Overlap Syndromes

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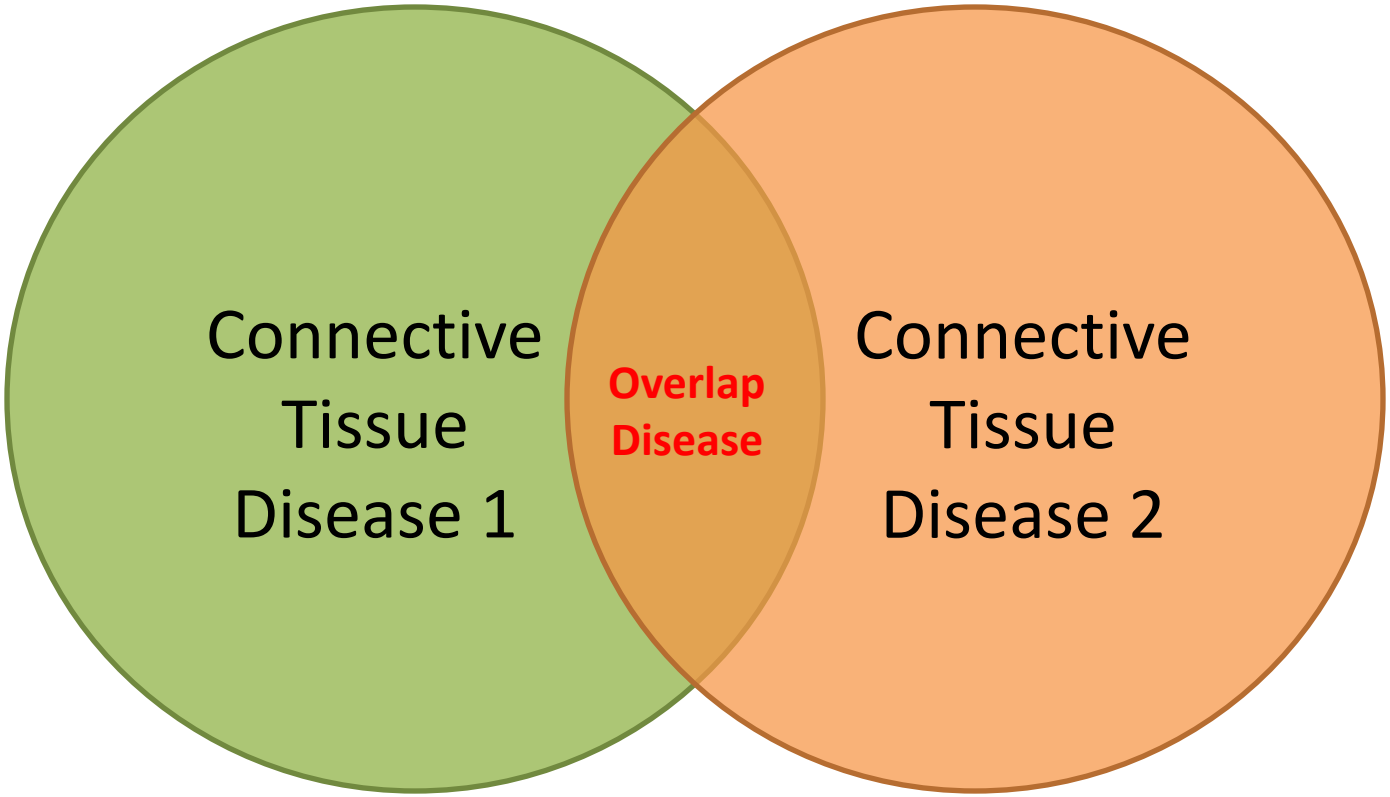
Talk Overview

- Definition of overlap syndrome
- Review of common diseases associated with overlap syndromes
- Specific overlap syndromes associated with myositis
- Questions and discussion

Overlap Syndrome



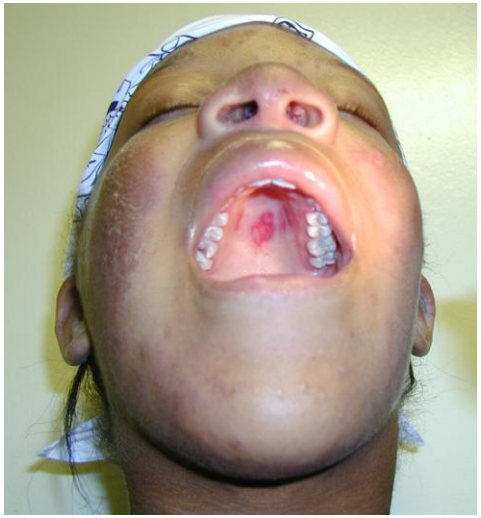
An autoimmune disease in which a patient presents with clinical and/or laboratory signs and symptoms of two or more connective tissue diseases.

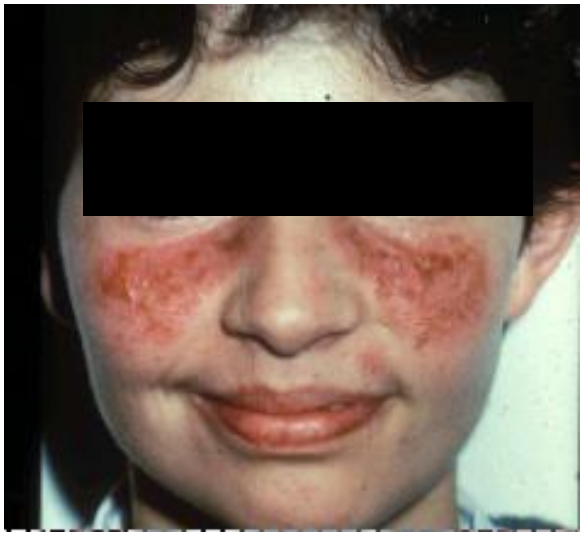
Connective Tissue Diseases Commonly Involved in Overlap Syndromes

- Systemic Lupus Erythematosis (SLE)
- Rheumatoid Arthritis (RA)
- Scleroderma (Ssc)
- Polymyositis/Dermatomyositis (PM/DM)
- Sjogren's Syndrome (SS)
- Anti-phospholipid Antibody Syndrome (APS)

Systemic Lupus Erythematosus

- A heterogeneous autoimmune disease involving multiple organ systems in which organ inflammation is mediated by autoantibodies and immune complexes.

