**Rehabilitation Protocol**

**Non-Operative Knee Rehabilitation**

**Phase 1 – MOTION AND MOBILITY**

* Patellar mobilizations, including quad & patellar tendon
* Quad set progressing to SLR (with NMES, biofeedback)
* Open- and closed-chain terminal knee extension (TKE)
* Open-chain hip strengthening
* ROM: emphasize full extension, heel/wall slides for flexion
* Bike for motion
* Blood Flow Restriction Therapy to maintain muscle mass

**Phase 2 – ENDURANCE**

* Closed-chain progression (including squat, lunge, step-up, bridge)
* Progress from double leg to single leg; from stable to unstable surfaces
* Balance progression
* Bike for cardiovascular fitness
* Blood Flow Restriction Therapy to maintain muscle mass

**For Athletes: Check Y-Balance**

* \*Note: Non-athletes may be appropriate for discharge to independent home program at this time if able to complete work and life demands. Check for safety with stair negotiation and ambulation on uneven surfaces.

**Phase 3 – STRENGTH**

* Increase sets/duration of closed-chain strengthening in varied proprioceptive environments
* For Athletes: Initiate squat jump progression from shuttle to gravity dependent position
* Check Y-Balance
* Sport Cord Test
* Blood Flow Restriction Therapy to build muscle mass

**Phase 4 – AGILITY, POWER, RETURN TO SPORT**

* For Athletes: Sport-specific movement patterns practiced in supervised and controlled environment
* Graded re-integration into sport activities with MD and PT clearance
* Return to Activities See functional criteria
* Timelines dependent on symptoms and functional criteria
* Blood Flow Restriction Therapy to build muscle mass