



Butterfly rash

# AMERICAN OSTEOPATHIC SOCIETY FOR RHEUMATIC DISEASE

LABORATORY TESTING IN RHEUMATIC  
DISEASES

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# clinical signs and laboratory testing

- lets begin

# Basic lab testing

- Ana –titer plus reflex cascade
- Cbc
- Urinalysis
- Chem basic
- CRP
- Sed rate
- Uric acid
- Thyroid studies

# Basic lab testing

- Vit D
- Ferritin
- Anti-ccp
- Aldolase
- Lyme titer

# The ANA cascade

			Antibody					
	ds DNA	ss DNA	Histone	Nucleoprotein	Sm	RNP	Ro	La
<b>SLE</b>								
Sen	70%	80	30-80	58	25-30	45	40	15
Spec	95%		50	mod	mod	99	87-94	
<b>Drug LE</b>								
Sen	1-5%	80	95	50	1%		low	low
Spec		50	high	mod				
<b>RA</b>								
Sen	1%	mod	low	25	1%	47	low	low
Spec		mod		low				
<b>Scleroderma</b>								
Sen	<1%		<1%	<1%	<1%	20		
Spec		low						
<b>PM/DM</b>								
Sen	<1%		<1%	<1%	<1%		low	
Spec		low						
<b>Sjögren's</b>								
Sen	1-5%	mod	low	mod	1-5%	5-60	8-70	14-60
Spec		mod	low	mod			87	94



Butterfly rash







# Helpful Lab markers for SLE

- dsDNA (40-60%)
- Chromatin (anti-histone) SLE 48-97% ,  
drug induced SLE (90%)

