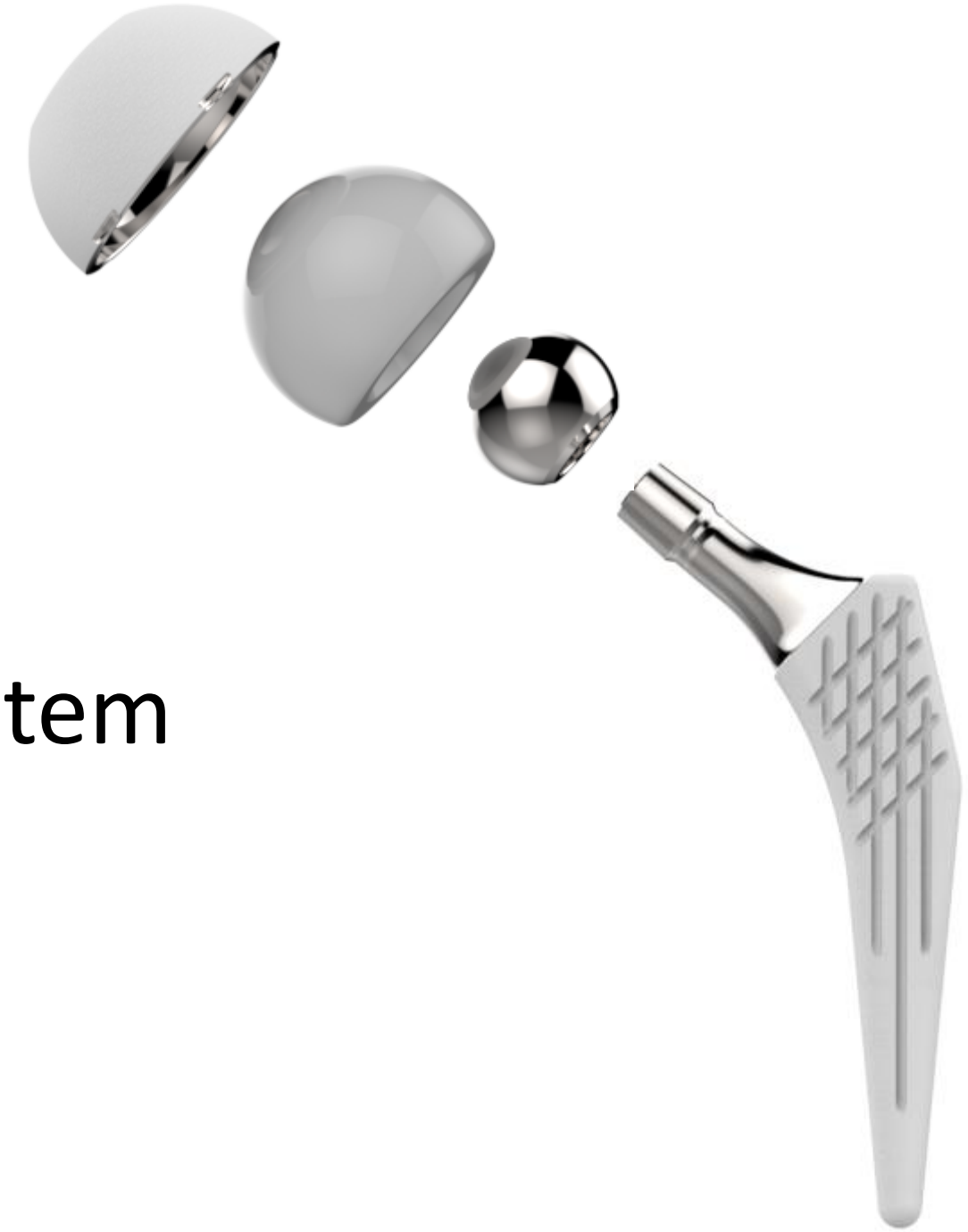
SYMBOL®

Global Hip System



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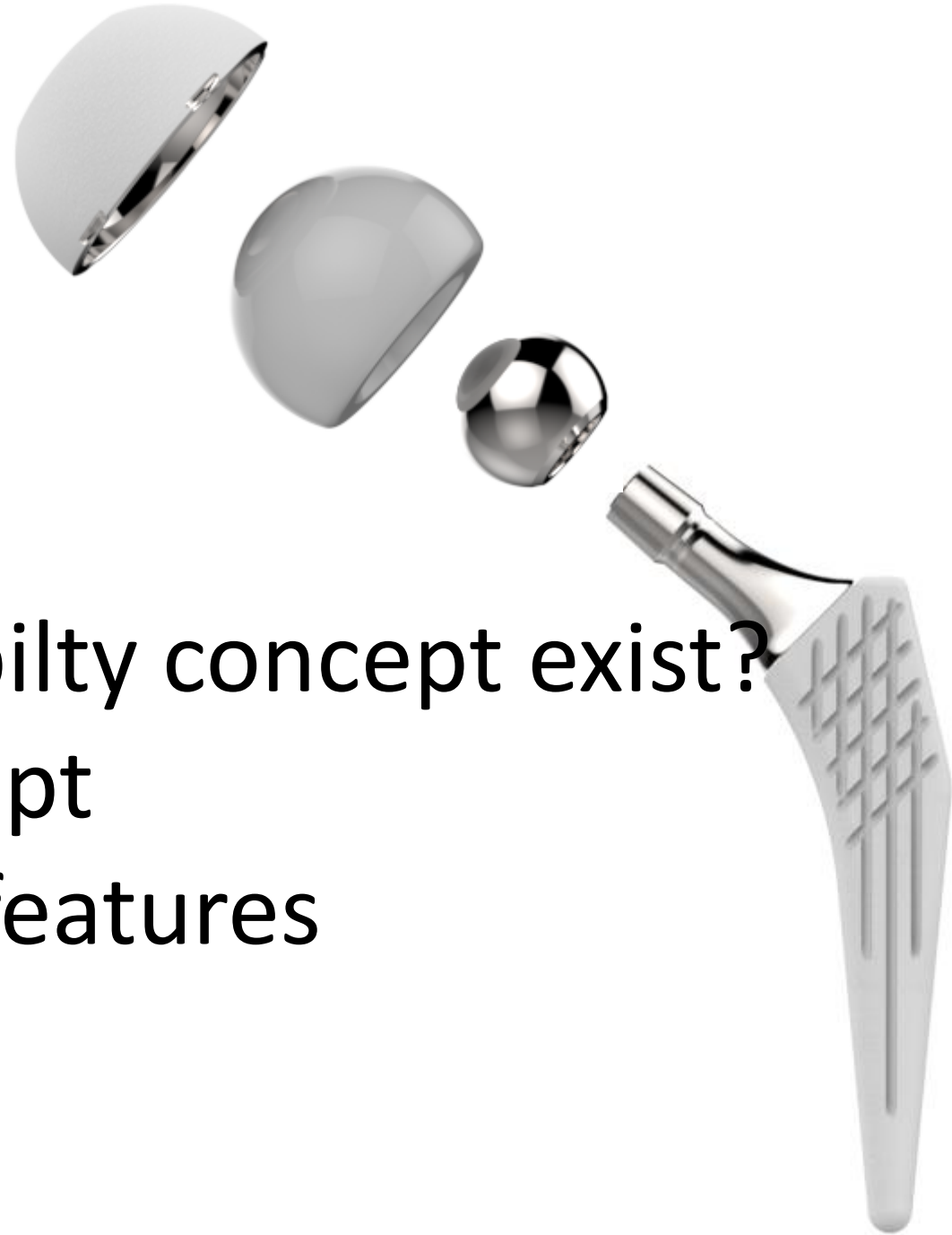

1/ Why does Dual Mobilty concept exist?
2/ Dual Mobility Concept
3/ Symbol ranges and features

Why does Dual Mobility Concept Exist?

1st reason of failure after THA = Instability

<u>Dislocation rates increase in the long run</u>

- 2% to 3% of early disclocationns after THA*
- 4,8% disclocations after 10 years**
- Up to 7% at 25 years **

*Chandler RW, Dorr LD, Perry J (1982) The functional cost of dislocation following total hip arthroplasty. Clin Orthop Relat Res 168–172 / Woo RY, Morrey BF (1982) Dislocations after total hip arthroplasty. J Bone Joint Surg Am 64:1295–1306
**Berry DJ, von Knoch M, Schleck CD, Harmsen WS (2004) The cumulative long-term risk of dislocation after primary Charnley, total hip arthroplasty. J Bone Joint Surg Am 86-A:9–14

Hip Cup Dual Mobility in THA

Société Française de Chirurgie Orthopédique et Traumatologique
84th Annual meeting, 12 November 2009
Symposium on Dual Mobility in THA

- **Prospective study in femoral neck fractures**
- **Retrospective study in primary procedures**

> 4000 cases included at 10 years of follow-up

Dislocation rate in Primary Procedures: 0.43%

Dislocation rates in FNF cases:

