

### Tests of Between-Groups Effects – All Groups

MANOVA-

Sensor Location	Plane	df	Statistic	No covariate			Controlling for gait speed		
				F#/H	p	$\eta^2$	F	p	$\eta^2$
Sacrum	3D	3	F	3.406	<b>.022</b>	.127	3.51	<b>0.02</b>	0.132
	Mediolateral	3	F	2.897	<b>.041</b>	.11	2.695	0.053	0.105
	Anteroposterior	3	F	1.592	.199	.064	1.587	0.200	0.065
	Vertical	3	H	9.942	.019^	.129	2.885	<b>0.042</b>	0.111
Sternum	3D	3	F	7.555	<b>.000</b>	<b>.245</b>	3.884	<b>0.013</b>	0.144
	Mediolateral	3	F	8.818	<b>.000</b>	.274	2.293	0.086	0.091
	Anteroposterior	3	H	18.104	<b>.000^</b>	.24	2.998	<b>0.037</b>	0.115
	Vertical	3	H	11.599	.009^	.17	4.045	<b>0.010</b>	0.150

\*transformed variable

^ Bonferroni correction for multiple comparisons requires  $p < 0.0083$

# Tukey adjusted

### Tests of Between-Group Effects

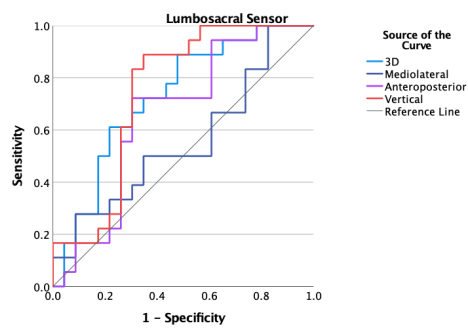
Healthy Controls versus EDSS 0-1

MANOVA		No covariate			Controlling for gait speed		
Sensor Location	Plane	F	p	$\eta^2$	F	p	$\eta^2$
Sacrum	3D	4.772	<b>.035</b>	.109	5.895	<b>0.02</b>	0.134
	Mediolateral	0.844	.364	.021	1.138	0.293	0.029
	Anteroposterior	3.000	.091	.071	4.213	<b>0.047</b>	0.100
	Vertical	6.078	<b>.018</b>	.141	3.679	0.063	0.088
Sternum	3D	11.846	<b>.001</b>	.233	10.5	<b>0.002</b>	0.216
	Mediolateral	6.695	<b>.014</b>	.147	2.432	0.127	0.060
	Anteroposterior	6.586	<b>.014</b>	.152	5.573	<b>0.023</b>	0.128
	Vertical	10.559	<b>.002</b>	.219	13.277	<b>0.001</b>	0.259
		No covariate					
Clinical Tests	Timed 25 ft walk	2.487	.123	.061			
	Average Gait Speed over 5 min (m/s)	5.390	<b>.026</b>	.124			

