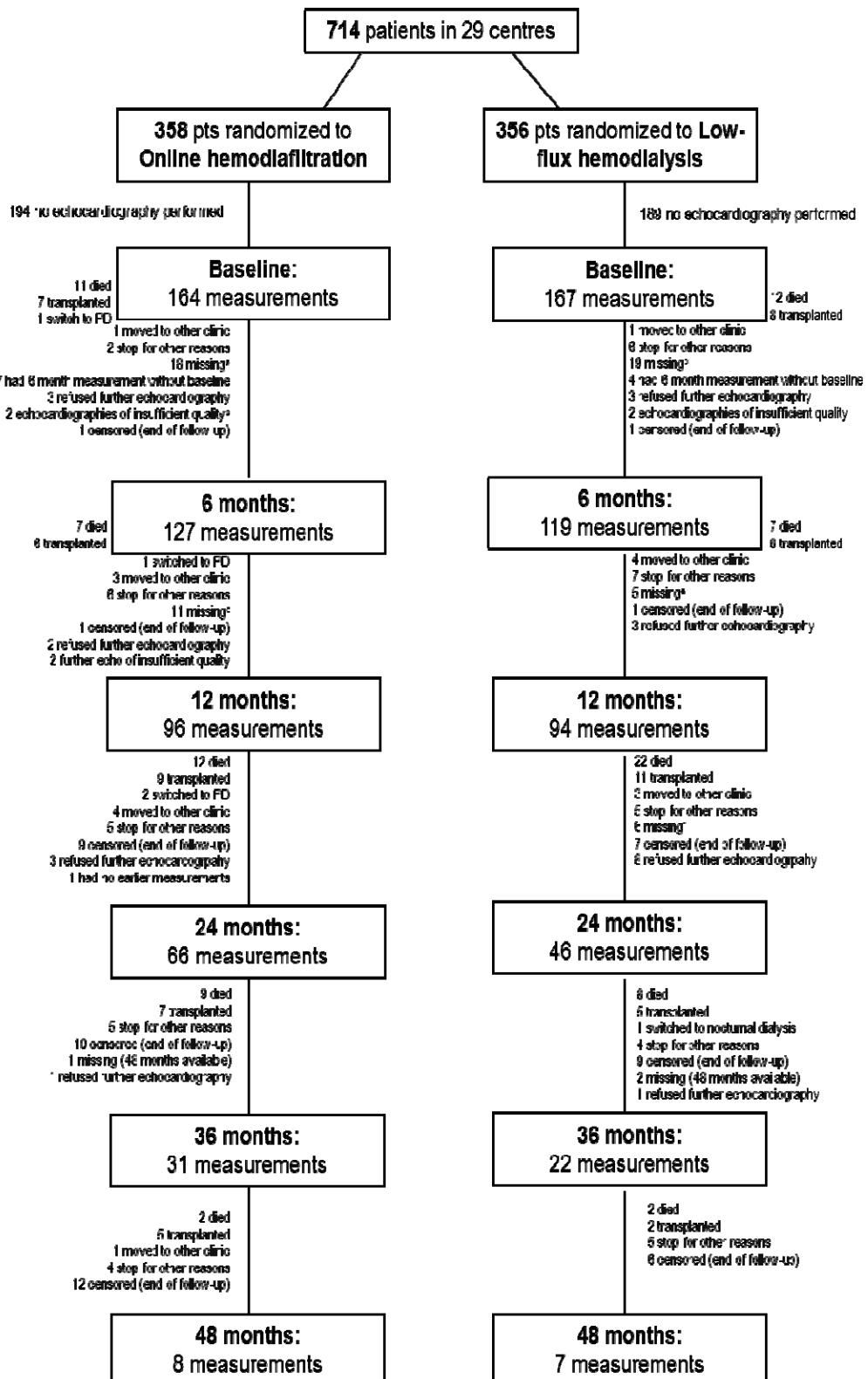
