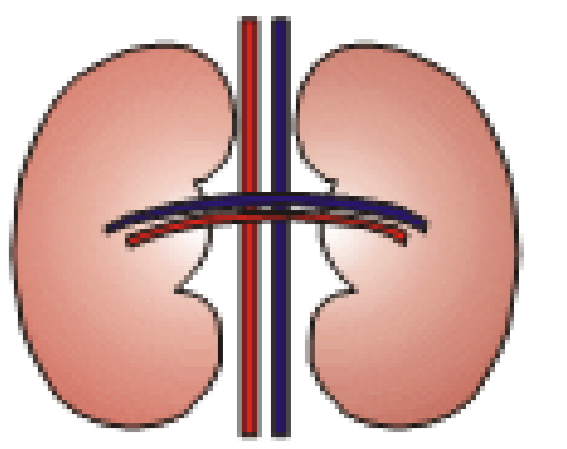


STROKE IN PATIENTS ON MAINTENANCE HEMODIALYSIS: A 10-YEAR SINGLE CENTER STUDY



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Introduction and aims

● Stroke is the third most common cause of cardiovascular disease death in pts on hemodialysis (HD), but the implications for mortality after stroke in these pts are not fully understood.

● The aim of this study was to examine predictive value for stroke death of various clinical variables after long-term HD

Methods

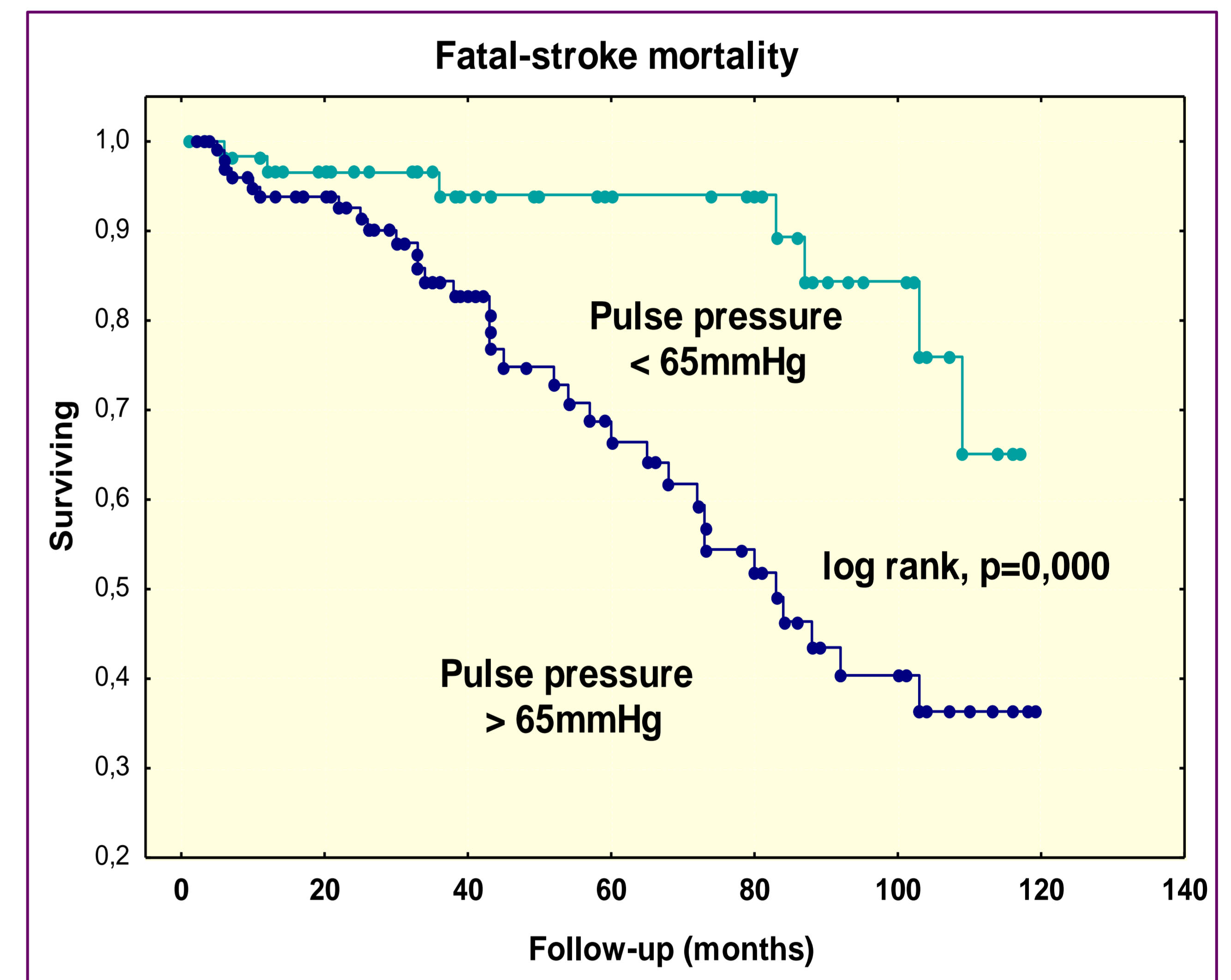
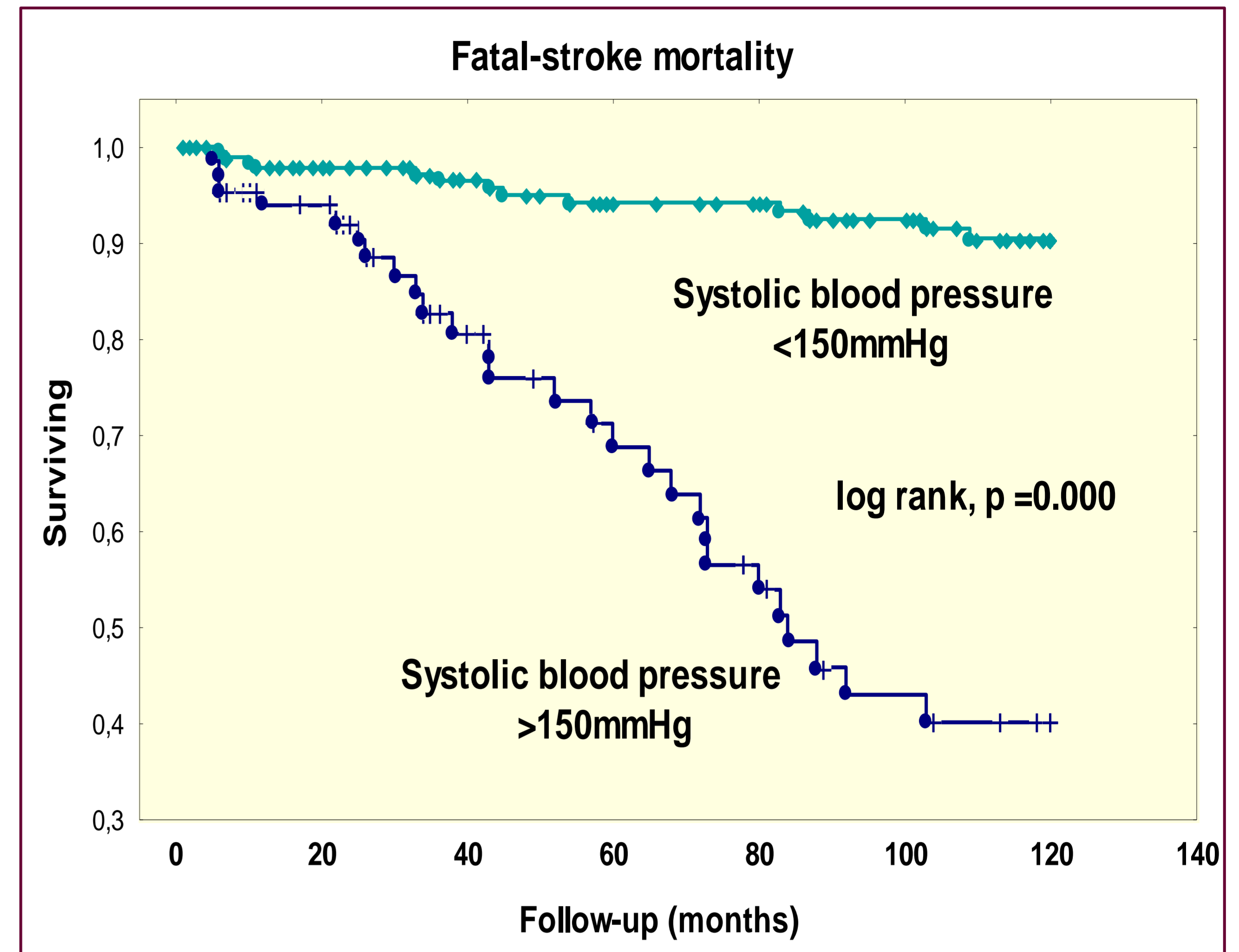
● We studied 261 prevalent HD pts (mean age at beginning of HD 49.69±15.59 years, diabetes 17.2%) in our HD center during 10-years. **Cerebrovascular disease death was defined as fatal-stroke death with evidence of compatible neuroimaging.**

