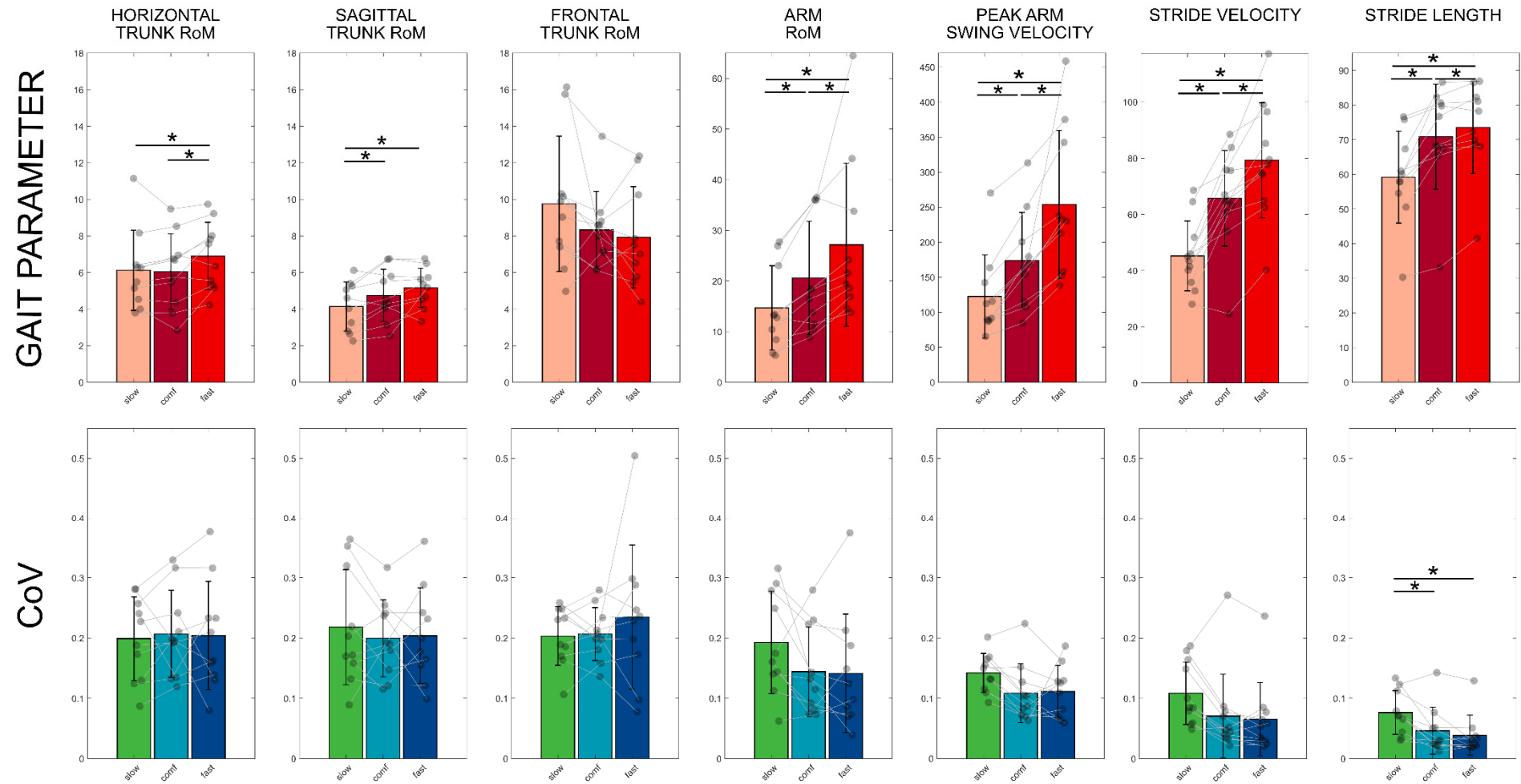


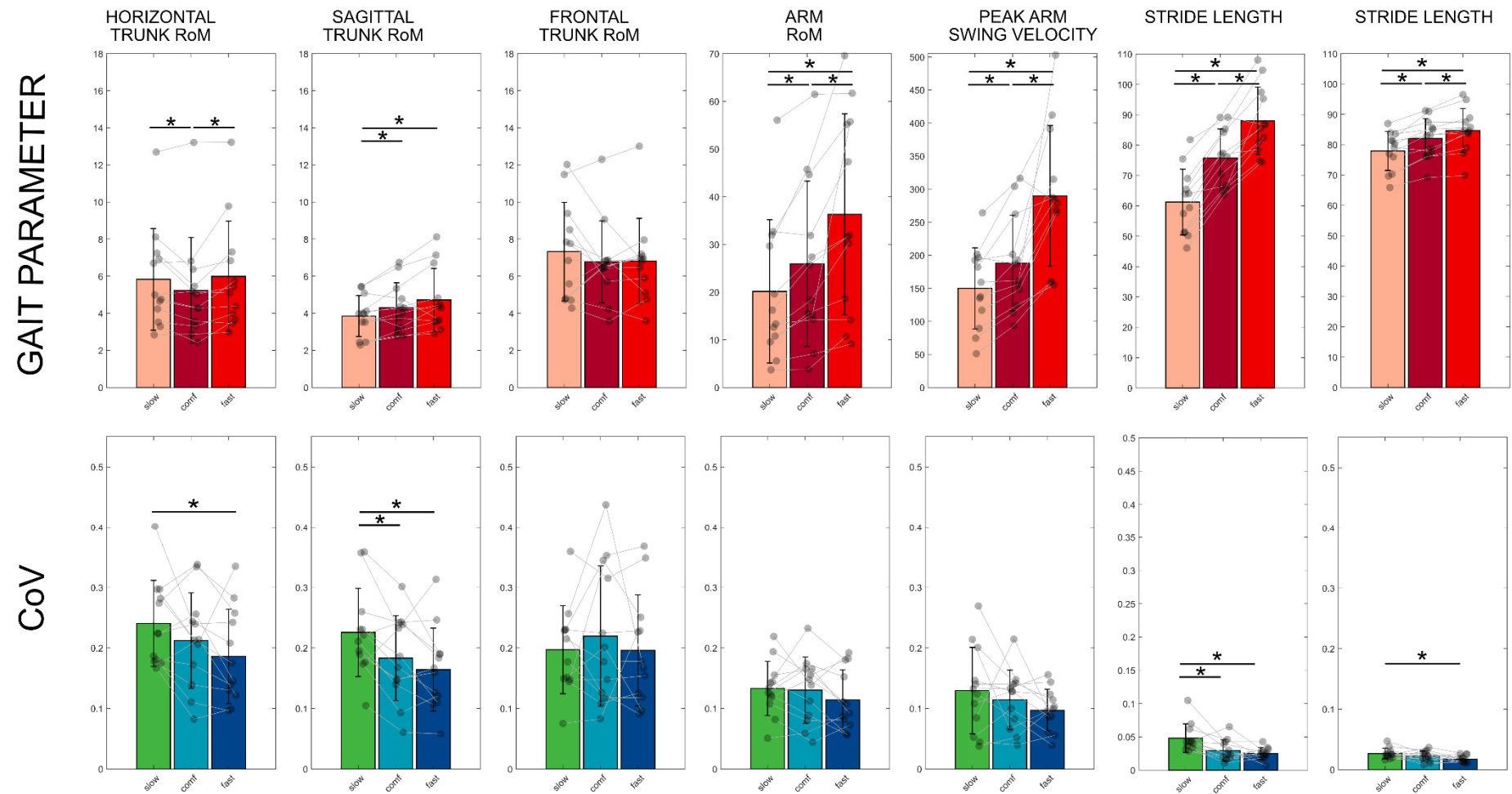
Supp. Table S1 – Clinical characteristics of patient cohort

