

# The 83rd Annual Scientific Meeting of The Japanese Circulation Society

## Renaissance of Cardiology for The Creation of Future Medicine

### Comparison of Prognosis and Risk Factors between Hospitalization for Stroke and Heart Failure in Very Old Patients with Atrial Fibrillation

超高齢心房細動患者における脳卒中発症と  
心不全入院の予後と危険因子

医療法人社団 竹内内科・循環器科  
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# The 83rd Annual Scientific Meeting of the Japanese Circulation Society JCS 2019

Congress Chairperson

**Issei Komuro, M.D., Ph.D.**

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## RENAISSANCE

of Cardiology for the Creation of Future Medicine

循環器病学 - 未来医療への処方箋

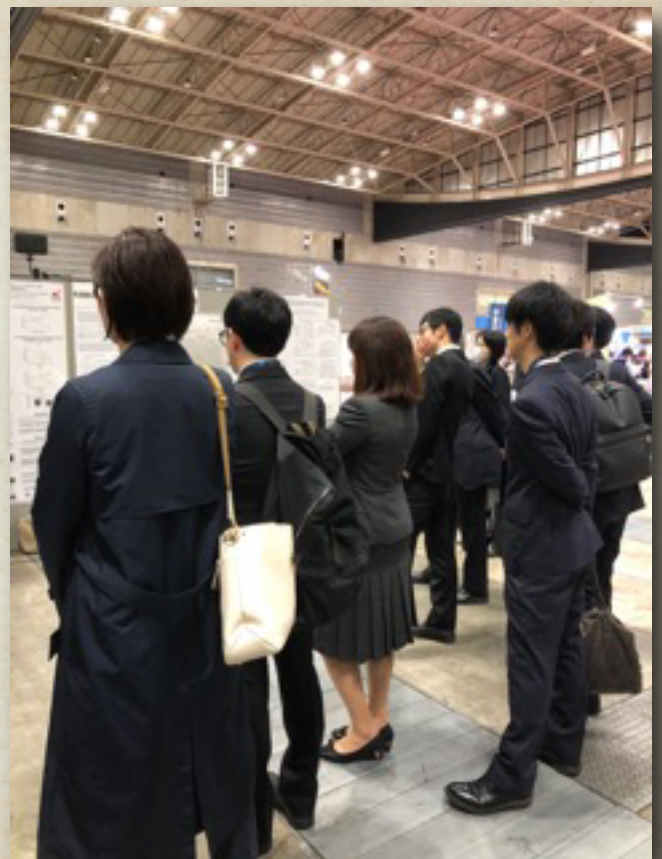
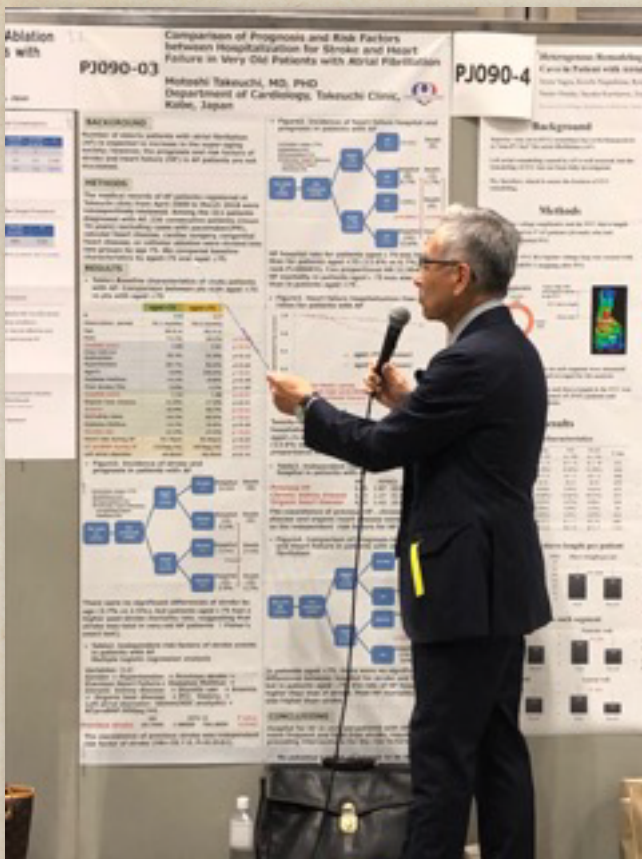
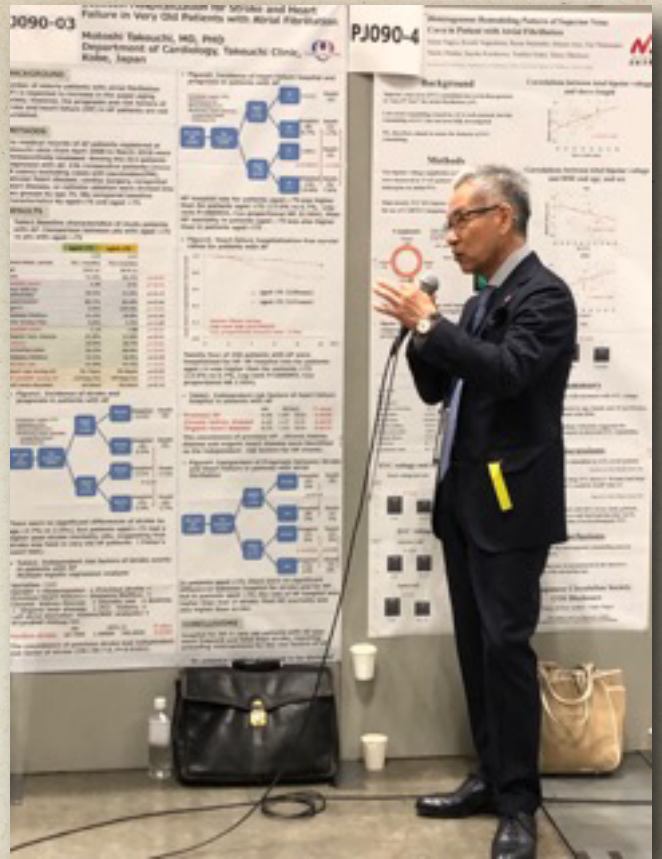
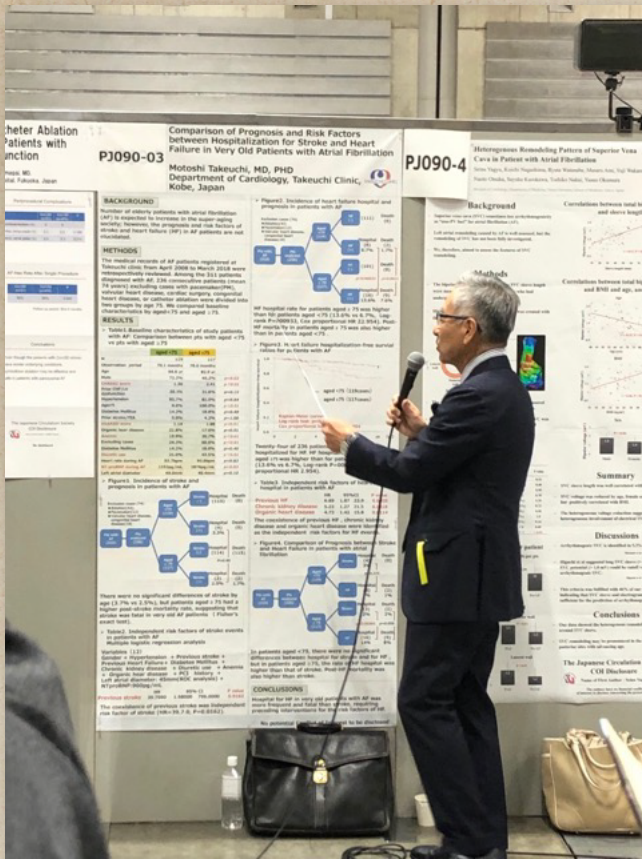
PROGRAM JCS 2019

