



## L'Épaule Instable Physiopathologie Indication et Score ISIS

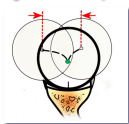
Pr Nicolas Bonneville, MD, PhD  
CHU de Toulouse

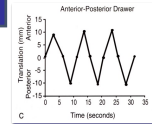
CENTRE HOSPITALIER UNIVERSITAIRE DE TOULOUSE

### Définitions: Laxité ≠ Instabilité

**Laxité « physiologique » :** translation normale, physiologique (jou articulaire)



**Asymptomatique**



**Instabilité :** Translation excessive, **non physiologique**

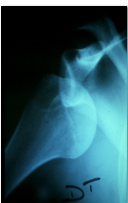
**Symptomatique**

## Formes Cliniques


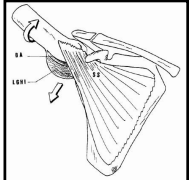
**Luxation:** perte de contact totale et permanente des surfaces articulaires → Réduction par un tiers

**Subluxation:** perte de contact partielle et transitoire des surfaces articulaires → Auto-réduction

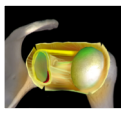

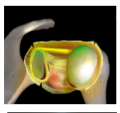
**Épaule Douleuruse & Instable (EDI):** instabilité non perçue (non verbalisée) par le patient


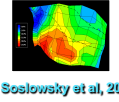
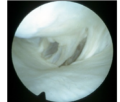


## Ligament Gleno-Huméral Inferieur = LGHI = Stabilisateur principal antéro-inférieur

## Lésions LGHI









Soslowsky et al, 2001

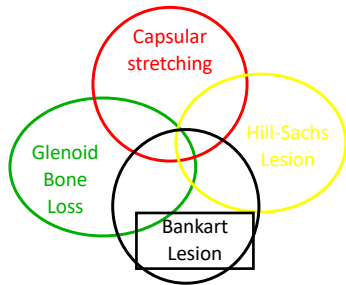
## Lésions Osseuses

**Humérus :**

Edwards et al. Arthroscopy 2003

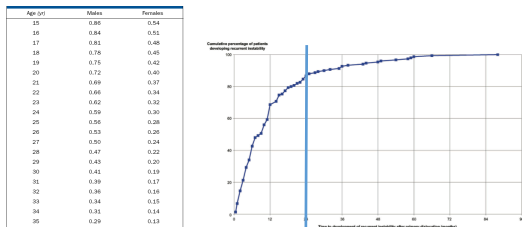
### Lésions souvent associées



### Epidémiologie: Age

	Age Group			Total
	12 to 22 Years	23 to 29 Years	30 to 40 Years	
Nonrecurrent†	32 (28%) [6]	25 (44%) [3]	59 (73%) [13]	116 [22]
Became stable over time	18 (20%)	9 (18%)	6 (10%)	33
Recurrent	11 (12%)	5 (10%)	2 (3%)	18
Surgical treatment	37 (40%)	15 (28%) [1]	10 (14%) [1]	62 [2]
Total	98 [6]	54 [4]	77 [14]	229 [24]

### Epidémiologie: Sexe

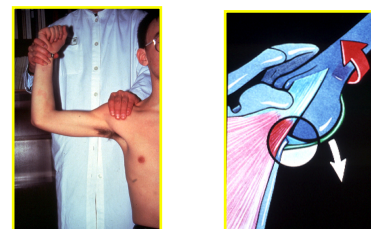
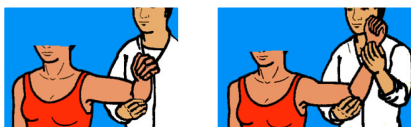


### Bilan Clinique: Hyperlaxité



### Bilan Clinique

#### Test d'Appréhension



### Bilan Clinique

« Relocation test »

### Bilan Clinique

D'après P.Boileau

### Bilan Clinique

Test de Gagey Modifié  
(le « Lachman » de l'épaule)

D'après P.Boileau

### Bilan Clinique

Tiroir Post  
Ressaut Post.

### Bilan Musculaire

#### Isocinétique

### Imagerie

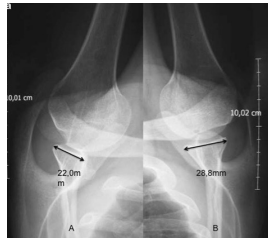
Profil glénoïdien      Face en double obliquité 3

### Evaluation des Défects Osseux Glénoïdiens

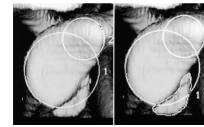
Profil de Bernageau comparatif



Reproductibilité de l'examen



### TDM Rec 3D

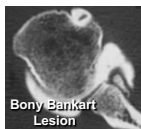


Type de PDS  
 •Fractures  
 •Erosion/Compressions  
 90% de PDS glénoïdienne  
*Sugaya et al. JBJS Am 2003*

### Arthro-TDM



Distension Capsulaire évidente



Bony Bankart Lesion



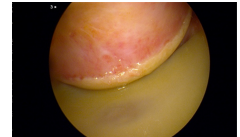
HAGL: désinsertion humérale du LGHI

### Engagement de la lésion de Hill-Sachs

#### Burkart et De Beer

Arthroscopy 2000

Intra-opératoire diagnostic



Prevalence 1,5 to 27% ?!

