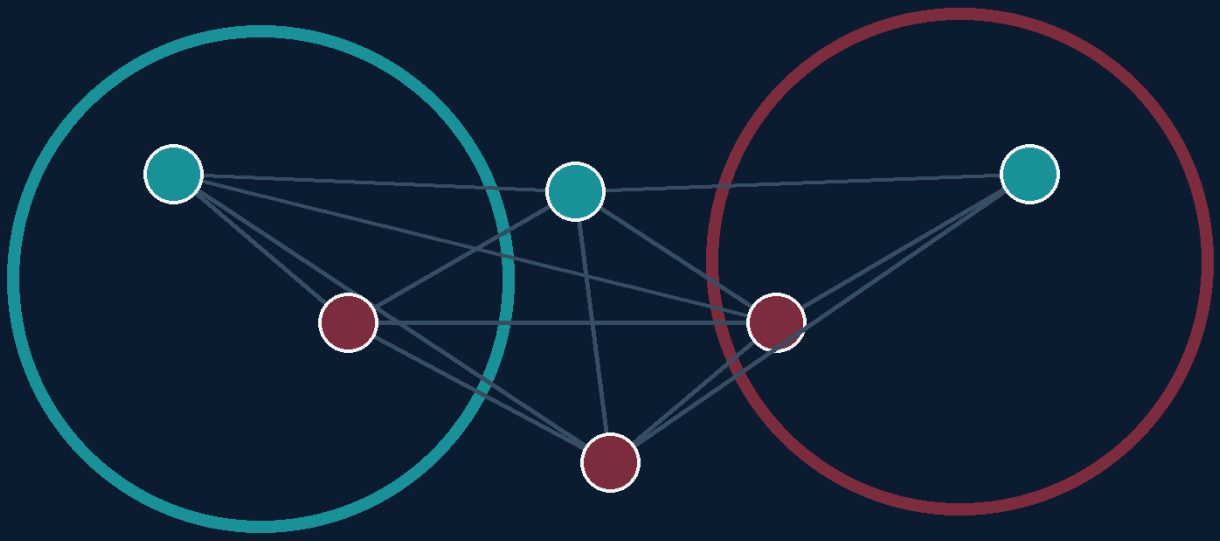

AUTOIMMUNE DISEASES

Buzzwords - Rapid Pattern Recognition 2026

USMLE Step 1 & Step 2 CK Board Review

Pattern -> Effector -> Target Organ -> Antibody -> Morphology -> Treatment

- Systemic + organ-specific autoimmunity
- ANA/ENA + histopathology pattern recognition
- 30 board-style clinical cases + final cheat sheets

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2026 Educational Edition

CHAPTER 0 | How to Use This Book

Source-grounded Sinoe framework: pattern -> effector -> target organ -> antibody -> morphology -> management.

This edition reorganizes the Sinoe Medical Association autoimmune case deck, autoimmunity review, and autoimmune histopathology keyword guide into one rapid-recognition manual. The source framework repeatedly emphasizes that a positive antibody alone does not diagnose disease; the clinical phenotype and target organ must fit.

THE FIVE-STEP AUTOIMMUNE STEM 1) Systemic or organ-specific? 2) Antibody, immune complex, T cell, complement, or cytokine? 3) Which organ is threatened? 4) Which test refines the diagnosis? 5) Which intervention protects that organ?

Source-derived core	What this edition preserves
Autoimmune Diseases Case Presentation - Updated 2026	Case clue -> mechanism -> labs/pathology -> treatment -> MCQ flow.
Immunity, Autoimmunity & Pediatric Immunodeficiency	Tolerance failure, ANA/ENA interpretation, systemic vs organ-specific classification.
USMLE Step 1 Autoimmune Histopathology Keywords	Morphology-first pattern recognition: linear vs granular IF, pannus, villous atrophy, demyelination, interface hepatitis.
Supplemental 2025-2026 guideline anchors	Clearly labeled treatment updates; intended as board review, not individualized clinical care.

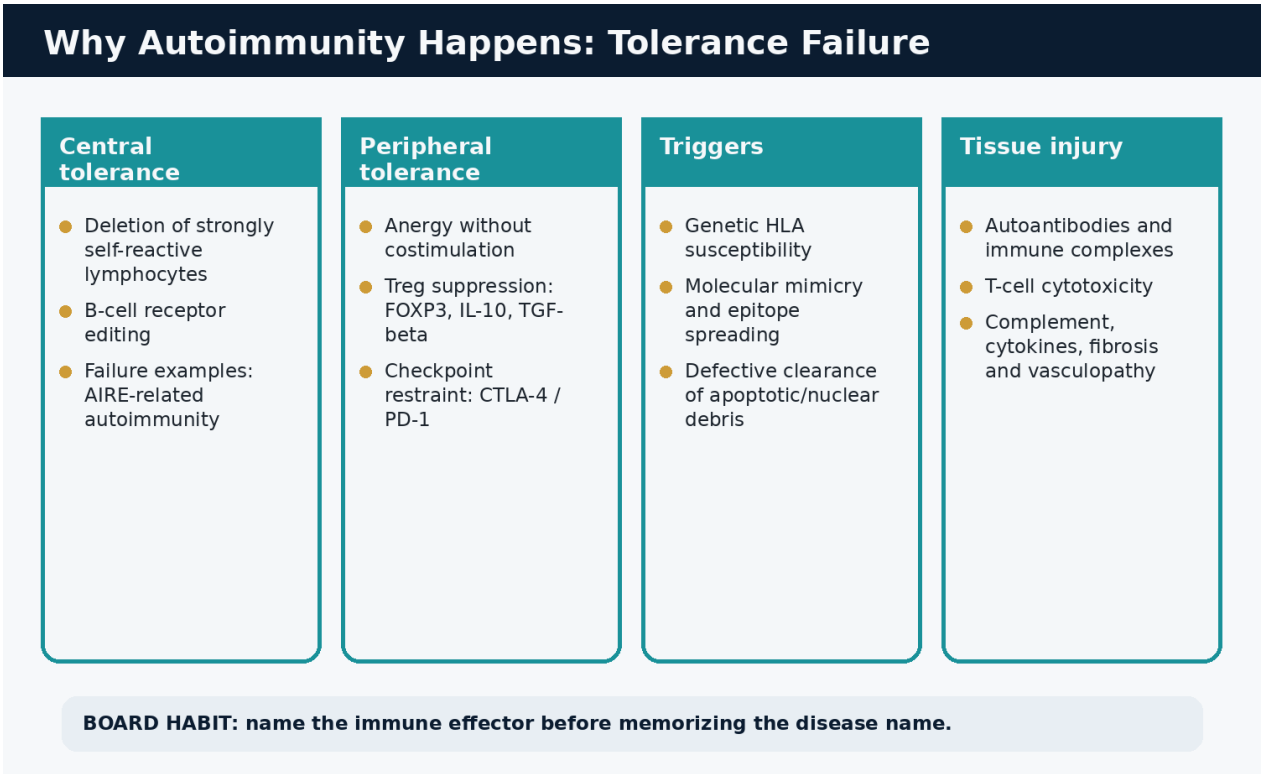

Figure 1. Original tolerance-failure map for board-style mechanism recognition.

