

15^{ος}
ΚΥΚΛΟΣ



**ΤΑ ΥΠΕΡ ΚΑΙ ΤΑ ΚΑΤ'Α
ΤΗΣ ΠΕΡΙΤΟΝΑΪΚΗΣ
ΚΑΘΑΡΣΗΣ ΣΤΟΥΣ
ΗΛΙΚΙΩΜΕΝΟΥΣ**

ΚΑΤΣΟΥΔΑΣ ΣΠΥΡΟΣ
ΝΕΦΡΟΛΟΓΟΣ
Π.Γ.Ν. «ΑΤΤΙΚΟΝ»

**ΔΕΝ ΥΠΑΡΧΕΙ ΣΥΓΚΡΟΥΣΗ
ΣΥΜΦΕΡΟΝΤΩΝ**



- Προσφατη μνημη μειωμένη
- Για τους περισσότερους η σχετικά μειωμένη συγκέντρωση-σκεψη δεν επηρεαζει την καθημερινότητα.
- Πιο αργες αντιδράσεις- κινηση
- Μικρότερη ικανότητα επίλυσης προβλημάτων
- Ενας στους 4 παρουσιαζει καταθλιψη, σχιζοφρενεια, άγχος, ντιμεντια
- 92% έχει μια χρόνια νόσο κ 77% δυο
- Τα 2/3 >65 θα εχει ένα απο τις 4 κυριες αιτιες θανατου, εγκεφαλικο, καρκινο, καρδια, διαβητη
- Μείωση οπτικής οξυτητας
- Εως τα 75 το ¼ χρειαζεται βοηθεια για την καθημερινότητα >85 χρειαζεται το 40% των ανδρων και 53% των γυναικών
- Οι ηλικιωμενοι μπορούν να μάθουν νεες τεχνικές, αλλα πιο αργά
- Δεν είναι ολοι οι ηλικιωμενοι ιδιοι.

Incident patients accepted for RRT in 2016 at day 1

Adjusted incidence

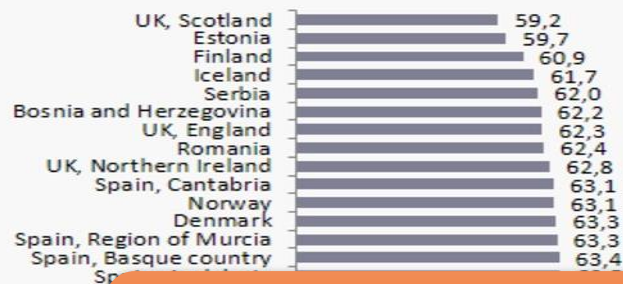
renal registries providing individual patient data



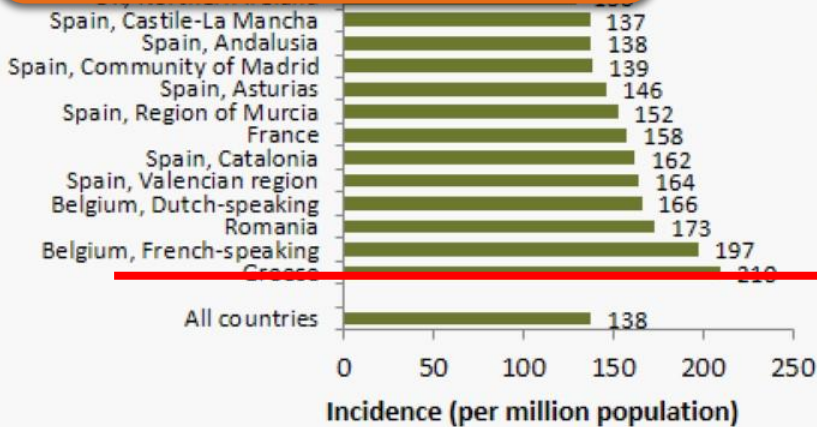
by country adjusted for age and gender

Mean age at start of RRT

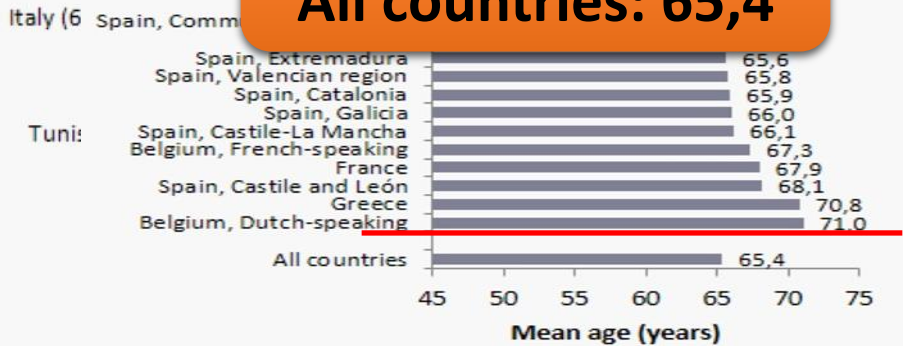
renal registries providing individual patient data



GREECE : 210/million
All countries : 138/million



GREECE : 70,8
All countries: 65,4



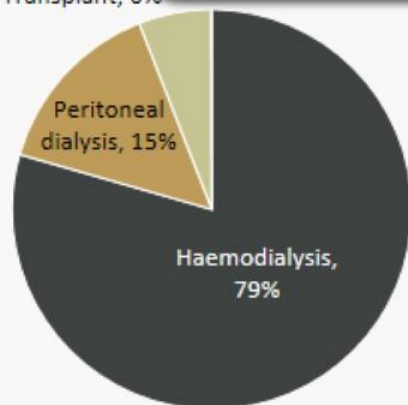
Incident patients accepted for RRT in 2016, at day 91

by established modality and age category

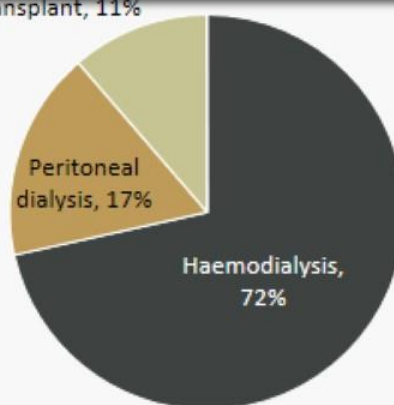
**Μικρότερη η πιθανότητα ασθενής >65 να
μπεί στην Περιτοναϊκή Κάθαρση**

older

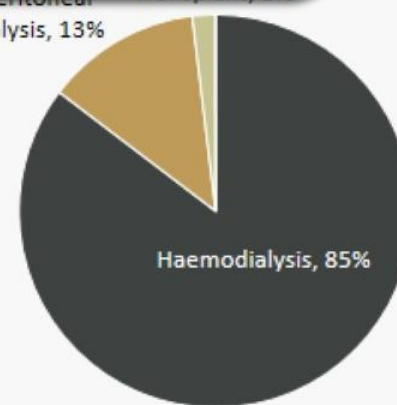
Transplant, 6%



Transplant, 11%



Peritoneal
dialysis, 13%



Peritoneal dialysis for older people: Overcoming the barriers

EA Brown¹

¹Imperial College London, Hammersmith Hospital, London, UK

Patient >70, six times more likely to choose HD than those 18-40

Principal reasons for not choosing PD:

- Age
- Female
- Living alone
- Late referral
- “Crashlanders”
- Little predialysis educational input

Living alone.....