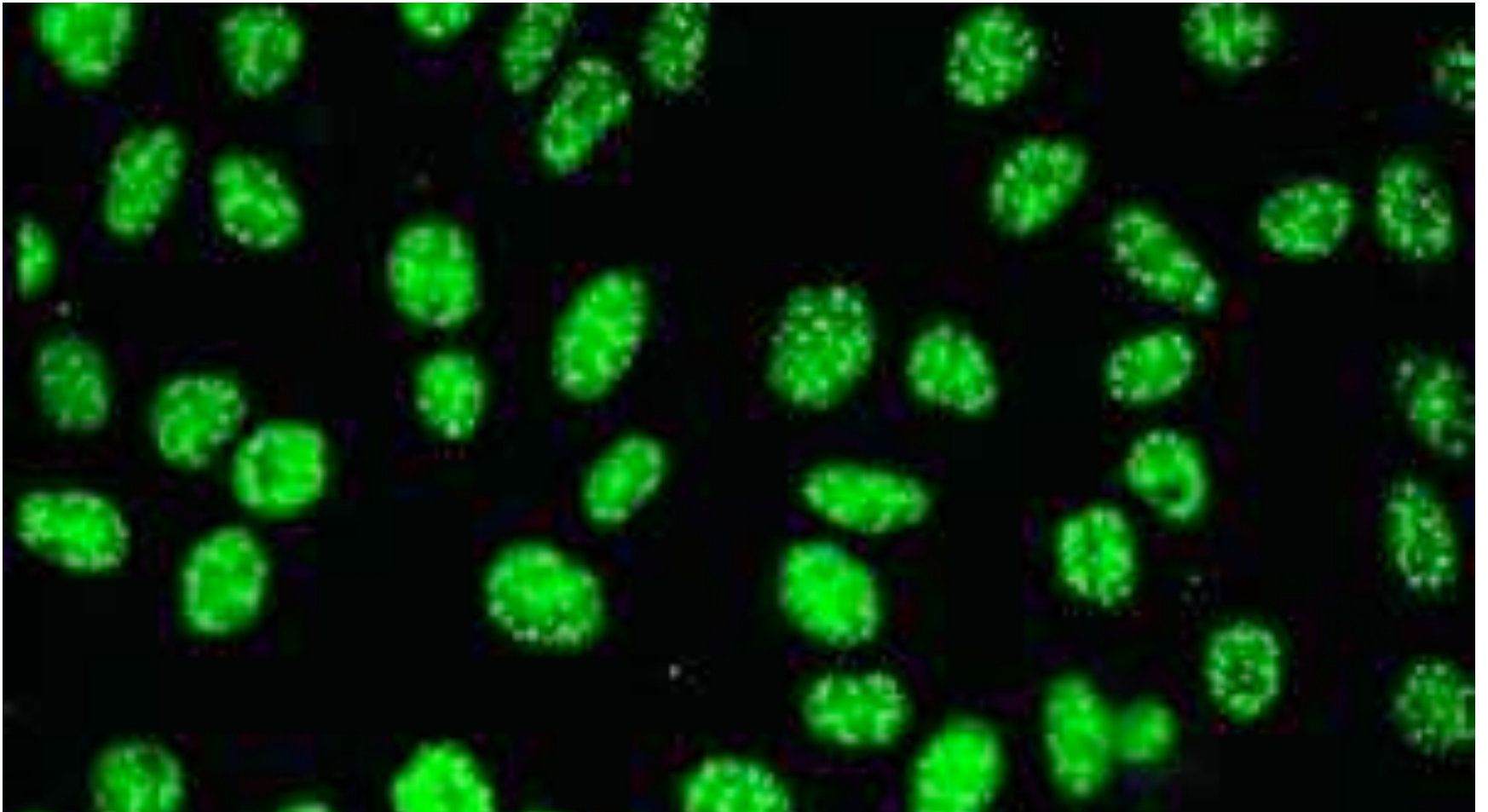
Ribosomal P SLE 10-20%

Sm (anti-smith) SLE 15-30%

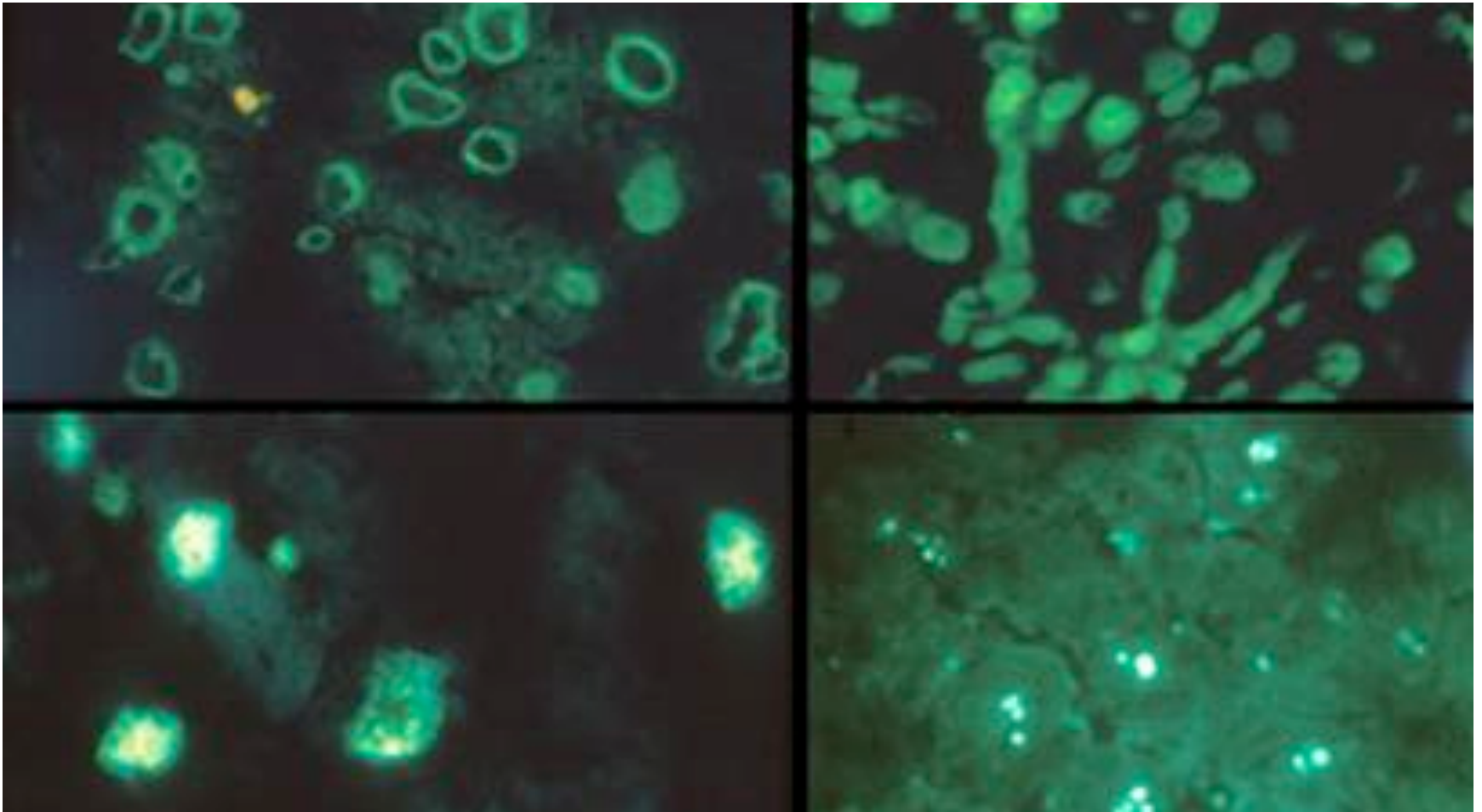
Compliment C3, C4, CH50 (decrease levels = increase activity)

