* Risk factors or causes of frailty among CKD patients.

		Effect (descriptions)	Risk Difference	Frailty Assessment	Sample Size	CKD Severity	Reference
Biological							
	Cardiovascular	Hypertension*	RR 1.6 (1.26-2.04)	Fried Phenotypes	205	CKD stage 5D (hemodialysis)	[1]*
		Peripheral vascular disease*	RR 1.58 (1.34-1.8)	Fried Phenotypes	205	CKD stage 5D (hemodialysis)	[1]*
		Left ventricular dysfunction*	RR 1.18 (1.03-1.36)	Fried Phenotypes	205	CKD stage 5D (hemodialysis)	[1]*
		Endothelial dysfunction	r= -0.367 (p= 0.004)	Fried Phenotypes	61	CKD stages 3-5	[2]
			OR 3.86 (1.00-14.88)				
	Cerebrovascular	Cerebrovascular Accident	RR 1.34 (1.19-1.5)	Fried Phenotypes	205	CKD stage 5D (hemodialysis)	[1]*
	Pulmonary	COPD	OR 1.68 (1.16-2.45)	Fried Phenotypes	10256	CKD stages 1-5	[3]
	Immunological	Inflammatory					
		IL-6*	Worse frailty	Fried Phenotypes	762	CKD stage 5D (hemodialysis)	[4]*
		CRP	After	Fried	5888	Chronic kidney	[5]

		Fibrinogen	adjustment, OR 1.76 (1.28-2.41) to 1.50 (1.07-2.09)	Phenotypes		insufficiency, serum creatinine ≥1.3mg/dL	
	Endocrinologic/ Metabolic	Diabetes	Frailty scores +0.7 points per year	Fried Phenotypes	762	CKD stage 5D (hemodialysis)	[4]*
			OR 1.68 (1.16-2.45)	Fried Phenotypes	10256	CKD stages 1-5	[3]
		Obesity (IMC ≥ 30 kg/m^2)	OR 6.63 (1.16-36.77)	Fried Phenotypes	61	CKD stages 3-5	[2]
		Higher parathyroid hormones (PTH)	r= 0.30 (p= 0.01)	Fried Phenotypes	61	CKD stages 3-5	[2]
	Body Composition	Higher fat mass	r= 0.25 (p= 0.04)	Fried Phenotypes	61	CKD stages 3-5	[2]
	Cancer	Cancer	OR 1.89 (1.19-2.99)	Fried Phenotypes	10256	CKD stages 1-5	[3]
	Arthritis	Arthritis	OR 3.34 (2.08-5.38)	Fried Phenotypes	10256	CKD stages 1-5	[3]
	Laboratory Data	eGFR (mL/min/1.72m^2)					

		eGFRcys <30	Frailty prevalence 2.8	Fried Phenotypes	336	CKD stages 1-4	[6]*
		eGFRcys 30-44	Frailty prevalence 2.1				
		eGFRcys >60	Referent				
		Serum Albumin Concentrations (g/dL)	Frailty scores -1.1 points per g/dL	Fried Phenotypes	762	CKD stage 5D (hemodialysis)	[4]*
		Serum Creatinine <4 mg/dL*	RR 1.46 (1.22-1.71)	Fried Phenotypes	205	CKD stage 5D (hemodialysis)	[1]*
		Testosterone, per 50% lower free testosterone*		Fried Phenotypes	440	CKD stage 5D (hemodialysis), men	[7]*
		being frail	OR 1.40 (1.05-1.53)				
		becoming frail over 12 months	OR 1.40 (1.07-1.73)				
		Hemoglobin	Adjusted, OR 1.76 (1.28-2.41) to 1.50 (1.07-2.09)	Fried Phenotypes	5888	Chronic kidney insufficiency, serum creatinine ≥1.3mg/dL	[5]
		LDL, HDL					
Lifestyle		Smoking*	RR 1.18 (1.04-	Fried	205	CKD stage 5D	[1]*

		1.34)	Phenotypes		(hemodialysis)	
Ethnicity	Hispanic*	Frailty scores +0.6 points per year	Fried Phenotypes	762	CKD stage 5D (hemodialysis)	[4]*

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* Risk factors or causes of frailty among CKD patients.