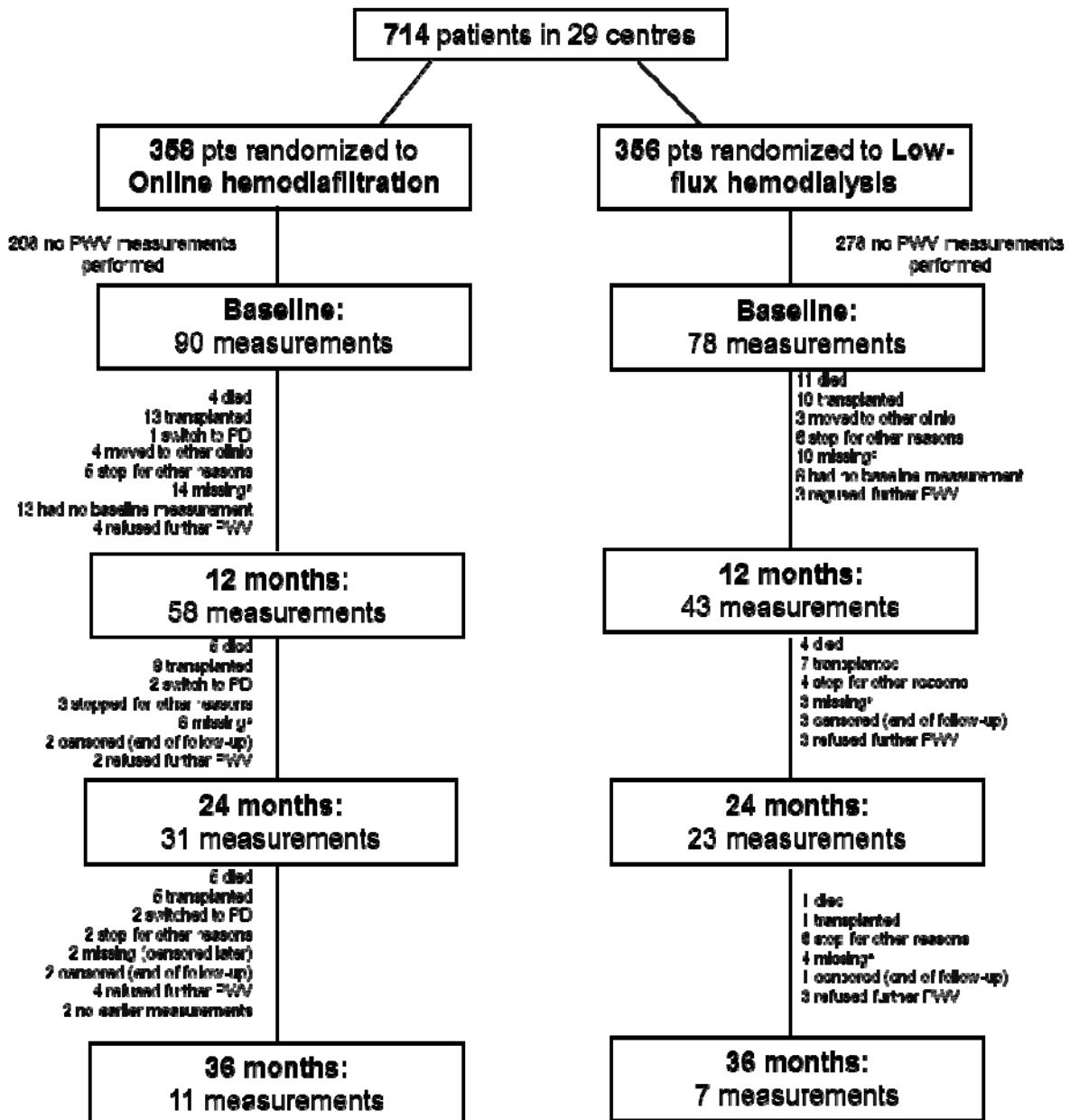


