

Table A1 Associations of intermediate frailty risk with adverse clinical outcomes compared to the low frailty risk group.

Outcome	Intermediate Risk, OR (95% CI), P-value				
	unadjusted	Model 1	Model 2	Model 3	NEWS-adjusted
all-cause 30-day mortality	2.53 (2.09 to 3.06), p<0.001	2.45 (2.03 to 2.97), p<0.001	2.52 (2.08 to 3.06), p<0.001	2.65 (2.17 to 3.25), p<0.001	2.05 (1.69 to 2.50), p<0.001
Length of stay, median (IQR)*	3.74 (3.34 to 4.14), p<0.001	3.76 (3.36 to 4.16), p<0.001	3.83 (3.45 to 4.21), p<0.001	3.77 (3.39 to 4.15), p<0.001	3.69 (3.28 to 4.09), p<0.001
Long hospital stay >10 days	3.47 (2.99 to 4.02), p<0.001	3.50 (3.02 to 4.06), p<0.001	3.55 (3.06 to 4.12), p<0.001	3.66 (3.14 to 4.28), p<0.001	3.44 (2.96 to 3.99), p<0.001
30-day readmission	1.04 (0.88 to 1.24), p=0.643	1.06 (0.89 to 1.26), p=0.521	1.06 (0.89 to 1.26), p=0.503	1.04 (0.87 to 1.24), p=0.69	0.99 (0.83 to 1.18), p=0.883
Functional impairment, n (%)					
Barthel Index, median (IQR)*	-15.76 (-17.87 to -13.64), p<0.001	-15.01 (-17.1 to -12.92), p<0.001	-14.87 (-16.97 to -12.78), p<0.001	-14.59 (-16.69 to -12.48), p<0.001	-15.45 (-17.59 to -13.31), p<0.001
Barthel Index <95 points	2.98 (2.48 to 3.58), p<0.001	2.89 (2.4 to 3.47), p<0.001	2.85 (2.36 to 3.43), p<0.001	2.87 (2.37 to 3.47), p<0.001	2.87 (2.38 to 3.45), p<0.001
Quality of Life, n(%)					
Impairment of mobility	3.25 (2.59 to 4.08), p<0.001	3.14 (2.50 to 3.95), p<0.001	3.13 (2.49 to 3.94), p<0.001	3.1 (2.46 to 3.92), p<0.001	3.17 (2.52 to 3.99), p<0.001
Impairment of self-care	3.69 (3.07 to 4.44), p<0.001	3.60 (2.99 to 4.35), p<0.001	3.56 (2.95 to 4.30), p<0.001	3.63 (2.99 to 4.4), p<0.001	3.55 (2.95 to 4.28), p<0.001
Impairment of usual activities	2.51 (2.08 to 3.05), p<0.001	2.41 (1.99 to 2.93), p<0.001	2.35 (1.93 to 2.87), p<0.001	2.35 (1.92 to 2.87), p<0.001	2.45 (2.02 to 2.98), p<0.001
Pain/discomfort	1.25 (1.04 to 1.51), p=0.017	1.26 (1.04 to 1.51), p=0.015	1.22 (1.01 to 1.47), p=0.036	1.21 (1 to 1.47), p=0.047	1.29 (1.07 to 1.55), p=0.008
Anxiety/depression	1.26 (1.03 to 1.55), p=0.023	1.28 (1.04 to 1.56), p=0.018	1.25 (1.02 to 1.53), p=0.032	1.26 (1.02 to 1.55), p=0.029	1.22 (1.00 to 1.50), p=0.053
EQ-VAS, mean (SD)*	-3.9 (-5.83 to -1.97), p<0.001	-3.87 (-5.81 to -1.93), p<0.001	-3.78 (-5.73 to -1.84), p<0.001	-3.75 (-5.69 to -1.81), p<0.001	-3.57 (-5.52 to -1.61), p<0.001
discharge other than home	2.46 (2.13 to 2.83), p<0.001	2.39 (2.07 to 2.75), p<0.001	2.39 (2.07 to 2.75), p<0.001	2.53 (2.18 to 2.92), p<0.001	2.15 (1.86 to 2.48), p<0.001

95% CI confidence interval; EQ-VAS EuroQol visual analog health scale; IQR interquartile range; NEWS national early warning score; OR odds ratio; SD standard deviation;

Quality of life measures were adapted from EQ-5D. We dichotomized levels into "no impairment" (level 1) and "impairment" (levels 2 and 3). Frequencies of reported impairment (level 2 and 3) were analyzed.

Models were adjusted for age (model 1), age and gender (model 2), age, gender, and comorbidities not included in the score (model 3), and for NEWS which was calculated retrospectively based on admission data.

* linear regression analyses were calculated reporting regression coefficient, 95% confidence interval, P-value

Table A2 Associations of high frailty risk with adverse clinical outcomes compared to the low frailty risk group.

