RhAPP

RHEUMATOLOGY ADVANCED PRACTICE PROVIDERS

4th Annual National Conference

September 21–23, 2023

RhAPP
RHEUMATOLOGY ADVANCED PRACTICE PROVIDERS

Rheumatology Specialty Labs

Presented By Rana Aoufe, PA-C and Sylvia Phommalinh, PA-C

September 2023

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Faculty Disclosures

Rana Aoufe, PA-C:

- There are no relevant financial relationships to disclose.

Sylvia Phommalinh, PA-C:

- There are no relevant financial relationships to disclose.

RHEUMATOLOGY LABS

- It is important to note that our labs do not make any diagnosis.
- The PHYSICAL EXAM is our most important component.
- Labs help GUIDE US.

RHEUMATOID ARTHRITIS MARKERS

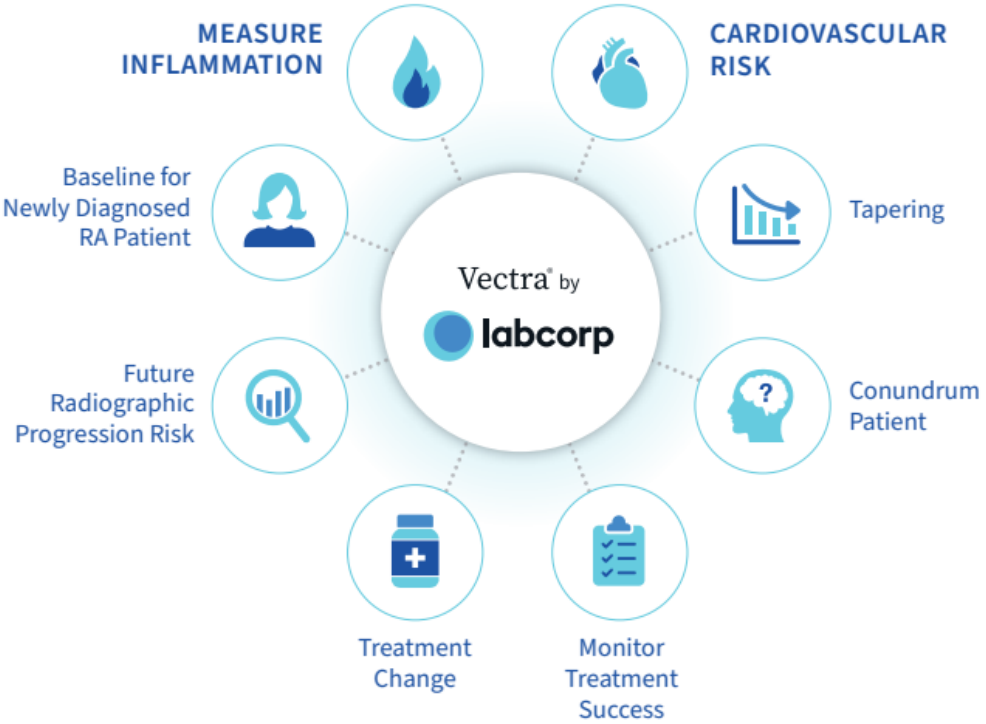
- Conventional markers used for RA are **RF** and **CCP** (98% specific, 70% sensitive)

- 14.3.3eta protein- joint derived, proinflammatory mediator that is highly specific for **established RA(77% sensitivity) and early RA(59-64% sensitivity).** May provide 15% incremental benefit in identifying early RA in RF/CCP negative patients. Also associated with higher rates of joint damage measured by radiographic assessments.

RHEUMATOID ARTHRITIS MARKERS

- AntiCarP(anti-carbamylated protein antibodies) predicts development of RA independent of anti-CCP with **sensitivity of from 36.2-47.7% and specificity from 92.9-97%.** may be present years before onset of symptoms of RA, associated with more severe clinical and radiographic disease.
- Anti-Sa(citrullinated vimentin antibodies) nearly **100% specificity for RA and sensitivities of 20-25% in early RA and 47% in establish RA**. May identify an additional 8.7% of RA that is anti-CCP negative. Predicts more severe disease and poor prognosis. Anti-Sa antibody titers correlate with higher disease activity.
- Anti-CEP-1(citrullinated alpha-enolase 1 antibody)– early marker that can predict the onset of symptoms in pre-clinical RA years before onset with **specificity of 98% and sensitivity of 37-67%**. Detected in 12.5% of RA patients who test negative for anti-CCP.

VECTRA DA


MEASURE INFLAMMATION
CARDIOVASCULAR RISK
Baseline for Newly Diagnosed RA Patient
Tapering
Vectra by labcorp
Future Radiographic Progression Risk
Conundrum Patient
Treatment Change
Monitor Treatment Success

VECTRA DA

Vectra simultaneously measures 12 proteins that are involved in multiple key pathways of RA

12 Biomarkers Assess Systemic Disease Activity in RA						
Adhesion Molecules	**Growth Factors**	**Cytokines/ Receptors**	**Matrix Metalloproteinases**	**Skeletal-Related Proteins**	**Hormones**	**Acute-Phase Proteins**
VCAM-1	EGF VEGF-A	IL-6 TNF-RI	MMP-1 MMP-3	YKL-40	Leptin Resistin	SAA CRP
Cellular Influx & Tissue Growth		Inflammation & Destruction	Cartilage Degradation & Joint Damage	Stromal Activity & Regulation	Systemic Inflammatory Response	

VECTRA DA

Clinical Remission (DAS28 <2.6) Does Not Eliminate the Risk for Radiographic Progression (RP)[9]

Structural damage can continue even when symptoms appear under control

N=102

19% of patients in clinically defined remission had progression of **radiographic joint damage** over one year

