

### Normal Joints vs RA Joints

#### Normal Joints

Normal, thin synovium surrounding joint space

Intact tendons and ligaments

Well-defined joint space

Smooth, intact cartilage surfaces providing protection to bone

#### RA Joints

Synovial thickening, leading to panes formation

Loosening of tendon sheath and other periarticular structures, leading to joint deformities

Joint space narrowing

Erosion of articular surfaces, leading t bone erosion and osteoporosis

## Overview of RA

### Definition

Complex systemic inflammatory condition manifesting initially as symmetric swollen and tender joints of the hands and/or feet

RA effects ~1% of the worlds population

RA arises from an immunologic reaction

May be in response to genetic or infectious antigen

### Managing established RA

### Risk factors

Female gender (3:1 female to males)

Increasing age (peak onset 35-50 years of age)

Current tobacco smoking

Family history of RA

Potential environmental exposures

Drugs - oral contraceptive use, high ingestion of vitamin D

### Managing Early RA

### Biologic DMARDs

### Non-biologic DMARDs

### Comorbidities & Impact on Morbidity/Mortality

#### Cardiovascular disease

1/2 of RA deaths are cardiac in nature

Inflammation happens in places other than joints, including blood vessels

#### Infections

RA leads to changes in cellular immunity and increases in infection risk

### Comorbidities & Impact on Morbidity/Mortality (cont)

#### Malignancy

Patients with RA have increase risk of cancer

Lymphoma, leukemia, multiple myeloma

#### Osteoporosis

RA causes increase in osteoclastic activity

Leads to bone loss

