

# HIP RESURFACING

## Where are we now?

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[www.orthopedie-resurfacage-lille.org](http://www.orthopedie-resurfacage-lille.org)



# RSA expectations

**Bone preservation**

**Normal femoral loading**

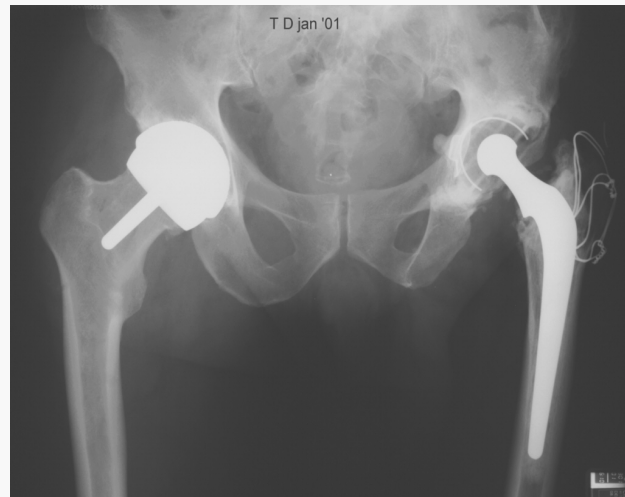
**Optimal proprioceptive feedback**

**Restores normal anatomy:**

- **Offset**
- **Leg length**
- **Anteversion**

**No risk of dislocation**

**Return to high impact sport activities**



**To date  
what are the real  
indication for resurfacing?**

# Resurfacing indications

## AGE:

- 65yo as limit for male / female
- Decision must be adapted according to bone quality

## GENDER:

- Not considered female as an CI

## FEMORAL HEAD SIZE:

- Less than 48mm considered as CI +++



# DIAGNOSIS

## AVN

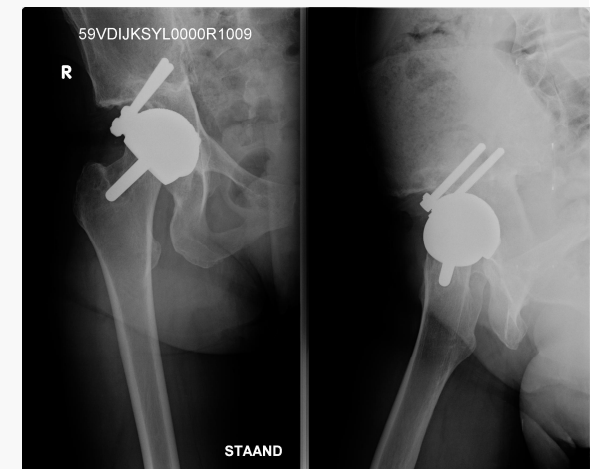
- No CI
- Size for osteonecrotic lesion: less than 1/3 of femoral head

## CYST

- Relative CI according to lesion size
- Large cyst larger than 1cm<sup>3</sup>
- 

## HIP DYSPLASIA

- If anatomic rotation center reached: OK
- Could be done with dysplasia RSA cup

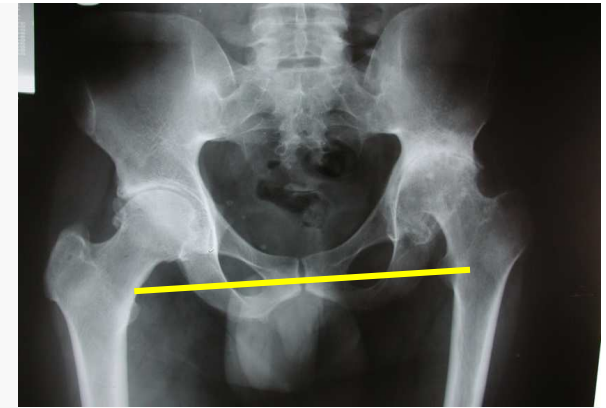


# Specific anatomic considerations

## Destructive arthritis



# DIAGNOSIS



## BONE QUALITY

- Use DEXA bone mineral density (useful tool especially for female)
- But no correlation proved between DEXA/neck fracture

## BIOMECHANICAL FACTORS as relative CI:

- LLD up than 1cm
- Short femoral neck inf to 2cm
- Low head to neck ratio



# Ideal indication...

Degenerative hip joint disease in:

- Young patient
- High level of activity
- Optimal clinical and medical condition