- **DM 5 - 10 x less dislocations than conventional THAs**

- **DM 2.9 – 4.7 x less dislocations than bipolar hemiarthroplasties implants (3.9 x less if POST approach)**

Hip Cup Dual Mobility in THA

Société Française de Chirurgie Orthopédique et Traumatologique
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Symposium on Dual Mobility in THA

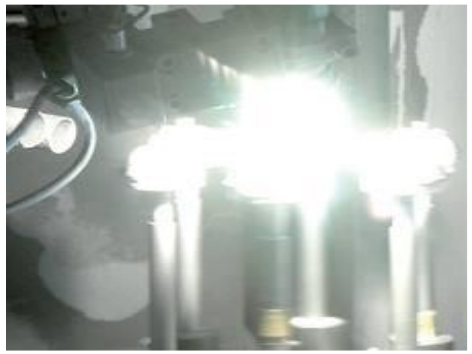
Other main conclusions

Survivorship according to coating :

- Porous titanium + HA : 100%
- Cobalt chromium + HA : 91%
- Stainless steel + HA : 89%
- Stainless steel + alumina + HA : 86%
- Porous coated stainless steel : 80%

What about material?

- Better results with CoCr



DUAL MOBILITY IN PRIMARY PROCEDURES…

- Clin Orthop Relat Res. 2007 Feb;455:202-8. **Unconstrained tripolar hip implants: effect on hip stability**.

  Guyen O, Chen QS, Bejui-Hugues J, Berry DJ, An KN.

- J Arthroplasty. 2007 Sep;22(6):849-58. Epub 2007 Jul 25. **Unconstrained tripolar implants for primary total hip arthroplasty in patients at risk for dislocation.**

  Guyen O, Pibarot V, Vaz G, Chevillotte C, Carret JP, Bejui-Hugues J.

167 primary THA with dual mobility in selected patients at risk for dislocation

No dislocation at 40.2 months mean FU (minimum 2-year FU)

Improved ROM to impingement → **improved STABILITY**

Revisions & Recurrent dislocations.....

