

# Supplement 1

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**Admission albumin concentrations and response to nutritional therapy in hospitalized patients at malnutrition risk: secondary analysis of a randomized clinical trial**

***Brief title: Admission albumin concentrations and nutritional therapy***

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**eTable 1:. Baseline Characteristics overall and stratified by CRP level**

	overall	CRP <100 mg/L	CRP >100 mg/L	p-value
n	1389	970	401	
<b>Sociodemographics</b>				
Male sex	747 (53.8%)	510 (52.6%)	226 (56.4%)	0.2
<b>Age</b>				
mean (SD)	73.1 (13.5)	73.5 (13.6)	72.2 (13.2)	0.10
<b>Age groups</b>				
< 65 years	220 (15.8%)	149 (15.4%)	67 (16.7%)	<b>0.02</b>
65-75 years	468 (33.7%)	311 (32.1%)	155 (38.7%)	
> 75 years	701 (50.5%)	510 (52.6%)	179 (44.6%)	
<b>Nutritional assessment</b>				
Mean body-mass index (kg/m2), mean (SD)	24.6 (5.3)	24.4 (5.3)	25.1 (5.2)	<b>0.019</b>
Mean body-weight (kg), median (IQR)	68.5 (58.4-81.5)	67.1 (57.5-80.7)	71.0 (61.0-83.0)	<b>0.005</b>
<b>NRS 2002 Score</b>				
3 points	397 (28.6%)	311 (32.1%)	81 (20.2%)	<0.001
4 points	547 (39.4%)	376 (38.8%)	164 (40.9%)	
≥ 5 points	445 (32.0%)	283 (29.2%)	156 (38.9%)	
<b>Weight loss, n (%)</b>				
≤ 5% in 3 months	679 (48.9%)	449 (46.3%)	225 (56.1%)	<b>0.00</b>
> 5% in 3 months	226 (16.3%)	156 (16.1%)	65 (16.2%)	
> 5% in 2 months	186 (13.4%)	145 (14.9%)	37 (9.2%)	
> 5% in 1 month	298 (21.5%)	220 (22.7%)	74 (18.5%)	
<b>Loss of appetite, n (%)</b>				
1242 (89.4%)	864 (89.1%)	364 (90.8%)	0.35	
<b>Food intake of normal requirement in the past week, n (%)</b>				
> 75%	130 (9.4%)	88 (9.1%)	38 (9.5%)	0.13
50-75%	430 (31.0%)	319 (32.9%)	107 (26.7%)	
25-50%	581 (41.8%)	398 (41.0%)	175 (43.6%)	
< 25%	248 (17.9%)	165 (17.0%)	81 (20.2%)	
<b>Severity of illness, n (%)</b>				
very mild	30 (2.2%)	26 (2.7%)	4 (1.0%)	<0.001
mild	924 (66.5%)	714 (73.6%)	197 (49.1%)	
moderate	418 (30.1%)	224 (23.1%)	190 (47.4%)	
severe	17 (1.2%)	6 (0.6%)	10 (2.5%)	
<b>Laboratory measurements</b>				
Admission Abumin level (g/L), mean (SD)	30.2 (6.7)	31.9 (6.3)	26.1 (5.9)	<0.001
Admission CRP level (mg/L), median (IQR)	37 (9.4-117)	17 (5-42)	164.7 (130-223)	<0.001
<b>Main admission diagnosis</b>				
Cardiovascular disease, n (%)	154 (11.1%)	143 (14.7%)	8 (2.0%)	<0.001
Infection, n (%)	390 (28.1%)	166 (17.1%)	221 (55.1%)	<0.001
Cancer, n (%)	287 (20.7%)	195 (20.1%)	87 (21.7%)	0.51
Pulmonary disease, n (%)	84 (6.0%)	64 (6.6%)	19 (4.7%)	0.19
Frailty, n (%)	128 (9.2%)	107 (11.0%)	20 (5.0%)	<0.001
Other, n (%)	249 (17.9%)	214 (22.1%)	30 (7.5%)	<0.001
<b>Comorbidities</b>				
Coronary heart disease, n (%)	391 (28.1%)	286 (29.5%)	98 (24.4%)	0.06
Congestive heart failure, n (%)	249 (17.9%)	193 (19.9%)	53 (13.2%)	<b>0.003</b>
Hypertension, n (%)	753 (54.2%)	528 (54.4%)	215 (53.6%)	0.78
Cerebrovascular disease, n (%)	105 (7.6%)	72 (7.4%)	33 (8.2%)	0.61
Peripheral arterial disease, n (%)	132 (9.5%)	97 (10.0%)	32 (8.0%)	0.24
Chronic kidney disease, n (%)	453 (32.6%)	323 (33.3%)	123 (30.7%)	0.35
Diabetes, n (%)	303 (21.8%)	207 (21.3%)	91 (22.7%)	0.58
COPD, n (%)	195 (14.0%)	140 (14.4%)	55 (13.7%)	0.73
Dementia, n (%)	57 (4.1%)	45 (4.6%)	12 (3.0%)	0.16
Malignant disease, n (%)	496 (35.7%)	321 (33.1%)	169 (42.1%)	<b>0.001</b>