**March 29 (Fri.) ▶ 31 (Sun.), 2019**

**PACIFICO YOKOHAMA**

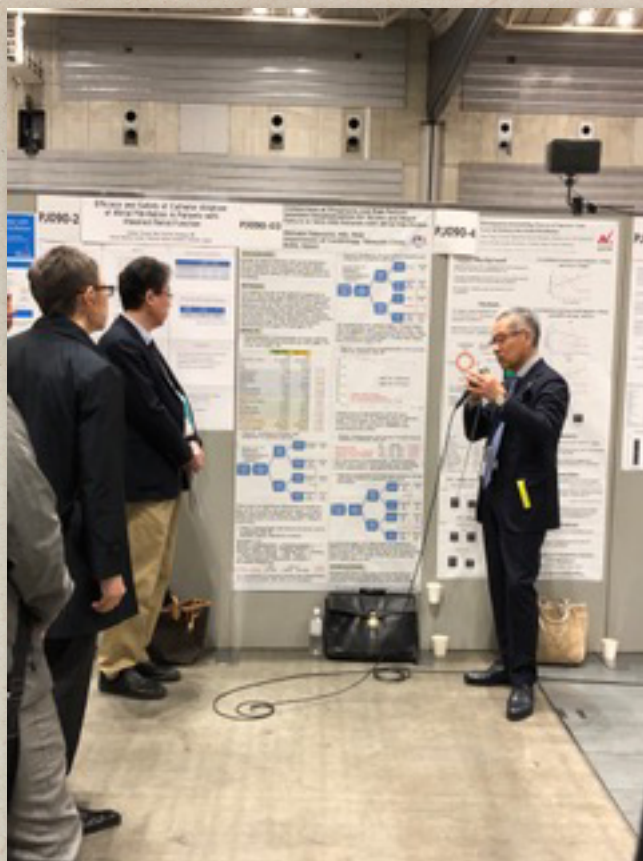
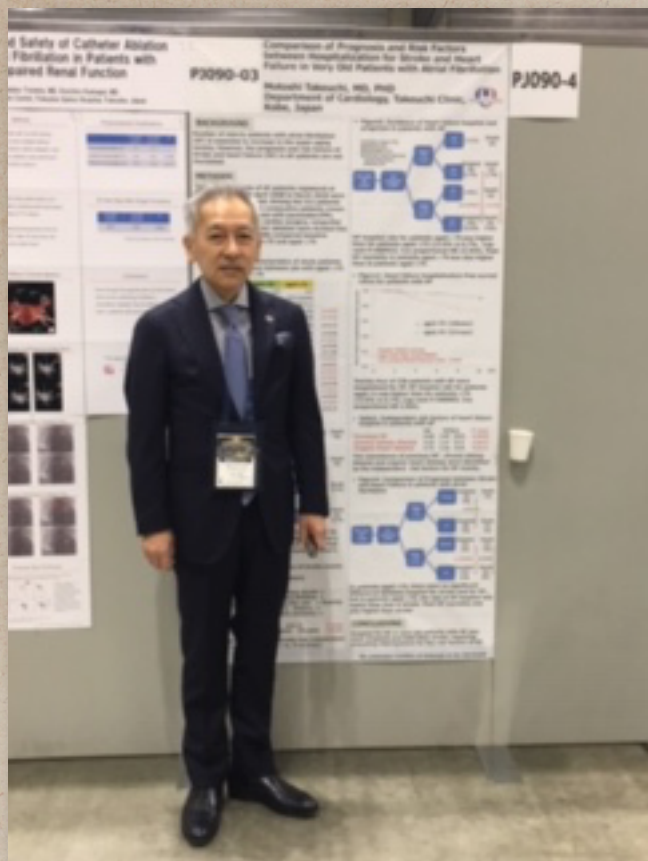


