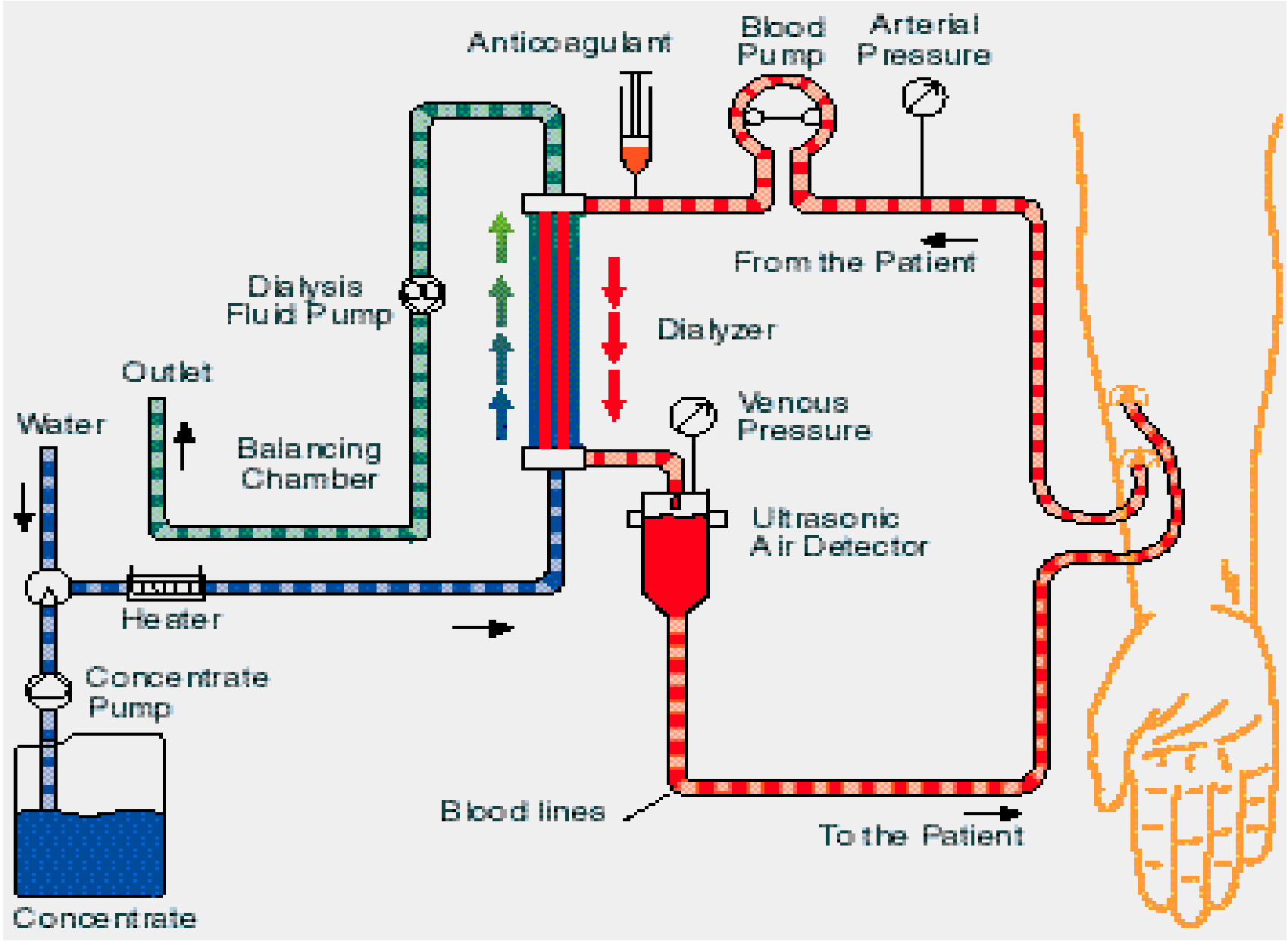
Ülkemizde Damar Yolu Sorunu ve Çözüm Yolları

Prof. Dr. Tevfik Ecder

İstanbul Bilim Üniversitesi Tıp Fakültesi

İç Hastalıkları Anabilim Dalı

Nefroloji Bilim Dalı


Anticoagulant
Blood Pump
Arterial Pressure
From the Patient
Dialysis Fluid Pump
Dialyzer
Outlet
Water
Balancing Chamber
Venous Pressure
Ultrasonic Air Detector
Heater
Concentrate Pump
Blood lines
To the Patient
Concentrate