		Effect (descriptions)		Prevalence	CKD Severity	Frailty Assessment	Sample Size	Reference
Biological								
	Cardiovascular	Heart Failure		30% vs 12%	CKD stages 1-4	Fried Phenotypes	336	(Roshanravan et al., 2012)
		Angina		34% vs. 22%	CKD stages 1-4	Fried Phenotypes	336	(Roshanravan et al., 2012)
	Cerebrovascular	Cerebrovascular Disease Prevalence (%)		26.4 vs. 12.0	ESRD	Fried Phenotypes	324	(McAdams-Demarco, Tan, et al., 2015)
	Neurological	Brain Wave		F vs. NF	ESRD, under chronic dialysis	Simple FRAIL scale (SFS)	46	(Chao, Lai, Tsai, Yang, &Huang, 2017)
			Global DAR	283 ± 679 vs. 2971 ± 4859				
			DARs (left frontal)	135 ± 250 vs. 3073 ± 4702				
			DAR (left TO)	197 ± 318 vs. 3708 ± 6398				
			DAR (central)	55 ± 96 vs. 1773 ± 3262				
			DAR (right TO)	187 ± 261 vs.				

				4400 ± 7763				
			Global DTABR	191 ± 469 vs. 1781 ± 2793				
			DTABR (left frontal)	86 ± 158 vs. 1680 ± 2388				
			DTABR (left TO)	130 ± 210 vs. 1884 ± 2828				
			DTABR (central)	39 ± 65 vs. 1132 ± 1957				
			DTABR (right TO)	126 ± 178 vs. 2960 ± 5271				
	Cognitive	Mini-Mental State Examination (MMSE)			Elderly, ≥65y/o	Edmonton Frail Scale (EFS)	137	(Fabrício-Wehbe et al., 2009)
			Spearman's correlation coefficient of EFS scores with gross MMSE scores	-0.607 ($p<0.01$)				
		Executive Function		F vs. NF at cohort entry				
			Trail Making Tests A (TMTA) scores	+12.08	ESRD	Fried Phenotypes	324	(McAdams-Demarco, Tan, et al., 2015)
			Trail Making Tests B	+33.15	ESRD	Fried	324	(McAdams-

			(TMTB) scores			Phenotypes		Demarco, Tan, et al., 2015)
	Microbiota	Gut Microbiota Composition		F vs. NF	Stage 3b-4, eGFR 15-45ml/min	Fried Phenotype score	64 (and 15 control subjects)	(Margiotta et al., 2018)
			Malnutrition-Inflammation-Score (MIS)	7.6 vs. 3.9				
			Abundance of unclassified Mogibacteriaceae and Oscillospira	Directly proportional to MIS				
			Abundance of Akkermansia, Ruminococcus, and Eubacterium	Inversely proportional to MIS				
			Bacterial Abundance of some genera (Mogibacteriacee, Coriobacteriacee, Eggerthella, Erwinia, Coprobacillus, Anaerotruncus, etc)	↑				
	Immunological	Inflammatory						

			CRP (ln CRP) (mg/dL)	1.12 vs 0.28	CKD stage 5D (peritoneal dialysis)	Clinical Frailty Scale (CFS)	119	(Kamijo, Kanda, Ishibashi, &Yoshida, 2018)
			IL6 (ln IL6) (mg/dL)	2.45 vs. 1.58				
		Mycophenolate mofetil (MMF) dose reduction (MDR)		F vs. NF	CKD stage 5T	Fried Phenotypes	525	(McAdams-Demarco, Law, et al., 2015)
			1 year since KT (%)	44 vs 40				
			2 years since KT (%)	54 vs. 45				
			3 years since KT (%)	67 vs. 51				
		Viral infection		F vs. NF				
			HCV (n=37)	36 vs. 1	CKD stage 5D (hemodialysis)	Fried Phenotypes	205	(Yadla, John, &Mummadi, 2017)
	Functional Status	Disability		F vs. NF	CKD stages 1-4	Fried Phenotypes	336	(Roshanravan et al., 2012)
			At least one disability in activities of daily Living (ADLs)	15% vs. 5%				
			At least one disability in instrumental activities of daily living (IADLs)	60% vs. 28%				
			At least one disability in	40% vs. 18%				

