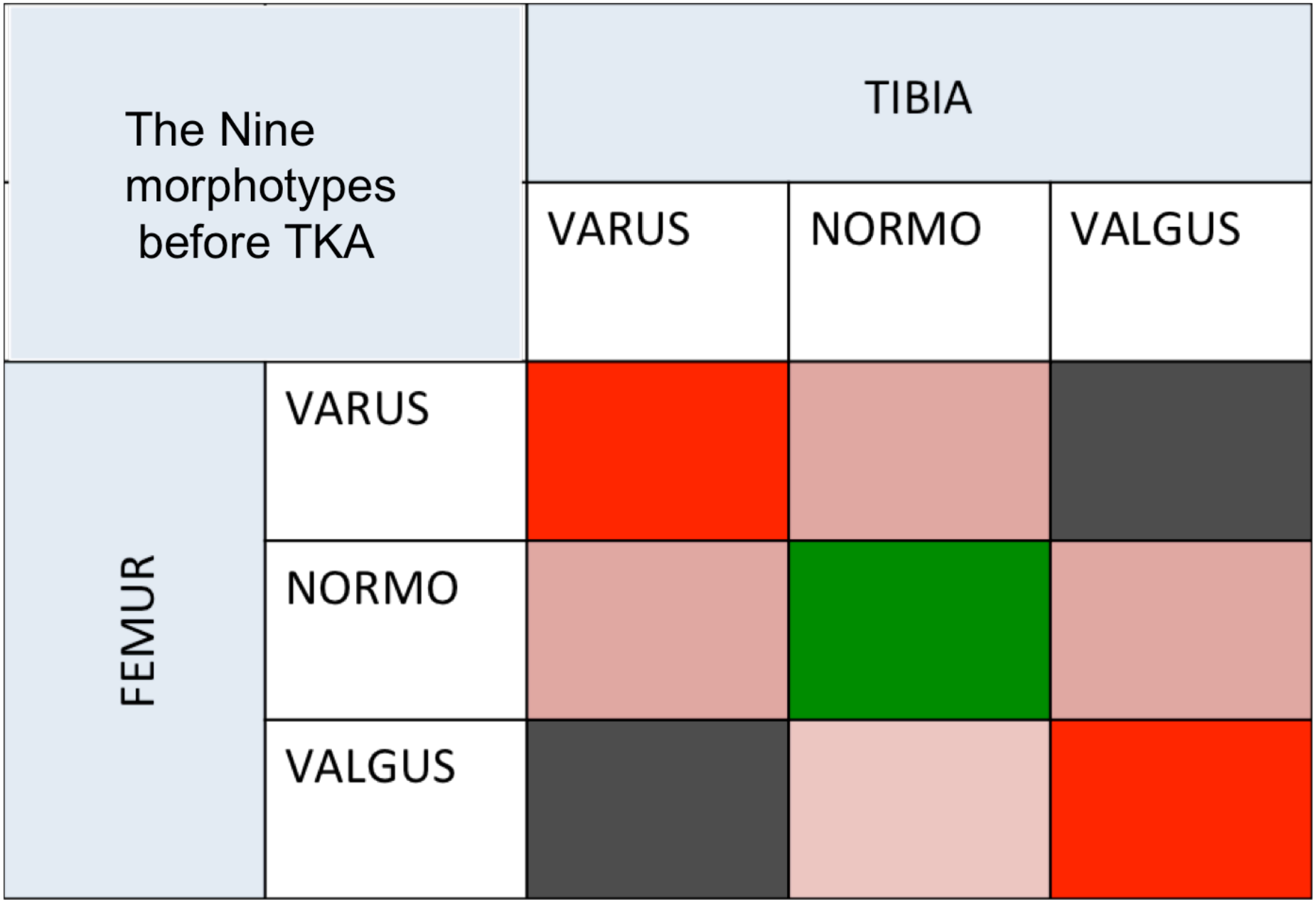
Five points to optimizing primary TKA

1- adapt the goals (customized alignment)



