ACTIVE Primary Results paper Online Supplementary Material

Contents

Appendix Tables

Appendix Figures

ACTIVE Dialysis Study Team

Steering Committee:

Hongli Lin*(First Affiliated Hospital of Dalian Medical University, Dalian, China)*, Josette Eris *(Concord Repatriation General and Royal Prince Alfred Hospitals, Sydney, Australia)*, Paul Snelling *(Concord Repatriation General and Royal Prince Alfred Hospitals, Sydney, Australia)*, Ling Zhang *(China-Japan Friendship Hospital, Beijing, China)*, Jinsheng Xu *(Fourth Hospital Affiliated to Hebei Medical University, Shijiazhuang, China)*, Junli Zhang *(The Chinese PLA Shanghai 85th Hospital, Shanghai, China)*, Carmel Hawley *(Princess Alexandra Hospital, Brisbane, Australia)*, Carolyn Van Eps *(Princess Alexandra Hospital, Brisbane, Australia)*, Bruce Cooper *(Royal North Shore Hospital, Sydney Australia)*, *Yinhui* Li *(Fourth Hospital Affiliated to Jilin University -FAW General Hospital, Changchun, China)*, Michael Suranyi *(Liverpool Hospital, Sydney, Australia)*, Jeff Wong *(Liverpool Hospital, Sydney, Australia)*, Li Zuo *(Peking University First Hospital, Beijing, China)*, *Ying* Li *(Third Hospital Affiliated to Hebei Medical University, Shijiazhuang, China)*, Nicholas Gray *(Nambour General Hospital, Nambour, Australia)*, Christopher T Chan *(Toronto General Hospital, Toronto, Canada)*, Janak de Zoysa *(North Shore Hospital and Auckland City Hospital, Auckland, New Zealand)*, Mei Wang *(Peking University People's Hospital, Beijing, China)*, Jiang Lei *(Peking University Shenzhen Hospital, Shenzhen, China)*, Zhangsuo Liu*(The First Affiliated Hospital of Zhengzhou University, Zhengzhou, China)*, Paul Collett *(Sydney Adventist Hospital, Sydney, Australia)*, Lanfen Xue*(Shijiazhuang First People's Hospital, Shijiazhuang, China)*, Nan Chen *(Ruijin Hospital Shanghai Jiaotong University, Shanghai, China)*, Yonghui Mao*(Beijing Hospital, Beijing, China)*, *Rongshan* Li*(The Second Affiliated Hospital of Shanxi Medical University, Taiyuan, China)*, Caili Wang *(First Affiliated Hospital of Inner Mongolia, Baotou Medical College, Baotou, China)*, Wen Huang *(Beijing Tongren Hospital, Beijing, China)*, Ping Fu *(West China Hospital, Sichuan University, Chengdu, China)*, Eugenia Pedagogos *(Royal Melbourne Hospitals, Melbourne, Australia)*, Kai Wang*(Civil Aviation General Hospital, Beijing, China)*, Shengrong Zhang*(Beijing Hospital of Traditional Chinese Medicine, Beijing, China)*, Dwarakanathan Ranganathan *(Royal Brisbane Hospital, Brisbane, Australia)*, Jijun Li*(First Affiliated Hospital of Chinese PLA General Hospital, Beijing, China)*, Bicheng Liu*(Zhongda Hospital, Southeast University, Nanjing, China)*, Michael Copland *(Vancouver Coastal Health, Vancouver, Canada)*, Jeffrey Perl *(St Michael's Hospital, Toronto, Canada)*, Peter Kerr *(Monash Medical Centre, Melbourne, Australia)*, Rebecca Pellicano *(Monash Medical Centre, Melbourne, Australia)*, Girish Talaulikar *(Canberra Hospital, Canberra, Australia)*, Richard Yu *(Royal Hobart Hospital, Hobart, Australia)*, Neil Boudville *(Royal Perth Hospital, Perth, Australia)*, Peter Mount (Austin Health, Melbourne, Australia), Murthy Divi (*Gold Coast Hospital)*, Imad Haloob (*Auckland City Hospital)*, Alan Cass (*The George Institute for Global Health, Sydney, Australia*), John Agar *(Geelong Hospital, Geelong, Australia)*, Kirsten Howard *(University of Sydney, Australia)*, Ashley Irish *(Royal Perth Hospital, Perth, Australia)*