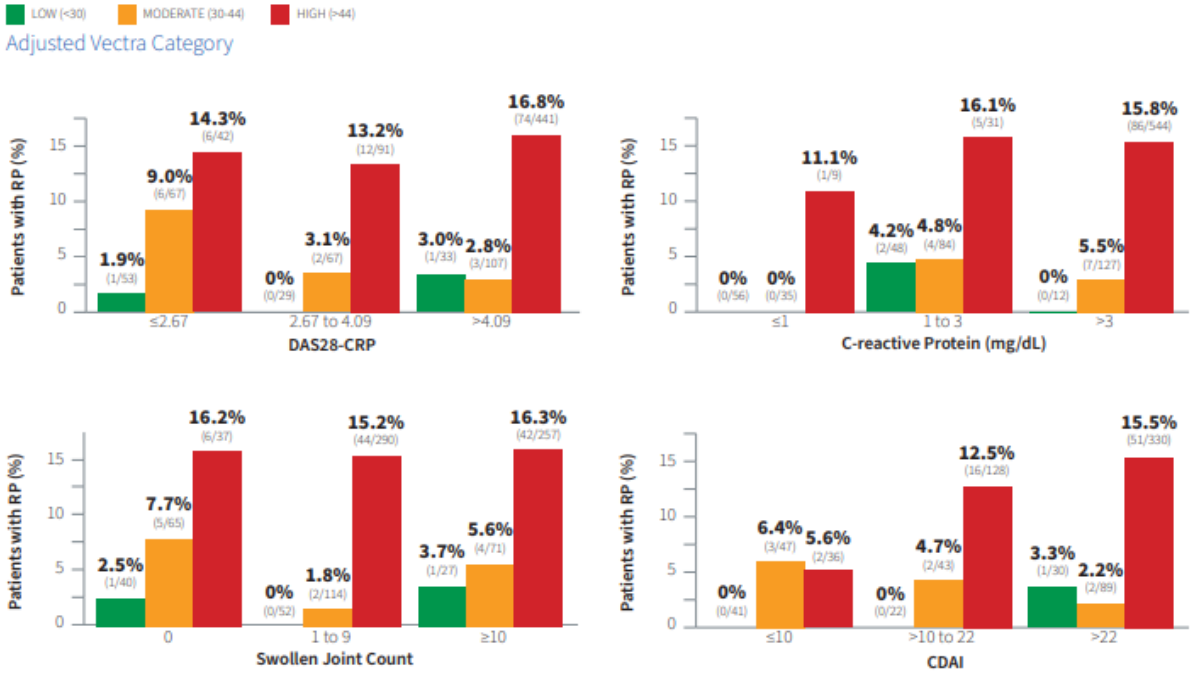
VECTRA DA

Four Cohorts with Requisite Data Were Identified and Combined (N=953)[11]

- The four cohorts combined (N=953) included patients receiving biologic and non-biologic DMARDS
- In continuous and binary analyses, the Vectra Score was the most significant predictor of radiographic progression over one year compared to eight other variables
- The analysis demonstrated that RP aligned more closely with the adjusted Vectra Score than conventional measures, even when they were discordant
- A risk curve was created, showing RP increases continuously with an increasing Vectra Score, with RP risk of more than 40% among the highest adjusted Vectra Scores

VECTRA DA

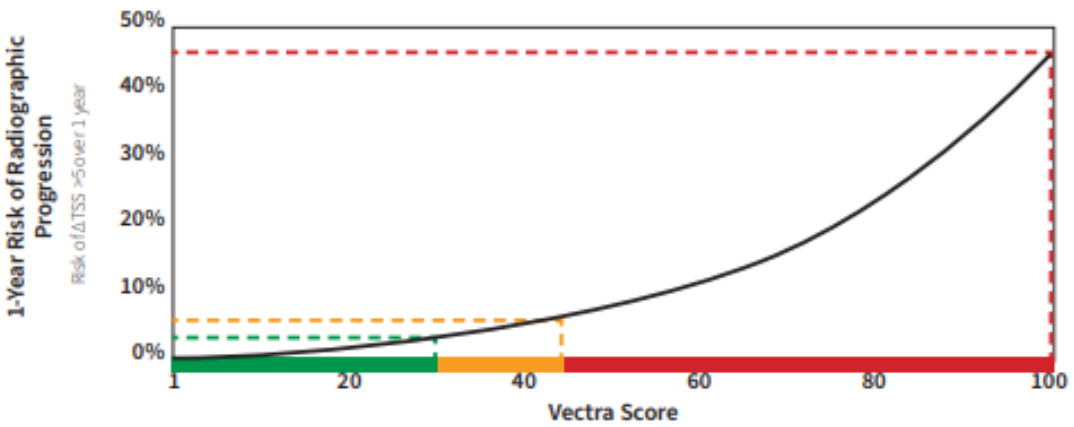
Radiographic progression (RP; ΔTSS >5) by category of adjusted Vectra Score cross-classified with conventional disease activity measures



VECTRA DA

A high Vectra Score correlates with a risk of higher future irreversible joint damage[11]

The risk for radiographic progression over one year increases continuously with an increasing Vectra Score.



VECTRA SCORE	RISK OF RAPID RP
HIGH (45-100)	7-47%
MODERATE (30-44)	4-6%
LOW (1-29)	1-3%

VECTRA DA

- Minimally Important Difference(MID) occurs when a patient's Vectra Score has a change that is greater or equal to 8.
  - **Decrease** of Vectra score of **8 or more** shows a **favorable response** to treatment in patients in moderate of high disease activity
  - **Increase** of Vectra score of **8 or more** presents an **increase in disease activity** and may require adjustment to treatment regimen

VECTRA DA

When would we use Vectra DA in clinical practice?

- Baseline data with new RA diagnosis and repeat every 6-12 months
- RA vs OA disease activity since joint pain subjectively assess by patients
- Deciding if change in therapy is indicated, patient reports their RA is not controlled but physical exam is benign

VECTRA DA

- **What is the recommended frequency for ordering this test?**

  - High disease activity : Q3 months to ensure response to treatment
  - Moderate disease activity: Q3-6 months to ensure patient is not moving into high disease activity category
  - Low disease activity: Annually

VECTRA DA SAMPLE RESULTS

Vectra Molecular Result

Vectra Score	Risk of RP	Change in Score	Vectra Score Interpretation
74 HIGH (45-100)	**21%** 1-Year Risk of Radiographic Progression	**Meaningful Change Not Calculated** Multiple Vectra scores required for meaningful change calculation	**High Vectra Score: 74** Patient has a High Vectra Score and is at increased risk for radiographic progression. Consider adjusting treatment regimen to reduce inflammation, and retesting at the next clinical visit.