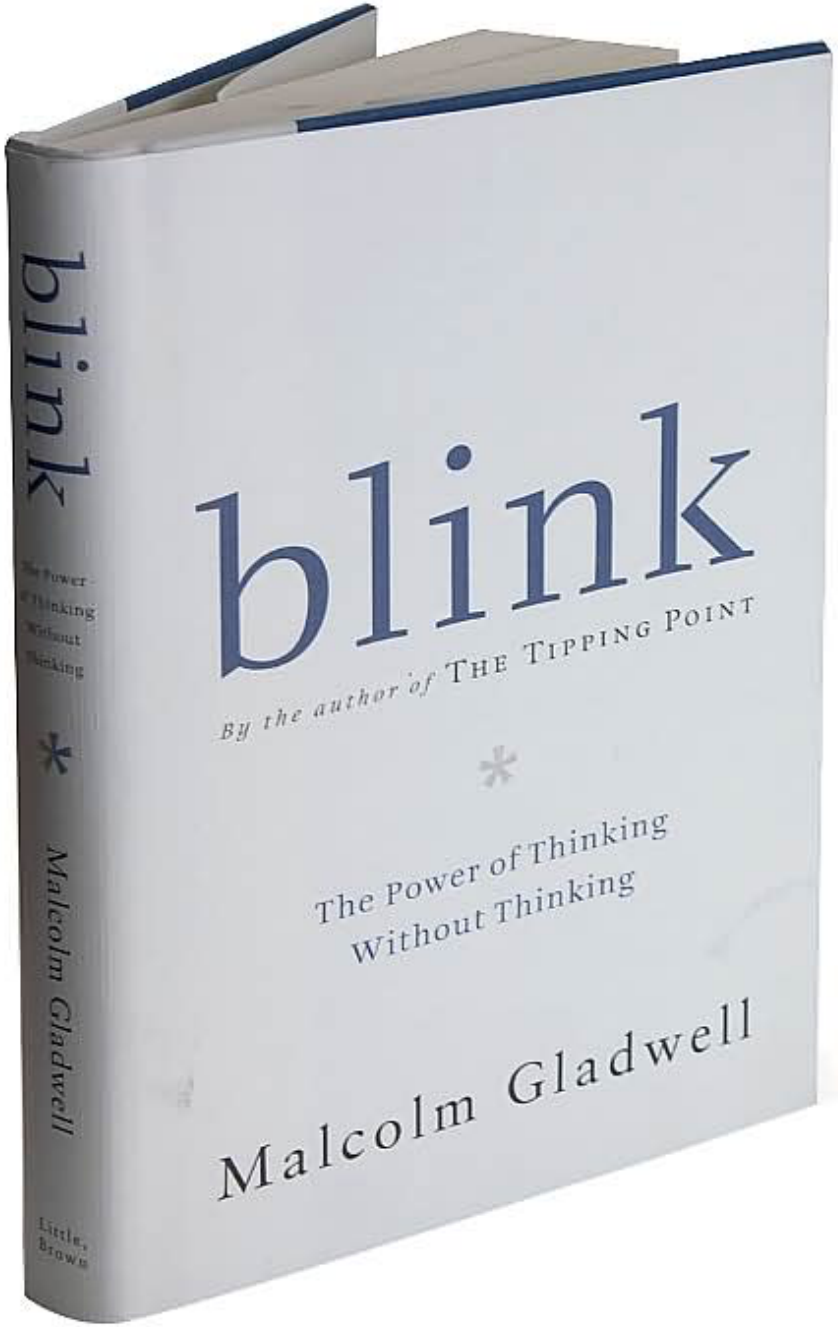

The Nine morphotypes before TKA
TIBIA
VARUS
NORMO
VALGUS
FEMUR
VARUS
NORMO
VALGUS

The Nine morphotypes before TKA		TIBIA		
		VARUS	NORMO	VALGUS
FEMUR	VARUS	5%	10%	3%
	NORMO	30%	27%	8%
	VALGUS	2%	10%	5%

