

Kinematic Alignment



SCAN TO WATCH VIDEO

Kinematic Alignment is the surgical philosophy used by Dr Liew for every total knee replacement. Rather than forcing each knee to a fixed mechanical axis, it positions the implant to match each patient's own unique anatomy. The alignment is literally personalised — even the two knees of the same patient will have different targets. The result is a knee that feels, moves, and functions more naturally.

THE TECHNIQUE

01 Preoperative Planning

3D imaging maps your unique knee anatomy with sub-millimetre precision.

02 Patient-Specific Guides

Custom-made cutting guides matched to your bone geometry.

03 Anatomical Positioning

Implant placed at the patient's own joint line — not a mechanical axis.

04 Ligament Preservation

All native ligaments preserved: LCL, MCL, popliteus, and capsule.

AT A GLANCE

IMPLANT

Cobalt Chromium

BEARING

Specialised HKPE

STUDIED

20+ Years

APPROACH

Patient-Specific

"The alignment is unique to each and every person."

— Dr Chien-Wen Liew

FREQUENTLY ASKED QUESTIONS

Q. How is kinematic alignment different from traditional surgery?

Traditional mechanical alignment sets all knees to the same axis. Kinematic alignment adapts the implant position to each patient's own anatomy.

Q. Are my ligaments preserved?

Yes. The aim is to preserve all surrounding ligaments — LCL, MCL, popliteus, and all capsular structures.

Q. Will my knee feel more natural after surgery?

The majority of patients note a more natural feel with kinematic alignment. Studies show improved patient-reported outcomes compared to mechanical techniques.

ABOUT THE SURGEON

Dr Chien-Wen Liew exclusively performs total hip replacements via the direct anterior approach and total knee replacements via kinematic alignment only. He utilises patient-specific technology for both procedures, and practices from Orthopaedics 360 — within the Eastwood Private Hospital Precinct.

Dr Chien-Wen Liew

Hip and Knee Replacement Surgeon

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