Steering Committee Executive: Vlado Perkovic *(Steering Committee Chair)*; Meg Jardine *(Study Director)*, Alan Cass; Chris Chan *(Regional Lead Canada)*; Janak de Zoysa *(Regional Lead New Zealand)*; Martin Gallagher; Nicholas Gray *(Regional Lead Australia)*; Zuo Li *(Regional Lead China)*

Study Sites:

(Auckland City Hospital, New Zealand) Janak de Zoysa, Imad Haloob, Grace Muyoma; *(Austin Health, Australia)* Pascal Bisscheroux, Peter Mount, Kathy Paizis, Matthew Robert; (Canberra Hospital, Australia) Patricia Johnson, Girish Talaulikar, Giles Walters; *(Beijing Hospital of Ministry of Health, China)* Yonghui Mao, Ying Sun, Songlan Wang; *(Beijing Hospital of Traditional Chinese Medicine, China)* Yufang Duan, Yuan Meng, Mingxia Sun, Shengrong Zhang; *(Beijing Tongren Hospital Capital Medical University, China)* Wen Huang, Wen Zhang; *(China-Japan Friendship Hospital, China)* Duo Li, Qian Liu, Ling Zhang, Yumei Zhang; *(Civil Aviation General Hospital, China)* Wang Bei, Kai Wang, Hongying Yang; *(Concord Repatriation General Hospital and Royal Prince Alfred Hospitals, Australia)* Jenny Burman, Josette Eris, Martin Gallagher, Samantha Hand, Meg Jardine, Shaundeep Sen, Paul Snelling; *(Diamond Health Centre Vancouver, Canada)* Katy Vela, Michael Copland, Jeffery Gardner, Matthew Paquette, Daniel Rogers, Lina Sioson; *(FAW General Hospital (Jilin University Fourth Hospital), China)* Gen Li, Yinhui Li, Ke Ma; *(First Affiliated Hospital of Chinese PLA General Hospital, China)* Fengkun Chen, Jijun Li; *(First Affiliated Hospital of Dalian Medical University, China)* Dan Liu, Hongli Lin, Yanling Sun, Jing Wang; *(First Affiliated Hospital of Inner Mongolia, Baotou Medical College, China)* Liping Liu, Lei Nan, Yingjin Shi, Caili Wang; *(Gold Coast Hospital, Australia)* Murthy Divi, Sandra Lawrence; *(Hebei Medical University Fourth Hospital, China)* Yaling Bai, Lei He, Jinsheng Xu, Shenglei Zhang; *(Hebei Medical University Third Hospital, China)* Qingqing Duan, Ying Li, Lihong Zhang; *(Liverpool Hospital, Australia)* Josephine Chow, Angela Makris, Ananthakrishnapuram Aravindan, Bruce Cleland, Margaret Gilbert, Bruce Hall, Kenneth Howlin, Andrew Jeffreys, Glenda Rayment, Stephen Timothy Spicer, Michael Suranyi, Jeffery Wong, Belinda Yip; *(Monash Medical Centre, Australia)* Fiona Brown, Peter Kerr, Jyotsna Nandkumar, Rebecca Pellicano, Kevan Polkinghorne, Maryanne Quinn; *(Nambour General Hospital, Australia)* Victoria Campbell, Carolyn Clark, Nicholas Gray, Peter Hollett,