**eTable 2: Baseline Characteristics overall and stratified by Randomisation**

	overall	Control	Intervention	p-value
n	1389	701	688	
<b>Sociodemographics</b>				
Male sex	747 (53.8%)	380 (54.2%)	367 (53.3%)	0.75
<b>Age</b>				
mean (SD)	73.1 (13.5)	73.2 (13.6)	73.0 (13.4)	0.7
<b>Age groups</b>				
< 65 years	220 (15.8%)	113 (16.1%)	107 (15.6%)	0.72
65-75 years	468 (33.7%)	229 (32.7%)	239 (34.7%)	
> 75 years	701 (50.5%)	359 (51.2%)	342 (49.7%)	
<b>Nutritional assessment</b>				
Mean body-mass index (kg/m <sup>2</sup> ), mean (SD)	24.6 (5.3)	24.5 (5.2)	24.7 (5.4)	0.41
Mean body-weight (kg), median (IQR)	68.5 (58.4-81.5)	68.6 (58.4-81.4)	68.1 (58.8-81.5)	0.79
<b>NRS 2002 Score</b>				
3 points	397 (28.6%)	196 (28.0%)	201 (29.2%)	
4 points	547 (39.4%)	272 (38.8%)	275 (40.0%)	
≥ 5 points	445 (32.0%)	233 (33.2%)	212 (30.8%)	
<b>Weight loss, n (%)</b>				
≤ 5% in 3 months	679 (48.9%)	344 (49.1%)	335 (48.7%)	1
> 5% in 3 months	226 (16.3%)	113 (16.1%)	113 (16.4%)	
> 5% in 2 months	186 (13.4%)	93 (13.3%)	93 (13.5%)	
> 5% in 1 month	298 (21.5%)	151 (21.5%)	147 (21.4%)	
<b>Loss of appetite, n (%)</b>				
Food intake of normal requirement in the past week, n (%)	1242 (89.4%)	632 (90.2%)	610 (88.7%)	0.37
> 75%	130 (9.4%)	65 (9.3%)	65 (9.4%)	0.48
50-75%	430 (31.0%)	204 (29.1%)	226 (32.8%)	
25-50%	581 (41.8%)	302 (43.1%)	279 (40.6%)	
< 25%	248 (17.9%)	130 (18.5%)	118 (17.2%)	
<b>Severity of illness, n (%)</b>				
very mild	30 (2.2%)	16 (2.3%)	14 (2.0%)	0.87
mild	924 (66.5%)	459 (65.5%)	465 (67.6%)	
moderate	418 (30.1%)	217 (31.0%)	201 (29.2%)	
severe	17 (1.2%)	9 (1.3%)	8 (1.2%)	
<b>Laboratory measurements</b>				
Admission Albumin level (g/L), mean (SD)	30.2 (6.7)	30.4 (6.9)	30.1 (6.4)	0.42
Admission CRP level (mg/L), median (IQR)	37 (9.4-117)	37 (8-110)	36 (10-120)	0.81
<b>Main admission diagnosis</b>				
Cardiovascular disease, n (%)	154 (11.1%)	83 (11.8%)	71 (10.3%)	0.37
Infection, n (%)	390 (28.1%)	208 (29.7%)	182 (26.5%)	0.18
Cancer, n (%)	287 (20.7%)	138 (19.7%)	149 (21.7%)	0.36
Pulmonary disease, n (%)	84 (6.0%)	48 (6.8%)	36 (5.2%)	0.21
Frailty, n (%)	128 (9.2%)	63 (9.0%)	65 (9.4%)	0.77
Other, n (%)	249 (17.9%)	118 (16.8%)	131 (19.0%)	0.28
<b>Comorbidities</b>				
Coronary heart disease, n (%)	391 (28.1%)	192 (27.4%)	199 (28.9%)	0.52
Congestive heart failure, n (%)	249 (17.9%)	126 (18.0%)	186 (26.9%)	0.96
Hypertension, n (%)	753 (54.2%)	380 (54.2%)	373 (54.2%)	1
Cerebrovascular disease, n (%)	105 (7.6%)	373 (54.2%)	53 (7.7%)	0.84
Peripheral arterial disease, n (%)	132 (9.5%)	75 (10.7%)	57 (8.3%)	0.13
Chronic kidney disease, n (%)	453 (32.6%)	223 (31.8%)	230 (33.4%)	0.52
Diabetes, n (%)	303 (21.8%)	156 (22.3%)	147 (21.4%)	0.69
COPD, n (%)	195 (14.0%)	96 (13.7%)	99 (14.4%)	0.71
Dementia, n (%)	57 (4.1%)	26 (3.7%)	31 (4.5%)	0.45
Malignant disease, n (%)	496 (35.7%)	248 (35.4%)	248 (36.0%)	0.99

**Data sharing plan:**

We intend to make data collected for the study, including deidentified individual participant data and a data dictionary defining each field in the set, available to others; Also, related documents will be available including the trial protocol and the statistical analysis plan. These data will be available with the publication of our main manuscript and all secondary projects as outlined in our trial protocol upon receipt of a letter of intention detailing the study hypothesis and statistical analysis plan. The steering committee of this trial will discuss all requests and decide based on the scientific rigor of the proposal whether data sharing is appropriate. All applicants are asked to sign a data access agreement. Please send any request to the principal investigator of this trial ([Philipp.Schuetz@unibas.ch](mailto:Philipp.Schuetz@unibas.ch)).