- Clin Orthop Relat Res. 2009 Feb;467(2):465-72. doi: 10.1007/s11999-008-0476-0. Epub 2008 Sep 9. **Use of a dual mobility socket to manage total hip arthroplasty instability.** Guyen O, Pibarot V, Vaz G, Chevillotte C, Béjui-Hugues J.
- J Arthroplasty. 2015 Apr;30(4):631-40. doi: 10.1016/j.arth.2014.10.034. Epub 2014 Nov 10. **Can Dual Mobility Cups prevent Dislocation in All Situations After Revision Total Hip Arthroplasty?** Wegrzyn J, Tebaa E, Jacquel A, Carret JP, Béjui-Hugues J, Pibarot V.
- J Orthop Res. 2013 Jun;31(6):991-7. doi: 10.1002/jor.22314. Epub 2013 Jan 17. **Cementation of a dual-mobility acetabular component into a well-fixed metal shell during revision total hip arthroplasty: a biomechanical validation.** Wegrzyn J, Thoreson AR, Guyen O, Lewallen DG, An KN.
- J Arthroplasty. 2017 Dec 6. pii: S0883-5403(17)31060-4. doi: 10.1016/j.arth.2017.11.055. [Epub ahead of print] **Cementation of a Dual Mobility Construct in Recurrently Dislocating and High Risk Patients Undergoing Revision Total Arthroplasty.** Chalmers BP, Ledford CK, Taunton MJ, Sierra RJ, Lewallen DG, Trousdale RT.

- LOW DISLOCATION RATE IN REVISION
- MULTIPLE FIXATION OPTIONS :
  - Cemenless press-fit
  - Cementless + screws & pegs
  - Cemented into a cage
  - Cemented into a well-fixed shell
  - Cemented into porous-metal shell…

Part 1 : Conclusion

- Instability is the 1st risk of failure after THA
- Dual Mobility reduces the risk of dislocation by factor 8 to 10
- Dual Mobility is an alternative to disclocations
- Cemented DM in revisions case as a safer solution
- Better results with CoCr cup and Ti/HA coating

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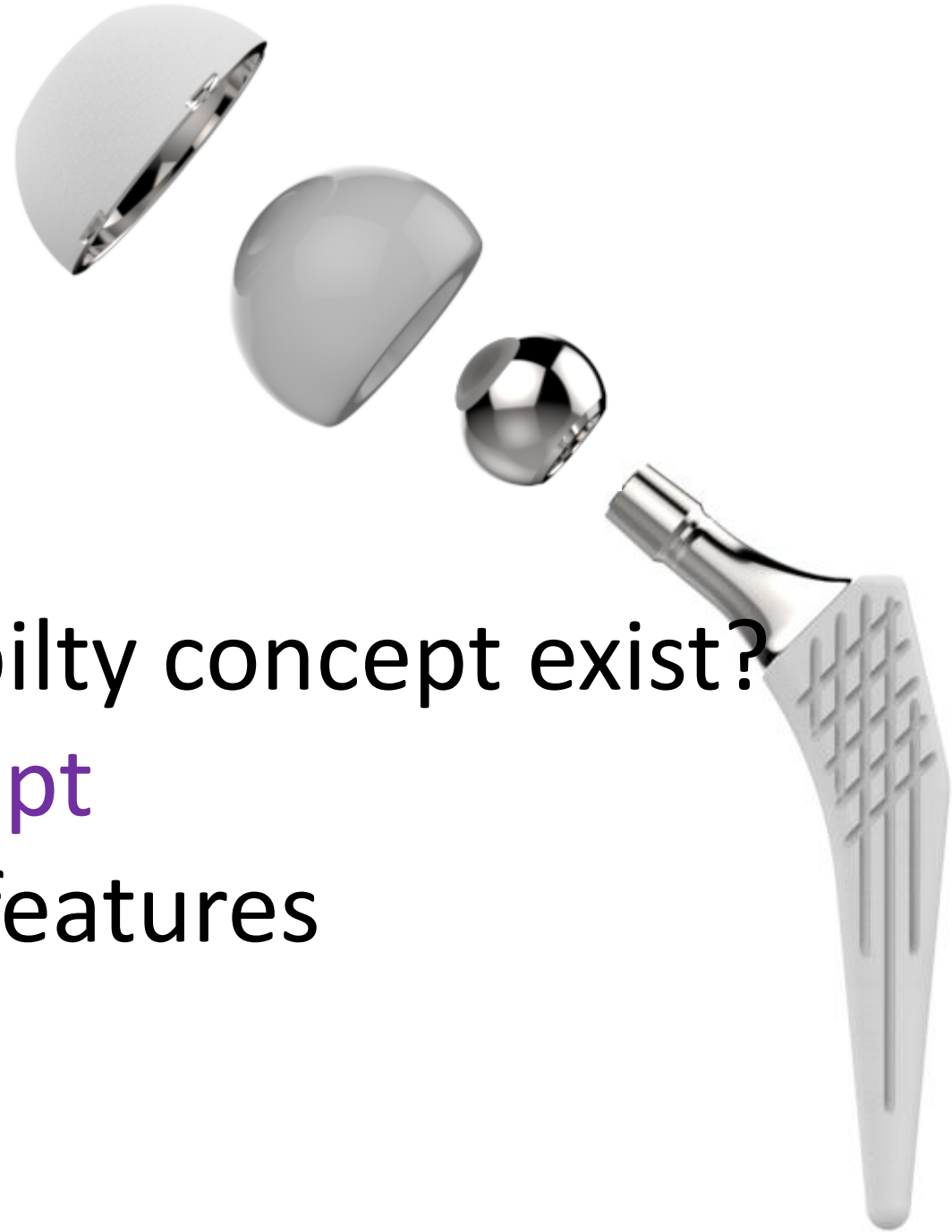

1/ Why does Dual Mobilty concept exist?