Elevated ESR, C-reactive protein

# Centromere (crest syndrome)



Peripheral,diffuse,nucleolar,speckeled







# Markers for Sero negative arthropathies

- Ankylosing spondylitis, Reiters syndrome, Psoriatic arthritis, Enteric arthropathy
- HLA-B27
- ANA negative
- Anti-ccp negative
- Increase acute phase reactants (ESR, CRP)









# Ohcronosis

- Urine turns dark in light, defect in homogenistic acid production
- Alkaptanuria

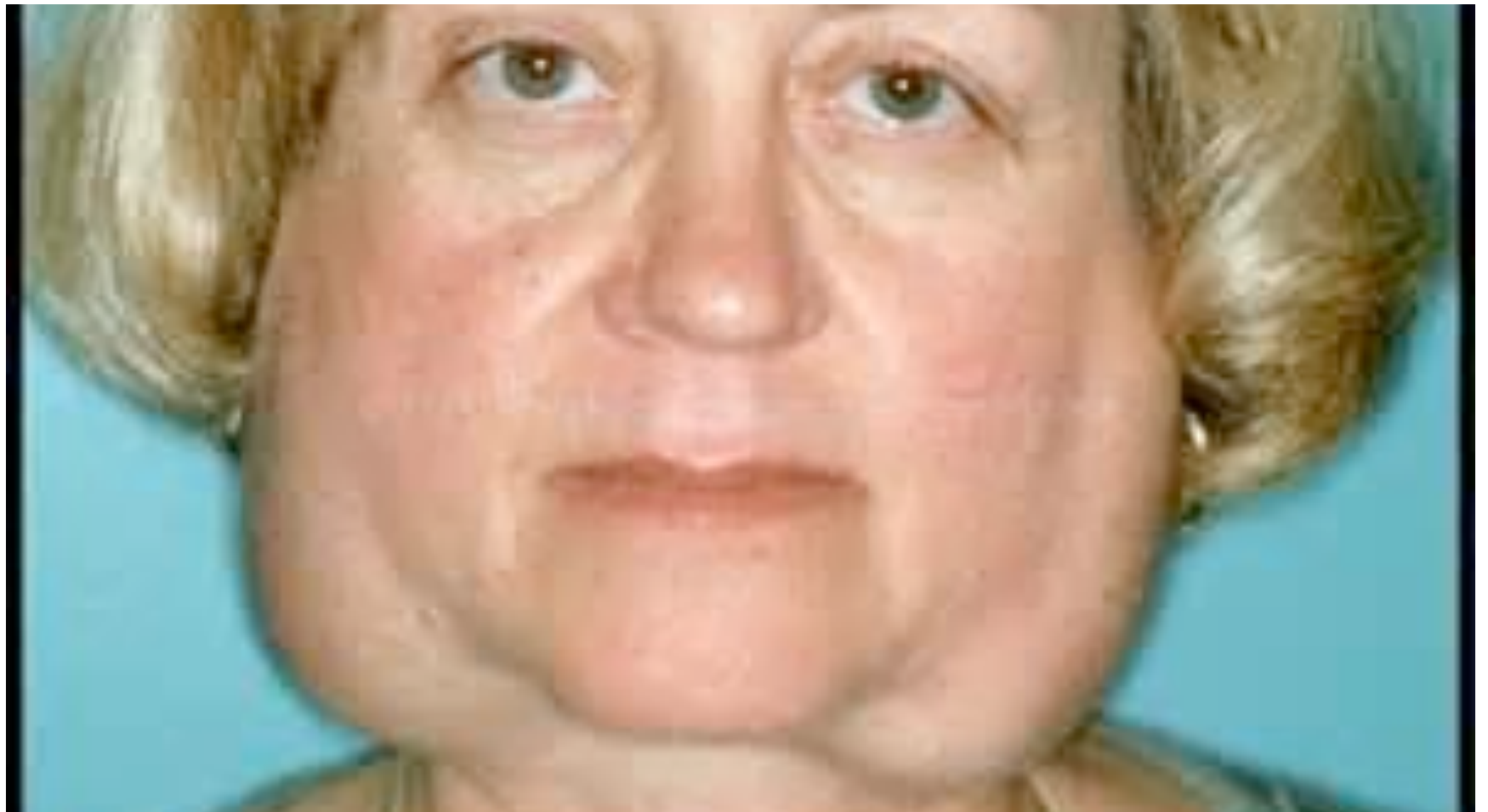
**Dry eyes resulting  
in damage to eye  
surface.**



