

PARVA

BONE PRESERVATION
ANATOMY RECONSTRUCTION
WITHOUT COMPROMISES

ADLER[®]
ORTHO

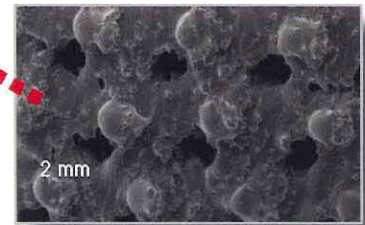


state of the art
technologies
for bone
preservation



Powder manufacturing technology

Adler Ortho has been the first to
employ it in Orthopaedics.
Implants are manufactured directly
out of Titanium powders.



TI-POR™

3-D bone ingrowth surface built in
one piece together with the implant.
It's not a coating

- MAXIMUM STABILITY
- NO DELAMINATION

CAD MODEL



REAL IMPLANT



When Femoral neck is preserved, the Implant has to adapt itself to a vast variety of anatomic variations (7) The ideal implant should as well be able to correctly restore the joint biomechanics (8). The Parva stem has been designed to achieve two main goals: to be versatile, achieving optimal fit and primary stability in presence of most anatomic variations, and after that get secondary stability thanks to the Ti-por™ surface. To be accurate, allowing precise joint biomechanics reconstruction in all conditions.



**THE PARVA
STEM
VERSATILITY
ACCURACY
STABILITY**

VERSATILITY

Fits most Anatomic variations.

The Parva stem can fit very differentiated morphotypes.

The implant design, together with its low diaphyseal invasivity, allows implantation in case of CCD angles between 120° and 140° (*) with total or partial femoral neck preservation.

On the left it's displayed an example of the cadaver studies performed to validate the Parva stem versatility (*) (*) Data on file at Adler Ortho



Modula™, the state of the art modular neck system, is used to optimize joint biomechanical reconstruction (9)

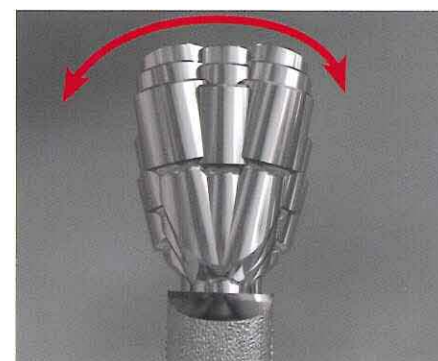
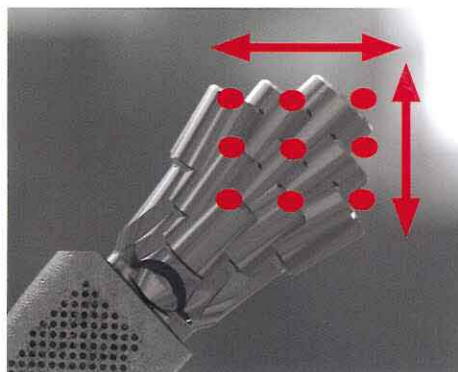
ACCURACY

Precise joint anatomy reconstruction.



Modula™

The comprehensive logic and simple modular neck system. 3 Offset options are coupled with a choice of 3 leg lengths and 3 version possibilities in a linear matrix. The surgeon can act on a single geometric parameter per time in a logic and independent fashion.

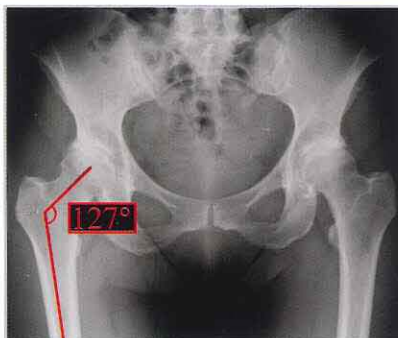
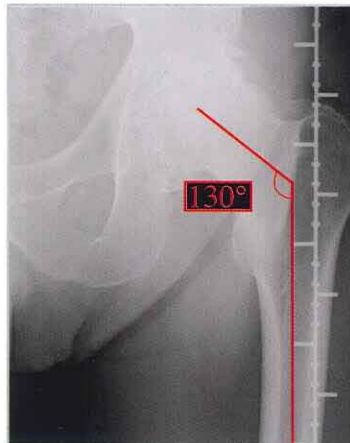


CLINICAL CASES



Female patient
70 years old
CCD angle 121°
Total Hip Replacement
performed on the right side.
On the left pre-op x-ray.
On the right, x-ray control
1 year post-op.