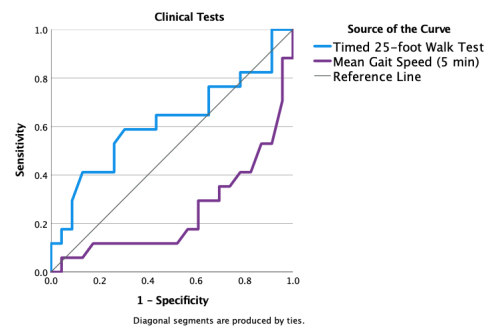
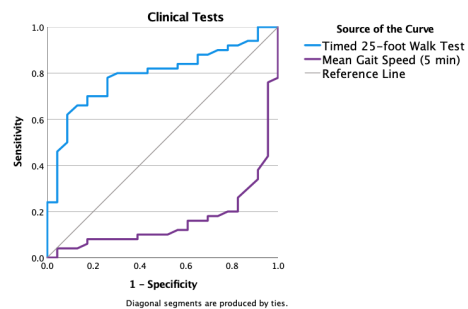
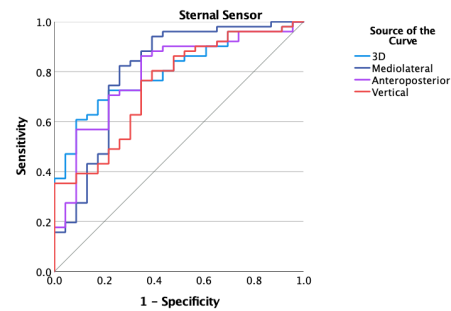
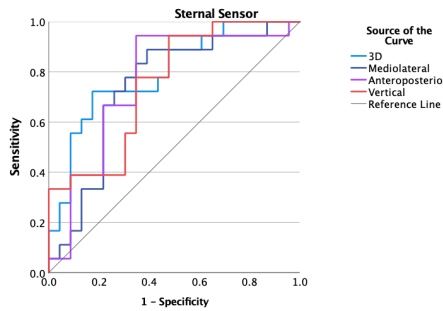
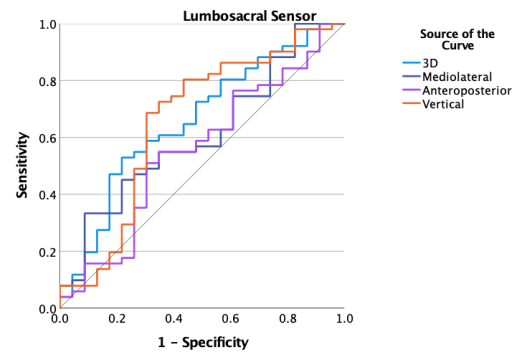
## Spearman's Correlations

		EDSS	Kurtzke Functional System Score						
		total	pyramidal	cerebellar	brainstem	sensory	bowel & bladder	visual	mental
		r	r	r	r	r	r	r	r
		(p)	(p)	(p)	(p)	(p)	(p)	(p)	(p)
Clinical Tests	Timed 25 ft walk	<b>.486**</b>	<b>.348*</b>	<b>.475**</b>	0.029	<b>.357*</b>	0.042	0.134	0.087
		( <i>&lt; .001</i> )	0.013	( <i>&lt; .001</i> )	0.839	0.011	0.773	0.352	0.548
	Mean Gait Speed	<b>-.459**</b>	<b>-.427**</b>	<b>-.391**</b>	0.08	<b>-.324*</b>	-0.065	-0.065	-0.083
		0.001	0.002	0.005	0.577	0.02	0.651	0.649	0.565
Sacrum Sensor	3D	.099	.138	-.130	.198	.198	-.112	-.055	.012
		(.489)	(.335)	(.365)	(.165)	(.163)	(.435)	(.702)	(.931)
	Mediolateral	<b>.280*</b>	.137	-.074	.241	<b>.362**</b>	-.008	-.075	.216
		(.046)	(.337)	(.606)	(.089)	(.009)	(.954)	(.599)	(.129)
	Anteroposterior	-.083	.131	-.074	.085	.089	-.222	-.089	.029
		(.561)	(.358)	(.605)	(.554)	(.534)	(.117)	(.534)	(.843)
	Vertical	.084	.157	.043	-.046	.061	-.051	-.082	.059
		(.559)	(.272)	(.766)	(.748)	(.672)	(.722)	(.566)	(.68)
Sternum Sensor	3D	<b>.330*</b>	<b>.447**</b>	.139	.142	.248	.036	-.130	.027
		(.018)	(.001)	(.330)	(.320)	(.079)	(.802)	(.362)	(.851)
	Mediolateral	<b>.360**</b>	<b>.397**</b>	.061	.125	<b>.293*</b>	.004	.021	.116
		(.010)	(.004)	(.671)	(.381)	(.037)	(.980)	(.886)	(.418)
	Anteroposterior	<b>.304*</b>	<b>.281*</b>	.175	.219	.270	-.106	.014	-.046
		(.030)	(.046)	(.219)	(.123)	(.055)	(.459)	(.924)	(.750)
	Vertical	.104	.254	.001	.115	.128	.016	-.048	.058
		(.468)	(.072)	(.997)	(.421)	(.371)	(.912)	(.738)	(.688)

Detecting PwMS (EDSS 0-4) from Healthy Controls



Detecting Non-disabled PwMS (EDSS 0-1) from Healthy Controls



Figures 2a-f.