

# The treatment and outcome of a first time traumatic Anterior shoulder dislocation

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***In 1972, I became interested in hockey-  
injuries***



**Hos hock**

**i Sverige**

# ***Shoulder dislocation in Swedish ice hockey players***

**Hovelius, Am. J. Sports Med. 1978**

***63 players, all anterior dislocations***

# ***Some results of this study:***

- ◆ **Incidence 8% in highest league.**
- ◆ **Instability did not exclude playing.**
- ◆ **Instability could heal by time.**
- ◆ ***Inspiration for further studies***

**In 1978 we started a Swedish multicenter study on shoulder dislocations**

***During 2 years (1978-79) all first time dislocations were included in the study***

***All had conservative treatment  
"Immobilization 3-4 weeks"  
or  
"Early movement",  
= "symptomatic treatment"  
"sling for some days"***

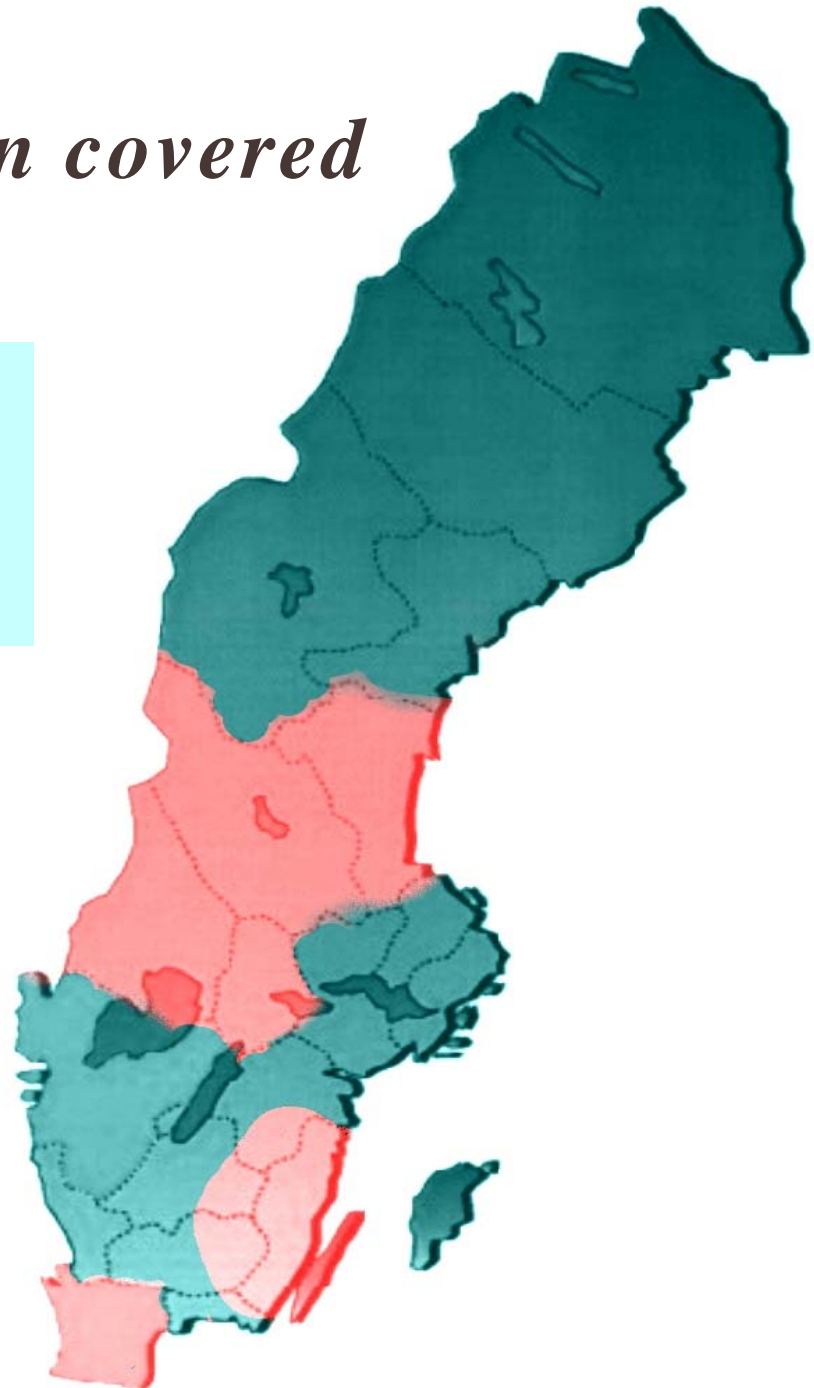
# **Study inclusion criteria**

- **Age, 40 years or younger**
- **True first time dislocations**
- **Verified at hospital by an experienced surgeon**

