



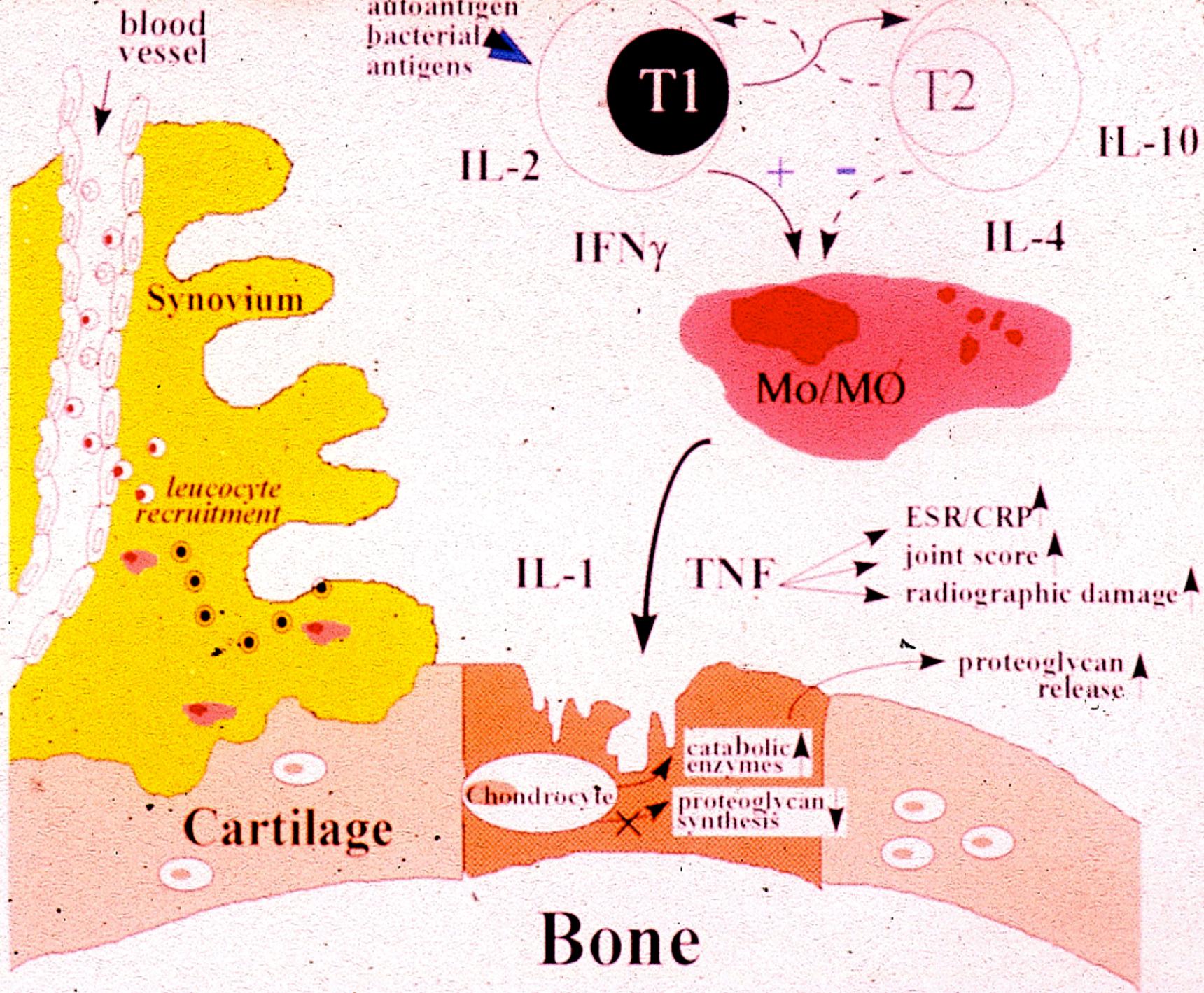
LEIDS UNIVERSITAIR MEDISCH CENTRUM

# *De schouders eronder!*

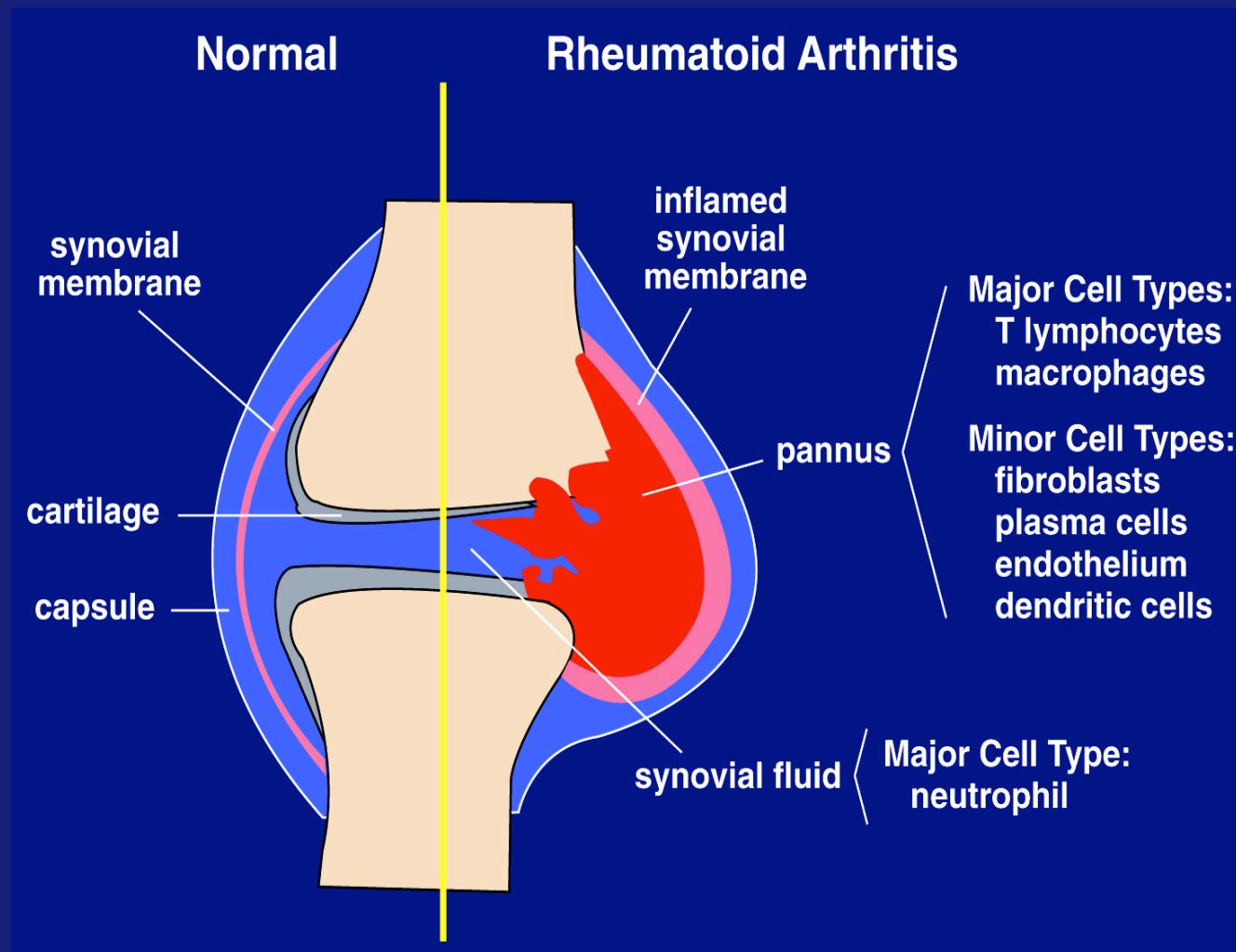
Preventie van gewrichtsschade door reumatoïde artritis