VECTRA SCORE DESCRIPTION

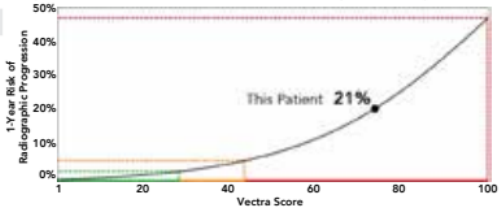
Vectra Disease Activity Levels: Low: 1 to 29 Moderate: 30 to 44 High: 45 to 100

Vectra Score measures the concentrations of 12 serum proteins. An algorithm is applied to these concentrations to calculate a disease activity score on a scale of 1 to 100. The Vectra Score is personalized based on the age, gender, and adiposity of the patient.

RISK OF RADIOGRAPHIC PROGRESSION (RP)

The risk of RP is shown as a function of Vectra Score (see chart, right). The definition of RP is a 1-year total Sharp score change of >5 units. Increased risk of RP means a greater chance of irreversible joint damage.

Patient serostatus may affect the risk of radiographic progression. Thus, the actual risk of radiographic progression may be higher if this patient is seropositive and lower if this patient is seronegative.

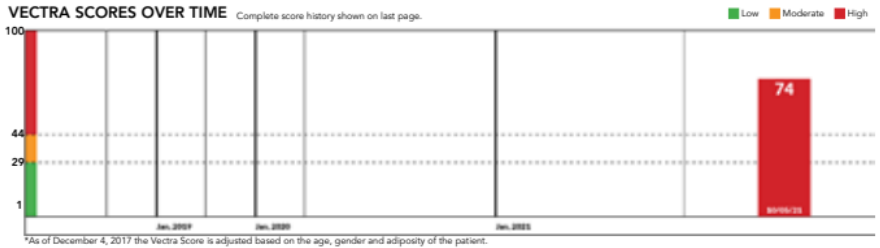


CHANGE IN SCORE DESCRIPTION

Change in Score is assessed in relation to the Minimally Important Difference (MID) for Vectra. The MID for patients with a Moderate or High Vectra Score is 8.0.

VECTRA SCORES OVER TIME

Complete score history shown on last page.



*As of December 4, 2017 the Vectra Score is adjusted based on the age, gender and adiposity of the patient.

PRISM RA

What is the test used for?

- Helps determine suitable treatment options for your patients

When is the test used in clinical practice?

- At baseline to determine if TNFi is a good first line therapy after failure of MTX
- Moderate RA disease activity after starting TNFi
- Switching to another class after failure of TNFi
- LOMN when appealing for another class of medication

PRISM RA

- **How was PRISM RA developed?**
  - The human interactome was used to identify genes relevant to RA disease biology
  - Clinical data from patients were analyzed with Sciphers AI platform to rank biological features by their ability to differentiate patients that would respond to therapy from those that would not
  - The 23 features most predictive of non-response were use in PrismRA algorithm

PRISM RA

- **What is the recommendation for when this test is ordered?**
  - RA patients naïve to treatment
  - RA patients prior to starting TNFi
  - RA patients on a TNFi and considering dose change or medication change

PRISM RA

UP TO **90%**

of patients with rheumatoid arthritis (RA) are treated with TNFi therapies as first-line b/tsDMARD[1,2]

ONLY ABOUT **1/3**

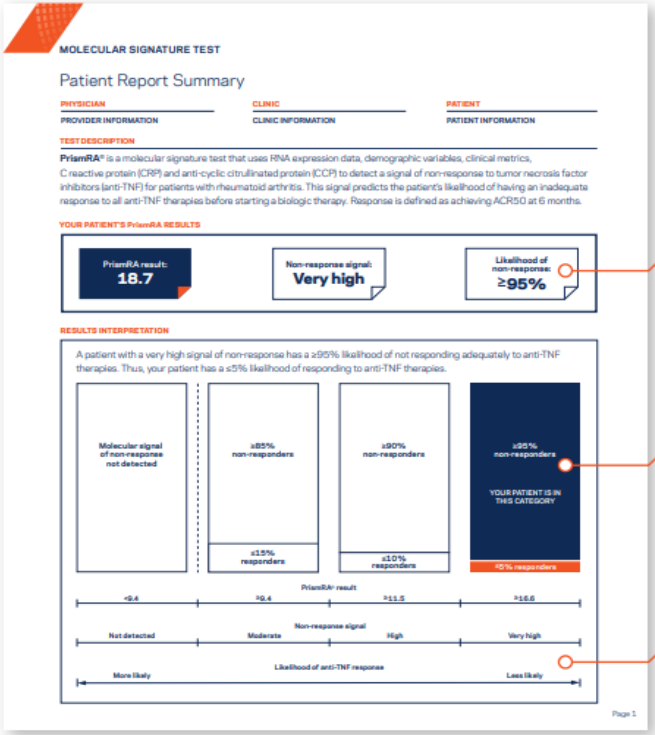
of patients with RA reach ACR50 at 6 months with b/tsDMARD after failing methotrexate[3,4]

PRISM RA

- **How accurate is this test?**
  - PrismRA has a 90% positive predictive value
  - **10%** of patients with results that they are non-responders **will** respond to a TNFi inhibitor
  - This should be used along with clinical judgement

PRISM RA RESULTS

Incorporating PrismRA into your practice



MOLECULAR SIGNATURE TEST

Patient Report Summary

PHYSICIAN
PROVIDER INFORMATION

CLINIC
CLINIC INFORMATION

PATIENT
PATIENT INFORMATION

TEST DESCRIPTION

PrismRA® is a molecular signature test that uses RNA expression data, demographic variables, clinical metrics, C reactive protein (CRP) and anti-cyclic citrullinated protein (CCP) to detect a signal of non-response to tumor necrosis factor inhibitors (anti-TNF) for patients with rheumatoid arthritis. This signal predicts the patient's likelihood of having an inadequate response to all anti-TNF therapies before starting a biologic therapy. Response is defined as achieving ACR50 at 6 months.

YOUR PATIENT'S PrismRA RESULTS

PrismRA result: 18.7

Non-response signal: Very high

Likelihood of non-response: ≥95%

RESULTS INTERPRETATION

A patient with a very high signal of non-response has a ≥95% likelihood of not responding adequately to anti-TNF therapies. Thus, your patient has a ≤5% likelihood of responding to anti-TNF therapies.