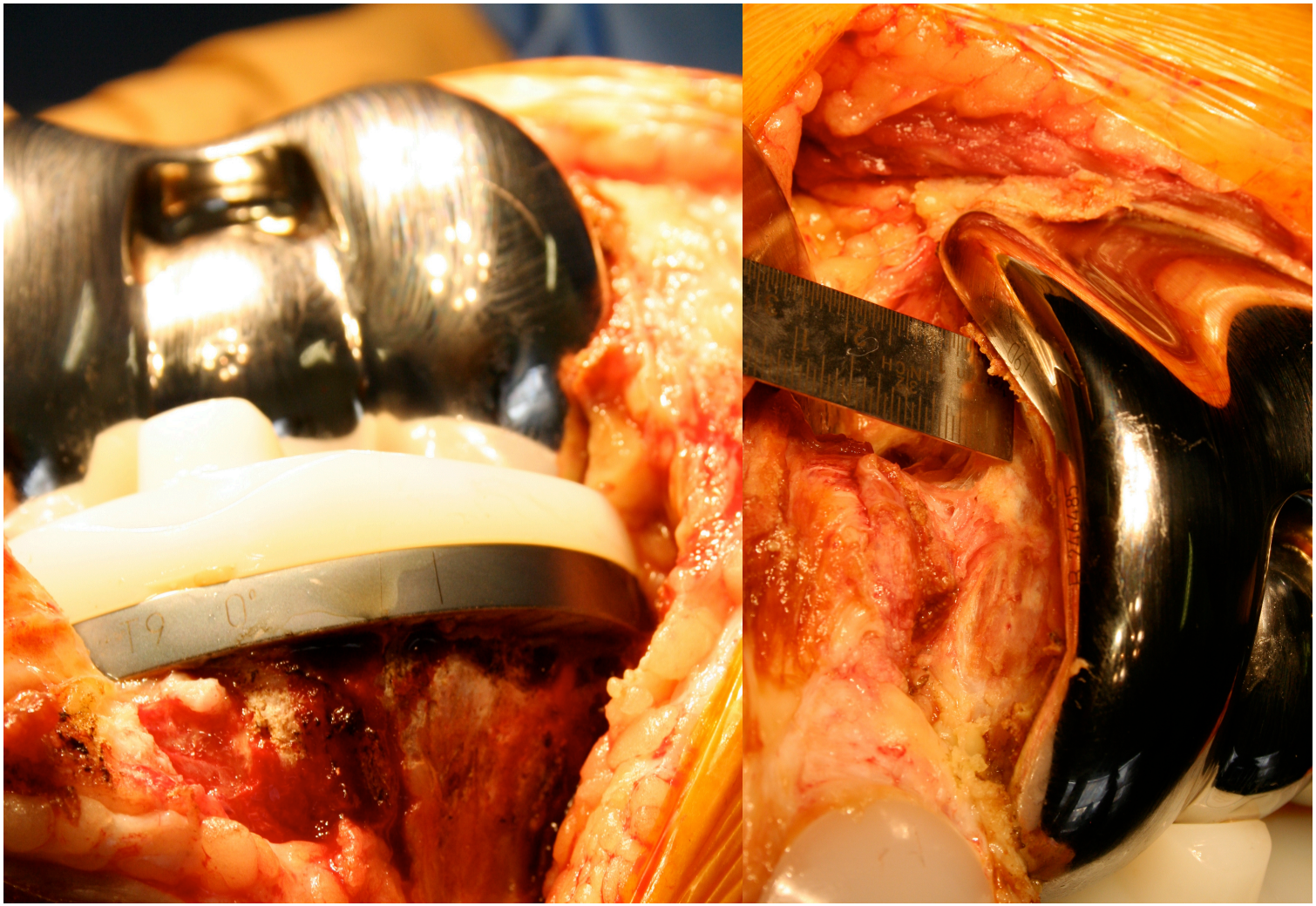
2- adapt the bone cuts
(customized resections)