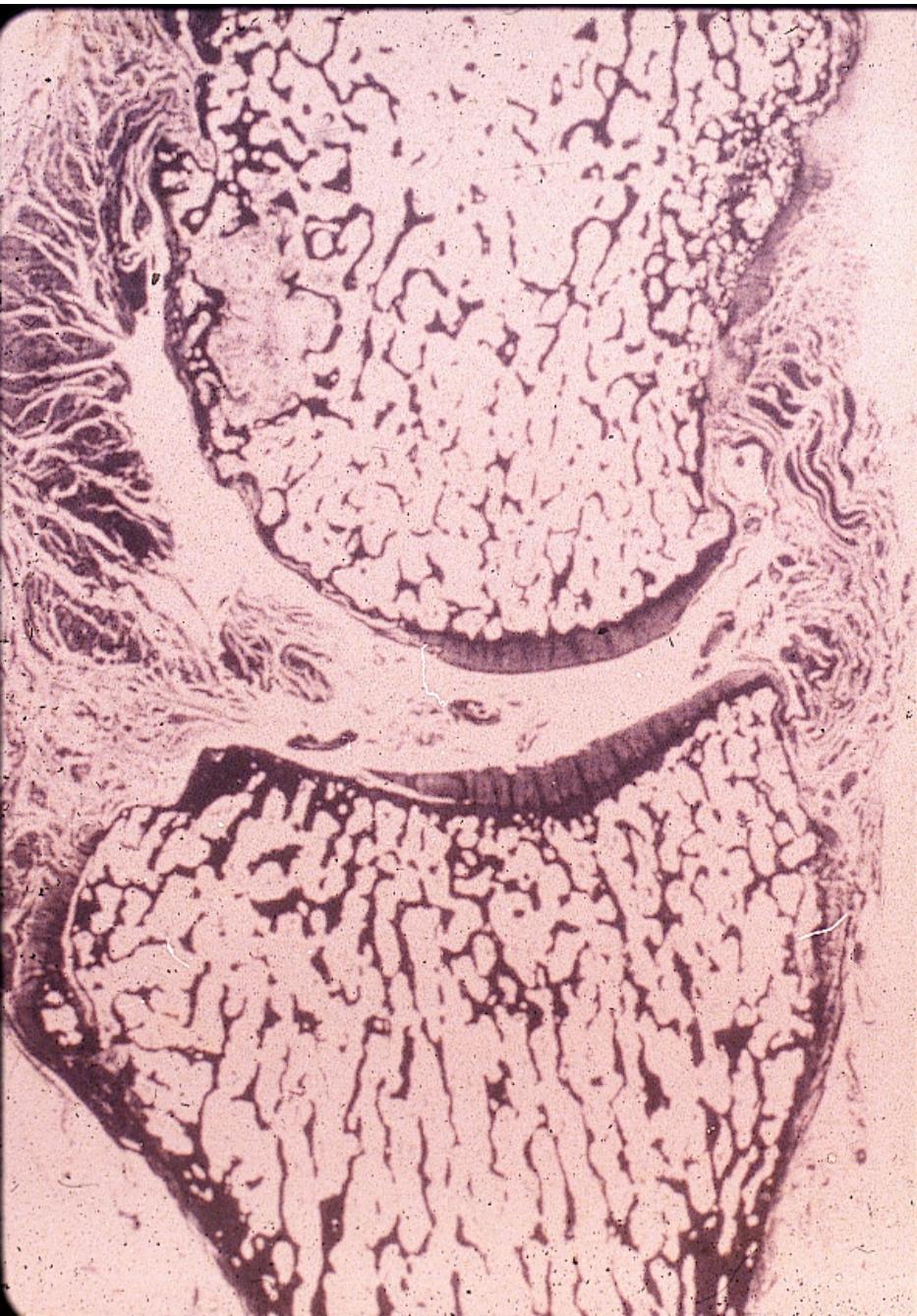
**C.F. Allaart**



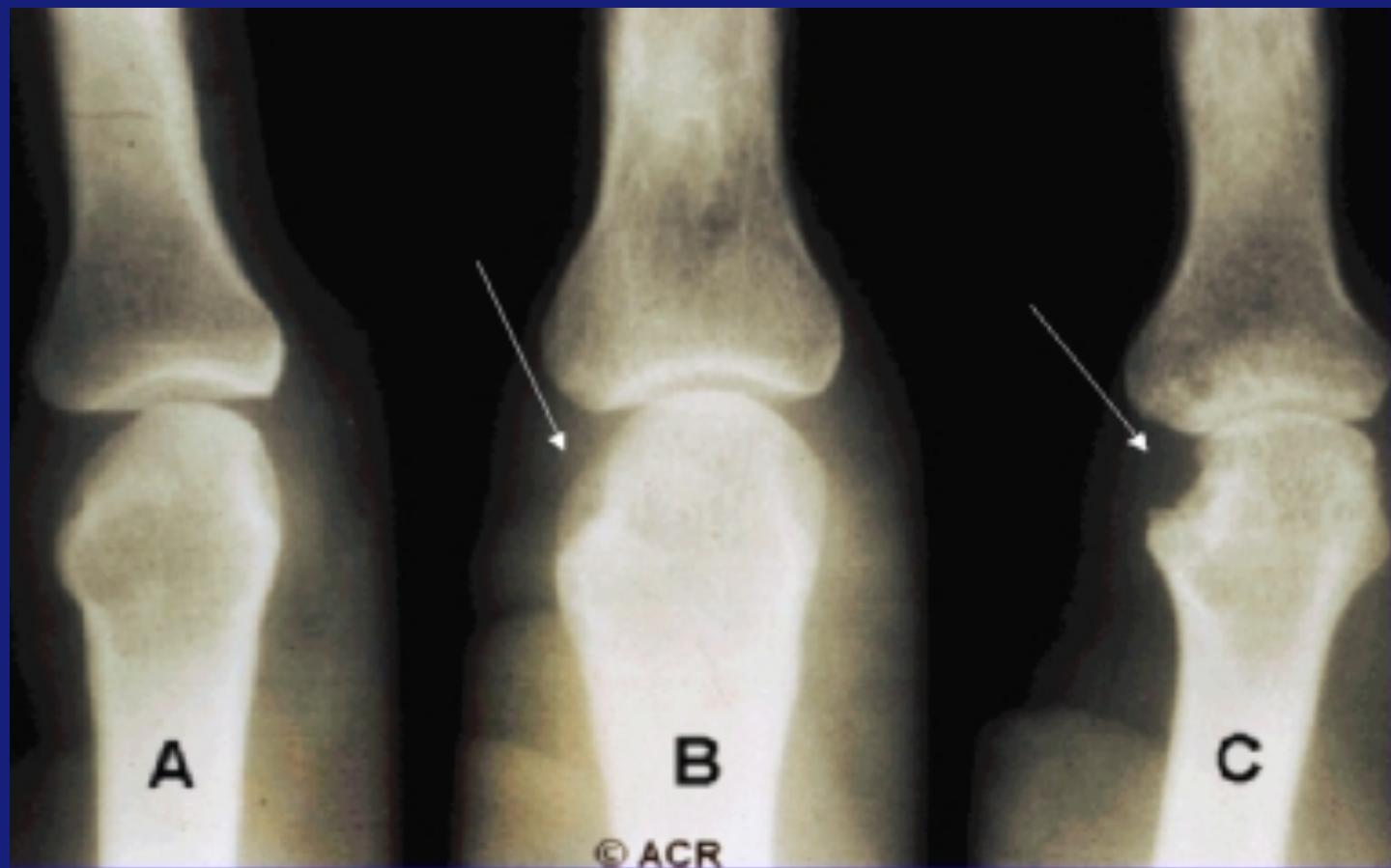


# *Synovitis in Rheumatoid Arthritis*



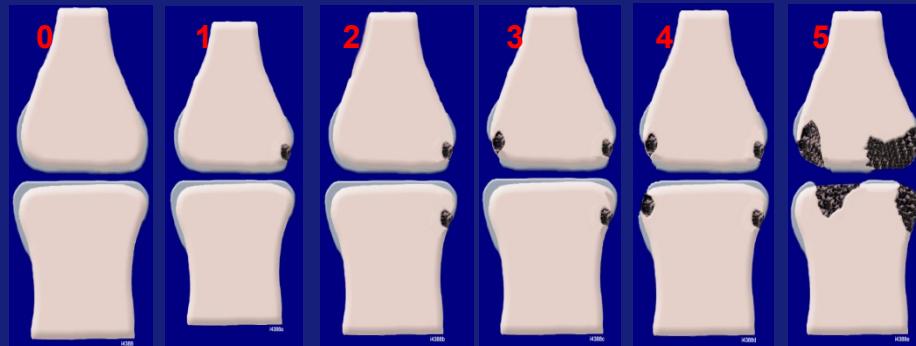


# Progression of joint damage in RA

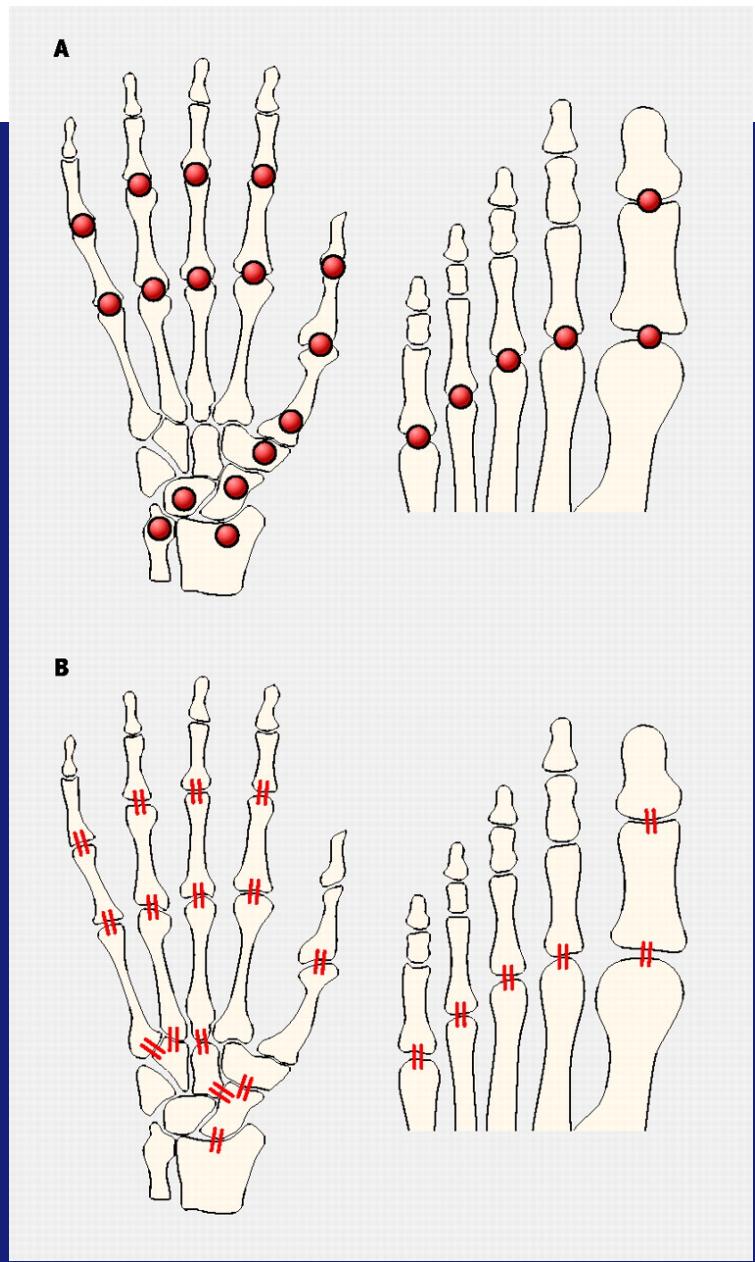
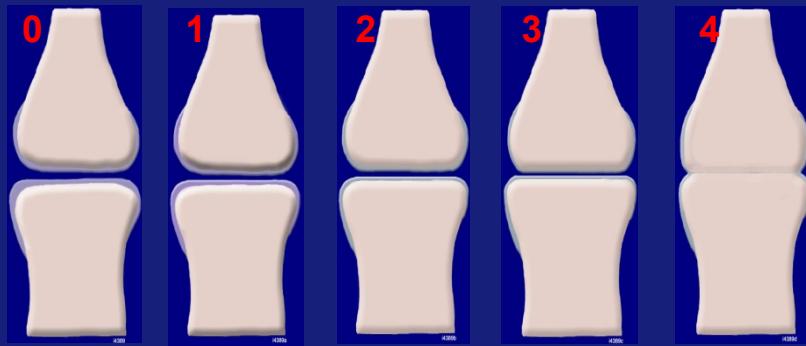


# Modified Sharp Scoring Method

Erosions Scored 0 - 5



Joint Space Narrowing Scored 0 - 4



*Large joints scored according to Larsen atlas*



## Risk factors:

- ACPA and RF
- Erosions at baseline
- High inflammatory response
- Delayed treatment
- High disease activity
- Rapid progression in year 1

