

UAB CENTER FOR EXERCISE MEDICINE

EXERCISE CLINICAL TRIALS FACILITY – Marcos Bamman, PhD, Director

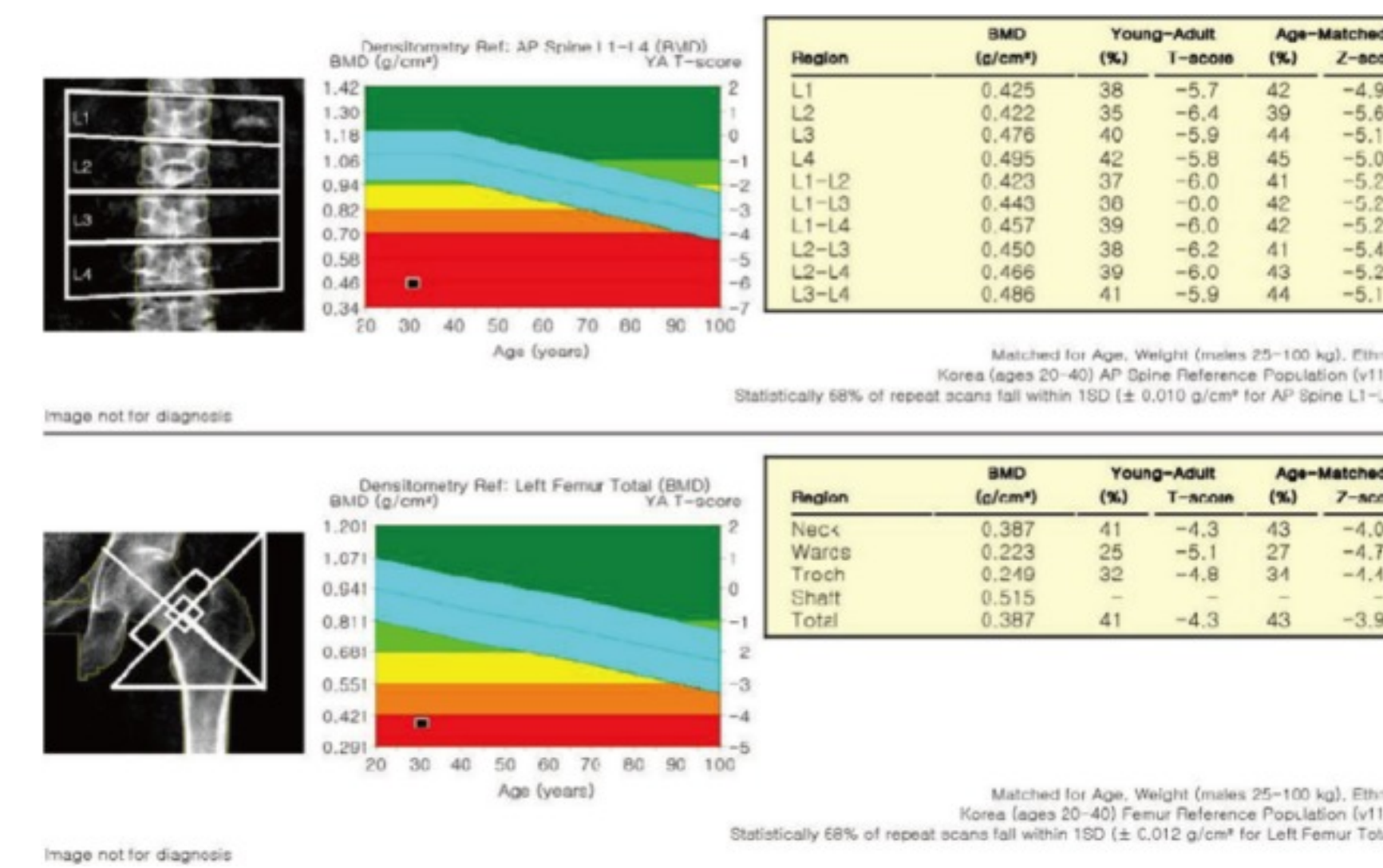
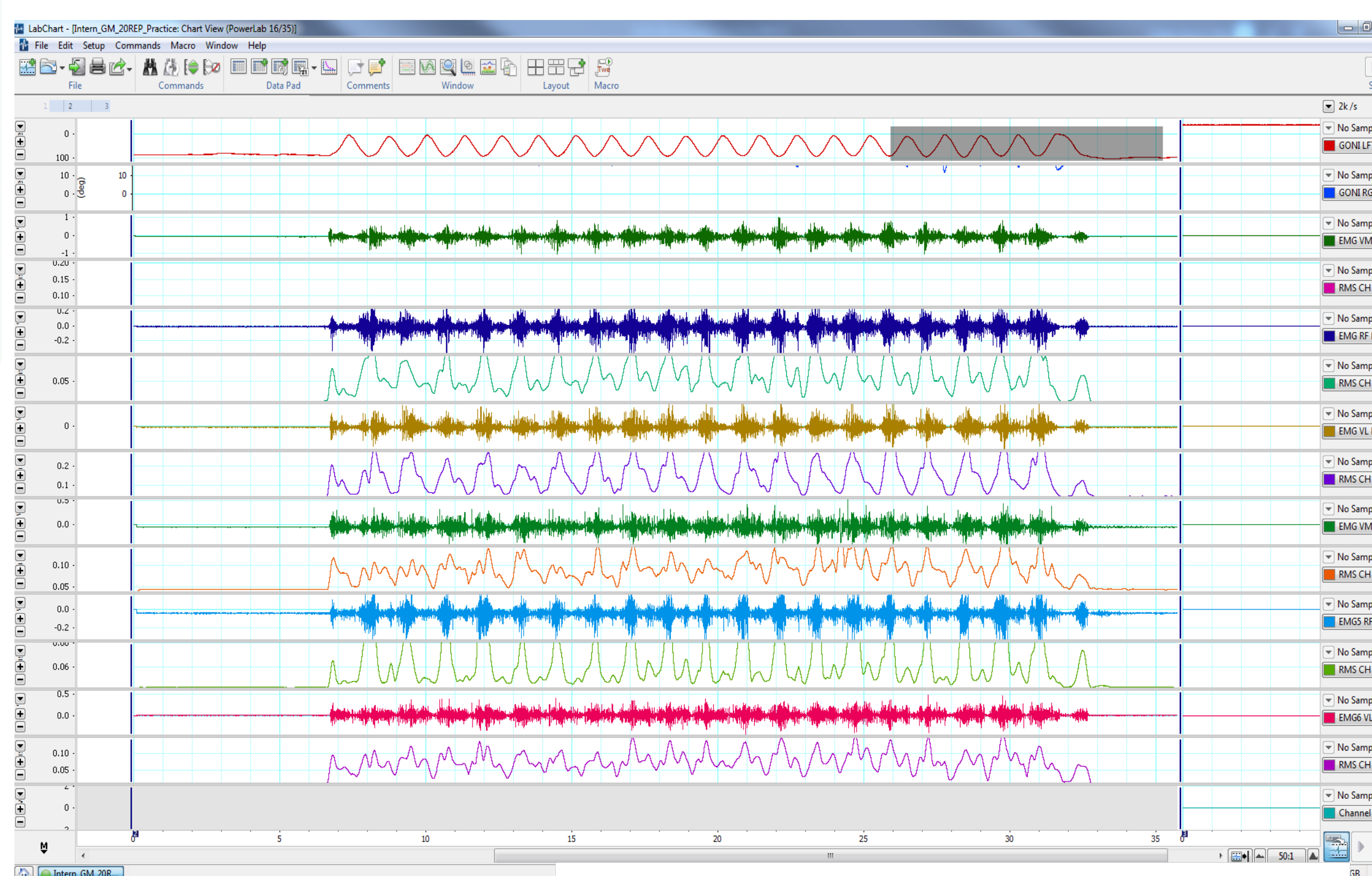