Outcome	High Risk, OR (95% CI), P-value				
	unadjusted	Model 1	Model 2	Model 3	NEWS adjusted
all-cause 30-day mortality	4.40 (2.94 to 6.57), p<0.001	4.28 (2.86 to 6.41), p<0.001	4.49 (2.99 to 6.73), p<0.001	4.83 (3.17 to 7.37), p<0.001	3.68 (2.41 to 5.60), p<0.001
Length of stay, median (IQR)*	10.04 (8.92 to 11.16), p<0.001	10.06 (8.94 to 11.18), p<0.001	10.12 (9.06 to 11.19), p<0.001	10.07 (9.02 to 11.13), p<0.001	9.98 (8.86 to 11.10), p<0.001
Long hospital stay >10 days	9.21 (6.51 to 13.01), p<0.001	9.28 (6.56 to 13.12), p<0.001	9.42 (6.66 to 13.33), p<0.001	9.75 (6.83 to 13.92), p<0.001	9.10 (6.43 to 12.88), p<0.001
30-day readmission	1.47 (0.95 to 2.26), p=0.081	1.49 (0.97 to 2.29), p=0.070	1.49 (0.97 to 2.30), p=0.069	1.67 (1.08 to 2.59), p=0.022	1.38 (0.90 to 2.13), p=0.141
Functional impairment, n (%)					
Barthel Index, median (IQR)*	-40.55 (-47.01 to -34.09), p<0.001	-40.29 (-46.66 to -33.93), p<0.001	-40.01 (-46.37 to -33.64), p<0.001	-39.70 (-46.06 to -33.33), p<0.001	-40.06 (-46.54 to -33.58), p<0.001
Barthel Index <95 points	22.37 (8.04 to 62.23), p<0.001	23.74 (8.48 to 66.44), p<0.001	22.9 (8.19 to 64.06), p<0.001	25.03 (8.91 to 70.32), p<0.001	21.12 (7.58 to 58.83), p<0.001
Quality of Life, n(%)					
Impairment of mobility	8.61 (4.97 to 14.91), p<0.001	8.62 (4.95 to 15.01), p<0.001	8.57 (4.92 to 14.93), p<0.001	8.45 (4.82 to 14.81), p<0.001	8.29 (4.77 to 14.40), p<0.001
Impairment of self-care	9.40 (4.70 to 18.79), p<0.001	9.67 (4.8 to 19.48), p<0.001	9.39 (4.66 to 18.90), p<0.001	9.59 (4.74 to 19.41), p<0.001	8.85 (4.42 to 17.73), p<0.001
Impairment of usual activities	4.16 (2.08 to 8.31), p<0.001	4.19 (2.08 to 8.44), p<0.001	3.88 (1.92 to 7.82), p<0.001	3.98 (1.97 to 8.06), p<0.001	4.00 (2.00 to 8.00), p<0.001
Pain/discomfort	1.39 (0.77 to 2.52), p=0.278	1.39 (0.77 to 2.52), p=0.276	1.28 (0.70 to 2.34), p=0.413	1.28 (0.70 to 2.33), p=0.430	1.45 (0.80 to 2.63), p=0.225
Anxiety/depression	3.29 (1.73 to 6.26), p<0.001	3.29 (1.73 to 6.27), p<0.001	3.08 (1.61 to 5.89), p=0.001	3.11 (1.62 to 5.99), p=0.001	3.11 (1.63 to 5.95), p=0.001
EQ-VAS, mean (SD)*	-10.3 (-17.53 to -3.08), p=0.005	-10.3 (-17.53 to -3.07), p=0.005	-10.13 (-17.37 to -2.90), p=0.006	-11.12 (-18.29 to -3.94), p=0.002	-9.77 (-17.01 to -2.54), p=0.008
discharge other than home	3.54 (2.50 to 5.01), p<0.001	3.46 (2.44 to 4.90), p<0.001	3.46 (2.44 to 4.90), p<0.001	3.81 (2.68 to 5.42), p<0.001	3.09 (2.17 to 4.41), p<0.001

95% CI confidence interval; EQ-VAS EuroQol visual analog health scale; IQR interquartile range; NEWS national early warning score; OR odds ratio; SD standard deviation;

Quality of life measures were adapted from EQ-5D. We dichotomized levels into "no impairment" (level 1) and "impairment" (levels 2 and 3). Frequencies of reported impairment (level 2 and 3) were analyzed.

Models were adjusted for age (model 1), age and gender (model 2), age, gender, and comorbidities not included in the score (model 3), and for NEWS which was calculated retrospectively based on admission data.

* linear regression analyses were calculated reporting regression coefficient, 95% confidence interval, P-value

Table A3 ROC analyses of different frailty score cut-offs for the outcome 30-day mortality

low risk		intermediate risk		high risk		AUC (95% CI)
Cut-off	No of patients	Cut-off	No of patients	Cut-off	No of patients	
	63.55 %	5-15	33.55 %	>15	2.9 %	0.624 (0.601 to 0.647)
<5	63.55 %	5-10	24.69 %	>10	11.76 %	0.629 (0.605 to 0.652)
<4	55.09 %	4-10	33.15 %	>10	11.76 %	0.636 (0.613 to 0.660)
<4	55.09 %	4-9	30.18 %	>9	14.73 %	0.637 (0.613 to 0.660)

AUC, area under the receiver operating curve; 95% CI, 95% confidence interval