# *Initial treatment options tested in BeSt*

## Initial MTX monotherapy: sequential or step up

n= 247



MTX



SSA



leflunomide

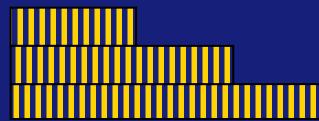


MTX+IFX

*other*

## Initial combination with prednisone

n=133



MTX+SSA+pred 60mg



MTX+CSA+pred



MTX+IFX



leflunomide

*other*

## Initial combination with infliximab

n=128



MTX+IFX 3mg/kg



MTX+IFX10mg/kg



SSA



leflunomide

*other*

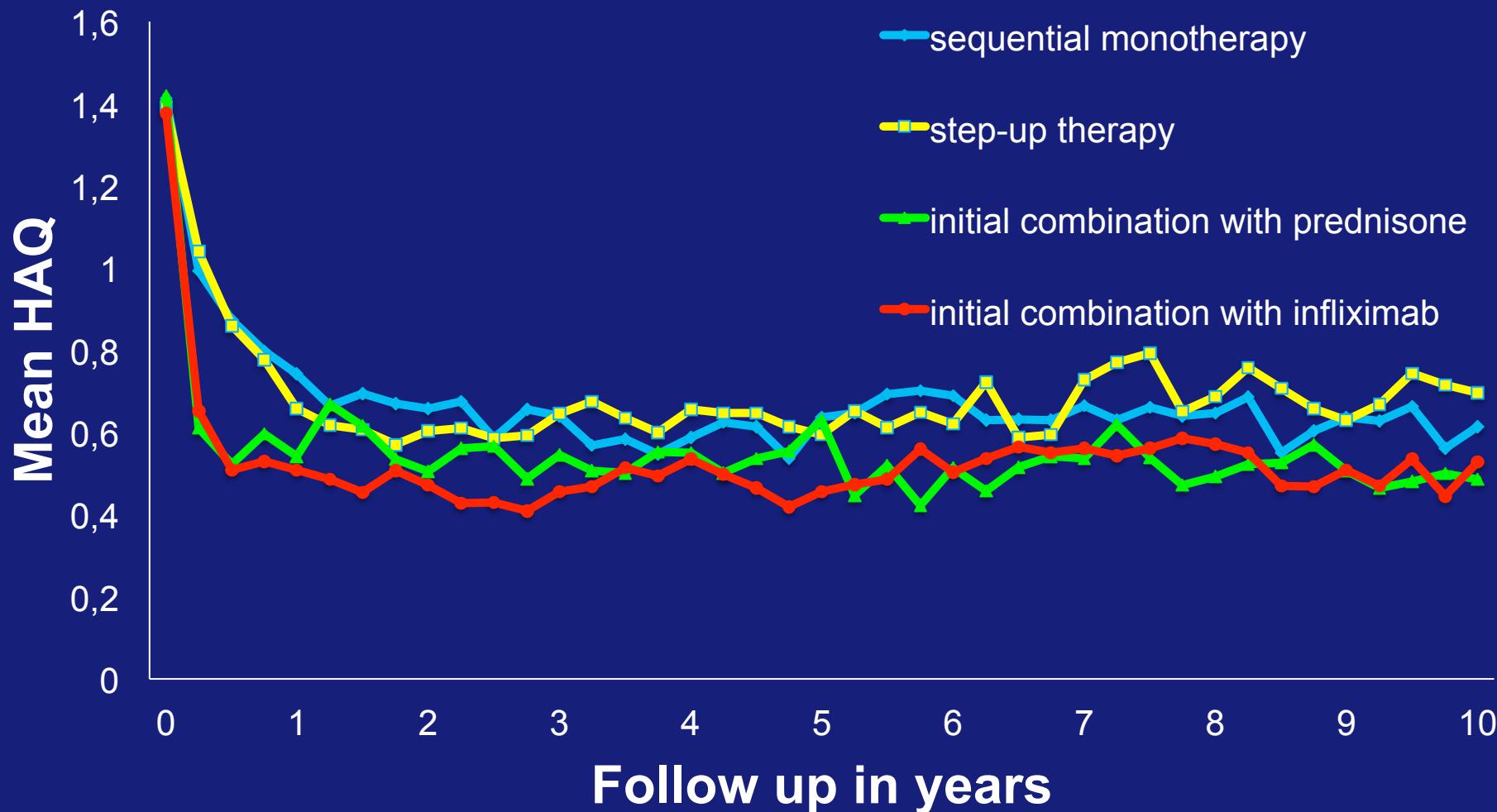
DAS > 2.4: next treatment step

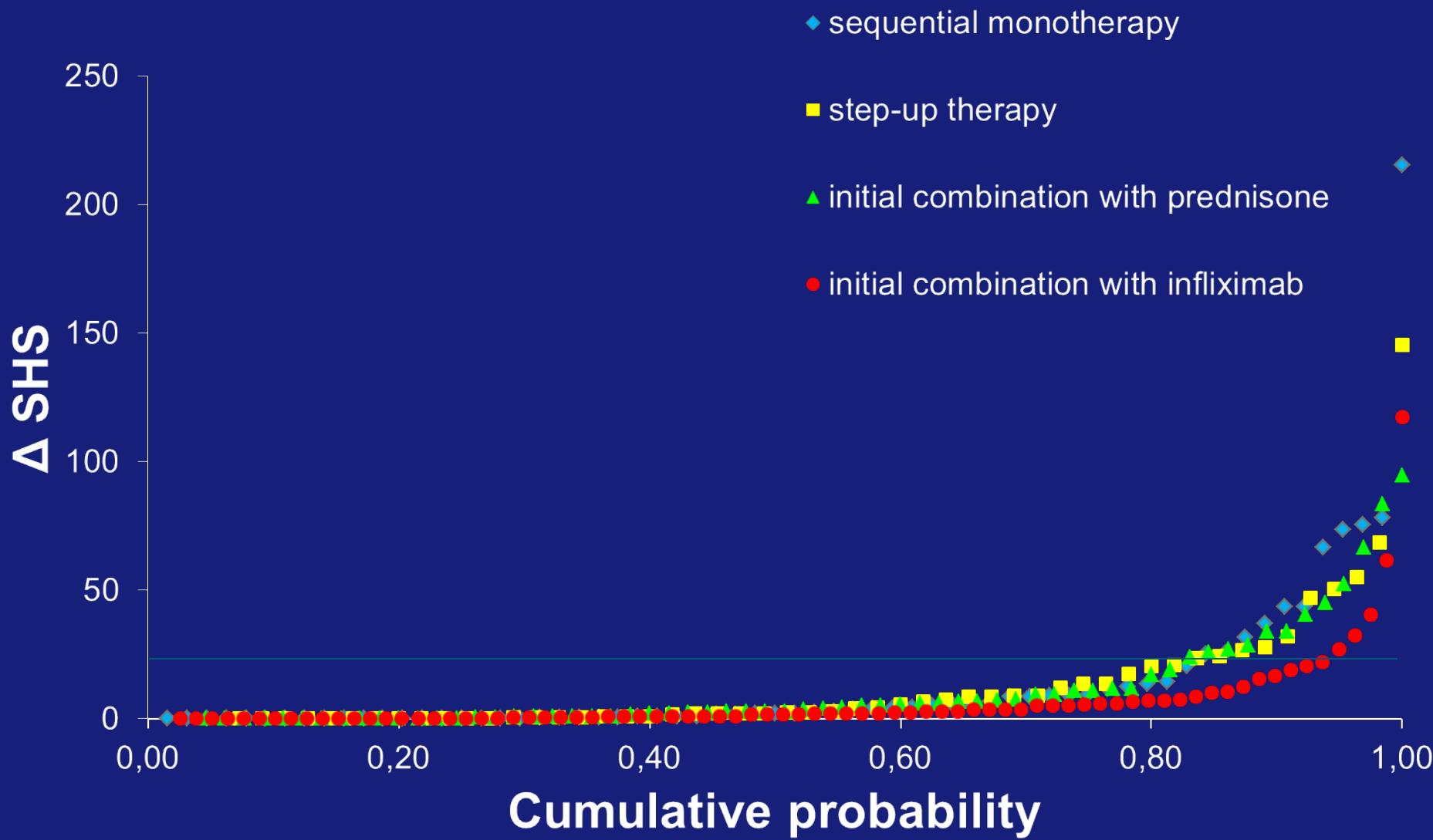
DAS ≤ 2.4 (>6 months): taper to  
maintenance dose monotherapy

From 3rd year:

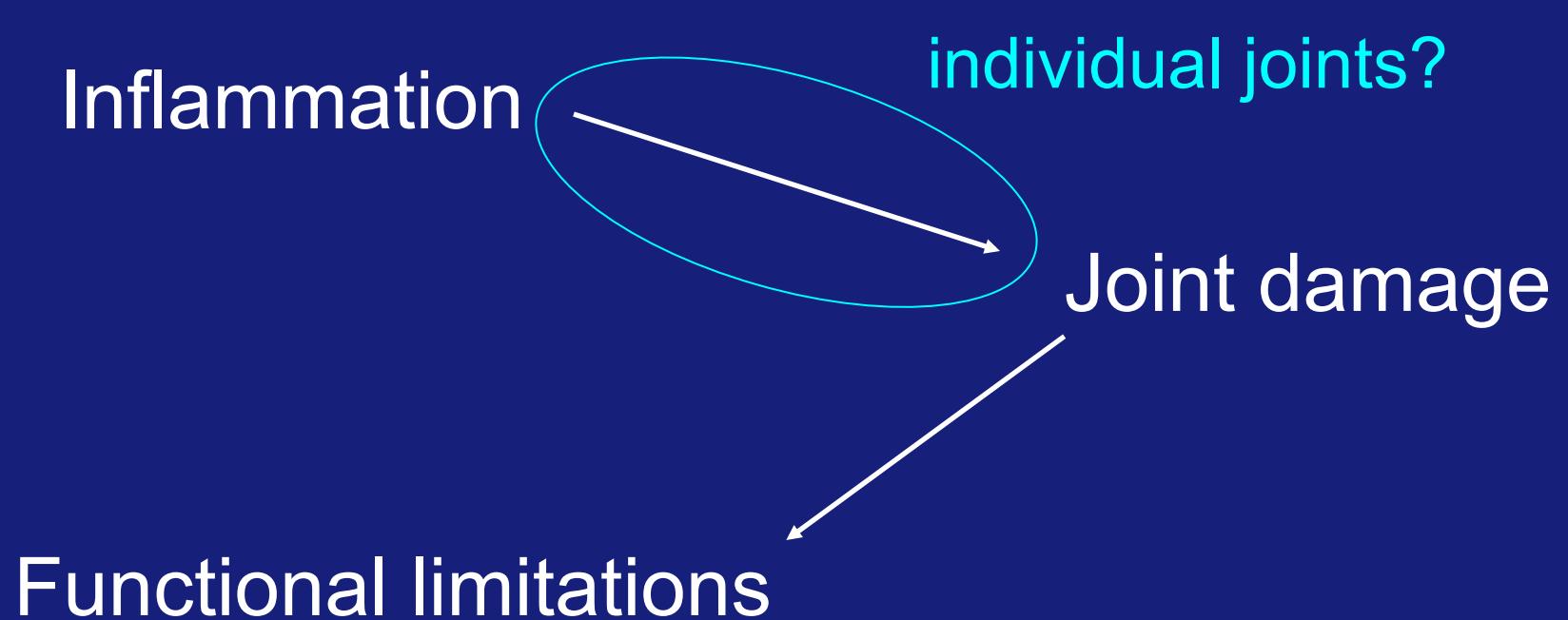
DAS < 1.6 ( $\geq$  6 months): taper to 0