 *Parts of Sweden covered  
by the study*

**257 shoulders  
were included  
(JBJS-Am, 1983)**

***1/3 of Sweden  
covered by the study***



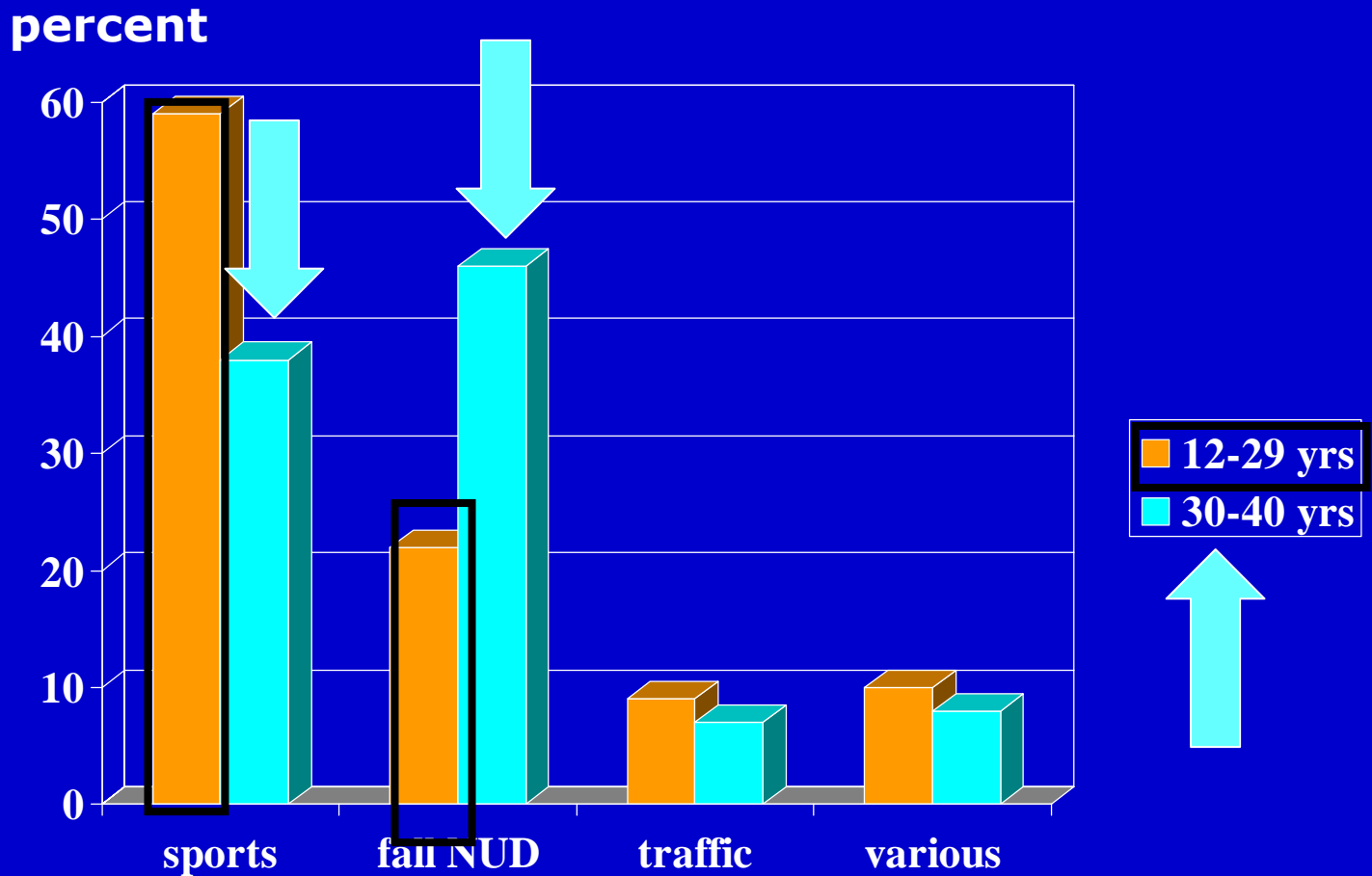
# ***Number of cases in different ages***