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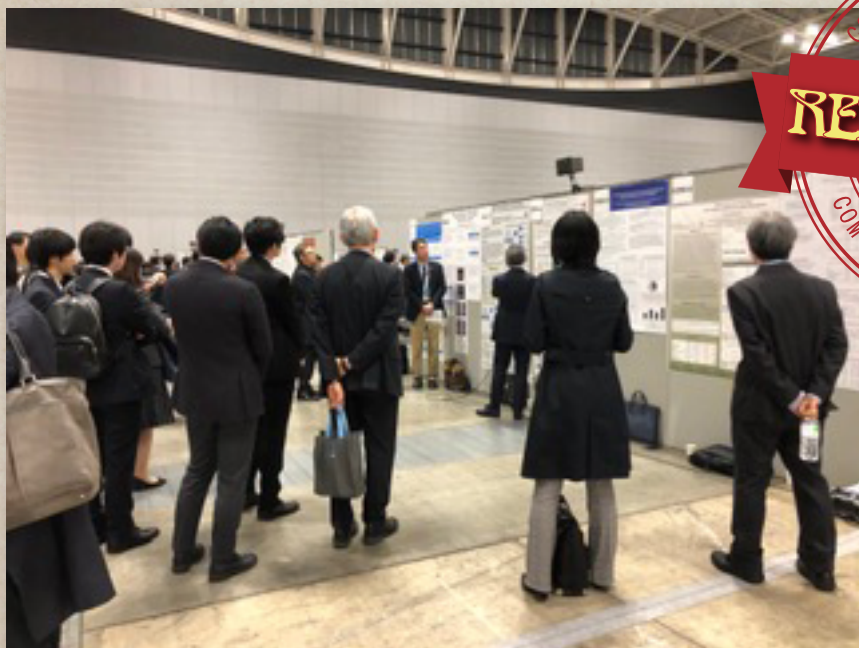




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The 83rd Annual Scientific Meeting of the Japanese Circulation Society  
2019.3.29(Fri)-31(Sun) At PACIFICO YOKOHAMA



**RENAISSANCE** of  
Cardiology for  
the Creation of  
Future Medicine

循環器病学

未来医療への処方箋



Comparison of Prognosis and Risk Factors between Hospitalization for Stroke and Heart Failure in Very Old Patients with Atrial Fibrillation

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BACKGROUND