Colleen Johnston, Kumar Mahadevan, Euan Noble, Andrea Pollock; *(North Shore Hospital, New Zealand)* Janak de Zoysa, Grace Muyoma; *(Peking University First Hospital, China)* Xuyang Cheng, Xiaomei Li, Li Zuo, Yuqing Chen; *(Peking University Peoples Hospital, China)* Liangying Gan, Mei Wang, Hongjie Yang; *(Peking University Shenzhen Hospital, China)* Lei Jiang, Jinnan Liao, Yue Zhang, Lei Zheng; *(Princess Alexandra Hospital, Australia)* Scott Campbell, Amanda Coburn, Carmel Hawley, Jean Helyar, Nicole Isbel, David Johnson, Joanna Sudak, Carolyn Van Eps; *(Royal Brisbane and Womens Hospital, Australia)* Helen Healy, Julie Owens, Dwarakanathan Ranganathan, Sharadchandra Kanneyalal Ratanjee, Rebecca Russo; *(Royal Hobart Hospital, Australia)* Melanie Clark, Roslyn Hamilton, Sharonne Hennessy, Matthew Jose, Geoffrey Kirkland, Gail Read, Richard Yu; *(Royal Melbourne Hospital, Australia)* Kathy Nicholls, Kym Boekel, Gloria Bruno, Peter Hughes, Michael Lian, Eugenia Padagogos, Matija Raspudic, Rowan Walker; *(Royal North Shore Hospital, Australia)* Bruce Cooper, Cheryl Macadam, Vlado Perkovic, Muh Geot Wong; *(Ruijin Hospital Shanghai Jiaotong University School of Medicine, China)* Chen Nan, Jiajie Wu, Xiaonong Chen; *(Shijiazhuang First People's Hospital, China)* Ling Cui, Na Liu, Lanfen Xue, Guoxin Zhang; *(Sir Charles Gairdner Hospital, Australia)* Neil Boudville, Helen Herson, Susan Pellicano; *(St Michael's Hospital, Canada)* Sheen Anthony, Stella Curvelo, Niki Dacouris, Strauss Diane, Jenny Hucule, Perl Jeff, Murji KarimaRosa Marticorena, Mauricio Medrano, Ron Wald; *(Sydney Adventist Hospital, Australia)* Paul Collett, Meg Jardine, Vlado Perkovic, Karen Sutherland, Debbie Talafua; *(The Chinese Peoples Liberation Army Shanghai 85th Hospital, China)* Hongdi Huan, Chunlai Lu, Junli Zhang, Jingjing Song; *(The First Affiliated Hospital of Zhengzhou University, China)* Zhangsuo Liu, Xiaoqing Lu, Pei Wang; *(The Second Hospital of Shanxi Medical University, China)* Qingjiang Hu, Rongshan Li, Xinyan Liu; *(Toronto General Hospital, Canada)* Christopher Chan, Margaret McGrath-Chong, Katherine Tsong; *(West China Hospital of Sichuan University, China)* Li Zhou, Ping Fu; *(Zhong Da Hospital Southeast University, China)* Min Gao, Bicheng Liu, Lichen Xu.

Management Committee:
Vlado Perkovic *(Steering Committee Chair)*; Meg Jardine *(Study Director)*; Alan Cass; Martin Gallagher; Helen Monaghan *(Senior Project Manager)*

Central Co-ordinating Centre (Sydney and Beijing)
(Data Management, The George Institute for Global Health, Sydney, Australia) Manuela Armenis, Bijini Bahuleyan, Dominic Byrne, Louise Ham, Leonie Pearson, Suzie Steley; *(International Coordinating Centre, The George Institute for Global Health, Sydney, Australia)* Rebecca Anderson, Ana Carreras, Alan Cass, Swamy Chintapatla, Eleanora Fjalling, Moya Flancman, Martin Gallagher, Jason Healey, Josephine Hsu, Meg Jardine, Min Jun, Tam Le, Nicola Martin, Mamta Merai, Helen Monaghan, Sue Murray, Sue Murray, Ayana Ono, Vlado Perkovic, Josephine Raley, Tanya Scotcher, Brendan Smyth, Amanda Wang; *(Radiology, SMRI, Sydney, Australia; Sydney Medical School, University of Sydney, Australia; Peking University First Hospital, Beijing China)* Stuart Grieve, Chi-Jen Hsu, Helen Lackey, Sarah Leighton, Raj Puranik, Yufeng Xu; *(Regional Coordinating Centre, George Clinical, Beijing, China)* Ying Guo, Ruolan Jia, Tingting Lei, Jicheng Lv, Zhang Qian, Li Shi, Lei Ting Ting, Xiaoting Wei, Xinfang Xie, Damin Xu, Fanli Zhou, Hui Zhou; *(Statistics, The George Institute for Global Health, Sydney, Australia)* Laurent Billot, Severine Bompoint, Stephane Heritier, Serigne Lo, Jayanthi Mysore, Kha Vo.

DSMB:
Laurent Billot (unblinded statistician) *(The George Institute for Global Health, Sydney, Australia)*, Gavin Becker *(The Royal Melbourne Hospital, Melbourne, Australia)*, Andrew Forbes *(Monash University, Melbourne, Australia)*, Adeera Levin *(University of British Columbia, Vancouver, Canada)*, Marcello Tonelli (Chair) *(University of Alberta, Edmonton, Canada)*, Zhihong Liu (*Nanjing University School of Medicine, Nanjing, China)*

Methods

Imputation

Single imputation was performed for EQ-5D defined quality of life if the measure was missing in accordance with the EQ-5D User Guide (www.euroqol.org). If the patient died before the 12 months follow-up then quality of life was scored as 0. If the patient reached the end of the study duration before 12 months or if the quality of life score at 12 month was missing then the last available measure was used. There was no imputation for LVMI as there was only one post-randomisation measure.