***"162 younger  $\leq$  29 yrs"***

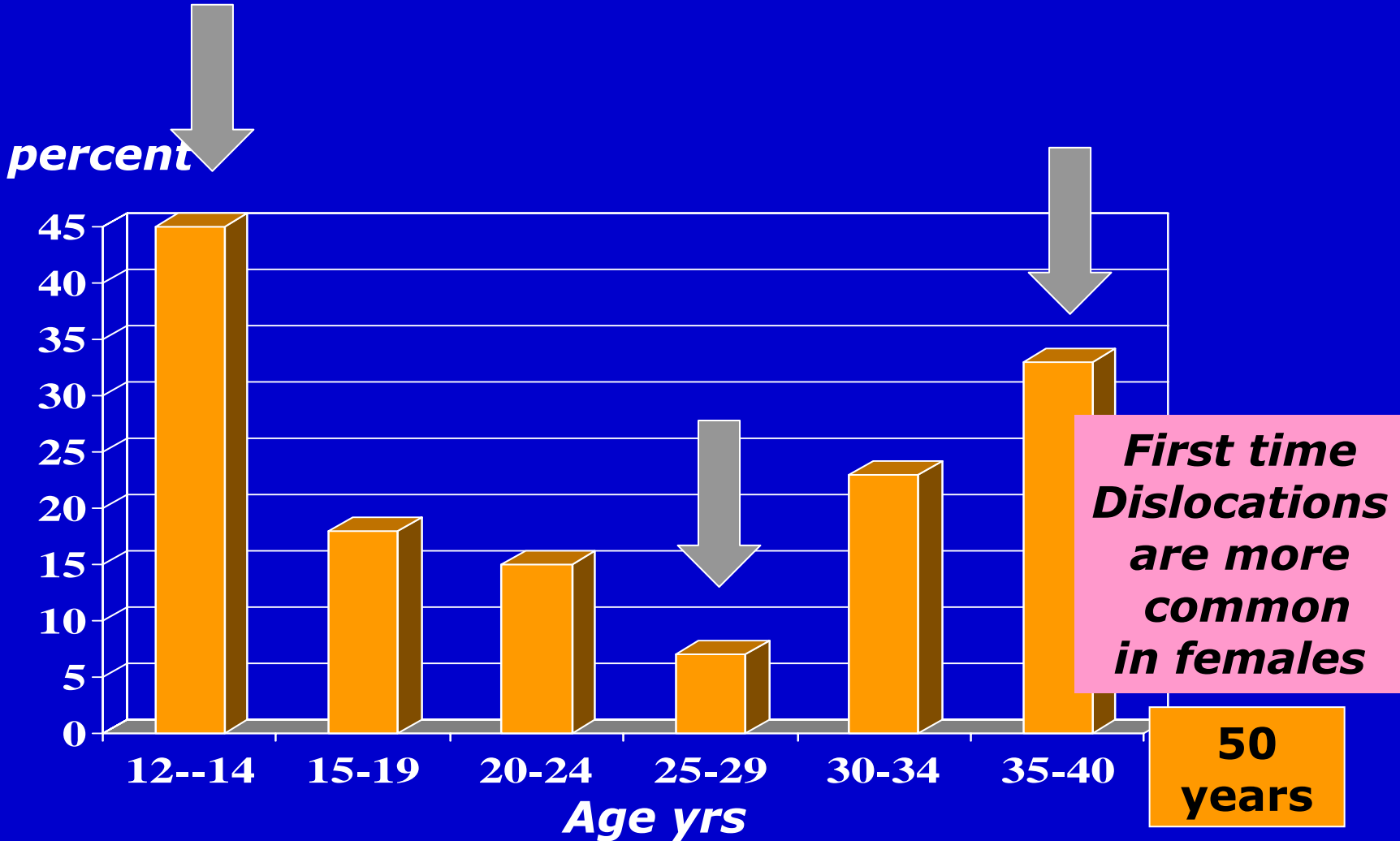
<b>12 – 22 yrs</b>	<b>102</b>
<b>23 – 29 yrs</b>	<b>60</b>
<b>30 – 40 yrs</b>	<b>95</b>



# Etiology, when allocated to two age groups



# Percent females in different ages



# I have followed these patients during 25 years !

Anastasia  
lost to  
Follow-up  
10 years

JBJSAm, 1983 (2 years)

Clin Orthop, 1983 (2 years)

JBJSAm, 1987 (5 years)

JBJSAm, 1996 (+x-ray, 10 years)

Acta Orthopedica, 2007 (↕ 25 years)

JBJSAm, 2008 (prognosis, 25 years)

JSES, 2009 (x-ray, 25 years)

# Results at 2-year follow-up immobilization versus symptomatic treatment in sling



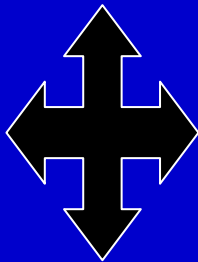
	Not recurred		Surgery or scheduled
Group 1 immobiliz	<b>71%</b>	Over 25 years of observation immobilization or symptomatic treatment: <b><i>the same prognosis</i></b> <b><i>Also when analyzed according to age!</i></b>	<b>11%</b>
Group 2 sling	<b>69%</b>		<b>10%</b>
Mixed	<b>71%</b>		<b>12%</b>