Number of elderly patients with atrial fibrillation (AF) is expected to increase in the super-aging society; however, the prognosis and risk factors of stroke and heart failure (HF) in AF patients are not elucidated.

METHODS

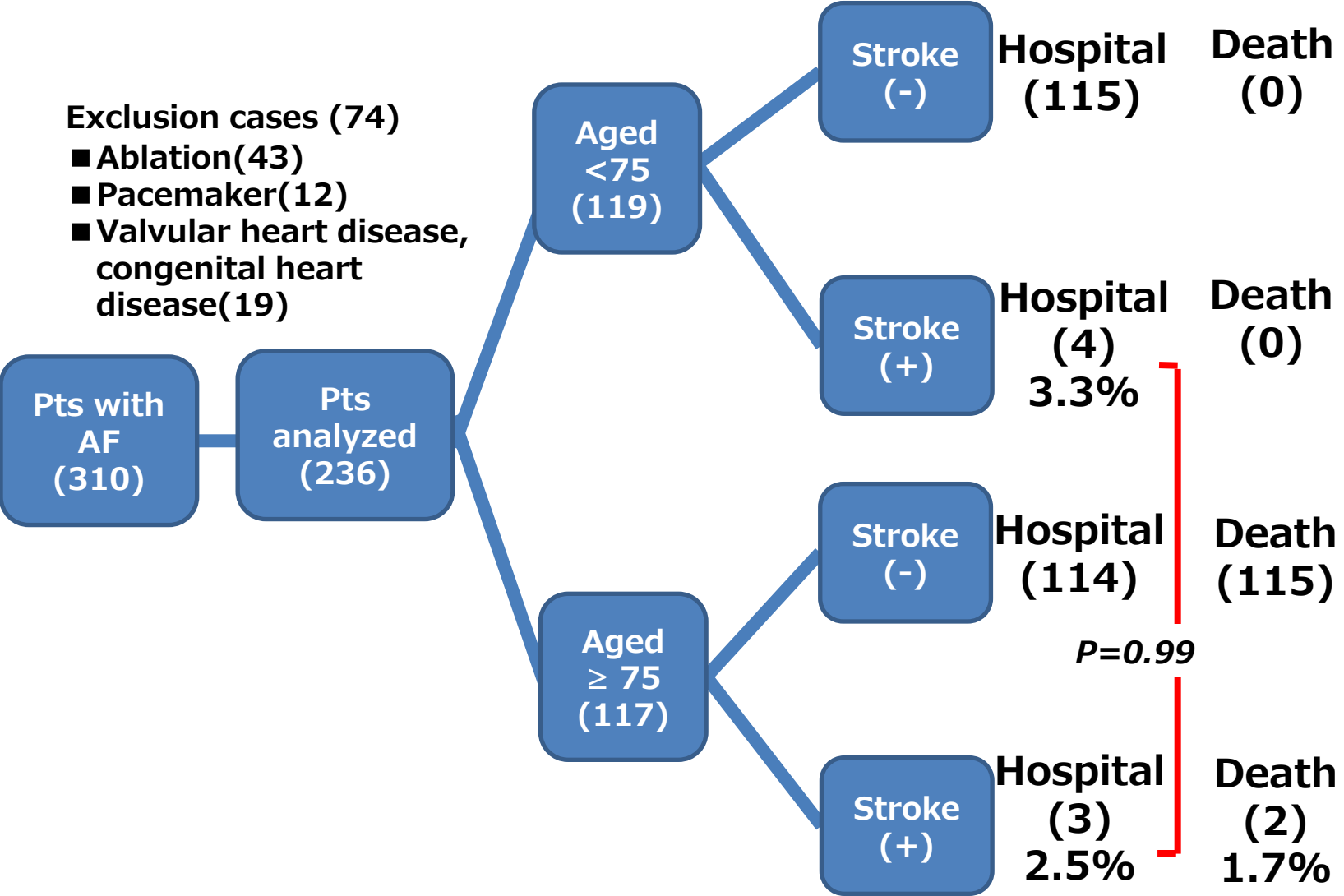
The medical records of AF patients registered at Takeuchi clinic from April 2008 to March 2018 were retrospectively reviewed. Among the 311 patients diagnosed with AF, 236 consecutive patients (mean 74 years) excluding cases with pacemaker(PM), valvular heart disease, cardiac surgery, congenital heart disease, or catheter ablation were divided into two groups by age 75. We compared baseline characteristics by aged<75 and aged ≥75.