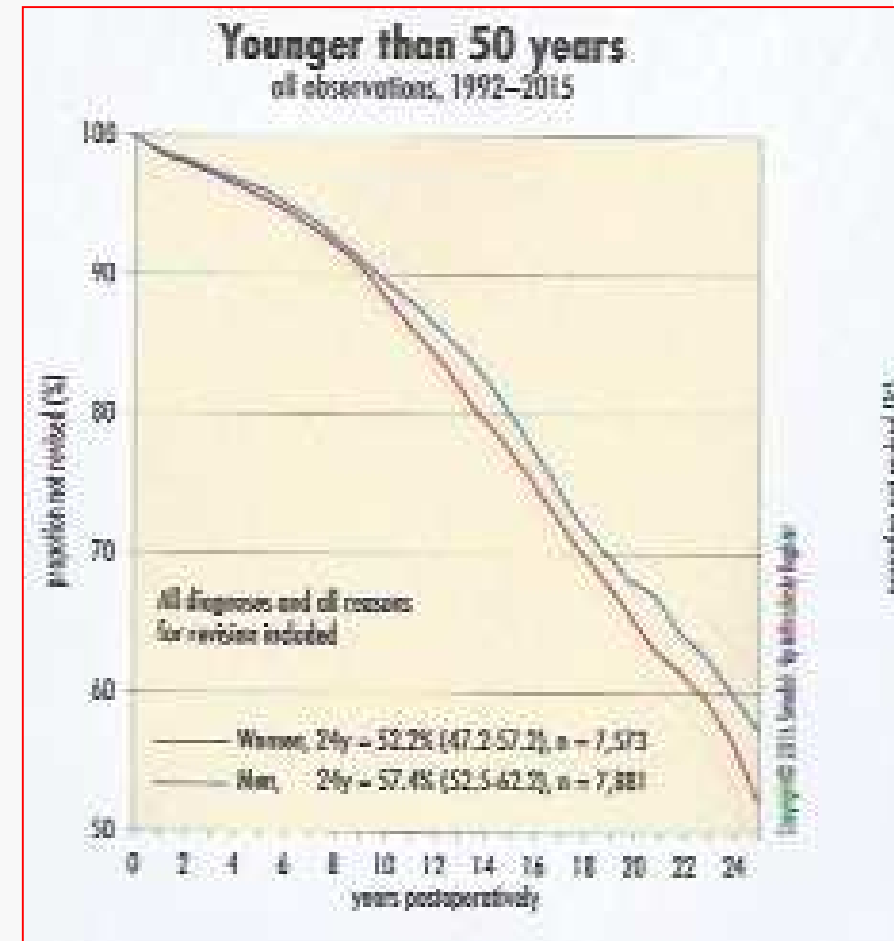
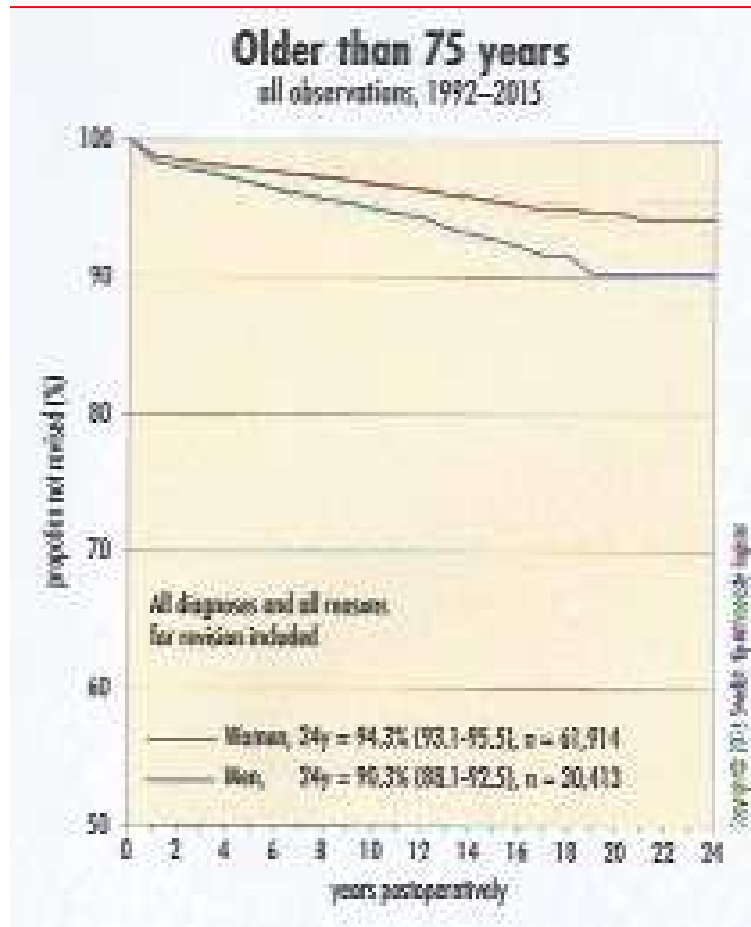
Solid bone in femoral head