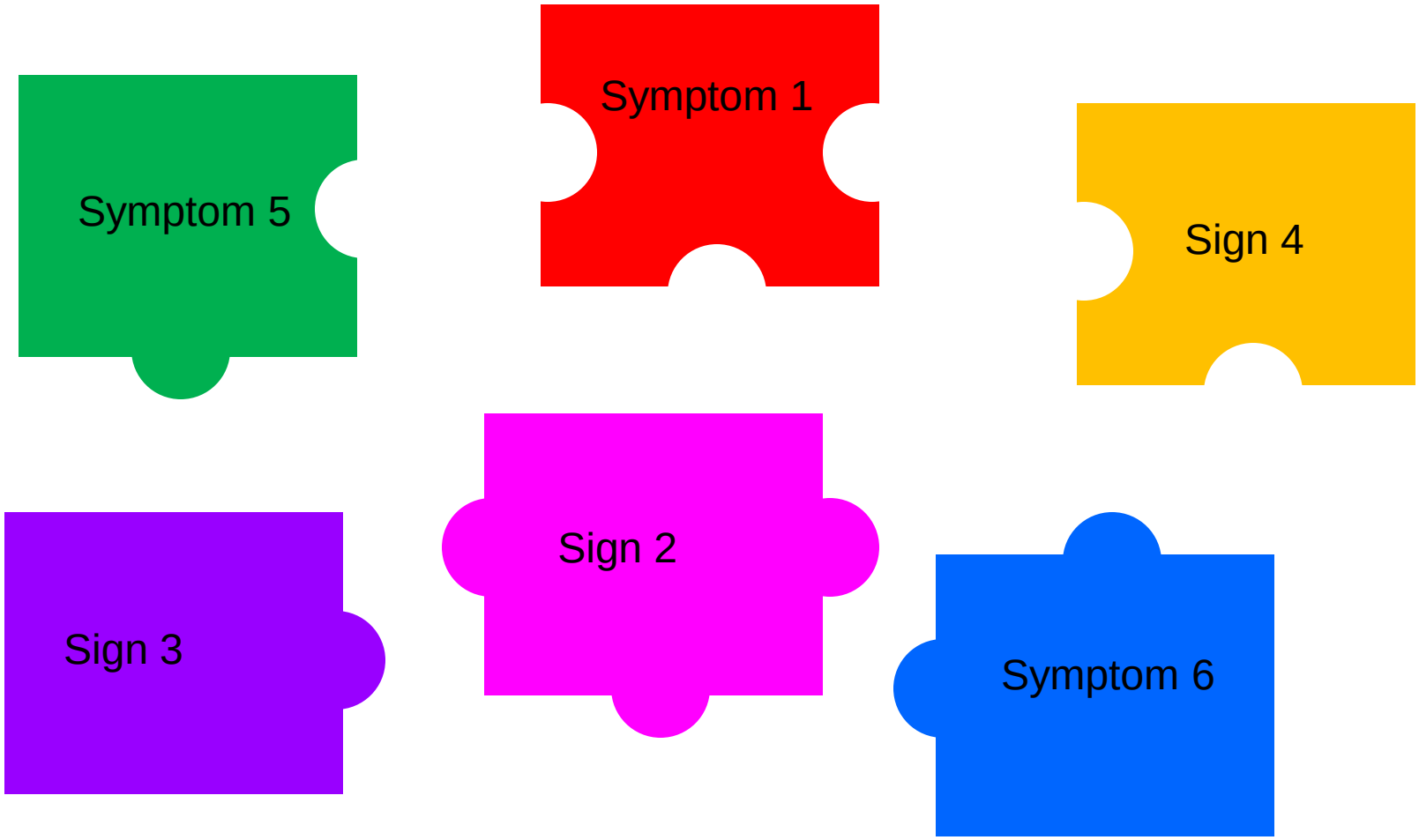




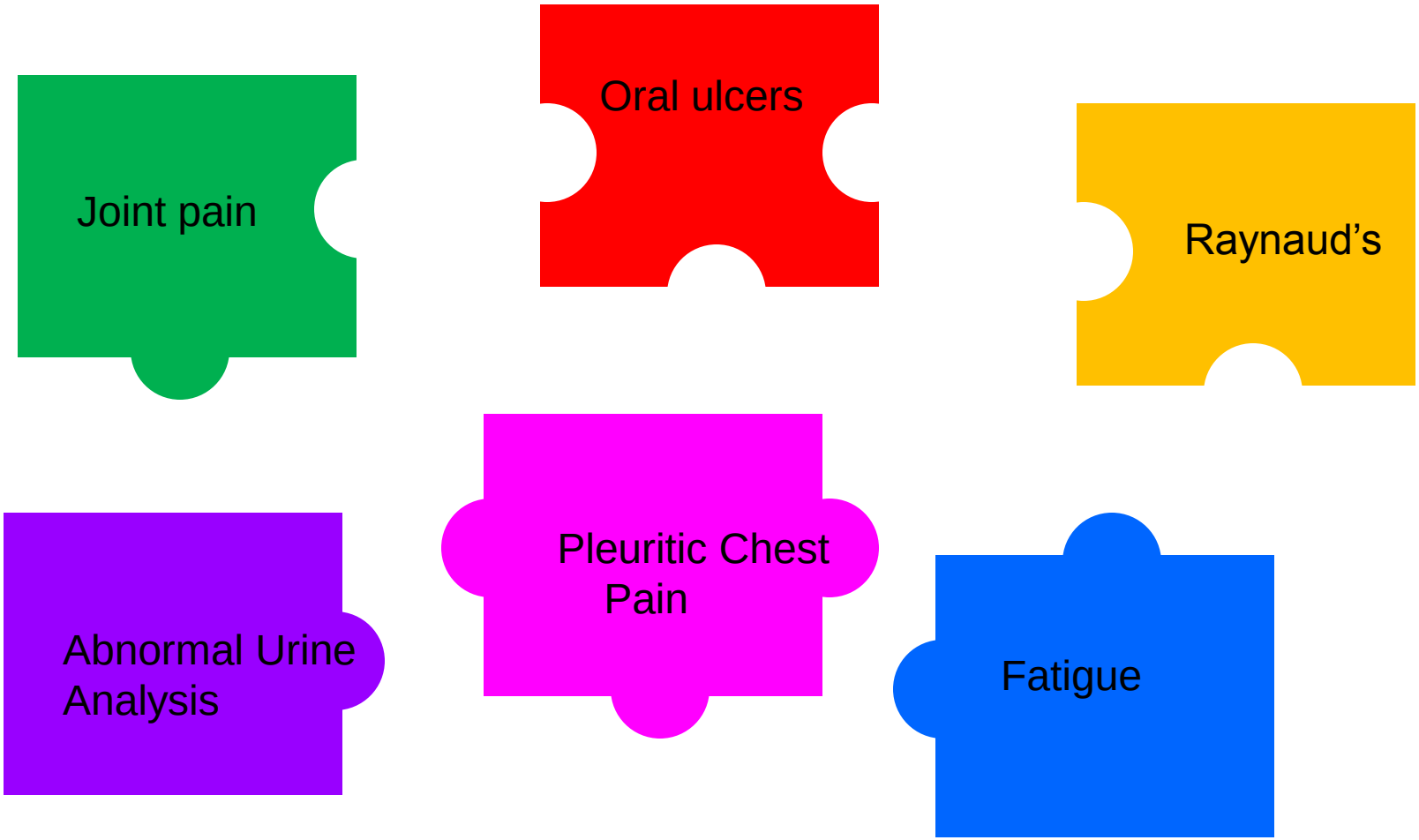
ACR Criteria for SLE 1997 (4/11)

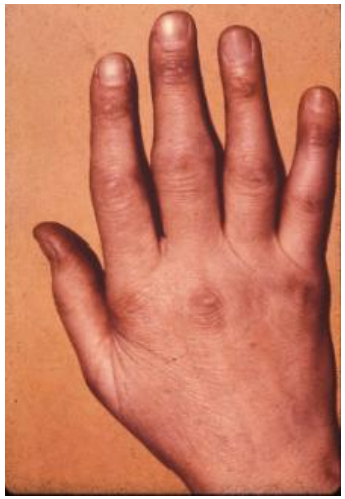
- Malar Rash
- Discoid Rash
- Photosensitive rash
- Oral Ulcers
- Serositis
  - Pericarditis
  - Pleuritis
- Nephritis
- Arthritis
- Neurologic
- Hematologic
  - Leukopenia
  - Lymphopenia
  - Hemolytic anemia
  - Thrombocytopenia
- Immunologic
  - Anti-dsDNA
  - Anti-Sm
  - Antiphospholipid Ab
- ANA

Autoimmune Disease: Putting together pieces of "The Puzzle"



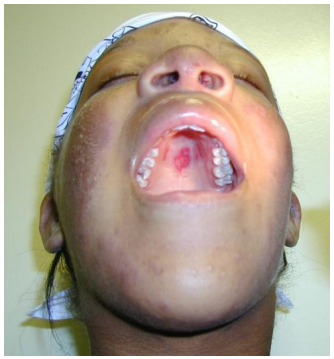
Example # 1. 35 year-old female presents with:





Criteria #1

Joint pain

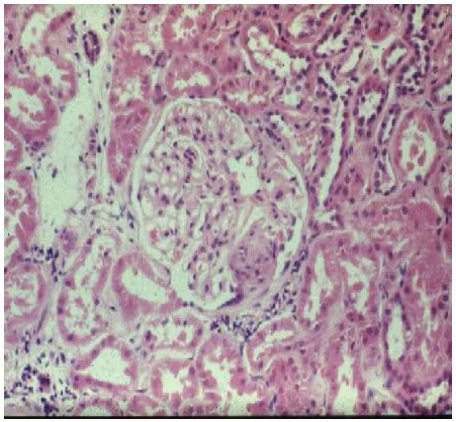


Criteria #2

Oral ulcers

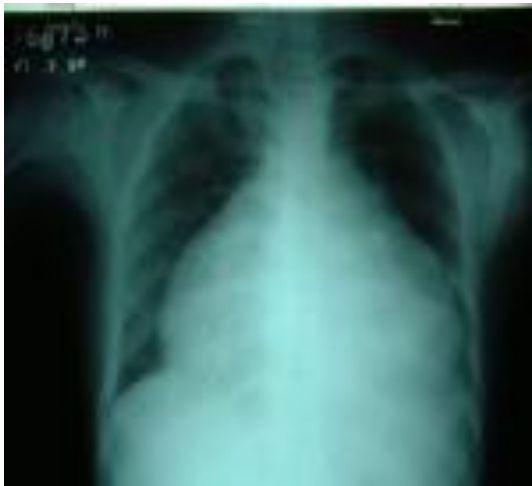
Abnormal urine analysis

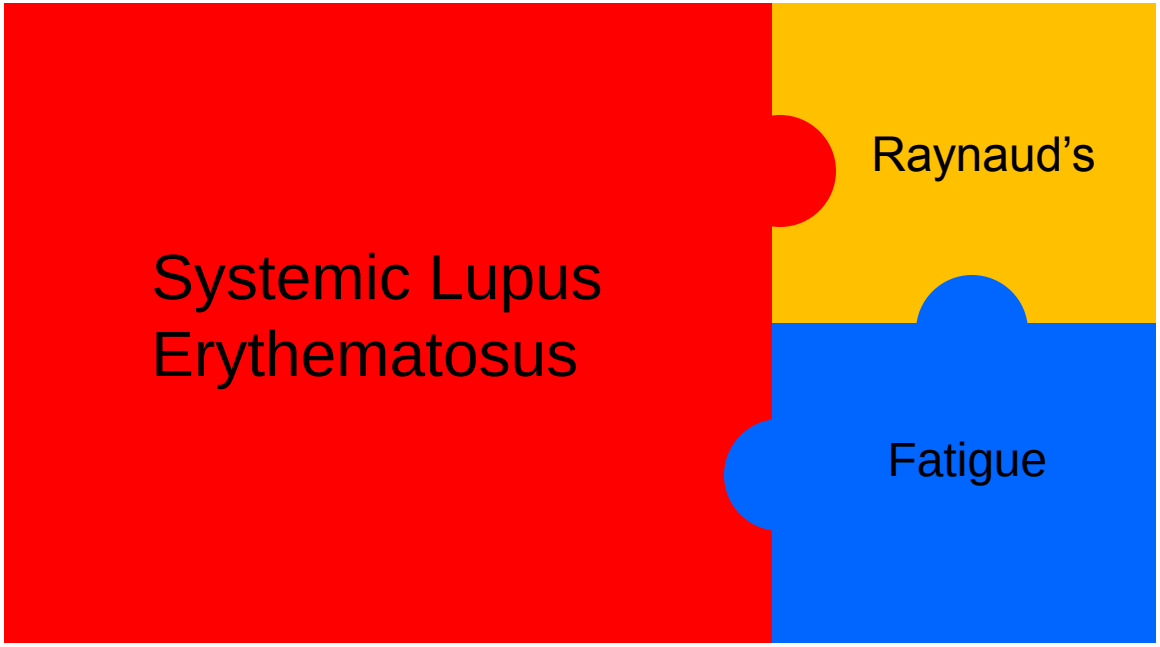
Criteria #3



Pleuritic chest pain

Criteria #4




Systemic Lupus Erythematosus
Raynaud's
Fatigue

DIAGNOSIS:

Systemic Lupus Erythematosus

Myositis:
Bohan and Peter Criteria-NEJM 1975

1. <u>Polymyositis: 3 of 4 Criteria Required:</u>

- **Symmetric Proximal Muscle Weakness**
- **Elevated Serum Muscle Enzymes**
- **Myopathic Changes on EMG**
- **Characteristic Muscle Biopsy Abnormalities and the Absence of Histopathologic Signs of other Myopathies**

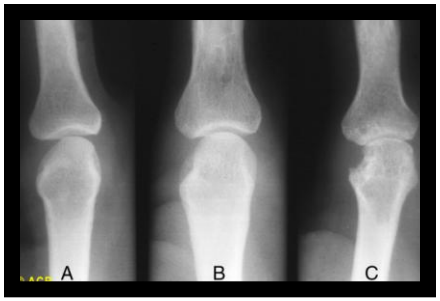
2. <u>Dermatomyositis: PM + “Typical” Rash</u>

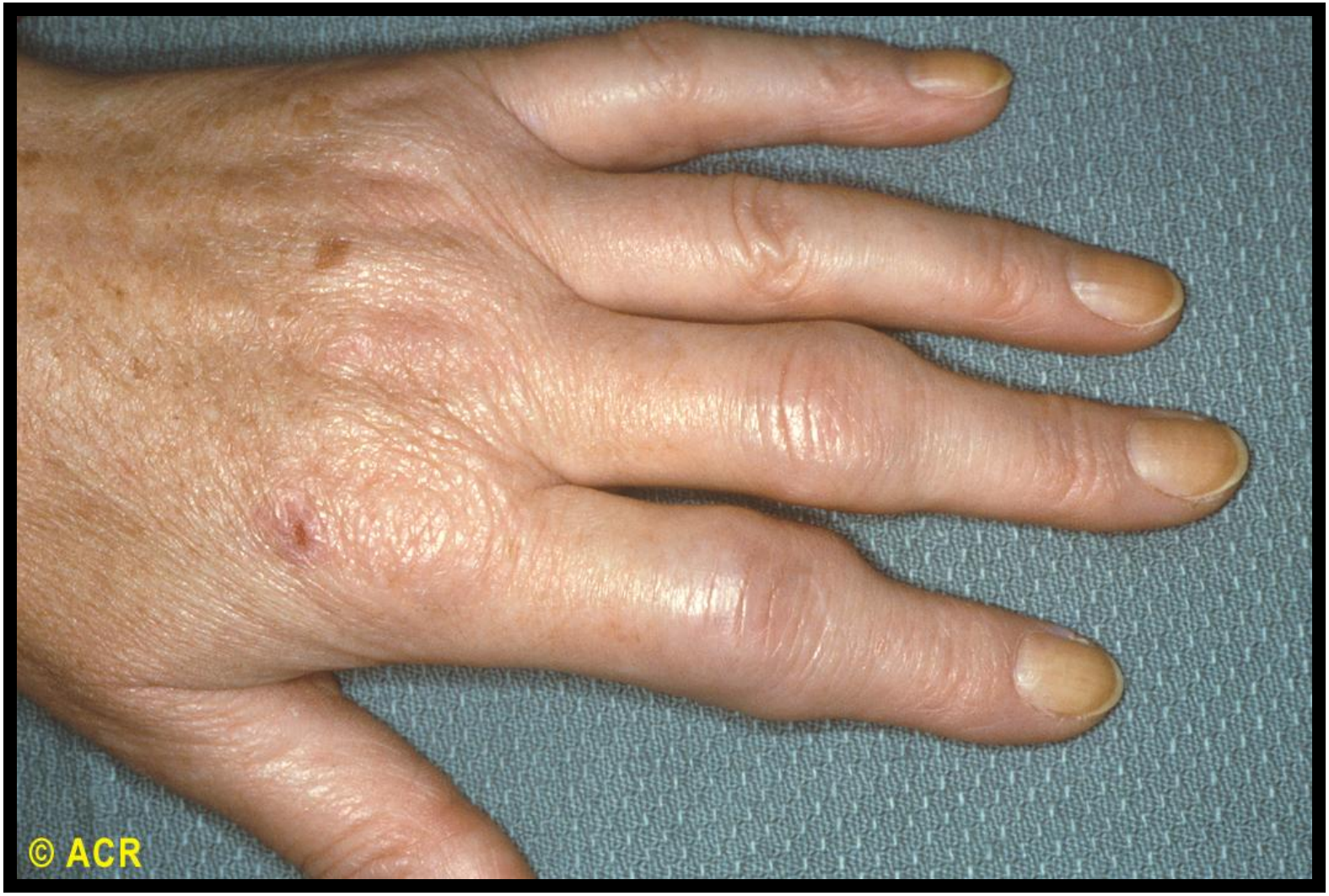
*** Inclusion body myositis was not recognized until the 1980s.**