Our 4200 sq. ft. core facility is well-equipped to provide a clean, safe and user friendly exercise training and testing environment for supervised exercise clinical trials. Three laboratories and a clinic are available for a wide array of clinical assessments physiological and performance tests.



Exercise Training Zone

- ❖ 24 resistance exercise stations
- ❖ Olympic barbells, dumbbells, and over 2000 pounds of free weight
- ❖ 13 stationary cycle ergometers
- ❖ 9 treadmills
- ❖ 3 water rowers
- ❖ 1 NuStep



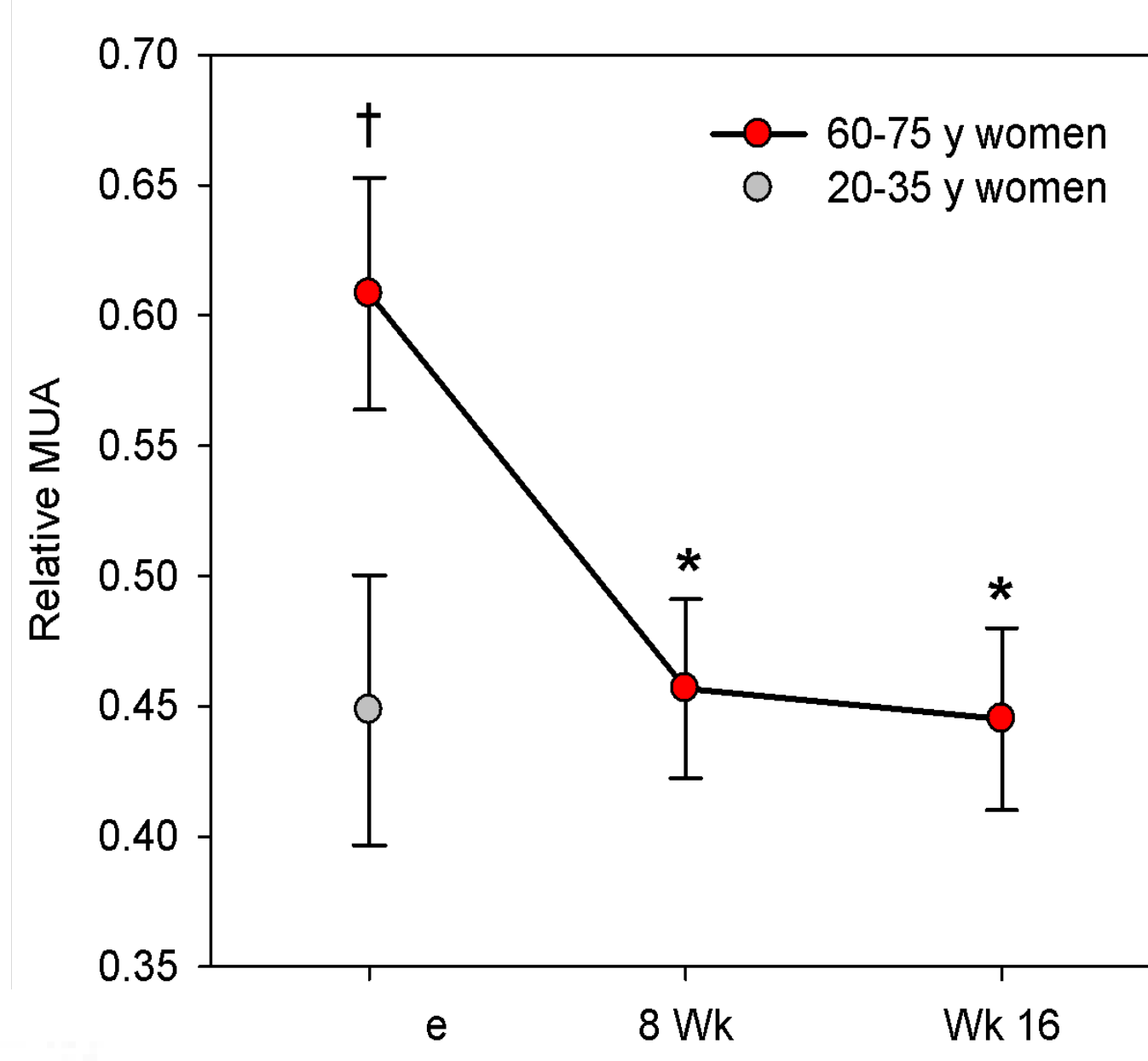
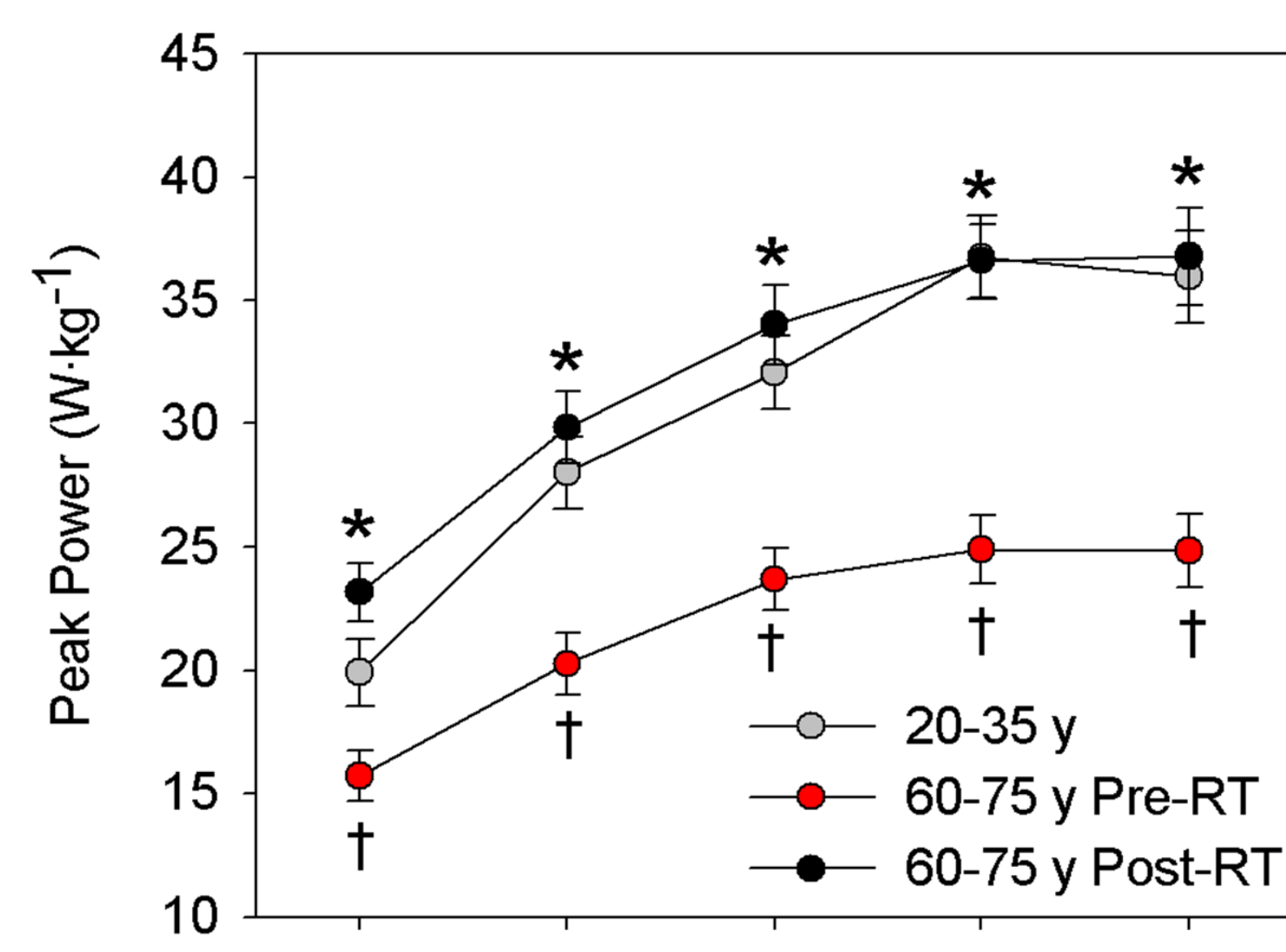
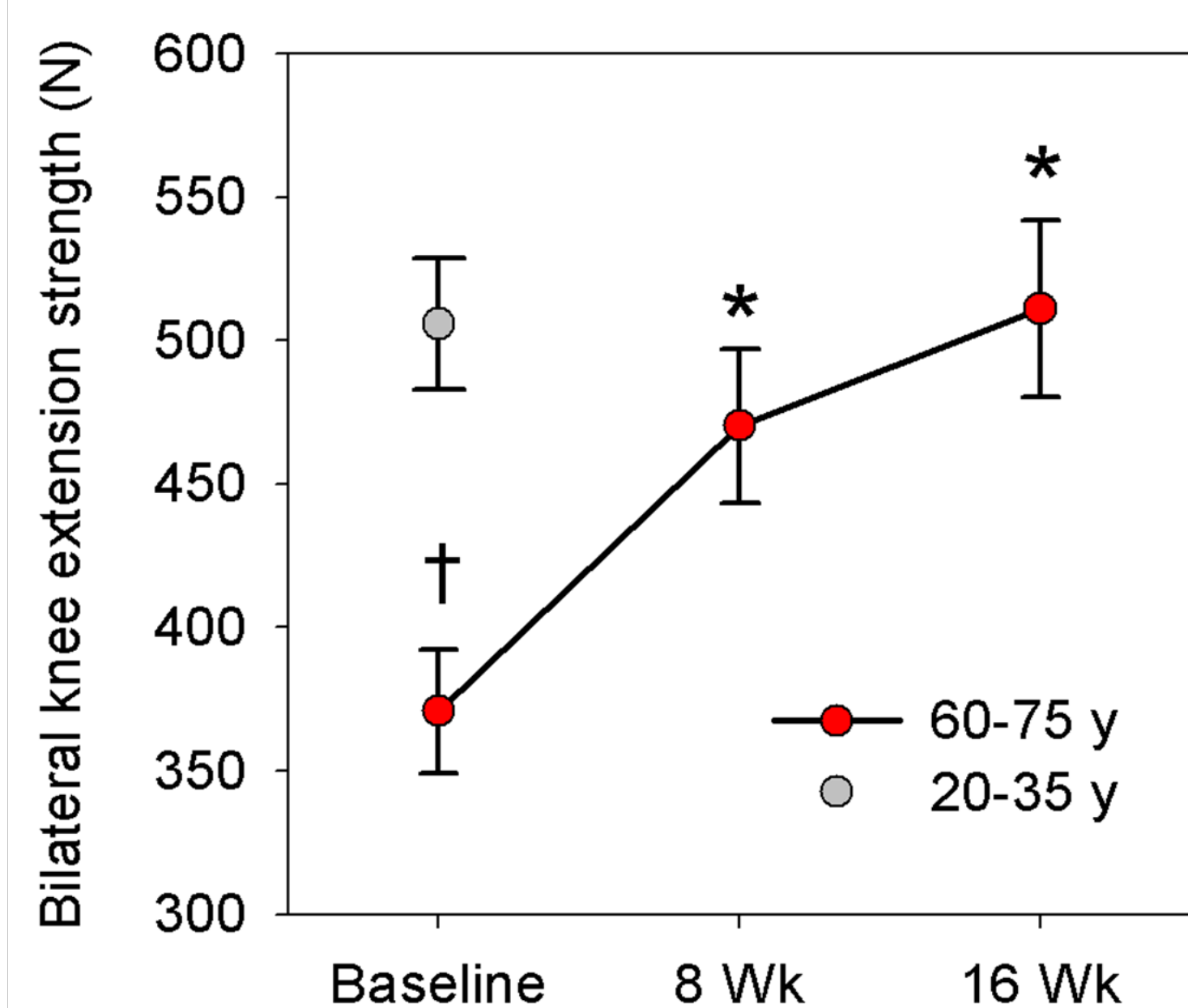
- ❖ GE Lunar iDXA (Dual Energy X-ray Absorptiometry)
- ❖ CoreScan, Total Body Density, Orthopedic Knee and Hip, Sarcopenia, Atypical Femur Fracture, Trabecular Bone Score, AP Spine, Dual Femur, Orthopedic Hip Implant, Pediatric measurement, Lateral Spine, BMD with trending, LVA Morphometry and Spine Geometry