RESULTS

➤ Table1. Baseline characteristics of study patients with AF: Comparison between pts with aged <75 vs pts with aged ≥75

	aged <75	aged ≥75	
N	119	117	
Observation period	70.1 months	70.0 months	
Age	64.6 yr	82.9 yr	
Male	72.2%	45.2%	p=0.03
CHADS2 score	1.30	2.41	p<0.01
Prior CHF/LV dysfunction	20.1%	31.6%	p=0.15
Hypertension	85.7%	82.0%	p=0.84
Age≥75	0.0%	100.0%	p<0.01
Diabetes Mellitus	14.2%	18.8%	p=0.49
Prior stroke/TIA	5.0%	4.2%	p=1.00
H2ARDD score	1.14	1.88	p<0.01
Organic hear disease	21.8%	17.0%	p=0.51
Anemia	10.9%	30.7%	p<0.01
Excluding cases	24.3%	60.6%	p<0.01
Diabetes Mellitus	14.2%	18.8%	p=0.49
Diuretic use	21.0%	43.5%	p<0.01
Heart rate during AF	92.7bpm	90.8bpm	p=0.63
NT-proBNP during AF	1232pg/mL	1876pg/mL	p=0.03
Left atrial diameter	44.6mm	46.4mm	p=0.10

➤ Figure1. Incidence of stroke and prognosis in patients with AF



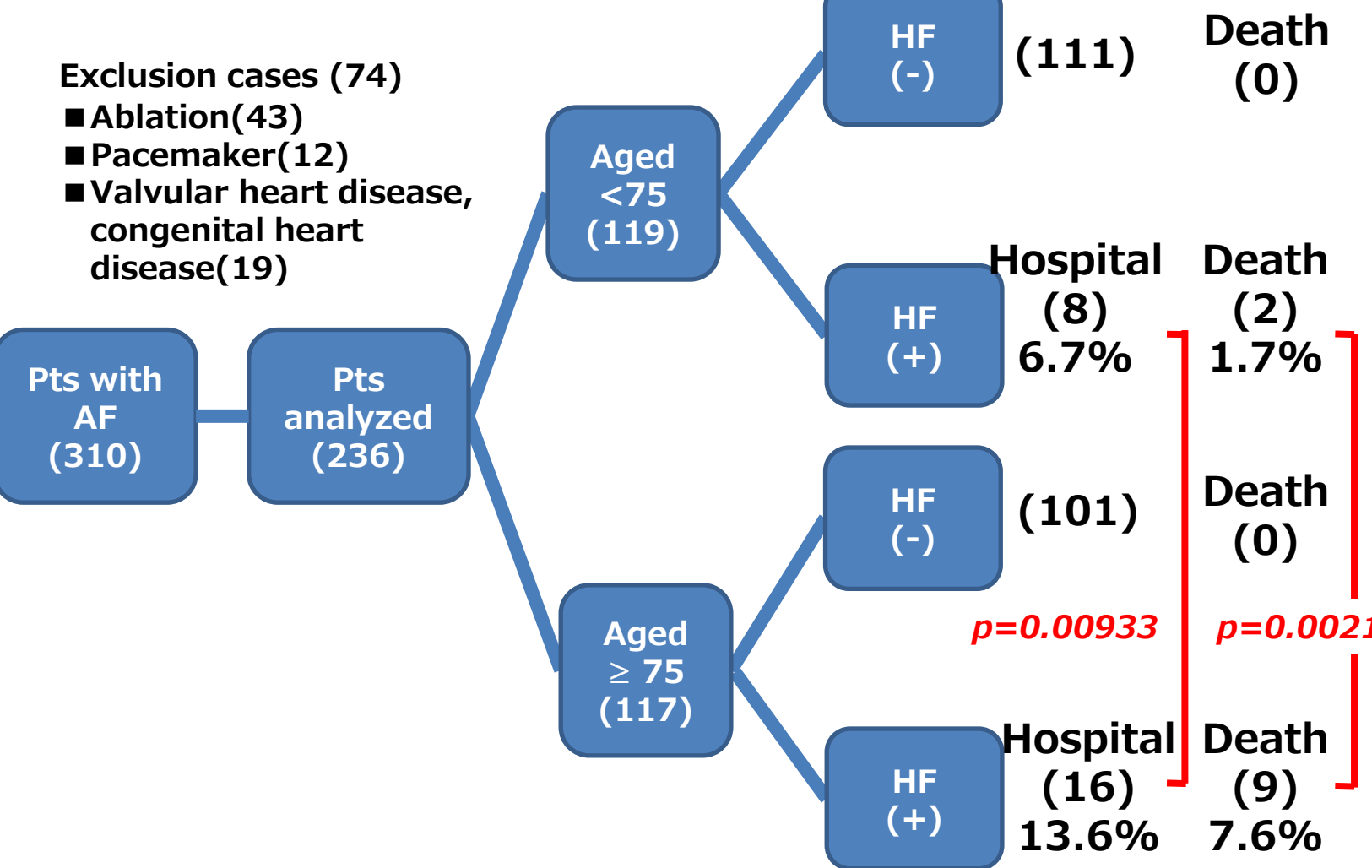
There were no significant differences of stroke by age (3.7% vs 2.5%), but patients aged ≥ 75 had a higher post-stroke mortality rate, suggesting that stroke was fatal in very old AF patients ( Fisher’s exact test).

➤ Table2. Independent risk factors of stroke events in patients with AF  
Multiple logistic regression analysis

Variables (12)				
Gender + Hypertension + Previous stroke + Previous Heart Failure+ Diabetes Mellitus + Chronic kidney disease + Diuretic use + Anemia + Organic hear disease + PCI history + Left atrial diameter: 45mm(ROC analysis) + NTproBNP:900pg/mL	HR	95% CI		P value
Previous stroke	39.7000	1.98000 796.0000		0.0162