1 Supplementary Figure 1: Flowchart of echocardiography cohort.



- 1   <sup>a</sup>8 available at 12 months, 9 available at 24 months, 2 available at 36 months  
2   <sup>b</sup>3 echocardiographies of insufficient quality from baseline; 2 echocardiographies of insufficient  
3   quality from baseline measurement on  
4   <sup>c</sup>6 available at 24 months, 5 available at 36 months  
5   <sup>d</sup>10 available at 12 months, 9 available at 24 months  
6   <sup>e</sup>5 available at 24 months  
7   <sup>f</sup>6 available at month 36  
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1 Supplementary Figure 2: Flowchart of the pulse wave velocity cohort.



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3 <sup>a</sup>6 available at 24 months, 1 transplanted later, 2 died later, 5 censored (end of follow-up) later

4 <sup>b</sup>3 available at 36 months, 3 died later, 1 transplanted later, 1 censored (end of follow-up) later

5 <sup>c</sup>3 available at 24 months, 2 died later, 1 stopped for other reasons later, 4 censored (end of follow-up) later

7 <sup>d</sup>1 available at 36 months, 1 transplanted later, 1 censored later

8 <sup>e</sup>1 died later, 3 censored later

1      Supplementary **Table 1a**: Baseline characteristics of patients receiving echocardiography versus  
 2      the other participants of the CONvective TRAnsport Study.

	echo cor cohort n=331	other CONTRAST participants n=383	p-value
<b>Demographic data</b>			
Gender (% male)	61	63	0.60
Race (% caucasian)	81	87	0.06
Age (year)	63.1 ± 13.3	64.9 ± 13.9	0.08
<b>Anthropometrics</b>			
BMI (kg/m <sup>2</sup> )	25.4 ± 4.9	25.3 ± 4.7	0.78
Body Surface Area (m <sup>2</sup> )	1.84 ± 0.21	1.86 ± 0.21	0.41
<b>Dialysis Properties</b>			
Duration of dialysis (minute)	226 ± 23	227 ± 23	0.48
Blood flow (mL/minute)	309 ± 36	307 ± 41	0.48
Kt/V <sub>urea</sub>	1.39 ± 0.20	1.40 ± 0.23	0.28
<b>Comorbidities</b>			
Cardiovascular disease (%)	45	43	0.74
Diabetes (%)	27	23	0.29
Kidney Transplant (%)	9	12	0.16
Dialysis vintage (year)	2.92 ± 2.81	2.93 ± 2.84	0.96
Patients with residual renal function (%)	52	53	0.80
<b>Hemodynamic measurements</b>			
Systolic blood pressure, pre-dialysis (mm Hg)	148 ± 21	147 ± 22	0.45
Diastolic blood pressure, pre-dialysis (mm Hg)	77 ± 12	75 ± 13	0.07
Pulse pressure, pre-dialysis (mmHg)	72 ± 19	72 ± 17	0.75
Systolic blood pressure, post-dialysis (mmHg)	136 ± 22	134 ± 21	0.23
Diastolic blood pressure, post-dialysis (mm Hg)	72 ± 11	70 ± 12	0.16
Pulse pressure, post-dialysis (mmHg)	64 ± 19	64 ± 16	0.89

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4      AV: arterio-venous; BMI: body mass index.

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1      Supplementary **Table 1b:** Baseline characteristics of patients receiving PWV measurements  
 2      versus the other participants of the CONvective TRAnsport Study.

	aPWV cohort n=168	other CONTRAST participants n=546	p-value
<b>Demographic data</b>			
Gender (% male)	67	25	0.28
Race (% caucasian)	82	84	0.53
Age (year)	60.0 ± 13.9	64.9 ± 13.5	<0.001
<b>Anthropometrics</b>			
BMI (kg/m <sup>2</sup> )	24.4 ± 2.6	25.6 ± 5.0	0.015
Body Surface Area (m <sup>2</sup> )	1.84 ± 0.20	1.85 ± 0.22	0.69
<b>Dialysis Properties</b>			
Duration of dialysis (minute)	229 ± 22	226 ± 23	0.18
Blood flow (mL/minute)	311 ± 31	307 ± 42	0.60
Kt/V <sub>urea</sub>	1.38 ± 0.18	1.40 ± 0.22	0.13
<b>Comorbidities</b>			
Cardiovascular disease (%)	41	45	0.43
Diabetes (%)	27	25	0.51
Kidney Transplant (%)	14	10	0.26
Dialysis vintage (year)	2.76 ± 2.77	2.96 ± 2.84	0.46
Patients with residual renal function (%)	50	53	0.58
<b>Hemodynamic measurements</b>			
Systolic blood pressure, pre-dialysis (mm Hg)	148 ± 24	148 ± 21	0.72
Diastolic blood pressure, pre-dialysis (mm Hg)	78 ± 12	75 ± 12	0.013
Pulse pressure, pre-dialysis (mmHg)	70 ± 21	72 ± 17	0.21
Systolic blood pressure, post-dialysis (mmHg)	135 ± 23	135 ± 21	0.80
Diastolic blood pressure, post-dialysis (mm Hg)	74 ± 12	70 ± 10	0.002
Pulse pressure, post-dialysis (mmHg)	61 ± 19	65 ± 17	0.08

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5      AV: arterio-venous; BMI: body mass index.