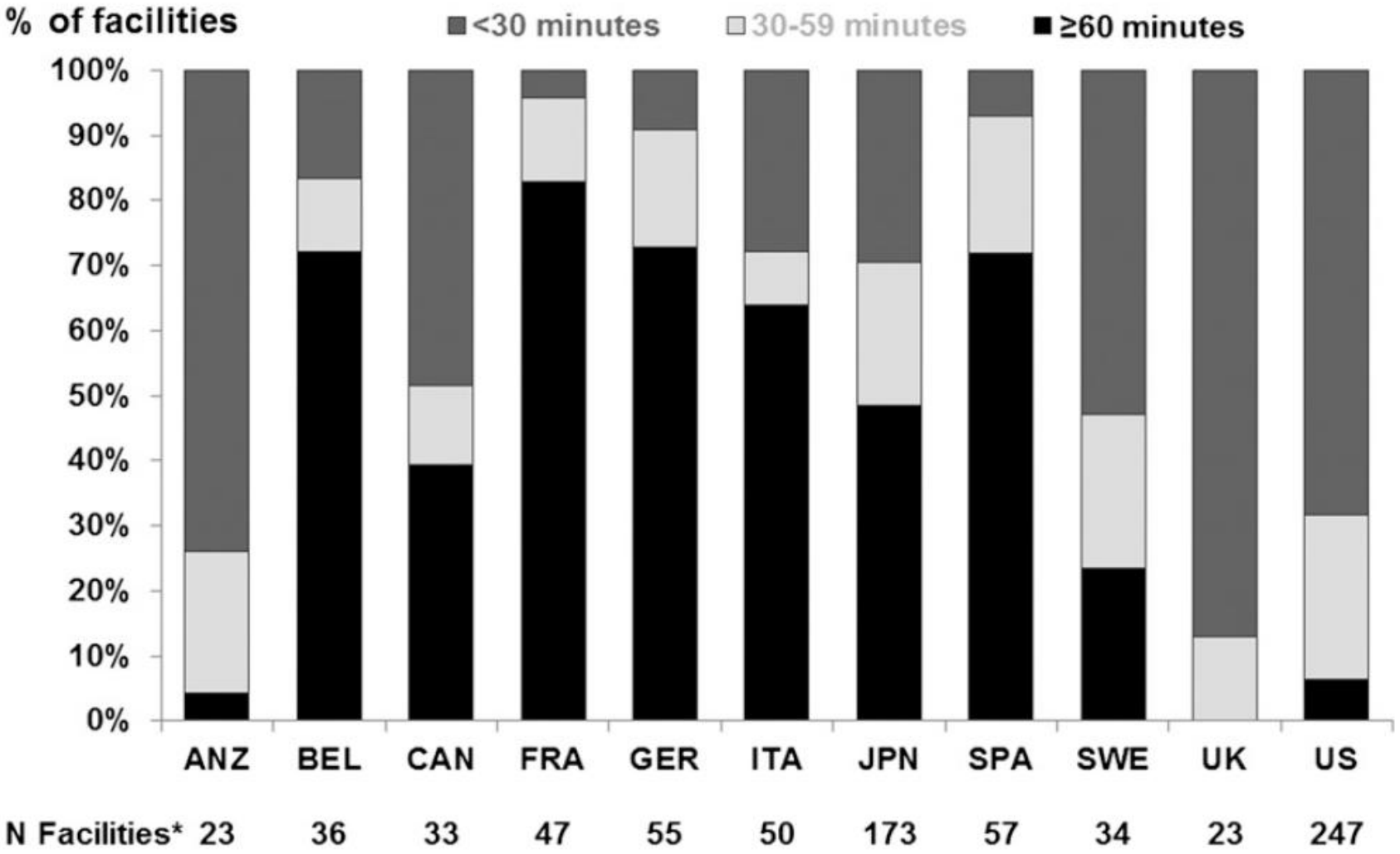
Associations of Frequency and Duration of Patient-Doctor Contact in Hemodialysis Facilities with Mortality

Takehiko Kawaguchi,* Angelo Karaboyas,† Bruce M. Robinson,† Yun Li,† Shunichi Fukuhara,‡ Brian A. Bieber,† Hugh C. Rayner,§ Vittorio E. Andreucci,‖ Ronald L. Pisoni,† Friedrich K. Port,† Hal Morgenstern,†¶ Tadao Akizawa,** and Rajiv Saran††

*Division of Nephrology, Department of Internal Medicine, National Hospital Organization Chiba-East Hospital, Chiba, Japan; †Arbor Research Collaborative for Health, Ann Arbor, Michigan; ‡Department of Epidemiology and Healthcare Research, Graduate School of Medicine and Public Health, Kyoto University, Kyoto, Japan; §Renal Medicine, Birmingham Heartlands Hospital, Birmingham, United Kingdom; ‖Universita Federico II di Napoli, Napoli, Italy; ¶Departments of Epidemiology and Environmental Health Services and ††Division of Nephrology, Department of Internal Medicine, Kidney Epidemiology and Cost Center, School of Public Health, University of Michigan, Ann Arbor, Michigan; and **Department of Nephrology, Showa University School of Medicine, Tokyo, Japan