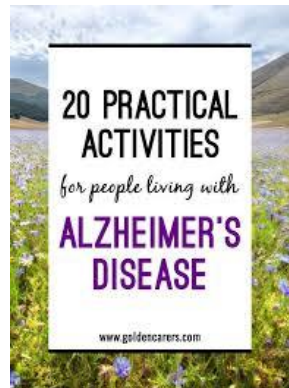


Prevalence of Diabetes

Total prevalence of diabetes in people aged 20 years or older, by age group—
United States, 2002

Percent

Age Group	Percent
20-24	1.0
25-29	1.5
30-34	2.5
35-39	4.0
40-44	6.0
45-49	8.5
50-54	12.0
55-59	16.0
60-64	20.0



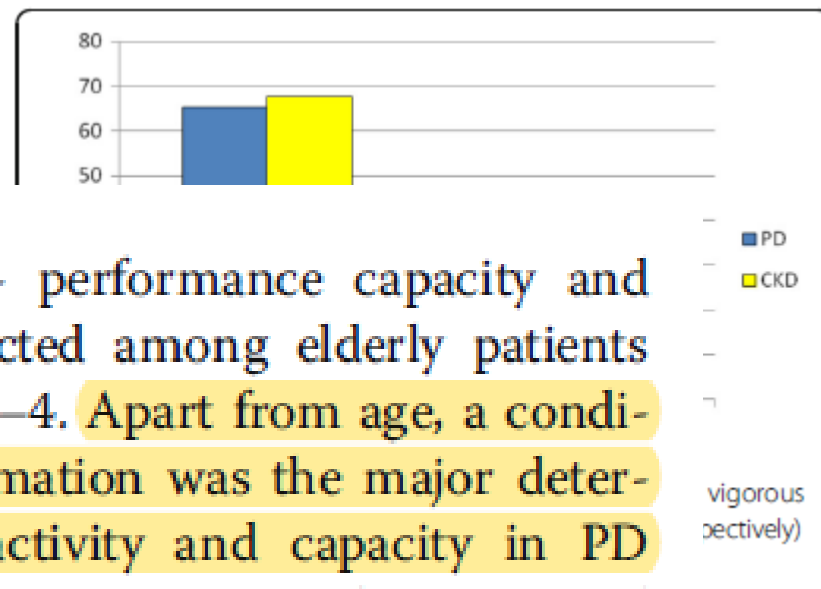
RESEARCH ARTICLE

Open Access



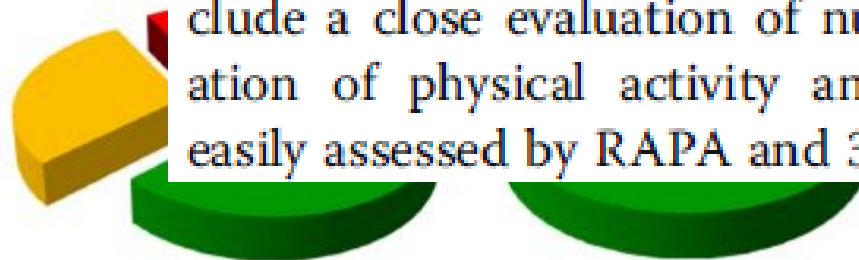
Assessment of physical activity, capacity and nutritional status in elderly peritoneal dialysis patients

Adamasco Cupisti^{1*}, Claudia D'Alessandro¹, Viviana Finato², Claudia Del Corso³, Battista Catania⁴, Gian Marco Caselli⁵ and Maria Francesca Egidi¹

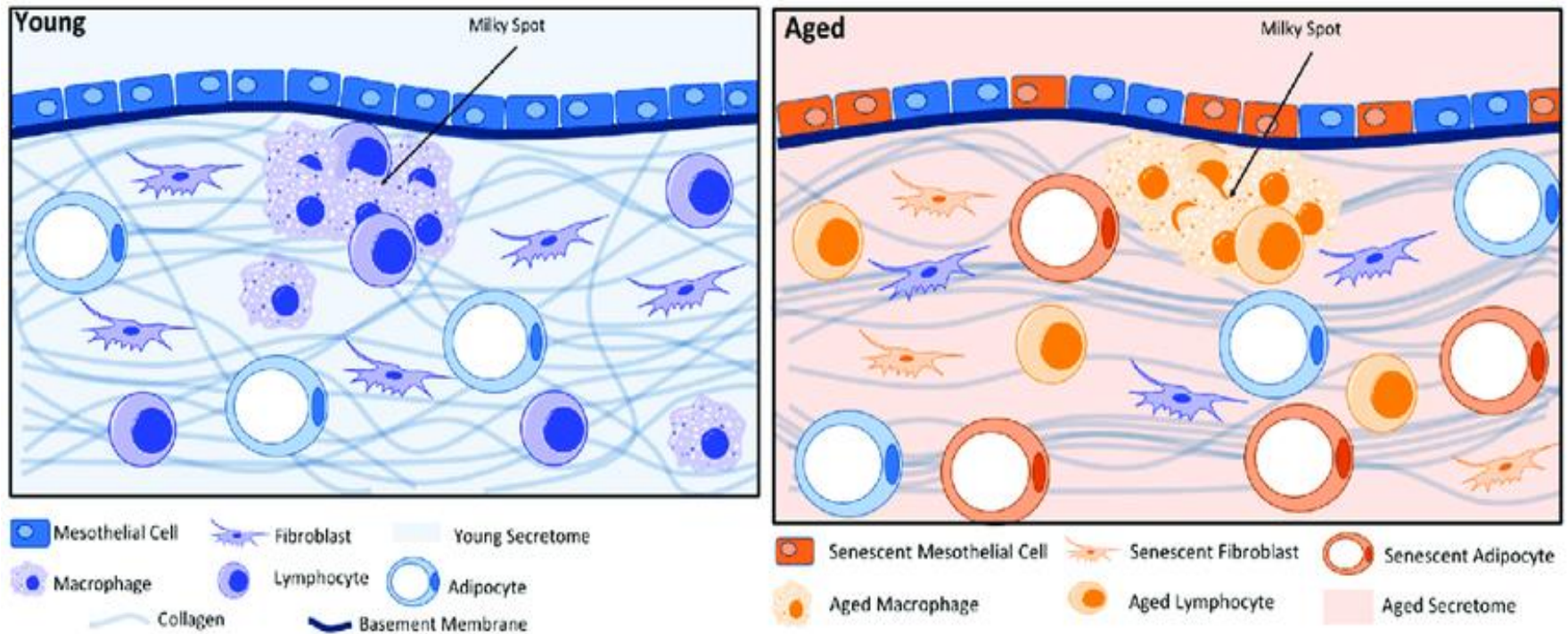


Conclusions

A high prevalence of low-performance capacity and sedentarism has been detected among elderly patients on PD or with CKD stage 3–4. Apart from age, a condition of malnutrition-inflammation was the major determinant of poor physical activity and capacity in PD patients. Better body composition seems to be associated with physical activity in PD and with physical capacity in CKD patients. Routine clinical management should include a close evaluation of nutritional status and evaluation of physical activity and capacity which can be easily assessed by RAPA and 30"STS tests.

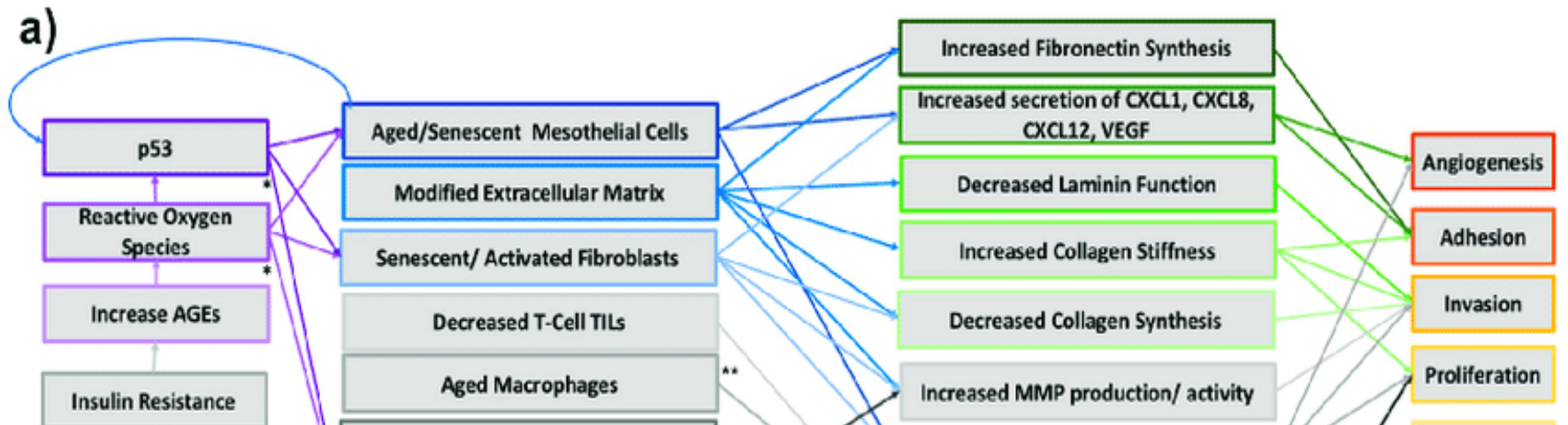


ΠΕΡΙΤΟΝΑΪΚΗ ΜΕΜΒΡΑΝΗ ΣΤΟ ΓΗΡΑΣ



SENESCENT = κυτταρικό γήρας

ΠΕΡΙΤΟΝΑΪΚΗ ΜΕΜΒΡΑΝΗ ΣΤΟ ΓΗΡΑΣ



ΓΗΡΑΣ = ΦΛΕΓΜΟΝΩΔΗΣ ΚΑΤΑΣΤΑΣΗ?