ID	Age at assessment	Genetic findings	Sex	Height	Weight	SARA total	SARA Gait	SARA Stance	SARA Sitting
P1	71	c368G>C, pG123A heterozygot	f	181	74	11	2	2	1
P2	69	c244-252delACCTTCGAG heterozygot	m	175	74	14,5	2	2	1
P3	32	c197G>A, pC66Y (Exon2) (son of P4)	m	171	63	9,5	2	0	0
P4	61	c197G>A, pC66Y (Exon2)	f	157	74,5	20,5	3	4	2
P5	64	c197G>A, pC66Y (Exon2) (sister of P4)	f	147	na	9,5	2	2	0
P6	62	brother of P2, not tested	m	177	89	11	2	2	0
P7	53	c.353G>A p.E11BD (PRKCG) heterozygot	m	175	85	9.5	1	2	0
P8	58	c.338_340delTCT, p.F113_C114delinsC (Exon 4)	f	167	93	9,5	3	2	0
P9	45	c.392G>C, p.C131S	f	159	78	9,5	2	1	0
P10	27	c.392G>C, p.C131S (son of P19)	m	173	120	3	0	0	0
average	54.2		5f, 5m	168.2	83.4	10.7	1.9	1.7	0.4
median	59.5			172	78	9.5	2	2	0

Supplemental Figure S1 – Walking speed categories for patients with SCA



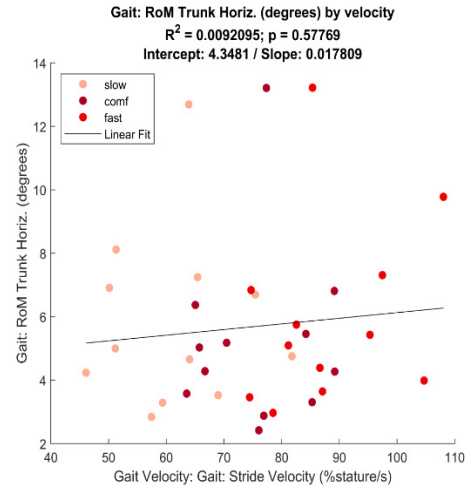
Supplemental Figure S2 – Walking speed categories for patients with ET



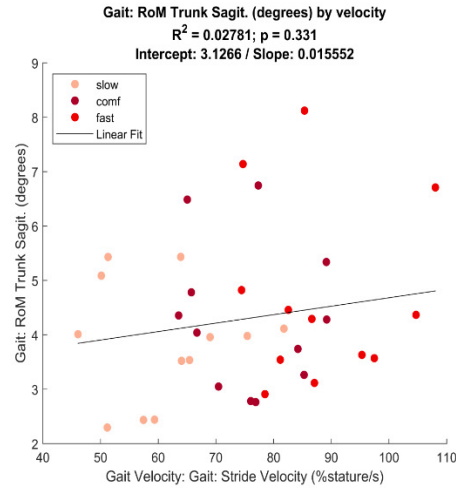
Supplemental Figure S3A & B Regression modelling of parameter dependence of gait velocity in ET

