Table e-1. Multivariate analysis showing individual clinical predictors for each diagnostic category				
Diagnosis	AVF/AVM	Stroke	Spondylotic	Other
Variable	OR* (95%CI)	OR* (95%CI)	OR* (95%CI)	OR (95%CI)
Demographics				
Age <20	-	4.89 (1.42-16.84)	-	1.93 (0.63-5.91)
Age 20-29	0.60 (0.11-3.20)	0.83 (0.27-2.53)	-	0.40 (0.13-1.24)
Age 30-39	0.36 (0.06-2.08)	0.39 (0.11-1.37)	0.63 (0.14-2.87)	0.66 (0.27-1.60)
Age 40-49	0.67 (0.16-2.81)	0.76 (0.30-1.92)	1.38 (0.42-4.49)	0.74 (0.34-1.60)
Age 50-59	[ref]	[ref]	[ref]	[ref]
Age ≥60	2.09 (0.58-7.47)	1.07 (0.38-3.00)	6.00 (1.81-19.91)	0.83 (0.33-2.10)
Age by 10 year increment	1.78(1.34-2.44)	1.02 (0.86-1.22)	2.04 (1.51-2.88)	1.10 (0.94-1.31)
Race Caucasian	[ref]	[ref]	[ref]	[ref]
Race African American	-	-	0.52 (0.16-1.67)	0.34 (0.15-0.78)
Race Other	3.44 (0.94-12.66)	0.18 (0.05-0.62)	0.60 (0.07-5.30)	0.34 (0.07-1.62)
Male gender	5.04 (1.81-14.07)	2.16 (0.75-6.22)	3.09 (1.29-7.35)	1.17 (0.66-2.06)
Diabetes	1.56 (0.34-7.28)	2.53 (0.92-6.99)	0.52 (0.10-2.74)	1.19 (0.45-3.17)
Hypertension	1.29 (0.39-4.28)	1.23 (0.50-3.03)	1.03 (0.36-3.00)	1.52 (0.72-3.22)
Dyslipidemia	1.13 (0.31-4.07)	1.82 (0.72-4.60)	0.40 (0.12-1.36)	0.91 (0.39-2.09)
BMI≥25 kg/m^2	0.49 (0.10-2.41)	1.70 (0.75-3.85)	1.49 (0.61-3.63)	0.91 (0.50-1.65)
Current smoker	0.80 (0.30-2.17)	1.18 (0.58-2.37)	1.55 (0.55-4.41)	0.76 (0.34-1.71)
Autoimmune disease	0.49 (0.10-2.41)	0.25 (0.07-0.89)	0.31 (0.06-1.50)	0.40 (0.16-1.03)
Infection in last 30 days	7.70 (0.32-184.21)	-	-	4.81 (0.38-60.76)
Vaccine in last 90 days	0.75 (0.08-6.40)	0.25 (0.05-1.39)	0.43 (0.05-4.41)	1.04 (0.36-3.00)
Symptoms				
Hyperacute	2.58 (0.26-25.84)	35.19 (8.92-138.80)	-	1.12 (0.30-4.21)
Acute	[ref]	[ref]	[ref]	[ref]
Subacute	0.15 (0.01-1.99)	-	0.09 (0.01-0.96)	0.39 (0.15-0.97)
Chronic	5.82 (1.05-32.22)	0.04 (0.00-0.73)	4.54 (1.18-17.43)	3.06 (1.31-7.12)
Motor symptoms	2.60 (0.55-12.34)	6.92 (0.22-213.32)	1.91 (0.67-5.41)	2.03 (0.99-4.15)
Sensory symptoms	1.29 (0.20-8.40)	1.08 (0.18-6.46)	0.84 (0.17-4.15)	0.67 (0.22-2.06)
Bladder/bowel dysfunction	4.12 (1.37-12.44)	2.26 (0.71-7.21)	1.13 (0.47-2.71)	0.82 (0.45-1.49)
Back pain	1.88 (0.56-6.29)	7.30 (2.21-24.11)	1.11 (0.37-3.38)	1.81 (0.90-3.67)
Worsened by exercise	13.99 (2.02-97.11)	14.71 (0.64-337.04)	1.05 (0.08-13.44)	0.47 (0.04-5.15)
Neurological Exam				
Normal motor exam	[ref]	[ref]	[ref]	[ref]
Normal tone weakness	4.25 (0.80-22.64)	10.24 (1.19-88.27)	0.54 (0.16-1.88)	0.95 (0.45-1.97)
Flaccid weakness	12.81 (1.36-120.86)	48.41 (4.60-509.60)	1.17 (0.09-14.62)	0.90 (0.21-3.78)
Spastic weakness	3.51 (0.53-23.37)	4.69 (0.42-52.85)	2.67 (0.79-9.08)	1.41 (0.58-3.40)
Decreased vibration/ propioception	1.22 (0.47-3.16)	0.64 (0.28-1.47)	1.34 (0.56-3.23)	0.83 (0.47-1.46)
Decreased pain/ temperature	0.60 (0.21-1.69)	1.82 (0.62-5.38)	0.80 (0.32-4.61)	0.56 (0.30-1.05)
Decreased light touch	1.88 (0.70-5.05)	1.25 (0.53-2.93)	2.00 (0.80-4.99)	0.95 (0.52-1.73)
Sensory level	1.80 (0.55-5.83)	1.83 (0.61-5.52)	0.98 (0.36-2.69)	1.25 (0.63-2.46)
Normal reflexes	[ref]	[ref]	[ref]	[ref]
Hyporeflexia	1.09 (0.22-5.31)	1.42 (0.41-4.89)	1.00 (0.22-4.61)	1.12 (0.44-2.87)
Hyperreflexia	1.47 (0.40-5.44)	0.42 (0.12-1.43)	1.37 (0.44-4.28)	0.95 (0.47-1.91)
Sphincter compromise	0.44 (0.14-1.35)	0.99 (0.41-2.42)	0.30 (0.09-0.99)	0.37 (0.18-0.80)
MRI				