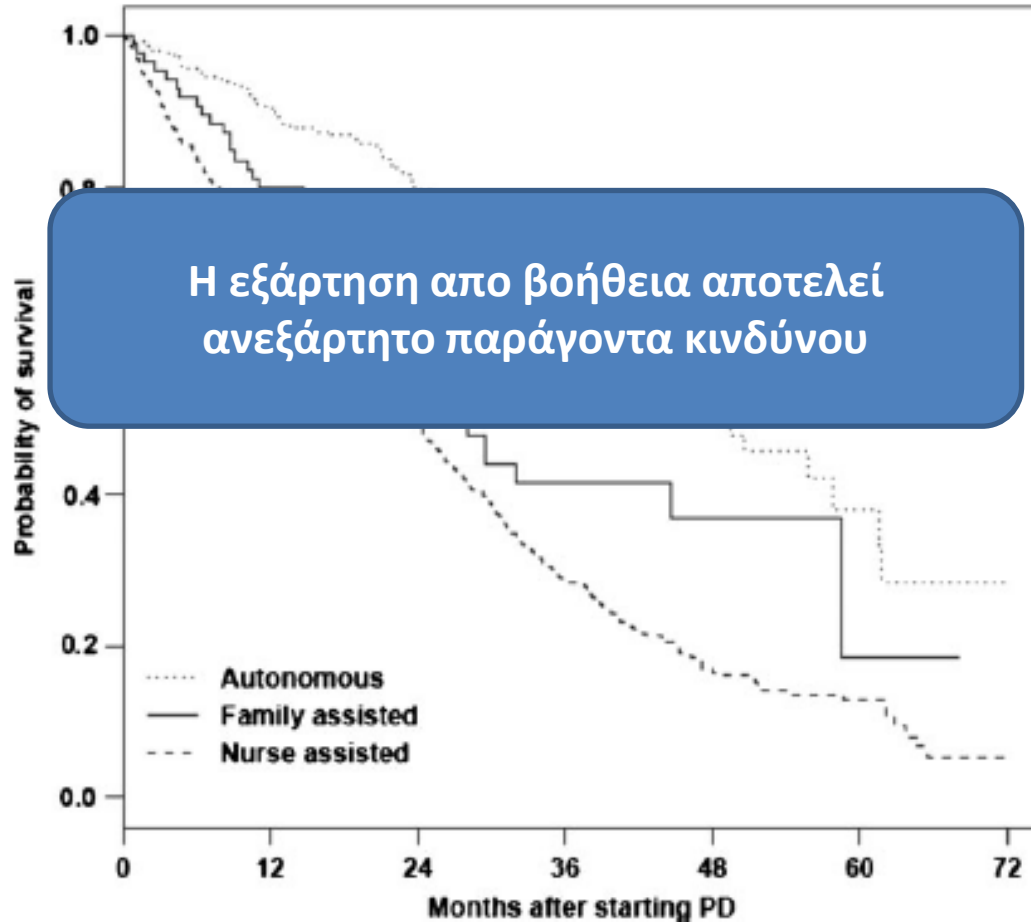
ΕΠΙΒΙΩΣΗ

**ΤΟ ΜΕΓΑΛΟ ΠΡΟΒΛΗΜΑ ΜΕ ΤΙΣ ΜΕΛΕΤΕΣ ΓΙΝΕΤΑΙ
ΑΚΟΜΑ ΜΕΓΑΛΥΤΕΡΟ ΜΕ ΤΟΝ ΟΡΙΣΜΟ ΤΟΥ ΓΗΡΑΤΟΣ**

- Διαφορετικές ηλικιακές ομάδες
- Μελέτες αρχειακές, αναδρομικές ή παρατήρησης
- Μικρός αριθμός ασθενών
- Τεράστιος όγκος μελετών

Peritoneal dialysis in elderly patients: report from the French Peritoneal Dialysis Registry (RDPLF)

Cindy Castrale¹, David Evans², Christian Verger³, Emmanuel Fabre⁴, Didier Aguilera⁴, Jean-Philippe Ryckelynck¹ and Thierry Lobbedez¹



Ανεξάρτητη από ηλικία, φύλο, διαβήτη, υποβοήθηση, πρωτοπαθή νεφρική νόσο.

Καλύτερη επιβίωση οι ασθενείς με τη μικρότερη συνοσηρότητα και οι ασθενείς σε ΑΠΚ έναντι της ΣΦΠΚ.

Υποβοηθούμενη ΠΚ πιο συχνή στη ΣΦΠΚ έναντι της ΑΠΚ.

Peritoneal dialysis in elderly patients: report from the French Peritoneal Dialysis Registry (RDPLF)

Cindy Castrale¹, David Evans², Christian Verger³, Emmanuel Fabre⁴, Didier Aguilera⁴, Jean-Philippe Ryckelynck¹ and Thierry Lobbedez¹

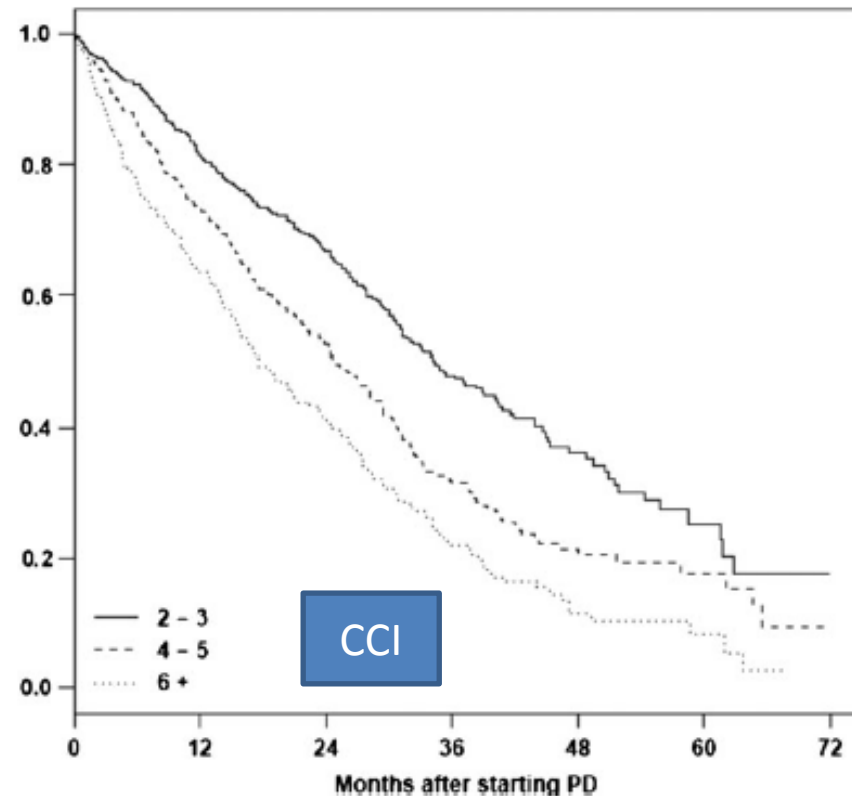
Επιβίωση κ συνοσηρότητα

ΕΠΙΒΙΩΣΗ ΑΣΘΕΝΩΝ:

- Διάμεση Τιμή : 27,1 μήνες
- 75-79: 31,0
- 80-84: 26,9
- 85-89: 21,8
- >90 : 14,2