A

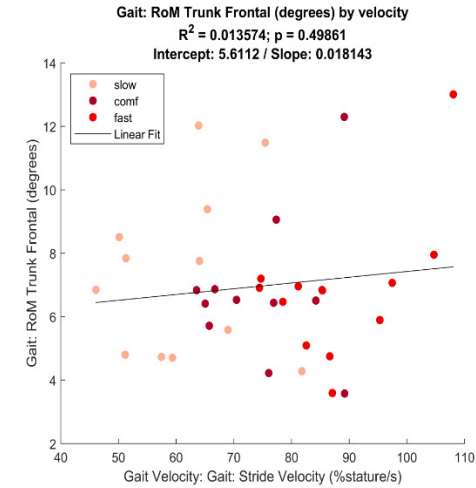
HORIZONTAL TRUNK RoM



SAGITTAL TRUNK RoM

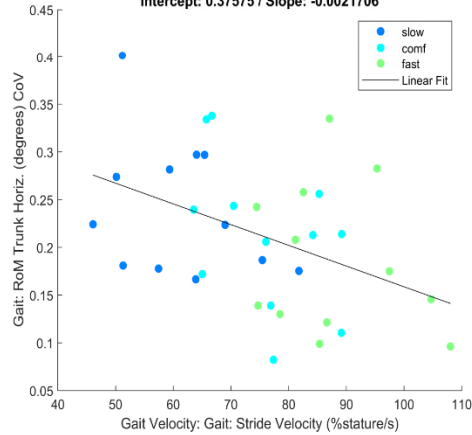


FRONTAL TRUNK RoM



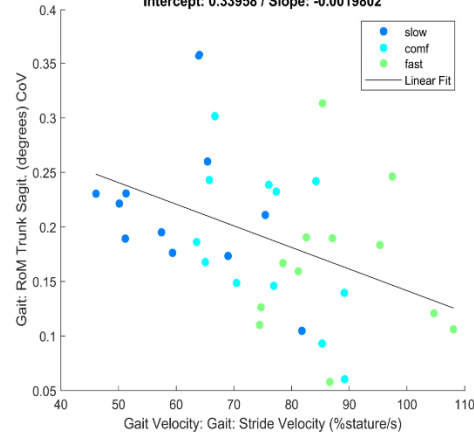
Gait: RoM Trunk Horiz. (degrees) by velocity COV

$R^2 = 0.17892$; $p = 0.010162$
Intercept: 0.37575 / Slope: -0.0021706



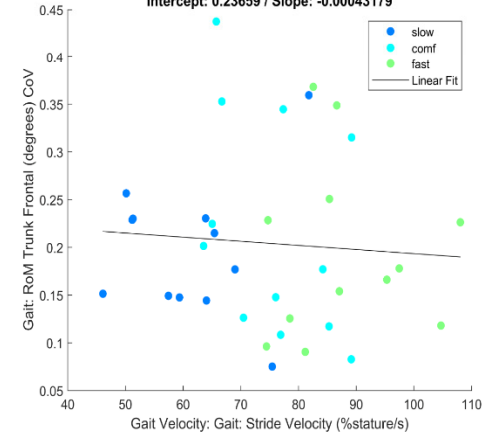
Gait: RoM Trunk Sagit. (degrees) by velocity COV