Page 1

Actionable results in easy-to-read report

- Illustrates likelihood of being inadequate responder to TNF inhibitor therapy
- Result values and interpretation guide are highlighted for every result
- Results are reported on a continuous, 25-point scale, divided into four tiers

AVISE

- Comprehensive test used for evaluation and monitoring of many rheumatological conditions

AVISE

- Conditions being evaluated:
  - SLE
  - RA
  - Sjogren’s
  - Scleroderma
  - PM/DM
  - APS
  - Autoimmune thyroid disease

AVISE

- **When to order AVISE?**
  - Further evaluate a +ANA with symptoms that could be related to multiple conditions
  - Useful when patients are adamant they have CTD because of a +ANA
  - Used to use for cash patient because it was cost effective

AVISE DIAGNOSTIC TESTS

- AVISE – CTD
- AVISE – APS
- AVISE – SLE
- AVISE – Vasculitis

AVISE PROGNOSTIC TESTS

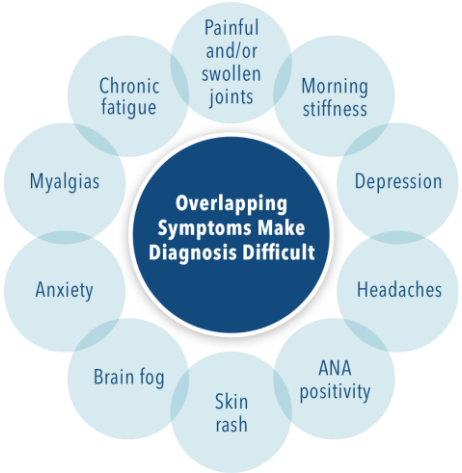
- AVISE SLE prognostic
- AVISE PC4d
- AVISE AntiCarP

AVISE MONITORING TESTS

- AVISE SLE monitor
- AVISE MTX
- AVISE HCQ

AVISE DIAGNOSTIC TESTS

- AVISE CTD
  - Useful in evaluating patients with +antibodies and overlapping symptoms of different disease states

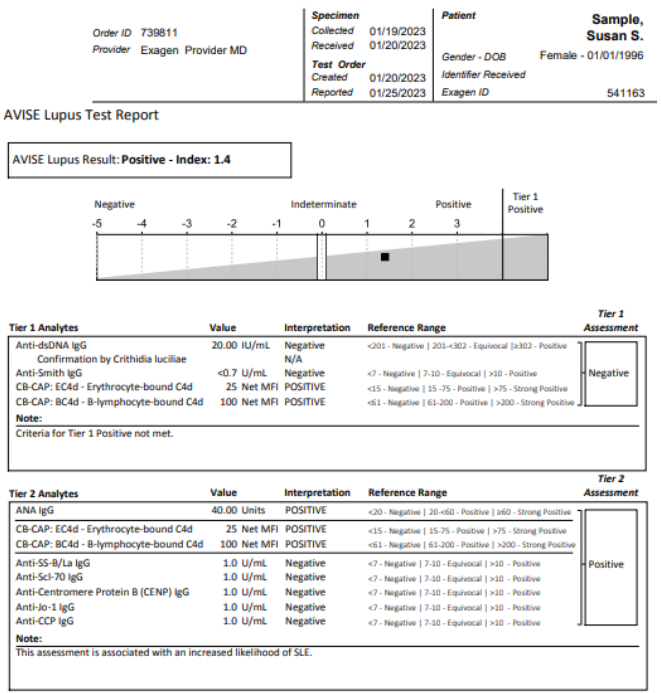


AVISE DIAGNOSTIC TESTS

- AVISE SLE
  - Improves accuracy by using assays with greater sensitivity and specificity in their Cell-Bound Complement Activation Products
  - Conducting multiple tests simultaneously to combine results into a single index score (Lupus index score)
  - Allows for earlier diagnosis which in turn decreases risk of organ involvement

AVISE DIAGNOSTIC TESTS

- AVISE SLE



Order ID 739811
Provider Exagen Provider MD

Specimen
Collected 01/19/2023
Received 01/20/2023

Test Order
Created 01/20/2023
Reported 01/25/2023

Patient
Sample, Susan S.
Gender - DOB Female - 01/01/1996
Identifier Received
Exagen ID 541163

AVISE Lupus Test Report

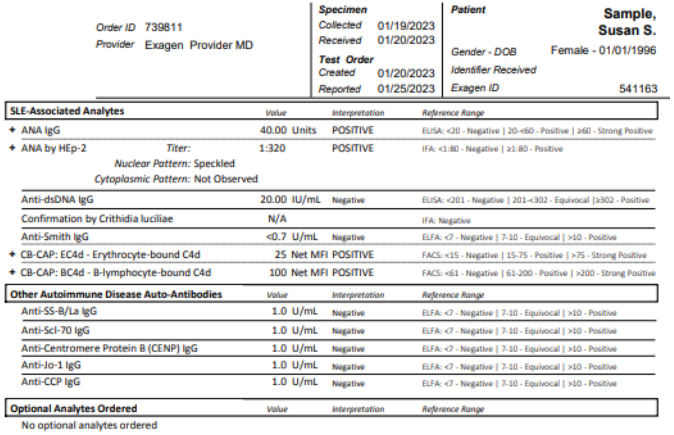
AVISE Lupus Result: **Positive - Index: 1.4**

Tier 1 Analytes	Value		Interpretation	Reference Range	Tier 1 Assessment
Anti-dsDNA IgG	20.00	IU/mL	Negative	<201 - Negative | 201-<302 - Equivocal |≥302 - Positive	Negative
Confirmation by Crithidia luciliae			N/A		
Anti-Smith IgG	<0.7	U/mL	Negative	<7 - Negative | 7-10 - Equivocal | >10 - Positive	
CB-CAP: EC4d - Erythrocyte-bound C4d	25	Net MFI	POSITIVE	<15 - Negative | 15 -75 - Positive | >75 - Strong Positive	
CB-CAP: BC4d - B-lymphocyte-bound C4d	100	Net MFI	POSITIVE	<61 - Negative | 61-200 - Positive | >200 - Strong Positive	

Note:
Criteria for Tier 1 Positive not met.