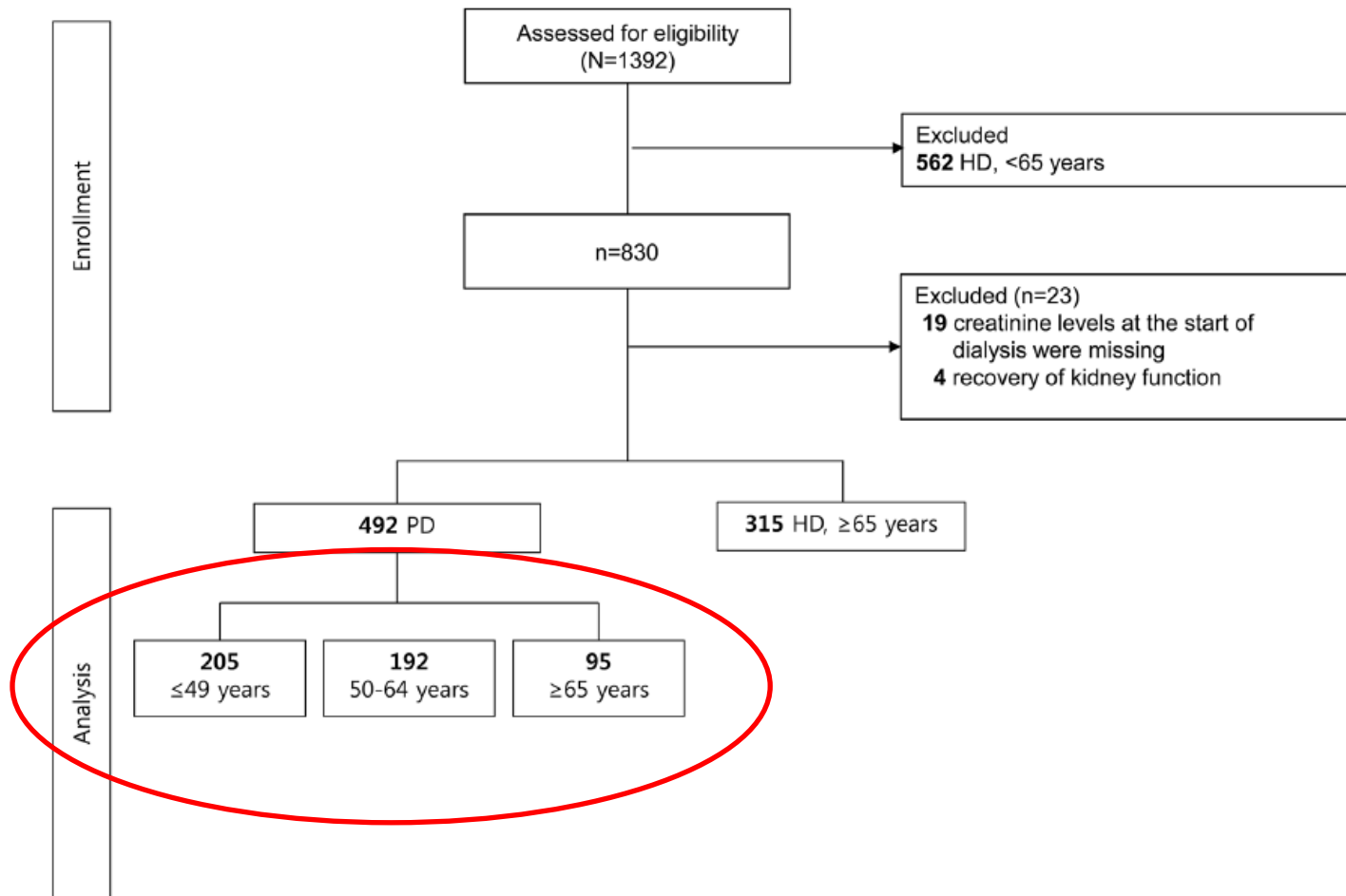
ΔΥΣΜΕΝΕΣΤΕΡΗ ΠΡΟΓΝΩΣΗ:

- Άνδρες
- Ηλικία
- Συνοσηρότητα
- ΣΦΠΚ
- Είδος υποβοηθούμενης ΠΚ
- Νεφροπάθεια



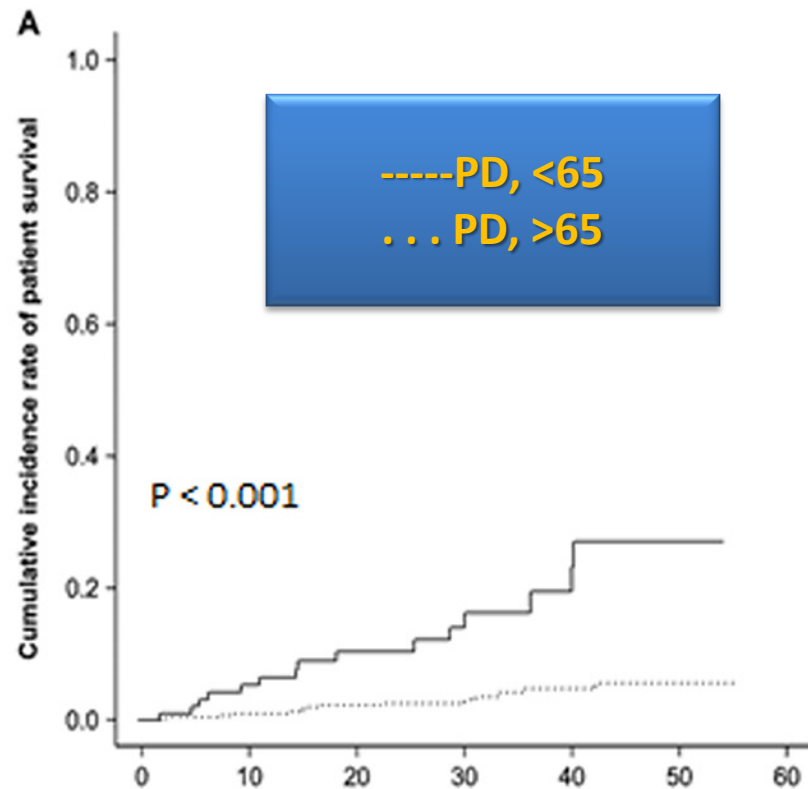
Elderly Peritoneal Dialysis Compared with Elderly Hemodialysis Patients and Younger Peritoneal Dialysis Patients: Competing Risk Analysis of a Korean Prospective Cohort Study

Hyunsuk Kim¹, Jung Nam An^{1,2}, Dong Ki Kim¹, Myoung-Hee Kim^{3,4}, Ho Kim^{3,5}, Yong-Lim Kim^{3,6}, Ki Soo Park⁷, Yun Kyu Oh², Chun Soo Lim^{2,3}, Yon Su Kim^{1,3}, Jung Pyo Lee^{2,3*}, CRC for ESRD Investigators^{3†}

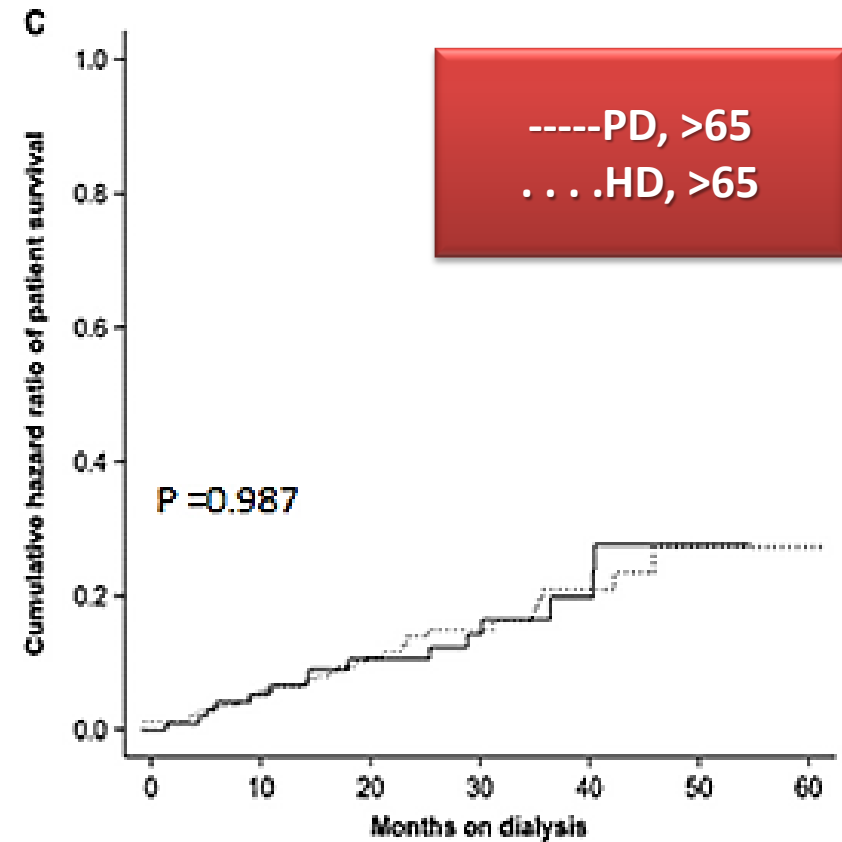


Elderly Peritoneal Dialysis Compared with Elderly Hemodialysis Patients and Younger Peritoneal Dialysis Patients: Competing Risk Analysis of a Korean Prospective Cohort Study