CHAPTER 1 | Tolerance Failure and Immune Mechanisms

Autoimmunity is a failure of self-tolerance; identify the effector mechanism before the disease label.

Mechanism	What fails	Classic board examples
Molecular mimicry	Microbial epitope resembles self	Post-streptococcal rheumatic fever pattern
Defective clearance	Nuclear/apoptotic debris persists	SLE / anti-dsDNA pattern
Loss of regulation	Treg/checkpoint restraint fails	Broad autoimmune phenotypes; IPEX is the extreme Treg example
Epitope spreading	Injury reveals new self-antigens	Progressive connective-tissue autoimmunity
Sequestered antigen exposure	Previously hidden antigen becomes visible	Selected ocular/testicular autoimmune reactions

IMMUNE-EFFECTOR SHORTCUT Type II = antibody against a fixed cell/receptor/basement membrane target. Type III = circulating immune complexes deposit. Type IV = T cells/macrophages cause delayed or chronic injury.

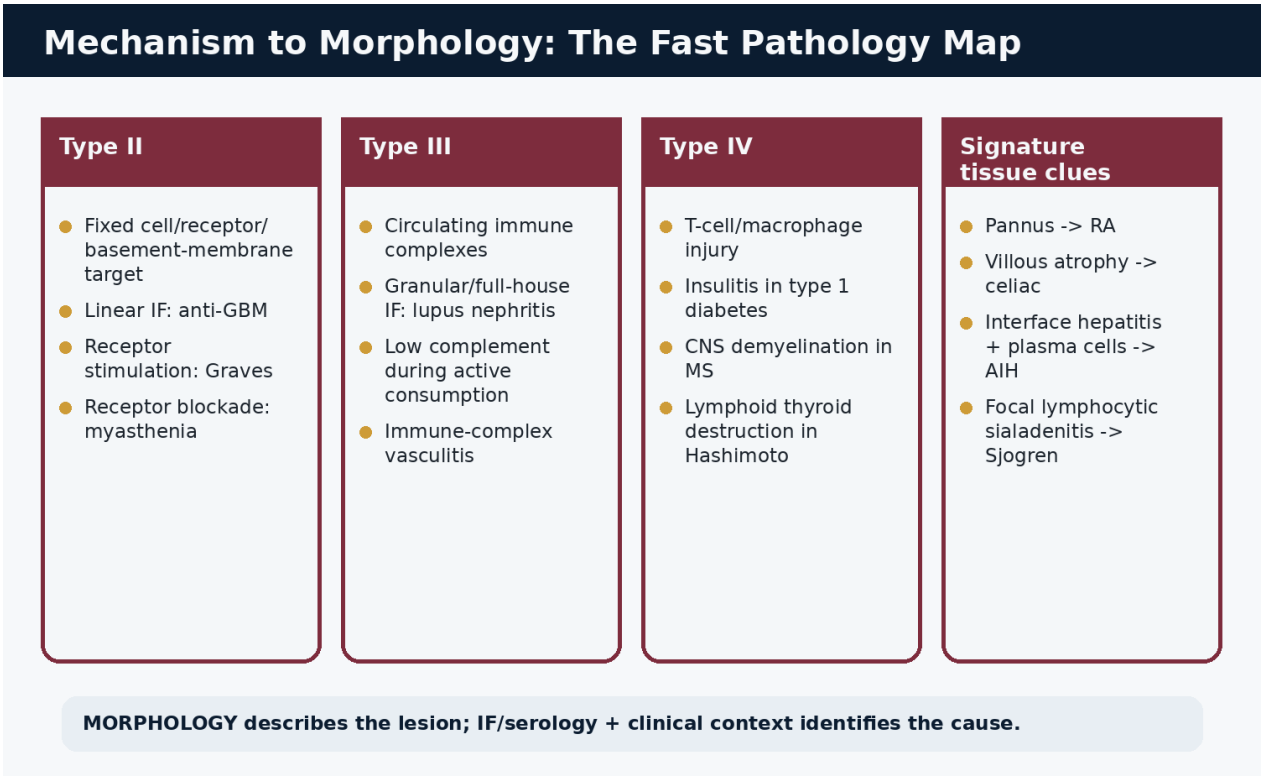

Figure 2. Original mechanism-to-morphology map.

CHAPTER 2 | ANA and ENA Interpretation

ANA is a screening context; disease-specific antibodies refine diagnosis and risk.

Antibody / pattern	Classic association	High-yield clue
ANA	SLE and multiple CTDs	Sensitive context test; positive alone is not diagnostic.
Anti-dsDNA	SLE	Often tracks nephritis/activity; immune-complex disease.
Anti-Sm	SLE	Very specific; low sensitivity.
Anti-histone	Drug-induced lupus	Hydralazine/procainamide/isoniazid pattern.
SSA/Ro	Sjogren, SLE	Neonatal lupus/congenital heart block risk.
SSB/La	Sjogren	Often accompanies SSA.
U1-RNP	Mixed connective-tissue disease	Overlap of lupus, sclerosis, myositis.
Centromere	Limited systemic sclerosis	CREST; PAH risk.
Scl-70 / topoisomerase I	Diffuse systemic sclerosis	Interstitial lung disease risk.
Jo-1	Antisynthetase syndrome	Myositis + ILD + mechanic hands/arthritis.