**Literature ?**  
**What we know ?**

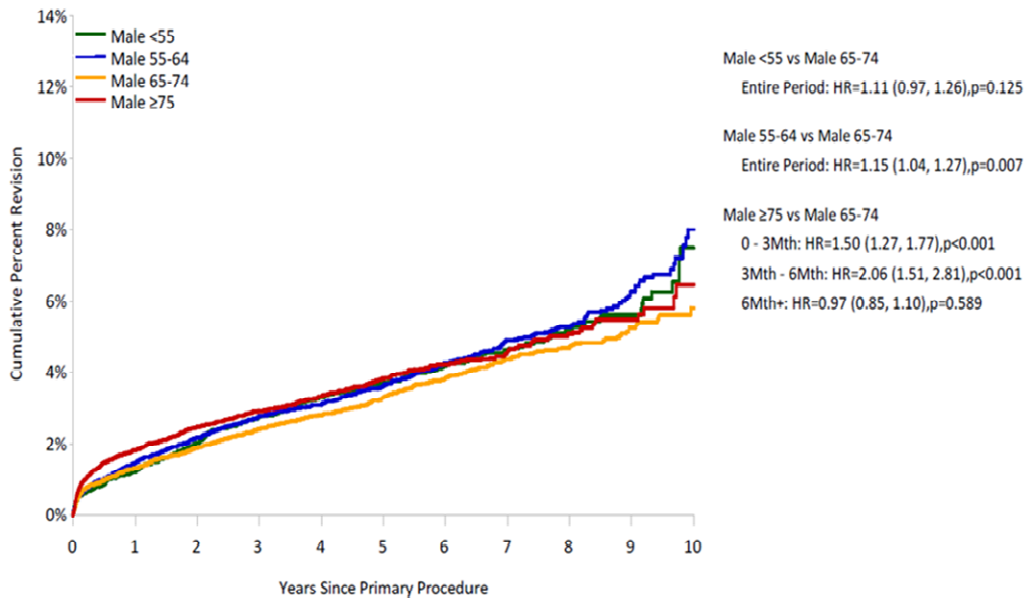
# SWEDISH HIP REGISTRY - REPORT 2016



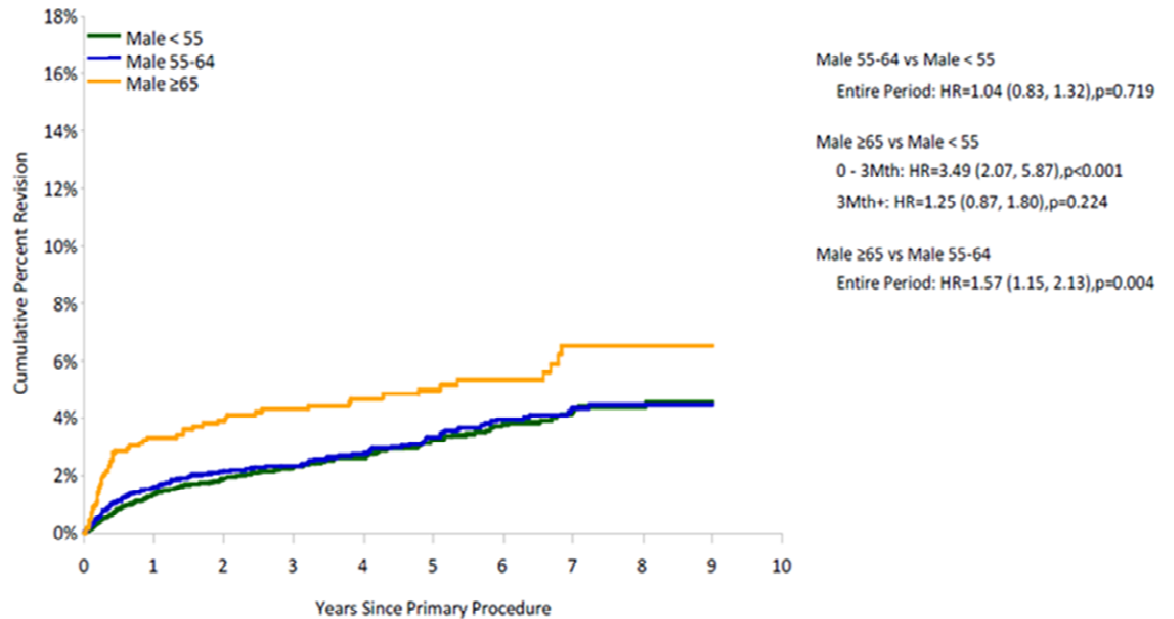
Survivorship in patients younger than 50yo:  
52,2% females and 57,4% males at 24 years  
compared to 90,3 to 94,3% in patients older than 75

A  
O  
A  
J  
R  
R  
2  
0  
1  
6

**Figure HT10: Cumulative Percent Revision of Primary Total Conventional Hip Replacement for Males by Age (Primary Diagnosis OA)**



**THA**  
**Males <65yrs**  
**92% survival @ 10 yrs**



**Resurfacing**  
**Males <65yrs**  
**96% survival @ 10 yrs**

# INTERNATIONAL HRA DATABASE

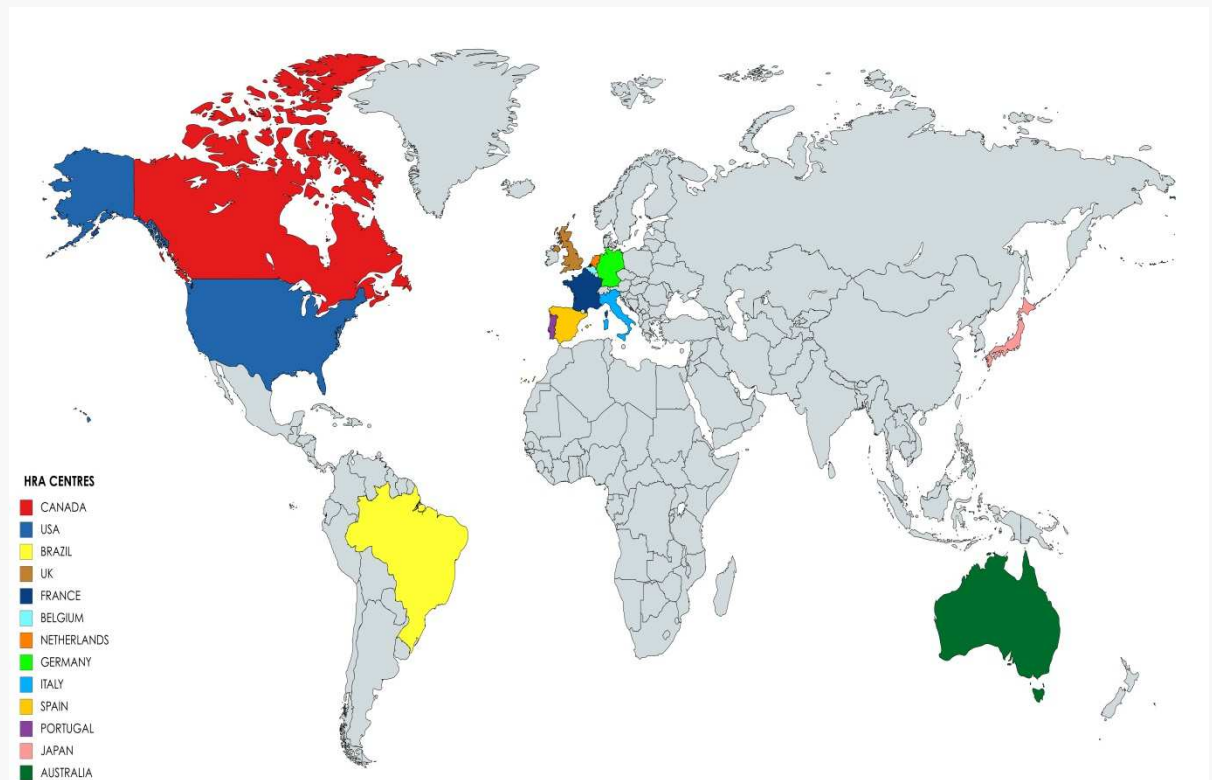
HIGH VOLUME CENTRES - ALL PATIENTS  $\leq 50y$  ; +3y FU