			mobility tasks					
		Ability to perform basic activities of daily living		33.33% vs 76.4%	CKD stage 5D (hemodialysis)	Fried Phenotypes	320	(Bancu et al., 2017)
		Ability to perform transfers		38.8% vs. 84.7%				
	Endocrinologic/ Metabolic	Diabetes		F vs. NF				
			Prevalence	64% vs. 49%	CKD stages 1-4	Fried Phenotypes	336	(Roshanravan et al., 2012)
		Obesity		F vs. NF				
			Prevalence	64% vs. 50%	CKD stages 1-4	Fried Phenotypes	336	(Roshanravan et al., 2012)
			Prevalence	51.8% vs. 23.9%	ESRD	Fried Phenotypes	324	(McAdams-Demarco, Tan, et al., 2015)
			BMI based on dry weight	31.5 vs. 27.6				
	Body Composition	Appendicular						
			Appendicular skeletal muscle mass index (ASMI)	6.8 vs. 7.7	CKD stage 1-5	Edmonton Frail Scale (EFS)	41	(Adame Perez, Senior, Field, Jindal, &Mager, 2018)

			Higher appendicular fat percentage (for left, right lower and left, right upper extremities, respectively)	SFS scores				
			Left lower extremity	β = 0.34; t = 2.32; p = 0.03	ESRD	Simple FRAIL scale	44	(Chao, Chan, &Huang, 2017)
			Right lower extremity	β = 0.3; t = 2.05; p = 0.048				
			Left upper extremity	β = 0.37; t = 2.66; p = 0.01				
			Right upper extremity	β = 0.43; t = 3.09; p = <0.01				
			Higher appendicular fat percentage (for left, right lower and left, right upper extremities, respectively)	Frail/Prefrail vs. Nonfrail				
			Left lower extremity	β = 0.33; t = 2.31; p = 0.03	ESRD	self- report instrument	44	(Chao, Chan, et al., 2017)

				Right lower extremity	β = 0.32; t = 2.28; p = 0.03		evaluating five dimensions of frailty (fatigue, resistance, ambulation, illnesses, and weight loss)		
				Right upper extremity	β = 0.33; t = 2.35; p = 0.03				
		Lower lean mass							
					F/PF vs. NF				
			Whole body (kg)		34.7 vs. 43.1	ESRD	Simple FRAIL scale	44	(Chao, Chan, et al., 2017)
			Cephalic area (g)		3059 vs. 3288				
			Trunk area (kg)		17.4 vs. 22.1				
			Right upper limb (g)		1831 vs. 2493				
			Left upper limb (g)		1869 vs. 2515				
			Right lower limb (g)		4920 vs. 6114				
			Left lower limb (g)		4650 vs. 6349				
					F vs. NF				
			lean body mass (i.e. sarcopenia) (in frail vs. nonfrail)		57.1% vs .14.7%	CKD stage 1-5	Edmonton Frail Scale (EFS)	41	(Adame Perez et al., 2018)

		BMI	22.53 vs. 26.16	CKD stage 5D (hemodialysis)	Fried Phenotypes	320	(Bancu et al., 2017)
	Laboratory Data	eGFR (mL/min/1.72m^2)	18 vs. 50	CKD stage 1-5	Edmonton Frail Scale (EFS)	41	(Adame Perez et al., 2018)
		eGFRcys <30	Frailty prevalence 2.8	CKD stages 1-4	Fried Phenotypes	336	(Roshanravan et al., 2012)*
		eGFRcys 30-44	Frailty prevalence 2.1				
		eGFRcys >60	Referent				
		Prealbumin (PRAB) (mg/dL)	28.9 vs. 38.3				
		Serum albumin (g/L)	38 vs. 41	CKD stage 1-5	Edmonton Frail Scale (EFS)	41	(Adame Perez et al., 2018)
			2.92 vs. 3.48	CKD stage 5D (peritoneal dialysis)	Clinical Frailty Scale (CFS)	119	(Kamijo et al., 2018)
			3.61 vs. 3.85	CKD stage 5D	Fried	320	(Bancu et al.,