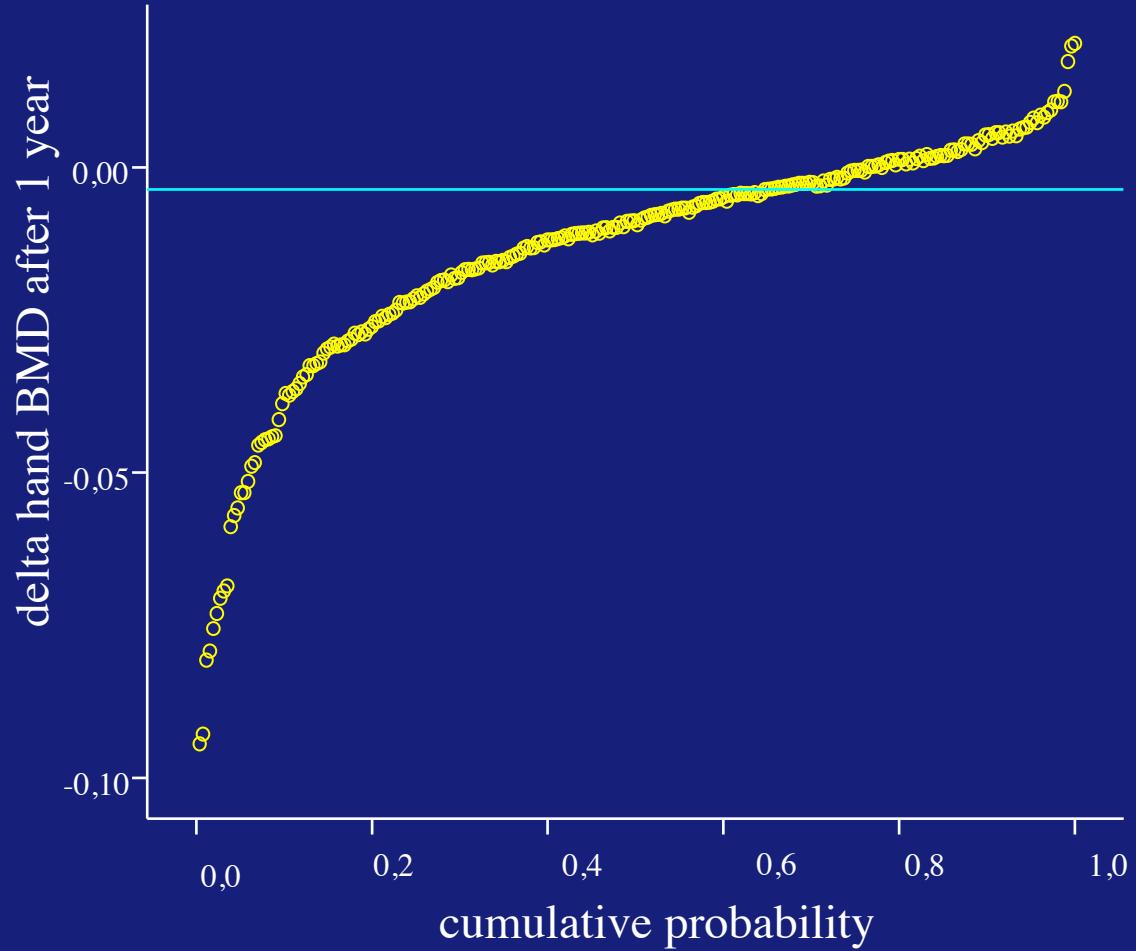
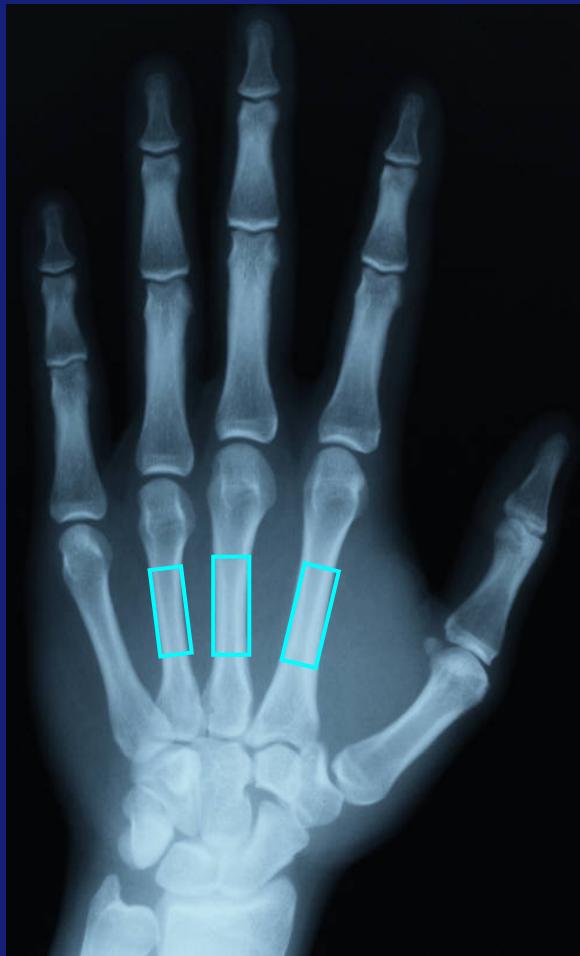
DAS  $\geq$  1.6: restart last monotherapy