$R^2 = 0.16559$; $p = 0.013776$
Intercept: 0.33958 / Slope: -0.0019802



Gait: RoM Trunk Frontal (degrees) by velocity COV

$R^2 = 0.0048853$; $p = 0.68543$
Intercept: 0.23659 / Slope: -0.00043179



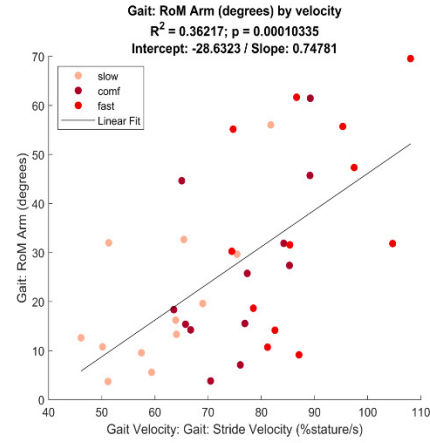
GAIT PARAMETER

CoV

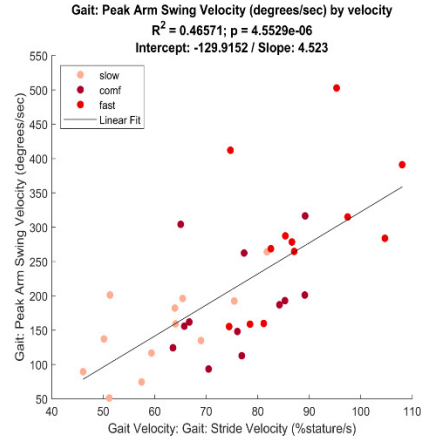
B

GAIT PARAMETER

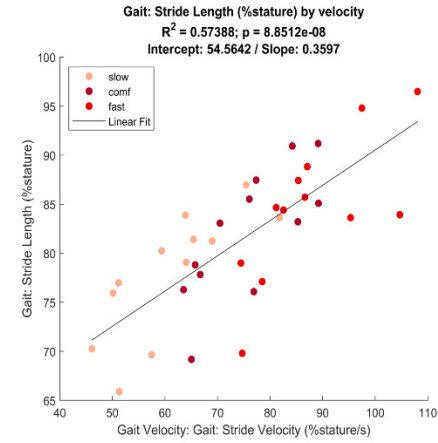
ARM RoM



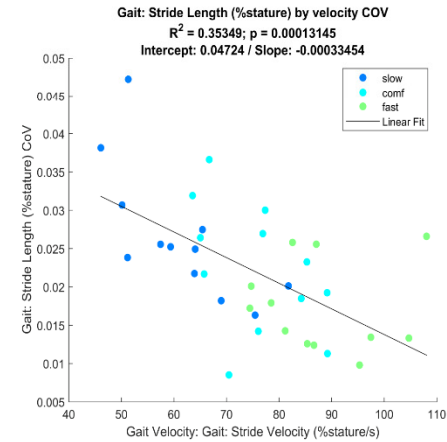
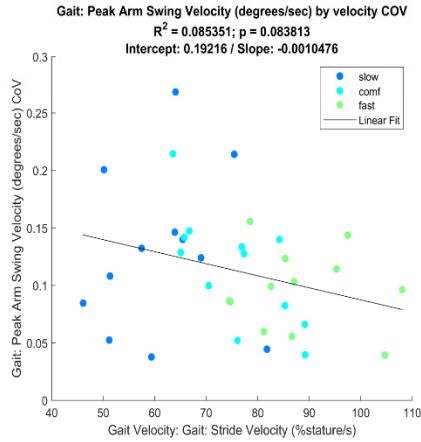
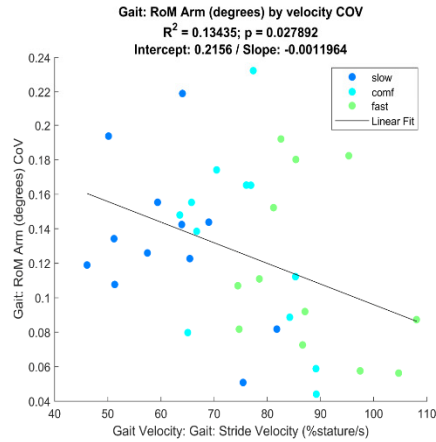
PEAK ARM SWING VELOCITY