Equation for stdKt/v

Standardised kt/v was calculated using the following equations described in the 2015 Update of the KDOQI Clinical Practice Guideline for Hemodialysis Adequacy[1] to estimate true std Kt/v from spKt/v. The fixed volume model was used as measures of residual native kidney clearance were not collected in this study. Residual native clearance is likely to have been negligible for most participants given the median duration on dialysis of 2.5 years at recruitment.

$$eKt/V = spKt/V\,(t/(t+30))$$

$$stdKt/V = \frac{10{,}080\,\frac{1-e^{-eKt/V}}{t}}{\frac{1-e^{-eKt/V}}{eKt/V} + \frac{10{,}080}{Nt} - 1}$$

1. Daugirdas JT, Depner TA, Inrig J, Mehrotra R, Rocco MV, Suri RS, Weiner DE, Greer N, Ishani A, MacDonald R, Olson C, Rutks I, Slinin Y, Wilt TJ, Rocco M, Kramer H, Choi MJ, Samaniego-Picota M, Scheel PJ, Willis K, Joseph J, Brereton L. KDOQI Clinical Practice Guideline for Hemodialysis Adequacy: 2015 Update. *Am. J. Kidney Dis.* 2015;66(5):884-930.

Appendix Table 1. Blood flow rate (mls/min) and dialysis flow rate (mls/min) by treatment group over study period

	Standard		Extended		
	Mean (SD)	Median (IQR)	Mean (SD)	Median (IQR)	p-value
Blood flow rate (mls/min)					
Baseline	278.6 (36.8)	280.0 (250.0; 300.0)	279.2 (39.8)	288.0 (250.0; 300.0)	
Follow up	283.8 (48.4)	280.0 (250.0; 300.0)	261.6 (42.9)	250.0 (230.0; 300.0)	0.0010
Dialysate flow rate (mls/min)					
Baseline	503.9 (84.5)	500.0 (500.0; 500.0)	514.0 (69.7)	500.0 (500.0; 500.0)	
Follow up	502.3 (71.7)	500.0 (500.0; 500.0)	478.4 (64.4)	500.0 (500.0; 500.0)	0.0215

P-values are from a Linear mixed model with random intercept including randomisation and time categories with baseline as reference

Appendix Table 2. Details of dialysis treatment characteristics used throughout the study

Characteristic		Standard N=100	Extended N=100	Total N=200
Membrane	Asahi	3.0%	1.0%	2.0%
	Baxter	6.0%	7.0%	6.5%
	Baxter then Bellco	1.0%	0.0%	0.5%
	Bellco	0.0%	1.0%	0.5%
	D-Tec	1.0%	1.0%	1.0%
	Fresenius	67.0%	70.0%	68.5%
	Fresenius then Nipro	1.0%	0.0%	0.5%
	Gambro	9.0%	9.0%	9.0%
	Nipro	6.0%	2.0%	4.0%
	Toray	1.0%	0.0%	0.5%
	Wego	2.0%	2.0%	2.0%
	Not reported	3.0%	7.0%	5.0%
Flux	High	89.0%	82.0%	85.5%
	Low	7.0%	10.0%	8.5%
	High then low	1.0%	0.0%	0.5%
	Low then high	0.0%	1.0%	0.5%
	Not reported	3.0%	7.0%	5.0%
Biocompatibility	Cellulose	4.0%	3.0%	3.5%
	Synthetic	93.0%	90.0%	91.5%
	Not reported	3.0%	7.0%	5.0%

Characteristics of dialysis treatment were mostly constant throughout the study. Proportions of those whose dialysis treatments changed during the study are indicated. Seven participants were treated with cellulose membranes throughout the study: 1 in Australia, 1 in Canada and 5 in China.

