Pearls and Pitfalls

PEARLS	PITFALLS
• Thorough preoperative planning (symptomatic defect, good sizing x-rays, and staged/simultaneous comorbidity correction) • Use of a certified tissue bank with fresh storage and appropriate dating (14 to 28 days) • Perpendicularity of sizing tube to lesion surface to ensure flush graft on implantation • Complete visualization of lesion with stable retractors for exposure of sizing tube, bore, and graft • Cold irrigation during all steps of the procedure involving drilling or boring to avoid thermal necrosis	• Poor patient selection and preoperative planning • Inaccurate measuring with sizing tube, especially undersizing the defect • Leaving graft proud or recessed in the recipient site • Failing to address comorbidities (alignment, meniscus, cruciate ligaments) • Failing to pulse lavage the graft to remove marrow elements (immunogenicity) • Not achieving stable graft fixation in operating room (either press-fit or with screw fixation) • Poor rehabilitation (motion/stiffness, too early weight bearing, too early return to vigorous high-impact sports activity)

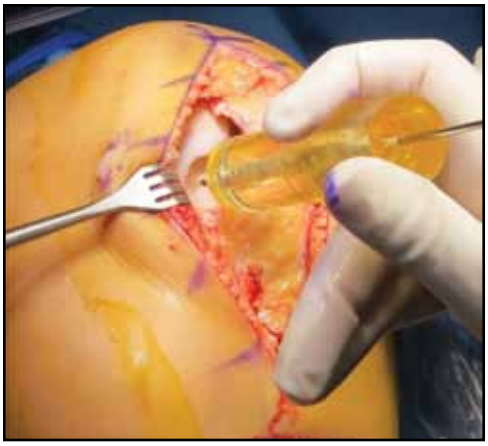

Figure 17-1. Left knee medial femoral condyle chondral defect visualized via medial parapatellar mini-arthrotomy with sizing tube and guide pin placed through tube, perpendicular to articular surface.

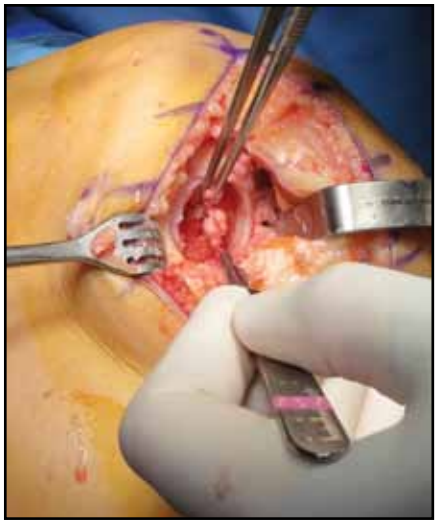

Figure 17-2. After recipient site is reamed, all loose unstable peripheral cartilage is removed with a scalpel. The recipient site bed is prepared by removing all bony or cartilaginous debris that may preclude flush donor graft placement.

8. Prepare the lesion and identify normal peripheral articular cartilage and pathologic defect cartilage.
9. The surgeon's choice of sizing system is used for defect sizing. It is important to avoid undersizing, as this will leave abnormal cartilage peripherally. The authors prefer Arthrex's Osteochondral Autograft Transfer System (OATS), which has circular cannulated sizing blocs of 15, 18, 20, 25, 30, and 35 mm (Figure 17-1).
10. After the correct sizing tube has been selected, ensure that this tube is appropriate for the allograft on the back table. Mark the 12 o'clock position on the allograft with a sterile surgical marker.
11. Place the sizing tube on the recipient site and place a 2.4-mm guide pin through the defect's center (see Figure 17-1). Ensure the pin is perpendicular to the lesion surface.
12. Remove the sizing tube and place the cannulated recipient site harvester and bore over the wire to remove the overlying remnant defect cartilage and subchondral bone to a depth of approximately 7 mm. Then remove the bore and pin.
13. Use a new no. 15 blade scalpel to remove any loose unstable peripheral cartilage (Figure 17-2).