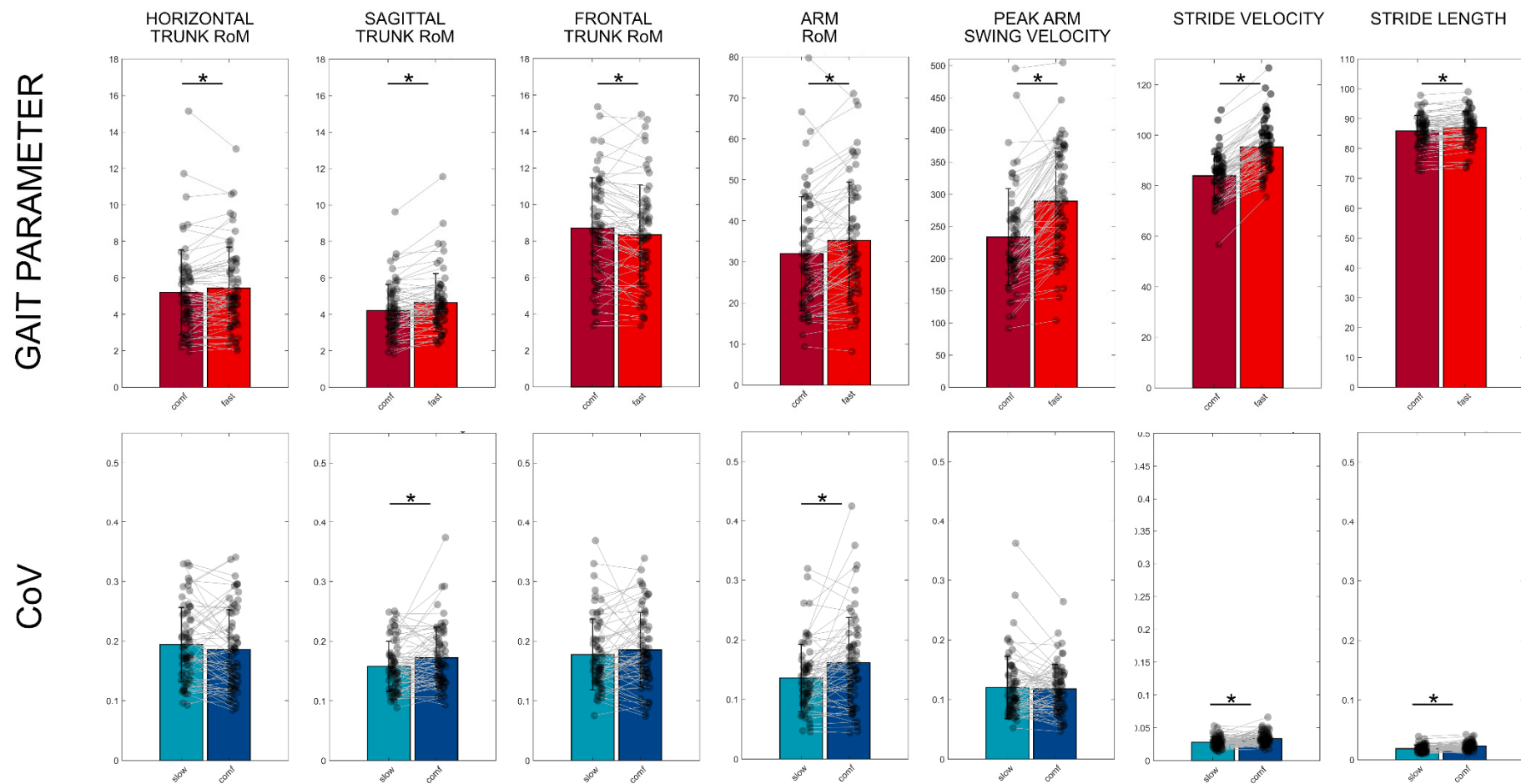
STRIDE LENGTH



CoV



Supplemental Figure S4 – Walking speed categories for patients with HE



Supplemental Figure S5A & B Regression modelling of parameter dependence of gait velocity in HE

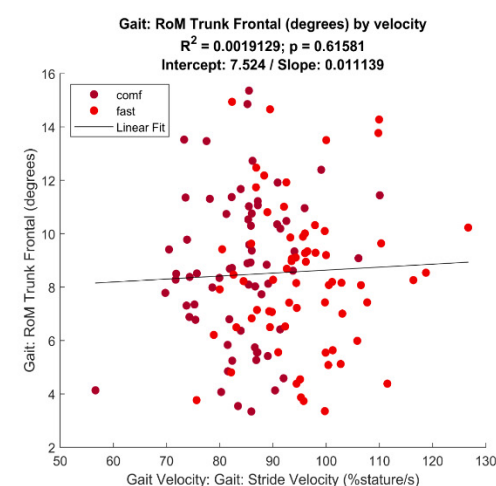
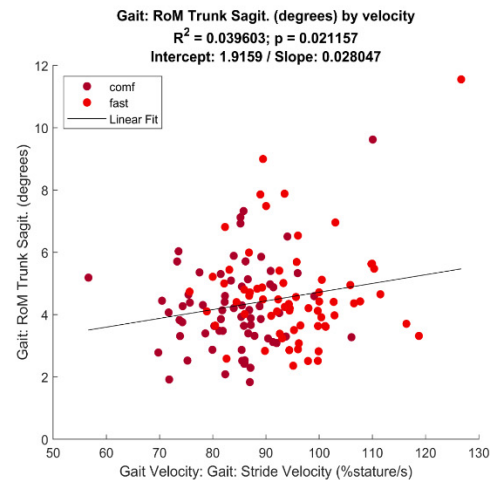
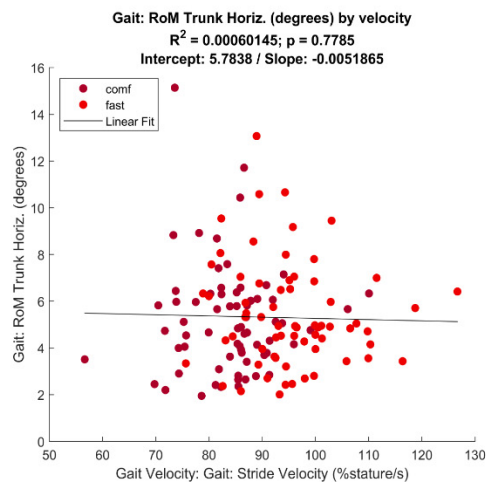
A