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1      Supplementary **Table 2a**: Baseline patient characteristics by duration of follow-up time in  
 2      patients who underwent echocardiography.

	<1 year of follow-up n=64	1-3 years of follow-up n=171	>3 years of follow-up n=92	p-value
<b>Demographic data</b>				
Gender (% male)	50	65	63	0.12
Race (% caucasian)	84	79	80	0.40
Age (year)	62.2 ± 13.4	64.0 ± 13.4	62.0 ± 13.1	0.45
<b>Anthropometrics</b>				
Body Mass Index (kg/m <sup>2</sup> )	25.0 ± 4.8	25.7 ± 4.9	25.3 ± 5.0	0.55
Body Surface Area (m <sup>2</sup> )	1.81 ± 0.24	1.83 ± 0.22	1.84 ± 0.19	0.30
<b>Dialysis Properties</b>				
Duration of dialysis (minute)	229 ± 22	224 ± 23	226 ± 22	0.47
Blood flow (mL/minute)	309 ± 55	314 ± 27	301 ± 35	0.33
Kt/V <sub>urea</sub>	1.39 ± 0.21	1.40 ± 0.21	1.35 ± 0.18	0.18
<b>Comorbidities</b>				
Cardiovascular disease (%)	48	41	48	0.47
Diabetes (%)	18	29	29	0.28
Kidney Transplant (%)	14	7	10	0.24
Dialysis vintage (year)	3.19 ± 2.72	2.86 ± 2.79	2.88 ± 2.93	0.77
Patients with residual renal function (%)	45	54	54	0.47
<b>Hemodynamic measurements</b>				
Systolic blood pressure, pre-dialysis (mm Hg)	146 ± 23	148 ± 21	151 ± 20	0.32
Diastolic blood pressure, pre-dialysis (mm Hg)	78 ± 12	76 ± 11	77 ± 12	0.47
Pulse pressure, pre-dialysis (mmHg)	68 ± 19	72 ± 19	74 ± 18	0.16
Systolic blood pressure, post-dialysis (mmHg)	133 ± 24	137 ± 23	134 ± 19	0.41
Diastolic blood pressure, post-dialysis (mm Hg)	71 ± 14	72 ± 11	71 ± 11	0.67
Pulse pressure, post-dialysis (mmHg)	63 ± 17	65 ± 20	63 ± 17	0.58

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1      Supplementary **Table 2b**: Baseline patient characteristics by duration of follow-up time in  
 2      patients who underwent PWV measurements.

	<1 year of follow-up n=25	1-3 years of follow-up n=53	>3 years of follow-up n=45	p-value
<b>Demographic data</b>				
Gender (% male)	68	62	71	0.64
Race (% caucasian)	84	77	87	0.55
Age (year)	59.8 ± 12.9	61.3 ± 13.7	58.7 ± 14.7	0.67
<b>Anthropometrics</b>				
Body Mass Index (kg/m <sup>2</sup> )	25.5 ± 4.3	24.5 ± 4.0	24.3 ± 3.4	0.67
Body Surface Area (m <sup>2</sup> )	1.85 ± 0.22	1.83 ± 0.21	1.86 ± 0.18	0.88
<b>Dialysis Properties</b>				
Duration of dialysis (minute)	233 ± 22	227 ± 23	229 ± 22	0.53
Blood flow (mL/minute)	328 ± 45	315 ± 27	297 ± 29	0.06
Kt/V <sub>urea</sub>	1.34 ± 0.18	1.37 ± 0.26	1.34 ± 0.16	0.72
<b>Comorbidities</b>				
Cardiovascular disease (%)	48	34	44	0.40
Diabetes (%)	8	25	27	0.18
Kidney Transplant (%)	84	91	82	0.46
Dialysis vintage (year)	2.87 ± 1.99	2.53 ± 2.46	2.96 ± 3.43	0.72
Patients with residual renal function (%)	44	55	49	0.66
<b>Hemodynamic measurements</b>				
Systolic blood pressure, pre-dialysis (mm Hg)	147 ± 23	147 ± 25	151 ± 23	0.64
Diastolic blood pressure, pre-dialysis (mm Hg)	81 ± 11	78 ± 10	77 ± 13	0.51
Pulse pressure, pre-dialysis (mmHg)	66 ± 19	69 ± 23	74 ± 20	0.28
Systolic blood pressure, post-dialysis (mmHg)	136 ± 27	136 ± 23	134 ± 22	0.90
Diastolic blood pressure, post-dialysis (mm Hg)	74 ± 15	74 ± 10	72 ± 13	0.69
Pulse pressure, post-dialysis (mmHg)	62 ± 20	61 ± 20	61 ± 19	0.99