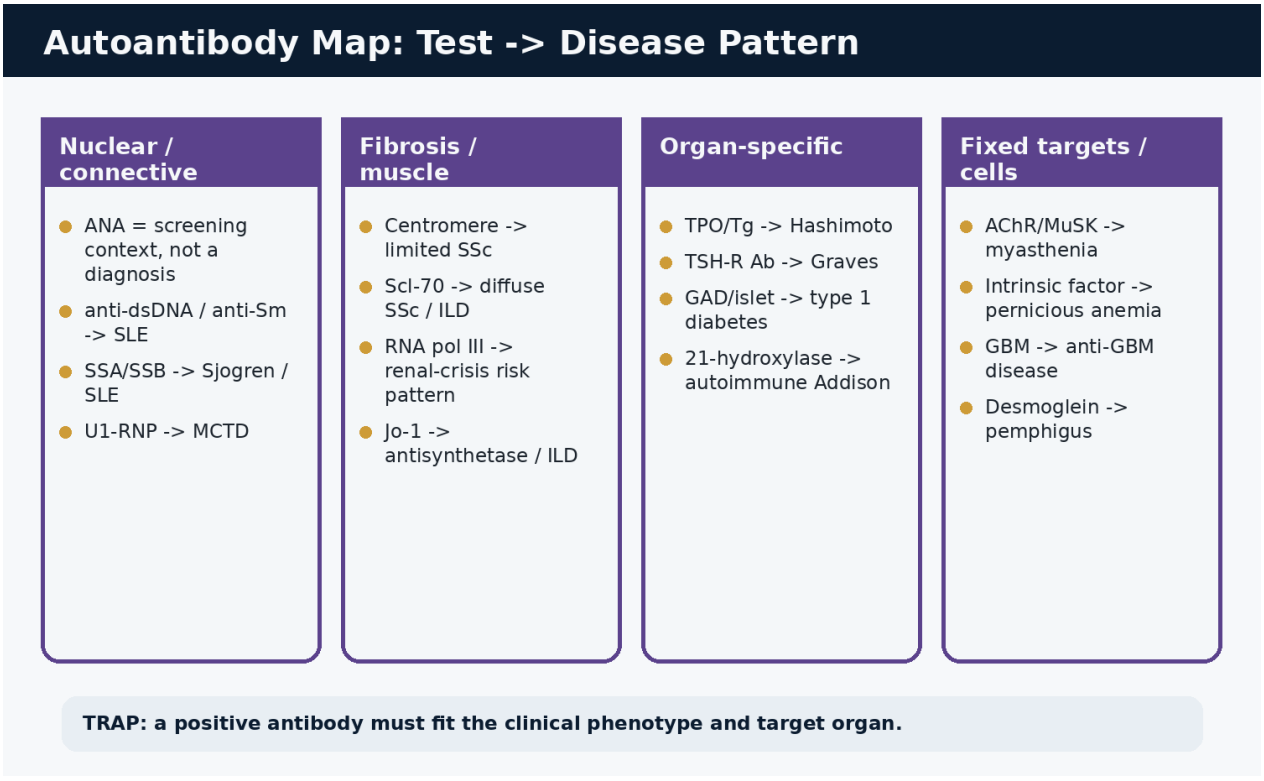

Figure 3. Original autoantibody map.

CHAPTER 3 | Systemic Lupus Erythematosus and Lupus Nephritis

Immune-complex disease: skin + joint + blood + serosa + kidney/CNS.

SLE - "malar/photosensitive rash + cytopenias + nephritis"

TRIGGER	Young or middle-aged patient with inflammatory arthralgia/arthritis, photosensitivity, serositis, cytopenias, proteinuria/hematuria.
MECHANISM	Loss of tolerance to nuclear antigens -> autoantibodies -> immune-complex deposition and complement activation.
LAB / PATH CLUE	ANA sensitive; anti-dsDNA and anti-Sm specific; low C3/C4 in active immune-complex disease; lupus nephritis can show wire loops and full-house granular IF.
BOARD TRAP	ANA alone is not SLE. ESR can be high while CRP may be less impressive unless infection/serositis is present.
TREATMENT / PEARL	Hydroxychloroquine is a common foundation unless contraindicated; organ-threatening disease requires organ-specific immunosuppression. Kidney abnormalities should trigger urinalysis/protein quantification and biopsy when indicated.

LUPUS NEPHRITIS 2026 ANCHOR The source deck and current ACR guidance emphasize screening for renal involvement and biopsy-guided, severity-based therapy; modern regimens can combine glucocorticoid-sparing immunosuppression with agents such as mycophenolate, belimumab, calcineurin inhibition, or other selected therapies.

Biopsy / lab phrase	Think
Wire-loop capillaries	Subendothelial immune complexes; proliferative lupus pattern
Full-house IF: IgG, IgA, IgM, C3, C1q	Lupus nephritis
Anti-dsDNA rising + complement falling + active sediment	Active immune-complex disease
Proteinuria/hematuria/cellular casts	Renal involvement; do not ignore

CHAPTER 4 | Antiphospholipid Syndrome, Drug-Induced Lupus, and MCTD

APS - "thrombosis despite prolonged PTT"

TRIGGER	Venous/arterial thrombosis or characteristic pregnancy morbidity with antiphospholipid antibodies.
MECHANISM	Prothrombotic autoantibodies: lupus anticoagulant, anticardiolipin, anti-beta2-glycoprotein I.
LAB / PATH CLUE	PTT can be prolonged in vitro; clinically the patient clots. Classification requires persistent antibodies on repeat testing at the required interval.
BOARD TRAP	"Lupus anticoagulant" does not mean bleeding tendency.
TREATMENT / PEARL	Acute thrombosis is treated as thrombosis; long-term antithrombotic strategy depends on phenotype. Catastrophic APS is an emergency.

Drug-induced lupus - "new arthralgia after hydralazine/procainamide"

TRIGGER	Fever/arthralgia/serositis after a culprit drug.
MECHANISM	Medication-triggered autoantibody formation.
LAB / PATH CLUE	ANA and anti-histone common; complement often normal; major nephritis/CNS disease is less typical in classic DIL.
BOARD TRAP	Do not automatically label anti-dsDNA-negative drug-related arthralgia as idiopathic SLE.
TREATMENT / PEARL	Stop the offending drug; supportive anti-inflammatory therapy may be used depending on severity.

MCTD - "high anti-U1 RNP + overlap"

TRIGGER	Raynaud, swollen hands, arthritis, myositis, esophageal dysfunction, pulmonary disease.
MECHANISM	Overlap autoimmune connective-tissue phenotype.
LAB / PATH CLUE	High-titer anti-U1 RNP is the classic serologic anchor.
BOARD TRAP	Overlap features are expected; forcing the patient into one classic CTD can be the trap.
TREATMENT / PEARL	Treat the dominant organ manifestation and monitor pulmonary complications.

CHAPTER 5 | Rheumatoid Arthritis

Cytokine-rich synovitis -> pannus -> erosions.