3- Follow your experience

Follow the most sophisticated surgical tool

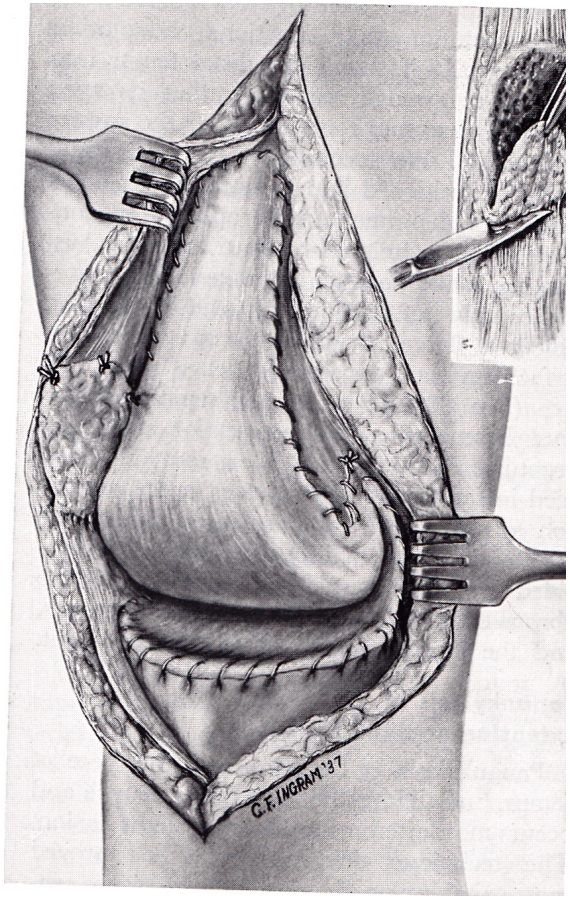

blink
The Power of Thinking Without Thinking
*
Malcolm Gladwell
Little, Brown
blink
By the author of THE TIPPING POINT
*
The Power of Thinking
Without Thinking
Malcolm Gladwell