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1      Supplementary **Table 3**: Changes over time of left ventricular mass (LVM) indexed for body surface area (LVMi) and LVM indexed for height<sup>2,7</sup> in post-  
 2      dilution online hemodiafiltration and low-flux hemodialysis.

Follow-up	Mean change in concentration ( $\Delta$ ) per year (95% CI)				HDF versus HD P for slope	
	HDF		HD			
	$\Delta$	P	$\Delta$	P		
<b>1 year</b>						
LVMi (g/m <sup>2</sup> )	1.97 (-7.32 to 11.26)	0.68	6.42 (-2.23 to 15.07)	0.15	0.19	
LVM/height <sup>2,7</sup>	0.29 (-2.01 to 2.59)	0.80	1.19 (-0.94 to 3.32)	0.27	0.06	
<b>3 years</b>						
LVMi (g/m <sup>2</sup> )	-0.91 (-6.04 to 4.23)	0.73	6.51 (-0.23 to 13.27)	0.06	0.19	
LVM/height <sup>2,7</sup>	-0.26 (-1.30 to 0.79)	0.63	1.10 (-0.44 to 2.64)	0.16	0.08	
<b>4 years</b>						
LVMi (g/m <sup>2</sup> )	-0.38 (-5.39 to 4.61)	0.88	6.55 (-0.05 to 13.15)	0.05	0.13	
LVM/height <sup>2,7</sup>	-0.05 (-1.10 to 1.00)	0.92	1.13 (-0.35 to 2.62)	0.13	0.09	

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1 Supplementary **Table 4a**: Left ventricular mass changes in hemodiafiltration versus hemodialysis in various subgroups of patients.

Subgroups	Mean change in LVM in grams ( $\Delta$ ) per year (95% CI)				HDF versus HD	
	HDF		HD		P for slope	P for interaction time*HDF*subgroup
	$\Delta$	P	$\Delta$	P		
Age $\leq$ 64.9 years	-2.77 (-14.32 to 8.97)	0.63	-1.74 (-14.98 to 11.49)	0.79	0.10	0.26
Age $>$ 64.9 years	0.93 (-9.08 to 10.93)	0.85	18.04 (0.52 to 35.56)	0.044		
Male	-1.57 (-9.95 to 6.80)	0.71	4.17 (-9.75 to 18.10)	0.55	0.54	0.83
Female	1.52 (-8.76 to 11.81)	0.77	10.05 (-7.49 to 27.60)	0.25		
RKF	-2.54 (-11.75 to 6.67)	0.59	12.61 (-7.71 to 32.93)	0.20	0.17	0.34
No RKF	3.16 (-10.26 to 16.59)	0.63	1.98 (-10.39 to 14.16)	0.76		
CVD	3.22 (-5.74 to 12.17)	0.48	0.57 (-13.80 to 14.92)	0.94	0.55	0.90
No CVD	0.58 (-8.49 to 9.64)	0.89	12.50 (-3.39 to 28.38)	0.12		
Diabetes	-1.56 (-16.16 to 13.04)	0.83	-4.52 (-26.68 to 17.65)	0.67	0.79	0.34
No diabetes	-1.00 (-9.91 to 7.92)	0.82	10.40 (-2.49 to 23.28)	0.11		
Dialysis vintage $\leq$ 2 years	6.62 (-8.67 to 21.89)	0.38	4.86 (-7.92 to 17.64)	0.45	0.88	0.33
Dialysis vintage $>$ 2 years	-4.57 (-12.87 to 3.73)	0.28	7.58 (-12.61 to 27.76)	0.41		

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3 CVD: cardiovascular disease; RKF: residual kidney function.

