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Nota di contenuto	Serum uric acid and biomarkers of lumbar spine bone mineral density -- Use of alkaline phosphatase (ALP) activity and disease severity to determine secular changes in bone disease as applied to Paget's disease of the bone -- Bone Turnover and Spinal Cord Injury -- Bone-related proteins as markers in vascular remodelling -- Serum Sclerostin as Biomarker in Osteogenesis Imperfecta -- Parathyroid Hormone (PTH) assays and applications to bone disease: Overview on methodology -- Registered microcomputed tomography data as a four dimensional imaging biomarker of bone formation and resorption -- Use of bone biomarkers after weight loss: Example of bariatric surgery -- Adiponectin as biomarker of osteoporosis -- Effect of statins on bone turnover markers -- Chitinases as biomarkers in bone studies -- Hormone relaxin as biomarker for bone health and disease -- Panoramic radiomorphometric indices of mandible: Biomarker for osteoporosis -- Hip Fracture Risk is Strongly Related to Circulating Levels of the Advanced Glycation End-product Carboxy-Methyl Lysine (CML) -- Effects of glucose on bone markers: Overview of current knowledge with focus on diabetes, glucose, and bone markers -- Traditional medicine and use of bone biomarkers -- Osteosarcoma Biomarkers discovery using "omics" approaches -- Creatine kinase as biomarker in osteogenesis imperfecta -- Ameloblastin as biomarker of bone -- Biomarker genes in autosomal dominant osteopetrosis type II (ADO II) -- Bone markers in Rett syndrome -- Bone Specific Alkaline Phosphatase and Exercise -- Bone turnover markers and glucocorticoid treatments -- Overview of biochemical markers of bone metabolism --

Biomarkers of natural radionuclides in bone and teeth -- Bone markers throughout sexual development: epidemiological significance and population-based findings -- Parathyroid hormone (PTH) and the relationship between PTH and bone health: structure, physiology, actions, and ethnicity -- Quantitative ultrasound as a biomarker tool in newborn infants for bone -- Bone biomarkers in gestational hypertension -- Bone biomarkers in intrauterine growth restriction -- Raman spectroscopy as a biomarker-investigative tool in bone metabolism -- Pentosidine as a biomarker for poor bone quality and elevated fracture risk -- Spine bone texture and the trabecular bone score (TBS) -- Bone biomarkers in HIV -- Bone Biomarkers Related to Osteoarthritis -- Dietary Soy Phytoestrogens and Biomarkers of Osteoporosis -- Utilisation and reference values of osteocalcin and procollagen type 1 n-propeptide -- Analysis of integrin alpha2beta1 (a2b1) expression as a biomarker of skeletal metastasis -- Circulating Sclerostin in Bone Sclerosing Disorders -- Pentraxin 3 as a bone biomarker -- Sirtuins as markers of bone disease: a focus on osteoarthritis and osteoporosis -- Tartarate resistant acid phosphatase as a biomarker of bone remodeling. .

Sommario/riassunto

There are many conditions that affect the skeletal system. On a worldwide basis, osteoarthritis alone affects 10%-15 percent of those over 60 years of age and in some countries more than 30-50% of postmenopausal women will have osteopenia or osteoporosis. With the increasing ageing population, maintaining skeletal health is particularly important. Fractures in the aged, for example, can lead to premature deaths. It is therefore imperative that appropriate use is made of conventional, new and emerging biomarker platforms. Biomarkers in Bone Disease embraces a holistic approach by combining information on different conditions that affect the skeletal system and the use of biomarkers. Biomarkers are described in terms of conventional, new and emerging analytes, techniques, platforms and applications. It covers the latest knowledge, trends and innovations. New platforms are described which combine advances in biomedical sciences, physics, computing and chemistry.