*** Bohan and Peter criteria never validated.**

ACR Criteria for Diagnosis of RA
(4/7)

- Morning stiffness
- Arthritis of 3 or more joint areas
- Arthritis of hand joints
- Symmetric arthritis
- Rheumatoid nodules
- Serum rheumatoid factor
- Radiographic changes




© ACR

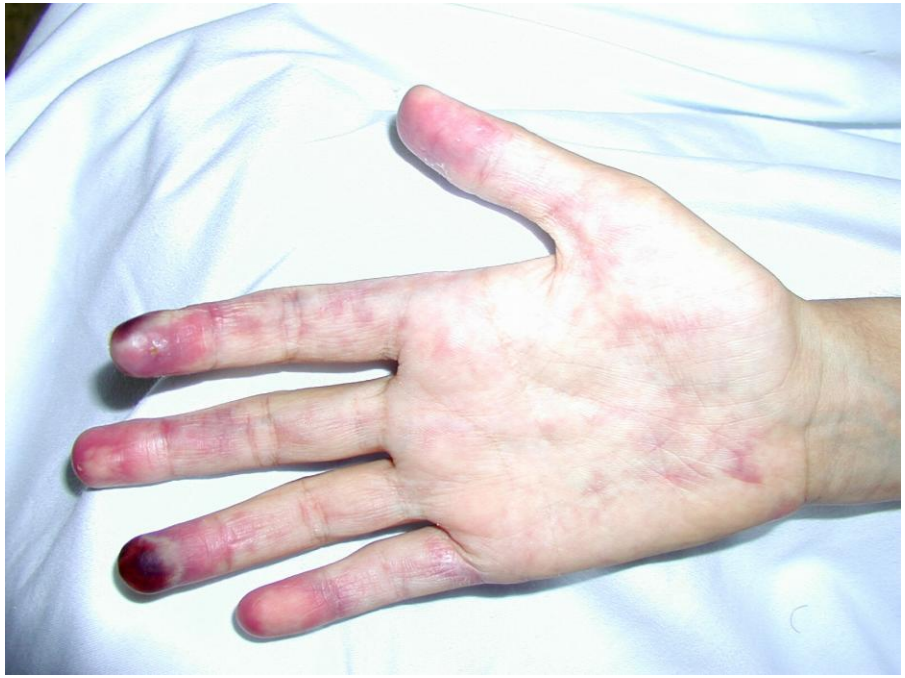
Systemic Sclerosis (SSc)

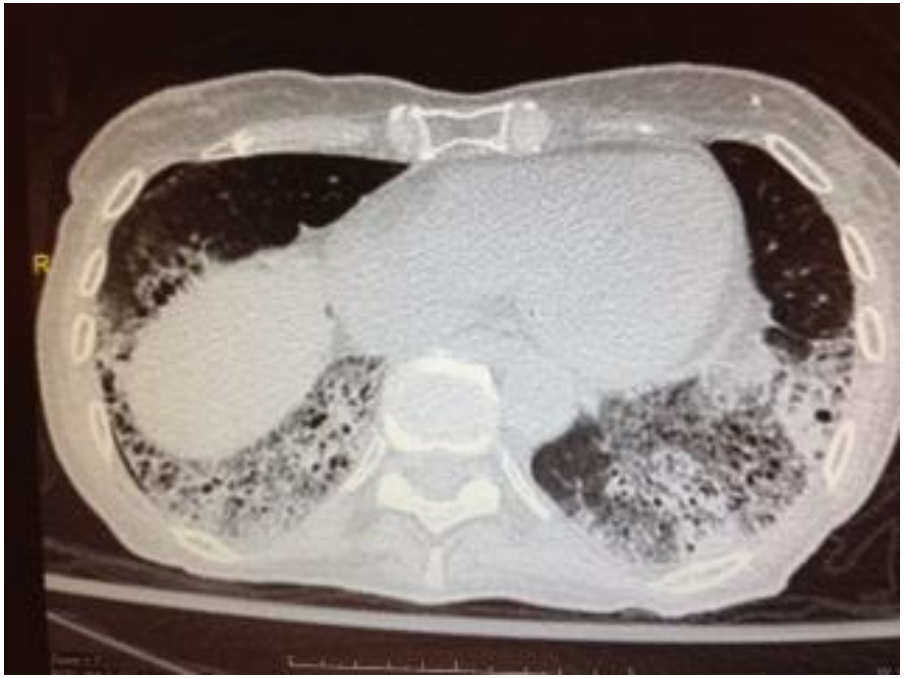
- Progressive disease involving the skin and connective tissue which involves increased deposition of collagen in small arteries and connective tissue and sclerotic changes in skin and internal organs.

Diffuse: Skin thickening-trunk, face, and limbs

Limited: Skin thickening distal to elbows and knees with face involvement.