DOPPS (*Dialysis Outcomes and Practice Patterns Study*) Çalışmasına Dahil Edilen 778 Merkezdeki 24,498 Hasta

Aylık Hasta-Doktor Diyaloğu



Kawaguchi et al.: J Am Soc Nephrol 24: 1493-1502, 2013

Hasta-Doktor Diyaloğu ve Mortalite

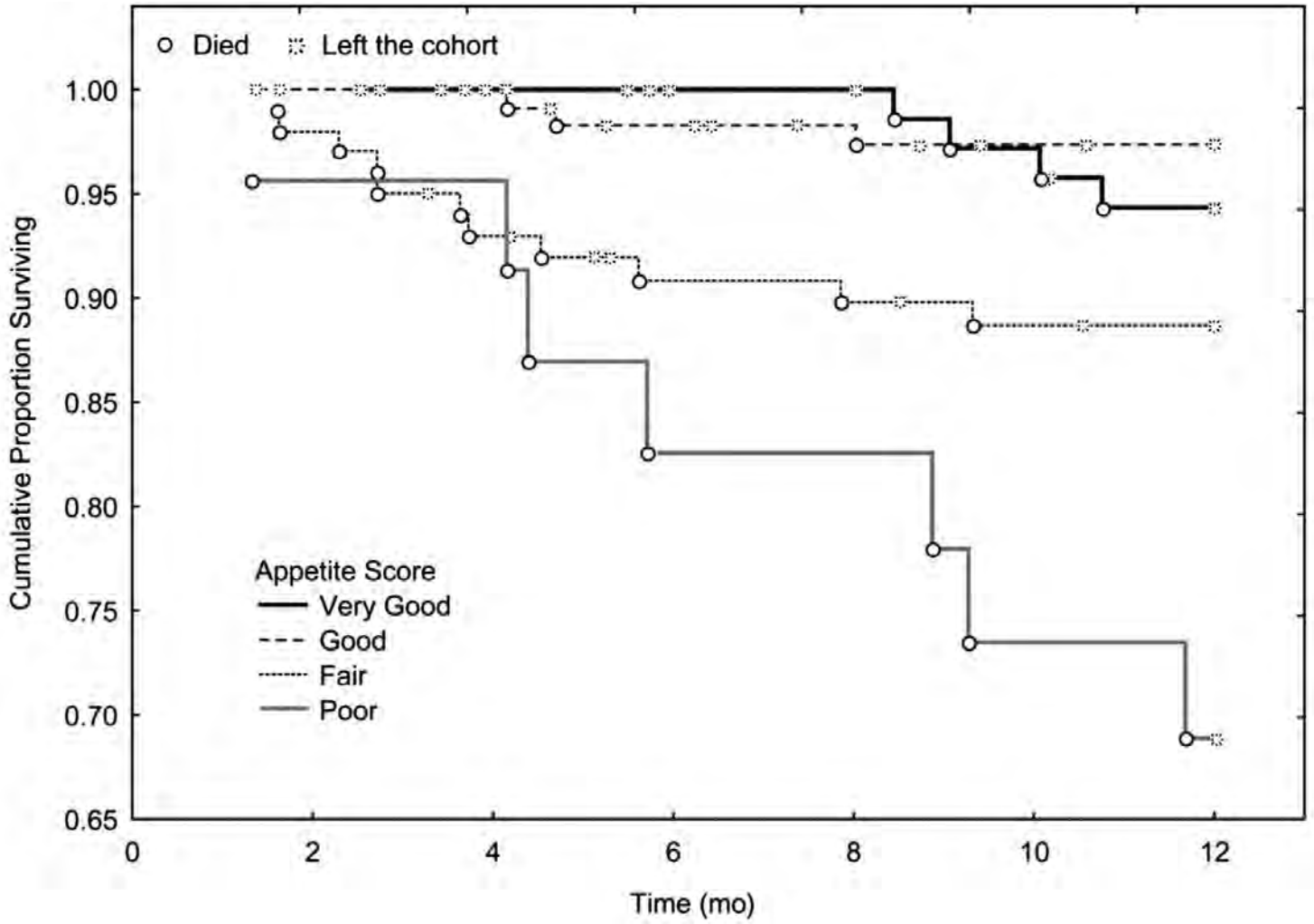
Table 3. Association (HR and 95% CI) of PDC Frequency and Duration with All-Cause Mortality, after Various Levels of Adjustment