2/ Dual Mobility Concept

3/ Symbol ranges and features

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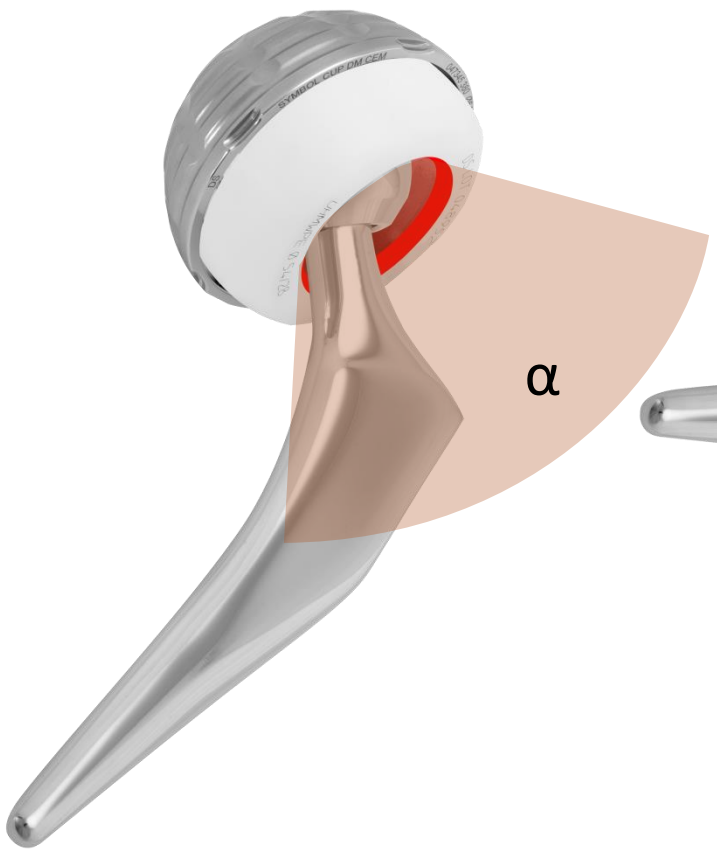
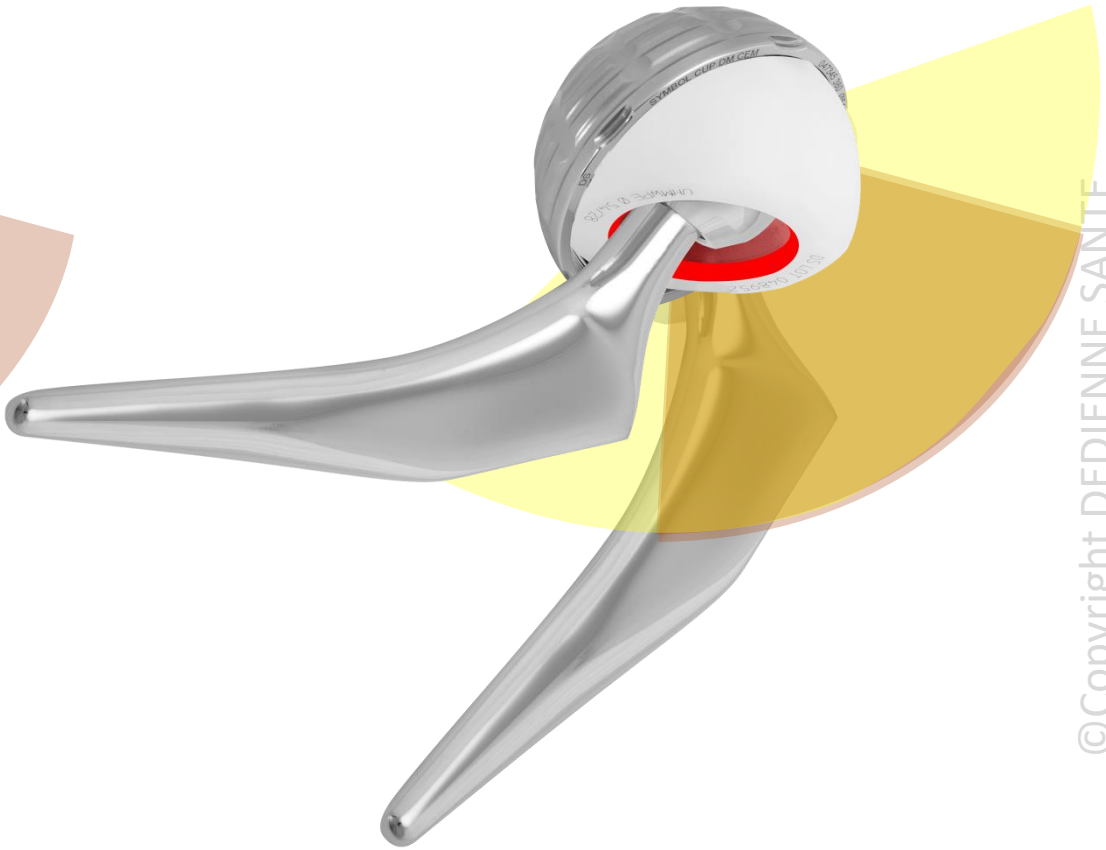
Dual mobility