# In 2003 the 25-year follow-up started!

**In February 2005 ALL patients alive,  
229, had had the F-up  
Mean 25,3 yrs, Median 25,2 yrs**

***Anastasia, found in Greece"***

***223 with X-ray (97,4%)***



**28 patients had died**

**(Acta Ort Scand 2007)**

**We used these  
classification “endpoints”  
at 25 years**

*“Surgically stabilized”*

*“Solitary” or rec. once*  
**= nonrecurrent**

*“Recurrent” =  $\geq 2$  redislocations*

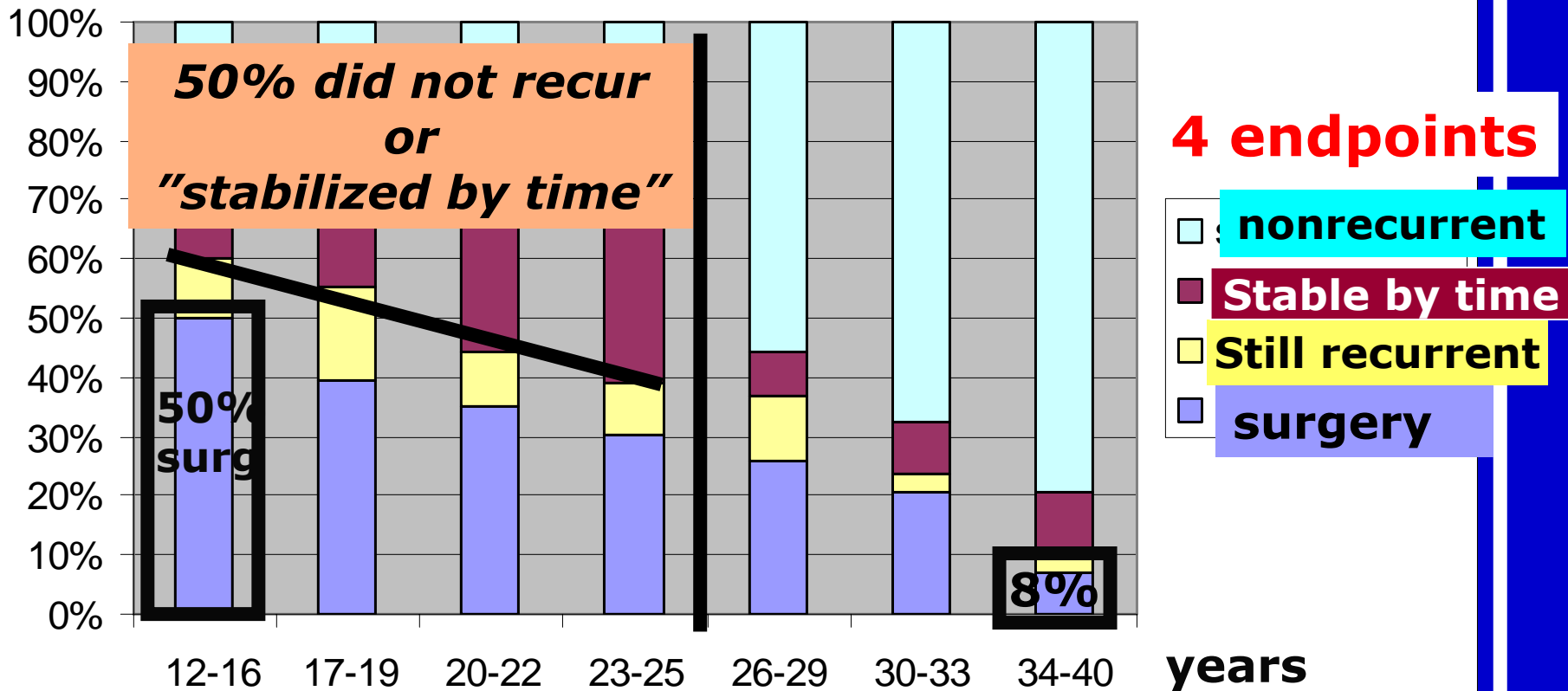
A. Still recurrent

B. Became stable over time

**= “No redisloc last 10 years”**

# 25-years prognosis

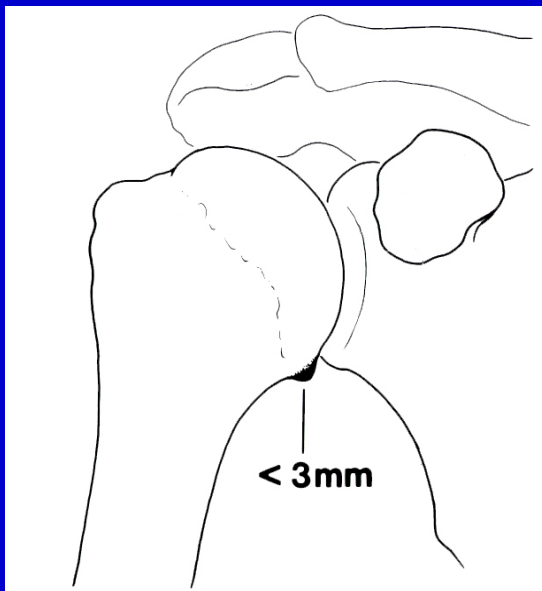
(JBJS-Am, 2008)