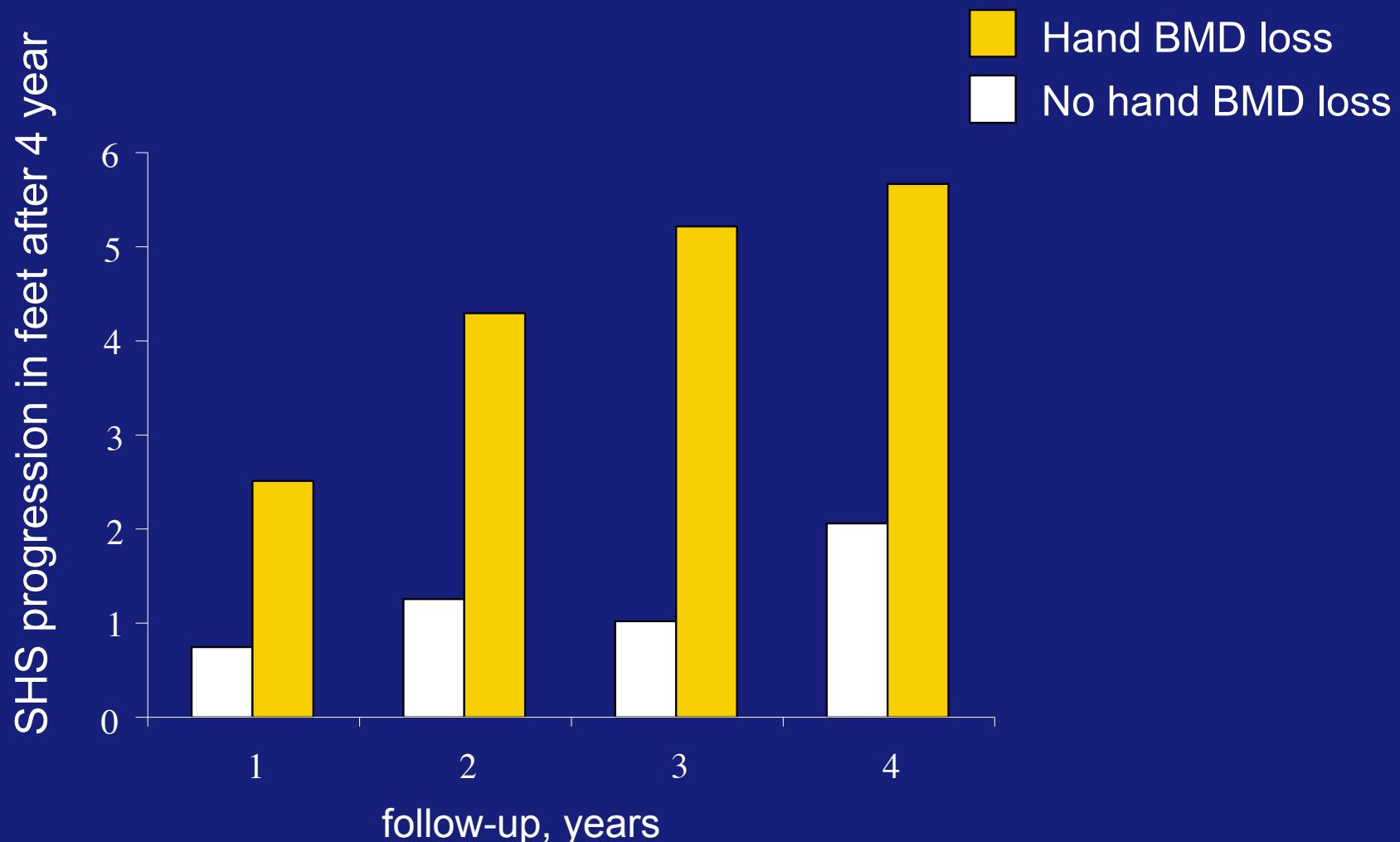


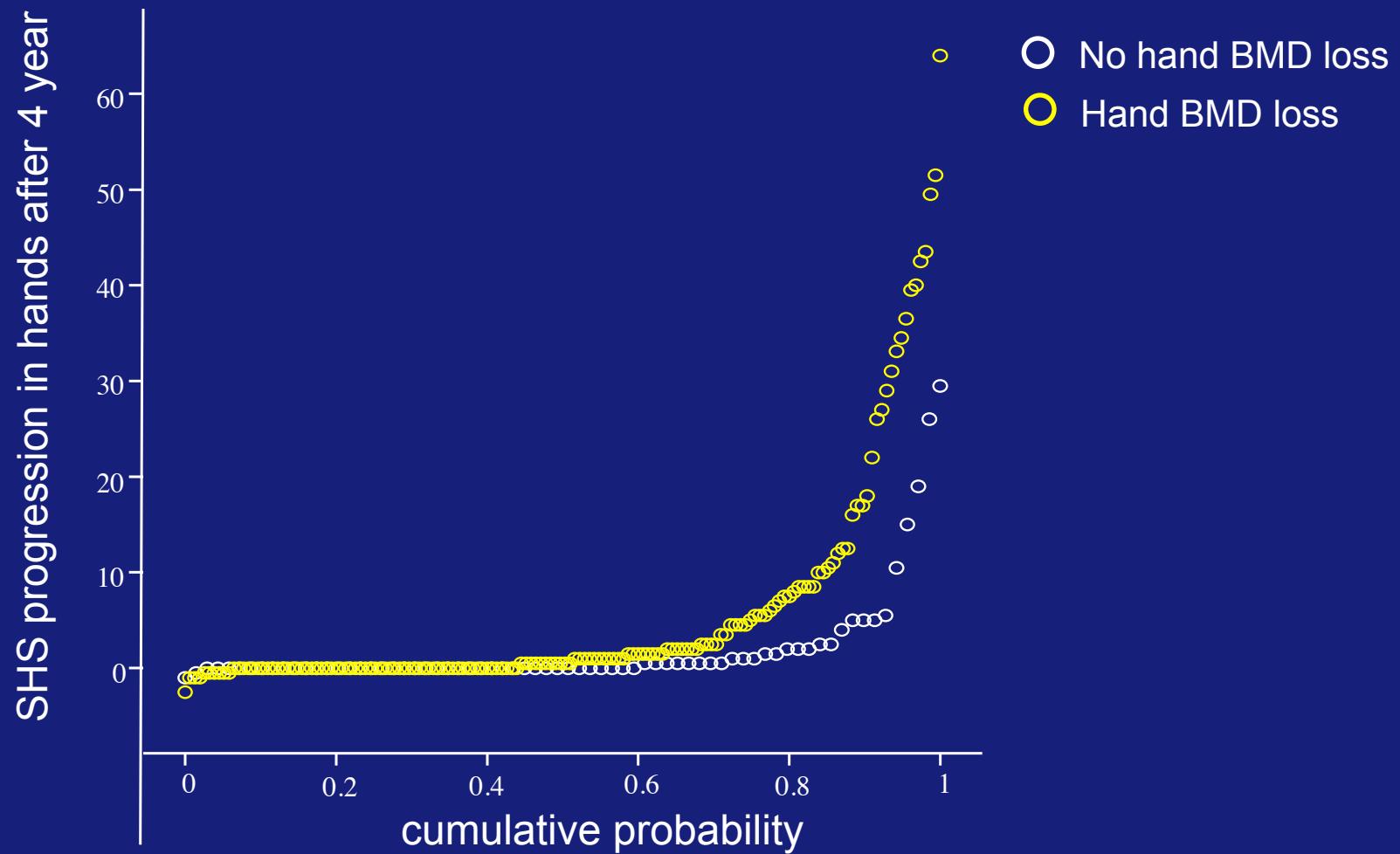
*Radiologic damage after 10 years*

# *Relation inflammation-damage-function in RA*



*Regional metacarpal BMD loss*



*Hand BMD loss and hand SHS progression after 4 year*

# *Clinical data for individual joints*

- Every 3 months:
  - Absence/presence of swelling/tenderness
- Total: 5 assessments in year 1 in relevant joints
  - Swollen and tender:
    - ever: 1-5 out of 5
    - never: 0 out of 5



Total number of joints: 13,969

Swollen (ever): 45%

Tender (ever): 59%

Erosion progression: 2%

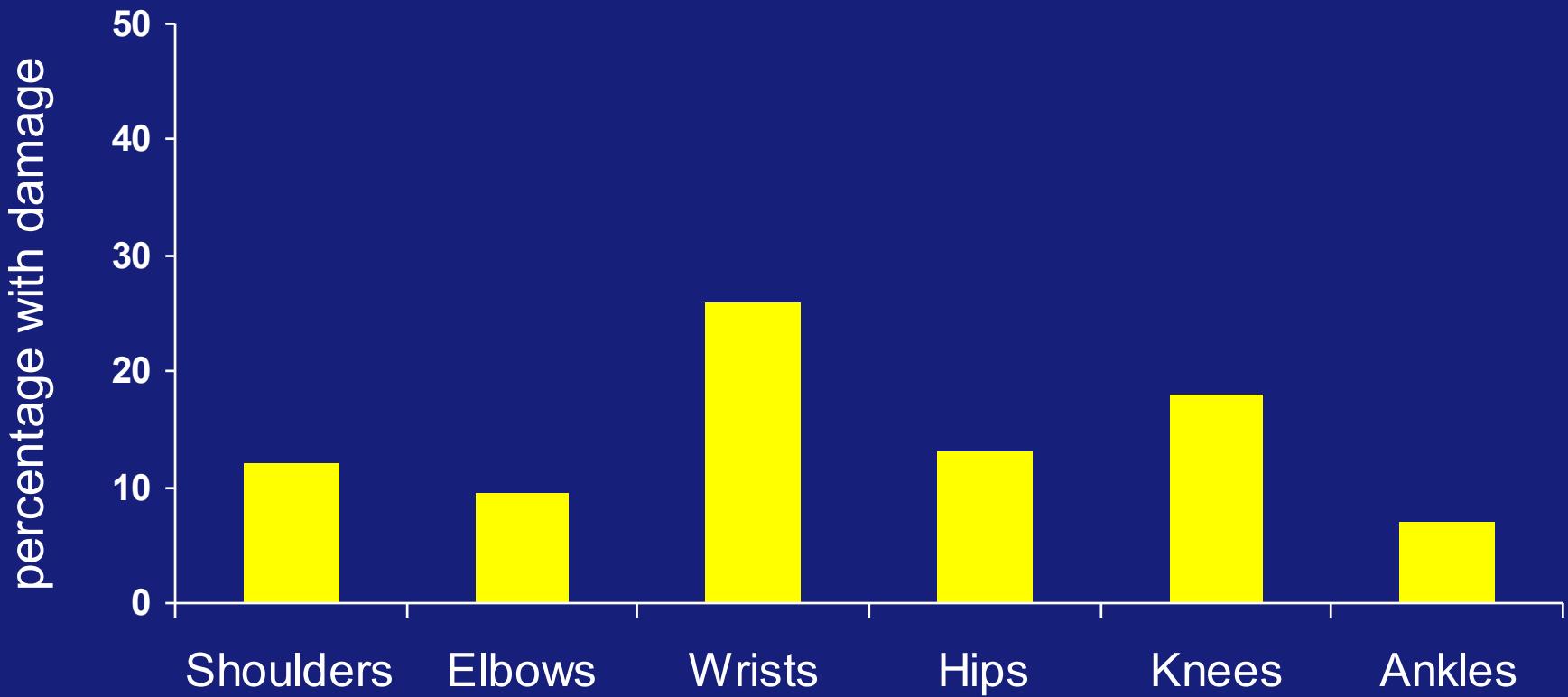
JSN progression: 2%

	Erosion progression		JSN progression	
	OR	95% CI	OR	95% CI
Ever swollen	1.6	1.2 – 2.2	1.9	1.4 – 2.6
Ever tender	2.0	1.4 – 2.9	1.7	1.2 – 2.5

Corrected for: baseline age, gender, BMI, RF, ACPA, treatment, ESR, absence/presence of erosions/JSN, total SHS, random patient effect

	Erosion progression OR (95% CI)	JSN progression OR (95% CI)
Swollen never	ref	ref
Swollen 1x	1.4 (1.00-2.3)	1.7 (1.2-2.4)
Swollen ≥2x	3.0 (2.0-4.5)	3.2 (2.1-4.8)
Tender never	ref	ref
Tender 1x	1.6 (1.03-2.4)	1.4 (0.94-2.1)
Tender ≥2x	3.9 (2.6-5.9)	3.7 (2.2-5.2)

