55 y/o Korean male presents with chronic bilateral hand and wrist swelling, pain and stiffness. Fatigue and 10lb weight loss.

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Rheumatoid Arthritis

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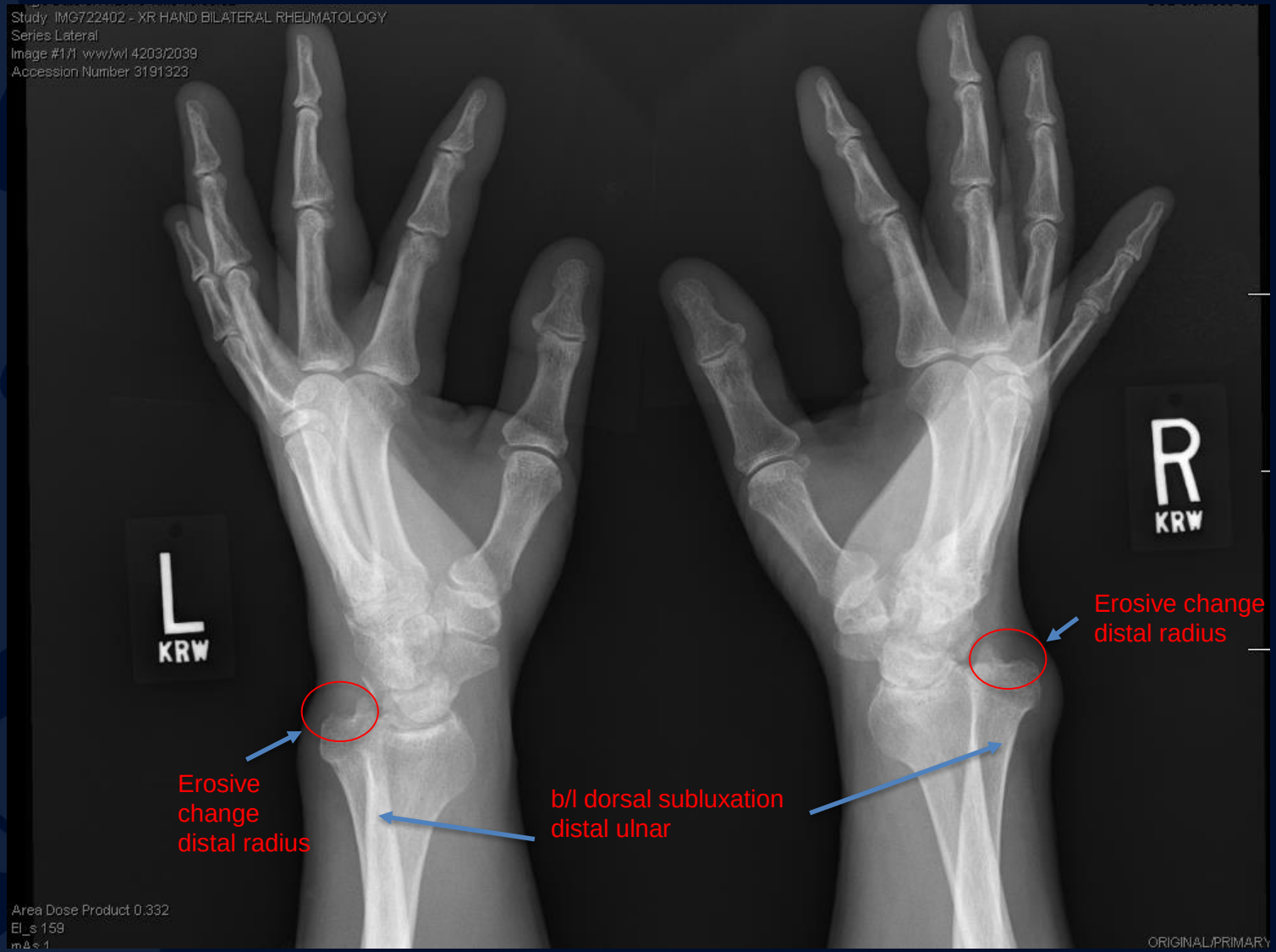

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Rheumatoid Arthritis

- Epidemiology
  - More common in females 3:1
  - Onset typically 30-50 years old
  - Annual incidence RA 40 per 100,000 in United States
- Etiology
  - Autoimmune inflammatory arthritis
    - Proliferation macrophages in synovium of joints leading to lymphocyte infiltration
    - Ultimately joint and cartilage destruction in addition to other systemic complications
    - Most commonly small joints of hands (MCPs, PIPs) and feet (MTPs), and wrists
    - Cervical spine (C1-C2), and other large joints (shoulder, knee)
    - Axial skeleton relatively spared
  - Environmental factors and genetic factors likely both play role
    - HLA genes play role most significantly HLA-DRB1 gene
    - Hypothesis possible triggering event such as a viral infection
    - Smoking strong risk factor for development of RA

Rheumatoid Arthritis

- Presentation
  - Progressive onset joint pain and swelling with symmetric polyarticular involvement
  - Joint decreased range of motion, redness, and warmth
  - Morning stiffness >1 hour that improves with activity
  - Tenosynovitis and carpal tunnel concomitantly
  - Significant fatigue, fever, anemia chronic disease, weight loss
- Diagnosis
  - Positive Rheumatoid factor (RF) and/or positive anti-cyclic citrullinated peptide (anti-CCP)
  - Elevated inflammatory markers ESR and CRP
  - X-ray/Radiographs:
    - Joint space narrowing, bone erosions, joint subluxation particularly ulnar in hand (“ulnar drift”)
    - Erosions typically around margin of the joint
    - Joint deformities including swan neck deformities and boutonniere deformity

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Rheumatoid Arthritis

- Differential Diagnosis
  - Psoriatic arthritis, systemic lupus erythematosus, crystalline arthropathy, inflammatory osteoarthritis, septic arthritis
- Management
  - Medical management to lower or achieve remission of inflammatory disease activity to prevent further destruction of joints and improve quality of life
  - Disease-modifying anti-rheumatic drug (DMARD)
    - Initiate as early as possible
    - Common agents include methotrexate, leflunomide, sulfasalazine
    - Biologic agents targeted against specific cytokines in the inflammatory pathway including:
      - Anti-TNF (adalimumab, etanercept, infliximab,
      - Anti-IL-12/23 (Ustekinumab)
      - Anti-IL-6 (tocilizumab)
      - Anti-B cell (rituximab)
  - May use steroids intermittently for acute flares but not for long-term therapy

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