**Dry mouth resulting in**





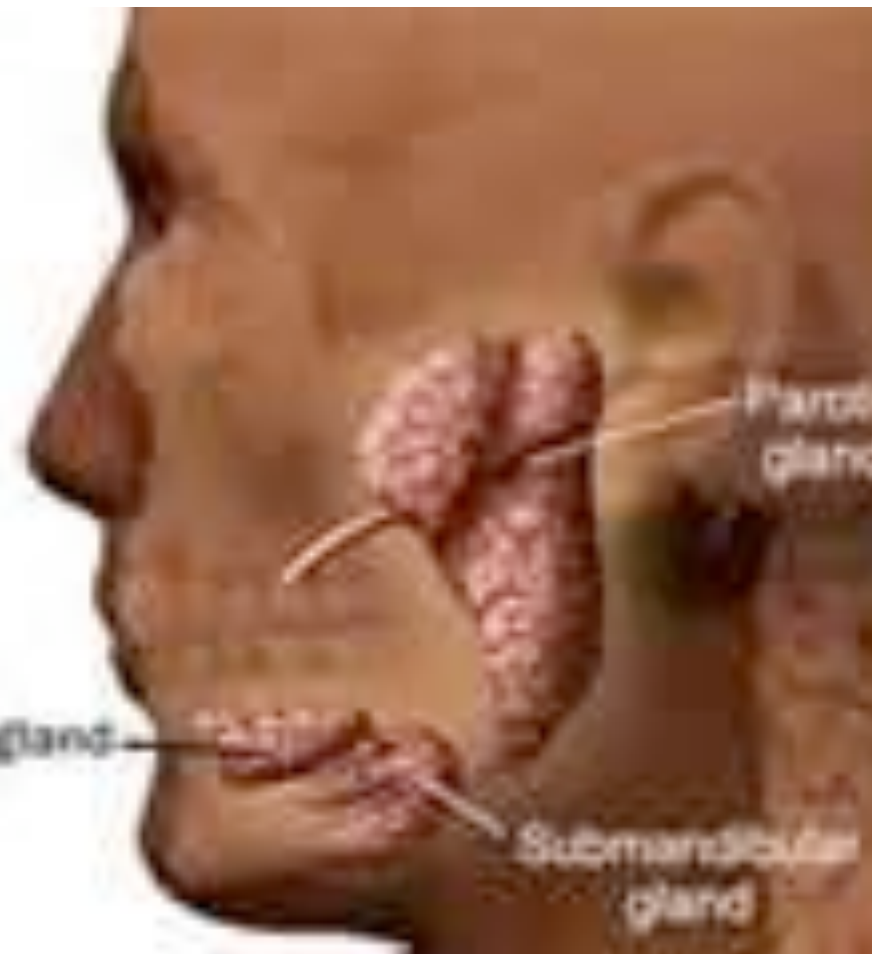


# ROGREN'S SYNDROME

Sublingual gland

Submandibular gland

Parotid gland



# SJOGRENS SYNDROME

- SSA ( RO) 40-70% also seen in SLE 25-35% and seen in neonatal lupus 100%
- SSB (LA) 30% SLE only 10%
- ESR,CRP,CBC, Chem profile, LFT's











