



# Cartilage Repair Center

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## **Autologous Chondrocyte Transplantation**

DFVO/TTO + PF

Stage 1 – Proliferative Phase (0-6 weeks)

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### PRIMARY GOALS

DO NOT OVERLOAD GRAFT

INCREASE TIBIAL-FEMORAL AND PATELLA-FEMORAL MOBILITY

RESTORE QUADRICEPS CONTROL

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<b>BRACE</b>	♦Hinged knee brace locked in full extension for transfers and ambulation
<b>PRECAUTIONS</b>	♦Heel to toe TDWB with crutches
<b>ROM</b>	♦Gentle AROM flexion as tolerated only PROM extension allowed ♦CPM >= 6-8 hours daily 0-40 degree for first 3 weeks, full ROM as tolerated by pain ♦Minimum 90 degree flexion by 3 weeks, 110 degrees by 6 weeks, and full ROM by 12 weeks post-op
<b>THEREX</b>	♦Quad sets, NO SLR ♦Stationary Bicycle with no resistance once 90 degree knee flexion obtained (~4 weeks) ♦90 degree leg dangle once an hour each day to regain flexion ROM
<b>THERAPY</b>	♦Patella mobilization immediately after surgery ♦Cryotherapy and Ace wrap for swelling and pain control ♦E-stim for VMO/quadriceps muscle re-education/biofeedback encouraged early after surgery ♦Standing resisted isometrics and closed-chain terminal knee extension (0-30 degree) with elastic band permitted at 3 weeks post-op ♦Massage/deep friction to hamstring insertions, suprapatellar quadriceps, medial/lateral gutters, and infrapatellar fat pad region 2 weeks after surgery ♦Whirlpool therapy recommended at 2-3 weeks post-op to enhance motion
<b>COMMENTS</b>	♦Avoid active open-chain extension and repetitive knee flexion 40-70 degree due to increased patellofemoral contact forces ♦Contact MD if ROM not achieved to within 20 degree of goal ♦No progression of this protocol until cleared by MD at 6 weeks post-op ♦ <b>NO</b> leg presses/squats ♦ <b>NO</b> active open-chain due to increased patellofemoral contact forces

For Outpatient Physical Therapist:  
2-3x week / 6 weeks



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