Tier 2 Analytes	Value		Interpretation	Reference Range	Tier 2 Assessment
ANA IgG	40.00	Units	POSITIVE	<20 - Negative | 20-<60 - Positive | ≥60 - Strong Positive	Positive
CB-CAP: EC4d - Erythrocyte-bound C4d	25	Net MFI	POSITIVE	<15 - Negative | 15-75 - Positive | >75 - Strong Positive	
CB-CAP: BC4d - B-lymphocyte-bound C4d	100	Net MFI	POSITIVE	<61 - Negative | 61-200 - Positive | >200 - Strong Positive	
Anti-SS-B/La IgG	1.0	U/mL	Negative	<7 - Negative | 7-10 - Equivocal | >10 - Positive	
Anti-Scl-70 IgG	1.0	U/mL	Negative	<7 - Negative | 7-10 - Equivocal | >10 - Positive	
Anti-Centromere Protein B (CENP) IgG	1.0	U/mL	Negative	<7 - Negative | 7-10 - Equivocal | >10 - Positive	
Anti-Jo-1 IgG	1.0	U/mL	Negative	<7 - Negative | 7-10 - Equivocal | >10 - Positive	
Anti-CCP IgG	1.0	U/mL	Negative	<7 - Negative | 7-10 - Equivocal | >10 - Positive	

Note:
This assessment is associated with an increased likelihood of SLE.



Order ID 739811
Provider Exagen Provider MD

Specimen
Collected 01/19/2023
Received 01/20/2023

Test Order
Created 01/20/2023
Reported 01/25/2023

Patient
Sample, Susan S.
Gender - DOB Female - 01/01/1996
Identifier Received
Exagen ID 541163

SLE-Associated Analytes	Value		Interpretation	Reference Range
+ ANA IgG	40.00	Units	POSITIVE	ELISA: <20 - Negative | 20-<60 - Positive | ≥60 - Strong Positive
+ ANA by HEp-2 *Titer:*	1:320		POSITIVE	IFA: <1:80 - Negative | ≥1:80 - Positive
Nuclear Pattern: Speckled				
Cytoplasmic Pattern: Not Observed				
Anti-dsDNA IgG	20.00	IU/mL	Negative	ELISA: <201 - Negative | 201-<302 - Equivocal |≥302 - Positive
Confirmation by Crithidia luciliae	N/A			IFA: Negative
Anti-Smith IgG	<0.7	U/mL	Negative	ELFA: <7 - Negative | 7-10 - Equivocal | >10 - Positive
+ CB-CAP: EC4d - Erythrocyte-bound C4d	25	Net MFI	POSITIVE	FACS: <15 - Negative | 15-75 - Positive | >75 - Strong Positive
+ CB-CAP: BC4d - B-lymphocyte-bound C4d	100	Net MFI	POSITIVE	FACS: <61 - Negative | 61-200 - Positive | >200 - Strong Positive

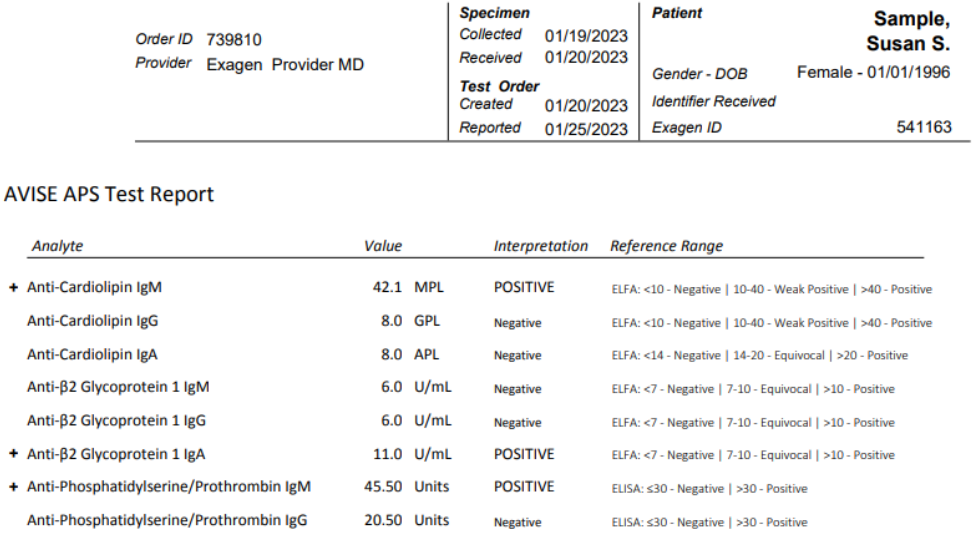
Other Autoimmune Disease Auto-Antibodies	Value		Interpretation	Reference Range
Anti-SS-B/La IgG	1.0	U/mL	Negative	ELFA: <7 - Negative | 7-10 - Equivocal | >10 - Positive
Anti-Scl-70 IgG	1.0	U/mL	Negative	ELFA: <7 - Negative | 7-10 - Equivocal | >10 - Positive
Anti-Centromere Protein B (CENP) IgG	1.0	U/mL	Negative	ELFA: <7 - Negative | 7-10 - Equivocal | >10 - Positive
Anti-Jo-1 IgG	1.0	U/mL	Negative	ELFA: <7 - Negative | 7-10 - Equivocal | >10 - Positive
Anti-CCP IgG	1.0	U/mL	Negative	ELFA: <7 - Negative | 7-10 - Equivocal | >10 - Positive

Optional Analytes Ordered	Value	Interpretation	Reference Range

No optional analytes ordered

AVISE DIAGNOSTIC TESTS

- AVISE APS
  - Combination of biomarkers to assess a patient's risk for APS and thrombosis



Order ID 739810	**Specimen**	**Patient**	**Sample, Susan S.**
Provider Exagen Provider MD	Collected 01/19/2023		
	Received 01/20/2023	Gender - DOB	Female - 01/01/1996
	Test Order	Identifier Received	
	Created 01/20/2023	Exagen ID	541163
	Reported 01/25/2023		