# Rheumatoid Arthritis

- ANA-can be positive
- Anti-CCP
- Rheumatoid factor
- ESR, CRP
- CBC
- Thyroid studies
- Lyme titer
- Ferretin levels





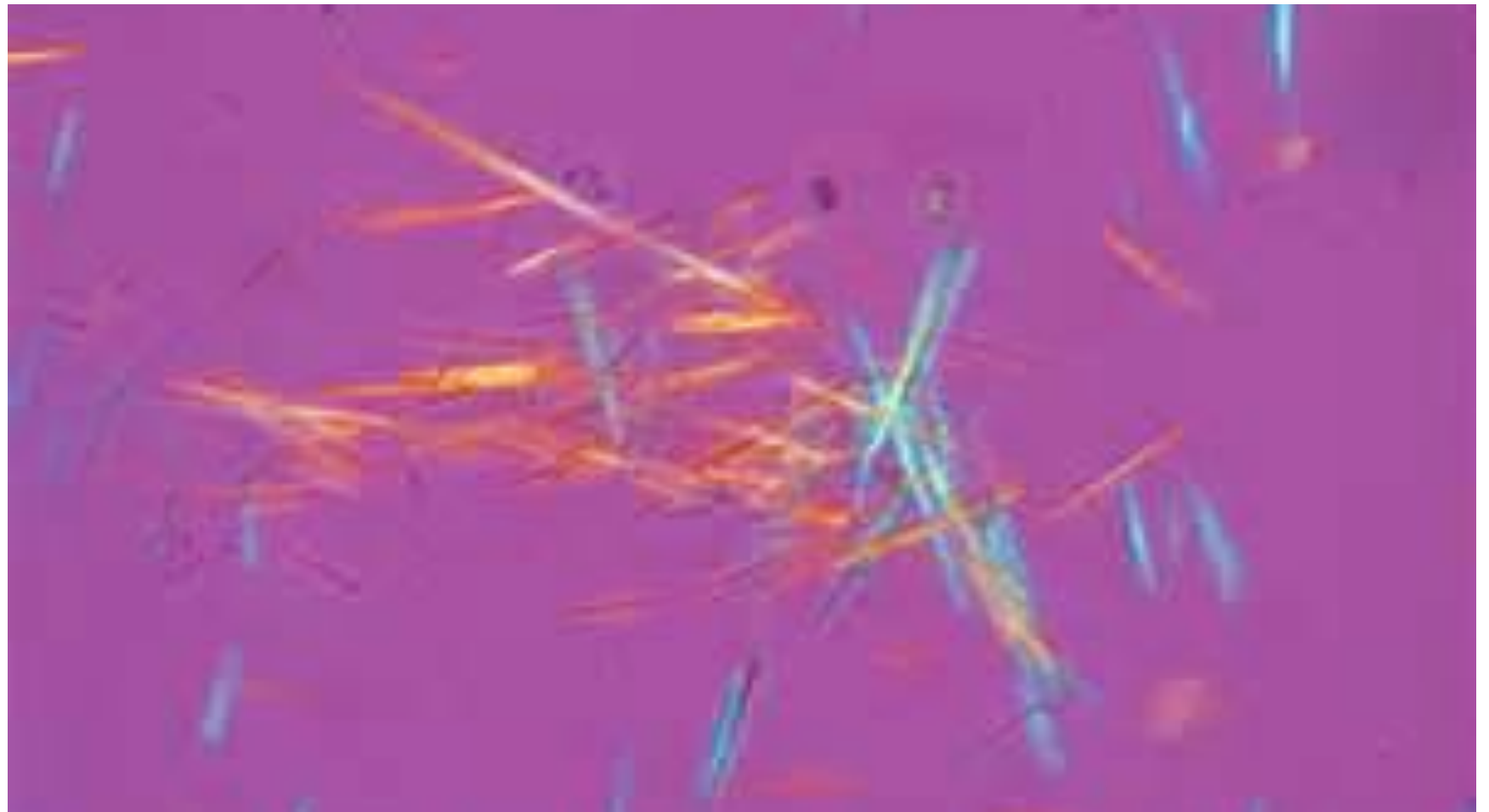
# dermatomyocytis/polymyositis

- Jo-1 (20-40%)
- Anti-ribonucleoprotein 20%
- Aldolase
- Myoglobin
- ESR, CRP, CBC, Urine, LFT's, Chem profile