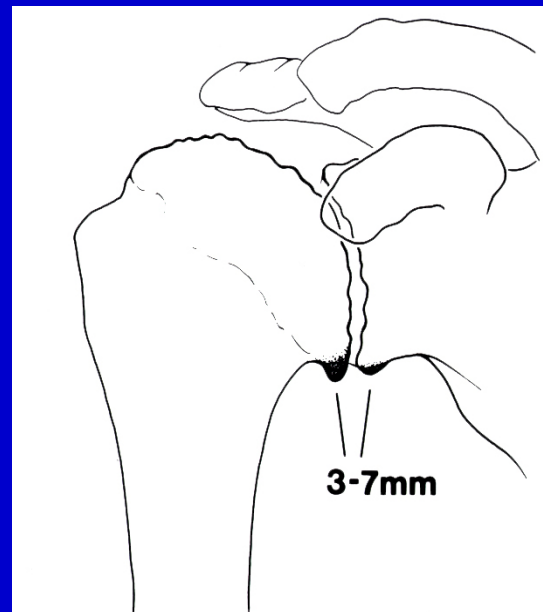
# Classification of arthropathy

(Samilson and Prieto. 1983)

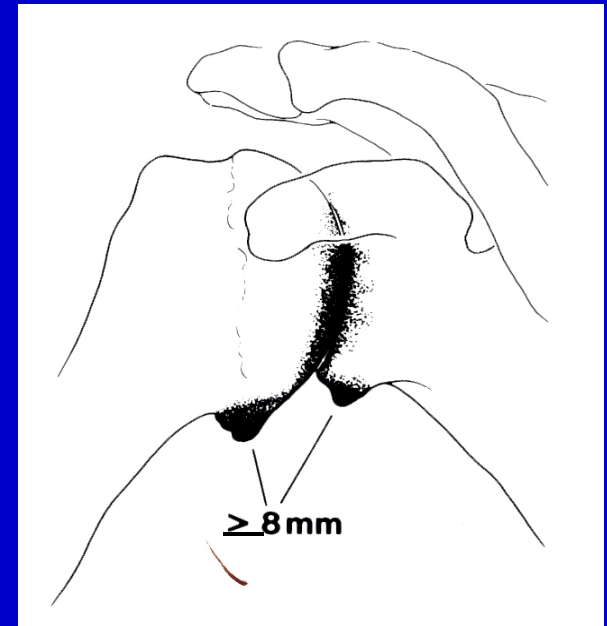
**mild**



**moderate**



**severe**





# ***After 25 yrs we found*** ***OUT OF 223 SHOULDERS***

***Mild***                      ***65(29%)***

***moderate***                ***21(9,4%)***

***severe***                    ***38(17%)***

***26,4% had moderate or severe  
arthropathy after 25 years***

# Stability endpoints, 25 yrs and % moderate/severe arthropathy

**Solitary**

**17%**

Solitary shoulders less A-Y than  
healed rec. ( $P < 0.001$ ) and still rec.  
( $P = 0.048$ )

**Surgically stab**

**21%**

**1 recurrence**

**35%**

**Persist. Recur.**

**29%**

**Stabi. by time**

**45%**

# **Surgically stabilized shoulders**

**Less arthropathy**  
(mild, moderate or severe) than those  
with **1** recurrence or more  
**P=0,0002**

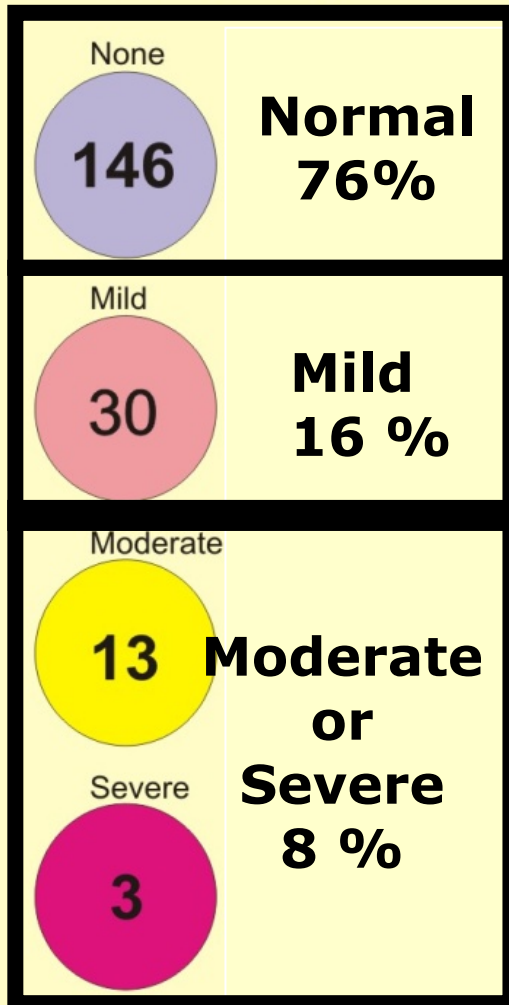
***Possibly  
the evolution of Arthropathy  
is reduced by surgery?***