RA - "MCP/PIP/wrist morning stiffness + anti-CCP"

TRIGGER	Symmetric inflammatory small-joint arthritis, prolonged morning stiffness, nodules, erosions.
MECHANISM	CD4 T cells, macrophages, B cells, TNF, IL-6, IL-1 and RANKL drive pannus and osteoclast activation.
LAB / PATH CLUE	Anti-CCP more specific; RF = usually IgM against Fc of IgG. Marginal erosions, periarticular osteopenia, joint-space narrowing.
BOARD TRAP	DIP-predominant bony enlargement suggests OA more than classic RA. Seronegative early RA is possible.
TREATMENT / PEARL	Treat-to-target with early DMARD therapy; methotrexate is a classic anchor when appropriate. Biologic/targeted agents require infection and toxicity risk awareness.

Extra-articular buzzword	Association
Felty syndrome	RA + splenomegaly + neutropenia
Caplan syndrome	RA + pneumoconiosis + pulmonary nodules
Pleural disease / ILD	Important pulmonary manifestations
Scleritis/episcleritis	Ocular inflammation
Rheumatoid nodule	Palisading granuloma with fibrinoid necrosis

CHAPTER 6 | Sjogren Disease

Sicca is the entrance; systemic B-cell activation and lymphoma risk are the board complication.

Sjogren - "dry eyes + dry mouth + SSA/SSB"

TRIGGER	Keratoconjunctivitis sicca, xerostomia, parotid enlargement, dental caries; may coexist with RA/SLE.
MECHANISM	Lymphocytic destruction of lacrimal/salivary glands with B-cell hyperactivity.
LAB / PATH CLUE	Anti-SSA/Ro, anti-SSB/La; Schirmer/ocular testing; focal lymphocytic sialadenitis on selected biopsy.
BOARD TRAP	Dry mouth alone is nonspecific; drugs and dehydration are common mimics.
TREATMENT / PEARL	Symptomatic sicca care plus organ-specific immunomodulation for systemic disease; persistent parotid enlargement, purpura, low complement or cryoglobulins raise lymphoma concern.

CHAPTER 7 | Systemic Sclerosis

Microvasculopathy + fibrosis; lungs, vessels, kidney, and GI tract determine risk.

Pattern	Antibody	Classic clue	Major board risk
Limited / CREST	Anti-centromere	Calcinosis, Raynaud, esophageal dysmotility, sclerodactyly, telangiectasia	Pulmonary arterial hypertension
Diffuse cutaneous	Anti-Scl-70	Proximal skin thickening; early visceral disease	Interstitial lung disease
Diffuse risk pattern	Anti-RNA polymerase III	Rapid skin disease; selected cancer association	Scleroderma renal crisis

RENAL CRISIS Abrupt severe hypertension + AKI in systemic sclerosis = ACE inhibitor immediately in classic board logic; high-dose glucocorticoids are a recognized risk factor.

CURRENT MANAGEMENT LENS The source deck and EULAR update emphasize organ-based therapy: vasodilators for Raynaud/PAH, reflux/motility management, and selected antifibrotic/immunomodulatory therapy for ILD/skin disease.

CHAPTER 8 | Inflammatory Myopathies and Antisynthetase Syndrome

Disease	Pathology / mechanism	Classic clues	Board trap
Polymyositis	CD8-predominant endomysial inflammation	Symmetric proximal weakness, high CK, no primary rash	Not every proximal weakness with CK elevation is dermatomyositis.
Dermatomyositis	Humoral/complement microangiopathy; perifascicular pattern	Heliotrope rash, Gottron papules, proximal weakness	Adult disease -> evaluate malignancy risk.
Inclusion body myositis	Endomysial inflammation + rimmed vacuoles	Older adult, finger flexor/quadriceps weakness	Often poor response to standard immunosuppression.
Antisynthetase	Anti-Jo-1 or related synthetase antibodies	ILD, myositis, arthritis, mechanic hands, Raynaud, fever	Lung disease may dominate the presentation.

CHAPTER 9 | Vasculitis and Pulmonary-Renal Autoimmunity

Use vessel size, respiratory pattern, kidney findings, complement, and ANCA - not ANCA alone.

Disease	Signature	Fast discriminator
GPA	PR3-ANCA/c-ANCA; pauci-immune necrotizing granulomatous vasculitis	ENT disease + cavitary lung nodules + GN
MPA	MPO-ANCA/p-ANCA; pauci-immune necrotizing vasculitis	Pulmonary capillaritis/GN without granulomatous ENT disease
EGPA	Asthma + eosinophilia; MPO-ANCA in subset	Neuropathy + pulmonary infiltrates + eosinophilic disease
PAN	Medium-vessel necrotizing vasculitis	Mesenteric/renal/skin/nerve ischemia; classically no GN
IgA vasculitis	IgA immune-complex small-vessel disease	Child: palpable purpura + abdominal pain + arthralgia + hematuria
Cryoglobulinemic vasculitis	Immune complexes + low complement	Purpura + neuropathy + GN; hepatitis C association

Anti-GBM disease - "hemoptysis + hematuria + linear IgG"

TRIGGER	Pulmonary hemorrhage plus rapidly progressive nephritic syndrome.
MECHANISM	IgG against alpha-3 chain of type IV collagen in glomerular/alveolar basement membrane.
LAB / PATH CLUE	Crescentic GN with smooth linear IgG along GBM.
BOARD TRAP	Crescents indicate severity, not etiology. Linear vs granular vs pauci-immune separates major RPGN mechanisms.
TREATMENT / PEARL	Urgent organ-threatening disease; board logic includes plasma exchange plus immunosuppression in appropriate severe anti-GBM disease.