HORIZONTAL TRUNK RoM

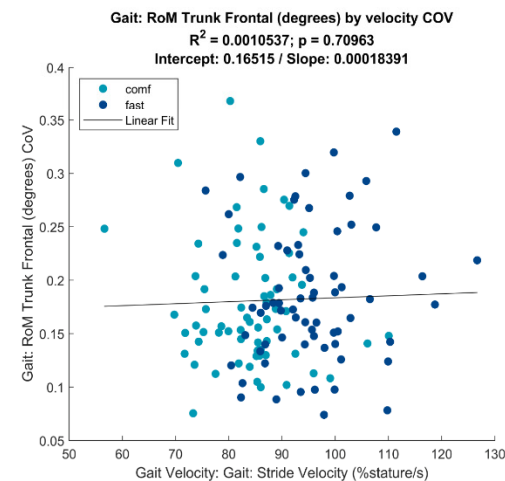
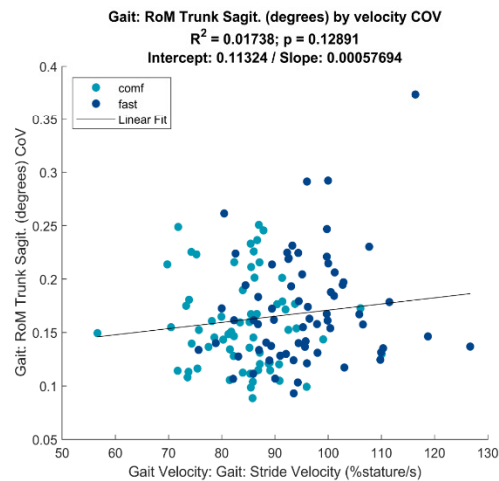
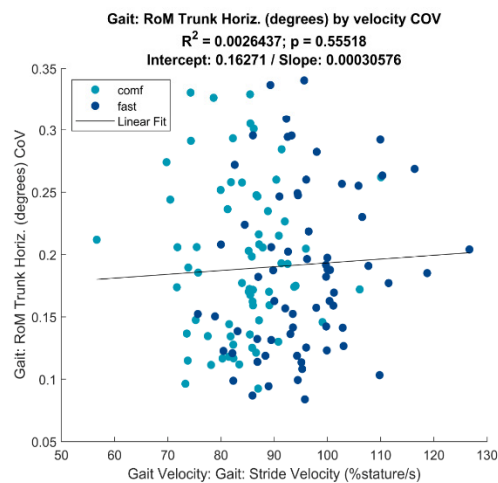
SAGITTAL TRUNK RoM

