MAKO – Robotic Assisted Joint Surgery

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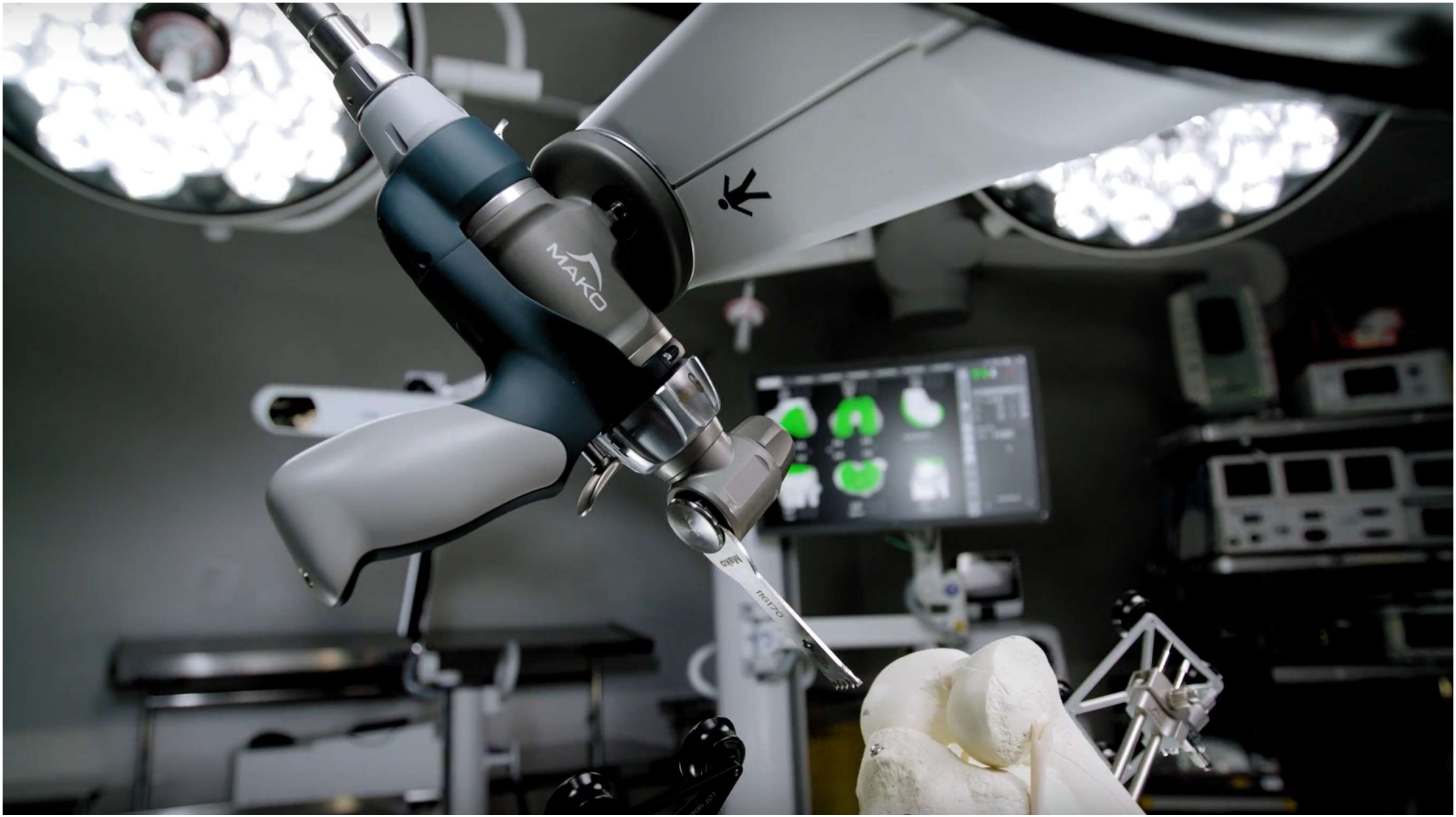
What is all the fuss about?

- History of Joint replacement techniques and evidence based landmark improvements.
- Reliable reproducible results every time.
- Paradigm shift from Analogue to Digital era.
- Less invasive surgery = Better physiological reaction = Enhanced Recovery

The
Stryker Legacy
1930
1940
1950
1970
1990
Howmedica
1998
1980
2005
stryker
MAKO
NOT FOR HUMAN USE DEMO SYSTEM

Patient Journey

- Seen in clinic, history and examination, xray to confirm diagnosis
- Informed consent shared agreement, after failed conservative treatments…
- CT to marry up the Real Patient and Virtual Computer Navigated Model (Robot)
- Pre-op Planning
- Surgery
- Rehab


MAKO

Focal half
knee arthritis

Final bone cut and component positions were 5 and 3 times more precise[13]