CREST: Calcinosis, Raynaud's, Esophageal dysmotility, Sclerodactyly, Telengiectasias

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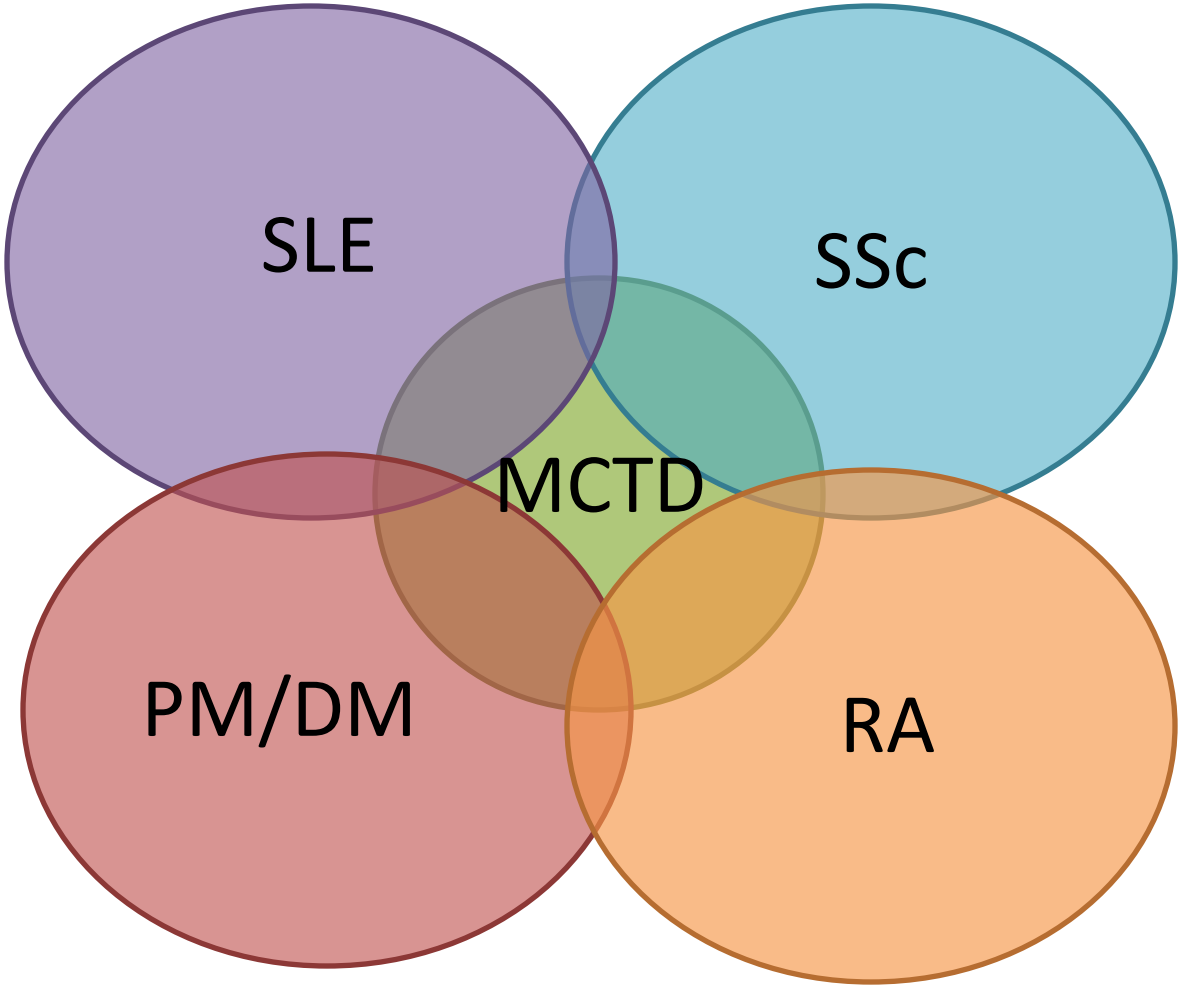
Overlap Syndromes Associated with Myositis

- Mixed Connective Tissue Disease (MCTD)
- Polymyositis/scleroderma overlap (anti-PM/Scl antibodies)
- Anti-synthetase Syndrome (anti-Jo-1, anti-PL7 antibodies, etc.)
- Undifferentiated Connective Tissue Disease (UCTD)

Mixed Connective Tissue Disease (MCTD)



Mixed Connective Tissue Disease (MCTD)

I. Common symptoms

a. Raynaud's phenomenon

b. Swollen fingers or hands

II. Anti-RNP antibody

III. Mixed findings

a. SLE-like findings

1. Polyarthritis
2. Lymphadenopathy
3. Facial erythema
4. Pericarditis or pleuritis
5. Leukocytopenia (less than 4,000/mm^3) or thrombocytopenia (less than 100,000/mm^3)

b. Scleroderma-like findings

1. Sclerodactyly
2. Pulmonary fibrosis, restrictive change of lung (%VC less than 80%) or reduced diffusion capacity (DLco less than 70%)
3. Hypomotility or dilatation of esophagus