				(hemodialysis)	Phenotypes		2017)
			Frail with depression vs. Frail without depression vs. Nonfrail	32.9 vs. 34.9 vs. 35.8 (p=0.025)	CKD stage 5D (peritoneal dialysis)	In-house Chinese questionnaire	178	(Szeto et al., 2018)
		Calcium (mmol/L)		2.24 vs. 2.36	CKD stage 1-5	Edmonton Frail Scale (EFS)	41	(Adame Perez et al., 2018)
		Creatinine (umol/L)		299 vs. 115				
		Hemoglobin		10.35 vs. 10.97	CKD stage 5D (hemodialysis)	Fried Phenotypes	320	(Bancu et al., 2017)
	Miscellaneous	Dialysis clearance rate		↑	ESRD, under chronic dialysis	Simple FRAIL scale (SFS)	46	(Chao, Lai, et al., 2017)
Psychological								
	Mood	Mood Change		Negative change	CKD stage 5D (hemodialysis)	Edmonton Frail Scale (EFS)	N/A	(DeSouza Orlandi &Gesualdo, 2014)
	Mental Health							
		Anxiety	Hospital Anxiety and Depression Scale (HADS)	Women: ↑ in global, psychological, social frailty	ESRD, under online-haemodiafiltration (OL-HDF)	N/A	97	(Sales et al., 2017)

				Men: ↑ in Physical frailty				
		Depression	Hospital Anxiety and Depression Scale (HADS)	Men ↑ in global, psychological, physical frailty	ESRD, under online-haemodiafiltration (OL-HDF)	N/A	97	(Sales et al., 2017)
			Incidence (%) (Self-reported Major Depression Inventory)	83 vs. 6	CKD stage 1-5	Edmonton Frail Scale (EFS)	41	(Adame Perez et al., 2018)
	Mental Function		Post-KT delirium	9.0% vs. 3.9%	CKD stage 5T	Fried Phenotypes	893	(Haugen et al., 2018)
Sociological								
	Isolation							
	Interaction		Interaction with family	Good				(Moffatt, Moorhouse, Mallery, Landry, &Tennankore, 2018)
Physical activity			Minnesota Leisure Time Activity (LTA)	95 vs. 735	CKD stage 5D	Fried	68	(Johansen,

		(p<0.001)	(hemodialysis)	Phenotypes		Painter, Delgado, &Doyle, 2015)
	Low Physical Activity Questionnaire (LoPAQ)	280 vs. 798 (p=0.003)				
	Sitting (hours/day)	6.5 vs. 5 (p=0.04)				
Quality of Life	HRQoL					
	SF-36					
	Scores in physical functioning, blood pressure, role physical, and physical component summary domains	↓	CKD stage 1-5	Edmonton Frail Scale (EFS)	41	(Adame Perez et al., 2018)
	Kidney Disease Quality of Life (KDQoL)	F vs. NF				
	Physical health	33.7 vs. 40.7	ESRD CKD stage 5D (conventional hemodialysis)	Fried Phenotypes	151	(Noori, Sharma Parpia, Lakhani, Janes, &Goldstein, 2018)
	Kidney disease effects	51.6 vs. 66.8				
	Falls (times)	115 vs. 12	CKD stage 5D	Fried Frailty	205	(Yadla et al.,

				(hemodialysis)	Phenotypes		2017)
Independence	Functional Independence Measure (FIM)			Elderly, ≥65y/o	Edmonton Frail Scale (EFS)	137	(Fabrício-Wehbe et al., 2009)
	Spearman's correlation coefficient	Frailty diagnosis with global FIM	-0.703 (p<0.001)				
		Frailty diagnosis with motor FIM	-0.714 (p<0.001)				
		Frailty diagnosis with cognitive FIM	-0.575 (p<0.001)				
		EFS scores with gross FIM	-0.53 (p<0.01)				
Health-care utilization	Hospitalization						
		Cumulative number of inpatient health-care visits	↑	CKD stage 1-5	Edmonton Frail Scale (EFS)	41	(Adame Perez et al., 2018)
		Cumulative number of emergency health-care visits					
		Cumulative number of total health-care visits					
		>3 times (n=141)	127 vs. 14	CKD stage 5D (hemodialysis)	Fried Frailty Phenotypes	205	(Yadla et al., 2017)
		1-2 times (n=64)	40 vs. 24				

