



# Use of Opteform<sup>®</sup> to Repair Failed Total Knee Prosthesis with Osteolysis

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## **Presentation**

A 58-year-old, 335 pound female with bilateral total knee arthroplasties was seen three weeks after a fall. On examination, the right knee was found to be painful with laxity in both the A/P and M/L planes. Radiographs showed a large osteolytic lesion in the lateral femoral condyle (Figure 1). The patient elected to have revision right total knee arthroplasty.

## **Operation**

The femoral and tibial components were removed. A large osteolytic defect was found in the lateral femoral condyle and a much smaller defect in the lateral tibial plateau. Defect sizes were 4cm deep by 3cm wide and 1cm deep by 1cm wide respectively.



1)



*Fig.1 Pre-operative: large osteolytic defect in the lateral condyle.*

*Fig.2 Six weeks post-operative: Opteform<sup>®</sup> (white arrows) surrounding femoral head allograft (black arrows).*

2)



3)



4)

A warmed 8cc disk of Opteform® was placed into the proximal portion of the femoral defect. A sagittally split, hemi-femoral head allograft was shaped and impacted into the defect on top of the Opteform®. A second warmed 8cc disk of Opteform® was used to fill in the remaining voids between the allograft and the host bone. The tibial defect was filled with the remainder of Opteform®. Femoral and tibial resections were made and Optetrak® total knee components were implanted to complete the revision procedure.

### ***Post-operative Results***

Radiographs taken at six weeks post-operatively (Figure 2) showed the femoral head allograft (black arrow) surrounded by Opteform® (white arrows) in the lateral femoral condyle. Three month radiographs showed consolidation of Opteform® in progress around the femoral head allograft and no migration of any component (Figure 3). Clinical examination demonstrated full extension and 110° flexion with no instability in either plane. Flexion at 1 year increased to 115° with continued stability and excellent component position. One year radiographs demonstrated graft incorporation with trabeculation traversing the Opteform® and good reconstitution of the lateral cortex (Figure 4).

*Fig.3 Three months post-operative: consolidation in progress and stable components.*

*Fig.4 One year post-operative: trabeculation across the Opteform with good reconstitution of the lateral cortex.*