Appendix Table 3. Number of patients with measures of small molecule clearance at baseline and throughout follow up by dialysis location[1]

	In-center and satellite-based participants		Home-based participants	
	Baseline	Follow up[2]	Baseline	Follow up
	N=149	N=145	N=51	N=49
Urea Reduction Ratio (%)	78 (52.3%)	99 (68.3%)	32 (62.7%)	26 (53.1%)
Kt/V	47 (31.5%)	66 (45.5%)	28 (54.9%)	25 (51.0%)

1. ACTIVE used values obtained from routine clinical practice. Not all participants had a measure of small molecular clearance measured every 3 months. The table depicts the numbers of patients who had measures of small molecular clearance during the study.
2. Numbers in followup exclude participants who had withdrawn or died before follow-up assessments

Appendix Table 4. Impact of extended dialysis hours on measures of small molecule clearance among participants with baseline measures

	Standard		Extended		Between-Group difference	p-value
	n	mean (sd)	n	mean (sd)	Mean difference (95% CI)	
Urea Reduction Ratio (%)						
Baseline	58	69.67 (10.29)	52	72.35 (8.52)	2.67 (-0.92, 6.27)	
3-month	55	69.62 (9.29)	50	78.06 (8.84)	8.44 (4.92, 11.96)	
6-month	52	69.65 (8.63)	45	79.82 (6.89)	10.17 (6.99, 13.35)	
9-month	48	68.40 (9.58)	47	77.68 (8.22)	9.29 (5.65, 12.92)	
12-month	49	69.49 (8.97)	52	75.85 (9.51)	6.36 (2.70, 10.01)	
Average intervention effect[1]					7.12 (4.91, 9.33)	<.0001
Single pool Kt/v						
Baseline	42	1.39 (0.35)	33	1.43 (0.31)	0.04 (-0.11, 0.19)	
3-month	41	1.47 (0.40)	34	1.96 (0.74)	0.50 (0.23, 0.76)	
6-month	39	1.41 (0.33)	35	1.95 (0.69)	0.54 (0.29, 0.78)	
9-month	36	1.40 (0.30)	34	1.93 (0.56)	0.54 (0.33, 0.75)	
12-month	37	1.40 (0.26)	33	1.83 (0.61)	0.43 (0.21, 0.65)	
Average intervention effect[1]					0.48 (0.27, 0.68)	<.0001
Standardised Kt/V[2]						
Baseline	42	2.53 (0.42)	33	2.76 (0.85)	0.23 (-0.07, 0.53)	
3-month	41	2.72 (0.55)	34	3.81 (1.39)	1.10 (0.63, 1.57)	
6-month	39	2.56 (0.46)	35	4.25 (3.86)	1.69 (0.45, 2.93)	
9-month	36	2.83 (1.51)	34	3.65 (0.92)	0.83 (0.23, 1.43)	
12-month	37	2.83 (1.40)	33	3.62 (1.20)	0.79 (0.17, 1.42)	
Average intervention effect[1]					1.29 (0.61, 1.96)	0.0003

1. Average effect of intervention for all followup visits adjusted for baseline.
2. Calculated from measuring spKt/V using a fixed volume model. Residual kidney function data was not collected in the study.

Appendix Table 5. Baseline characteristics of participants contributing to MRI analyses of the ACTIVE Dialysis Trial