c. PM-like findings

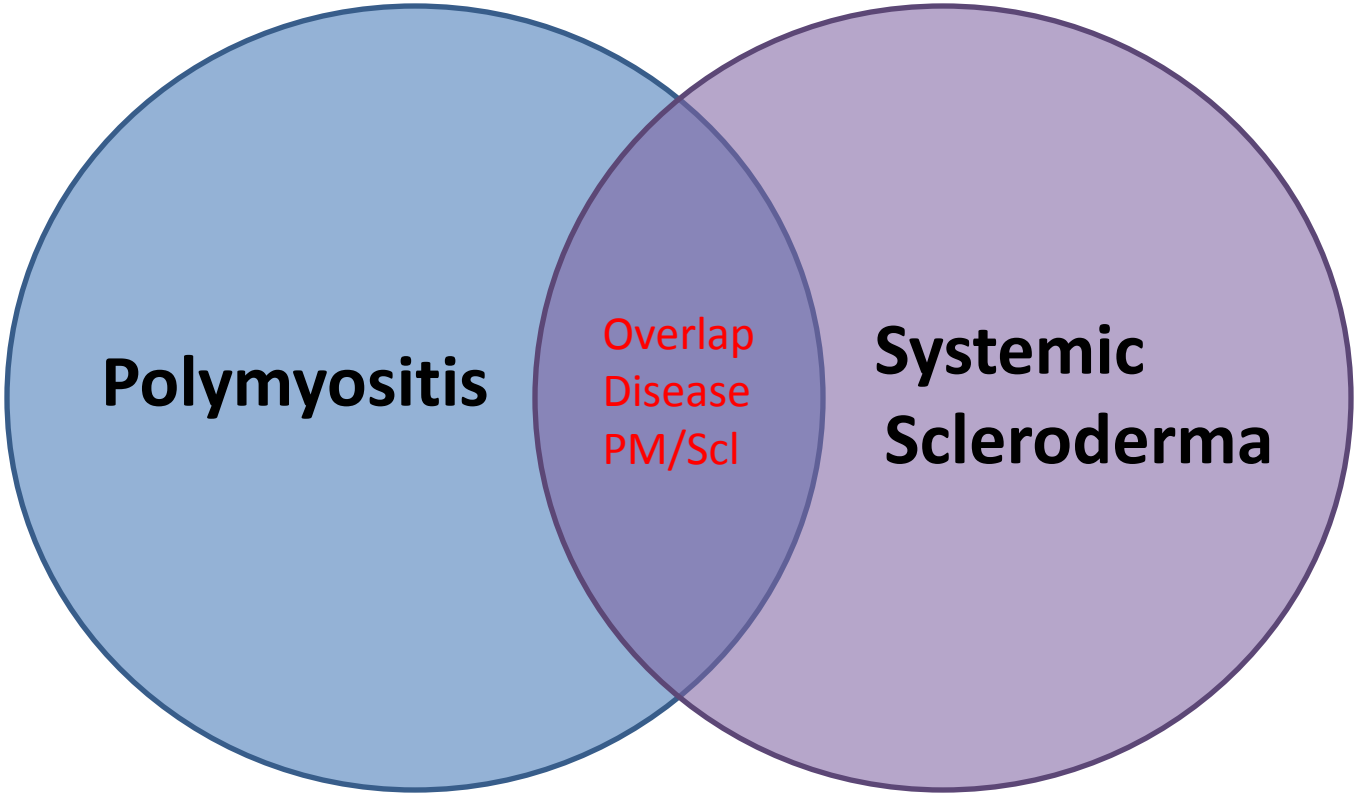
1. Muscle weakness
2. Increased serum level of myogenic enzymes (CPK)
3. Myogenic pattern in EMG

MCTD will be diagnosed when the following three conditions are fulfilled:

1. **Positive – 1 or 2 common symptoms**
2. **Positive anti-RNP antibody**
3. **Positive in one or more findings in at least 2 disease categories: a, b, & c.**

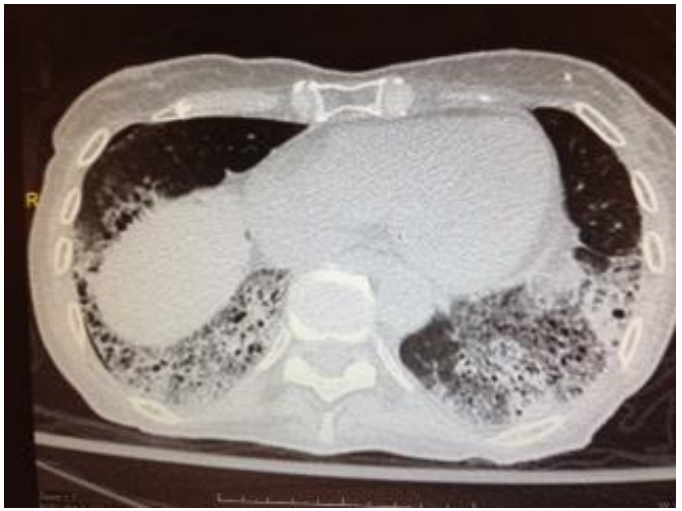
Mixed Connective Tissue Disease and Anti-nuclear Antibodies, Kasukawa, R, Sharp, G (Eds), Elsevier, Amsterdam 1987. p.33-40

