



SCAN TO READ MORE

Patient Specific Technology

Patient-specific technology refers to the use of each patient's own CT scan data to plan and execute their knee replacement. A 3D model of the knee is created, and custom cutting guides are manufactured to match the individual's anatomy precisely. This eliminates the guesswork of intraoperative measurement and allows kinematic alignment to be executed with reproducible accuracy. Dr Liew uses patient-specific instruments for every total knee replacement he performs.

THE TECHNIQUE

01 CT Scan & 3D Planning

Your knee modelled in three dimensions from your own CT data.

02 Custom Cutting Guides

Patient-specific guides manufactured to your exact bone geometry.

03 Intraoperative Precision

Guides eliminate manual measurement and improve reproducibility.

04 Kinematic Alignment

Combined with PSI, kinematic targets achieved accurately every time.

AT A GLANCE

PLANNING

CT-Based 3D

GUIDES

Custom-Made

ALIGNMENT

Kinematic

USAGE

Every TKR that Dr Liew Performs

"Planned to your anatomy.

Executed with precision."

— Dr Chien-Wen Liew

FREQUENTLY ASKED QUESTIONS

Q. What is a patient-specific instrument?

A custom-made cutting guide manufactured from your CT scan that fits only your bone. It guides the saw cuts to the pre-planned kinematic position.

Q. Is this available at all hospitals?

No. Patient-specific instruments require additional planning time and cost. Dr Liew considers them essential and uses them for every knee replacement he performs.

Q. Does this mean I need a CT scan before surgery?

Yes. A CT scan is required to produce the 3D plan and manufacture your custom guides. This is arranged as part of your pre-operative preparation.

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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