Male patient
75 years old
CCD angle 130°
Total Hip Replacement
performed on the left side.
On the left pre-op x-ray.
On the right, Post-op x-ray control.



Female patient
64 years old
CCD angle 127°
Bilateral Total Hip Replacement performed in two steps.
On the left pre-op x-ray.
On the centre 1 year follow up Post-op X-ray
control of the total hip replacement
performed on the left side.
On the right, post-op x-ray control after total
hip replacement on the right side .

PARVA

VERSATILITY
ACCURACY
STABILITY

Femoral neck preservation increases implant rotational stability (1:2)
The proximal femur is loaded in a more physiologic fashion reducing chances for stress shielding to occur (3)
Patient anatomy is respected and therefore the joint biomechanic behaviour is improved (4)

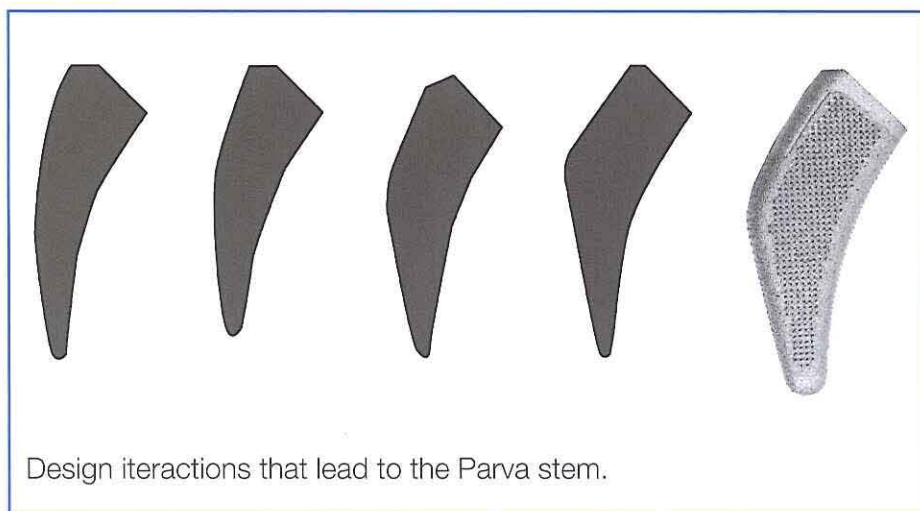
The *Parva* stem, thanks to its innovative design coupled with *Modula™* modular neck technology, allows the reachment of optimal primary stability and accurate hip joint reconstruction for almost all the possible anatomic variables.

STABILITY

Optimal Stability In all conditions

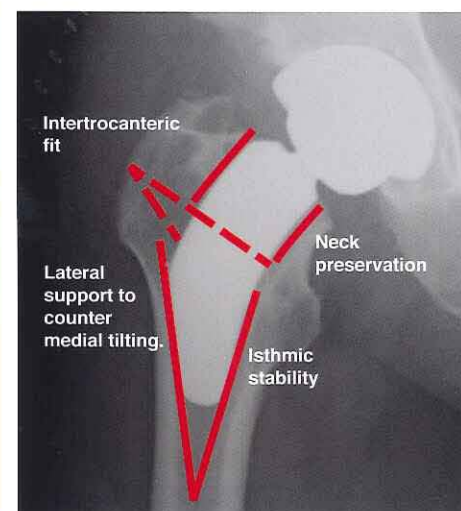
The main requisite for a long lasting uncemented implant would be to get optimal primary stability thanks

to the stem design, to a suitable instrumentation and surgical technique (5)(6)



On the right it's shown the final design chosen for the Parva stem. The concept of anchorage in the femoral isthmus has been kept. An Intertrochanteric "shoulder" has been developed. The implant has been proximally shaped in order to lay on the calcar area.

The Parva stem Fixation concepts



The *Parva* stem has been designed to achieve primary stability at the isthmus as well as intertrochanteric area.