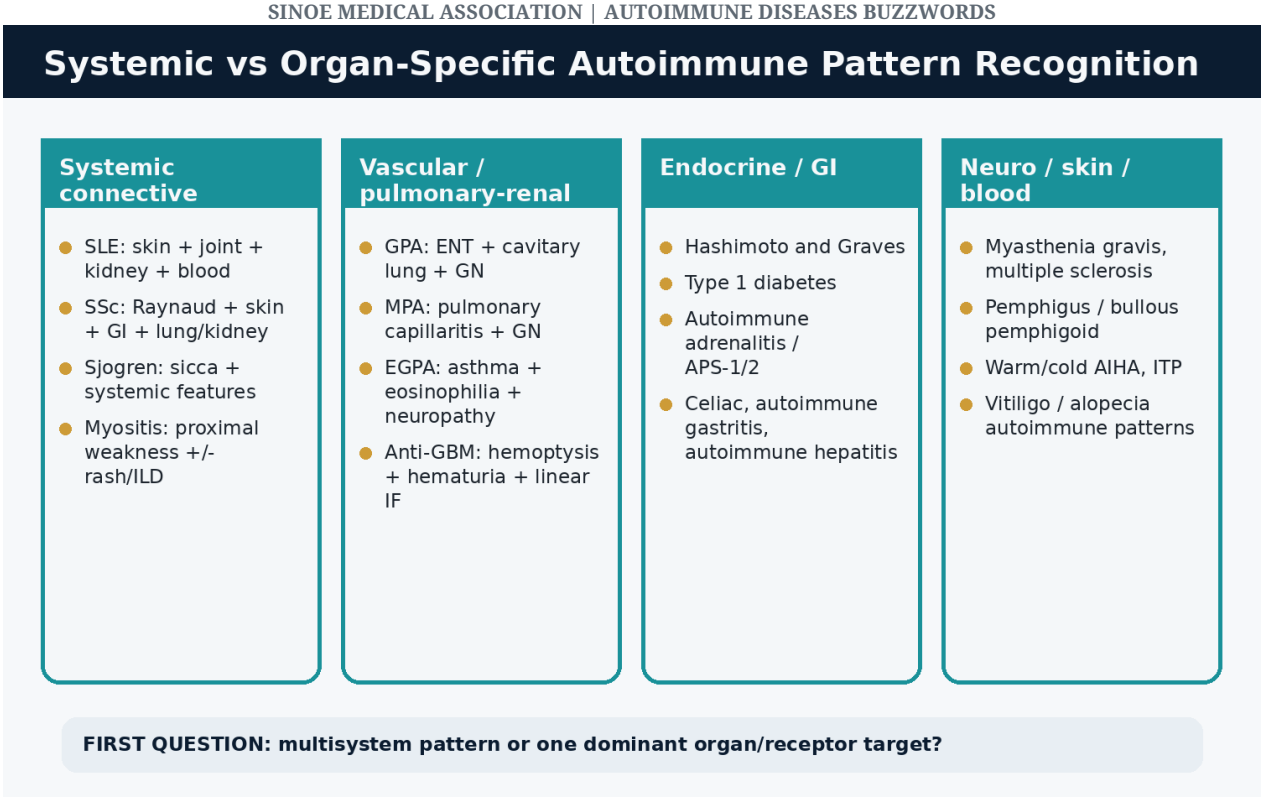

Figure 4. Original systemic-vs-organ-specific and pulmonary-renal map.

CHAPTER 10 | Autoimmune Cytopenias and Hematologic Patterns

Disease	Immune target / clue	Buzzword
Warm AIHA	IgG; extravascular hemolysis; direct Coombs positive	SLE/CLL/drugs; spherocytes
Cold agglutinin disease	IgM/complement; cold-reactive	Mycoplasma, EBV, lymphoid malignancy; acrocyanosis
ITP	Autoantibodies to platelet glycoproteins	Isolated thrombocytopenia; mucocutaneous bleeding
Evans syndrome	AIHA + immune thrombocytopenia	Think systemic immune dysregulation/SLE context
Anemia of chronic inflammation	Not autoimmune hemolysis; iron sequestration	Low iron, low TIBC, normal/high ferritin in chronic inflammatory disease

HEMOLYSIS CHECK Reticulocytosis, indirect bilirubin/LDH increase and haptoglobin decrease support hemolysis; the direct antiglobulin test identifies antibody/complement-coated RBCs.

CHAPTER 11 | Autoimmune Thyroid Disease

Hashimoto - "Hurthle cells + germinal centers + anti-TPO"

TRIGGER	Painless firm goiter or atrophic hypothyroid gland; fatigue, cold intolerance, weight gain.
MECHANISM	Autoimmune thyroid destruction with T-cell injury and antibodies.
LAB / PATH CLUE	Anti-TPO, anti-thyroglobulin; lymphoid follicles/germinal centers, Hurthle cells, follicular atrophy.
BOARD TRAP	Hurthle cells are not automatically cancer.
TREATMENT / PEARL	Thyroid hormone replacement for hypothyroidism; remember association with other autoimmune disease and thyroid lymphoma risk.

Graves - "ophthalmopathy + pretibial myxedema + diffuse uptake"

TRIGGER	Hyperthyroidism with diffuse goiter, eye disease and dermopathy.
MECHANISM	TSH-receptor stimulating IgG: type II hypersensitivity can stimulate, not just destroy.
LAB / PATH CLUE	Suppressed TSH, elevated thyroid hormones, TSH-receptor antibodies; tall crowded epithelium, papillary infoldings, scalloped colloid.
BOARD TRAP	Thyroiditis can cause thyrotoxicosis but typically has low uptake.
TREATMENT / PEARL	Antithyroid medication, radioactive iodine, or surgery depending on context; radioactive iodine is contraindicated in pregnancy.

CHAPTER 12 | Type 1 Diabetes, Addison Disease, and Autoimmune Polyglandular Syndromes

Type 1 diabetes - "insulitis + anti-GAD"

TRIGGER	Young patient or autoimmune phenotype with insulin deficiency, ketosis risk, polyuria/polydipsia/weight loss.
MECHANISM	T-cell-mediated beta-cell destruction.
LAB / PATH CLUE	Anti-GAD/islet antibodies; lymphocytic insulitis and beta-cell loss.
BOARD TRAP	Type 2 diabetes classically shows insulin resistance/islet amyloid rather than autoimmune insulitis.
TREATMENT / PEARL	Insulin is life-sustaining; DKA is an acute emergency.

Autoimmune Addison - "hyperpigmentation + hyperK + low cortisol/high ACTH"

TRIGGER	Fatigue, weight loss, hypotension, hyperpigmentation, hyponatremia, hyperkalemia.
MECHANISM	Autoimmune destruction of adrenal cortex, often with anti-21-hydroxylase antibodies.
LAB / PATH CLUE	Low cortisol with high ACTH in primary adrenal failure; mineralocorticoid deficiency produces hyperkalemia.
BOARD TRAP	Secondary adrenal insufficiency lacks the classic hyperpigmentation/hyperkalemia pattern.
TREATMENT / PEARL	Glucocorticoid +/- mineralocorticoid replacement; adrenal crisis requires urgent stress-dose glucocorticoid and resuscitation.

Syndrome	Core pattern
APS-1 / APECED	AIRE mutation; chronic mucocutaneous candidiasis + hypoparathyroidism + adrenal insufficiency.
APS-2	Autoimmune adrenal insufficiency + autoimmune thyroid disease and/or type 1 diabetes; other autoimmune diseases may coexist.
Schmidt syndrome	Classic association of autoimmune Addison disease with autoimmune thyroiditis.