**27 CENTRES**

BIRMINGHAM  
LONDON  
SOUTHAMPTON  
MELBOURNE  
SYDNEY  
COLUMBIA, SC  
LOS ANGELES, CA  
CLEVELAND, OH  
NEW YORK, NY  
SEATTLE, WA  
OTTAWA  
SAO PAULO  
OSAKA

**13 COUNTRIES**

GHENT  
ROME  
BOLOGNA  
BARCELONA  
BARCELONA  
MADRID  
PORTO  
LILLE  
DRESDEN  
NEUSS  
FRIEDRICHSHAFEN  
MÜNCHEN  
ARNHEM



# 11,386 HIP RESURFACINGS IN PATIENTS $\leq 50$ Y (3-22Y FU)

AGE AT SURGERY:

Mean 42.7y (16.3-50)

FEMORAL HEAD SIZE (mm):

Mean: 50.3 mm

DIAGNOSIS	N	%
OA	8238	75.1
AVN	759	6.9
DDH	1095	10.0
PTOA	291	2.7
InflammA	192	1.8
SCFE	122	1.1
LCP	121	1.1
Other	150	1.4

GENDER	N	%
MALE	8459	74.3
FEMALE	2926	25.7

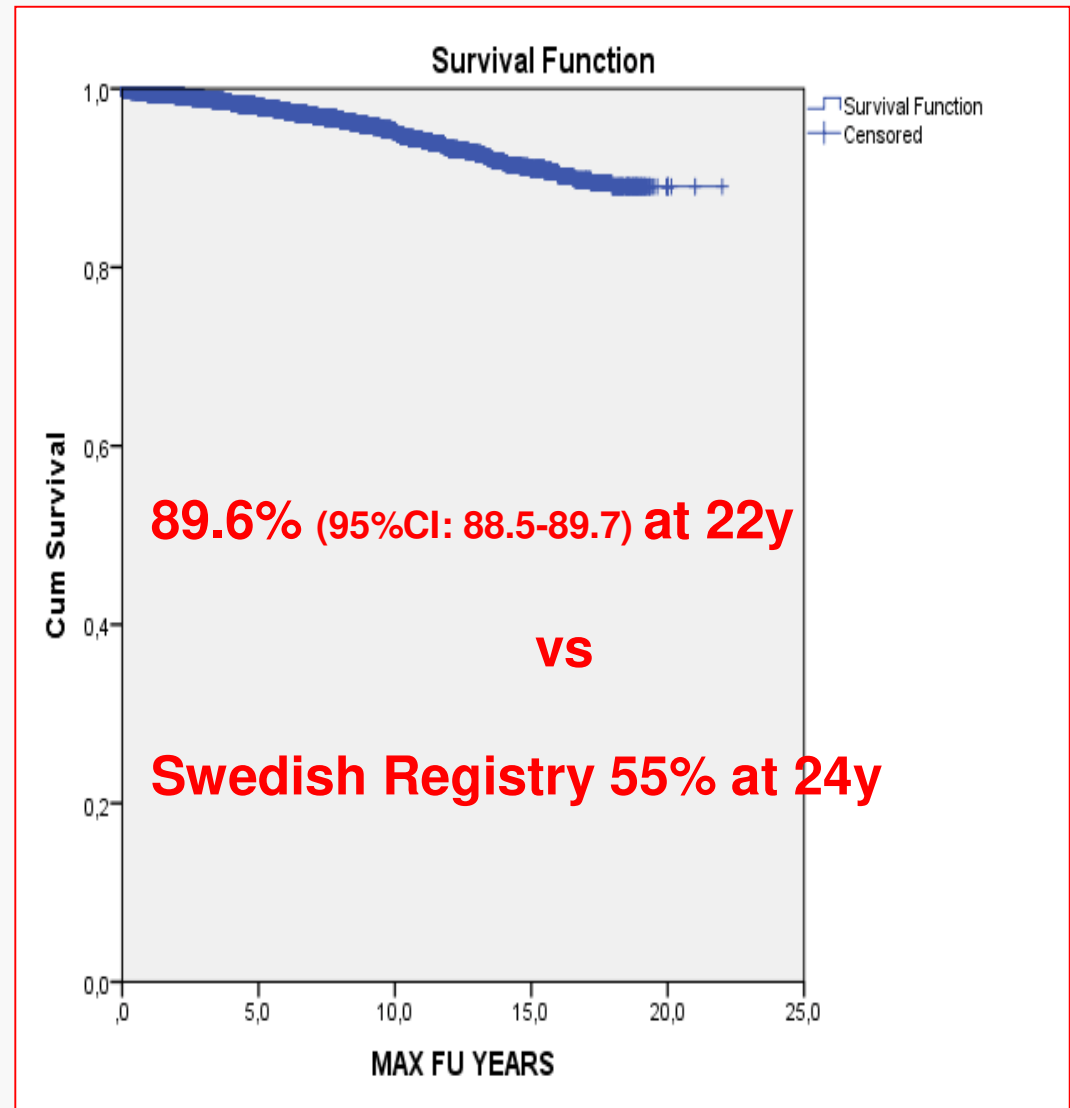
FOLLOW-UP:

Mean 7.6 y (3-22)

# KAPLAN-MEIER CUMULATIVE SURVIVORSHIP

## ALL CASES

STATUS	N	%
IN SITU	9778	85.9
REVISED	400	3.5
DECEASED	92	0.8
LOST	1116	9.8
<b>TOTAL</b>	<b>11386</b>	<b>100</b>



# KM SURVIVORSHIP: GENDER

**MALE**

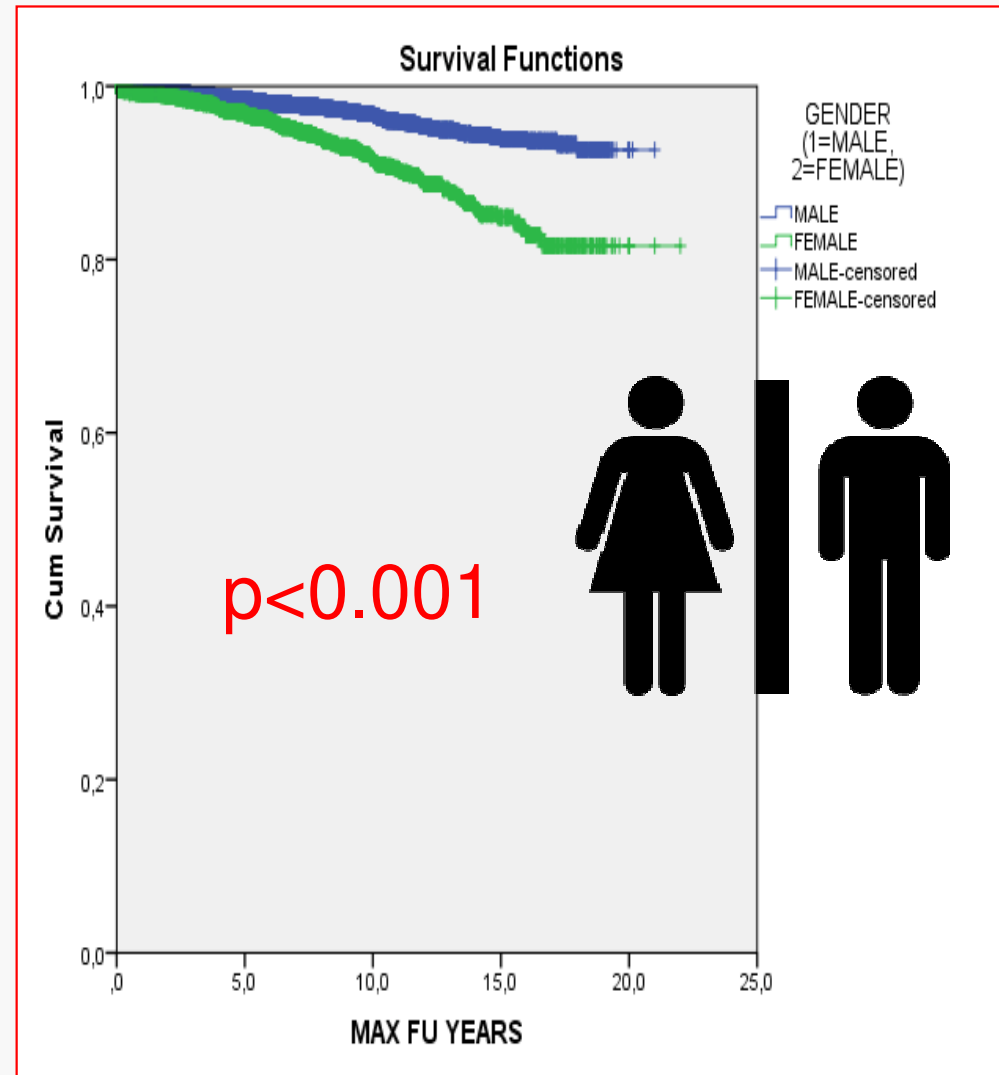
21y

**92.7%** (95%CI: 92.1-93.3)

**FEMALE**

22y

**81.6%** (95%CI:80.3-82.9)



# KM SURVIVORSHIP: DIAGNOSIS

OA

22y

92.6% (95%CI: 92.0-93.2)