Corrected for: baseline age, gender, BMI, RF, CCP2, treatment, ESR, absence/presence of erosions/JSN, total SHS, random patient effect

*Damage large joints after 8 years*

- Larsen score (ranging from 0-5 in each joint)
- Median progression LS 1 (IQR 0-4), similar in all 4 groups

## *Joint prostheses*

- 2 elbows
- 2 wrists
- 15 hips
- 14 knees
- 1 ankle

Number of prostheses per patient

- 1: 52%
- 2: 33%
- 3: 14%

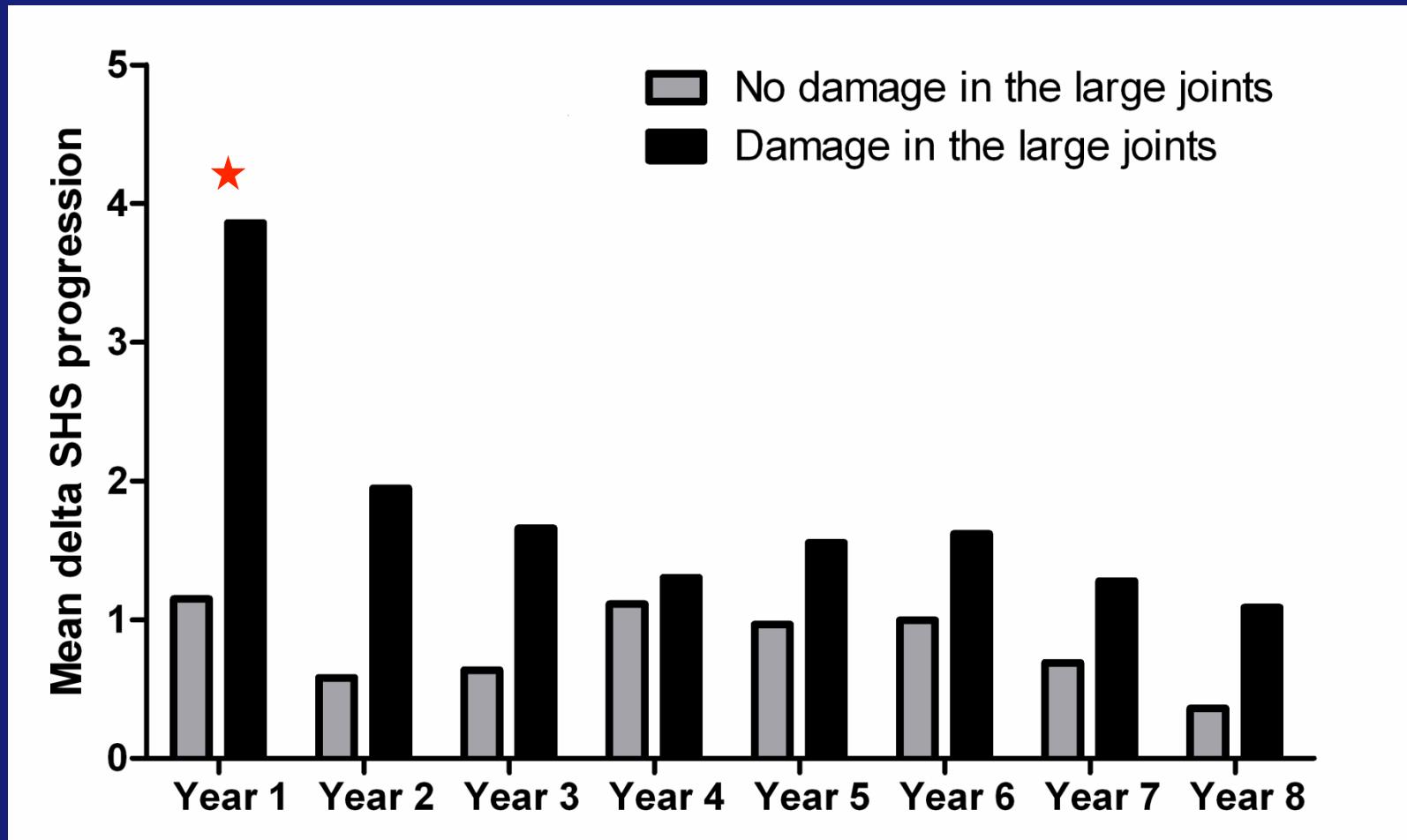
Reasons: 50% primary OA, 35% secondary OA, 12% other (fractures, dysplasia), 3% unknown

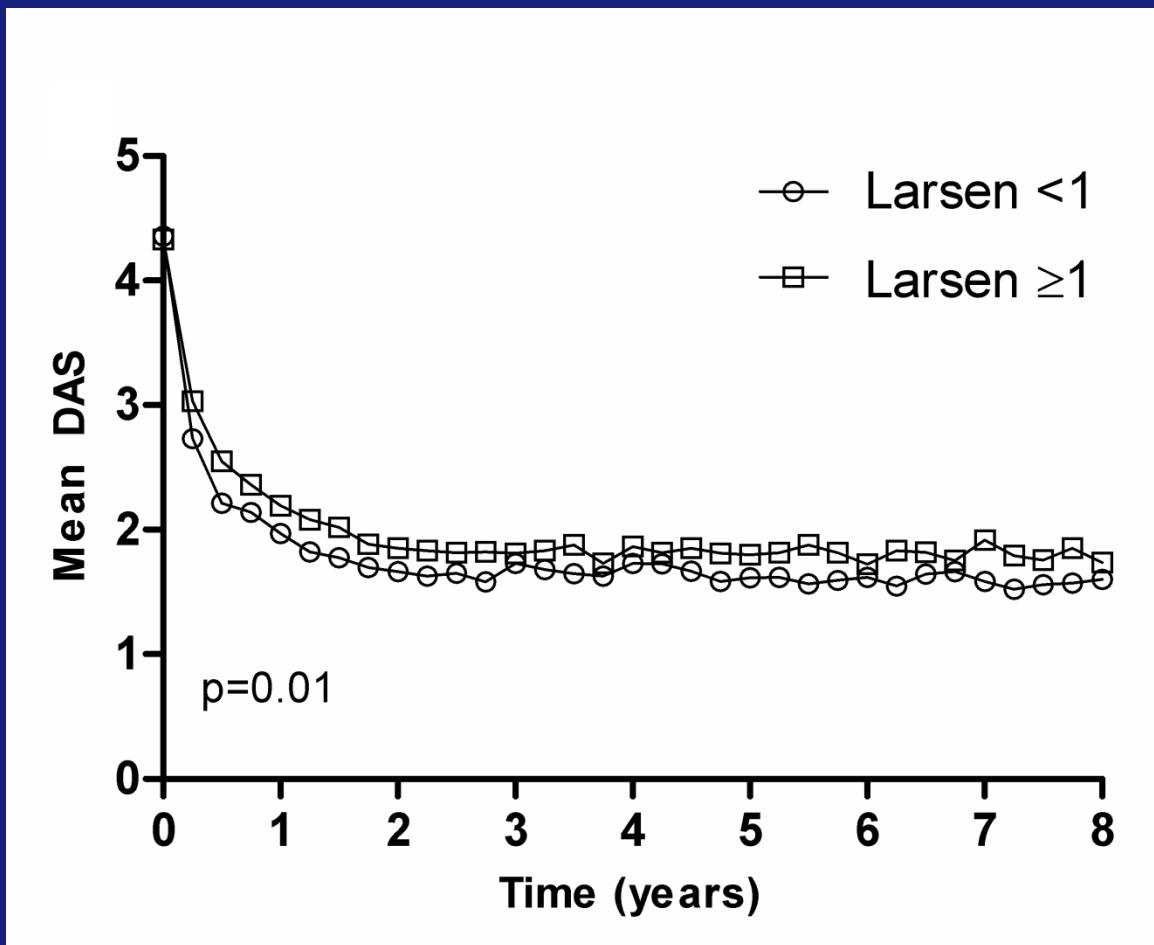
*Association between local synovitis and local damage*

	OR	95%CI
<b>Swelling</b>		
•≥ 1x	2.0	1.5-2.6
•≥ 2x consecutive	2.9	2.1-3.9
<b>Tenderness</b>		
•≥ 1x	1.7	1.2-2.2
•≥ 2x consecutive	1.9	1.4-2.5

(Model combining swelling and tenderness: both independent associated with local damage).