All-Cause Mortality	Model 0	Model 1	Model 2	Model 3	Model 4	Model 4a	Model 4b
PDC frequency							
Low frequency (less than weekly)	1.08 (0.99 to 1.19)	1.11 (1.01 to 1.22)	1.11 (1.01 to 1.23)	1.11 (1.01 to 1.22)	1.08 (0.98 to 1.19)	1.11 (1.01 to 1.23)	
Intermediate frequency (weekly)	1.10 (1.00 to 1.21)	1.07 (0.97 to 1.19)	1.08 (0.97 to 1.19)	1.07 (0.97 to 1.18)	1.06 (0.96 to 1.16)	1.06 (0.96 to 1.17)	
High frequency (more than weekly)	1.00 (reference)	1.00 (reference)	1.00 (reference)	1.00 (reference)	1.00 (reference)	1.00 (reference)	
P for trend across categories	0.07	0.04	0.02	0.04	0.11	0.03	
PDC duration							
Per 5 min shorter duration	1.08 (1.04 to 1.12)	1.04 (1.00 to 1.08)	1.04 (1.00 to 1.08)	1.05 (1.01 to 1.09)	1.04 (1.01 to 1.08)		1.05 (1.01 to 1.09)
P for duration as continuous variable	<0.001	0.03	0.03	0.02	0.03		0.01
Categorical analysis							
Short duration (≤5 min)	1.23 (1.10 to 1.38)	1.11 (1.00 to 1.24)	1.11 (0.99 to 1.24)	1.12 (1.00 to 1.25)	1.11 (0.99 to 1.24)		1.13 (1.01 to 1.27)
Intermediate duration (6–10 min)	1.17 (1.03 to 1.32)	1.10 (0.98 to 1.24)	1.10 (0.98 to 1.24)	1.09 (0.97 to 1.23)	1.11 (0.99 to 1.25)		1.13 (1.00 to 1.28)
Long duration (>10 min)	1.00	1.00	1.00	1.00	1.00		1.00

Hasta-doktor diyaloğundaki her 5 dakika kısalma için ölüm riskinde %5 artış olmakta!

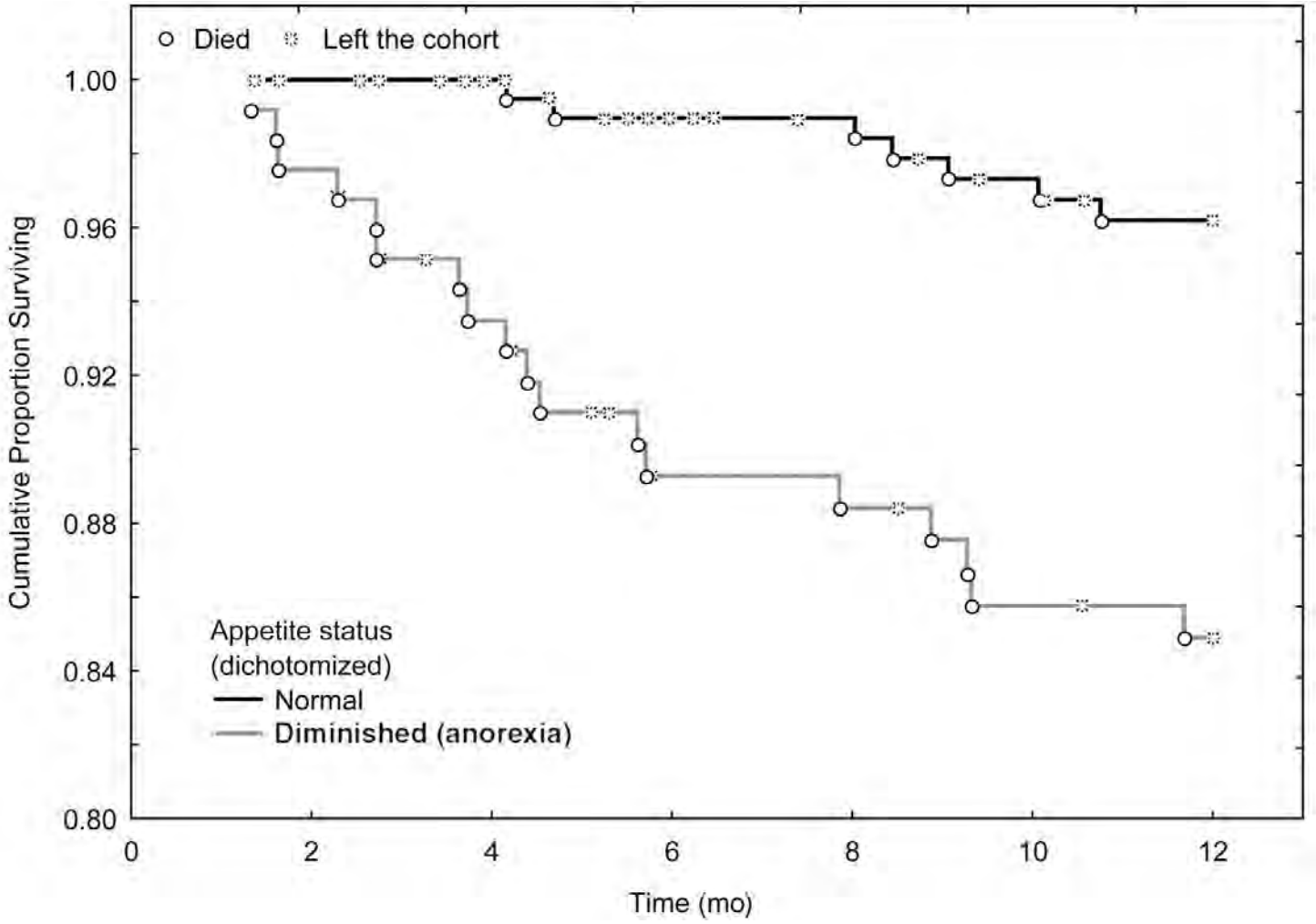
Kawaguchi et al.: J Am Soc Nephrol 24: 1493-1502, 2013

