



FINAL

Report Date: May 8, 2023

Octave MS Disease Activity Test Report

PATIENT NAME: **Jane Foster** DOB: Jun 9, 1985 SEX: F INTERNAL PT ID: ST-00000060 CURRENT DMT: Kesimpta YEAR OF DIAGNOSIS: Not Provided

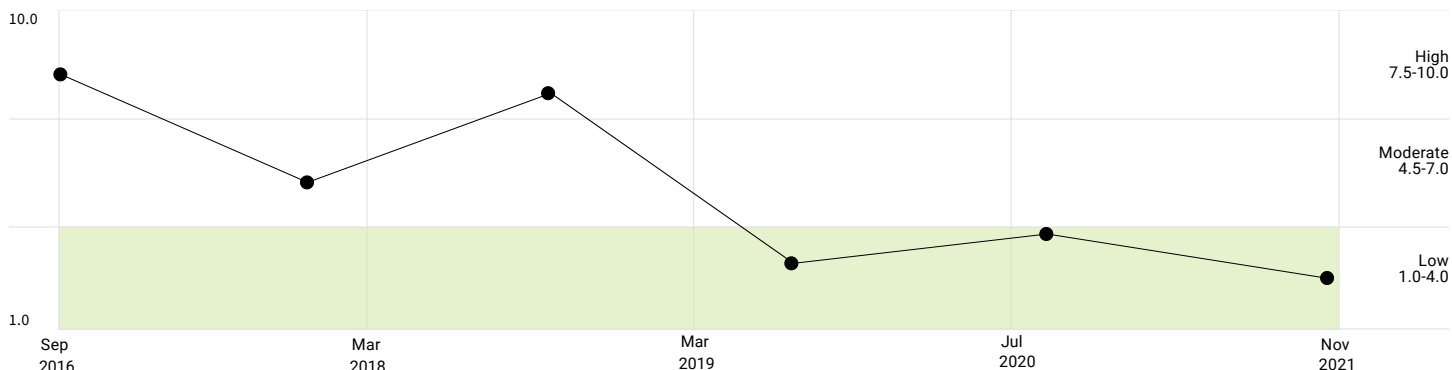
AGE AT SAMPLE DRAWN: 36.3 TRFID: MCU1610 TEST REQUESTED: Octave MS Disease Activity Test COLLECTION DATE: Oct 11, 2021

ORDERING PHYSICIAN: Stephen Strange CLINIC NAME: Sanctum Sanctorum CLINIC FAX: Not Provided CLINIC PHONE: 212-555-1212

Disease Activity Score

2.5
Low

Patient has a Low Disease Activity (DA) Score. Generally, this indicates disease activity is well controlled as evidenced by a high probability of minimal or no radiographic worsening. This Low DA score has decreased by 1.5 units from the previous DA score, which was in the Low category.



Disease Activity & Pathway Scores: Current and Historical Results

Collection Date	DA Score	Immunomodulation Score	Neuroinflammation Score	Myelin Biology Score	Neuroaxonal Integrity Score
10/11/2021	2.5 L	2.0	2.5	2.5	2.5
9/01/2020	4.0 L	4.5	4.5	2.5	5.0
8/29/2019	3.0 L	3.0	3.0	1.5	3.0
9/10/2018	8.0 H	7.0	7.5	8.0	9.0
9/21/2017	5.5 M	5.5	5.5	4.0	7.0
9/27/2016	8.5 H	7.0	8.0	7.0	10.0

DA Score Categories: ■ Low (L): 1.0 - 4.0 ■ Moderate (M): 4.5 - 7.0 ■ High (H): 7.5 - 10.0

Test Description: The Octave MS Disease Activity Test measures the concentrations of 18 serum proteins. An algorithm is applied that utilizes subsets of the protein concentrations (adjusted for age and sex) to calculate four Disease Pathway Scores that reflect key hallmarks of multiple sclerosis pathophysiology: Immunomodulation, Neuroinflammation, Myelin Biology and Neuroaxonal Integrity. The individual biomarkers and the four Disease Pathway scores are used to determine the overall Disease Activity Score. The scale of each score is scaled from 1.0 to 10.0 with intervals of 0.5. Prior to 01May2023, MSDA scores were derived from an earlier iteration of the algorithm. The current version of the algorithm was validated for disease activity assessments and results from the two algorithm versions were demonstrated to be equivalent. Test results are intended to aid in the assessment of disease activity in patients with MS when used in conjunction with standard clinical and radiographic assessments. This test is not intended or validated to diagnose MS.

The Octave MS Disease Activity Test is intended for clinical use. Octave Bioscience Inc. developed the MS Disease Activity Test and determined its performance characteristics. It has been analytically and clinically validated and is offered as a Lab Developed Test. It has not been cleared or approved by the US Food and Drug Administration (FDA). The Octave Clinical Laboratory is certified under the Clinical Laboratory Improvement Act of 1988 (CLIA) as qualified to perform high complexity clinical testing and is a College of American Pathology (CAP) Accredited Laboratory.

