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PHASE I:	Generally 0 - 6 weeks post-op
PHASE I GOALS:	Protect surgical graft 0-90° Knee ROM Regain adequate quadriceps control
PRECAUTIONS:	*Wear brace at all times (even while sleeping)* * <u>NO</u> knee hyperextension or AROM knee flexion exercises. <u>NO</u> hamstring strengthening *
CRUTCHES:	Touch weight-bearing (Foot flat: 0 - 25% body weight)
BRACE:	Locked at 0° x 6 weeks
WOUND:	Post-op dressing remains intact until post-op day #2-3 (~48-72 hours after surgery) May begin showering after post-op day #2 -3 (keep incision site clean) * Do <u>NOT</u> submerge knee in tub or pool for 4 weeks* Bilateral compression stockings for 7-10 days: unilateral use thereafter as needed Suture/staple removal @ 10-14 days per Ortho/PT
REHABILITATION:	Frequent use of cryocuff and/or ice with lower extremity elevated Begin patellar mobilizations (10 reps each direction TID) after suture/staple removal Begin scar massage after incision site sloughs/scar is formed Begin the first 3 exercises below and add others gradually as tolerated Calf pumping with tubing Static quad sets (with estim until patient able to do 10 SLRs without extension lag) PROM/AAROM exercises Strengthening: (add light wgt when pain free) • Wks 1-2: 0-30° • Wks 1-2: Short arc quads (0-30°) • Wks 3-4: 0-60° • Wks 3-4: Medium arc quads (0-60°) • Wks 5-6: 0-90° • Wks 5-6: Long arc quads (0-90°) Gentle hamstring stretching Supine passive extension to 0° extension SLRs (with brace on) : All directions (with exception of <u>MO</u> ABD or ADD for PLC repair) – ankle weights may be added to the SLR exercise gradually as tolerated Seated bilateral calf raises - progress to seated unilateral calf raises Seated ankle disk training UBE and/or well leg cycle
FOLLOW-UP:	Physical Therapy: Weekly; Ortho: ~6 weeks post-op; Supervised rehabilitation: 2-3 x per week as needed
DOCUMENTATION:	Precautions, pain level, medications, modalities Observation: (incision sites) - Signs/symptoms of infection? Site healing well? Effusion? Neurovascular status: Distal pulses, motor and sensation intact? Presence of calf pain? Knee ROM & quadriceps function



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PHASE II:	Generally 7-12 weeks post-op
PHASE II GOALS:	Normal gait and stair ambulation Full Knee ROM
PRECAUTIONS:	*Continue to wear brace at all times (except while sleeping)* * <u>NO</u> knee hyperextension. <u>NO</u> open kinetic chain hamstring strengthening * * <u>NO</u> pool program or swimming*
CRUTCHES:	Progress gradually to full weight-bearing during post-op weeks 7-8
BRACE:	 Unlock brace for ambulation per the following schedule: Wks 7-8: 0-30° Wks 9-10: 0-60° Wks 11-12: 0-90°
REHABILITATION:	Progress to the following exercises and increase intensity gradually when patient is ready (i.e., no increase in knee pain or effusion since the previous exercise session) *Note: all strengthening should be done with the brace on, using low weights, high repetitions, and in a painless ROM*
~weeks 7-8	Active assisted weight shifts Stationary bike for ROM - progress to biking for conditioning Progressive AROM and ROM stretching exercises as tolerated General LE stretching (calf, HS - add quads, HF, hip adductors @~week 9) Calf press Leg press Double leg mini-squats (0-45°) - add weight gradually as tolerated
~weeks 9-10	Bilateral calf raises – add unilateral calf raises @~week 9 Stepups Unilateral leg mini-squats (0-45°) Gait training (cone walking, marching, retrowalking, cariocas, shuffles, etc.) Progressive standing balance exercises (body blade, plyoball, platform training, etc.)
~weeks 11-12	(progress in duration, intensity, double leg to single leg, etc.) Elliptical
FOLLOW-UP:	PT: Bimonthly; Ortho: ~12 weeks post-op; Supervised rehabilitation: 2-3 x per week as needed
DOCUMENTATION:	Precautions, pain level, medications, modalities Effusion Knee ROM & quadriceps function Gait



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` PHASE III:	Generally 4-6 months post-op
PHASE III GOALS:	Jog at own pace and distance without pain 80-90% quadriceps and HS strength return
PRECAUTIONS:	* <u>NO</u> participation in sports or military schools*
BRACE:	Hinged knee sports brace (as needed per ortho)
REHABILITATION:	Continue phase II exercises as needed Progress in duration and intensity of exercise only if there is no increase in knee pain or effusion since the previous exercise session.
~weeks 13-16	Aerobic conditioning (biking, elliptical, stairmaster) LE weight lifting (Calf press, leg press, squats (0-60°), knee ext, hip add/abd) Progressive pool program Progressive balance training
~weeks 16-26	 Active HS curls with ankle weights progress gradually to using HS curl machine – using low weight, high reps Progressive jogging program (Begin jogging for 5-10 minutes TIW - increase time and/or distance no more than 10-20% per wk) Straight line jogging (up to 50% speed on treadmill or other level terrain) Progressive functional training: Begin at 25-50% intensity and progress gradually (jumping, hopping, directional jogging, cariocas, shuffles, etc.)
FOLLOW-UP:	PT: Monthly; Ortho: ~6 months post-op; Supervised rehabilitation: 1-2 x per week as needed
DOCUMENTATION:	Pain level & medications Effusion Knee ROM & quadriceps function Hop for distance at 6 months post-op Biodex testing at 6 months post-op
MISCELLANEOUS:	 After 6 months post-op: Exercises in phase III are continued, gradually increasing intensity & duration as tolerated. The recommendation is to wait until 9-12 months post-op to return to contact/collision sports. This time period may be adjusted slightly by the surgeon and therapist according to patient progress.