# What happened between 10 and 25 years?

Artropathy 10 years

Artropathy 25 years

No X-ray 10 years



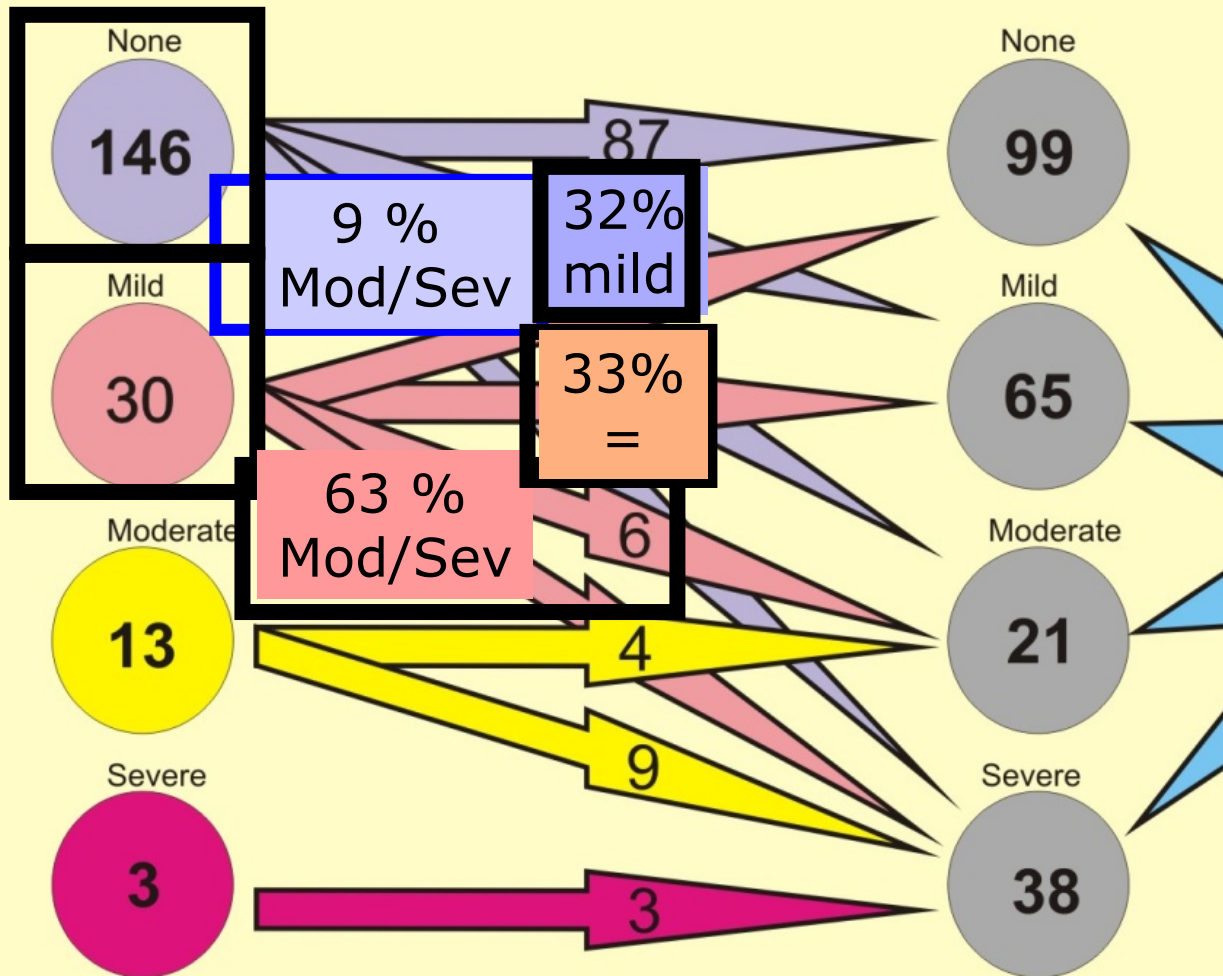
After 25 years

**31 shoulders  
no X-ray at  
10 years F-Up**

# What happened between 10 and 25 years?

Arthropathy 10 years

Arthropathy 25 years



*No patient had surgery because of arthropathy!*

**However some will have had it after 40 years!**

*"mild" arthropathy at 10 yrs = mod/severe at 25 yrs in 2/3 (63%)*

**Immobilization 3-4 weeks**  
***"Did not change the prognosis"***

**Other options?**

**Itoi et al JBJS, 2007,**  
***"Immobilization of the shoulder in external rotation reduces the risk of recurrence"***

# Itoi in comparision- "our study"

	<b>Itoi Internal rot redislocation</b>	<b>Itoi External rot redislocation</b>	<b><i>Our study "All" redislocation</i></b>
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**Age  
≤20 y**

68%

41%

55%

**P= 0.283**

**Age  
21-30 y**

52%

24%

31%

**P= 0,638**

# Finestone, Milgrom et al

**JBJS-Br 2009**

**"Bracing in external rotatation"**

**51 patients**

**Age 17-27 yrs, mean F-up 33,4 months**

**24 internal, 27 external rotation**

**External group 37% recurrence**

**Internal group 41% recurrence**

**P=0.74**

**To me  
"the effect of treatment in external fixation"  
is still not verified**



***First time shoulder  
dislocations in Young  
athletes.***

***“To operate or not,  
that’s the Question”***

**“In retrospect;  
would you have preferred surgery when  
the first dislocation occurred?”**

	<b>yes</b>	<b>no</b>	<b>can not answer</b>
• <b>12-22 yrs</b>	<b>22%</b>	<b>63%</b>	<b>14%</b>
• <b>23-29 yrs</b>	<b>22%</b>	<b>62%</b>	<b>16%</b>

