GLOSSARY OF COMMON TERMS

Terms Related to Drug Classes

Antiresorptive agents — Drugs used to prevent and/or treat osteoporosis that work primarily by inhibiting bone resorption (destruction) to slow or stop bone loss. This class includes all osteoporosis therapies in clinical practice in the United States—bisphosphonates, a selective estrogen receptor modulator, estrogens and calcitonin.

Bone formation (anabolic) agents — Investigational drugs that stimulate new bone formation by acting primarily upon bone-forming cells called osteoblasts. Drugs in this class include parathyroid hormone, sodium fluoride, growth hormone and statins.

Terms Related to Bone Remodeling

Bone remodeling — A dynamic, lifelong process in which old bone is removed from the skeleton and replaced with new bone. It consists of two distinct stages, resorption and formation, which must be carefully balanced to maintain skeletal integrity. When women reach menopause – usually between the ages of 45 and 55 – bone resorption significantly exceeds formation; the activity of the osteoblasts cannot keep up with the activity of the osteoclasts, and women begin to lose bone more rapidly.

Osteoblasts — Bone-forming cells that lay down new bone during the formation stage of the bone remodeling process. They fill in cavities and tunnels made by the osteoclasts.

Osteoclasts — Bone-removing cells that dissolve and erode bone during the resorption stage of the bone remodeling process.

Bone resorption — The first stage of the bone remodeling process in which bone is broken down, or resorbed. Osteoclasts attach to the bone surface and erode it, creating small cavities in the trabecular bone surface or tunnels in cortical bone.

Bone formation — The second stage of the bone remodeling process in which new bone is formed. Osteoblasts fill in the cavities and tunnels (created by osteoclasts) with new bone until the bone surface is restored.

GLOSSARY OF COMMON TERMS

Terms Related to Bone

Bone mass	Refers to the amount or volume of bone tissue that one has.
Bone mineral density (BMD)	Bone density is a measure of grams of mineral (calcium) per area and is often used as a proxy measure for bone strength (due to the fact there is currently no accurate measure of overall bone strength).
Bone quality	Refers to architecture, connectivity, turnover, damage accumulation (e.g., microfractures) and mineralization . Bone quality and bone mineral density affect bone strength.
Bone strength	The resistance of bone to bending or fracture.
Cortical bone	The dense, outer shell of bone that encases the trabecular bone. The hip area is primarily comprised of cortical bone.
Trabecular bone	The internal, honeycomb-like structure of spongy bone, also known as *cancellous bone*. The vertebrae of the spine contain a high proportion of trabecular bone.

Terms Related to Osteoporosis

Osteopenia	Medical term used for bone density that is lower than normal, but not low enough to be diagnosed as osteoporosis. World Health Organization criteria define osteopenia as a T-score between 1 and 2.5 standard deviations below normal (e.g., between –1.0 and –2.5).
Osteoporosis	A progressive systemic skeletal disease characterized by low bone mass and microarchitectural deterioration of bone tissue, with a consequent increase in bone fragility and susceptibility to fracture. According to the World Health Organization definition, osteoporosis is present when a T-score is 2.5 or more standard deviations below normal (e.g. –2.5 or lower)
T-score	The score from a bone mineral density (BMD) test, used to screen for osteoporosis. This number measures the standard deviations above or below the mean BMD value for young healthy white women.

GLOSSARY OF COMMON TERMS

Terms Related to Fractures

Fragility fracture	A type of fracture that occurs due to the skeletal fragility of osteoporosis and not from severe trauma (such as an auto accident, falling from a ladder, etc.). Having a fragility fracture is the strongest known risk factor for future fractures.
Vertebral crush fractures	Fractures of the spine (each individual bone of the spine is called a vertebra). *Also called vertebral compression fractures.*
Kyphosis	Commonly known as "dowager's hump," this deformity is marked by a forward curvature of the upper spine caused by fractures of the vertebrae and compression of the spinal column.

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