AVN

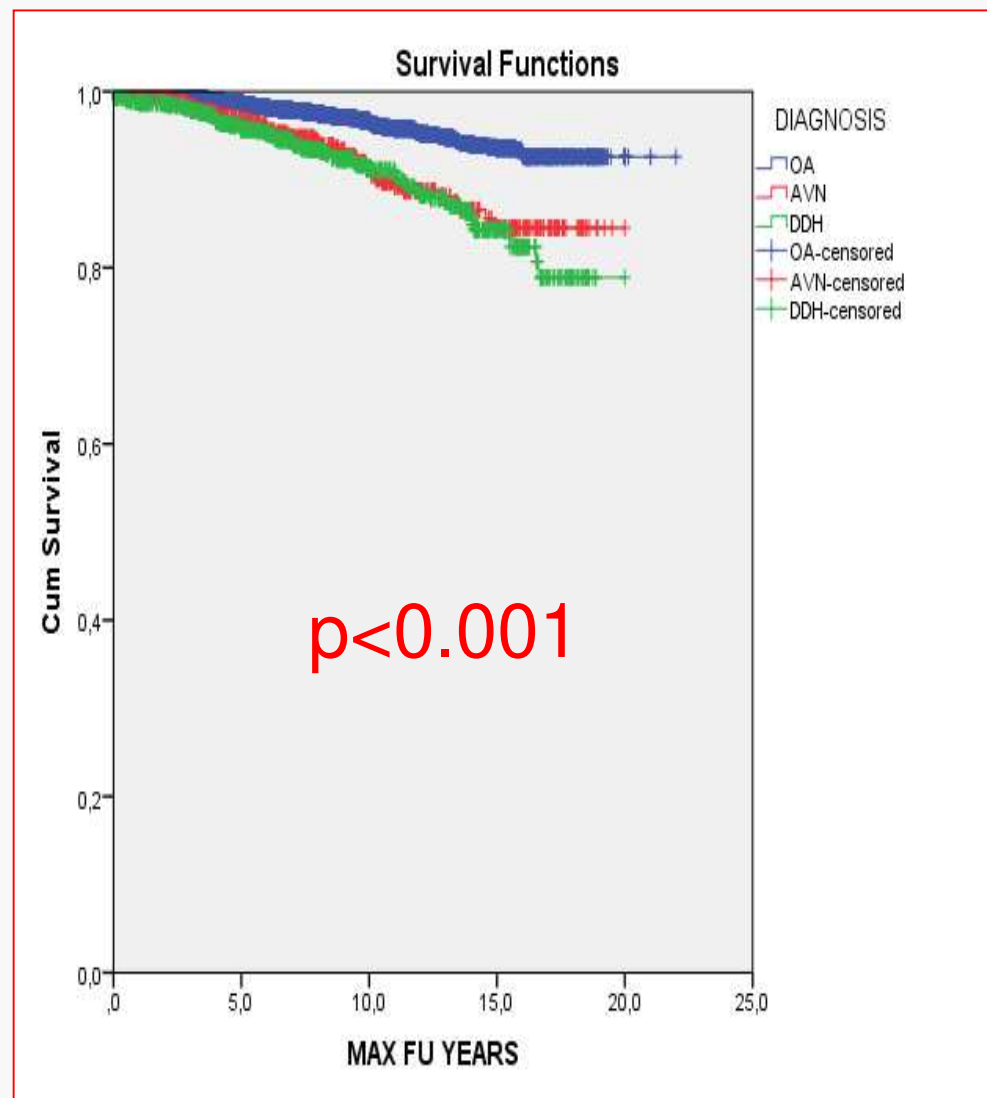
20y

84.5% (95%CI: 82.4-86.6)

DDH

20y

78.9% (95%CI: 77.1-80.7)