Results

❖ During the 10-year follow-up, 171 out of 261 pts (65.54%) had died, 40 (23%) pts from fatal-stroke, 64 (37%) pts from cardiac disease (CD) and 67 (39%) pts from non-cardiovascular disease (non-CVD).

● Patients died from fatal-stroke are significantly different from pts died from CD and non-CVD with higher systolic and diastolic blood pressure, pulse pressure, ultrafiltration, phosphate levels and N-terminal pro-B-type natriuretic peptide (NT-proBNP)

● **Kaplan-Meier analysis** showed that pts with systolic blood pressure >150mmHg, pulse pressure >65mmHg and NT-proBNP >17000 pg/ml had a higher mortality from fatal-stroke than pts with systolic blood pressure <150mmHg, pulse pressure <65 mmHg and NT-proBNP <17000 pg/.



Comparative characteristics of pts died from fatal stroke, cardiac disease and non-cardiovascular disease

	Fatal-stroke	Cardiac disease	non-CVD	p
Age (years)	53.80 ± 14.41	57.58 ± 13.59	48.55 ± 14.32	0.001
Systolic blood pressure	157.28 ± 23.16	135.25 ± 21.35	130.31 ± 24.71	0.000
Diastolic blood pressure	91.68 ± 16.68	76.62 ± 13.97	76.56 ± 17.12	0.000
Pulse pressure	65.60 ± 14.33	58.63 ± 17.29	53.75 ± 13.82	0.001
Ultrafiltration (L)	3.06 ± 0.84	2.74 ± 0.65	3.03 ± 0.81	0.045
Phosphate (mmol/L)	1.61 ± 0.38	1.41 ± 0.36	1.47 ± 0.35	0.024
NT-proBNP/ pg/ml	18148.27 ± 12222.09	15386.13 ± 12573.93	5721.78 ± 5702	0.014

Conclusions

● Patients undergoing HD have high mortality after fatal stroke which has multifactorial reasons

● Our findings confirm the association of systolic blood pressure >150mmHg, pulse pressure >65mmHg and volume overload with NT-proBNP >17000 pg/ml with higher mortality from fatal stroke among maintenance HD patients.