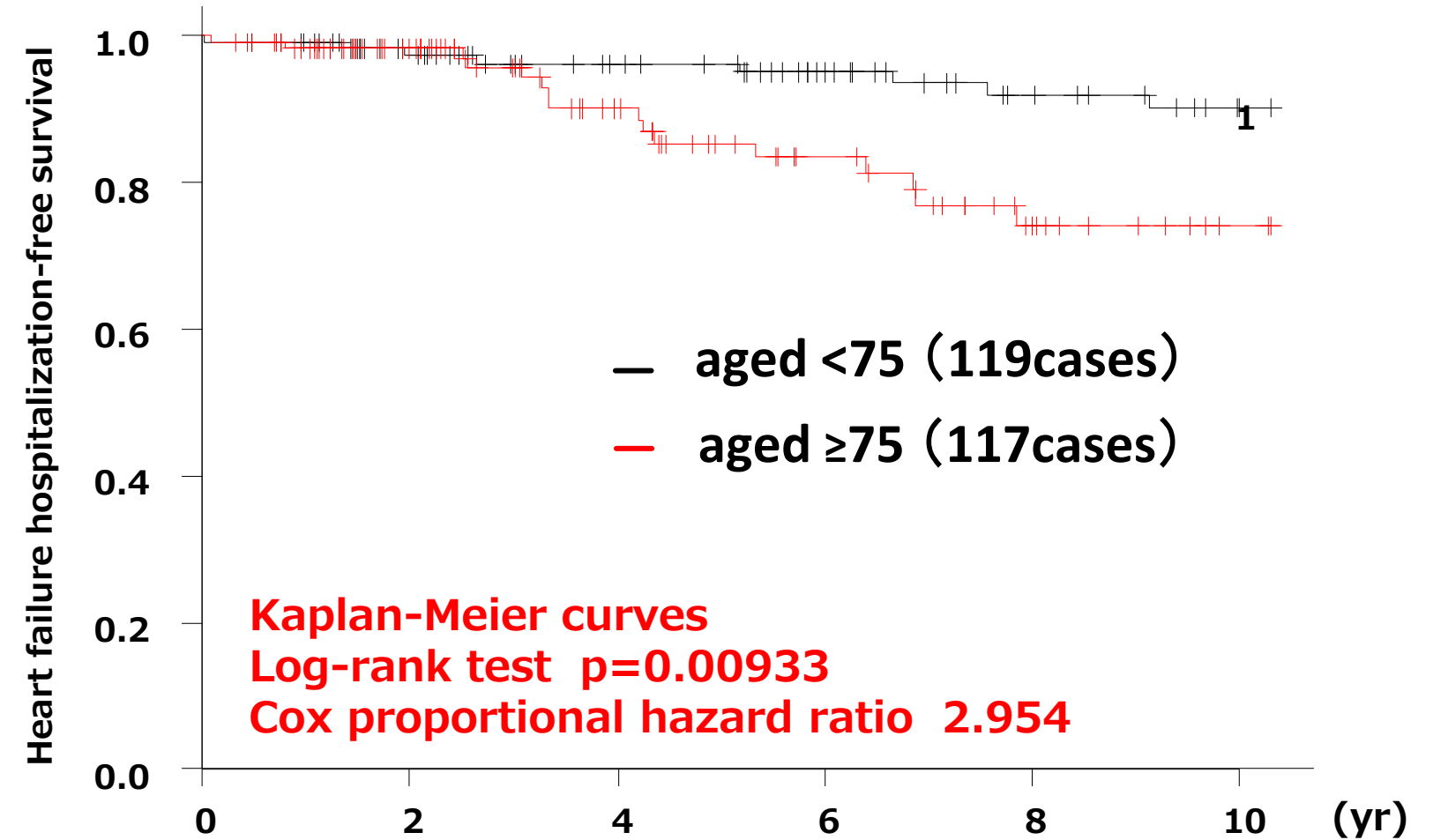
The coexistence of previous stroke was independent risk factor of stroke (HR=39.7.0, P=0.0162).

➤ Figure2. Incidence of heart failure hospital and prognosis in patients with AF



HF hospital rate for patients aged ≥ 75 was higher than for patients aged <75 (13.6% vs 6.7%, Log-rank P=000933, Cox proportional HR 22.954). Post-HF mortality in patients aged ≥ 75 was also higher than in patients aged <75 .

➤ Figure3. Heart failure hospitalization-free survival ratios for patients with AF