FRONTAL TRUNK RoM

GAIT PARAMETER



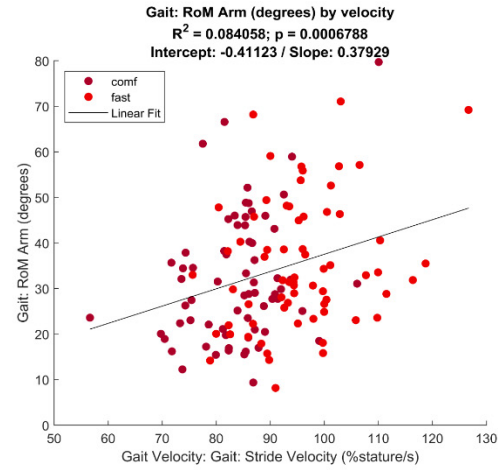
CoV



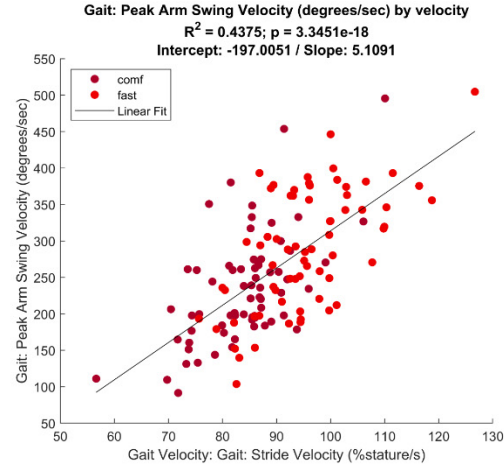
B

GAIT PARAMETER

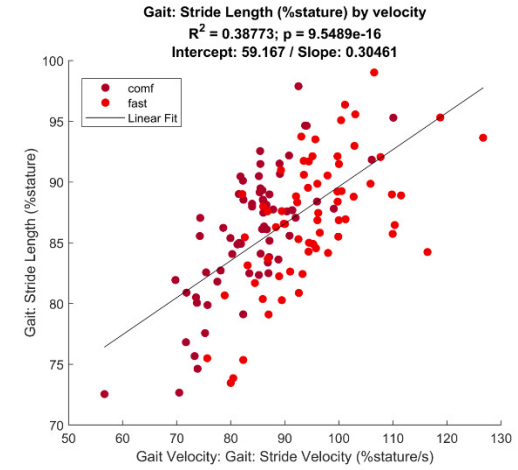
ARM
RoM



PEAK ARM
SWING VELOCITY



STRIDE LENGTH



CoV

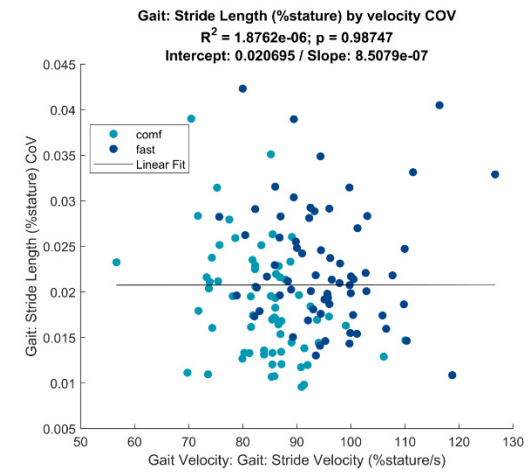
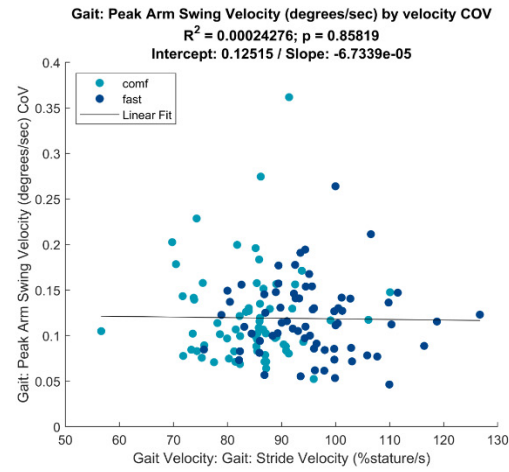
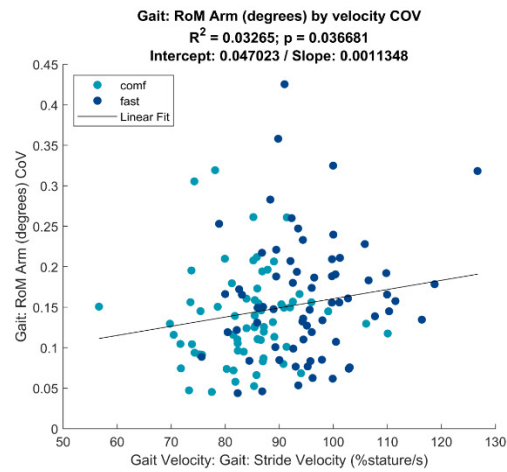


Figure S6 – Cohort differences per walking speed category