NIH National Mutli-Center Trials

- ❑ PHITE - Precision High Intensity Training through Epigenetics
- ❑ MoTrPAC – The Molecular Transducers of Physical Activity Consortium
- ❑ STEP – Supervised VS Telerehab Exercise Program For People with Multiple Sclerosis
- ❑ ACES – Antihypertensives Combined with Exercise for Seniors with Hypertension
- ❑ TWEAK – Overcoming TWEAK Signaling to Restore Muscle and Mobility After Joint Replacement
- ❑ MASTERS – Metformin to Augment Strength Training
- ❑ PDEX – Impact of Intensity on Efficacy of Exercise Rehabilitation in Parkinsons Disease

Cardiorespiratory Function Lab

- ❖ 12-lead ECG diagnostic graded exercise stress testing
- ❖ Aerobic power, i.e. maximal oxygen uptake (VO₂max)
- ❖ Anaerobic power (e.g., Wingate cycle test)
- ❖ Steady state cardiorespiratory and metabolic demand (e.g., stair climbing, walking)
- ❖ Resting Metabolic Rate



Neuromuscular Function Lab

- ❖ Joint kinematics (electrogoniometry) and kinetics
- ❖ Maximum voluntary strength testing
- ❖ Electrically evoked maximum force measurement
- ❖ Neuromuscular power assessment
- ❖ Muscle fatigue testing
- ❖ Muscle activation via wireless surface EMG
- ❖ Computerized gait analysis