Hyunsuk Kim¹, Jung Nam An^{1,2}, Dong Ki Kim¹, Myoung-Hee Kim^{3,4}, Ho Kim^{3,5}, Yong-Lim Kim^{3,6}, Ki Soo Park⁷, Yun Kyu Oh², Chun Soo Lim^{2,3}, Yon Su Kim^{1,3}, Jung Pyo Lee^{2,3*}, CRC for ESRD Investigators^{3†}



PD, <65	397	324	219	132	65	14	0
PD, ≥65	95	64	40	23	9	1	0



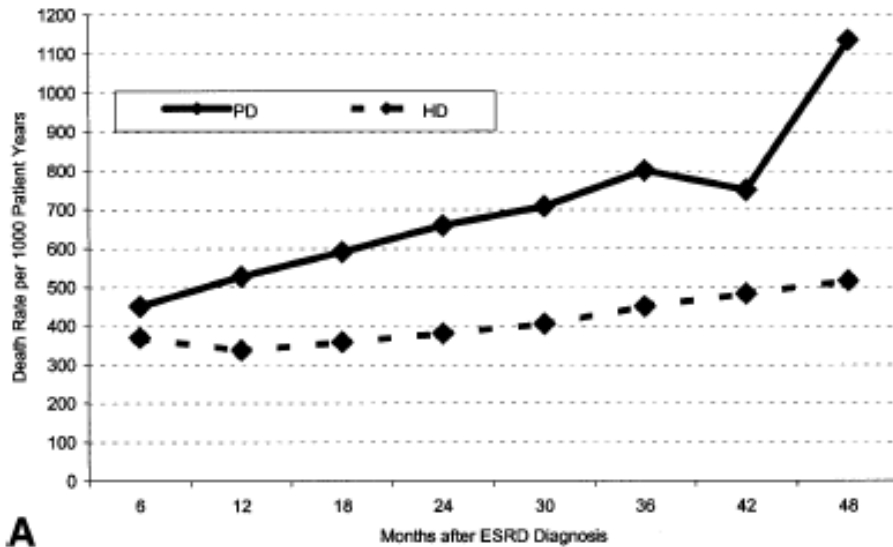
HD, ≥65	311	208	107	59	27	6	0
PD, ≥65	91	64	40	23	9	1	0

Comparison and Survival of Hemodialysis and Peritoneal Dialysis in the Elderly

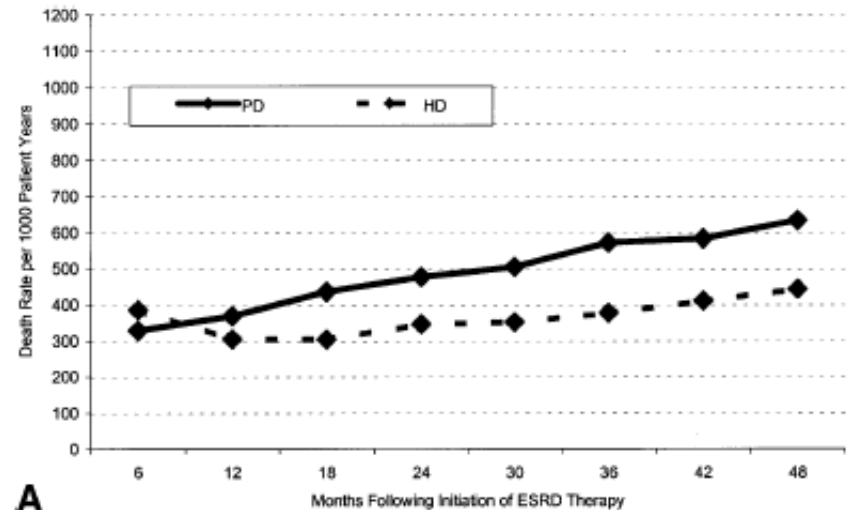
Allan J. Collins,* Eric Weinhandl,† Jon J. Snyder,† Shu-Cheng Chen,† and Dave Gilbertson†

*Department of Medicine, University of Minnesota and †U.S. Renal Data System Coordinating Center, Minneapolis Medical Research Foundation, Minneapolis, Minnesota

