

boards fodder

Comprehensive laboratory disease workups

by Paul M. Graham, DO, 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	Antisynthetase panel: (Anti-Jo-1 PL-7, EJ, OJ PL-12) Anti Mi-2 CK Aldolase LDH CRP Anti-SRP *anti-aminoacyl-tRNA synthetases *Anti P 155 *Anti-CADM, anti-MDA5 PFTs

Flushing	Hypercoagulability & Thrombogenic Vasculopathy	Hyperhidrosis	LCV	Mixed Connective Tissue Disease
24hr 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 2 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-hr 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

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Mycosis Fungoides	PCOS	PCT/ Pseudoporphyria	Pruritus	Purpura
CBC with manual diff (Sezary Prep) AST/ALT LDH CXR HIV HTLV-1 CD4/8 flow cytometry with CD5, CD7, CD45RO, CD26	Total Testosterone Free Testosterone DHEA-S LH/FSH Sex Hormone binding globulin (SHBG) 17-OH progesterone Prolactin 24hr urine free cortisol TSH B-HCG (pregnancy test) Fasting insulin Fasting glucose Lipid panel	Hepatitis C Iron 24 hour urine-porphyrins <i>Uro:copro > 8:1</i> CBC LFT Lead levels Quantitative plasma porphyrins Stool porphyrins	Primary CBC/CMP LFTs TSH Anti-TPO TSH receptor abs Anti-thyroglobulin Bilirubin CXR UA Secondary Hepatitis Panel (B/C) Peripheral blood smear Iron -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

Pyoderma gangrenosum	Recurrent Furunculosis/ Carbuncles	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 <i>*Nitroblue tetrazolium (CGD)</i>	CBC CMP Ca ⁺ Serum ACE level 1-25Vit 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 Fodrin Ab

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Syphilis	Systemic Lupus Erythematosus	Urticaria	Urticarial Vasculitis	Vitiligo
RPR/VDRL – primary FTA-ABS - secondary	<p>Primary Labs</p> <p>CBC/CMP Anti-smith (ENA) ANA dsDNA Urinalysis BUN/Creatinine ESR (sed rate)</p> <p>Secondary Labs</p> <p>Anti-Ro/Anti-La Anti-RNP Anti-histone ssDNA CRP RF C3/C4/CH50 Urine microalbumin Anti C1q (kidney) ANCA Anti-rRNP (CNS lupus)</p>	CBC ANA ESR Liver function test IgE Anti Fc RI (CUI) Sinus XRay Hepatitis B/C TSH Anti -TPO Anti thyroglobulin C3/C4/CH50 H. Pylori Cryoglobulins	ESR C4/CH50 Anti Fc RI (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

*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 Fc RI: 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-ribonuclear protein

AST – aspartate aminotransferase
-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 – chronic urticarial index
CXR – chest radiograph
DHEA-S – dehydroepiandrosterone sulfate
EJ – glycyI-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-lymphotrophic 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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