ISCD

The International Society
For Clinical Densitometry

Certified Clinical Densitometrist (CCD[TM®])
2020 Examination Specifications[i]

I. Overview of Bone Physiology

A. Bone Development, Structure & Peak Bone Mass
1. Bone formation and resorption
2. Bone microarchitecture and mineralization
3. Cellular Mechanisms
4. Cortical bone
5. Trabecular bone

B. Bone Pathologic States and Fractures
1. Incidence and prevalence
2. Morbidity and mortality
3. Economic burden
4. Fracture Types
   a. Fragility
   b. Non-fragility
   c. Pathologic Fractures

II. Imaging Technologies

A. Core Concepts
1. Radiation science and physics
2. Safety
3. Artifacts

B. DXA
1. Central
   a. Spine
   b. Hip
2. Peripheral

C. Other Techniques and Modalities
1. Vertebral Fracture Assessment (VFA, LVA)
2. Radiograph

III. Interpretation

A. Principles of Interpretation
1. Study quality (e.g., positioning, artifacts)
2. T-score
3. Z-score
4. BMD
5. Least Significant Change (LSC)

      6. Interpretation Rules:
         a. Spine
         b. Hip
         c. Final Diagnosis
      7. Other modalities (e.g., VFA/LVA, TBS, QCT/pQCT)

B. Reporting
    1. Clinical indication, history, and demographics
    2. Procedure (e.g., machine, software)
    3. Diagnosis:
       a. WHO criteria (e.g., premenopausal vs. postmenopausal)
       b. ISCD Official Positions
       c. NOF Standards of Care
    4. Absolute fracture risk
    5. Comparison to prior study (LSC if available)
    6. Study limitations

C. Special Situations
    1. Pediatric
    2. Young adult/premenopausal
    3. Bariatric
    4. Patients with limited mobility

IV. Risk Assessment

A. Epidemiology
    1. Incidence and prevalence
    2. Morbidity and mortality
    3. Economic impact

B. Risk Factors
    1. Demographics (e.g., age, ethnicity)
    2. Social/lifestyle (e.g., smoking, alcohol, diet)
    3. Medical (e.g., chronic kidney disease, endocrine/rheumatological disorders)
    4. Drugs (e.g., glucocorticoids, chemotherapy, hormonal)

C. Clinical Evaluation
    1. Evaluation for secondary factors for bone loss (e.g., labs)
    2. Fracture and clinical history
    3. Imaging assessment (e.g., DXA, other techniques)

D. Risk Assessment Calculators
    1. FRAX

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V. Management

A. Non-pharmacological/Preventive Interventions
1. Lifestyle modifications (e.g., diet, exercise, substances)
2. Fall prevention, gait and balance therapy

B. Pharmacological Interventions
1. Calcium and vitamin D
2. Antiresorptive (e.g., bisphosphonates, Rank-L inhibitors, SERMS)
3. Anabolic (i.e., teriparatide, abaloparatide)
4. Emerging therapies (e.g., anti-sclerostin Ab)
5. Drug holiday/modification of therapy

C. Surveillance and Frequency of Testing
1. Serial DXA testing
2. Testing indication (e.g., special circumstance)

D. Patient Education
1. Disease process and fracture risk
2. Prevention (e.g., pharmacological, nonpharmacological)
3. Reevaluation (e.g., monitoring frequency, treatment)