obtained from Stago (Parsippany, NJ, United States of America). Platelet neutralization procedure (PNP; delta < 1 second) has been performed using a STA-R Evolution instrument by Stago [4, 5]. IgG and IgM antibodies against β 2-glycoprotein 1 (α 2-IgG, α 2-IgM) and cardiolipin (aCL-IgG, aCL-IgM) were measured in house while IgA isotypes (α 2-IgA, aCL-IgA) were tested by LabCorp Diagnostics (Burlington, NC). Sensitivities, specificities, and positive (PPV) and negative predictive values (NPV) for detection of APS were calculated and compared by 2-tailed chi-square tests using GraphPad software.

Results: 222/1633 SLE patients had APS when using a combination of nine tests. Table 1 shows the frequency of positive and negative test results and p value for each assay. The greatest sensitivity was seen when all nine tests were performed together for detecting APS in SLE patients (74%; χ^2 p=0.0003). In contrast, combining all tests had the lowest specificity (52%; p<0.0001). Importantly, the 2nd most sensitive test for detection of APS was the HPPNA at 52%, this tests also had the second lowest specificity (66%). Similar trends were seen when individual APS comorbidities, such as deep venous thrombosis (DVT), pulmonary embolism (PE), and stroke or TIA, were separately analyzed. Among the charts reviewed, the complete 9-test panel was only performed in 550 of 1633 patients (Table 1).

TEST	HPPNA	PNP	dRVVT	α 2-IgG	α 2-IgM	α 2-IgA	aCL-IgG	aCL-IgM	aCL-IgA	All 9 tests
APS+ TEST+	102	35	36	15	14	13	21	28	8	73
APS+ TEST-	96	77	155	191	192	175	195	185	181	26
APS-TEST+	395	78	96	43	57	47	81	123	41	215
APS-TEST-	777	536	1179	1285	1271	1110	1298	1245	1069	236
p value	<0.0001	<0.0001	<0.0001	0.0046	NS	NS	0.0316	NS	NS	<0.0001
Sensitivity (%)	52	31	19	7	7	7	10	13	4	74
p value vs	HPPNA	0.0006	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0003
PPV (%)	21	31	27	26	20	22	21	19	16	25
Specificity (%)	66	87	92	97	96	96	94	91	96	52
p value vs	HPPNA	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
NPV (%)	89	87	88	87	87	86	87	87	86	90
Number of Patients Tested	1370	726	1466	1534	1534	1345	1595	1581	1319	550

Conclusion: This study demonstrates that utilizing a combined 9-test panel has the greatest sensitivity but lowest specificity for detecting APS in SLE subjects. Thus, a failure to employ the complete panel may lead to exclusion of patients who may meet criteria for identifying patients with APS who need long-term anticoagulation for preventing life-threatening thrombotic events.

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LOW ATTENUATION NON-CALCIFIED CORONARY PLAQUES AND POSITIVE REMODELING INDEX: MARKERS OF VULNERABLE CORONARY PLAQUES IN SYSTEMIC LUPUS ERYTHEMATOSUS

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Background: The presence of low attenuation noncalcified plaque (LANCP) and positive remodeling index (RI) are characteristic vessel changes in unstable coronary plaques. LANCP (<30 Hounsfield Units) contain necrotic cores that are characterized by endothelial dysfunction, oxidative stress, and inflammation. They

have been shown to be a better predictor of future cardiovascular events compared to traditional cardiovascular risk factors in the general population.

Coronary arterial remodeling describes changes of vessel size at the site of atherosclerotic lesions. Positive remodeling (expansion) of early lesions maintains lumen size despite plaque accumulation. This explains why these lesions might pass undetected by conventional angiography. Plaque rupture is often apparent at sites with only modest luminal stenoses but marked positive remodeling.

Accelerated atherosclerosis leading to premature coronary artery disease remains the major cause of late death in SLE.

Objectives: We sought to characterize LANCP and positive RI in patients with systemic lupus erythematosus.

Methods: A total of 72 patients who met the ACR or SLICC classification criteria for SLE had CT angiogram studies, 30 of which had follow up CT angiograms. A total of 100 healthy controls who had two CT angiograms were included in the study. Each noncalcified plaque (NCP) detected within the vessel wall was evaluated for minimum CT density and vascular remodeling index. A LANCP was defined as an NCP with a density <30 Hounsfield units. Lesions with remodeling 0% were considered to have positive RI. T-test was used to evaluate baseline characteristics between lupus patients and controls. Paired t-test or Wilcoxon signed ranks test was used to compare LANCP volume and RI between baseline and follow-up. Fisher's exact test was used to evaluate the association between change in LANCP, RI, demographic and clinical variables.

Results: Lupus patients had a significantly higher burden of LANCP at baseline compared to healthy controls in all age subgroups except in those >60 years of age. LANCP volume was associated with age (p<0.01) and body mass index (p<0.01). No significant differences were observed between RI in lupus and controls at baseline.

Despite a significant progression of the total noncalcified plaque burden in lupus compared to controls (p<0.0001), the LANCP in lupus patients regressed (p<0.001). No demographic or clinical differences were observed between lupus patients whose LANCP progressed and those whose LANCP regressed. Lupus patients who were not treated with statins had a more significant regression of their LANCP burden (p<0.01) compared to controls who were on statins, while lupus patients who were taking statins had a significant progression (p<0.01).

There were only 5 cardiovascular events in the studied group and there were no differences in remodeling index or low density noncalcified plaque observed but the number of events was small.

Conclusion: Lupus patients have a significantly higher burden of LANCP at baseline compared to healthy controls in all age subgroups except in those >60 years of age. The LANCP burden regresses more rapidly over time in lupus compared to controls. Surprisingly, the most significant LANCP plaque volume regression was seen in lupus patients who were never treated with statins, while the most significant progression was observed in those taking statins. Positive RI was ubiquitous, with no evidence of progression or differences compared to controls. These characteristic vessel changes may identify SLE patients at need for more frequent noninvasive cardiac monitoring.

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ASSESSING THE PREVALENCE AND USE OF VALIDATED SYSTEMIC LUPUS ERYTHEMATOSUS DISEASE ACTIVITY METRICS IN REAL WORLD PRACTICE

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Background: Disease activity metrics for systemic lupus erythematosus (SLE) are not widely used in real world clinical practice.