Hemodiyaliz Hastalarında İştah ve Sağkalım



Kalantar-Zadeh et al.: Am J Clin Nutr 80: 299-307, 2004

Hemodiyaliz Hastalarında İştah ve Sağkalım



Kalantar-Zadeh et al.: Am J Clin Nutr 80: 299-307, 2004

Önümüzdeki 1 yıl içinde bu hasta ölürse şaşırır mısınız?

Utility of the "Surprise" Question to Identify Dialysis Patients with High Mortality

Alvin H. Moss,*† Jesse Ganjoo,* Sanjay Sharma,* Julie Gansor,* Sharon Senft,* Barbara Weaner,* Cheryl Dalton,* Karen MacKay,* Beth Pellegrino,* Priya Anantharaman,* and Rebecca Schmidt*

*Section of Nephrology, Department of Medicine, School of Medicine, and †Center for Health Ethics and Law, Robert C. Byrd Health Sciences Center, West Virginia University, Morgantown, West Virginia

Background and objectives: Dialysis patients are increasingly characterized by older age, multiple comorbidities, and shortened life expectancy. This study investigated whether the "surprise" question, "Would I be surprised if this patient died in the next year?" identifies patients who are at high risk for early mortality.

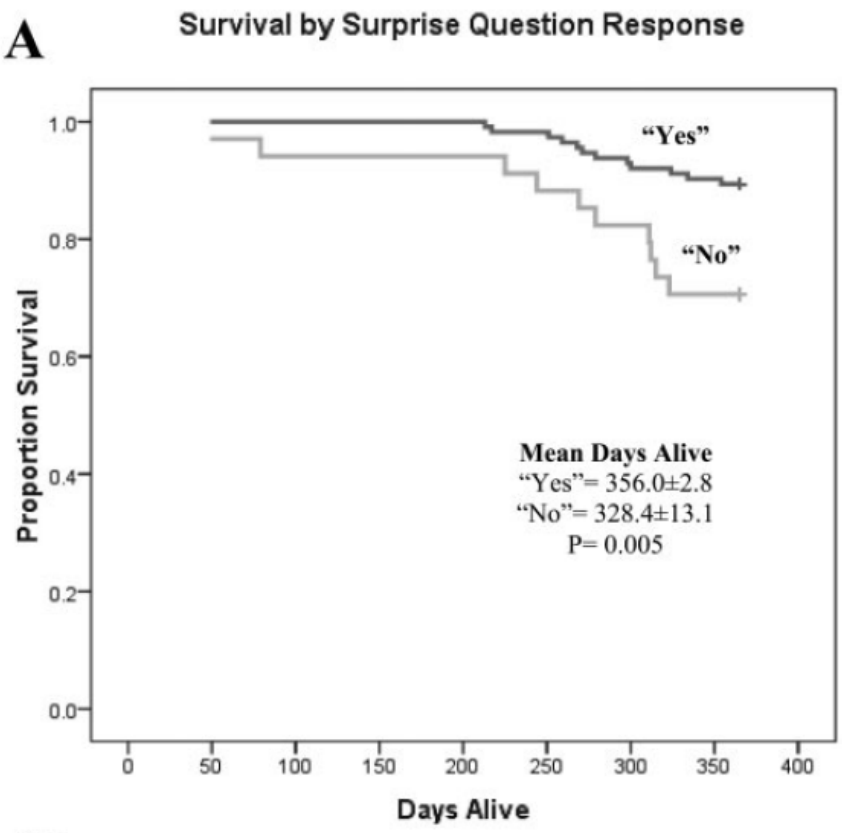
Design, setting, participants, & measurements: This prospective cohort study of 147 patients in three hemodialysis dialysis units classified patients into "yes" and "no" groups on the basis of the "surprise" question response and tracked patient status (alive or dead) at 12 mo. Demographics, Charlson Comorbidity Index score, and Karnofsky Performance Status score were measured.