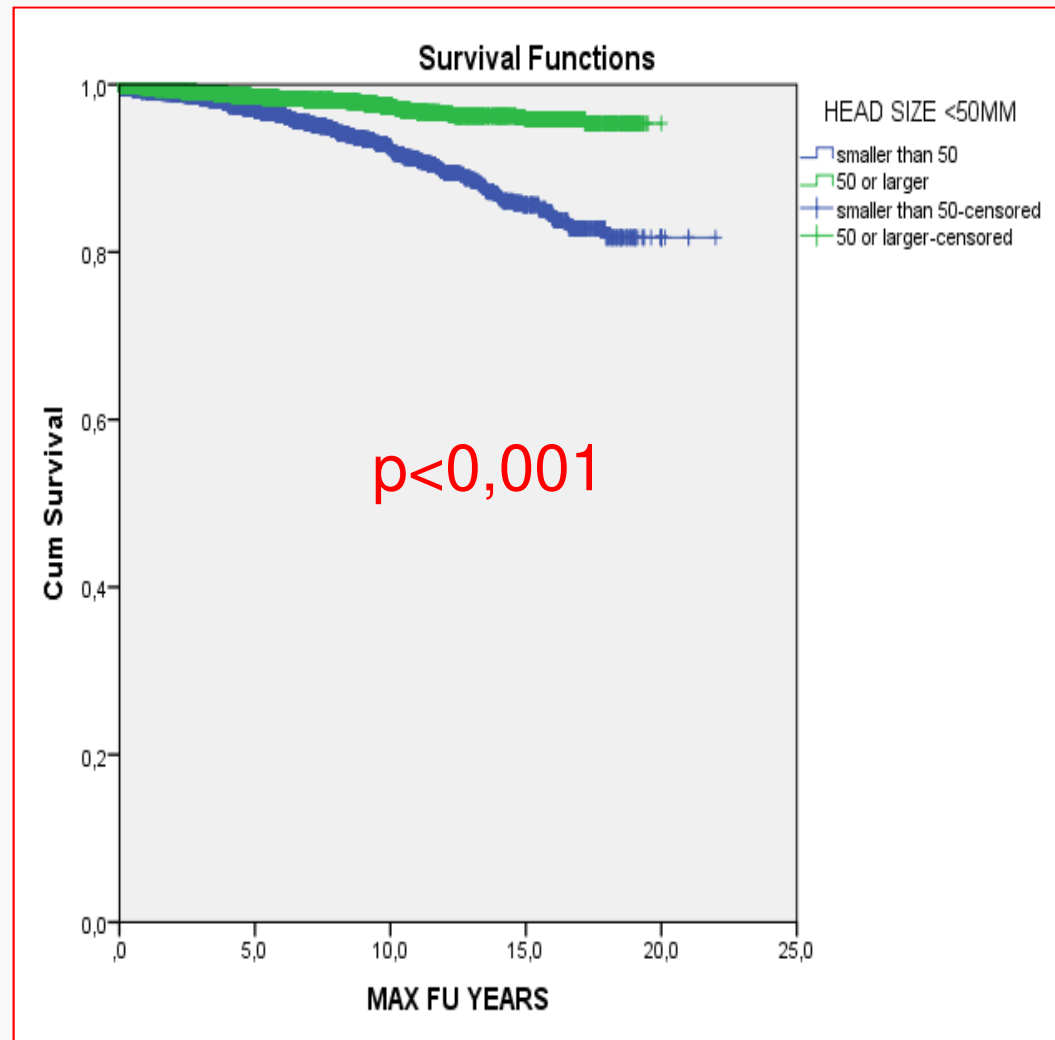




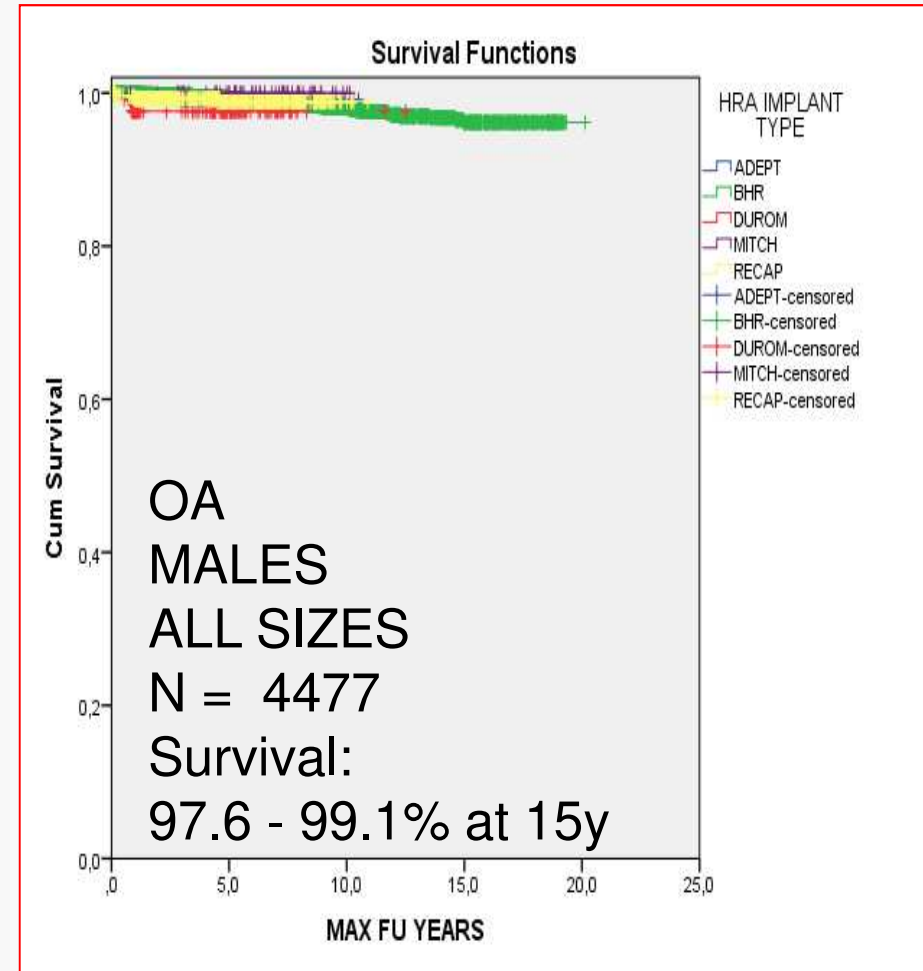
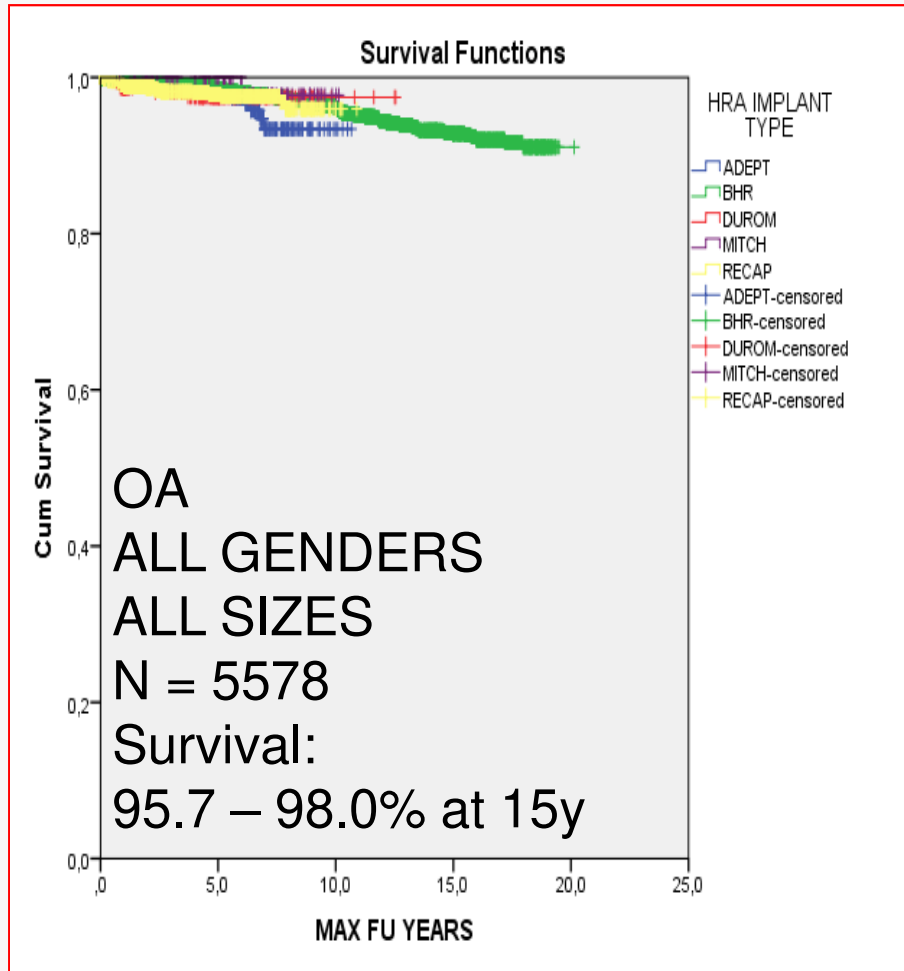
# KM SURVIVORSHIP: HEAD SIZE