		Admissions/year	0.77727 vs. 0.2838	CKD stage 5D (hemodialysis)	Fried Phenotypes	320	(Bancu et al., 2017)
Composite	Overall subjective global assessment (SGA) (weight loss, anorexia, subcutaneous fat, muscle mass) (Frail with depression vs. Frail without depression vs. Nonfrail)		5.04 vs. 5.41 vs. 5.75 ($p<0.0001$)	CKD stage 5D (peritoneal dialysis)	In-house Chinese questionnaire	178	(Szeto et al., 2018)
	Malnutrition inflammation score (MIS) (frail with depression vs. frail without depression vs. nonfrail)		9.48 vs. 7.13 vs. 5.12 ($p<0.0001$)				
	Number of complications (complications identified at data collection: High Pressure Cramping, Anemia, Weight loss Pain, Weakness, Weight gain Constipation, Heart Arrhythmia, Headache, Itch, Recurrent infections, Arterial hypertension)		Spearman's correlation 0.666 ($p=0.000$ in table) ($p<0.05$ in text)	Elderly (≥ 60 yo), with diagnosis of CKD	Edmonton Frail Scale	35	(deSousa Meira et al., 2016)
	Charlson's comorbidity score		Spearman's rank correlation coefficient r = 0.40 (p <	CKD stage 5D (peritoneal dialysis)	Chinese questionnaire	193	(Ng et al., 2016)

		0.0001)				

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* Risk factors or causes of frailty among CKD patients.

	Effect (descriptions)	Risk Difference	CKD Severity	Frailty Assessment	Sample Size	Reference
Biological						
Cardiovascular	Cerebrovascular Accident	OR 1.55 (1.05-2.99)	CKD stage 5D (hemodialysis)	Fried Phenotypes	2275	(Johansen, Chertow, Jin, &Kutner, 2007)
	Vascular Access failure	HR 2.63 (1.03-6.71)	ESRD (CKD stage 5D)	Self-reported simple FRAIL scale	51	(Chao, Chiang, Huang, &Hung, 2017)
	Permanent Vascular Access (fistula or graft)	HR 0.71 (0.51-0.98)	CKD stage 5D (maintenance hemodiaysis)	Fried Phenotypes	2275	(Johansen et al., 2007)
Renal Function Decline	Risk for death or dialysis therapy	2.5 (1.4-4.4)-fold greater	CKD stages 1-4	Fried Phenotypes	336	(Roshanravan et al., 2012)
Immunological	Mycophenolate mofetil (MMF) dose reduction (MDR)	HR 1.29 (1.01-1.66)	CKD stage 5T	Fried Phenotypes	525	(McAdams-Demarco, Law, et al., 2015)
Cognitive	Modified Mini-Mental State (3MS)	-2.37 to -2.80 (1 year) (p=0.03)	ESRD	Fried Phenotypes	324	(McAdams-Demarco, Tan, et al., 2015)

			Declined, 1-4 years post-KT (points/week)	Slope = -0.04 vs. 0.005	CKD stage 5T	Fried physical frailty phenotypes (PFP)	665	(Chu, Gross, et al., 2019)
			At 4 year post-KT (points)	-5.5 (87.4 vs. 92.9)				
	Diabetes	Diabetes		OR 1.35 (1.10-1.65)	CKD stage 5D	Fried Phenotypes	2275	(Johansen et al., 2007)
	Body composition	Bones						
			Bone Mineral Density (BMD)	One year follow-up, with frailty	ESRD CKD stage 5D (chronic hemodialysis)	Simple FRAIL Scale (SFS)	43	(Chao, Huang, &Chan, 2017)
			L1	ß = −0.4, t =−2.18, p=0.04				
			L4	ß =−0.39, t =−2.1, p=0.046				
			Femur Neck (FN)	ß =−0.5, t= −2.96, p<0.01				
			Total	ß = −0.53, t =−3.27, p<0.01				
			Areas	One year follow-up, with frailty				
			Average L-spine areas	ß = −0.48, t =−2.84, p < 0.01				

		Changes of average L-spine areas	ß = −0.5, t =−3.02, p<0.01				
		Z-score	One year follow-up, with frailty				
		Percentage change of L1 Z-score	ß = −0.45, t =−2.11, p=0.049				
		Muscles					
		Quadriceps muscle area (magnitude of association with PbF vs. 10 years of age)	Multivariable coefficient -30.3 cm^2 (p = 0.02) vs. -6.6 cm^2 (p = 0.0001)	CKD stage 5D (hemodialysis)	Performance-based frailty (PbF)	80	(Delgado, Doyle, &Johansen, 2013)
	Laboratory data	Serum Albumin Concentrations (g/dL)					
		<3.2 vs. ≥3.9	OR 1.89 (1.30-2.59)	CKD stage 5D	Fried Phenotypes	2275	(Johansen et al., 2007)
		Hypoalbuminemia	Negative association (p = 0.01)	CKD stage 5D (maintenance hemodialysis) (ESRD)	Simple Frail Scale	46	(Chao et al., 2015)
Psychological							