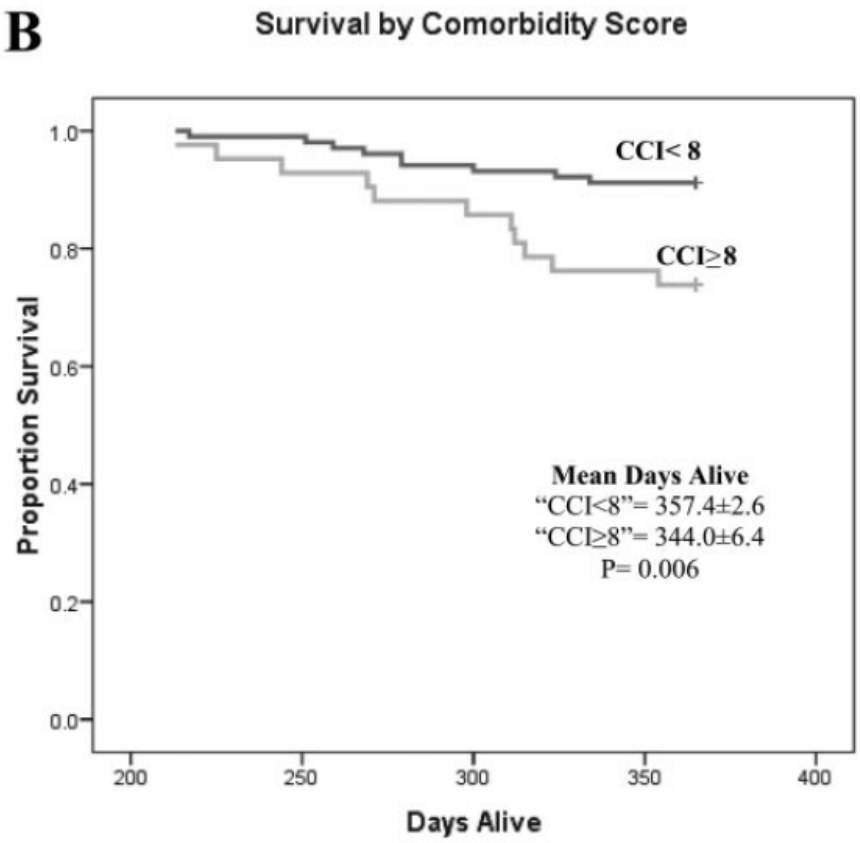
Results: Initially, 34 (23%) patients were classified in the "no" group. Compared with the 113 patients in the "yes" group, the patients in the "no" group were older (72.5 ± 12.8 *versus* 64.5 ± 14.9), had a higher comorbidity score (7.1 ± 2.3 *versus* 5.8 ± 2.1), and had a lower performance status score (69.7 ± 17.1 *versus* 81.6 ± 15.8). At 12 mo, 22 (15%) patients had died; the mortality rate for the "no" group was 29.4% and for the "yes" group was 10.6%. The odds of dying within 1 yr for the patients in the "no" group were 3.5 times higher than for patients in the "yes" group, (odds ratio 3.507, 95% CI 1.356 to 9.067, $P = 0.01$).

Conclusions: The "surprise" question is effective in identifying sicker dialysis patients who have a high risk for early mortality and should receive priority for palliative care interventions.

Clin J Am Soc Nephrol 3: 1379–1384, 2008. doi: 10.2215/CJN.00940208

Önümüzdeki 1 yıl içinde bu hasta ölürse şaşırır mısınız?





Moss et al.: Clin J Am Soc Nephrol 3: 1379-1384, 2008

Michelle L. Robbin, MD
Nathan E. Chamberlain, MD
Mark E. Lockhart, MD
Michael H. Gallichio, MD
Carlton J. Young, MD
Mark H. Deierhoi, MD
Michael Allon, MD

Hemodialysis Arteriovenous Fistula Maturity: US Evaluation[1]

Index terms:
Dialysis, shunts, 91.457
Fistula, arteriovenous, 91.12984, 91.12986, 91.457, 91.7173
Ultrasound (US), Doppler studies, 91.12984

Published online before print
10.1148/radiol.2251011367
Radiology 2002; 225:59–64

Abbreviations:
AVF = arteriovenous fistula
DOQI = Dialysis Outcome Quality Initiative
ROC = receiver operating characteristic

[1] From the Department of Radiology (M.L.R., M.E.L.), Division of Transplant Surgery (M.H.G., C.J.Y., M.H.D.), and Division of Nephrology (M.A.), University of Alabama at Birmingham, 619 19th St S, JTN350, Birmingham, AL 35249-6830; and Nephrology Associates, Chattanooga, Tenn (N.E.C.). From the 2001 RSNA scientific assembly. Received August 13, 2001; revision requested October 9; final revision received May 6, 2002; accepted May 14. **Address correspondence to** M.L.R. (e-mail: *mrobbin@uabmc.edu*).