**Consequently:  
<1/4 should have preferred surgery!**

**10 athletes, aged  $\leq 25$ , first time dislocation**



**No, 5 will have surgery unnecessarily!**

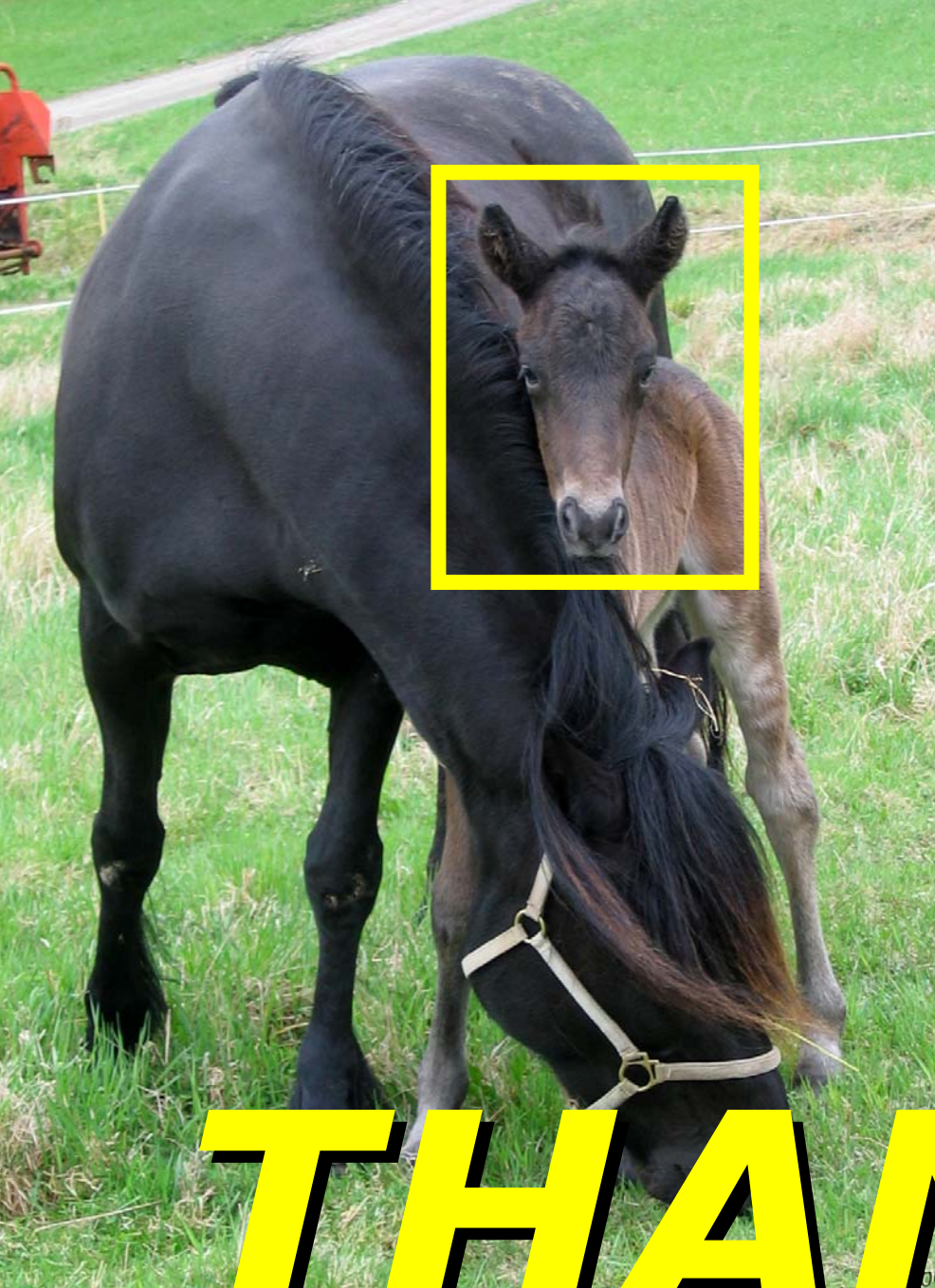
Will all need surgery???

Christian  
got this price  
3 times!

I am proud  
having 1/3  
of his  
smartness!



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*In year 2018?*

**Will I take care of  
Hovfaksen?**

*Or am I starting the  
40 years Follow-up?*

**THANKS!**

How is it possible to find all patients after 25 years?

