ACL Tunnel Bone Grafting Protocol

	Phase I: weeks 0-2	Phase II: 3-6 weeks	Phase II: 6-12+ weeks
Weight-Bearing and Immobilization	 Progress from TTWB to PWB (25-50%) to WBAT with brace locked in full extension Unlock brace for ambulation when no extension lag, excellent quadriceps control, and quadriceps strength adequate for stable ambulation Discontinue crutches as tolerated Brace may be unlocked while sitting 		Discontinue brace when no extension lag, excellent quadriceps control, and quadriceps strength adequate for stable ambulation
Aerobic	• None	Stationary bike (low resistance, elevated seat height initially, and normalize height as ROM allows)	 Begin low-load high-repetition exercise (elliptical machine, treadmill) Advance stationary bike (increase resistance, normalize seat height as ROM allows)
Range of Motion (ROM) and Strengthening	 ROM as tolerated Heel Slides Isometric quad sets Patellar mobility Straight-leg raises (in brace until able to do SLR without extension lag) Ankle pumps 	 Continue Phase I exercises Progress ROM May progress to early Phase III exercises when full ROM and no pain or effusion 	 Continue Phase II exercises Begin closed-chain strengthening exercises and advance low-impact strengthening gradually as tolerated Advance proprioceptive and balance training
Other	 Modalities as needed for muscle re-education and to reduce pain and swelling Home Exercise Program (HEP) per discretion of Physical Therapist 		
Goals	 Pain control Protect tissue healing Minimize joint stiffness Control and resolve knee effusion 	Regain full ROMBegin light muscle conditioningProprioception and balance	 Progress strengthening Increase activity while avoiding high-load and multiplanar activities