DIABETICS

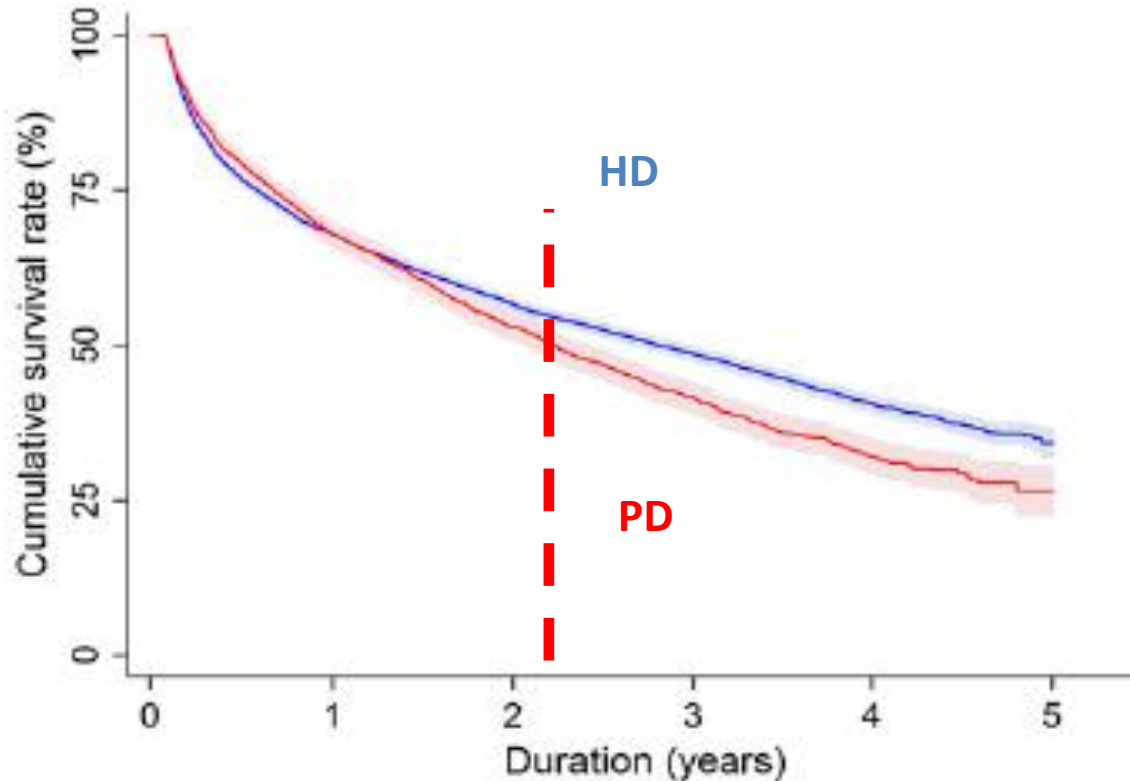


NON DIABETICS



Dialysis Modality and Mortality in the Elderly: A Meta-Analysis

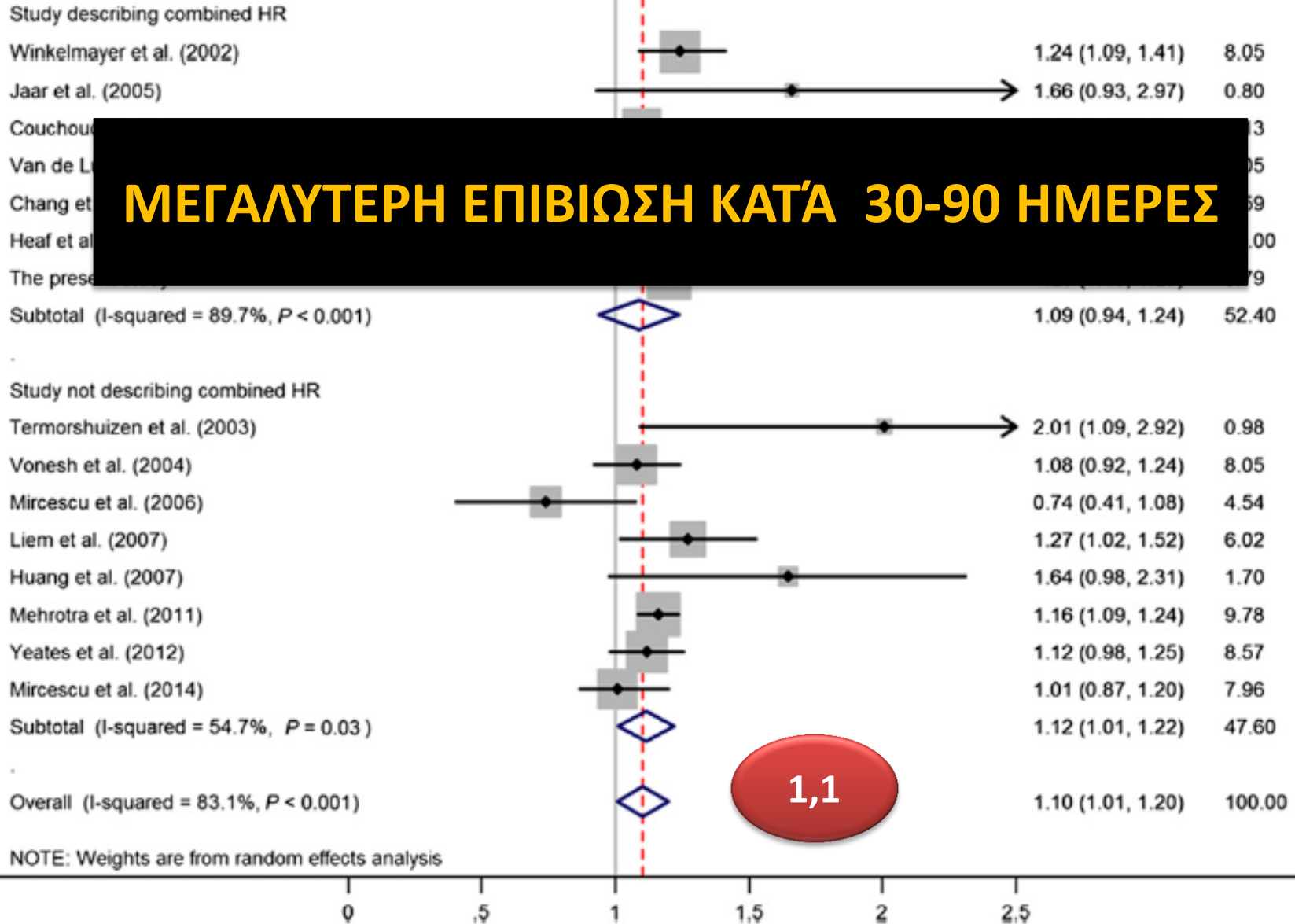
Seung Seok Han,^{*} Jae Yoon Park,^{*} Soohee Kang,[†] Kyoung Hoon Kim,[‡] Dong-Ryeol Ryu,[§] Hyunwook Kim,^{||}
Kwon Wook Joo,^{*¶} Chun Soo Lim,^{¶**} Yon Su Kim,^{*¶} and Dong Ki Kim^{*¶}



Number at risk

HD	10675	7146	4146	2237	866	8
PD	2390	1467	814	421	166	2

Meta-analysis of overall mortality in peritoneal dialysis compared with hemodialysis.



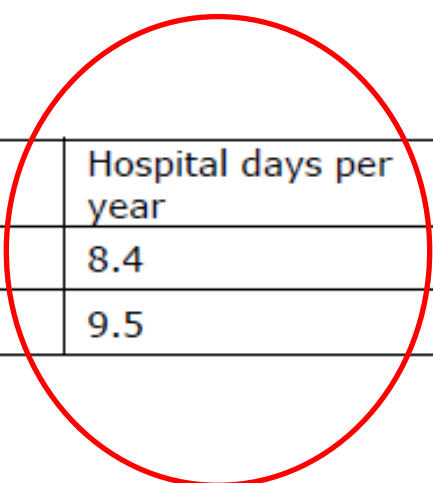
ΜΕΓΑΛΥΤΕΡΗ ΕΠΙΒΙΩΣΗ ΚΑΤΆ 30-90 ΗΜΕΡΕΣ

1,1

NOTE: Weights are from random effects analysis


Hospitalization Rates for Patients on Assisted Peritoneal Dialysis Compared with In-Center Hemodialysis

Matthew J. Oliver,^{*,†} Ahmed A. Al-Jaishi,[‡] Stephanie N. Dixon,[§] Jeffrey Perl,^{||} Arsh K. Jain,^{**} Susan D. Lavoie,^{**}
Danielle M. Nash,[‡] J. Michael Paterson,^{††} Charmaine E. Lok,^{§§} and Robert R. Quinn^{||††}



Modality	Hospital days per year	95% CI	P-value
Assisted PD	8.4	4.6,15.5	0.55
HD	9.5	6.8,13.3	

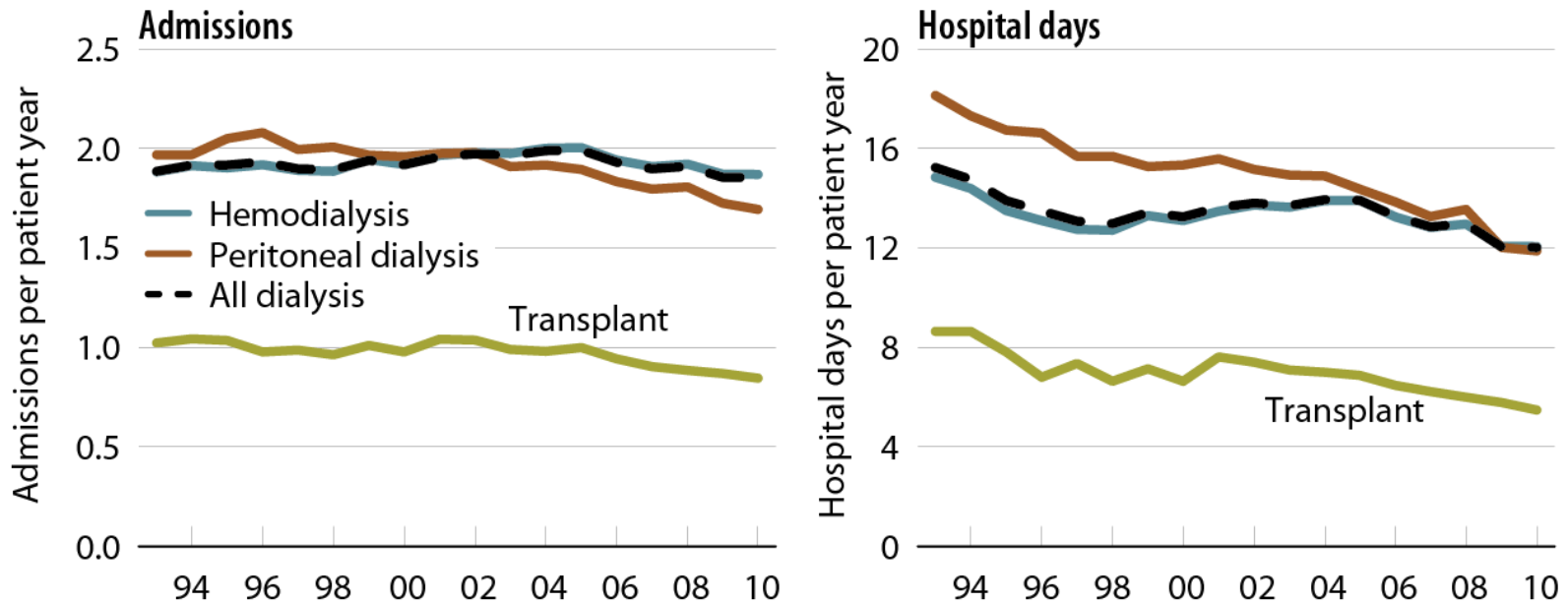
Quality of life of elderly patients on peritoneal dialysis versus hemodialysis: a single-center study

Yosuke Saka¹  · Tomohiko Naruse¹ · Naoto Tawada¹ · Mitsuhiro Tokomoto¹ · Yuhei Noda¹ · Yohei Taniguchi¹ · Yasuko Nagahara¹ · Ryoko Yamashita¹ · Munetoshi Karasawa¹ · Yuzo Watanabe¹ · Yasuhiko Ito²

Outcome	All patients		
	PD (<i>n</i> = 14)	HD (<i>n</i> = 42)	<i>p</i> value
Hospitalization (days)	50 [42–72]	31 [19–104]	0.128
Long-term hospitalization			
>90 days [<i>n</i> (%)]	1 (7.1)	11 (26.2)	0.133
>180 days [<i>n</i> (%)]	0 (0.0)	7 (16.7)	0.102

Adjusted hospital admission rates & days, by modality

Figure 3.2 (Volume 2)



Period prevalent ESRD patients. Adj: age/gender/race/primary diagnosis; ref: ESRD patients, 2005.