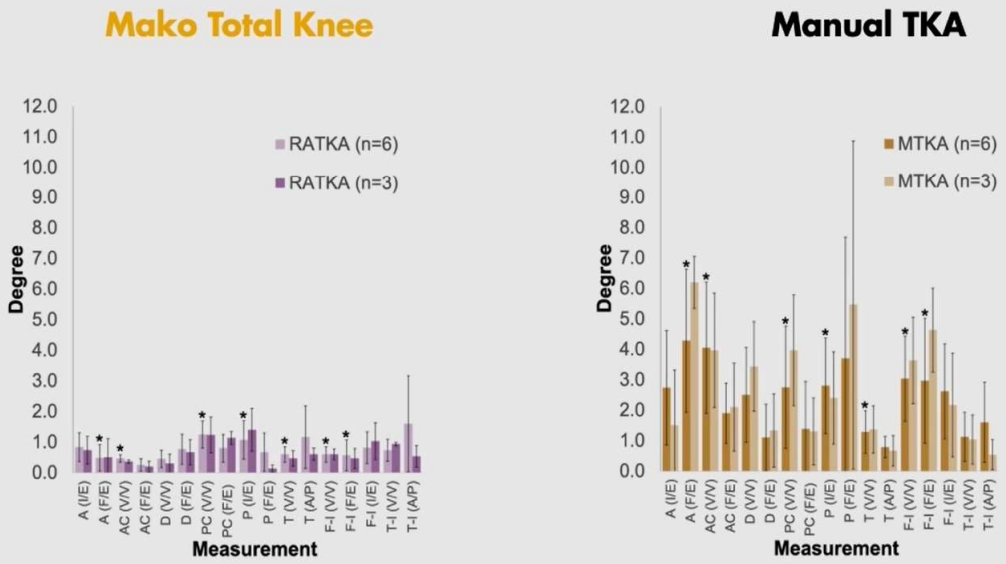
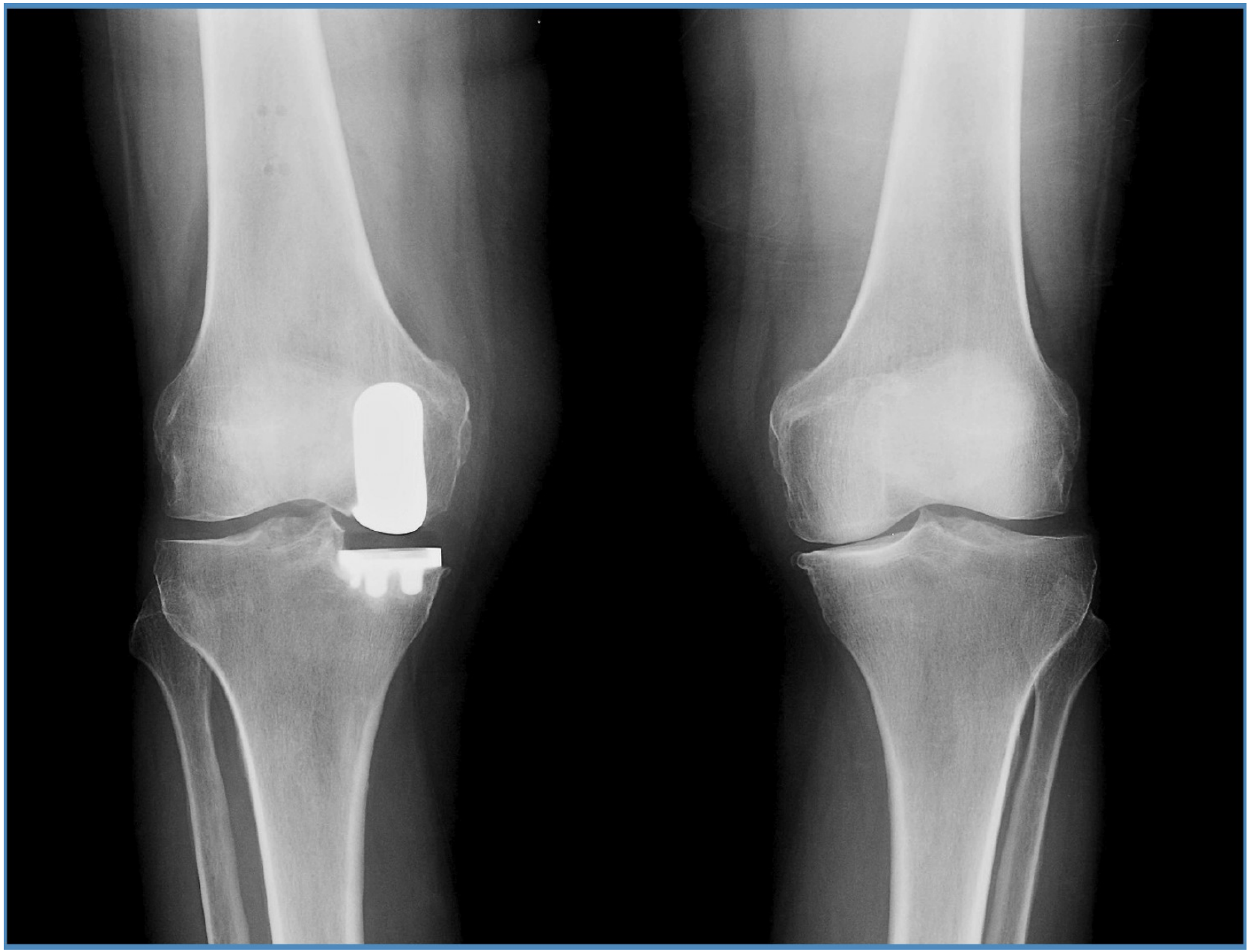


Figure 1. Comparison of RATKA and MTKA mean cuts and implant position to plan for all 6 matched pairs (n=6) and last 3 matched pairs (n=3). For final bone cut to plan, on the femur, A = Anterior, AC = Anterior Chamfer, D = Distal, PC = Posterior Chamfer, and P = Posterior, and on the tibia, T = Tibia. For final component position to plan, F-I = Femoral Implant, T-I = Tibial Implant. V/V = varus or valgus, F/E = flexion or extension, I/E = internal or external, and A/P = anterior or posterior slope. Error bars represent standard deviation. *Indicates a significant difference between RATKA and MTKA for n=6, with RATKA having less variance.



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