Osteotomies are a well-known treatment to unload the affected knee compartment in cases of lower limb malalignment. Distal femoral osteotomies (DFO) should be considered in the presence of isolated lateral compartment arthritis. The opening wedge technique has been well studied and results show that the technique allows for a more precise correction with a survival rate of around 80% at 7 years.

Surgical Technique


- In this study, the authors reported functional outcomes using the Knee Injury and Osteoarthritis Outcome Score (KOOS) for 24 consecutive patients with lateral knee osteoarthritis treated with DFO.
- KOOS increased significantly as compared with baseline during the first year by 28% to 122% for all five subscores. This notable gain in functional outcomes remained at 10-year follow-up for those with surviving osteotomy. Six knees (25%) were converted to total knee arthroplasty (TKA) at a mean of 6.4 years (CI 3.3–9.6, range 4.0–11.8). The DFO survival rate was 74% at 10 years.


- The authors followed 21 knees (20 patients) long term or until failure after undergoing DFO. The probability of survival at 10 years was 64% (95 CI 48–80%).
- The authors concluded DFO is effective for the treatment of lateral compartment arthritis in the indicated patient with valgus deformity.


- Four patients underwent TKA (19%) at a mean of 4.5 years. The cumulative survival rate for the procedure was 79% at 5 years.
- Functional outcomes scores (KOOS Pain and International Knee Documentation Committee) in the surviving cohort improved significantly from baseline.

- This study reported on 6 patients (7 knees) after undergoing DFO with a mean follow-up of 6.5 years.
- Clinical outcomes were assessed by the Oxford Knee Score. The mean Oxford Knee Score improved from 13.1 ± 8.6 to 26 ± 12.5 from preoperation to most recent follow-up.
- No patients required additional surgery.


- In this study, 30 patients (30 knees) were managed with DFO for the treatment of noninflammatory lateral-compartment arthritis with an associated valgus deformity.
- The authors reported 25 patients (83%) had a satisfactory result, 2 (7%) had a fair result according to the Hospital for Special Surgery rating system, and 3 (10%) were converted to a TKA. With conversion to TKA as the end point, the cumulative 10-year survival rate for all patients was 87% (95% CI, 69% to 100%).


- The authors reported on 20 patients (22 knees) after undergoing opening DFO for lateral tibiofemoral osteoarthrosis of a valgus knee.
- Eighteen knees had good or excellent results (80%), 2 had fair results (9.5%), and 2 had poor results (9.5%). The 8-year survival rate was 91% (CI 69–100%).
- The mean preoperative International Knee Society score increased from 49.28 to 74.23 at the most recent follow-up.

References