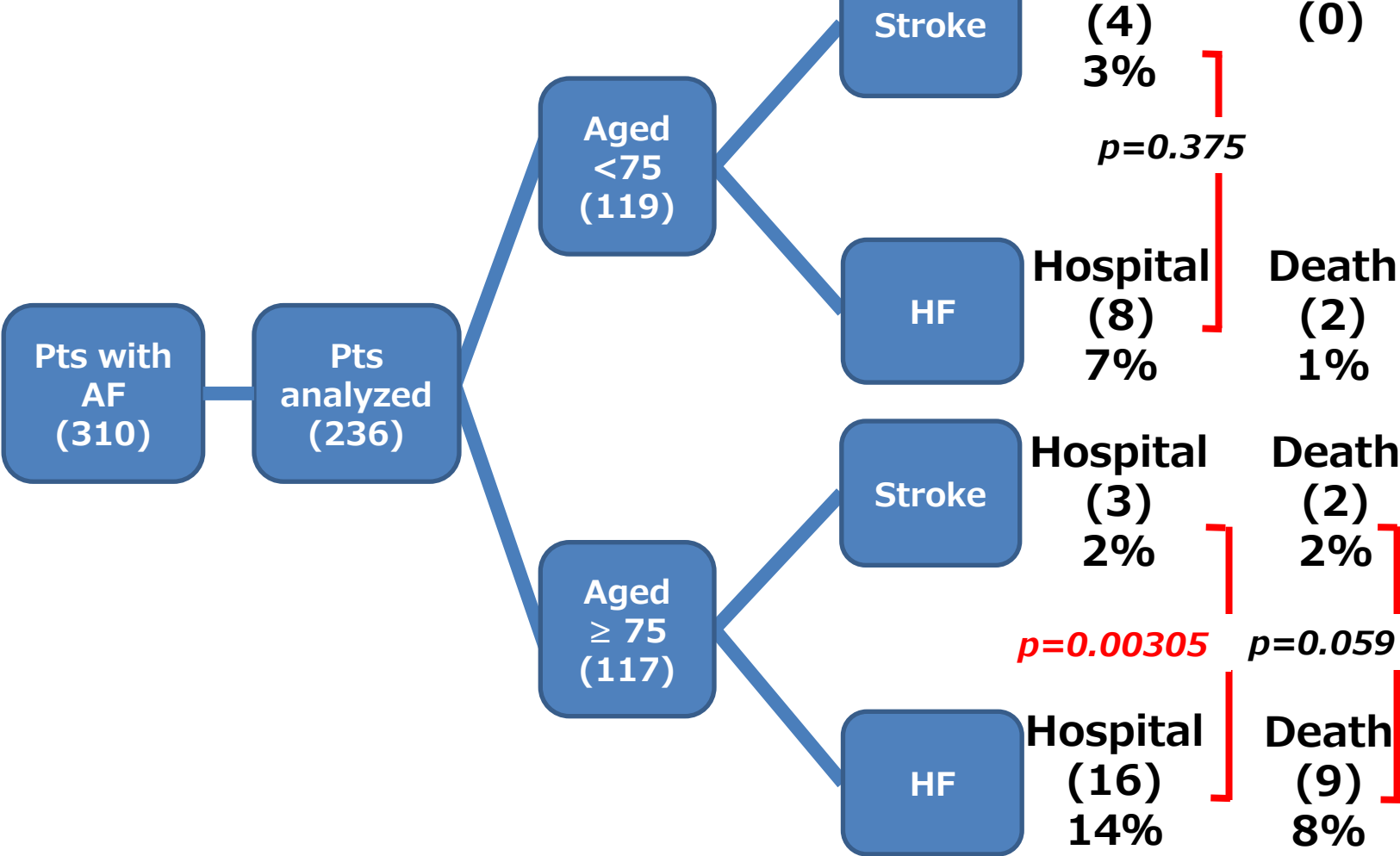
Twenty-four of 236 patients with AF were hospitalized for HF. HF hospital rate for patients aged ≥75 was higher than for patients <75 (13.6% vs 6.7%, Log-rank P=000903, Cox proportional HR 2.954).

➤ Table3. Independent risk factors of heart failure hospital in patients with AF

	HR	95%CI	P value
Previous HF	6.69	1.87 23.9	0.0035
Chronic kidney disease	5.23	1.27 21.5	0.0218
Organic heart disease	4.73	1.42 15.8	0.0114

The coexistence of previous HF , chronic kidney disease and organic heart disease were identified as the independent risk factors for HF events.

➤ Figure4. Comparison of Prognosis between Stroke and Heart Failure in patients with atrial fibrillation



In patients aged <75, there were no significant differences between hospital for stroke and for HF , but in patients aged ≥75, the rate of HF hospital was higher than that of stroke. Post-HF mortality was also higher than stroke.

CONCLUSIONS

Hospital for HF in very old patients with AF was more frequent and fatal than stroke, requiring preceding interventions for the risk factors of HF.