DEDIENNE SANTÉ

SYMBOL®

Several designs on the market

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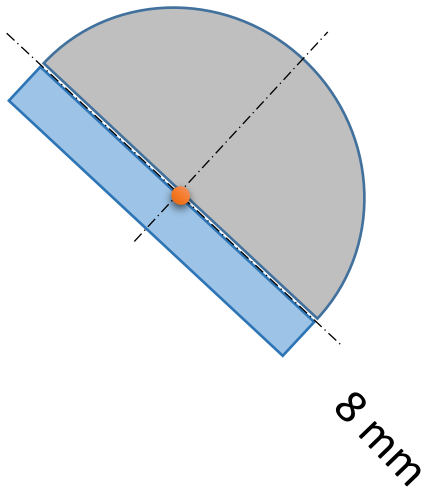
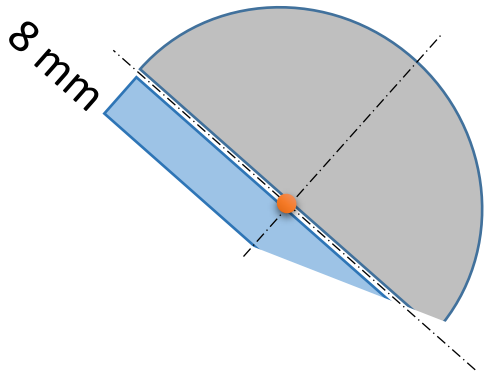
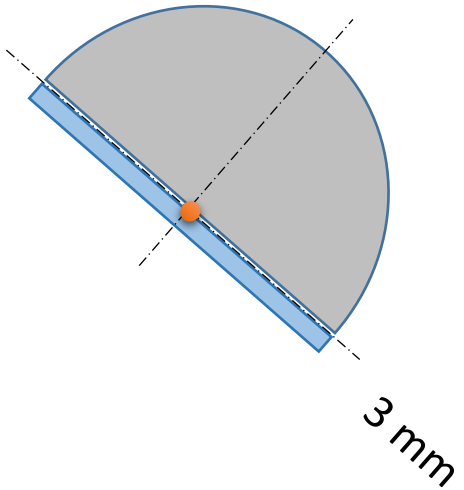
Several designs on the market



1976



1979



2000

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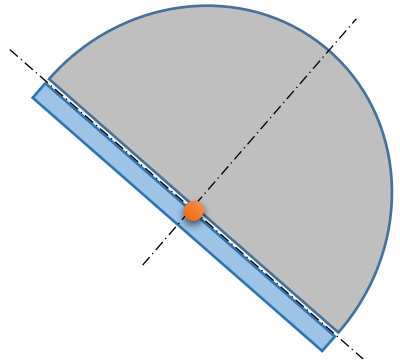
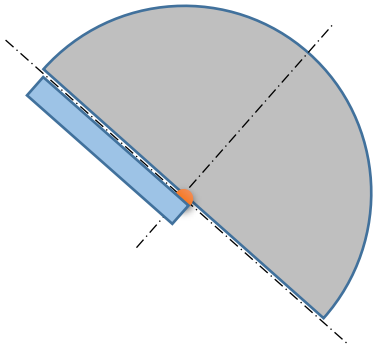
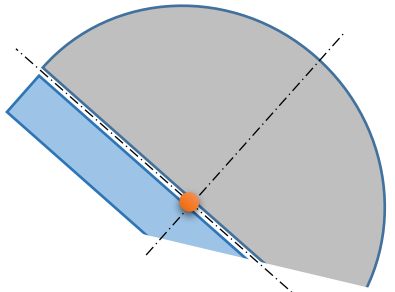
Several designs on the market





1995's



1970's

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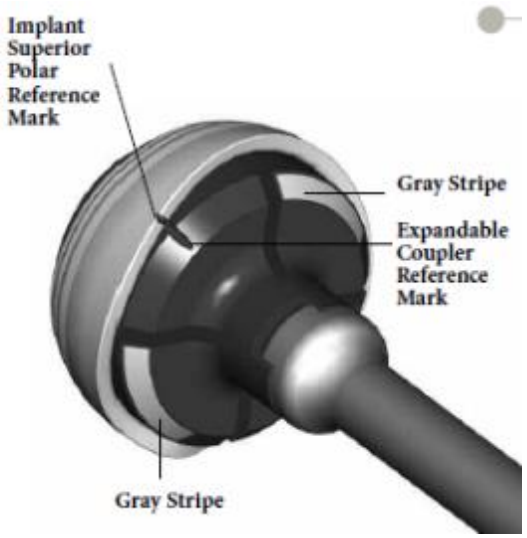
Several designs on the market : cut-out designs



