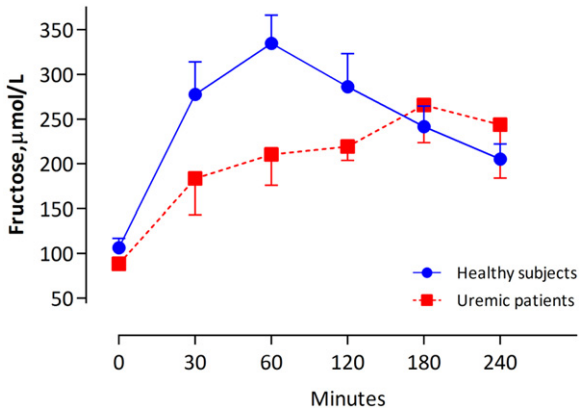

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HYPOALBUMINEMIA IN PERITONEAL DIALYSIS (PD) PATIENTS

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This study aimed to determine the factors that were associated with hypoalbuminemia in PD patients. Patients who had received PD at our hospital for more than three months were divided into two groups. Patients who had mean serum albumin levels ≥ 3.5 g/dL were allocated to Group 1, while those who had mean serum albumin levels $=3.5$ g/dL were allocated to Group 2. Demographic characteristics, clinical parameters and laboratory data were compared between the two groups. Logistic regression was performed to identify the factors that were associated with hypoalbuminemia. There were 359 patients (mean age 54.3 years, male 46.5%) included. Group 2 patients (10.3%) had lower body mass index ($P<0.001$), lower total Kt/V ($P<0.01$), lower levels of hemoglobin, creatinine, triglyceride, potassium and phosphorus ($P<0.05$), but higher levels of C-reactive protein ($P<=0.05$). More Group 2 patients had high or high-average peritoneal equilibration test ($P<=0.05$). Factors that were associated with hypoalbuminemia were total Kt/V ($P<0.01$), hemoglobin ($P<0.01$), creatinine ($P<0.0001$), triglyceride ($P<0.01$) and potassium ($P<0.05$). In conclusion, hypoalbuminemia in our PD patients was associated with total Kt/V and various laboratory data.

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BODY COMPOSITION AND MORTALITY IN PREVALENT HEMODIALYSIS PATIENTS: HEMO STUDY

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Both higher body size (as indicated by body mass index- BMI) and higher muscle mass (as indicated by serum creatinine- (SCr)) are associated with better survival in HD patients (pts) but the relative importance of muscle vs. body size is not established. In the current study, the associations of SCr, BMI and the ratio of Scr to BMI with time to death were examined in Cox proportional hazards models using HEMO study data. Details of HEMO Study have been published elsewhere. In the current study, the associations of SCr, BMI and the ratio of Scr to BMI with time to death were examined in Cox proportional hazards models adjusted for age, gender, race, and HEMO trial interventions.

Associations of SCr, BMI and SCr/BMI with mortality ($n=1,775$).[Table 1]

Model 1	HR (95% CI)
For each change in SD of SCr	0.68 (0.63, 0.74)
For each change in SD of BMI	0.86 (0.80, 0.93)
Model 2	
For each change in SD of SCr/BMI	0.82 (0.75, 0.89)

The results indicate that patient differences in Scr level are substantially more strongly predictive of mortality thanpatient differences in BMI, relative to the SD of each factor. Furthermore, each SD increase in the ratio SCr/BMI wasassociated with 18% lower risk of death. In subgroup analyses, each SD increase in the SCr/ BMI ratio was associated with lower risk of death in those with BMI < 25 (HR 0.69, 95% CI 0.2-0.78), BMI 25-29.9 (HR 0.72, 95% CI 0.57 -0.90) and BMI 30 (HR 0.53, 95% CI 0.37-0.76). Both SCr and BMI are associated with lower risk of death in HD pts. However, in the HEMO Study, the magnitude of the association of SCr with mortality was stronger than the magnitude of the association of BMI with mortality, and higher SCr/BMI ratio was also associated with lower risk of death. Interventions targeting muscle mass at any level of BMI may improve survival in HD pts.

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SERUM CREATININE TO BODY WEIGHT RATIO-A SIMPLE MEAUSRE OF BODY COMPOSITION

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Body composition is not routinely measured in clinical practice in HD pts. Therefore, we examined whether serum creatinine (SCr) (a muscle mass marker in HD pts) to weight (wt) ratio is associated with measures of body composition and functional ability. 116 HD pts from an longitudinal study of nutritional status underwent at least one DEXA scan for measurement of body composition. Height, wt and 6-min walk distance were measured on a non-HD day. Intra-abdominal fat at the L4-L5 level and muscle area at mid thigh level were measured with MRI. Generalized estimating equations (GEE) were used to fit a pooled cross-sectional regression model relating outcomes to concurrently measured SCr/Wt across 4 study visits.

SCr/wt	0.14	0.10-0.14	0.10
SCr, mg/dL	12.0 ± 3.0	9.6 ± 1.7	6.9 ± 1.9
Wt, kg	65 ± 16	83 ± 15	89 ± 8
Age,yr	43 ± 16	51 ± 14	58 ± 15
Men, %*	58	55	59
DM, %	11	55	62
BMI, kg/m	23.2 ± 4.5	29.0 ± 4.7	30.8 ± 5.7
Intra-abdominal fat, cm	79 ± 43	140 ± 68	167 ± 65
Muscle area, cm	109 29	108 28	104 26
DEXA fat mass/wt ,%	25 ± 9	34 ± 9	39 ± 18
6-min walk distance, m	372 ± 109	313 ± 110	244 ± 78

In a multivariable GEE regression, adjusted for age, gender, race and DM, compared to the highest tertile of Scr/Wt, the lowest tertile was associated with lower 6 min walk distance (β -61, 95% CI -94 to -29 m). Results were similar when these models were further adjusted for wt. SCr/Wt is associated with direct measures of body composition and correlates with physical function. The specific functional form of SCr/ Wt which scales optimally with body composition needs to be determined.

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ADEQUACY OF DIETARY INTAKE OF VITAMIN D IN STABLE HD PATIENTS: ARE THEY MEETING THEIR NEEDS

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Hypovitaminosis D is associated with reduced survival, increased cardiovascular events, and impaired bone-mineral balance in dialysis. The KDOQI guidelines do not have specific recommendations regarding vitamin D (VitD) intake in dialysis patients. The purpose of this study was to determine whether stable prevalent hemodialysis (HD) patients, for whom standard clinical dietary restrictions had been recommended, were able to