Delirium	Post-KT delirium	OR 2.05 (1.02-4.13)	CKD stage 5T	Fried Phenotypes	893	(Haugen et al., 2018)
Quality of Life	HRQoL					
	Fair/Poor HRQOL at follow-up (median 9.4 mo)	aOR 2.79 (1.32-5.90)	ESRD CKD stage 5T	Fried Phenotypes	233	(M AMcAdams-DeMarco et al., 2016)
	Worsening HRQOL at follow-up (median 9.4 mo)	aRR 2.91 (1.08-7.80)				
	SF-36					
	Hierarchical regression R^2 change (effects of frailty on HRQoL) in Physical Component Summary (PCS)	29% (p<0.001)	CKD stage 2-4	Fried Phenotypes	168	(S. J.Lee, Son, &Shin, 2015)
	Hierarchical regression R^2 change (effects of frailty on HRQoL) in Mental Component Summary (MCS)	21.3% (p<0.001)				
	SF-12					
	MCS	Effect estimate 0.94 (0.91-0.97) (p<0.01)	CKD stage 5D (peritoneal dialysis, n=129;	The Canadian Study of Health and Aging Clinical Frailty Scale	251	(Iyasere et al., 2016)

		PCS	Effect estimate 0.88 (0.84-0.91) (p<0.01)	hemodialysis, n=122)	(CFS)		
	KDQOL-SF scores in physical and kidney disease-specific HRQoL						
		At KT	↓	CKD stage 5T	Fried Phenotypes	443	(Mara AMcAdams-DeMarco et al., 2018)
		Post-KT	Greater increase				
	Illness Intrusiveness Rating Scale		Effect estimate 1.14 (1.09-1.20)	CKD stage 5D (peritoneal dialysis, n=129; hemodialysis, n=122)	The Canadian Study of Health and Aging Clinical Frailty Scale (CFS)	251	(Iyasere et al., 2016)
	Barthel Index		Effect estimate 0.89 (0.86-.093)				
	Symptom score		Effect estimate 1.23 (1.13-1.34)				
	Hospital Anxiety and Depression Scale		Effect estimate 1.21 (1.11-1.31)				
	Falls		HR 2.1 (1.21-3.92)	CKD stage 5D (hemodialysis)	Fried Phenotypes	205	(Yadla, John, &Mummadi, 2017)

		OR 2.39 (1.22-4.71)	CKD stage 5D (maintenance hemodialysis)	Fried frailty index	762	(Kutner, Zhang, Huang, &Wasse, 2014)
	Time to first fall or fracture requiring medical attention	HR 1.60 (1.16-2.20)	CKD stage 5D (maintenance hemodialysis)	Modified Fried Phenotypes by Bao Y (Bao, Dalrymple, Chertow, Kaysen, &Johansen, 2012).	1646	(Delgado et al., 2015)
Graft Loss	Death-censored graft loss					
	F vs. NF (in patients with depressive symptoms)	aHR 6.20 (1.67, 22.95) vs. 3.16 (0.90, 11.04)	CKD stage 5T	Fried Phenotypes	773	(Konel et al., 2018)
Health-care utilization	Hospitalization/Death	HR 1.56 (1.36-1.79)	CKD stage 5D	Fried Phenotypes	2275	(Johansen et al., 2007)
	Hospitalization	HR 2.06 (1.18-3.58)	CKD stage 5D (hemodialysis)	Fried Phenotypes	205	(Yadla et al., 2017)
		aHR 1.80 (1.4-2.3)	CKD stage 5D (maintenance hemodialysis & peritoneal dialysis)	Adopted	1658	(S.Lee &Kim, 2015)
	Early Hospital Readmission	aRR 1.61 (1.81-	CKD stage 5T	Fried Phenotypes	383	(M.