Gad +	0.27 (0.08-0.88)	0.09 (0.03-0.26)	0.32 (0.12-0.86)	0.15 (0.08-0.29)
LE	1.14 (0.26-5.01)	3.87 (1.15-13.02)	1.01 (0.32-3.16)	1.89 (0.84-4.26)
Multifocality	0.07 (0.01-0.76)	0.42 (0.08-2.11)	0.32 (0.07-1.60)	0.67 (0.27-1.67)
Axial Central lesion	2.55 (0.59-10.98)	0.39 (0.13-1.15)	4.59 (1.50-14.00)	0.77 (0.35-1.71)
Axial Anterior lesion	0.37 (0.07-2.02)	6.39 (0.13-1.15)	1.05 (0.33-3.34)	0.62 (0.27-1.40)
Axial Lateral lesion	0.19 (0.04-0.94)	0.32 (0.10-1.05)	0.51 (0.18-1.43)	1.35 (0.68-2.69)
Axial Posterior lesion	0.61 (0.15-2.48)	0.25 (0.08-0.77)	0.77 (0.29-2.07)	0.85 (0.45-1.61)
Cervical	0.39 (0.09-1.65)	0.37 (0.11-1.21)	1.16 (0.30-4.42)	0.23 (0.10-0.52)
Upper thoracic (T1-T6)	0.66 (0.17-2.58)	0.37 (0.12-1.10)	0.48 (0.15-1.51)	0.69 (0.33-1.45)
Lower thoracic (T7-T12)	0.70 (0.15-3.42)	0.89 (0.26-3.02)	0.14 (0.03-0.66)	0.39 (0.17-0.90)
Conus Medullaris	19.23 (3.35-110.38)	1.45 (0.26-8.05)	4.11 (0.33-51.52)	4.12 (1.01-16.81)
Cerebrospinal Fluid				
WBC <5 cells/uL	[ref]	[ref]	[ref]	[ref]
WBC 6-19 cells/uL	0.22 (0.03-1.55)	0.32 (0.11-0.94)	0.27 (0.05-1.46)	0.28 (0.10-0.77)
WBC ≥20 cells/uL	0.82 (0.15-4.46)	0.02 (0.00-0.15)	-	0.17 (0.05-0.62)
Protein <45 mg/dL	[ref]	[ref]	[ref]	[ref]
Protein 45-75 mg/dL	2.53 (0.65-9.77)	1.03 (0.40-2.67)	2.61 (0.75-9.06)	0.84 (0.37-1.90)
Protein ≥75 mg/dL	4.37 (0.86-22.20)	1.68 (0.46-6.17)	0.83 (0.08-8.57)	0.47 (0.13-1.73)
Oligoclonal bands	-	0.05 (0.01-0.43)	0.12 (0.06-1.11)	0.28 (0.10-0.76)
IgG Index ≥0.7	2.16 (0.18-25.84)	1.27 (0.26-6.26)	0.25 (0.02-3.98)	0.27 (0.06-1.36)

*Relative to inflammatory myelopathy

LE= longitudinally extensive lesion. Gad + = lesion enhancement after gadolinium administration.

Table e-2. Etiological diagnosis of 247 participants classified as Inflammatory	
Inflammatory	**N (%)**
MS/ CIS	74 (30)
Idiopathic	73 (29.5)
NMOSD	41 (16.6)
Sarcoidosis	28 (11.3)
Rheumatologic	14 (5.7)
Post infectious	12 (4.8)
Drug induced demyelinating myelopathy	4 (1.6)
Post vaccine	1 (0.4)

Table e-3. Etiological diagnosis of 83 participants classified as Other	
Category	**n (%)**
Unknown	42 (51)
Metabolic disorder	15 (18)
Infectious	9 (11)
Intrinsic spinal neoplasia	6 (7)
Non spondylotic compression	6 (7)
Radiation myelopathy	3 (4)
Cord herniation	1 (1)
Traumatic	1 (1)

Table e-4. Results for top discriminatory model to predict the myelopathy diagnostic category relative to the null model				
Variable	Integrated Discrimination Increment (95% CI)	Net Reclassification Improvement (95% CI)	Correct Classification Rate	Multinomial AUC[d]
Temporal profile only*	0.15 (0.12-0.19)	0.15 (0.02-0.28)	0.68	0.39
Lesion enhancement +				
+ Pleocytosis	0.13 (0.11-0.16)	0.09 (-0.05-0.24)	0.67	0.32
+ Temporal profile	0.20 (0.16-0.24)	0.21 (0.06-0.37)	0.72	0.43
All of the above[c]	0.16 (0.12-0.19)	0.14 (-0.01-0.27)	0.77	0.54
*relative to the null model				