<50mm      22y  
81.7% (80.6-82.8)

>=50mm      20y  
95.4% (94.9-95.9)



# BEST CASE SCENARIOS



# RESURFACING UNDER 50 yo

Girard et al. OTSR 2018

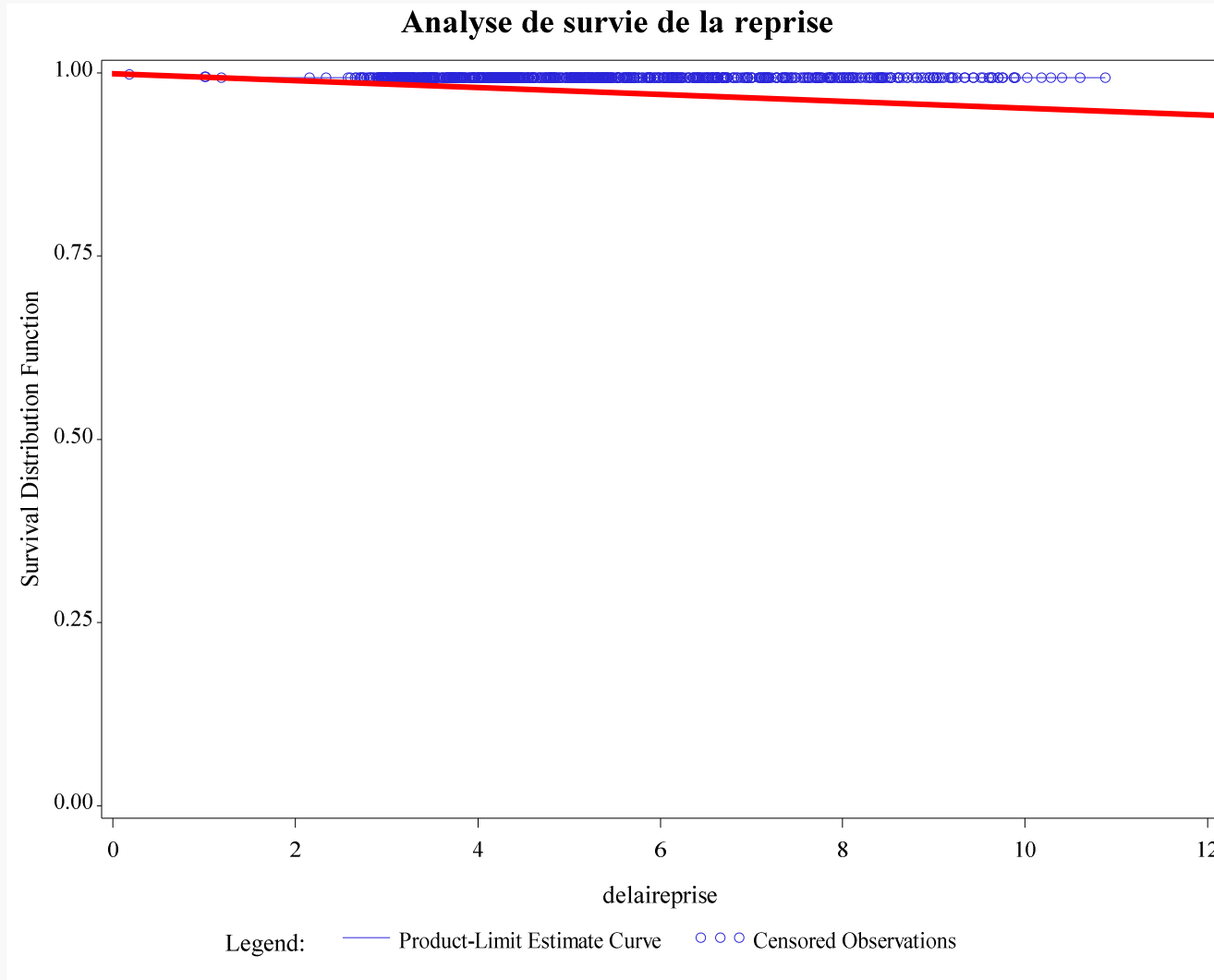
- According to NICE criteria (0.5% revision/year)
- 936 patients (979 hips)
- 698 males (71,3%) vs 281 females (28,7%)
- Mean age: 42,7yo (16,4-50)
- Mean femur diam 52mm
- Mean FU 6,1 ans (3,1-9)



# Survivorship

Implant revision whatever the reason (septic or aseptic)

98,7% at 10 years (IC à 95% : 97,6-99,3)



NICE

# CONCLUSION

## What we know???



- For young patients RSA works better than THA
- Registry for results (Nice benchmark) is key point
- No head diameter under 48mm (to date no charged for the french health authority)
- Better results for men with OA (up than 97% at 15 y FU)