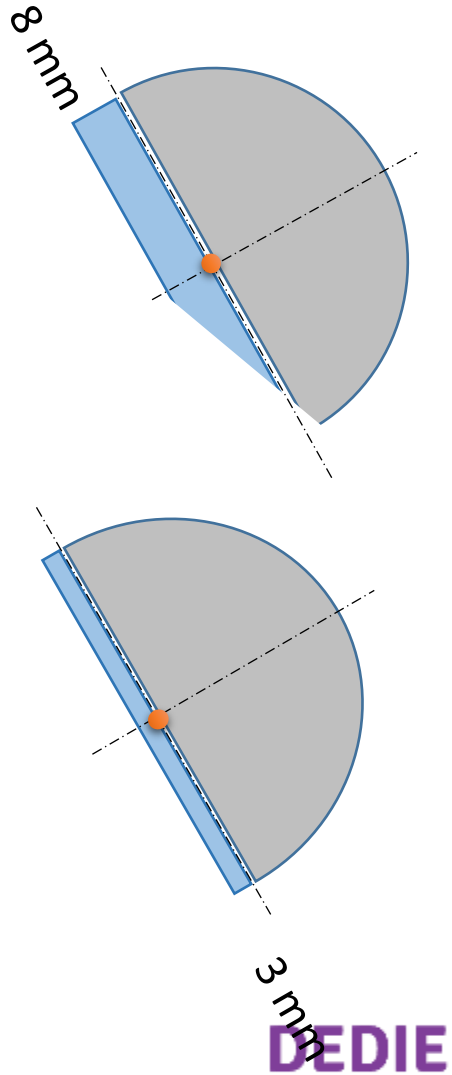
- Implants holding and handling
- Accurate positionning
- Impigements and Psoas pains

- No-touch impaction and holding
- Easy positionning (symetric and hemispheric)
- Less invasive approach and technique

SYMBOL®

But Dual Mobility Shell remains different with …

- Different Surgical technique
- Different reaming process
- Different impaction
- Different positionning



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Part 2 : conclusion

Dual Mobility gives stability

Dual Mobility is an interesting system

Part 2 : conclusion

Dual Mobility gives stability

Dual Mobility is an interesting system

BUT

Dual Mobility used to be surgically different

Part 2 : conclusion

Dual Mobility gives stability

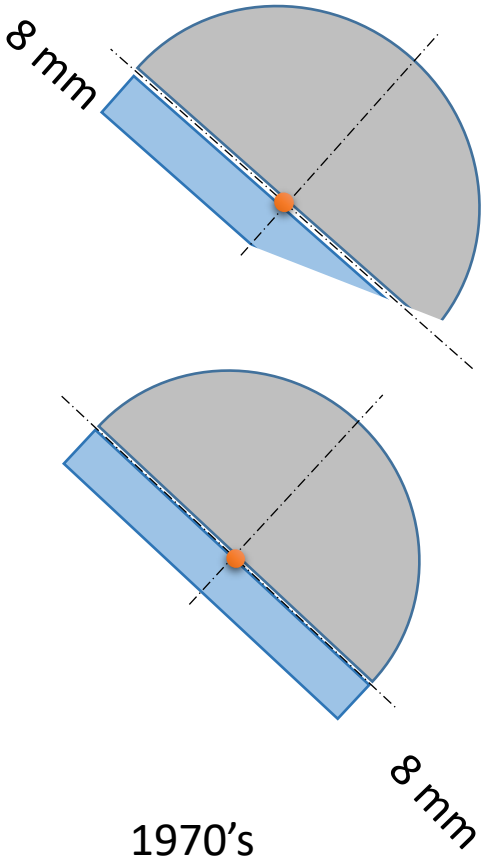
Dual Mobility is an interesting system

BUT

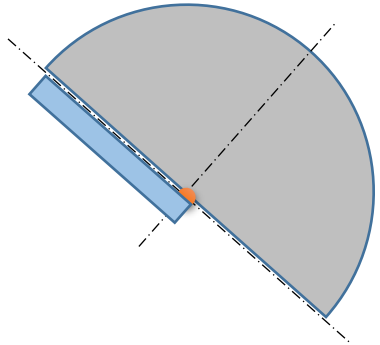
Dual Mobility used to be surgically different

WHY DON'T WE DESIGN **AN HEMISPHERICAL SHELL** WITH A DUAL MOBILITY LINER?