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1   Supplementary **Table 4b:** Ejection fraction changes in hemodiafiltration versus hemodialysis in various subgroups of patients.

Subgroups	Mean change in EF in % ( $\Delta$ ) per year (95% CI)				HDF versus HD	
	HDF		HD		P for slope	P for interaction time*HDF*subgroup
	$\Delta$	P	$\Delta$	P		
Age ≤ 64.9 years	-0.32 (-3.26 to 2.62)	0.83	-4.21 (-7.08 to -1.35)	0.005	0.90	0.27
Age > 64.9 years	-0.35 (-3.32 to 2.61)	0.81	-2.30 (-7.06 to 2.46)	0.34		
Male	-1.12 (-4.19 to 1.95)	0.47	-3.22 (-6.38 to -0.05)	0.047	0.22	0.81
Female	-0.60 (-4.24 to 3.03)	0.74	-3.39 (-7.48 to 0.69)	0.10		
RKF	-0.14 (-2.94 to 2.68)	0.92	-1.69 (-5.77 to 2.37)	0.41	0.57	0.75
No RKF	1.47 (-0.92 to 3.86)	0.23	-4.92 (-7.94 to -1.89)	0.002		
CVD	-0.37 (-3.76 to 3.02)	0.82	-2.76 (-6.44 to 0.92)	0.14	0.60	0.59
No CVD	-0.35 (-3.01 to 2.31)	0.79	-3.97 (-7.47 to -0.47)	0.027		
Diabetes	-2.31 (-5.87 to 1.25)	0.19	-2.09 (-8.04 to 3.88)	0.48	0.96	0.39
No diabetes	0.32 (-2.19 to 2.83)	0.80	-3.86 (-6.78 to -0.95)	0.010		
Dialysis vintage ≤ 2.0 years	-1.23 (-4.00 to 1.53)	0.38	-2.66 (-6.83 to 1.51)	0.21	0.22	0.67
Dialysis vintage > 2.0 years	0.79 (-2.34 to 3.92)	0.61	-3.83 (-6.97 to -0.69)	0.018		

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3   CVD: cardiovascular disease; RKF: residual kidney function.

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1 Supplementary **Table 4c**: Pulse wave velocity changes in hemodiafiltration versus hemodialysis in various subgroups of patients.

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Subgroups	Mean change in PWV in m/s ( $\Delta$ ) per year (95% CI)					
	HDF		HD		HDF versus HD	
	$\Delta$	P	$\Delta$	P	P for slope	P for interaction time*HDF*subgroup
Age $\leq$ 61.7 years	-0.15 (-1.03 to 0.74)	0.73	-0.01 (-0.80 to 0.79)	0.99	0.99	0.95
Age > 61.7 years	-0.23 (-1.75 to 1.30)	0.76	-0.24 (-1.48 to 1.00)	0.69		
Male	-0.13 (-1.26 tot 1.01)	0.82	0.02 (-0.92 to 0.96)	0.96	0.81	0.94
Female	-0.36 (-1.68 to 0.96)	0.56	-0.28 (-1.28 to 0.73)	0.57		
RKF	-0.49 (-1.65 to 0.67)	0.39	0.12 (-0.83 to 1.08)	0.79	0.43	0.28
No RKF	0.35 (-0.84 to 1.54)	0.53	-0.25 (-1.18 to 0.68)	0.58		
CVD	0.14 (-1.40 to 1.69)	0.85	0.23 (-1.08 to 1.55)	0.70	0.91	0.88
No CVD	-0.58 (-1.34 to 0.30)	0.20	-0.24 (-1.04 to 0.57)	0.55		
Diabetes	-0.88 (-3.49 to 1.73)	0.48	-0.03 (-2.30 to 2.85)	0.98	0.51	0.48
No diabetes	0.08 (-0.65 to 0.78)	0.86	-0.14 (-0.83 to 0.56)	0.69		
Dialysis vintage $\leq$ 2.0 years	-0.10 (-0.86 to 0.65)	0.78	0.05 (-0.99 to 1.09)	0.92	0.99	0.84
Dialysis vintage > 2.0 years	-0.30 (-2.04 to 1.46)	0.73	-0.21 (-1.15 to 0.73)	0.65		

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4 CVD: cardiovascular disease; RKF: residual kidney function.