PM-SSc Overlap Syndrome

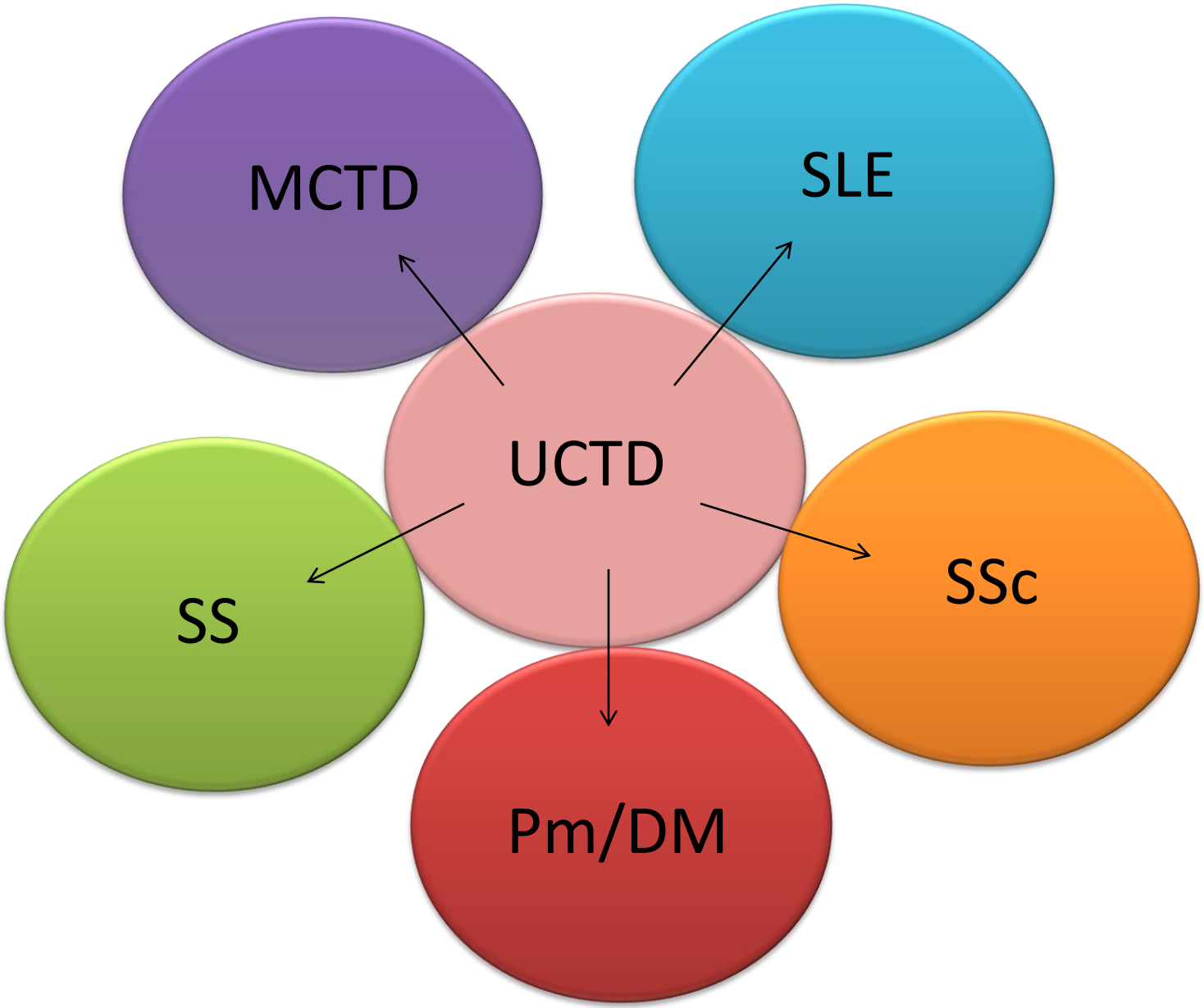


Anti-synthetase Syndrome

- Myositis
- Interstitial Lung Disease
- Inflammatory Arthritis
- Raynaud's phenomenon
- Fevers
- Mechanic's Hands

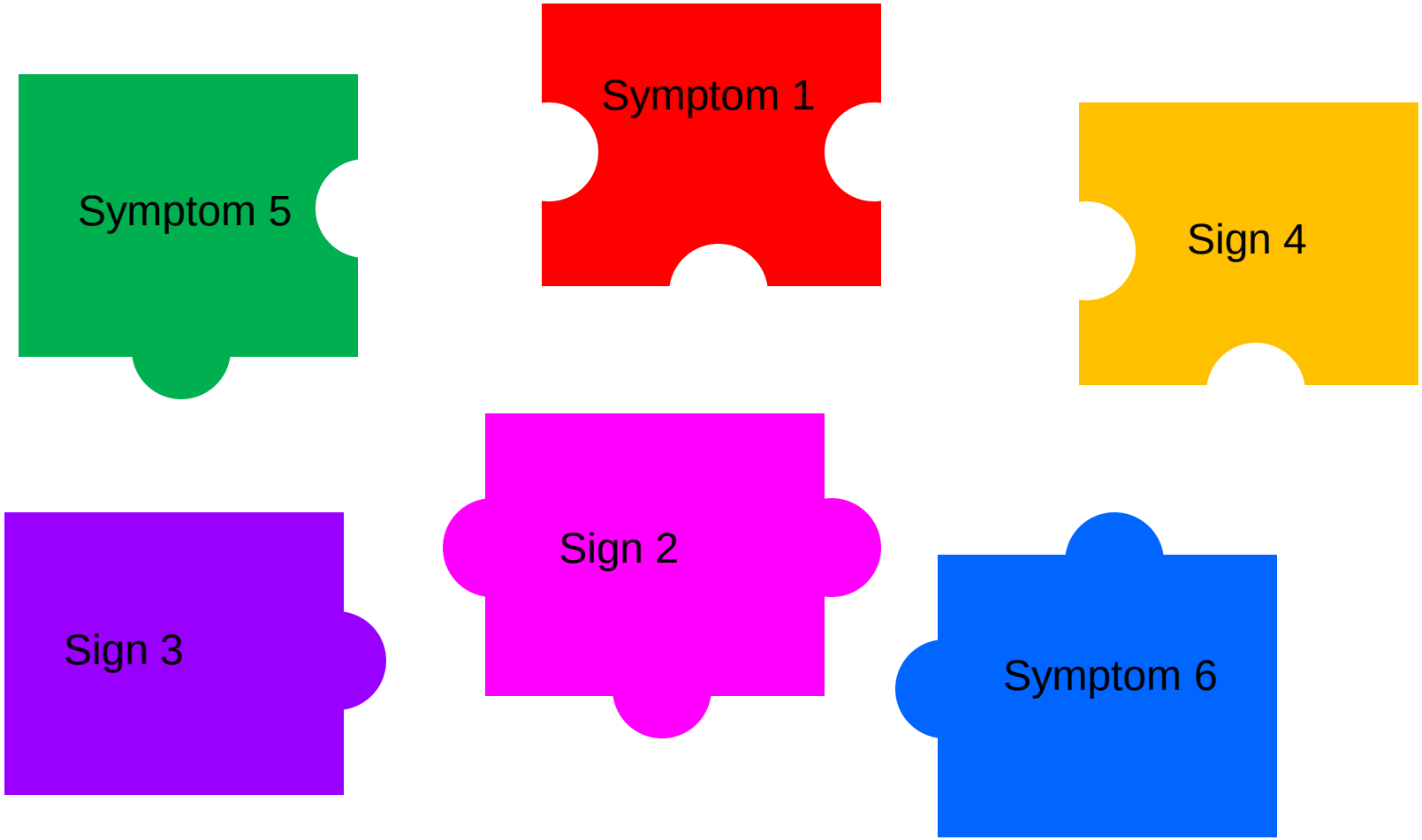


- Anti-synthetase antibodies: Jo-1, PL-7, PL-12
  EJ, OJ, KS


MCTD
SLE
UCTD
SS
SSc
Pm/DM

Autoimmune Disease: Putting together pieces of "The Puzzle"

Importance in Determining Correct Treatment



What is YOUR Disease?

Questions and Discussion….