Should Peritoneal Dialysis be the First Option Offered to the Elderly Who Require Renal Replacement Therapy for Continued Longevity?

Peritoneal Dialysis Should Be the First Choice for Renal Replacement Therapy in the Elderly

Joanne M. Bargman

Home Peritoneal Dialysis Program, University Health Network, Toronto, Canada

There is No Place Like Home

Quality of Life

In the elderly, the quality of time left is perhaps more important than the quantity (maybe this applies to all patients, not just the elderly). When a patient asks “Which dialysis is better?” I do not think that they are asking which dialysis will allow them to live 30 days longer according to registry data. I believe that “Which dialysis is better?” to the patient means which dialysis will let him/her feel better, and with minimal distress and imposition on their life and the life of their family. Unfortunately, many nephrologists equate “better” dialysis with higher Kt/V urea or the longest survival seen in patient registries, so that their recommendations may not be congruent with the wishes of the patient.

However, in the subset of the elderly dialysis patients with a high burden of comorbidity, the prognosis appears to be very poor altogether. A recent study demonstrated that survival in this type of patient population was nearly identical, whether or not the patients undertook hemodialysis or conservative care (21). Similarly, Carson undertook a provocative analysis demonstrating that while the elderly undergoing hemodialysis did have longer survival compared with conservation care, most of the extra days of survival were spent either in the hemodialysis unit or in the hospital because of intercurrent illness (22).



ντυσιμο



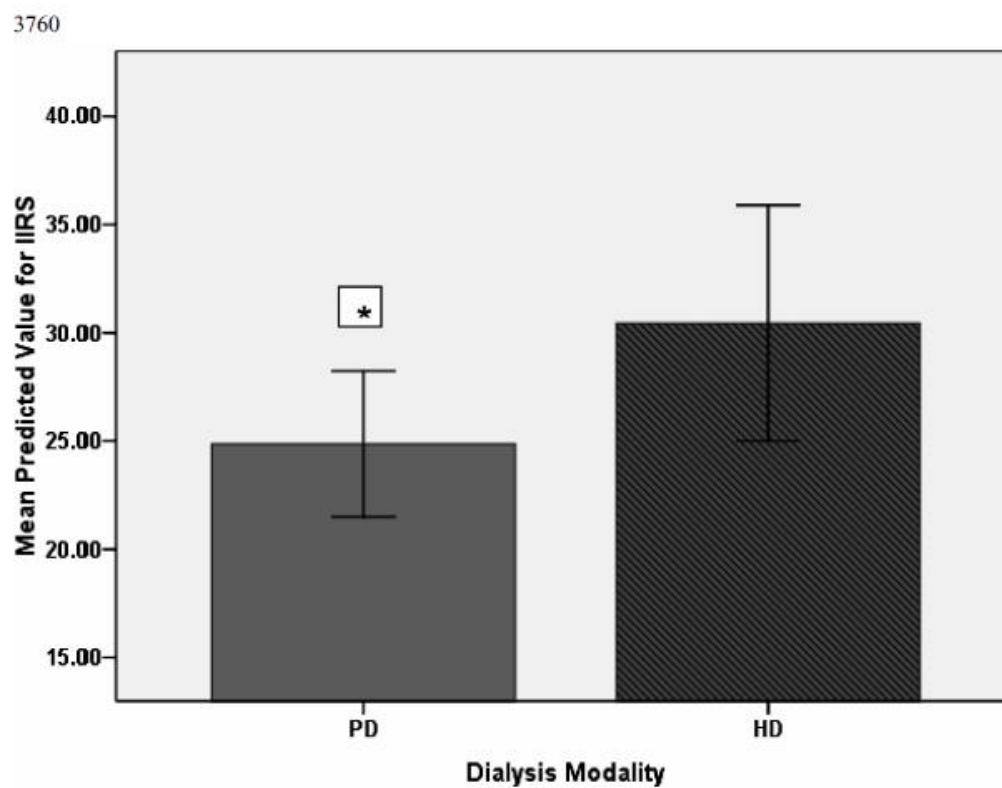
ντυσιμο



ΠΟΙΟΤΗΤΑ ΖΩΗΣ vs ΠΑΡΑΤΑΣΗ ...

Broadening Options for Long-term Dialysis in the Elderly (BOLDE): differences in quality of life on peritoneal dialysis compared to haemodialysis for older patients

Edwina A. Brown¹, Lina Johansson¹, Ken Farrington², Hugh Gallagher³, Tom Sensky⁴,
Fabiana Gordon⁵, Maria Da Silva-Gane², Nigel Beckett⁶ and Mary Hickson⁷



Error Bars: +/- 1 SD

Fig. 1. Illness Intrusion Ratings Scores (IIRS) for PD and HD adjusted for age, time on dialysis, comorbidity scores, symptom count, social network score, gender, modality, nutritional status and cognitive function. *Significantly less illness intrusion in PD group, $P=0.032$.

E.A. Brown *et al.*

Illness
Intrusion
Rating Score

Broadening Options for Long-term Dialysis in the Elderly (BOLDE): differences in quality of life on peritoneal dialysis compared to haemodialysis for older patients

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Fabiana Gordon⁵, Maria Da Silva-Gane², Nigel Beckett⁶ and Mary Hickson⁷

Table 3. Unadjusted quality of life outcomes in older PD and HD patients

Quality of life assessments	PD		HD		P-value
	<i>n</i>		<i>n</i>		
SF-12 PCS ^a , mean (SD)	70	36 (12.1)	70	34.3 (9.7)	0.263
SF-12 MCS ^a , mean (SD)	70	55.0 (8.4)	70	51.3 (12.9)	0.046
IIRS, median (IQR)	69	22.0 (15.0)	70	26.0 (19.0)	0.006
HADS: depression, median (IQR)	70	4.0 (5.0)	70	6.0 (5.0)	0.003
HADS score >8; prevalence of possible depression (%)	70	10	70	26	0.015

**Ελαφρά υπεροχή της περιτοναϊκής έναντι της
αιμοκάθαρσης**

Dialysis Therapies

Quality of Life of Family Caregivers of Elderly Patients on Hemodialysis and Peritoneal Dialysis

Angelica Belasco, PhD, Dulce Barbosa, PhD, Ana R. Bettencourt, PhD, Solange Diccini, PhD, and Ricardo Sesso, MD