PURPOSE: To compare various objective ultrasonographic (US) criteria for native arteriovenous fistula (AVF) maturation with subsequent fistula outcomes and clinical evaluation by experienced dialysis nurses.

MATERIALS AND METHODS: US fistula evaluation results were analyzed retrospectively in 69 patients within 4 months after AVF placement; adequacy for dialysis was known in 54. Measurements included minimum venous diameter and blood flow rate. Experienced dialysis nurses examined 30 fistulas clinically. Predictors of fistula adequacy were analyzed with univariate and multivariate logistic regression. Mean fistula diameters and blood flow rates were compared by using analysis of variance or unpaired Student *t* tests.

RESULTS: Fistula adequacy for dialysis doubled if the minimum venous diameter was 0.4 cm or greater (89% [24 of 27]) versus less than 0.4 cm (44% [12 of 27]; $P < .001$). Fistula adequacy for dialysis was nearly doubled if flow volume was 500 mL/min or greater (84% [26 of 31]) versus less than 500 mL/min (43% [nine of 21]; $P = .002$). Combining venous diameter and flow volume increased fistula adequacy predictive value: minimum venous diameter of 0.4 cm or greater and flow volume of 500 mL/min or greater (95% [19 of 20]) versus neither criterion met (33% [five of 15]; $P = .002$). Women were less likely to have an adequate fistula diameter of 0.4 cm or greater: 40% (12 of 30) of women versus 69% (27 of 39; $P = .015$) of men. No significant differences in blood flow or minimum venous diameter were found during 2–4 postoperative months. Experienced dialysis nurses' accuracy in predicting eventual fistula maturity was 80% (24 of 30).

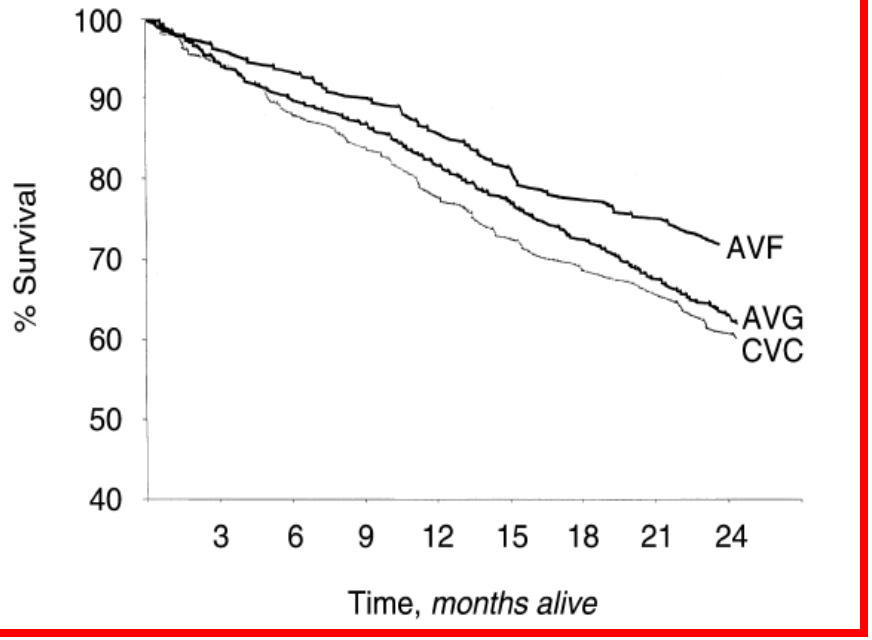
CONCLUSION: US measurements of AVF at 2–4 months in patients undergoing hemodialysis are highly predictive of fistula maturation and adequacy for dialysis.
© RSNA, 2002