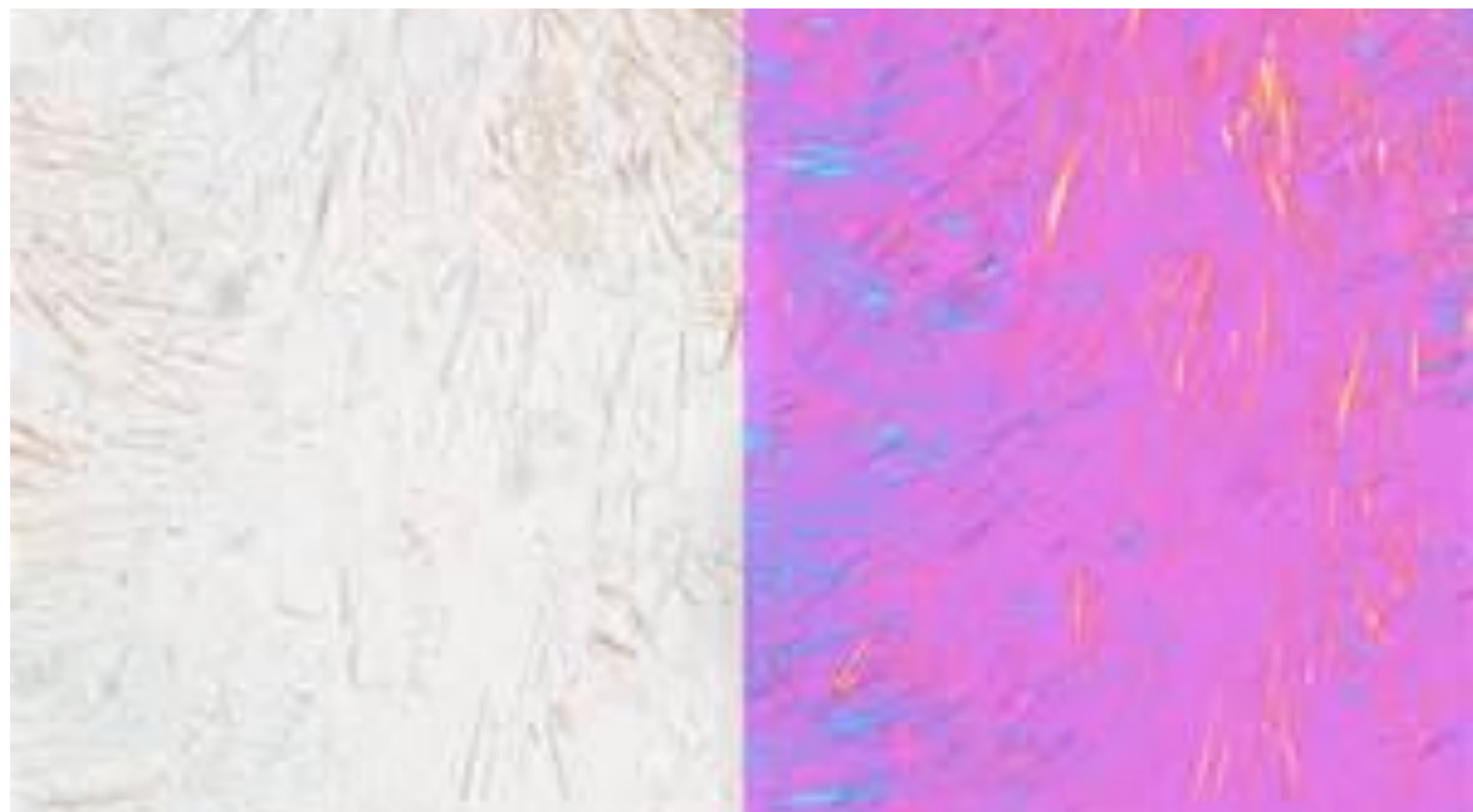


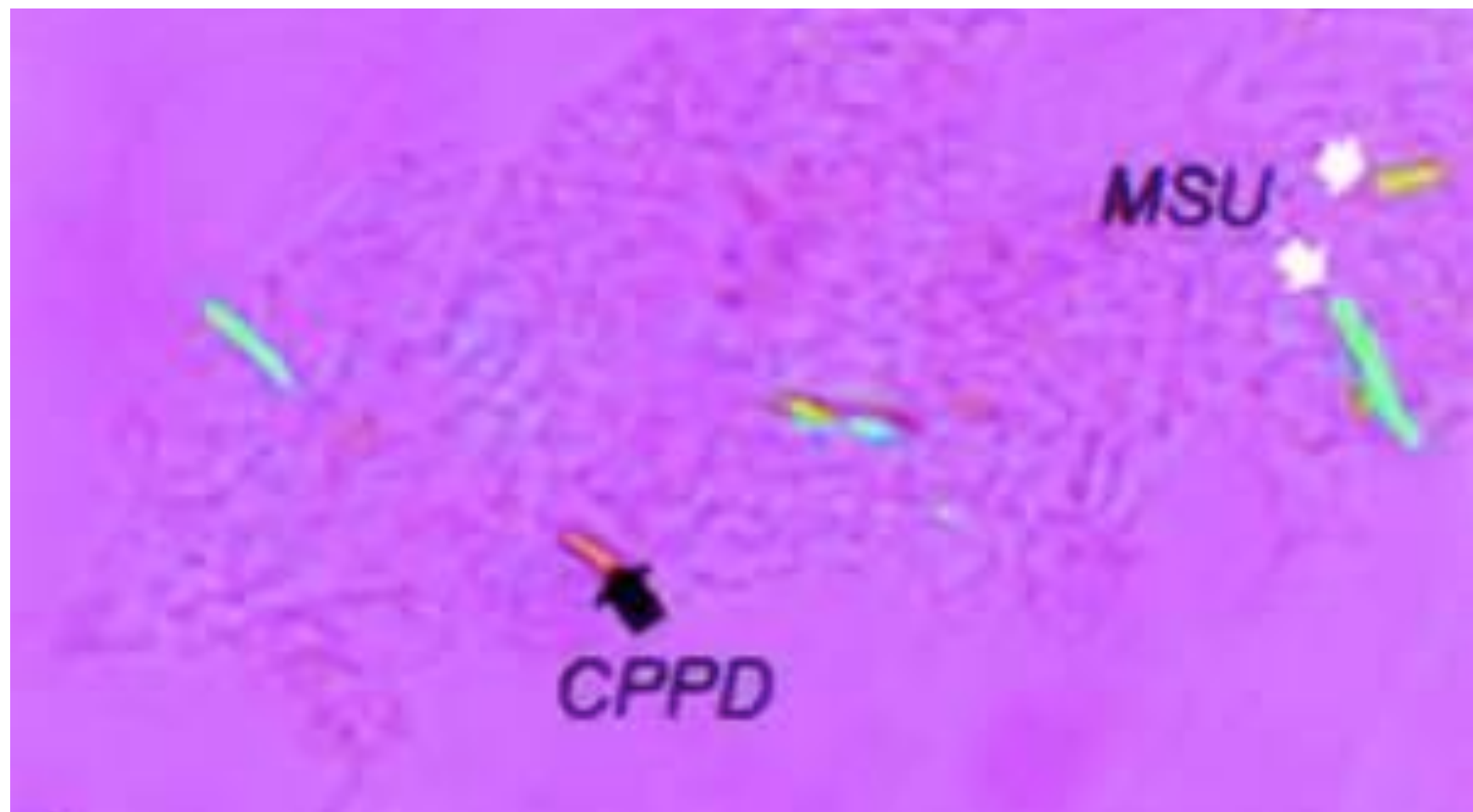
# Gout and Pseudogout

- Serum uric acid
- ESR ,CRP
- CBC, Urine, Chem profile
- Synovial fluid crystals, needle shaped for gout, rhomboid shaped for cppd
- Possible to run 24 hr urinary uric acid









