Arthritis & Rheumatology
Vol. 0, No. 0, Month 2023, pp 1–16
DOI 10.1002/art.42624

American College of Rheumatology
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2023 ACR/EULAR Antiphospholipid Syndrome Classification Criteria

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on Behalf of the ACR/EULAR APS Classification Criteria Collaborators

ACR 2023 CLASSIFICATION CRITERIA

Entry Criteria[a]

At least one documented[b] clinical criterion listed below (domains 1-6)

plus

A positive antiphospholipid antibody (aPL) test

(a lupus anticoagulant test, or moderate-to-high titers of anticardiolipin or anti-β_2-glycoprotein-I antibodies [IgG or IgM])

within three years[b] of the clinical criterion

↓

If absent, do not attempt to classify as APS - If present, apply additive criteria

↓

TOTAL SCORE

Classify as Antiphospholipid Syndrome for research purposes if there are

at least 3 points from clinical domains AND at least 3 points from laboratory domains

High Risk VTE : 1 major or 2 minor	
Major	Minor
Active malignancy	Active systemic autoimmune disease or IBD
Hospital admission : bed confined > 3 days within 3 months	Active/acute severe infection
Major trauma with fractures or spinal cord injury within 1 month	Central venous catheter
Surgery with general/spinal/epidural anesthesia for >30 min within 3 month	Hormone replacement therapy/IVF
	>8 hours travel
	BMI >30
	Pregnancy or within 6 weeks after delivery
	Prolonged immobilization : >3 days
	Surgery with general/spinal/epidural anesthesia for <30 min within 3

High Risk CVD : 1 major or 3 moderate	
Major	Moderate
Arterial Hypertension >180/110	Arterial Hypertension on treatment or persistent >140/90
CKD egfr < 60 ml/min for 3 months	Current tobacco smoking
Diabetes Mellitus with organ damage	Diabetes Mellitus with no organ damage
Hyperlipidemia total cholesterol >310 mg/dl or LDL >190 mg/dl	Hyperlipidemia on treatment or total cholesterol <310 mg/dl or LDL <190 mg/dl but above normal range
	Obesity : BMI > 30

Additive clinical and laboratory criteria[a]

Do not count a clinical criterion if there is an equally or more likely explanation than APS.
Within each domain, only count the highest weighted criterion towards the total score.

Clinical domains and criteria	Weight
D1. Macrovascular (Venous Thromboembolism [VTE])	
VTE with a high-risk VTE profile[c]	1
VTE without a high-risk VTE profile[c]	3
D2. Macrovascular (Arterial Thrombosis [AT])	
AT with a high-risk CVD profile[c]	2
AT without a high-risk CVD profile[c]	4
D3. Microvascular	
Suspected (one or more of the following)	2
Livedo racemosa (exam)	
Livedoid vasculopathy lesions (exam)	
Acute/chronic aPL-nephropathy (exam or lab)	
Pulmonary hemorrhage (symptoms and imaging)	
Established (one of more of the following)	5
Livedoid vasculopathy (pathology[d])	
Acute/chronic aPL-nephropathy (pathology[d])	
Pulmonary hemorrhage (BAL or pathology[d])	
Myocardial disease (imaging or pathology)	
Adrenal hemorrhage (imaging or pathology)	
D4. Obstetric	
≥3 Consecutive pre-fetal (<10w) and/or early fetal (10w 0d -15w 6d) deaths	1
Fetal death (16w 0d – 33w 6d) in the absence of pre-eclampsia (PEC) with severe features or placental insufficiency (PI) with severe features	1
PEC with severe features (<34w 0d) or PI with severe features (<34w 0d) with/without fetal death	3
PEC with severe features (<34w 0d) and PI with severe features (<34w 0d) with/without fetal death	4
D5. Cardiac Valve	
Thickening	2
Vegetation	4
D6. Hematology	
Thrombocytopenia (lowest 20-130x10^9/L)	2

Laboratory (aPL) domains and criteria[e]	Weight
D7. aPL test by coagulation-based functional assay (lupus anticoagulant test [LAC])	
Positive LAC (single – one time)	1
Positive LAC (persistent)	5
D8. aPL test by solid phase assay (anti-cardiolipin antibody [aCL] ELISA and/or anti-β_2-glycoprotein-I antibody [aβ_2GPI] ELISA [persistent])	
Moderate or high positive (IgM) (aCL and/or aβ_2GPI)	1
Moderate positive (IgG) (aCL and/or aβ_2GPI)	4
High positive (IgG) (aCL or aβ_2GPI)	5
High positive (IgG) (aCL and aβ_2GPI)	7

Non uniform, irreversible, broken and assymetric

New onset hypertension, proteinuria, acute renal failure, microscopic hematuria

Mitral valve
>4 mm : 20-39 yr age
>5 mm : >40 year age
Other valves : >3 mm

Changes from Sapporo criteria

Severe features PEC
- BP > 160/110
- New onset headache
- Visual disturbance
- Pulmonary edema
- Impaired liver function
- Renal dysfunction
- Thrombocytopenia < 1 lac

Severe features PI :
- Abnormal fetal surveillance test
- Abnormal doppler flow waveform
- Severe IUGR
- Oligohydramnios
- Maternal vascular malperfusion on placental histology

Moderate : 40-79 units
High : >80 units

Differences from Sapporo Criteria

- Entry criteria included
- Defined high risk venous thromboembolism and arterial thrombosis
- Included 3 new domains : Microvascular thrombosis, Cardiac valve and thrombocytopenia
- Decreased weightage of pregnancy morbidity : Foetal death at any gestation without severe features of pre eclampsia or placental insufficiency does not qualify as standalone clinical criterion
- Different weightage given to IgM and IgG positivity of antiphospholipid anitibodies
- Different weightage for titres of antiphospholipid anitibodies
- Decreased sensitivity but increased specificity compared to Sapporo criteria

Table 5. Operating characteristics of the 2023 ACR/EULAR antiphospholipid syndrome (APS) classification criteria versus the revised Sapporo APS classification criteria compared against independent adjudicators' consensus in two distinct validation cohorts

	Validation cohort 1 (n = 278)		Validation cohort 2 (n = 275)	
	2023 ACR/EULAR APS criteria	Revised Sapporo APS criteria	2023 ACR/EULAR APS criteria	Revised Sapporo APS criteria
Criteria met, no. of subjects	83	120	97	143
Specificity (95% CI)	0.99 (0.98–1.00)	0.91 (0.86–0.95)	0.99 (0.97–1.00)	0.86 (0.81–0.92)
Sensitivity (95% CI)	0.83 (0.75–0.90)	1.00 (1.00–1.00)	0.84 (0.77–0.91)	0.99 (0.98–1.00)

95% CI = 95% confidence interval.