- *Anastasia, who in 1985 moved to some island in Greece?*
- *the patient, who stayed abroad, "wanted by interpool"?*
- *the patient that lived in Spain since 12 years, address "unknown"?*

# Itoi in comparision- "our study"

**Anders Olofsson**  
**Ongoing study**  
**47 shoulders, 2**  
**Yrs external rot**

	Itoi Internal rot redislodation	Our study "All" redislodation	Itoi External rot redislodation
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Age  
≤20 y

68%

55%

41% **39%**

Age  
21-30 y

52%

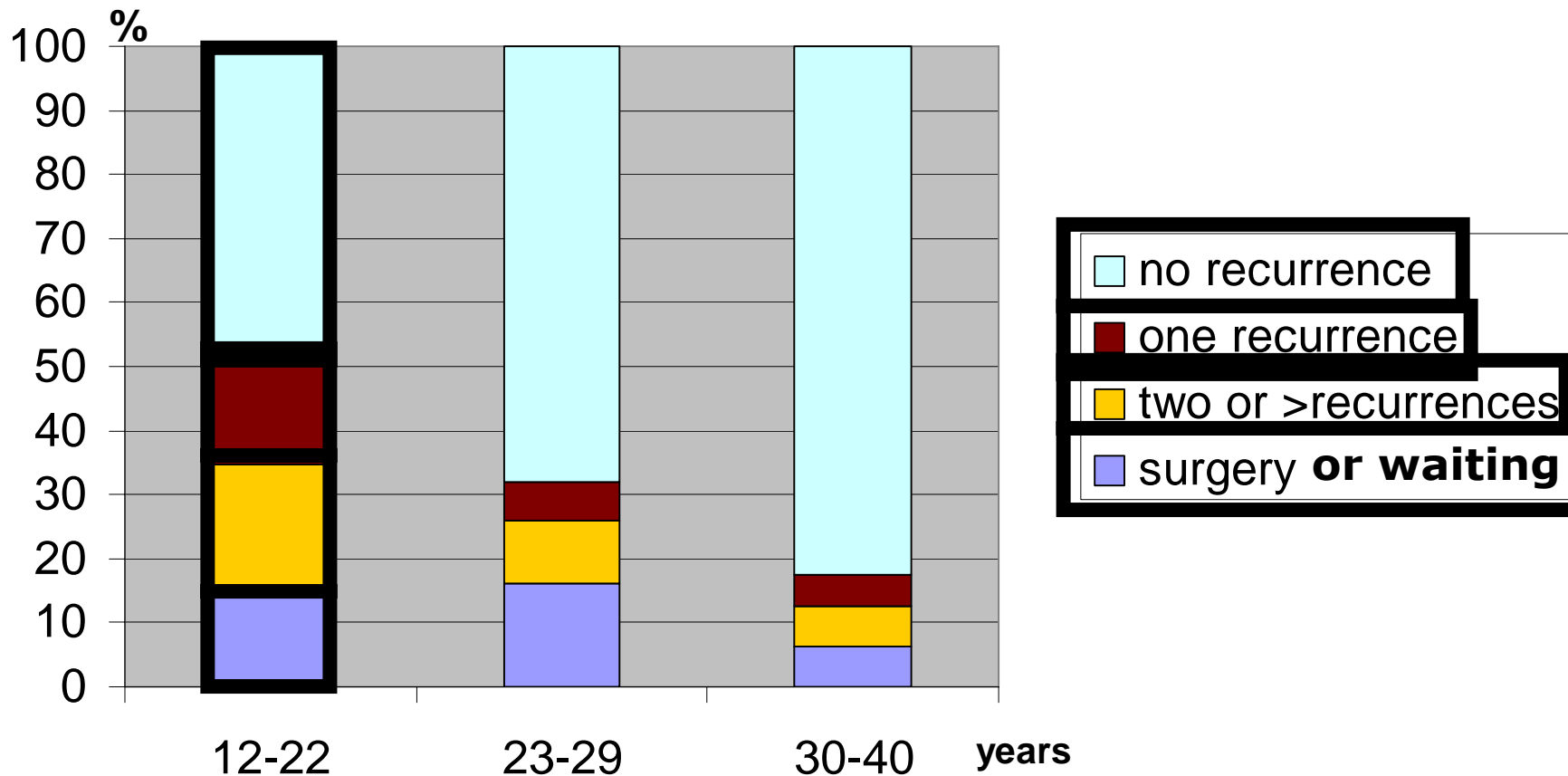
**35%**

31%

24%

# Prognosis after 2 years

Both groups of treatment together



12-22

23-29

30-40

years





# Sport activity - Trauma (%, Arthropathy, moderate/severe)

- No sports 22%
- Traumatic sports 37%
- non-traum.sports 15%

*Trauma by first/recurrent  
dislocation!*

P=0.009

# Studies on the prognosis of primary SJD

Recurrence rate in the young, 40-100%!

- **Rowe, 1956**
- **McLaughlin and Maclellan, 1967**
- **Kazar and Relovszky, 1969**
- **Henry and Genung, 1982**
- **Simonet and Cofield, 1984**
- **Milgrom, Mann & Finestone, 1998**
- **Itoi et al 2007, JBJS Am**

***Most of the studies are retrospective!***