

## Comprehensive Laboratory Disease Workups

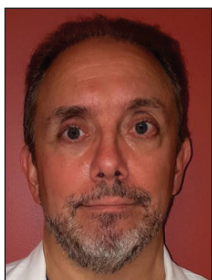
by Paul M. Graham, DO, Sara Wilchowski, PA-C, and David Fivenson, MD



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Acanthosis Nigricans	Alopecia	Anetoderma	Dermatitis Herpetiformis	Dermatomyositis
CBC/CMP Lipid panel HgA1C Fasting insulin Fasting glucose TSH ANA CEA LH/FSH Plasma insulin level Anti-insulin receptor	CBC/CMP Iron/TIBC/Ferritin TSH/Free T4 Free testosterone Total testosterone 17-OH progesterone VDRL FSH, LH, DHEA-S ANA ESR Prolactin Vitamin D	CBC ANA Anti-dsDNA Anti-SSA/Ro Anti-SSB/La TSH/anti-TPO RPR Lyme titer HIV Fasting AM cortisol SPEP C3/C4/C50 Protein C/S Anti-thrombin III Anti-cardiolipin abs Lupus anticoagulant B2-glycoprotein	Anti TTG-IgG, IgA Endomysial ab Anti-Gliadin ab (IgG and IgA) Total IgA CBC CMP Vitamin D TSH	<i>Antisynthetase panel:</i> (Anti-Jo-1 PL-7, EJ, OJ PL-12) Anti Mi-2 CK Aldolase LDH CRP Anti-SRP PFTs  *Anti-aminoacyl-tRNA synthetases *Anti P-155 *Anti-CADM, anti-MDA5

Flushing	Hypercoagulability & Thrombogenic Vasculopathy	Hyperhidrosis	LCV	Mixed Connective Tissue Disease
24-hour urine 5-HIAA & metanephrines Norepinephrine VMA Prostaglandin D2 Dopamine Tryptase Histamine Plasma VIP UA Serotonin Calcitonin (if thyroid nodule)	ANA Protein C/S Lupus anticoagulant Anti-phospholipid ab β2 glycoprotein ab Anti-cardiolipin Cryoglobulin Cryofibrinogen RF Hep B/C antibodies SPEP/UPEP Factor V Leiden Prothrombin gene mutation Homocysteine level MTHFR gene mutation	CBC Blood glucose ESR PPD FSH/LH Cortisol TSH GH Serotonin Urine 5-HIAA Urine 24-hour catecholamines Uric acid levels	CBC CMP UA ESR RF ANA Anti-SSA/Ro Anti-SSB/La Blood culture Cryoglobulins C-ANCA/P-ANCA Hepatitis B/C CMV TB HIV RPR SPEP D-dimer Chest X-ray Fecal occult blood	Anti-U1RNP Anti-Ku ANA RF CRP

Mycosis Fungoides	PCOS	PCT/ Pseudoporphyria	Pruritus	Purpura
CBC with peripheral smear (Sezary Prep) AST/ALT LDH CXR HIV HTLV-1 CD4/8 flow cytometry w/ CD5, CD7, CD45RO, CD26	Total testosterone Free testosterone DHEA-S LH/FSH Sex hormone binding globulin (SHBG) 17-OH progesterone Prolactin 24-hour urine free cortisol TSH β-HCG Fasting insulin Fasting glucose Lipid panel	Hepatitis C Iron 24-hour urine porphyrins (Uro:copro > 8:1) CBC LFT Lead levels Quantitative plasma porphyrins Stool porphyrins	<b>Primary</b> CBC/CMP LFTs TSH Anti-TPO TSH receptor abs Anti-thyroglobulin Bilirubin CXR UA  <b>Secondary</b> Hepatitis Panel (B/C) Peripheral blood smear Iron β-HCG Anti-mitochondrial ab ESR HIV SPEP Stool guaiac Stool ova and parasite Mammogram	CBC w/ peripheral smear CMP TSH ANA PT/PTT Bleeding time C-ANCA P-ANCA SPEP Cryoglobulins Vitamin K level D-dimer