Characteristics	Standard (N = 44)	Extended (N = 51)	Total (N = 95)
Age at randomisation (years)			
Mean (SD)	50.2 (12.08)	50.0 (13.23)	50.1 (12.64)
Median (Q1, Q3)	51.0 (42.0, 58.9)	50.5 (39.6, 62.1)	50.9 (40.2, 59.4)
Gender			
Male	26/44 (59.1%)	31/51 (60.8%)	57/95 (60.0%)
Female	18/44 (40.9%)	20/51 (39.2%)	38/95 (40.0%)
Primary cause of renal disease			
Diabetic Nephropathy	17/44 (38.6%)	11/51 (21.6%)	28/95 (29.5%)
Hypertension/Vascular Nephrosclerosis	4/44 (9.1%)	5/51 (9.8%)	9/95 (9.5%)
Glomerulonephritis	16/44 (36.4%)	23/51 (45.1%)	39/95 (41.1%)
Reflux Nephrology	1/44 (2.3%)	1/51 (2.0%)	2/95 (2.1%)
Polycystic Kidney Disease	1/44 (2.3%)	4/51 (7.8%)	5/95 (5.3%)
Other or unknown	5/44 (11.4%)	7/51 (13.8%)	12/95 (12.7%)
Co-morbidity			
Diabetes Mellitus	20/44 (45.5%)	15/51 (29.4%)	35/95 (36.8%)
Hypertension	36/44 (81.8%)	40/51 (78.4%)	76/95 (80.0%)
Any Cardiovascular disease	14/44 (31.8%)	12/51 (23.5%)	26/95 (27.4%)
Symptomatic Ischaemic Heart Disease	6/44 (13.6%)	5/51 (9.8%)	11/95 (11.6%)
Angina	3/44 (6.8%)	2/51 (3.9%)	5/95 (5.3%)
Acute Myocardial Infarction	1/44 (2.3%)	1/51 (2.0%)	2/95 (2.1%)
Previous Coronary Artery Bypass Graft/ Percutaneous Transluminal Coronary Angioplasty	3/44 (6.8%)	2/51 (3.9%)	5/95 (5.3%)
Congestive Heart Failure	7/44 (15.9%)	5/51 (9.8%)	12/95 (12.6%)
Cerebrovascular Disease	2/44 (4.5%)	3/51 (5.9%)	5/95 (5.3%)
Peripheral Vascular Disease	5/44 (11.4%)	1/51 (2.0%)	6/95 (6.3%)
Smoking status			
Never smoked	27/44 (61.4%)	32/51 (62.7%)	59/95 (62.1%)
Past cigarette smoker	9/44 (20.5%)	9/51 (17.6%)	18/95 (18.9%)
Current cigarette smoker	8/44 (18.2%)	10/51 (19.6%)	18/95 (18.9%)
Country			
Australia	11/44 (25.0%)	18/51 (35.3%)	29/95 (30.5%)
Canada	2/44 (4.5%)	3/51 (5.9%)	5/95 (5.3%)
China	29/44 (65.9%)	30/51 (58.8%)	59/95 (62.1%)
New Zealand	2/44 (4.5%)	0/51 (0.0%)	2/95 (2.1%)
Ethnicity			
Caucasian	7/44 (15.9%)	12/51 (23.5%)	19/95 (20.0%)
Aboriginal or Torres Strait Islander	0/44 (0.0%)	1/51 (2.0%)	1/95 (1.1%)
Maori	1/44 (2.3%)	2/51 (3.9%)	3/95 (3.2%)
Pacific Islander	3/44 (6.8%)	2/51 (3.9%)	5/95 (5.3%)
Asian	31/44 (70.5%)	32/51 (62.7%)	63/95 (66.3%)

