The following ACL reconstruction guidelines were developed by the Sports Rehabilitation and Performance Center staff at Hospital for Special Surgery. Progression is both criteria-based and patient specific. Phases and time frames are designed to give the clinician a general sense of progression. Concomitant procedures such as additional ligament reconstruction, meniscal repair and articular cartilage procedures may alter the guideline.

Follow physician’s modifications as prescribed

**POST – OPERATIVE PHASE I (WEEKS 0-2)**

**GOALS:**
- ROM:
  - Full passive extension
  - Minimum of 90° knee flexion
- Normalize patella mobility
- Weightbearing:
  - Progressive weight bearing to WBAT
- Control post-operative pain / swelling
- Prevent quadriceps inhibition
- Promote independence in home therapeutic exercise program

**PRECAUTIONS:**
- Avoid active knee extension 40 → 0°
- Avoid ambulation without brace locked @ 0°
- Avoid heat application
- Avoid prolonged standing/walking

**TREATMENT RECOMMENDATIONS:**
- Towel under heel for knee extension, A/AAROM for knee flexion, patella mobilization, quadriceps re-education (NMES and/or EMG), hip progressive resisted exercises, proprioception training, short crank bike, bilateral leg press (5 – 70°), SLR supine (with brace locked to without brace), SLR all planes, cryotherapy for pain and edema
- Emphasize patient compliance to HEP and weight bearing precautions/progression

**MINIMUM CRITERIA FOR ADVANCEMENT TO NEXT PHASE:**
- Able to SLR without quadriceps lag
- 0° knee extension, minimum of 90° knee flexion
- Able to demonstrate unilateral (involved extremity) weight bearing without pain
POST – OPERATIVE PHASE II (WEEKS 2-6)

**GOALS:**
- ROM 0° - 125° progressing to full ROM
- Good patella mobility
- Minimal swelling
- Restore normal gait (non-antalgic) without assistive device
- Ascend 8” stairs with good control, without pain

**TREATMENT RECOMMENDATIONS:**
- Continue phase I exercises as appropriate
- Advance AAROM knee flexion/extension exercises (emphasize full passive extension), hamstring/calf flexibility, standard bike (if ROM 115°), leg press (80 – 0° arc), mini squats, active knee extension to 40°, proprioceptive training, forward step up program, underwater treadmill (incision benign), open brace (0 – 50°) ambulate with crutches as quadriceps strength improves
- Progress/advance patients home exercise program (evaluation based)

**PRECAUTIONS:**
- Avoid descending stairs reciprocally until adequate quadriceps control & lower extremity alignment
- Avoid pain with therapeutic exercise & functional activities

**MINIMUM CRITERIA FOR ADVANCEMENT:**
- ROM 0° → 125°
- Normal gait pattern
- Demonstrate ability to ascend 8” step
- Good patella mobility
- Functional progression pending functional assessment

POST – OPERATIVE PHASE III (WEEKS 6-14)

**GOALS:**
- Restore Full ROM
- Able to descend 8” stairs with good leg control & no pain
- Improve ADL endurance
- Improve lower extremity flexibility
- Protect patello-femoral joint

**TREATMENT RECOMMENDATIONS:**
- Progress squat/leg press program, initiate step down program, advance proprioceptive training, agility exercises, retrograde treadmill ambulation/running, quadriceps stretching
- Emphasize patient compliance to both home and gym exercise program

**PRECAUTIONS:**
- Avoid pain with therapeutic exercise & functional activities
- Avoid running and sport activity till adequate strength development and MD clearance

**MINIMUM CRITERIA FOR ADVANCEMENT:**
- ROM to WNL
- Ability to descend 8” stairs with good leg control without pain
- Functional progression pending functional assessment

*Emphasize*
- Normalizing knee ROM and patella mobility
- Minimizing knee effusion
- Normal gait pattern

*Emphasize*
- Improving quadriceps strength
- Eccentric quadriceps control

*Developed by the HSS Rehabilitation Department Sports Rehabilitation and Performance Center*
POST – OPERATIVE PHASE IV (WEEKS 14-22)

GOALS:
• Demonstrate ability to run pain free
• Maximize strength and flexibility as to meet demands of ADLS
• Hop Test $\geq$ 75% limb symmetry

TREATMENT RECOMMENDATIONS:
• Start forward running (treadmill) program when 8” step down satisfactory
• Advance agility program / sport specific
• Start plyometric program when strength base sufficient

PRECAUTIONS:
• Avoid pain with therapeutic exercise & functional activities
• Avoid sport activity till adequate strength development and MD clearance

CRITERIA FOR ADVANCEMENT:
• Symptom-free running
• Hop Test $\geq$ 75% limb symmetry
• Functional progression pending & functional assessment

POST – OPERATIVE PHASE V
RETURN TO SPORT (WEEKS 22 - ?)

GOALS:
• Lack of apprehension with sport specific movements
• Maximize strength and flexibility as to meet demands of individual’s sport activity
• Hop Test $\geq$ 85% limb symmetry

TREATMENT RECOMMENDATIONS:
• Continue to advance LE strengthening, flexibility & agility programs
• Advance plyometric program

PRECAUTIONS:
• Avoid pain with therapeutic exercise & functional activities
• Avoid sport activity till adequate strength development and MD clearance

CRITERIA FOR DISCHARGE:
• Hop Test $\geq$ 85% limb symmetry
• Lack of apprehension with sport specific movements
• Flexibility to accepted levels of sport performance
• Independence with gym program for maintenance and progression of therapeutic exercise program at discharge