AVISE APS Test Report

Analyte	Value		Interpretation	Reference Range
+ Anti-Cardiolipin IgM	42.1	MPL	POSITIVE	ELFA: <10 - Negative | 10-40 - Weak Positive | >40 - Positive
Anti-Cardiolipin IgG	8.0	GPL	Negative	ELFA: <10 - Negative | 10-40 - Weak Positive | >40 - Positive
Anti-Cardiolipin IgA	8.0	APL	Negative	ELFA: <14 - Negative | 14-20 - Equivocal | >20 - Positive
Anti-β2 Glycoprotein 1 IgM	6.0	U/mL	Negative	ELFA: <7 - Negative | 7-10 - Equivocal | >10 - Positive
Anti-β2 Glycoprotein 1 IgG	6.0	U/mL	Negative	ELFA: <7 - Negative | 7-10 - Equivocal | >10 - Positive
+ Anti-β2 Glycoprotein 1 IgA	11.0	U/mL	POSITIVE	ELFA: <7 - Negative | 7-10 - Equivocal | >10 - Positive
+ Anti-Phosphatidylserine/Prothrombin IgM	45.50	Units	POSITIVE	ELISA: ≤30 - Negative | >30 - Positive
Anti-Phosphatidylserine/Prothrombin IgG	20.50	Units	Negative	ELISA: ≤30 - Negative | >30 - Positive

AVISE DIAGNOSTIC TESTS

- AVISE Vasculitis
  - Complete panel of ANCA-associated biomarkers

Order ID	204187	***Specimen***		***Patient***	**Sample, Robert S**
Provider	Example Provider MD	*Collected*	08/20/2020		
		Received	08/20/2020	*Gender - DOB*	Male - 01/01/2001
		Test Order		*Identifier Received*	
		Created	08/20/2020	*Exagen ID*	302583
		Reported	08/24/2020		

AVISE VASCULITIS AAV

AVISE VASCULITIS RESULT:	**p-ANCA Positive >1:1280**	**Anti-MPO Positive**

ANCA by IFA Titer: >1:1280 Positive IFA:<1:20-Negative I ≥20 Positive

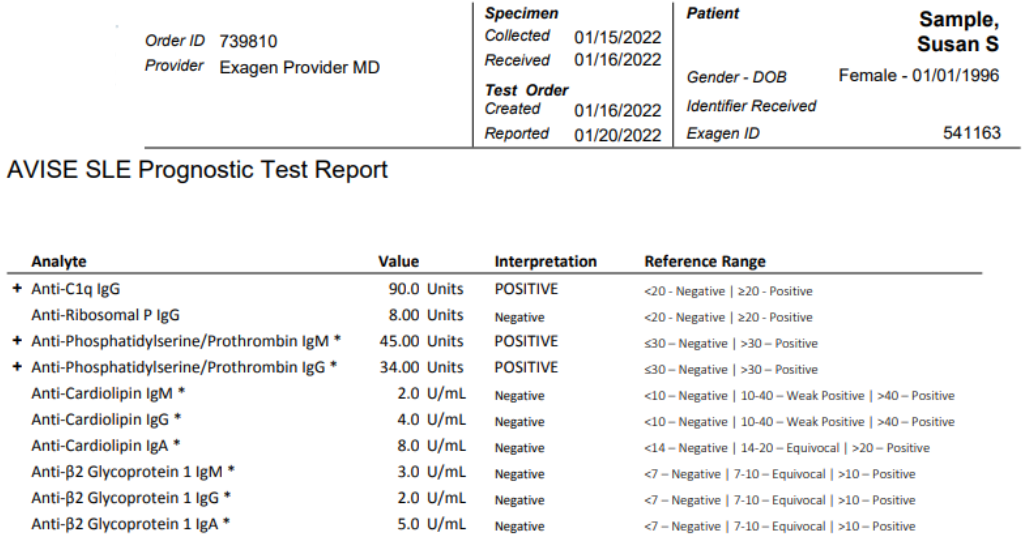
Pattern: Perinuclear (p-ANCA)

Positive ANCAs are useful in the diagnosis of small vessel vasculitis - granulomatosis with polyangiitis, microscopic polyangiitis and eosinophilic granulomatosis with polyangiitis. However, they can also be seen in connective tissue disease, IBD, some infections, malignancy, and as a reaction to drugs. Therefore, they should be interpreted with care in light of the clinical findings and workup.

Vasculitis-Associated Analytes:	***Value***	***Interpretation***	***Reference Range***
Anti-MPO IgG	>740 CU	Positive	CIA: <20-Negative I ≥20-Positive
Anti-PR3 IgG	<2 CU	Negative	CIA: <20-Negative I ≥20-Positive
Anti-GBM IgG	3 CU	Negative	CIA: <20-Negative I ≥20-Positive

AVISE PROGNOSTIC TESTS

- AVISE SLE prognostic
  - 10-marker panel to assess risk for thrombosis, CV events, lupus nephritis and neuropsychiatric lupus.



Order ID 739810
Provider Exagen Provider MD

Specimen
Collected 01/15/2022
Received 01/16/2022

Test Order
Created 01/16/2022
Reported 01/20/2022

Patient
Sample, Susan S
Gender - DOB Female - 01/01/1996
Identifier Received
Exagen ID 541163

AVISE SLE Prognostic Test Report

	Analyte	Value	Interpretation	Reference Range
+	Anti-C1q IgG	90.0 Units	POSITIVE	<20 - Negative | ≥20 - Positive
	Anti-Ribosomal P IgG	8.00 Units	Negative	<20 - Negative | ≥20 - Positive
+	Anti-Phosphatidylserine/Prothrombin IgM *	45.00 Units	POSITIVE	≤30 – Negative | >30 – Positive
+	Anti-Phosphatidylserine/Prothrombin IgG *	34.00 Units	POSITIVE	≤30 – Negative | >30 – Positive
	Anti-Cardiolipin IgM *	2.0 U/mL	Negative	<10 – Negative | 10-40 – Weak Positive | >40 – Positive
	Anti-Cardiolipin IgG *	4.0 U/mL	Negative	<10 – Negative | 10-40 – Weak Positive | >40 – Positive
	Anti-Cardiolipin IgA *	8.0 U/mL	Negative	<14 – Negative | 14-20 – Equivocal | >20 – Positive
	Anti-β2 Glycoprotein 1 IgM *	3.0 U/mL	Negative	<7 – Negative | 7-10 – Equivocal | >10 – Positive
	Anti-β2 Glycoprotein 1 IgG *	2.0 U/mL	Negative	<7 – Negative | 7-10 – Equivocal | >10 – Positive
	Anti-β2 Glycoprotein 1 IgA *	5.0 U/mL	Negative	<7 – Negative | 7-10 – Equivocal | >10 – Positive