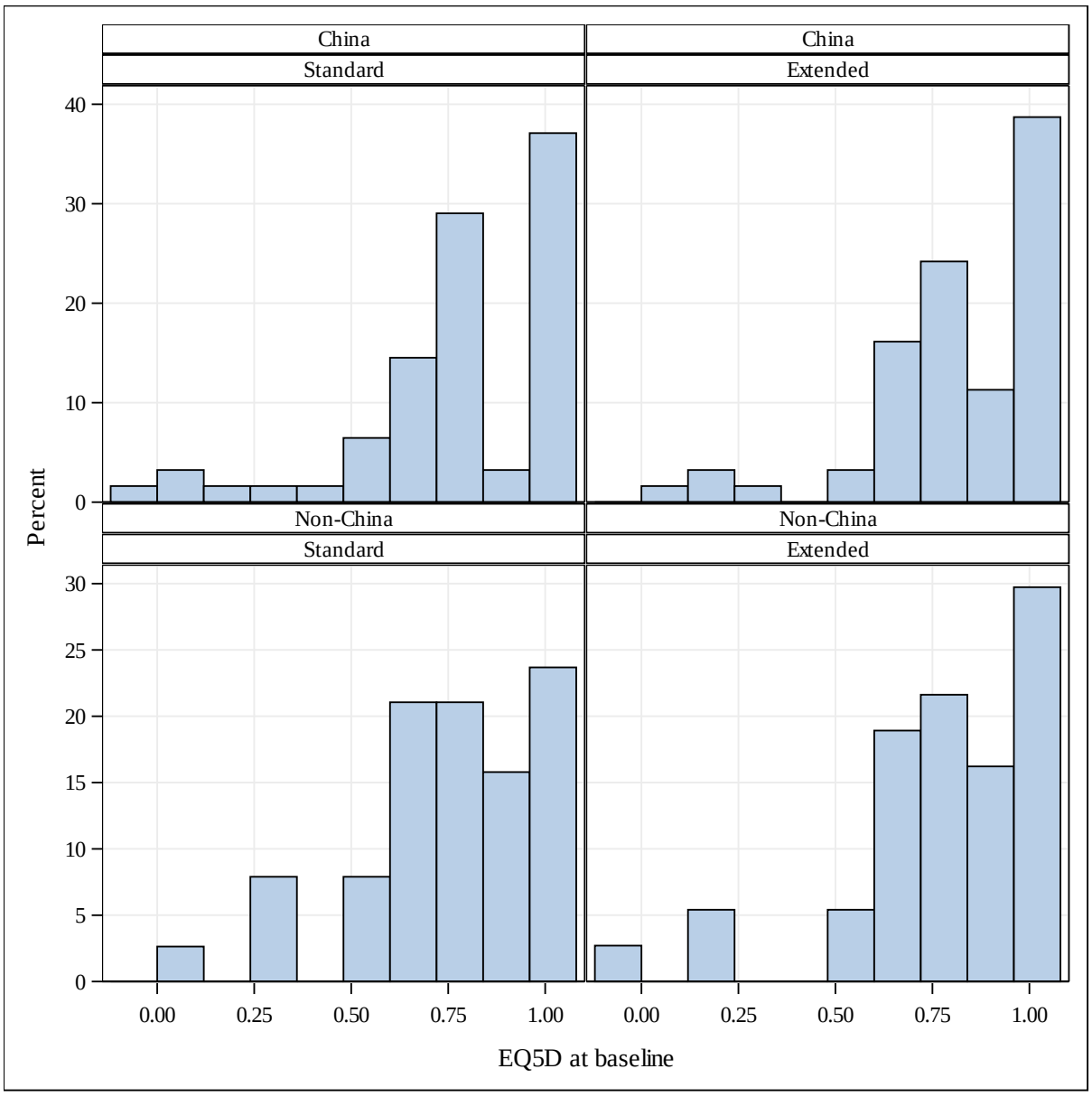
Characteristics	Standard (N = 44)	Extended (N = 51)	Total (N = 95)
Indian	0/44 (0.0%)	0/51 (0.0%)	0/95 (0.0%)
Other	2/44 (4.5%)	1/51 (2.0%)	3/95 (3.2%)
Not reported	0/44 (0.0%)	1/51 (2.0%)	1/95 (1.1%)
Number of dialysis sessions per week			
2	1/44 (2.3%)	0/51 (0.0%)	1/95 (1.1%)
3	39/44 (88.6%)	44/51 (86.3%)	83/95 (87.4%)
4 or more	4/44 (9.1%)	7/51 (13.8%)	11/95 (11.7%)
Total number of hours on dialysis per week			
Mean (SD)	13.4 (2.58)	13.6 (2.50)	13.5 (2.53)
Median (Q1, Q3)	12.0 (12.0, 15.0)	12.0 (12.0, 15.0)	12.0 (12.0, 15.0)
Duration on dialysis at enrolment, median (IQR) in years	2.20 (1.04, 5.19)	2.43 (0.54, 5.35)	2.24 (0.71, 5.35)
Dialysis site at enrolment			
At home	12/44 (27.3%)	13/51 (25.5%)	25/95 (26.3%)
Institution	32/44 (72.7%)	38/51 (74.5%)	70/95 (73.7%)
Intended Dialysis site for study treatment			
Home	6/44 (13.6%)	3/51 (5.9%)	9/95 (9.5%)
Institution (Satellite Centre/Hospital)	38/44 (86.4%)	48/51 (94.1%)	86/95 (90.5%)
Dialysis access			
Native arteriovenous fistula	35/44 (79.5%)	45/51 (88.2%)	80/95 (84.2%)
Synthetic fistula	1/44 (2.3%)	1/51 (2.0%)	2/95 (2.1%)
Tunnelled dialysis catheter	7/44 (15.9%)	4/51 (7.8%)	11/95 (11.6%)
Non-tunnelled dialysis catheter	1/44 (2.3%)	1/51 (2.0%)	2/95 (2.1%)
Dialysis cannulation method			
The Buttonhole technique	8/44 (18.2%)	10/51 (19.6%)	18/95 (18.9%)
The Rope Ladder technique	28/44 (63.6%)	36/51 (70.6%)	64/95 (67.4%)
Dialysis Catheter	8/44 (18.2%)	5/51 (9.8%)	13/95 (13.7%)
Pre-dialysis blood pressure			
Systolic Blood Pressure, mean (SD) in mmHg	143.5 (20.04)	141.9 (15.94)	142.6 (17.87)
Diastolic Blood Pressure, mean (SD) in mmHg	81.3 (13.29)	81.3 (11.85)	81.3 (12.47)
Body Mass Index, median (IQR) in kg/m2	24.3 (23.0, 28.9)	24.1 (21.6, 26.6)	24.2 (22.4, 27.7)
Left ventricular mass index[2], mean (SD) in g/m2	103.64 (30.68)	106.48 (36.39)	105.16 (33.72)