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PARVA B0020-00

CODE	DESCRIPTION	SIZE	
0108209	PARVA STEM	9	
0108210	PARVA STEM	10	
0108211	PARVA STEM	11	
0108212	PARVA STEM	12	
0108213	PARVA STEM	13	
0108214	PARVA STEM	14	
0108215	PARVA STEM	15	
0108216	PARVA STEM	16	
0108217	PARVA STEM	17	
0108218	PARVA STEM	18	
0108219	STELO PARVA	19	(*)
0108220	STELO PARVA	20	(*)
0440110	MODULA NECK S.C. 12/14		0X
0440210	MODULA NECK S.C. 12/14		0A
0440220	MODULA NECK S.C. 12/14		0Y
0440310	MODULA NECK S.C. 12/14		0B
0440320	MODULA NECK S.C. 12/14		0C
0440330	MODULA NECK S.C. 12/14		0Z
0449110	MODULA NECK S.C. 12/14		9X
0449120	MODULA NECK S.C. 12/14		9AA
0449130	MODULA NECK S.C. 12/14		9BB
0449210	MODULA NECK S.C. 12/14		9A
0449220	MODULA NECK S.C. 12/14		9Y
0449230	MODULA NECK S.C. 12/14		9CC
0449310	MODULA NECK S.C. 12/14		9B
0449320	MODULA NECK S.C. 12/14		9C
0449330	MODULA NECK S.C. 12/14		9Z

CODE	DESCRIPTION	SIZE	
0514281	DELTA CERAMIC HEAD	DIAM. 28	SHORT
0514282	DELTA CERAMIC HEAD	DIAM. 28	MEDIUM
0514283	DELTA CERAMIC HEAD	DIAM. 28	LONG
0514321	DELTA CERAMIC HEAD	DIAM. 32	SHORT
0514322	DELTA CERAMIC HEAD	DIAM. 32	MEDIUM
0514323	DELTA CERAMIC HEAD	DIAM. 32	LONG
0514361	DELTA CERAMIC HEAD	DIAM. 36	SHORT
0514362	DELTA CERAMIC HEAD	DIAM. 36	MEDIA
0514363	DELTA CERAMIC HEAD	DIAM. 36	LONG
0514401	DELTA CERAMIC HEAD	DIAM. 40	SHORT
0514402	DELTA CERAMIC HEAD	DIAM. 40	MEDIUM
0514403	DELTA CERAMIC HEAD	DIAM. 40	LONG
0540321	METAL/METAL HEAD	DIAM. 32	SHORT
0540322	METAL/METAL HEAD	DIAM. 32	MEDIUM
0540323	METAL/METAL HEAD	DIAM. 32	LONG
0540361	METAL/METAL HEAD	DIAM. 36	SHORT
0540362	METAL/METAL HEAD	DIAM. 36	MEDIUM
0540363	METAL/METAL HEAD	DIAM. 36	LONG
0540401	METAL/METAL HEAD	DIAM. 40	SHORT
0540402	METAL/METAL HEAD	DIAM. 40	MEDIUM
0540403	METAL/METAL HEAD	DIAM. 40	LONG
0520281	Cr-Co-Mo HEAD	DIAM. 28	SHORT
0520282	Cr-Co-Mo HEAD	DIAM. 28	MEDIUM
0520283	Cr-Co-Mo HEAD	DIAM. 28	LONG

BIBLIOGRAPHY.

1.M. Thomsen and Others. Primary Stability of short stems designs compared to conventional and shortened conventional stems in THA. (EFORT 2005)

2.L.A. Whiteside and Others. Effect of neck resection on torsional stability of cementless total hip replacement. Am. J. Orthopaedics 24:70-76 (1995)

3.F. Pipino and Others. Tissue Sparing Surgery: 25 yrs experience with Femoral neck Preserving Hip Arthroplasty. J. Orth. Traum. 7:36:41 (2006)

4.P. Rossi and Others. TSS and Traditional Surgery in Hip and Knee Replacement. J. Orth. Traum. 8:157-163 (2007)

5.H. Malchau and Others. Micromotion of femoral stems in THA. A randomized study of cemented, HA Coated and Porous-Coated Stems with Roentgen stereophotogrammetric analysis. JBJS Am (1994) 76: 1692-1705.

(*) Items available on request.

6.C.A. Engh and Others. Quantification of implant micromotion, strain shielding and bone resorption with Porous Coated Anatomic medullary locking femoral prosthesis. CORR (1992), 250: 13-29

7.P.C. Noble and Others. The Anatomic basis of Femoral Component Design. CORR 235:148-163 (1988)

8.F. Traina and Others. Modularità e Offset. GIOT 2007; 33 (suppl. 1) : S28-S30

9.F. Traina and Others, Sex Differences in Hip Morphology: Is stem Modularity effective for Total Hip Replacement?. JBJS Am. 2009;9:1 Suppl 6:121-8

10) M. Schiraldi and Others. Parva: A novel Hip Stem. Presentation given to the 2010 ISTA (International Society of Technology in Arthroplasty Meeting (Dubai 7-9 October 2010).