# High SHS scores in patients with large joint damage



*Relation DAS over time and large joint damage*

Local clinical synovitis  
- swollen  
- tender



Local joint damage progression  
- erosions  
- joint space narrowing

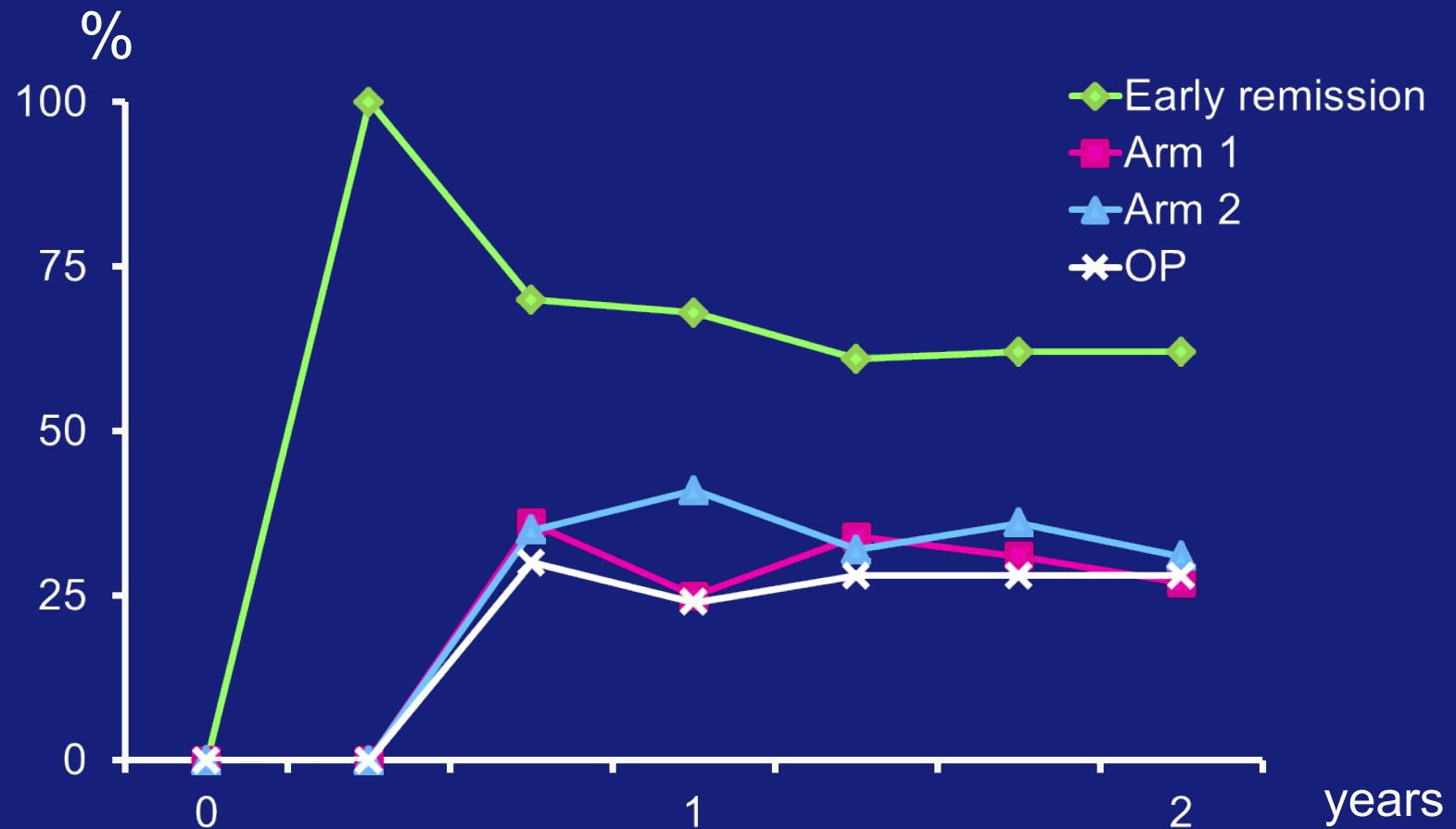
- true for small and large joints
- association comparable for erosions and JSN
- comparable for swollen and tender joints
- ‘dose effect’ of inflammation on damage
- damage in small joints associated with damage in large joints
- prevent one, prevent the other

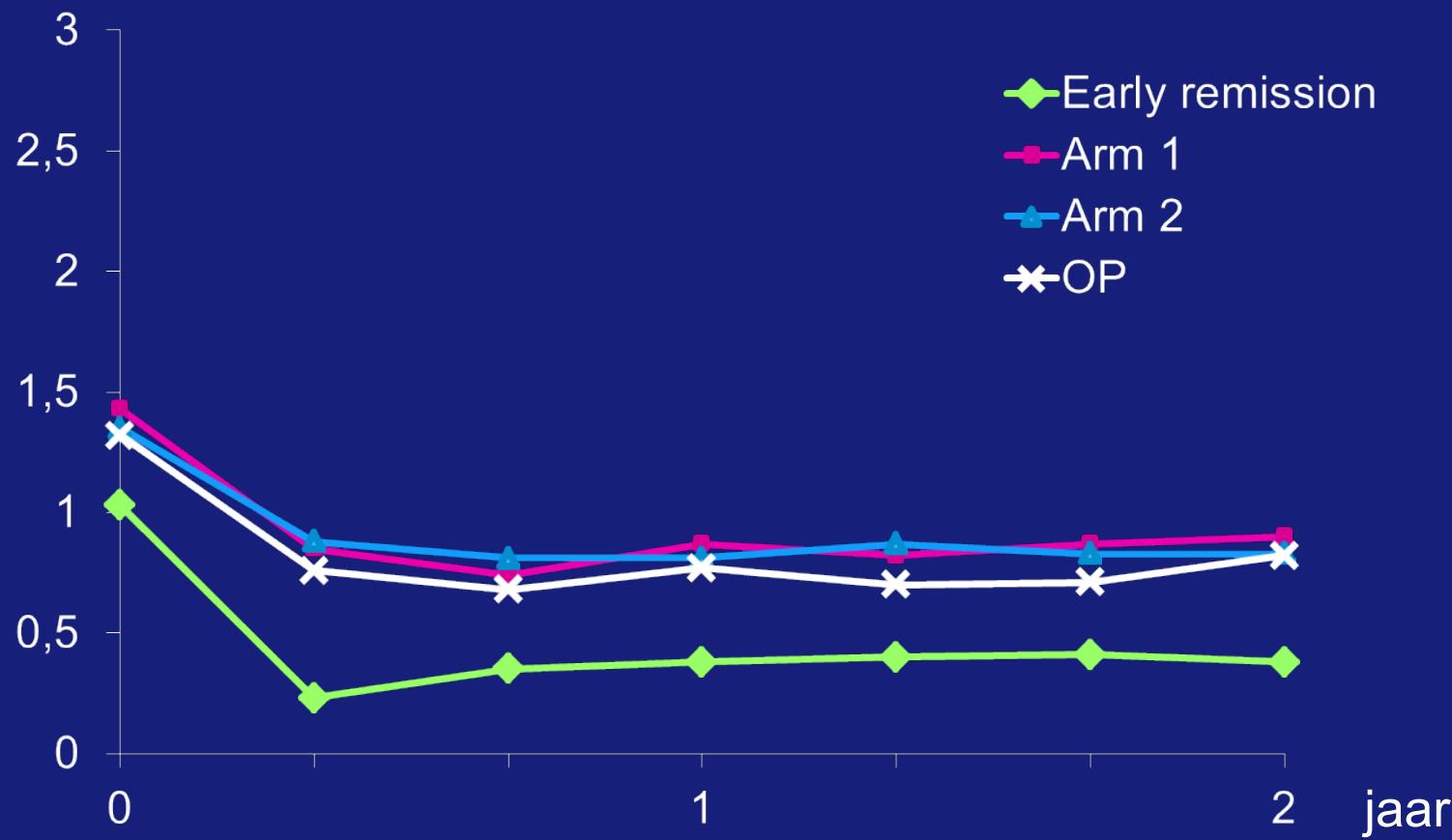
*Further improvements in RA treatment*

- Even earlier diagnosis
- Even earlier treatment
- Aim at even lower disease activity (remission)



- RA < 2 years symptoms and clinically suspect UA
- Target remission: DAS <1.6
- No early remission at 4 months: 2 strategies with early or delayed anti-TNF
- When remission: taper and stop strategies
- No/loss of remission: restart or adjust medication



*Functional ability*

*IMPROVED damage progression after 2 years*