	(EHR)	2.19) (p=0.002)				A.McAdams-DeMarco et al., 2013)
	Hospital stay (days per year of follow up) (frail with depression vs. frail without depression vs. nonfrail)	26.62 (IQR 10.65-61.18) vs. 14.05 (IQR 3.57-37.27) vs. 8.04 (IQR 0.91-19.42) (p<0.0001)	CKD stage 5D (peritoneal dialysis)	In-house Chinese questionnaire	178	(Szeto et al., 2018)
	Duration	Severe vs. moderate vs. mild vs. none frail				
	Days per year	58.5 vs. 27.4 vs. 10.2 vs. 18.3 (p < 0.0001)	CKD stage 5D (peritoneal dialysis)	Chinese questionnaire	193	(Ng et al., 2016)
	Days per hospital admission	12.9 vs. 10.0 vs. 5.3 vs. 6.4 (p < 0.001)				
	Longer Length of Stay (LOS)					
	with delayed graft function (DGF), LOS	Relative Risk 1.15 (1.03-1.29)	CKD stage 5T	Fried Phenotypes	589	(Mara AMcAdams-DeMarco et al., 2017)
	With DGF, LOS ≥2 weeks	OR 1.57 (1.06-2.33)				

	≥2 weeks		CKD stage 5 to 5T	Fried Phenotypes	569	(Chu, Deng, et al., 2019)
	Change in 3 categories (more frail)	OR 2.02 (1.20-3.40)				
	Change in frailty scores (more frail)	OR 1.92 (1.13-3.25)				
	With depressive symptoms (aRR difference between F and NF)	aRR 1.88 (1.70-2.08) vs. 1.38 (1.27-1.52)	CKD stage 5T	Fried Phenotypes	773	(Konel et al., 2018)
	CES-D score (10-point increase) (aRR increase between F and NF)	aRR 1.23 (1.16-1.31) vs. 1.17 (1.08-1.27)				
Mortality	Mortality	2.17 fold	CKD stage 5T	Fried Phenotypes	537	(M AMcAdams-DeMarco et al., 2015)
		HR 1.22 (1.04-1.43)	CKD stage 5D (incident chronic dialysis)	CFS	390	(Alfaadhel et al., 2015)
		HR 4.28 (1.22-14.98)	Predialysis (eGFR ≤ 25 mL)	PRISMA questionnaire & Timed up and Go test	104	(Ali, Abdelaziz, Abdelaal, &Baharani, 2018)

		aHR 9.83 (1.80-53.7)	CKD stage 5D (peritoneal dialysis)	Clinical Frailty Scale (CFS)	119	(Kamijo, Kanda, Ishibashi, &Yoshida, 2018)
		20.45% vs. 12.36% (p<0.005)	CKD stage 5D (hemodialysis)	Fried Phenotypes	320	(Bancu et al., 2017)
	F vs. NF (in patients with depressive symptoms)	aHR 2.62 (1.03, 6.70) vs. 1.92 (0.68, 5.38)	CKD stage 5T	Fried Phenotypes	773	(Konel et al., 2018)
	At 24-month follow up, frail with depression vs. frail without depression vs. nonfrail	62.5% vs. 71.4% vs 86.6% (p=0.001)	CKD stage 5D (peritoneal dialysis)	In-house Chinese questionnaire	178	(Szeto et al., 2018)
	Prediction ability of comorbidities in F vs. NF	HR 0.75 (0.44-1.29) vs. 1.66 (1.17-2.35)	CKD stage 5T (KT candidates, on waitlist)	Fried Phenotypes	2086	(Pérez Fernández et al., 2019)
All-cause mortality						
	Adjusted	HR 1.66 (1.03-2.67)	CKD stage 5D (incident chronic dialysis)	Fried Phenotypes	370	(Fitzpatrick et al., 2019)
	Among BMI ≥30 kg/m^2	HR 3.77 (1.10-12.92)				

	Above median Waist-Hip Ratio (WHR)	HR 2.38 (1.17-4.82)				
	Post-KT mortality					
	Change in 3 categories (more frail)	HR 2.27 (1.11-4.65)	CKD stage 5 to 5T	Fried Phenotypes	569	(Chu, Deng, et al., 2019)
	Change in frailty scores (more frail)	HR 2.36 (1.12-4.99)				
Composite	Composite outcomes of all-cause death or cardiovascular hospitalization	HR 23.58 (1.61-346.03)	CKD stage 5D ESRD	Multidimensional frailty score based on comprehensive geriatric assessment (CGA) protocol	46	(S. W.Lee et al., 2017)

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