Appendix Table 6. Number (%) of participants with missing data for secondary outcomes

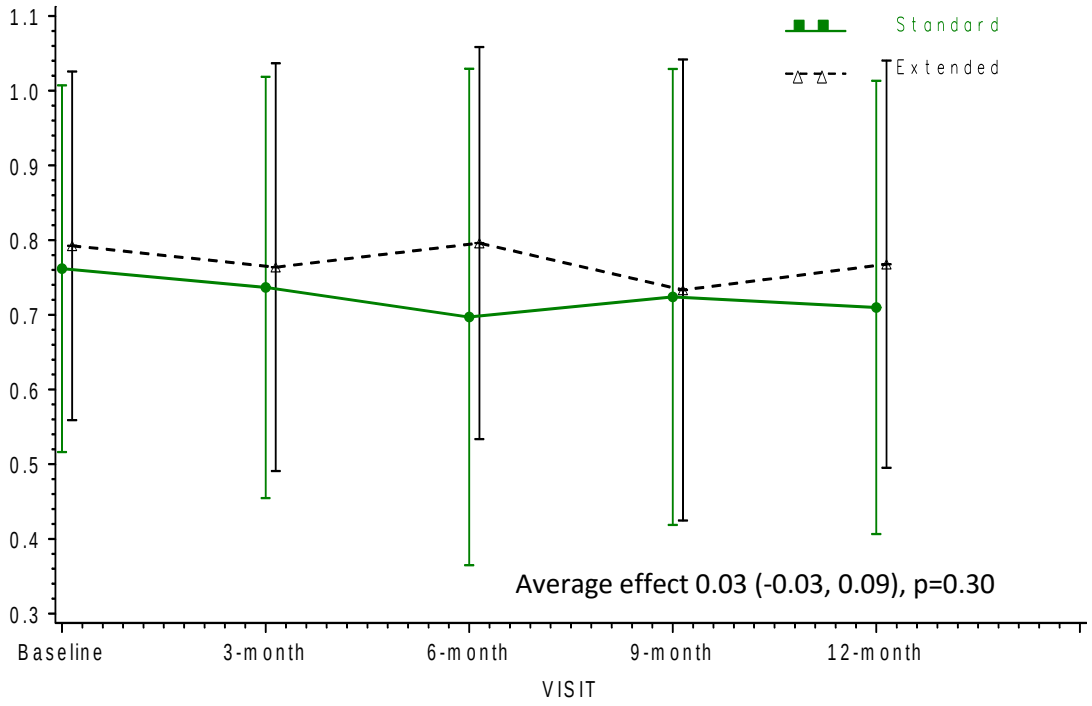
Parameter	No baseline measure	No follow-up measure
	n=200	n=194[1]
Systolic Blood Pressure (mmHg)	0 (0.0%)	3 (1.5%)
Diastolic Blood Pressure (mmHg)	0 (0.0%)	3 (1.5%)
BP lowering agents (number)	0 (0.0%)	2 (1.0%)
Potassium (meq/L)	3 (1.5%)	2 (1.0%)
Phosphate (mg/dL)	3 (1.5%)	3 (1.5%)
PTH (pg/mL)	25 (12.5%)	6 (3.1%)
Phosphate binders (number of tablets)	0 (0.0%)	2 (1.0%)
Calcium (mg/dl)	3 (1.5%)	3 (1.5%)
Hemoglobin (g/dl)	2 (1.0%)	2 (1.0%)
ESA dose (EPO units)	2 (1.0%)	2 (1.0%)
Ferritin (ng/ml)	46 (23.0%)	27 (13.9%)
Transferrin saturation (%)	65 (32.5%)	45 (23.2%)
Weight (kg)	1 (0.5%)	3 (1.5%)
Waist:hip ratio (cm:cm)	0 (0.0%)	4 (2.1%)
Albumin (g/dL)	22 (11.0%)	15 (7.7%)

1. Numbers eligible for follow-up assessments excludes participants who had withdrawn or died before follow-up assessments

Appendix Figure 1. Distribution of baseline EQ5D scores in ACTIVE participants according to randomisation and location in China or Australia/Canada/New Zealand



Appendix Figure 2. Evolution of EQ5D scores through the study with the average effect from all follow-up visits



Appendix Figure 3. Impact of extended dialysis hours on change in left ventricular mass index at 12 months according to prespecified subgroup analyses defined by region, dialysis setting and months on dialysis at baseline