James Mossell, DO
Tift Regional Medical Center
Tifton, GA

A 53 year-old African American female patient was referred to Dr. Mossell in 2014 by her PCP with complaints of polyarthralgias (swelling in the joints along with joint pain), reoccurring rash on chest and arms, fatigue and dry eyes/mouth– all of which could be suggestive of SLE/Lupus or other CTD. Because the symptoms and examination did not clearly indicate a specific disease, **Dr. Mossell ordered Avise CTD to help distinguish the overlapping symptoms.** The test report came back with a positive ANA (nucleolar IIF pattern) and elevated anti-MCV.

POSITIVE MARKERS	RESULTS	REFERENCE RANGE
ANA by IIF	1:320 (Nucleolar)	Negative (<1:80); Positive (≥1:80)
ANA by ELISA	29 Units	<20 (Negative); 20-59 (Positive); ≥60 (Strong Positive)
Anti-MCV	37 U/mL	<20 (Negative); ≥20-70 (Positive); >70 (Strong Positive)

Based on these results and clinical assessment, Dr. Mossell was able to rule-in Rheumatoid Arthritis with possible overlap with SLE/Lupus. Treating for RA due to joint inflammation and positive anti-MCV, Dr. Mossell initially put the patient on methotrexate; however she was intolerant so he prescribed prednisone, leflunomide (Arava) and hydroxychloroquine (Plaquenil). At this time, the patient decided to get a second opinion at Emory University in Atlanta, GA and was told it was unlikely she had RA, but they could not arrive at a specific diagnosis.

Three months later, the patient came back to Dr. Mossell. She developed numerous subcutaneous nodules that were biopsied and appeared to be consistent with panniculitis – there was no evidence of cancer or infection. Because of these symptoms and failure to respond to treatment, **Dr. Mossell repeated the Avise CTD to see if any new serologic data presented.** The results were very similar with the previous Avise CTD, showing positive ANA (nucleolar IIF pattern) and elevated anti-MCV.

Still suspecting developing disease and potential RA/Lupus overlap, Dr. Mossell repeated the Avise CTD three months later at the patient's next visit. These results again indicated a positive ANA (nucleolar IIF pattern). However, the anti-MCV was negative, the Cell-Bound Complement Activation Products markers – EC4d and BC4d – were positive and the Avise Index was also positive at 0.6.

POSITIVE MARKERS	RESULTS	REFERENCE RANGE
ANA by IIF	1:80 (Nucleolar)	Negative (<1:80); Positive (≥1:80)
EC4d	53 Net MFI	≤12 (Negative); >12-75 (Positive); >75 (Strong Positive)
BC4d	100 Net MFI	≤48 (Negative); >48-200 (Positive); >200 (Strong Positive)

This was consistent with Dr. Mossell's suspicion and what he saw clinically – her disease seemed to have evolved from suspected RA to SLE/Lupus. The patient is continuing her dose of leflunomide, hydroxychloroquine and prednisone, but still has nodules, so Dr. Mossell plans to put her on rituximab (Rituxan) or belimumab (Benlysta). He will also **run the Avise HCQ monitoring test in 6 months to make sure HCQ exposure is optimized and the patient is compliant.**

AVISE™ CTD
Powered by CB-CAPs Technology

> "Avise CTD was indispensable in following this patient as her symptoms evolved over time and the sensitivity of this test allowed me to provide this patient with a definitive diagnosis."