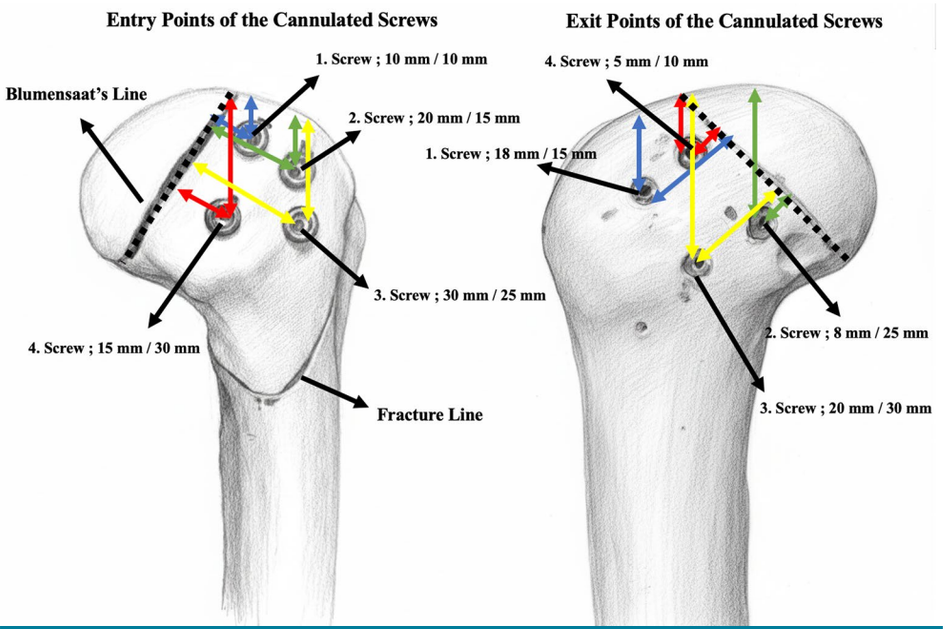
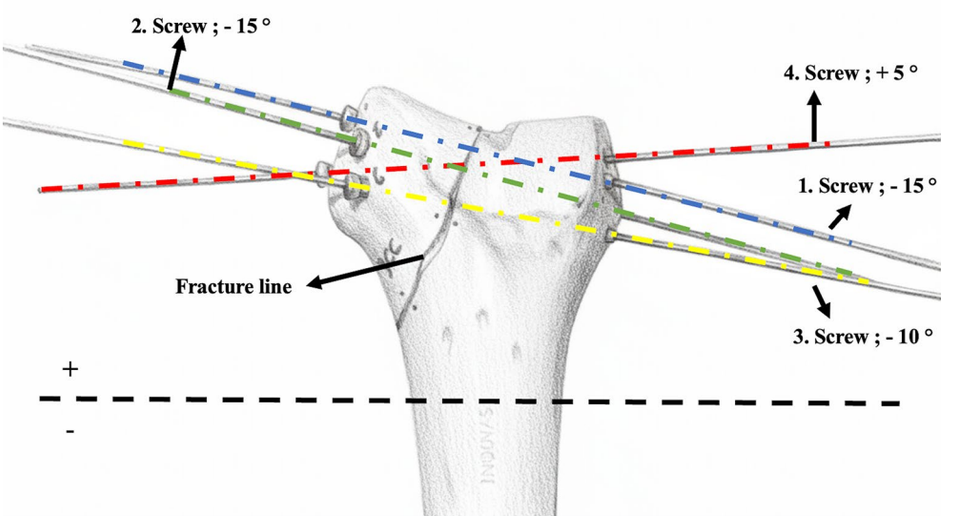
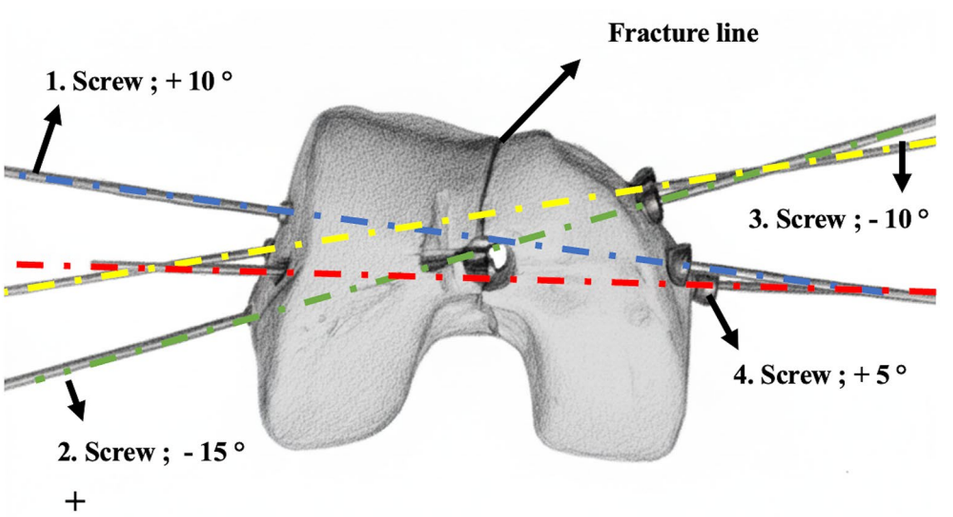


SUPPLEMENTARY FIGURE 1. Entry and exit points of the cannulated screws. Illustration showing the standardized entry (left) and exit (right) locations for the four 6.5-mm cannulated screws used in the fixation constructs. Colored arrows indicate the measured distances (mm) from each screw's entry and exit point to the Blumensaat line and the medial condylar rim, with the corresponding values provided next to each label. The fracture line is outlined to demonstrate the relationship between screw placement and the simulated fracture plane.



SUPPLEMENTARY FIGURE 2. Angulation of the cannulated screws. Illustration showing the planned trajectories and coronal plane angulations of the four 6.5-mm cannulated screws across the medial distal femur. Colored dashed lines correspond to the individual screw paths, with measured insertion angles indicated next to each label: Screw 1, –15°; Screw 2, –15°; Screw 3, –10°; and Screw 4, +5°. The simulated fracture line is outlined to demonstrate the relationship between screw orientation and the osteotomy plane.



SUPPLEMENTARY FIGURE 3. Transcondylar trajectories of the cannulated screws. Inferior (axial) view illustrating the planned axial angulations of the four 6.5-mm cannulated screws across the medial distal femur. Colored dashed lines represent the screw paths, with insertion angles indicated next to each label: Screw 1, +10°; Screw 2, –15°; Screw 3, –10°; and Screw 4, +5°. The simulated fracture line is outlined to demonstrate the relationship between screw orientation and the osteotomy plane.