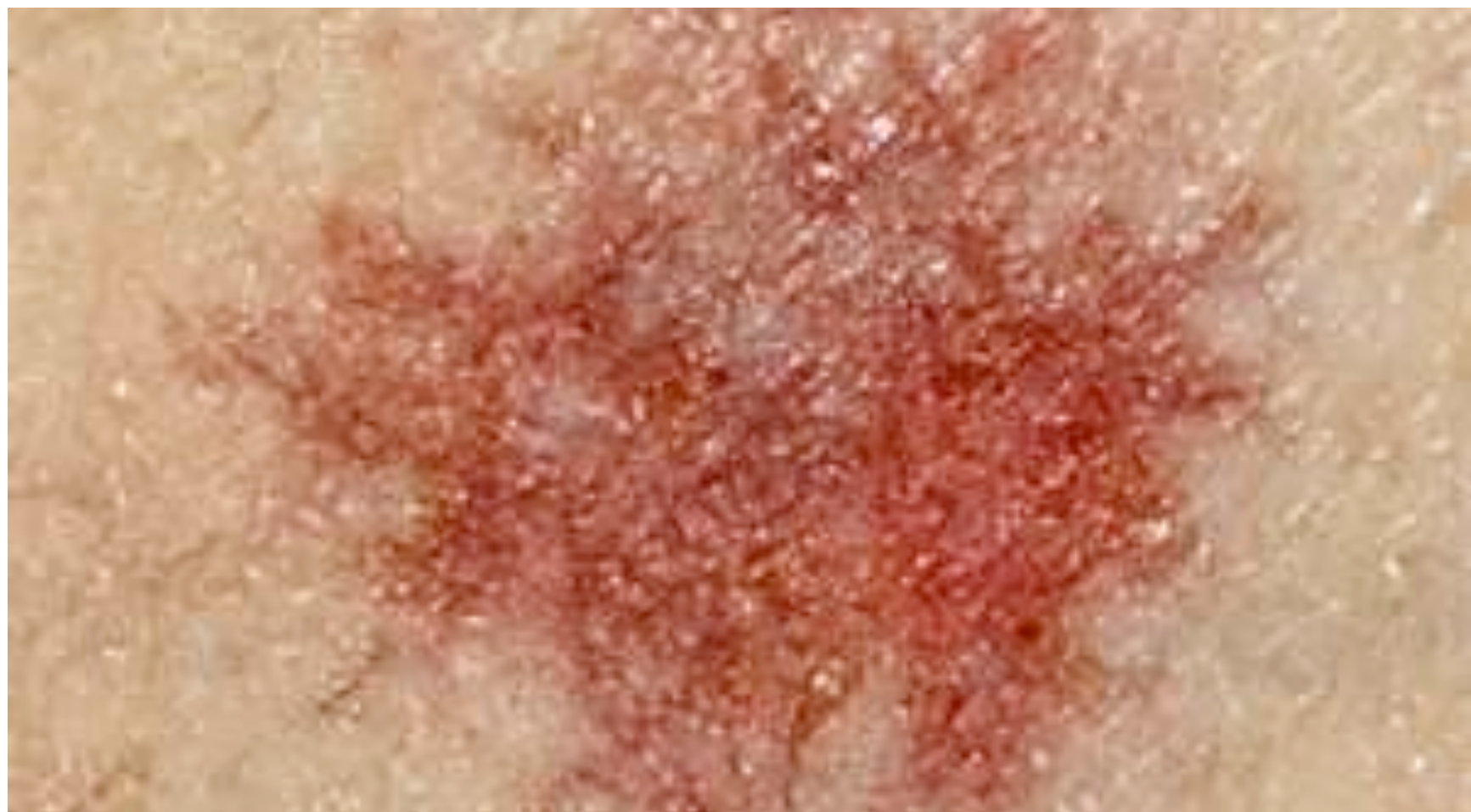












# Scleroderma and Crest syndrome

- ANA
- Scl-70 20-35%
- Centremere B- crest variant 80%
- Ua, CBC, Chem Profile ,ESR,CRP



# Raynauds

- Test for autoimmune diseases, thyroid, etc.
- Test for cryoglobulins, (globulins that precipitate when cooled, clumps up and blocks blood flow.

# PMR

- ESR, CRP, CBC, etc., ANA with reflex titer

# RHUPUS

- Symptoms of lupus and Ra
- Test for SLE and Rheumatoid arthritis

# MCTD

- Use testing for SLE, Scleroderma, and polymyositis
- Ana cascade positive for anti-rnp

# Hypermobile joints



# Elastic skin



# Ehlers-Danlos syndrome

- Hereditary , no real lab studies of significance,
- You win the Grand Prize if you got it right.

# THE END

- Questions will now be taken if any?
- Thank you for the privilege of speaking with you today.