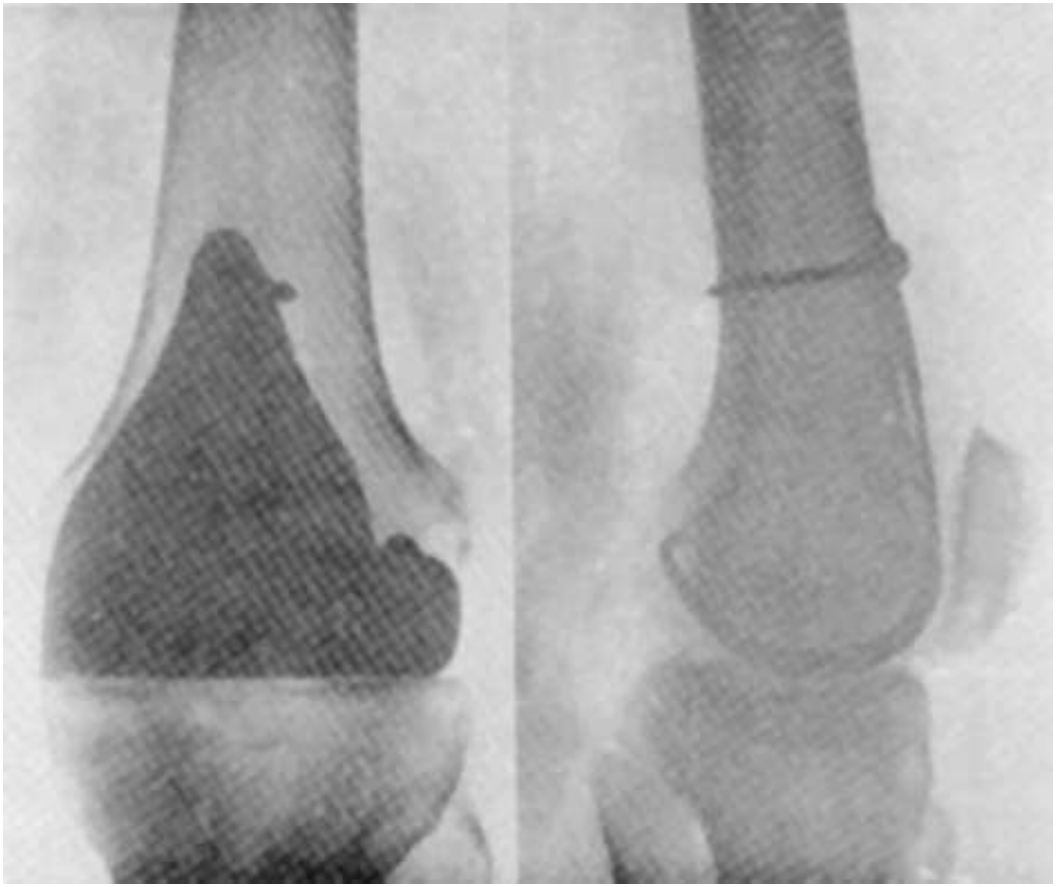
4- adapt the size



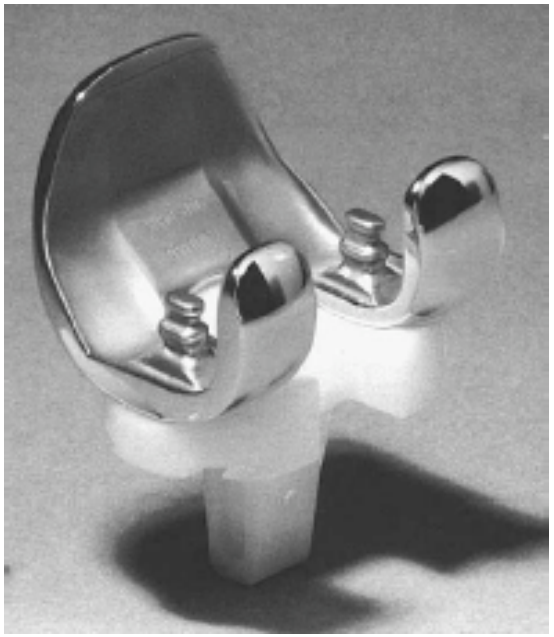