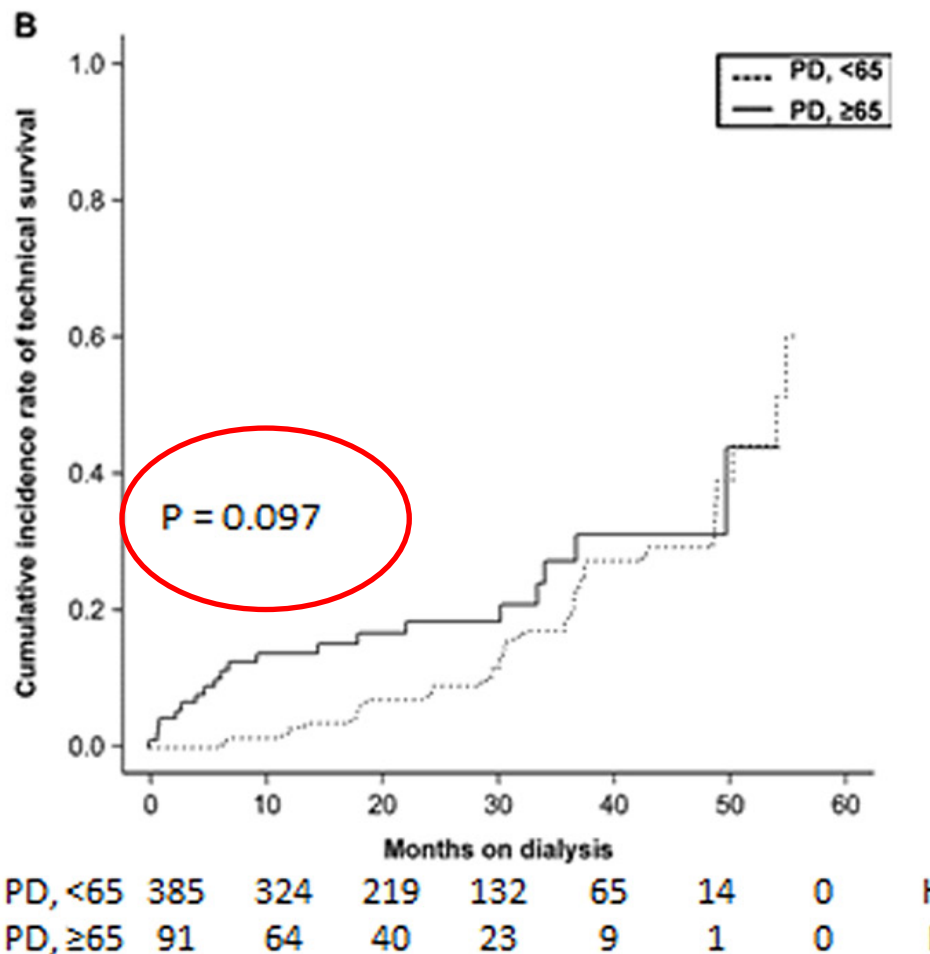
Table 5. Multiple Linear Regression Analysis of Factors Affecting Caregiver Burden of Elderly Patients on HD or PD Therapy

Parameter	Coefficient	SE	R ² *	P
HD				
Social Aspect	-0.0043	0.002	16.9	0.038
Pain	-0.0041	0.002	6.0	0.036
Vitality	-0.0063	0.003	3.2	0.035
Hours/wk as caregiver†	0.1370	0.079	2.7	0.086
Total R ²			29.8	
PD				
Caregiver Mental Component Summary	-0.0235	0.006	40.4	<0.001
Patient Mental Component Summary	-0.0169	0.006	9.6	0.007
Karnorsky index	-0.0104	0.005	5.8	0.037
Total R ²			55.8	

Elderly Peritoneal Dialysis Compared with Elderly Hemodialysis Patients and Younger Peritoneal Dialysis Patients: Competing Risk Analysis of a Korean Prospective Cohort Study

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Technique survival



Peritoneal dialysis in elderly patients: report from the French Peritoneal Dialysis Registry (RDPLF)

Cindy Castrale¹, David Evans², Christian Verger³, Emmanuel Fabre⁴, Didier Aguilera⁴, Jean-Philippe Ryckelynck¹ and Thierry Lobbedez¹

MEDIAN SURVIVAL FREE OF PERITONITIS:

Δεν έχουν σημασία τα συγκριτικά αποτελέσματα αλλά κατά πόσον το ελεύθερο περιτονίτιδας διάστημα είναι αποδεκτό.

85-89: 37,7 months

>90 :30,4 months

Table 1. Peritonitis causative micro-organism

Micro-organism	N	%
Gram-positive	242	44.16%
		10.77%
		2.45%
		0.01%
		0.94%
		4.10%
		0.18%
		1.89%
		0.27%
		0.40%
		20.07%
Total	548	100%

Δεν υπήρχε στατιστική συσχέτιση με το μέγεθος του κέντρου και το αν ήταν υποβοηθούμενη ή όχι η μέθοδος.

PERITONEAL DIALYSIS-RELATED INFECTION IN THE OLDER POPULATION

Cheuk-Chun Szeto

KEY POINTS

- With appropriate training and adequate support, the peritonitis rate of older peritoneal dialysis (PD) patients is highly respectable.
- In general, the recommendations for the treatment and prevention of PD-related infections by the International Society for Peritoneal Dialysis (ISPD) should be followed in older patients.
- Older PD patients who develop peritonitis have a high short-term mortality.
- Older PD patients with multiple comorbid conditions have an excessive risk of relapsing peritonitis episodes.
- Technical problems, social difficulties, and concomitant comorbid diseases often have substantial effects on management of peritonitis in older PD patients.

NUTRITION IN OLDER ADULTS ON PERITONEAL DIALYSIS

Lina Johansson

Imperial College Healthcare NHS Trust, London, United Kingdom

- Abdo
- Laxat
- Irritak

No Difference PD vs HD

Compared to HD:

- Postprandial fullness

Compromised food intake in HD

ΜΠΟΡΟΥΜΕ ΝΑ ΕΦΑΡΜΟΣΟΥΜΕ ΤΙΣ ΚΑΤΕΥΘΥΝΤΗΡΙΕΣ ΟΔΗΓΙΕΣ ΣΤΟΥΣ ΗΛΙΚΙΩΜΕΝΟΥΣ ΑΣΘΕΝΕΙΣ;

But in the case of the elderly, escalating PD dose may be counterproductive and increase technique failure; increasing fill volume or instituting continuous regimes may increase discomfort or cause subcutaneous leaks or hernias.

Yao (3)	Observational	Univariate analysis (unadjusted for age) Kt/V<1.7 (10 deaths) } survival lower by log rank test (p<0.05)	52/15	28 (19%)	4 (3%)
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Quality of life considerations mean that escalation of PD may not be appropriate for some elderly patients. In these cases, the frequency and intensity of monitoring solute clearance and peritoneal membrane function can be reduced.

Jansen (6)	Observational: Anuric patients	High comorbidity was associated with a better technique survival RR if CrCl<50=1.7 (10 CAPD, 5 APD); 95% CI 0.7–3.4 (univariate) RR if Kt/V<1.5=3.3 (15 patients); 95% CI 1.25–8.6 (adjusted for age) RR if CrCl<40=3.3 (13 patients); 95% CI 1.2–8.6 (adjusted for age)	53/17	33 (25%)	7 (6%)
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Original Article

Costs of dialysis for elderly people in the UK

Reinhold P. Grün¹, Niculae Constantinovici², Charles Normand¹ and Donna L. Lamping¹,
for the North Thames Dialysis Study (NTDS) Group

Primary cost variable

Modality					
Peritoneal dialysis	76	64.5 (32.0)			
Haemodialysis	95	71.5 (28.0)	0.13	5.1 (–3.7 to 14.0)	0.25

Epo, other drugs

Renal-related admissions, other admissions

Day-patient, out-patient, A&E attendances

Visits to surgery, home visits

District nurse, health visitor

Special nurse, dentist, optician, chiropodist, dietician,
complementary medicine

Home care, private domestic help, bath attendant,
meals-on-wheels, social worker, luncheon club, day centre,
voluntary organization help, nursing home

Peritoneal Dialysis in the elderly: challenge accepted

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<p>Strengths</p> <ul style="list-style-type: none"> • Home-based treatment • Better hemodynamic tolerance • Lower risk of GI bleeding • Longer renal function preservation • Less restricted potassium diet • Lower treatment intrusion in life • Lower risk of cognitive loss • No need for vascular access • No need for iterative angioplasties /surgeries • Fewer transport requirements • Cheaper than center HD in some business models 	<p>Weaknesses</p> <ul style="list-style-type: none"> • Physical barriers • Cognitive barriers • Psychological and social barriers • Nephrologists' lower experience with this modality • Clinicians' biased perceptions related with elderly and with PD • Lack of job opportunities in PD • Lack of reimbursement incentives to PD • Lack of integrated dialysis Units
<p>Opportunities</p> <ul style="list-style-type: none"> • Quality of life • Flexibility and freedom • Incremental PD • Assisted PD • Integrated dialysis care • Telemedicine • End-of-life comfort promotion • Cost efficiency in dialysis access management • Cost-efficiency in transfer policies among modalities 	<p>Threats</p> <ul style="list-style-type: none"> • Isolation • Technique failure • Infections • Minimal nurse training • Caregiver burnout • Conflict of interests within HD/PD Units • Inadequate business model making modality costlier than HD



The good physician treats the disease; the great physician treats the patient who has the disease.

~ William Osler