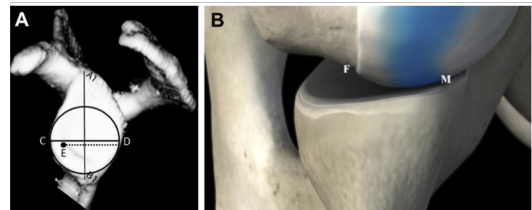
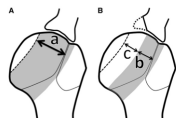
### Nouveau Concept: Glenoid Track

Itoi

JSES 2013

Pre-operative diagnostic: CT analysis

Prevalence 7%

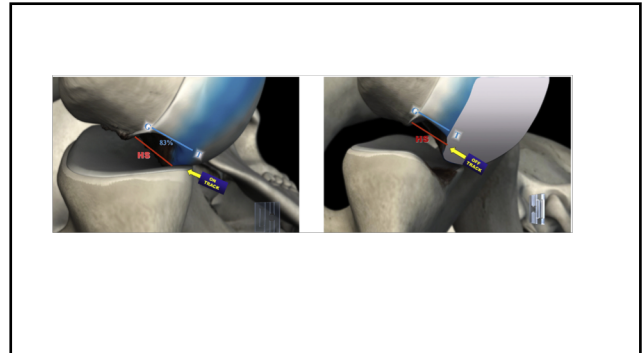


**A**

**B**

**Table 1. How to Determine Whether Hill-Sachs Lesion Is "On Track" or "Off Track"**

1. Measure the diameter (D) of the inferior glenoid, either by arthroscopy or from 3D CT scan.
2. Determine the width of the anterior glenoid bone loss (d).
3. Calculate the width of the glenoid track (GT) by the following formula:  $GT = 0.83 \cdot D - d$ .
4. Calculate the width of the HS, which is the width of the Hill-Sachs lesion (HS) plus the width of the bone bridge (BB) between the rotator cuff attachments and the lateral aspect of the Hill-Sachs lesion:  $HSI = HS + BB$ .
5. If  $HSI > GT$ , the HS is off track, or engaging. If  $HSI < GT$ , the HS is on track, or non-engaging.



**A**

**B**

Engagement lésion de HS:

- Large
- Etroite et Médiale

## Aide Simple au Choix Thérapeutique ?...

**The instability severity index score**

A SIMPLE PRE-OPERATIVE SCORE TO SELECT PATIENTS FOR ARTHROSCOPIC OR OPEN SHOULDER STABILISATION

### Instability Severity Index Score (ISIS)

		<i>points</i>
Questionnaire	Age (at surgery)	Inf or equal to 20 y = 2 > 20 y = 0
	Niveau sportif	Competition = 2 Leisure or no sport = 0
	Type de sport	Contact or forced overhead = 1 others = 0
Ex.	Hyperlaxité	Hyperlaxity Ant. ou inf. = 1 NO hyperlaxity = 0
	Encoche Hill-Sachs	Visible in ER = 2 Non visible in ER = 0
AP x-ray	PDS Glène	Glenoid bone loss = 2 No bony lesion = 0
	<b>Total = 10</b>	

### Hyperlaxité (Ant or Inf)

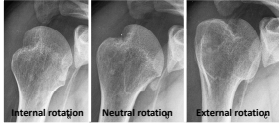
**Hyperlaxité Antérieure**

RE1 > 85°

**Hyperlaxité Inférieure**

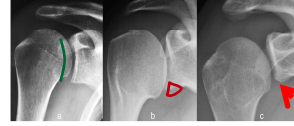
Différence hyperabduction > 20° (Hazy Test, modified by Gupte)

### Encoche de Hill-Sachs Sur Rx de Face en RE



Quand la lésion est visible en rotation Ext = Lésion Supérieure  
Haut Risque

### PDS Glénoïdienne sur Rx de Face



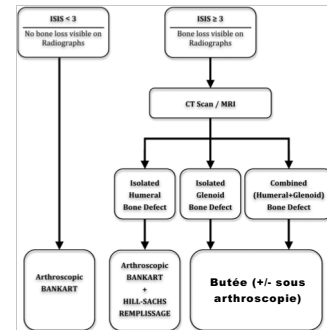
3 types

→ Pas lésion    Avulsion fracture    Perte du contour scléreux

### Instability Severity Index Score (ISIS). Bankart @ isolé ???

Score ISIS	Taux de Récidive
≤ 3	5%
≤ 5	10%
> 6	70%

p<0.001



Merci