Bonnin et al. KSSTA 2013

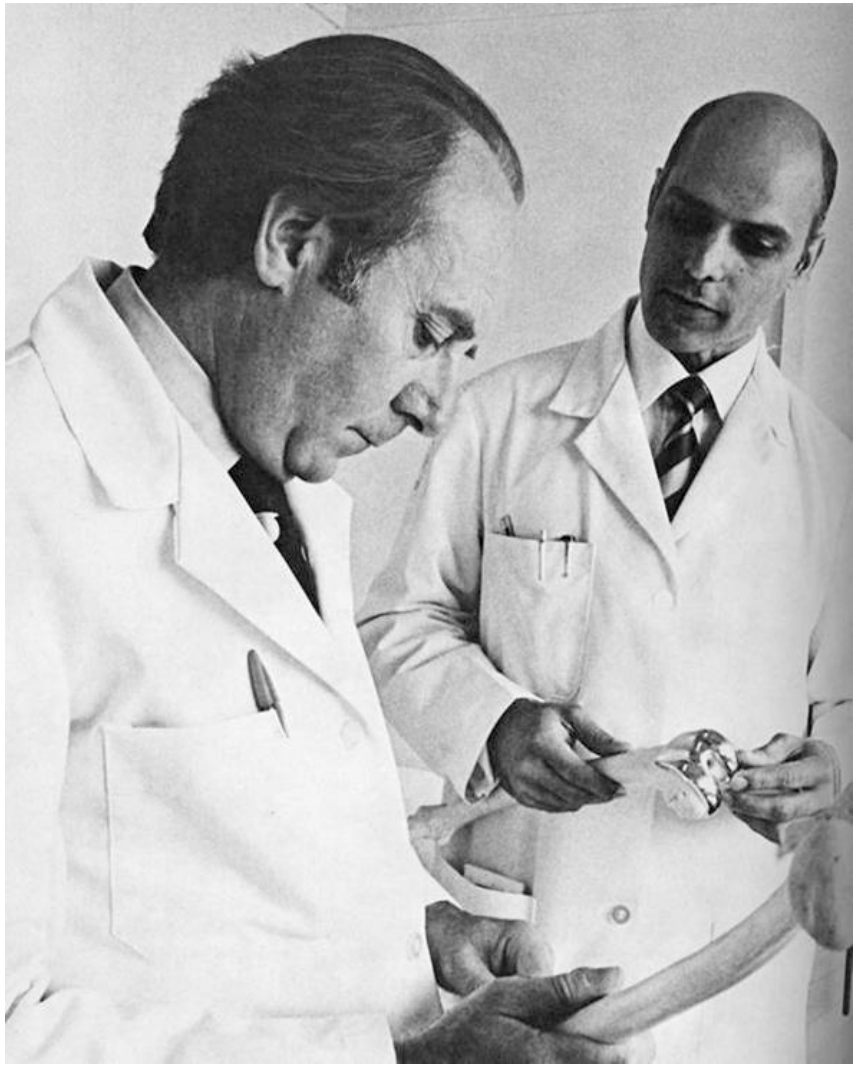
5- adapt the shape
(customized implants?)



