTHROSCOPISTES

WHEN: 29 MAI 2020

WHERE: VAL de GRÂCE, PARIS

WHAT: Tips and tricks de l'épaule, traumatisme du poignet, chirurgie du cartilage, chirurgie du sportif.

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