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Pyoderma Gangrenosum	Recurrent Furunculosis/ Carbuncle	Sarcoidosis	Scleroderma/ Crest Syndrome	Sjögren's Syndrome
CBC/CMP UA Peripheral smear ANA RF SPEP/UPEP ANCA Antiphospholipid ab RF Colonoscopy Hep B/C	Skin culture w/ gram stain CMP Blood glucose HIV Hepatitis B/C CH-50 Peripheral smear SPEP IgG/IgM/IgE  *Nitroblue tetrazolium (CGD)	CBC CMP Ca+ Serum ACE level 1,25 Vit D PTH Alk Phos ESR ANA CXR QuantiFERON Gold	Anti-Scl-70 ANA Anti-Jo-1 Anti-centromere RNA polymerase I/III RF Esophageal motility PFTs BUN/Creatinine	ANA Anti-Ro/La CRP RF Anti-alpha-fodrin ab
Syphilis	Systemic Lupus Erythematosus	Urticaria	Urticarial Vasculitis	Vitiligo
RPR/VDRL – primary FTA-ABS - secondary	<b>Primary Labs</b> CBC/CMP Anti-smith (ENA) ANA dsDNA Urinalysis BUN/Creatinine ESR (sed rate)  <b>Secondary Labs</b> Anti-Ro/Anti-La Anti-rNP Anti-histone ssDNA CRP RF C3/C4/CH50 Urine microalbumin Anti-C1q (kidney) ANCA Anti-rNP (CNS lupus)	CBC ANA ESR Liver function test IgE Anti-FcεRI (CUI) Sinus X-ray Hepatitis B/C TSH Anti-TPO Anti-thyroglobulin C3/C4/CH50 H. Pylori Cryoglobulins	ESR C4/CH50 Anti-FcεRI (CUI) Anti-C1q ASO RF ANA UA SPEP Hep B/C CRP C3/C4/CH50	CBC TSH/Free T4 Anti-thyroid peroxidase (TPO) ANA Fasting blood glucose 25-OH Vitamin D B12/Folic acid Anti-parietal gastric cell antibody (APGC)

\*Denotes experimental research laboratory test only

### ABBREVIATIONS

17-OH-progesterone – 17 hydroxyprogesterone  
5-HIAA – 5-hydroxyindoleacetic acid  
Abs – antibodies  
ACE – angiotensin-converting enzyme  
Alk Phos – alkaline phosphatase  
ALT – alanine aminotransferase  
ANA – antinuclear antibody  
Anti-dsDNA – anti double stranded DNA  
Anti FcεRI (CUI)– high affinity IgE receptor  
Anti Jo1 – histidyl-tRNA myositis antibody  
Anti MDA5 – anti-melanoma differentiation-associated gene 5  
Anti Mi-2 – Mi-2 myositis antibody  
Anti PL7 – threonyl-tRNA synthetase myositis antibody  
Anti PL12 – alanyl-tRNA synthetase myositis antibody  
Anti Scl-70 – anti-topoisomerase 1  
Anti-SRP – anti signal recognition particle  
Anti-SSA/Ro – anti-Sjögren's-syndrome-related antigen A  
Anti-SSB/La – anti-Sjögren's-syndrome-related antigen B  
Anti-TPO – anti thyroid peroxidase  
Anti-TTG – anti-transglutaminase antibodies  
Anti U1RNP – anti-ribonucleoprotein  
APGC - anti-parietal gastric cell antibody  
AST – aspartate aminotransferase  
β-HCG – beta-human chorionic gonadotropin

BUN – blood urea nitrogen  
C-ANCA – cytoplasmic antineutrophil cytoplasmic antibodies  
CBC – complete blood count  
CEA – carcinoembryonic antigen  
CGD – chronic granulomatous disease  
CK – creatine kinase  
CMP – complete metabolic panel  
CMV – cytomegalovirus  
CRP – C-reactive protein  
CUI Anti FcεRI– chronic urticarial index  
CXR – chest radiograph  
DHEA-S – dehydroepiandrosterone sulfate  
EJ – glycyl-tRNA synthetase myositis antibody  
ENA – extractable nuclear antigen  
ESR – erythrocyte sedimentation rate  
FTA-ABS – fluorescent treponemal antibody absorption  
FSH – follicle-stimulating hormone  
GH – growth hormone  
Hep - hepatitis  
HIV – human immunodeficiency virus  
H. Pylori – helicobacter pylori  
HTLV – human T-lymphotropic virus  
LDH – lactate dehydrogenase  
LH – luteinizing hormone  
MTHFR gene – methylenetetrahydrofolate reductase

OJ – isoleucyl-tRNA synthetase myositis antibody  
P-ANCA – peri-nuclear antineutrophil cytoplasmic antibodies  
PFTs – pulmonary function test  
PGD2 – prostaglandin D2  
Plasma VIP – plasma vasoactive intestinal polypeptide  
PPD – purified protein derivative  
PT/PTT – prothrombin time/partial prothrombin time  
PTH – parathyroid hormone  
RF – rheumatoid factor  
RPR – rapid plasma reagin  
SHBG – sex hormone binding globulin  
SPEP – serum protein electrophoresis  
ssDNA – single stranded DNA  
TB – tuberculosis  
TIBC – total iron binding capacity  
TSH – thyroid stimulating hormone  
UA – urinalysis  
UPEP – urine protein electrophoresis  
Uro:copro - urobilinogen:coprobilinogen  
VDRL – venereal disease research laboratory test  
VMA – vanillylmandelic acid

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