LABORATORY DIRECTOR: Russell Kerschmann, MD CLIA N°: 05D2168340 LABORATORY ID N°: CDF-00354252



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DOB

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SEX

F

INTERNAL PT ID

ST-00000060

CURRENT DMT

Kesimpta

YEAR OF DIAGNOSIS

Not Provided

AGE AT SAMPLE DRAWN

36.3

TRFID

MCU1610

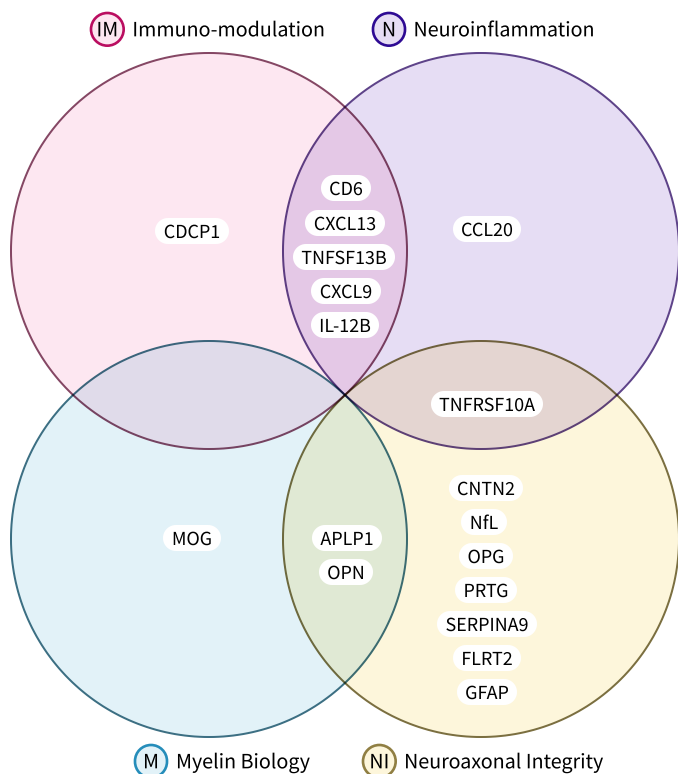
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Biomarker Pathway Categories



Individual Biomarker Results

Biomarker	Pathways	Concentration	MS Range*	Percentile ⁽¹⁾
NfL Neurofilament light	(N)	4.90 pg/mL	3.5 - 42 pg/mL	10 th
GFAP Glial Fibrillary Acidic Protein	(N)	54.39 pg/mL	24 - 220 pg/mL	25 th
SERPINA9 Serpin Family A Member 9	(N)	32.06 pg/mL	12 - 160 pg/mL	34 th
FLRT2 Leucine-rich repeat transmembrane protein	(N)	90.38 pg/mL	63 - 180 pg/mL	30 th
CNTN2 Contactin 2	(N)	0.91 ng/mL	0.65 - 3.3 ng/mL	14 th
PRTG Protogenin	(N)	119.22 pg/mL	71 - 180 pg/mL	56 th
OPN Osteopontin	(N) (M)	19.52 ng/mL	9.5 - 39 ng/mL	56 th
MOG Myelin Oligodendrocyte Glycoprotein	(M)	14.85 pg/mL	12 - 47 pg/mL	7 th
CXCL9 Monokine Induced by Gamma Interferon	(IM) (N)	50.23 pg/mL	17 - 250 pg/mL	60 th
CXCL13 C-X-C Motif Chemokine Ligand 13	(IM) (N)	40.24 pg/mL	22 - 190 pg/mL	30 th
CD6 Cluster of Differentiation 6	(IM) (N)	74.14 pg/mL	46 - 250 pg/mL	20 th
CCL20 MIP 3-alpha	(N)	4.43 pg/mL	2.1 - 52 pg/mL	26 th

Please Note: Individual biomarker results are expressed to the hundredths place and are required inputs into the algorithms used to calculate the Disease Activity Score and the four Pathway Scores. Clinical interpretation of individual biomarker levels and the four disease pathway scores, which have different weights in the algorithms, has not been established.

(*) These 95% reference ranges (expressed in two significant figures) were established from 1645 patient samples tested during method validation at the Octave Bioscience Clinical Laboratory.

(1) Subject's biomarker level relative to levels in MS patient samples from which the MS ranges were determined.

Inversely Correlated with Disease Activity

APLP1 ⁽²⁾ Amyloid Beta Precursor Like Protein 1	(N) (M)	8.19 ng/mL	5.5 - 22 ng/mL	19 th
OPG ⁽²⁾ Osteoprotegerin	(N)	0.54 ng/mL	0.41 - 1.4 ng/mL	17 th
TNFRSF10A ⁽²⁾ TRAIL-R1	(N) (N)	5.34 pg/mL	2.8 - 9.7 pg/mL	61 st
TNFSF13B ⁽²⁾ BAFF	(IM) (N)	5.00 ng/mL	2.3 - 10 ng/mL	66 th
IL-12B ⁽²⁾ Interleukin 12B	(IM) (N)	134.68 pg/mL	28 - 280 pg/mL	76 th
CDCP1 ⁽²⁾ CUB domain-containing protein 1	(IM)	91.86 pg/mL	28 - 230 pg/mL	69 th

(2) Biomarker is significantly inversely correlated with disease activity, therefore a lower concentration was associated with a higher level of disease activity in validation studies.

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