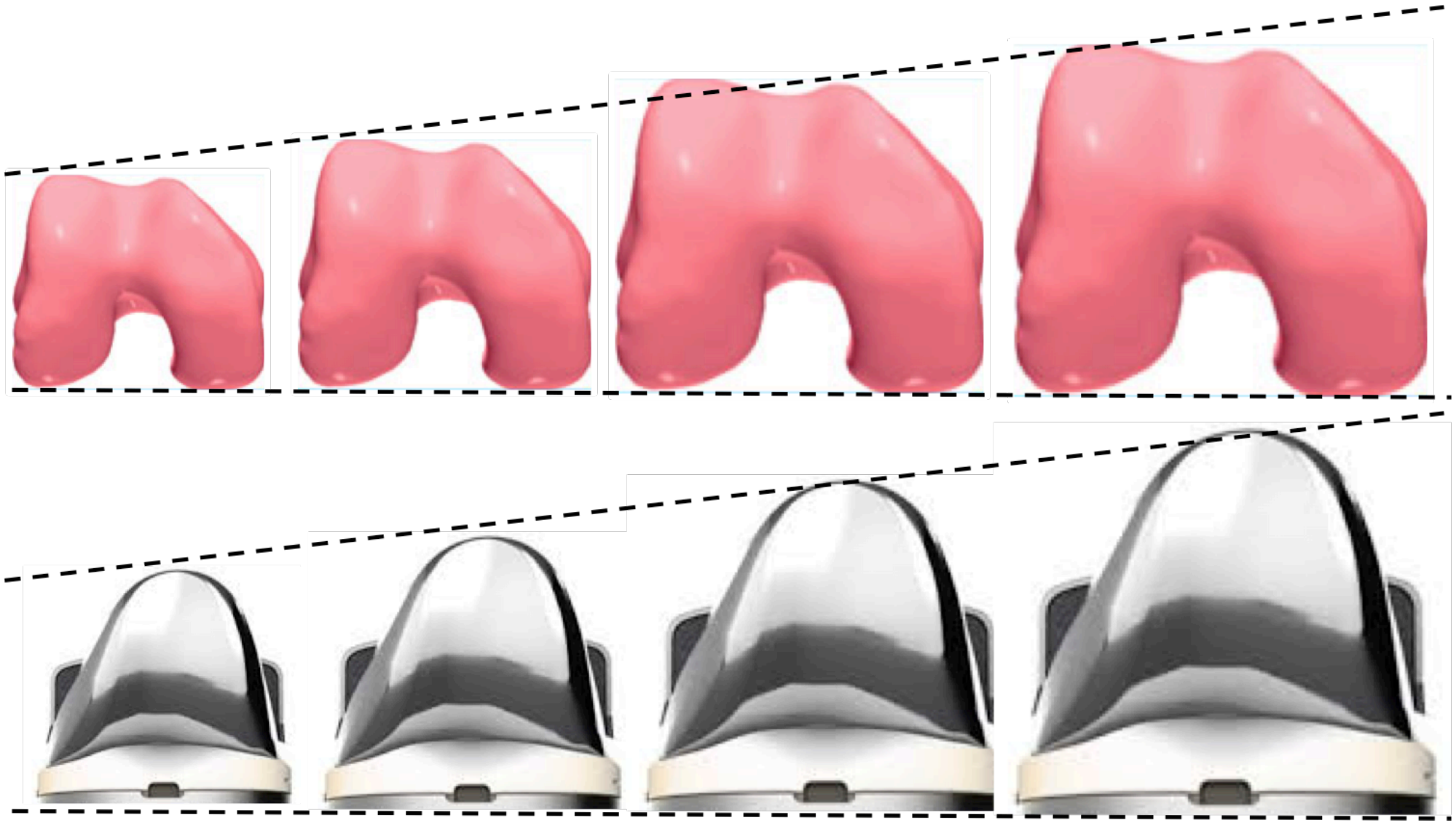


Campbell 1938





Proportional evolution



THE BONE & JOINT JOURNAL

■ KNEE

Morphometric analysis of the distal femur in total knee arthroplasty and native knees

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Aims

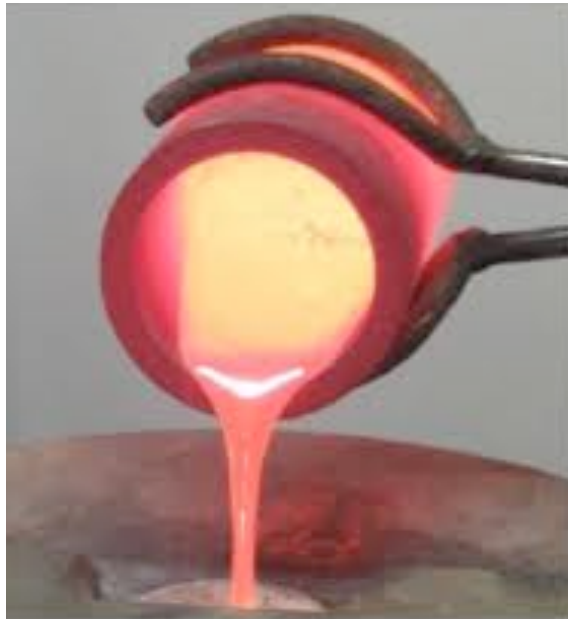
Analysis of the morphology of the distal femur, and by extension of the femoral components in total knee arthroplasty (TKA), has largely been related to the aspect ratio, which represents the width of the femur. Little is known about variations in trapezoidicity (i.e. whether the femur is more rectangular or more trapezoidal). This study aimed to quantify additional morphological characteristics of the distal femur and identify anatomical features associated with higher risks of over- or under-sizing of components in TKA.

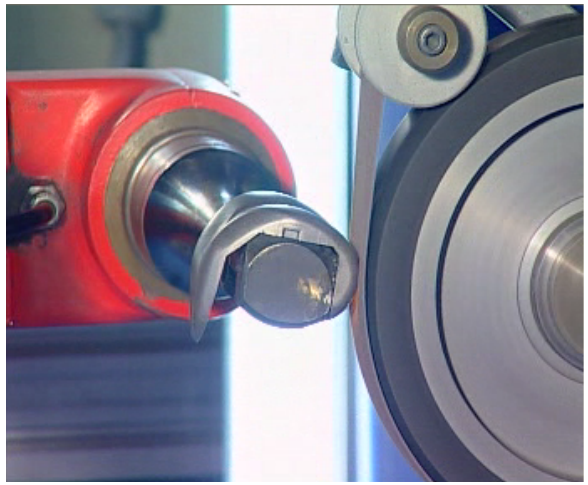
Methods

We analysed the shape of 114 arthritic knees at the time of primary TKA using the pre-operative CT scans. The aspect ratio and trapezoidicity ratio were quantified, and the post-operative prosthetic overhang was calculated. We compared the morphological characteristics with those of 12 TKA models.

Industrial limitations

- Titanium: failures
- Chromium-Cobalt
- Mould are expensive
- Machining is difficult
- Large scale production






Thank you
Toutes les photos de LYON ! http://www.Lyon-Photos.com