Table S1. Sample characteristics by categories.

	Fit with no falls (n=70)	Fit with Falls (n=50)	Frailty with no falls (n=7)	Frailty with Falls (n=36)	F o X^2
General characteristics					
Age (min-max/ mean, SD)	70 – 96 / 80.76 (6.29)	74 – 96 / 83.84 (4.88)	73 – 98 / 82.43 (8.81)	71-96/84.6 (6.27)	4.28*
Female (n (%))	45 (64.3)	38 (76)	6 (85.7)	29 (80.6)	
Height (min-max/ mean, SD)	1.42 – 1,84 / 1.61 (0.09)	1.37 – 1.74 / 1.52 (0.08)	1.5 – 1.81 / 1.64 (0.11)	1.32-1.72/1.51 (0.07)	14.53***
IMC (min-max/ mean, SD)	16.46 – 35.49 / 24.95 (3.99)	.00 – 41.23 / 26.38 (6.79)	19.61 – 33.83 / 25.7 (4.9)	.00 – 42.5/25.9 (8.38)	.570
GDS (min-max/ mean, SD)	1-7/ 1.74 (1.49)	1-7/ 2.4 (1.81)	1-2/ 1.43 (0.53)	1-5/2.28 (1.54)	2.29
Living at home (n (%))	49 (70)	32 (64)	6 (85.7)	23 (63.9)	
Tests were performed					43.91***
Mix terrain (n (%))	39 (55.7)	8 (16)	2 (28.6)	1 (2.8)	
Flat terrain (n (%))	26 (37.1)	36 (72)	5 (71.4)	35 (97.2)	
Functional performance					
GS (m/s) (mean, SD)	1.01 (0 .32)	0.701 (0.22)	0.9086 (0.30)	0.616 (0.26)	19.978***
TUG (s) (mean, SD)	11.9 (6.34)	19.75 (12.34)	12.61 (3.82)	20.01 (8.64)	9.165***
Short FES I (mean, SD)	8.49 (3.05)	12.51 (4.26)	8.14 (1.21)	12.56 (6.17)	10.916***
G-STRIDE spatiotemporal parameters: (mean, SD)					
Total distance (m)	1323.81 (611.52)	911.74 (471.81)	1296.79 (690.93)	464.49 (245.43)	23.727***
Total time (s)	1458.2 (382.71)	1346.2 (308.42)	1295.72 (535.46)	845.49 (312.71)	24.597***
Total steps	1281.2 (362.60)	1100.9 (343.50)	1141.71 (486.33)	659.5 (250.32)	26.539***
Toe-off	18.67 (2.75)	17.01 (2.84)	18.2714 (1.98)	16.939 (2.17)	5.393***
Swing	30.08 (2.34)	27.24 (4.37)	29.03 (2.25)	25.79 (3.86)	14.400***
Heel	11.77 (2.33)	10.70 (2.10)	11.62 (1.39)	9.23 (2.97)	9.247***
Foot flat	39.28 (6.18)	44.96 (7.34)	41.05 (4.93)	47.92 (7.43)	14.816***
Toe off angle	-58.65 (13.47)	-47.45 (11.55)	-58.95 (10.4)	-45.55 (2.17)	13.281***

Heel strike	16.86 (6.96)	13.28 (5.36)	18.56 (8.00)	10.30 (3.86)	13.603***
Cadence	52.06 (5.95)	47.61 (7.87)	52.45 (4.63)	45.20 (2.97)	9.090***
Step speed	1,00 (0.29)	0.72 (0.26)	1.03 (0.21)	0.62 (7.43)	20.839***
Stride length	1.04 (0.25)	0.82 (0.21)	1.08 (0.21)	0.74 (10.74)	17.579***
3D path	1.13 (0.27)	0.88 (0.23)	1.16 (0.25)	0.80 (5.57)	19.157***
2D path	1.06 (0.25)	0.84 (0.22)	1.10 (0.21)	0.75 (8.02)	17.734***
Clearance	0.21 (0.16)	0.12 (0.09)	0.21 (0.21)	0.14 (0.21)	5.883***