CHAPTER 13 | Autoimmune GI and Hepatobiliary Disease

Disease	Pathology / antibody	Classic clue / trap
Celiac disease	Villous atrophy + crypt hyperplasia + intraepithelial lymphocytes; anti-tTG/endomysial	Dermatitis herpetiformis = granular IgA at dermal papillae; check total IgA when appropriate.
Autoimmune gastritis / pernicious anemia	Body/fundus atrophy, parietal-cell loss; intrinsic-factor/parietal-cell antibodies	B12 deficiency, macrocytosis, neurologic findings; anti-intrinsic factor is highly specific.
Autoimmune hepatitis	Interface hepatitis with plasma cells; ANA/anti-smooth muscle and high IgG patterns	Histology supports diagnosis but is not fully specific.
Primary biliary cholangitis	Destructive small intrahepatic duct cholangitis; antimitochondrial antibody	Pruritus + cholestatic labs; autoimmune association.
Primary sclerosing cholangitis	Onion-skin periductal fibrosis; p-ANCA association	IBD/UC association; beading on cholangiography; not a classic autoantibody-driven disease.

CHAPTER 14 | Neurologic Autoimmunity

Disease	Target / clue	Board recognition
Myasthenia gravis	Postsynaptic AChR or MuSK antibodies	Fatigable ptosis/diplopia/bulbar weakness; thymic association.
Multiple sclerosis	Immune-mediated CNS demyelination	Deficits separated in time/space; oligoclonal IgG; perivenular plaques.
Neuromyelitis optica spectrum	AQP4-IgG in classic phenotype	Optic neuritis + longitudinally extensive myelitis; distinguish from MS.
Guillain-Barre syndrome	Post-infectious peripheral nerve autoimmunity	Ascending weakness, areflexia, albuminocytologic dissociation.
Autoimmune encephalitis	Neuronal surface antibodies in selected syndromes	Psychiatric change/seizures/movement disorder; syndrome-specific testing.

MYASTHENIC CRISIS Respiratory/bulbar weakness is an emergency. Board questions test airway/ventilatory assessment and rapid immunomodulatory therapy rather than simply increasing outpatient symptomatic medication.

CHAPTER 15 | Autoimmune Skin and Blistering Disease

Disease	Target / pathology	Immunofluorescence / clue
Pemphigus vulgaris	Anti-desmoglein; suprabasal acantholysis	Fishnet/chicken-wire IgG; flaccid bullae, mucosal involvement.
Bullous pemphigoid	Anti-hemidesmosome/BP antigens; subepidermal blister	Linear IgG/C3 along basement membrane; tense bullae.
Dermatitis herpetiformis	Gluten-related IgA disease; neutrophils at dermal papillae	Granular IgA at papillary tips; celiac association.
Vitiligo	Immune destruction of melanocytes	Depigmented macules; autoimmune clustering.
Alopecia areata	Autoimmune attack on hair follicles	Patchy nonscarring hair loss; autoimmune clustering.

CHAPTER 16 | Overlap Syndromes and Autoimmune Clustering

Pattern	Think	Board discriminator
Raynaud + swollen hands + myositis + esophageal symptoms	Mixed connective tissue disease	High anti-U1 RNP.
RA + sicca	Secondary Sjogren disease	Dry eyes/mouth plus SSA/SSB or objective gland testing.
SLE + thrombosis/pregnancy morbidity	Secondary APS	Persistent antiphospholipid antibodies.
Autoimmune thyroid + T1D + adrenal insufficiency	Autoimmune polyglandular syndrome	Cluster matters more than any single antibody.
Myositis + ILD + mechanic hands	Antisynthetase syndrome	Anti-Jo-1 or related synthetase antibody.

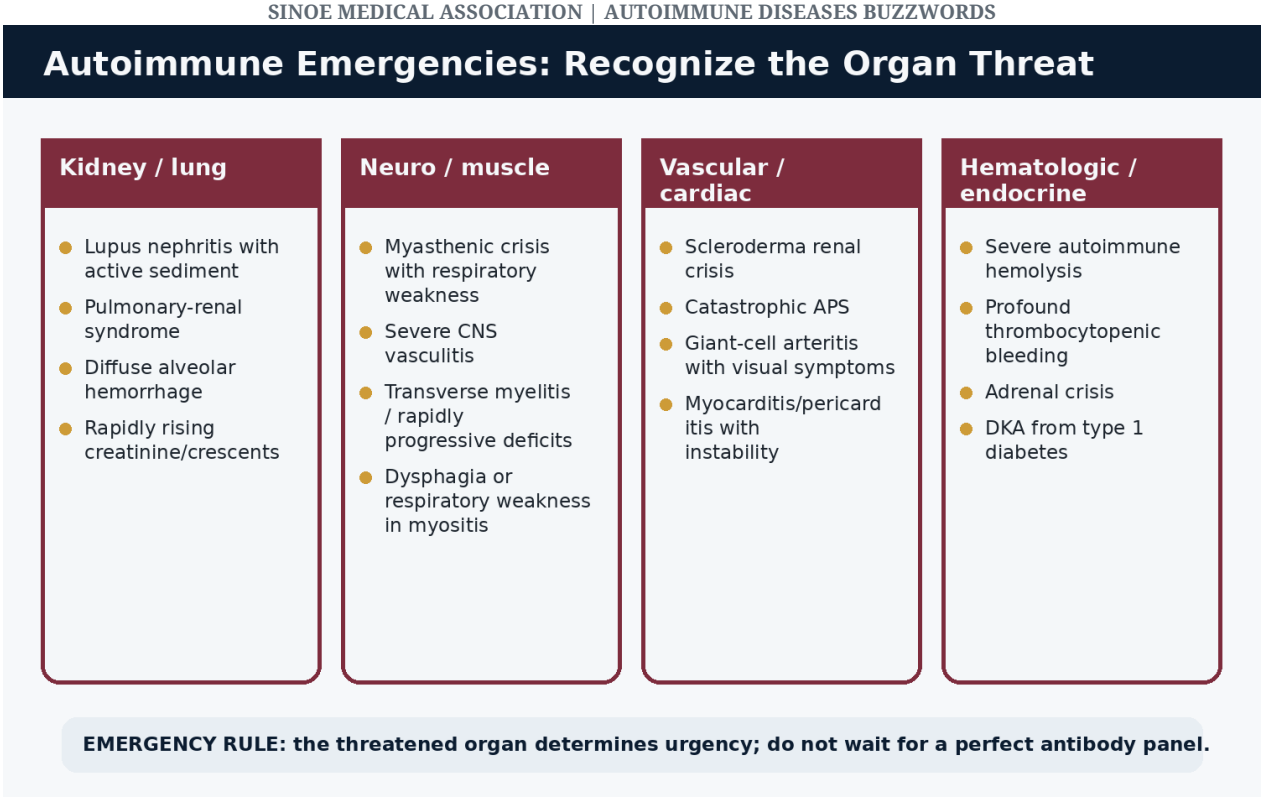

Figure 5. Original autoimmune emergency recognition map.