Hemodiyaliz Hastasının Takip ve Tedavisi

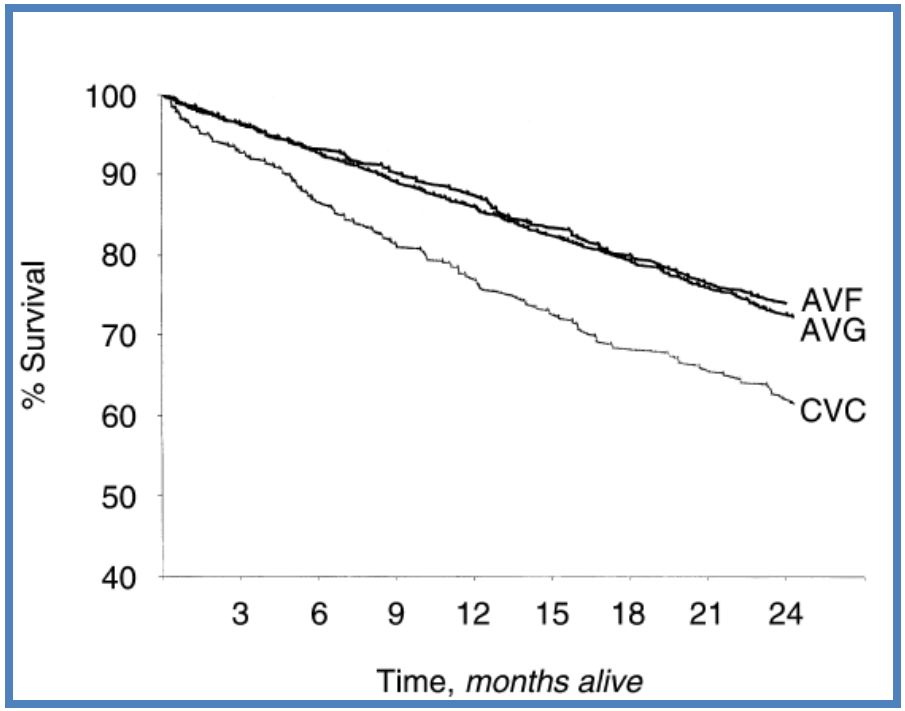
- Damar giriş yolunun sağlanması
- Yeterli diyalizin sağlanması
- Hacim kontrolü
- Kan basıncının kontrolü
- Aneminin tedavisi
- Sekonder hiperparatiroidinin tedavisi
- İmmünizasyon
- Transplantasyona hazırlık

Damar Giriş Yolu ve Sağkalım

Diyabetik Hastalar *(n=1628)*



Diyabetik Olmayan Hastalar *(n=3570)*

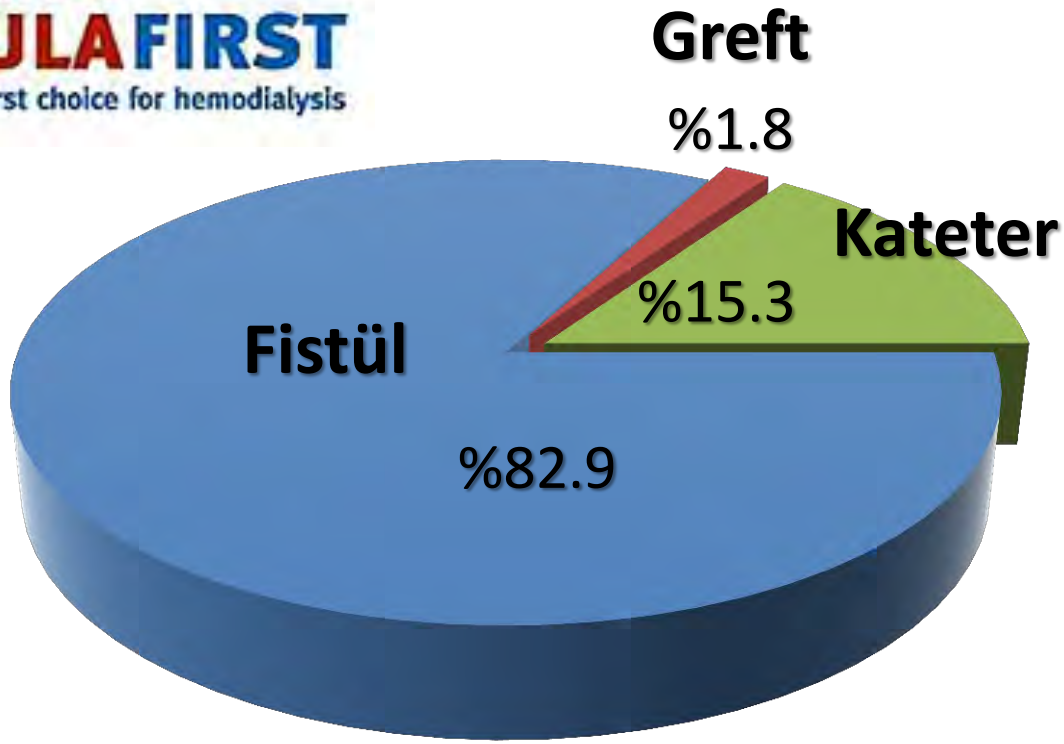


USRDS Verileri

Dhingra et al: Kidney Int 60: 1443-1451, 2001

Türkiye'deki Kronik Hemodiyaliz Hastalarının Damar Erişimi Yoluna Göre Dağılımı

arteriovenous
FISTULAFIRST
AVF — The first choice for hemodialysis



Türkiye'de Nefroloji, Diyaliz ve Transplantasyon, Registry 2013

Multidisipliner Yaklaşım

EKİP ÇALIŞMASI

Damar Yolu Sorunlarının Çözümü

Hekimin Sorumlulukları

Hemşirenin Sorumlulukları

Hastanın Sorumlulukları