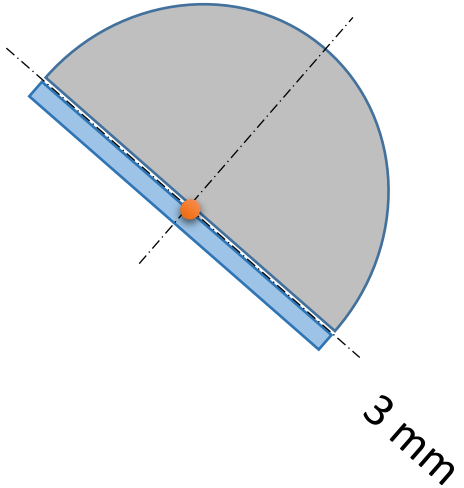
Several designs on the market



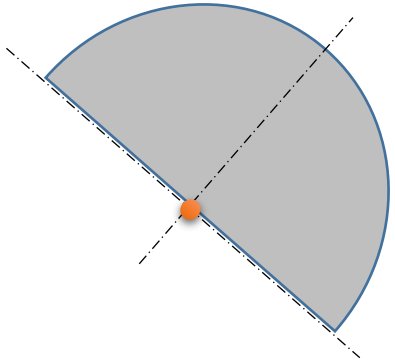
1970's



1995's

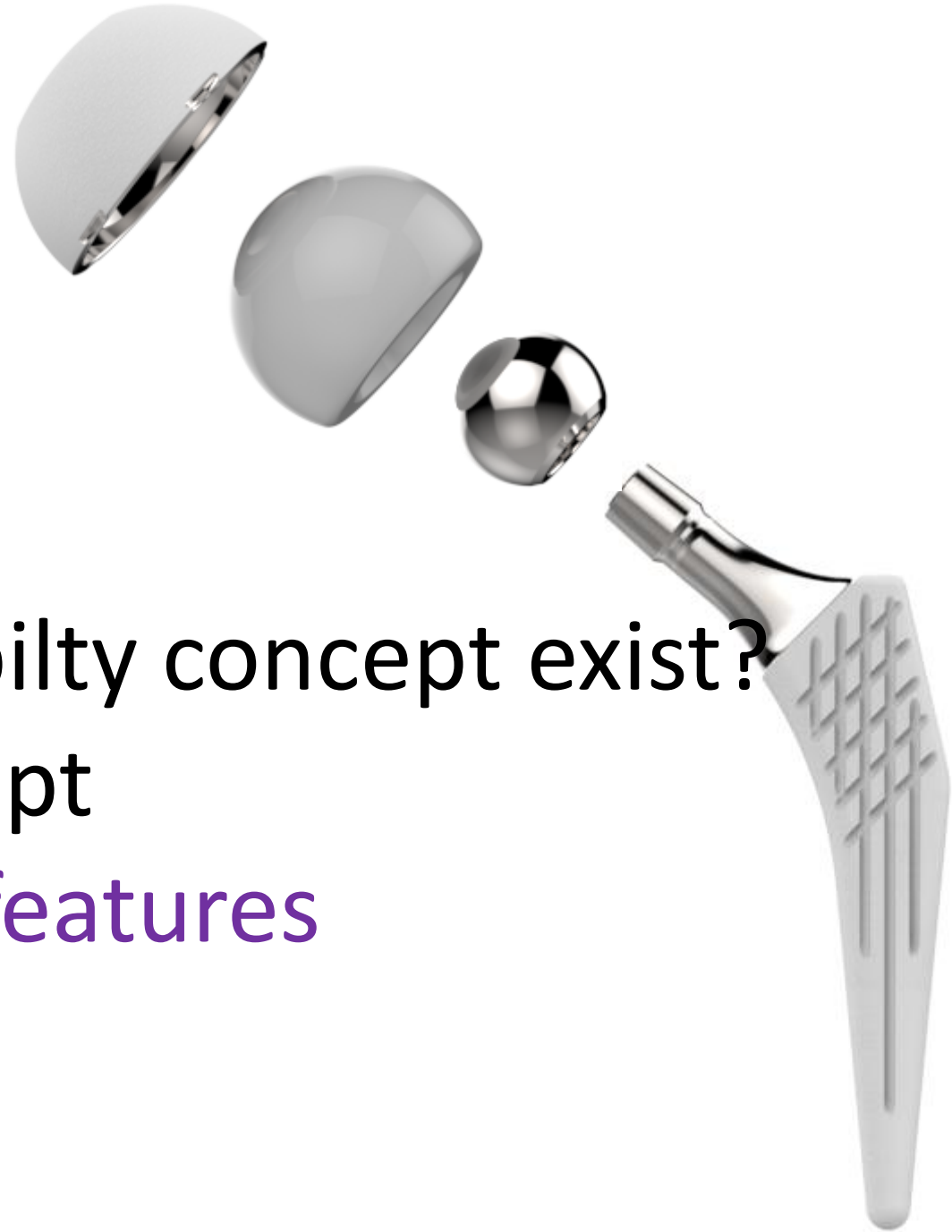


2000's



2014

SYMBOL®



1/ Why does Dual Mobilty concept exist?

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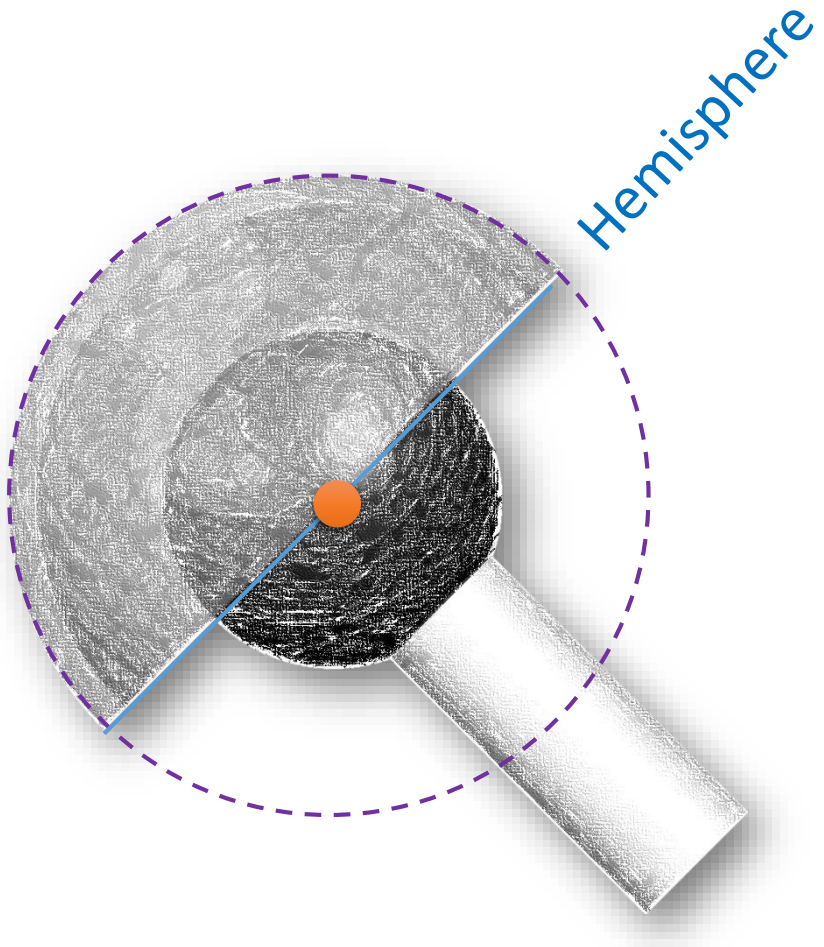
SYMBOL Concept