AVISE PROGNOSTIC TESTS

- AVISE PC4d
  - Useful in aiding risk of thrombosis in SLE patients

AVISE PROGNOSTIC TESTS

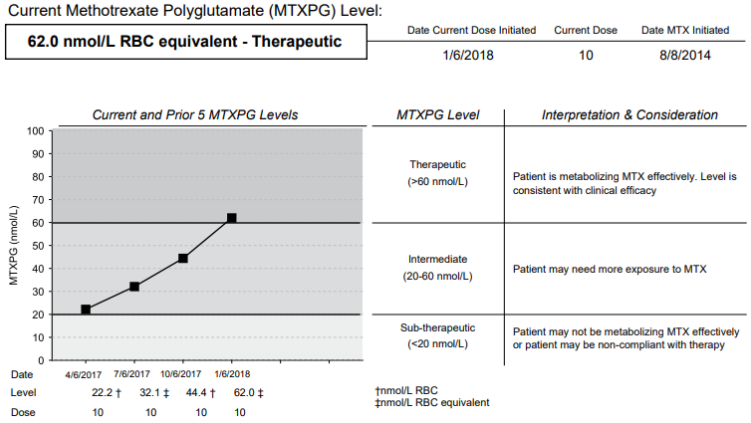
- AVISE AntiCarP
  - Useful detection of RA patients before onset of symptoms
  - Can be used with significant family history of RA
  - Useful in patients who do not test + for RF/CCP

AVISE MONITORING TESTS

- AVISE SLE monitor
  - Useful for monitoring disease progression
  - Assess treatment efficacy
  - Help prevent organ involvement and joint damage

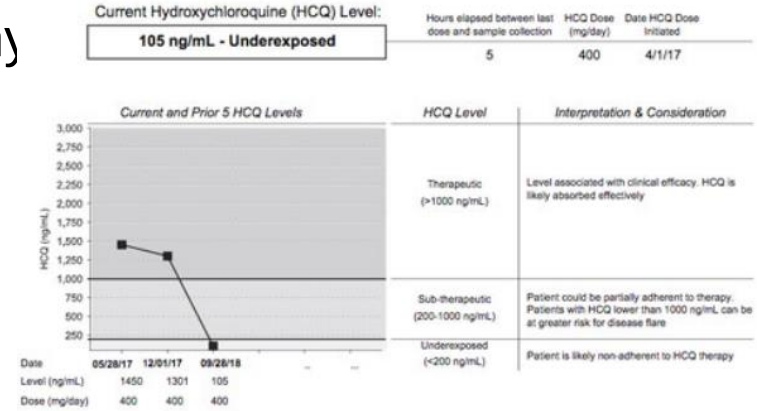
AVISE MONITORING TESTS

- AVISE MTX
  - Measures active MTX metabolites
  - Helps assess adherence to medication
  - Helps assess appropriate dosing levels



AVISE MONITORING TESTS

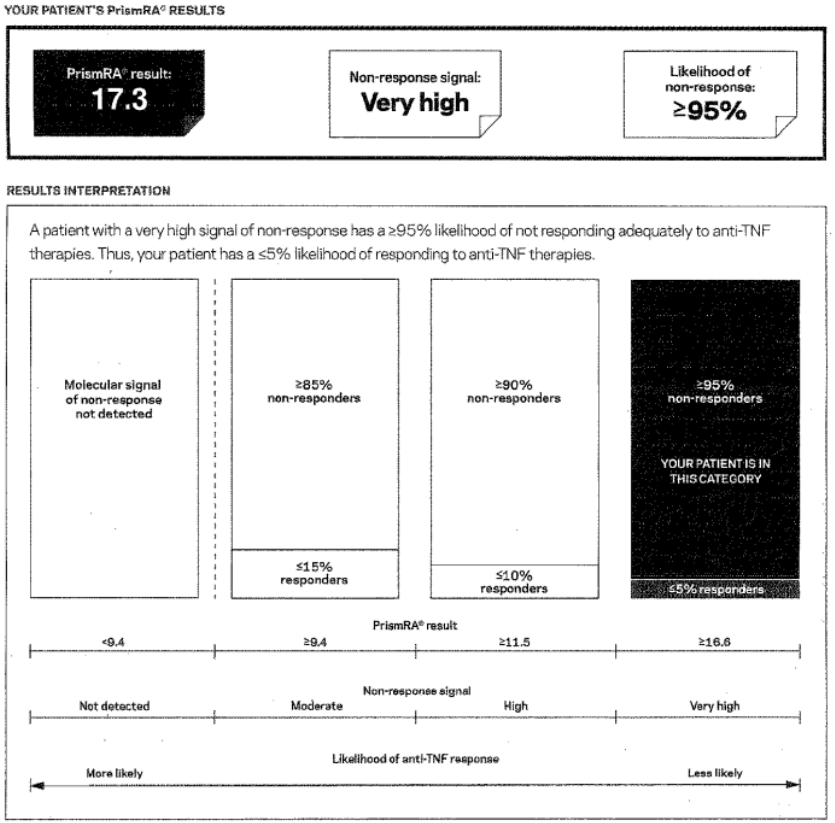
- AVISE HCQ
  - Measurement of HCQ levels
  - Helps determine drug adherence
  - Helps assess appropriate dosing levels
    - HCQ induced toxic retinopathy



PRISM RA CASE STUDY

- 39 y.o female diagnosed with SPRA in 2016. Failed MTX, HCQ, Adalimumab and Certolizumab pegol
- Do we switch to another TNFi or different mechanism of action?
- Decided to obtain PRISM RA

