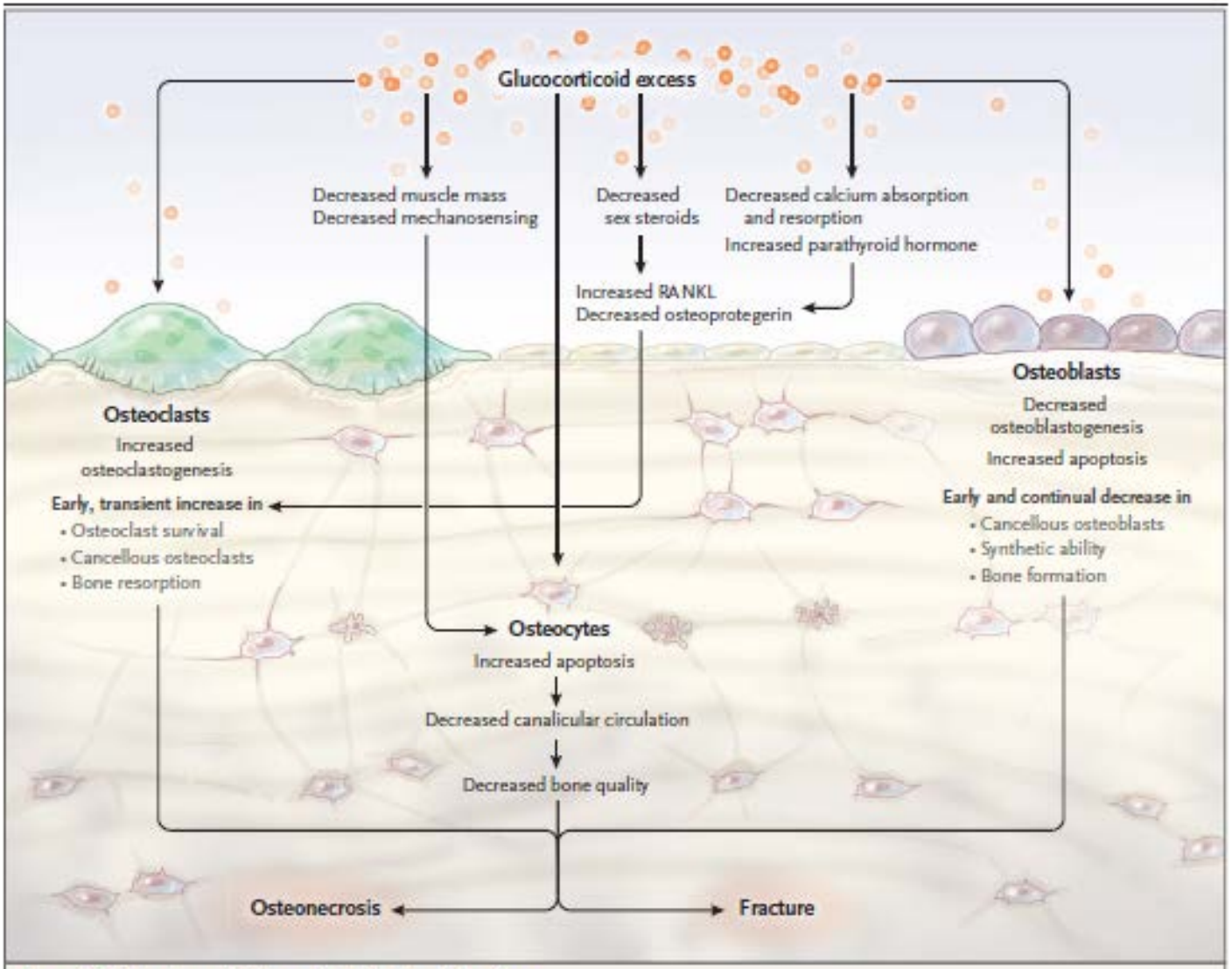

Figure 1. Mechanisms of Glucocorticoid-Induced Bone Loss.

Excessive amounts of systemic glucocorticoids lead to clinically significant adverse effects on the musculoskeletal system by inducing inappropriate bone remodeling through direct and indirect mechanisms and muscle atrophy that contributes to osteoporosis and fractures. Early bone loss is driven by changes in levels of estrogen and parathyroid hormone that stimulate receptor activator of nuclear factor-κB ligand (RANKL)–induced osteoclastogenesis. Osteocyte and osteoblast apoptosis prevents effective mechanosensing and new bone formation.