Concentric

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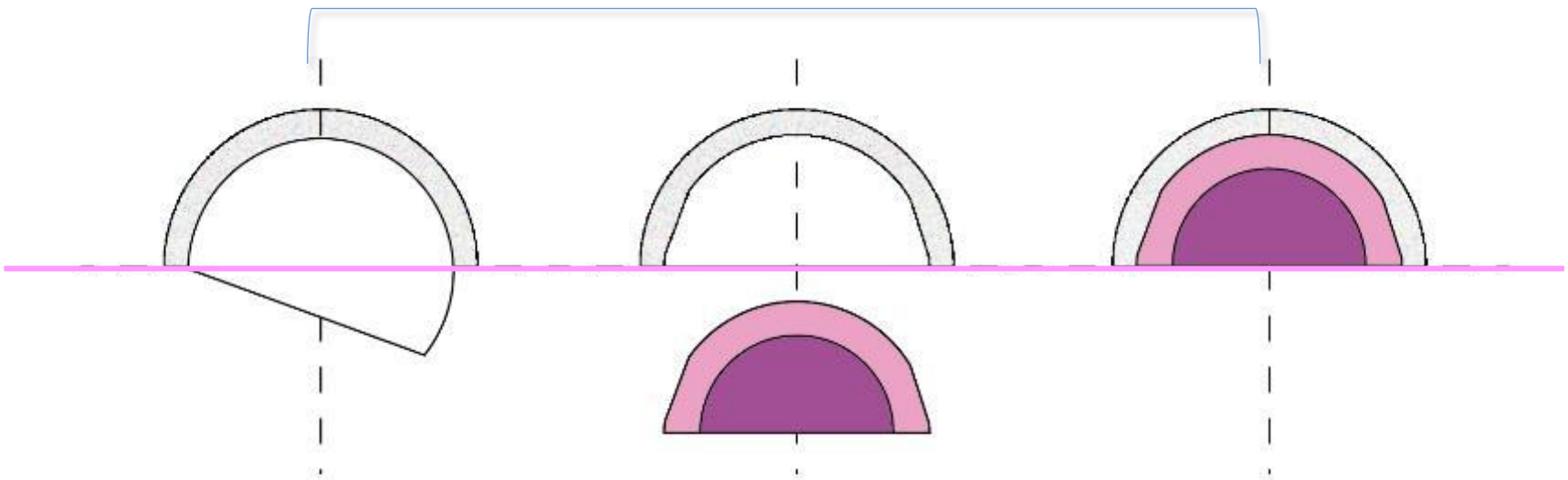
- Same External design for all shells



Dual Mobility **Impacted ceramic** **Pre-impacted ceramic**

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1 set of instruments / 5 shells

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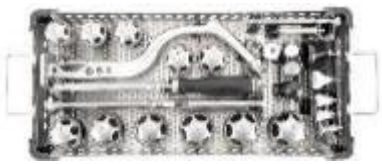

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SYMBOL®

Several designs on the market : Modular

52mm

52mm

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Cupules SYMBOL®

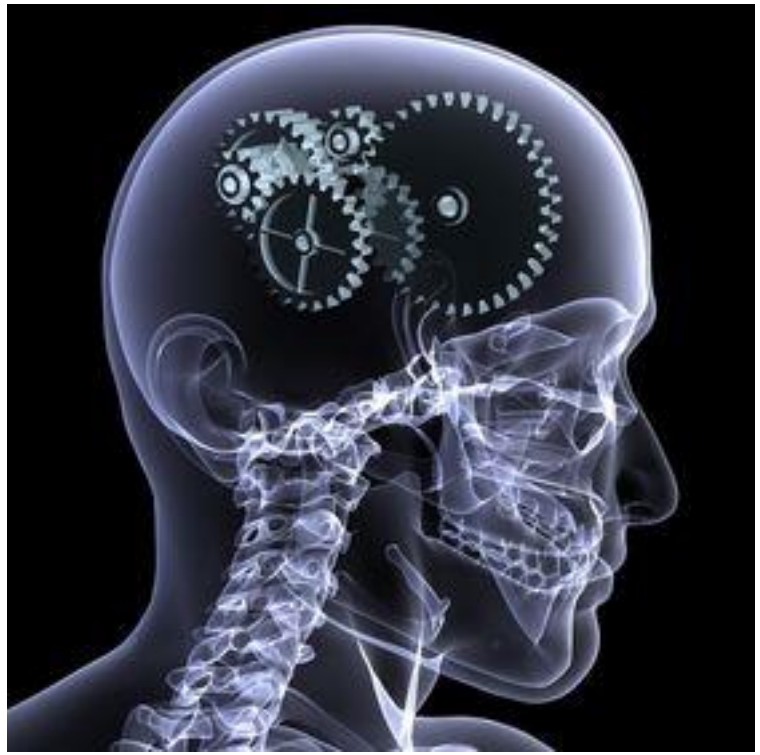
Only 1 set

DEDIENNE SANTÉ

Patented Impaction System

Part 3 : Conclusion

- All advantages from Dual Mobility Cups
- SYMBOL range of cups : same design
- 1 set for 5 shells
- A very confortable choice for the surgeon



SYMBOL DM Cups

- Last generation of Hemispherical DM cups
- 3 versions : cemented, HA, tripode HA
- >22 000 units sold