CHAPTER 17 | Immunomodulatory Pharmacology: Board Logic

Modern treatment is phenotype- and organ-based; dangerous organs decide urgency.

Target / class	Typical examples / use	High-yield risk or pearl
Glucocorticoids	Rapid anti-inflammatory therapy for flares/organ threat	Infection, hyperglycemia, osteoporosis; minimize chronic exposure when possible.
Antimalarial	Hydroxychloroquine in SLE and selected CTDs	Retinal monitoring; common long-term SLE foundation.
Conventional DMARDs	Methotrexate, azathioprine, mycophenolate	Marrow/liver/teratogenic or infection considerations vary by drug.
TNF blockade	RA, spondyloarthritis, other inflammatory disease	TB/fungal reactivation; screen before treatment.
B-cell / BAFF targeting	Rituximab, belimumab and selected disease-specific use	HBV reactivation/hypogammaglobulinemia for anti-CD20; infection risk.
IL-6 / JAK pathways	Tocilizumab; JAK inhibitors	Infection; liver/lipid effects; JAK thrombosis/MACE warnings in risk groups.
Plasma exchange	Selected antibody-mediated emergencies	Removes pathogenic circulating factors; not a universal autoimmune treatment.

GUIDELINE NOTE Treatment recommendations evolve rapidly. This book uses current ACR/EULAR guidance only as a supplemental 2026 anchor; exact drug choice, dosing, pregnancy safety, infection prophylaxis and monitoring require the current disease-specific guideline.

CHAPTER 18 | High-Yield Comparison Matrices

Pattern	Most likely diagnosis	Key discriminator
Linear GBM IF + hemoptysis	Anti-GBM disease	Fixed basement-membrane antibody; type II.
Full-house granular renal IF	Lupus nephritis	Immune complexes; low complement possible.
Pauci-immune crescents + ENT/cavitary lung	GPA	PR3-ANCA/c-ANCA phenotype.
Dry eyes + dry mouth + parotid enlargement	Sjogren	SSA/SSB; focal lymphocytic sialadenitis; lymphoma risk.
Raynaud + CREST	Limited systemic sclerosis	Anti-centromere; PAH risk.
Rapid proximal skin thickening + ILD	Diffuse systemic sclerosis	Scl-70; RNA pol III marks renal-crisis-risk phenotype.
Proximal weakness + heliotrope/Gottron	Dermatomyositis	Cancer association in adults.
MCP/PIP erosions + nodules	RA	Anti-CCP; pannus.
Villous atrophy + dermatitis herpetiformis	Celiac disease	Anti-tTG/endomysial; granular IgA skin IF.
Ptosis improves with rest	Myasthenia gravis	AChR/MuSK; postsynaptic NMJ.

CHAPTER 19 | Thirty Rapid Clinical Buzzword Cases

Commit to the pattern first; then name antibody, organ, mechanism, and next board move.

CASE 01 Photosensitive rash, arthritis, leukopenia, proteinuria, anti-dsDNA, low C3/C4 **ANSWER:** SLE with active lupus nephritis pattern.
CASE 02 Recurrent miscarriages, DVT, prolonged PTT **ANSWER:** Antiphospholipid syndrome.
CASE 03 Hydralazine + arthralgia + anti-histone + normal complement/urinalysis **ANSWER:** Drug-induced lupus.
CASE 04 MCP/PIP swelling, 2-hour morning stiffness, anti-CCP, erosions **ANSWER:** Rheumatoid arthritis.
CASE 05 Dry eyes/mouth, parotid enlargement, SSA/SSB **ANSWER:** Sjogren disease.

CASE 06 Raynaud + sclerodactyly + telangiectasia + centromere antibody **ANSWER:** Limited systemic sclerosis.
CASE 07 Rapid diffuse skin thickening + ILD + Scl-70 **ANSWER:** Diffuse systemic sclerosis.
CASE 08 Scleroderma + abrupt severe HTN + AKI **ANSWER:** Scleroderma renal crisis.
CASE 09 Heliotrope rash + Gottron papules + proximal weakness + high CK **ANSWER:** Dermatomyositis.
CASE 10 Myositis + ILD + mechanic hands + Jo-1 **ANSWER:** Antisynthetase syndrome.

CASE 11 Sinusitis + cavitary lung nodules + hematuria + PR3-ANCA **ANSWER:** GPA.
CASE 12 Pulmonary hemorrhage + GN without granulomatous ENT disease + MPO-ANCA **ANSWER:** MPA.
CASE 13 Adult asthma + eosinophilia + mononeuritis multiplex **ANSWER:** EGPA.
CASE 14 Hemoptysis + hematuria + linear IgG **ANSWER:** Anti-GBM disease.
CASE 15 Child + palpable purpura + abdominal pain + arthralgia + hematuria **ANSWER:** IgA vasculitis.

CASE 16 Cold-triggered acrocyanosis + hemolysis + Coombs complement pattern
ANSWER: Cold agglutinin disease.

CASE 17 SLE + hemolytic anemia + thrombocytopenia
ANSWER: Evans syndrome.

CASE 18 Painless goiter + hypothyroidism + anti-TPO + Hurthle cells
ANSWER: Hashimoto thyroiditis.

CASE 19 Diffuse goiter + ophthalmopathy + pretibial myxedema + diffuse uptake
ANSWER: Graves disease.

CASE 20 Young patient + DKA + anti-GAD + insulitis
ANSWER: Type 1 diabetes.

CASE 21 Hyperpigmentation + hypotension + hyperK + high ACTH
ANSWER: Primary autoimmune adrenal insufficiency.

CASE 22 Candidiasis + hypoparathyroidism + adrenal insufficiency
ANSWER: APS-1/APECED.

CASE 23 Adrenal insufficiency + autoimmune thyroid disease + type 1 diabetes
ANSWER: APS-2.

CASE 24 Macrocytosis + neurologic deficits + intrinsic-factor antibody
ANSWER: Pernicious anemia.