PRISM RA CASE STUDY



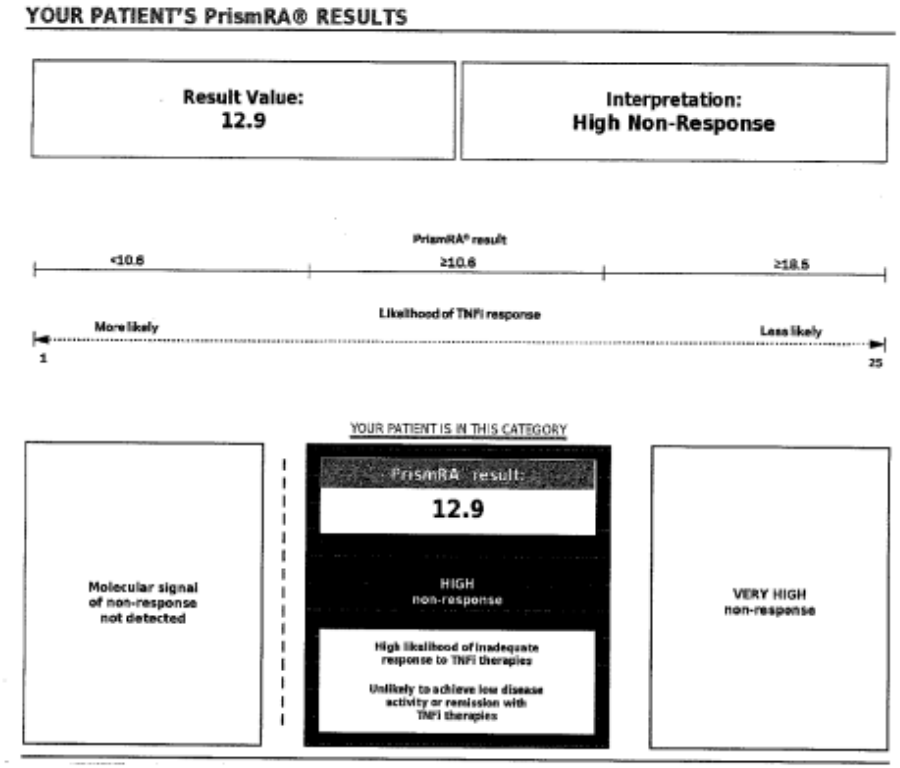
PRISM RA CASE STUDY

- RESULTS: High Non-Responder
- Patient was switched to biologic with different mechanism of action with great benefits

CASE STUDY

- 49 y.o female diagnosed with SNRA(4/2020) with synovitis, elevated APRs and fhx of RA.
- Tried MTX, LEF and HCQ. She has sulfa allergy.
- VECTRA DA 38 ; moderate disease activity(8/2/2021)
- PRISM RA 12.9 ; high non-response to TNFi (1/4/2022)
- Started on Adalimumab 40mg/0.4mL SQ biweekly 4/20/2022
- She reports joint pain and considering switch to another med
- VECTRA DA 19 ; low disease activity (6/19/2023) and normal APRs
- She continues with current therapy for RA, discussed OA is likely cause of joint pain

CASE STUDY


YOUR PATIENT'S PrismRA® RESULTS
Result Value:
12.9
Interpretation:
High Non-Response
PrismRA® result
<10.6
≥10.6
≥18.5
Likelihood of TNFi response
More likely
Less likely
1
25
YOUR PATIENT IS IN THIS CATEGORY
Molecular signal of non-response not detected
PrismRA result:
12.9
HIGH non-response
High likelihood of inadequate response to TNFi therapies
Unlikely to achieve low disease activity or remission with TNFi therapies
VERY HIGH non-response

CASE STUDY

Vectra Molecular Result

Vectra Score	Risk of RP	Change in Score	Vectra Score Interpretation
19 LOW (1-29)	2% 1-Year Risk of Radiographic Progression	Meaningful Decrease ≥8 Units	Low Vectra Score: 19 Patient has a Low Vectra Score that decreased by 8 or more units from the previous score, which was in the Moderate category. The patient is at low risk for radiographic progression. Consider retesting periodically to ensure low level of inflammation or if clinical disease activity changes.

VECTRA SCORE DESCRIPTION

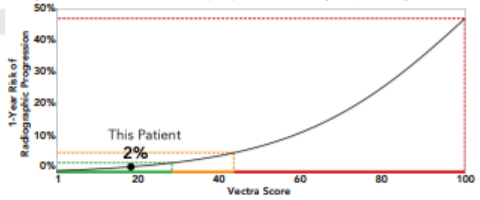
Vectra Disease Activity Levels: Low: 1 to 29 Moderate: 30 to 44 High: 45 to 100

Vectra Score measures the concentrations of 12 serum proteins. An algorithm is applied to these concentrations to calculate a disease activity score on a scale of 1 to 100. The Vectra Score is personalized based on the age, gender, and adiposity of the patient.

RISK OF RADIOGRAPHIC PROGRESSION (RP)

The risk of RP is shown as a function of Vectra Score (see chart, right). The definition of RP is a 1-year total Sharp score change of >5 units. Increased risk of RP means a greater chance of irreversible joint damage.

Patient serostatus may affect the risk of radiographic progression. Thus, the actual risk of radiographic progression may be higher if this patient is seropositive and lower if this patient is seronegative.

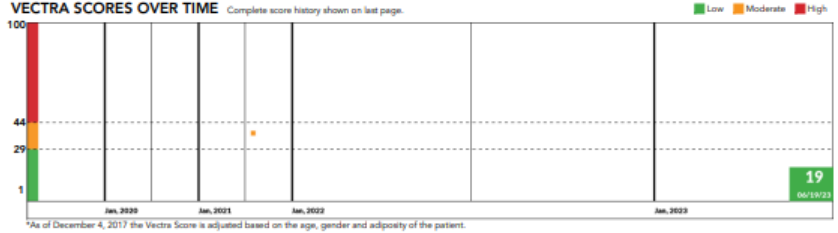


CHANGE IN SCORE DESCRIPTION

Change in Score is assessed in relation to the Minimally Important Difference (MID) for Vectra. The MID for patients with a Moderate or High Vectra Score is 8.0.

VECTRA SCORES OVER TIME

Complete score history shown on last page.



*As of December 4, 2017 the Vectra Score is adjusted based on the age, gender and adiposity of the patient.

AVISE CASE STUDY

- 72 y.o female with history of stroke in 2018, fibromyalgia and OA. She presents with symptoms of joint pain, fatigue, prolonged AM stiffness.
- Labs showed +ANA no titer and dsDNA 11, CRP 7 (<4.9).
- AVISE test ordered
  - Results showed +ANA and +anti-TPO 433.
  - Lupus index: low likelihood of SLE

AVISE CASE STUDY

- Patient was assured that lupus diagnosis was less likely
- Discussed that her +ANA was likely due to Hashimoto’s disease
- Advised regular evaluation of TSH levels through PCP

CONCLUDING REMARKS

- Specialty labs can be helpful in combination with clinical judgement
- It is important to consider cost to patients
- Patient cost may vary depending on insurance
- Most of these specialty tests have available assistance to patients

QUESTIONS

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