CASE 25 Diarrhea + iron deficiency + villous atrophy + anti-tTG
ANSWER: Celiac disease.

CASE 26 Interface hepatitis + plasma cells + high IgG + anti-smooth muscle
ANSWER: Autoimmune hepatitis.

CASE 27 Fatigable ptosis/diplopia + AChR antibody
ANSWER: Myasthenia gravis.

CASE 28 Optic neuritis + lesions separated in time/space + oligoclonal bands
ANSWER: Multiple sclerosis.

CASE 29 Flaccid bullae + mucosal lesions + fishnet IgG
ANSWER: Pemphigus vulgaris.

CASE 30 Tense bullae + subepidermal split + linear IgG/C3
ANSWER: Bullous pemphigoid.

CHAPTER 20 | Final Cheat Sheet: Histopathology, Antibodies, and Red Flags

Morphology / phrase	Diagnosis
Wire-loop lesions + full-house granular IF	Lupus nephritis
Linear IgG along GBM	Anti-GBM disease
Pauci-immune crescentic GN	ANCA-associated vasculitis
Pannus invading cartilage/bone	Rheumatoid arthritis
Focal lymphocytic sialadenitis	Sjogren disease
Lymphoid follicles + Hurthle cells	Hashimoto thyroiditis
Scalloped colloid + tall follicular epithelium	Graves disease
Insulitis	Type 1 diabetes
Villous atrophy + crypt hyperplasia	Celiac disease
Interface hepatitis + plasma cells	Autoimmune hepatitis
Perivenular CNS demyelination	Multiple sclerosis
Suprabasal acantholysis	Pemphigus vulgaris
Subepidermal blister	Bullous pemphigoid

15 RULES TO KNOW COLD 1 ANA is context, not diagnosis. 2 anti-dsDNA = SLE/nephritis activity clue. 3 anti-Sm = very specific SLE. 4 SSA = Sjogren/SLE + neonatal heart block. 5 centromere = limited SSc/PAH. 6 Scl-70 = diffuse SSc/ILD. 7 Jo-1 = antisynthetase/ILD. 8 anti-CCP = RA. 9 linear IF = anti-GBM or BP depending organ. 10 full-house = lupus nephritis. 11 pauci-immune crescents = ANCA disease. 12 pannus = RA. 13 villous atrophy = celiac. 14 fishnet IF = pemphigus. 15 dangerous organ decides urgency.

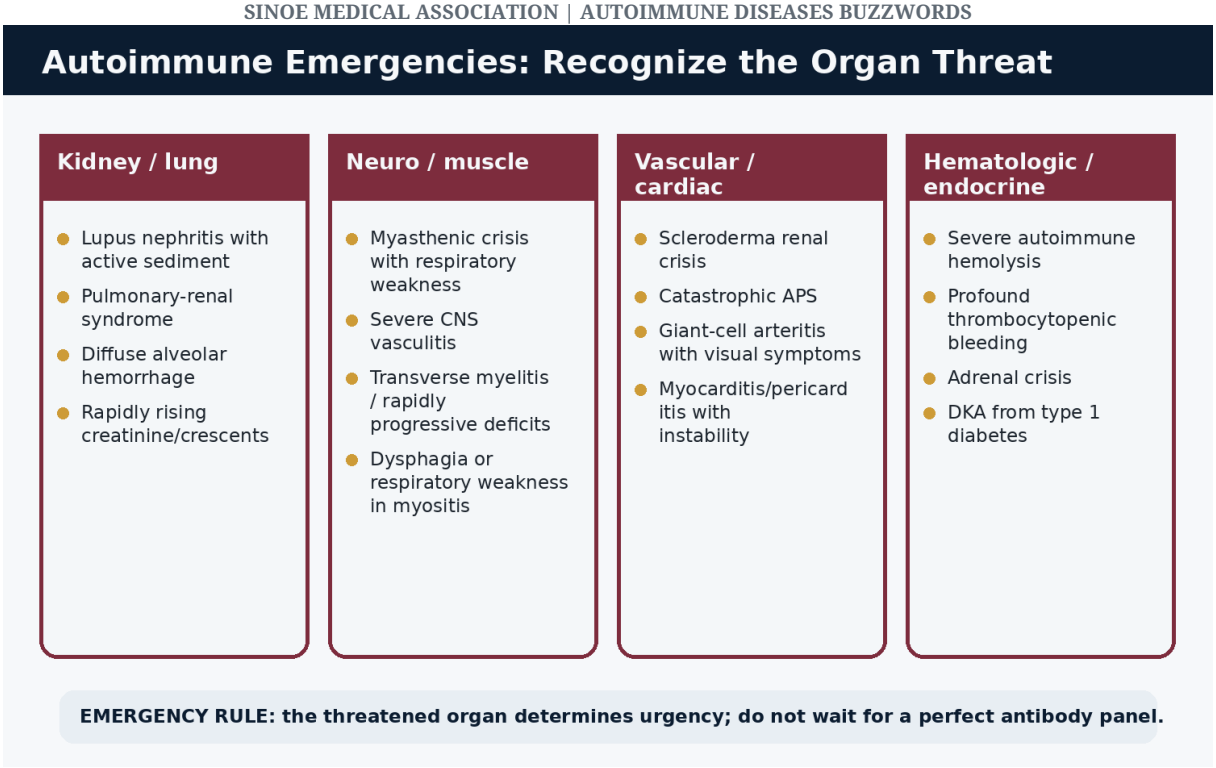

Figure 6. Emergency red-flag compression map.

CHAPTER 21 | Selected References and Source Notes

Primary source-derived material: Sinoe Medical Association Autoimmune Diseases Case Presentation - Updated 2026; Immunity, Autoimmunity & Pediatric Immunodeficiency 2026; USMLE Step 1 Autoimmune Histopathology Keywords; adrenal/polyglandular teaching materials. The disease organization, case-first approach, ANA/ENA framing, morphology clues, and many board traps were preserved from these materials.

Supplemental current-management anchors used for clearly labeled 2026 updates: American College of Rheumatology 2025 systemic lupus erythematosus guideline; ACR 2024 lupus nephritis guideline (published 2025); ACR/Vasculitis Foundation vasculitis guidelines; EULAR systemic sclerosis 2023 update (published online 2024). Exact therapy should always be checked against the current disease-specific guideline and patient context.

EDUCATIONAL USE This book is for structured medical education and board-style pattern recognition. It does not replace patient-specific diagnosis, prescribing, monitoring, or specialist judgment.