

# **Nationwide Real World Database of 20,462 Patients Enrolled in the Japan Acute Myocardial Infarction Registry (JAMIR)**

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# *Japan Acute Myocardial Infarction Registry (JAMIR) Group*

## **COI Disclosure**

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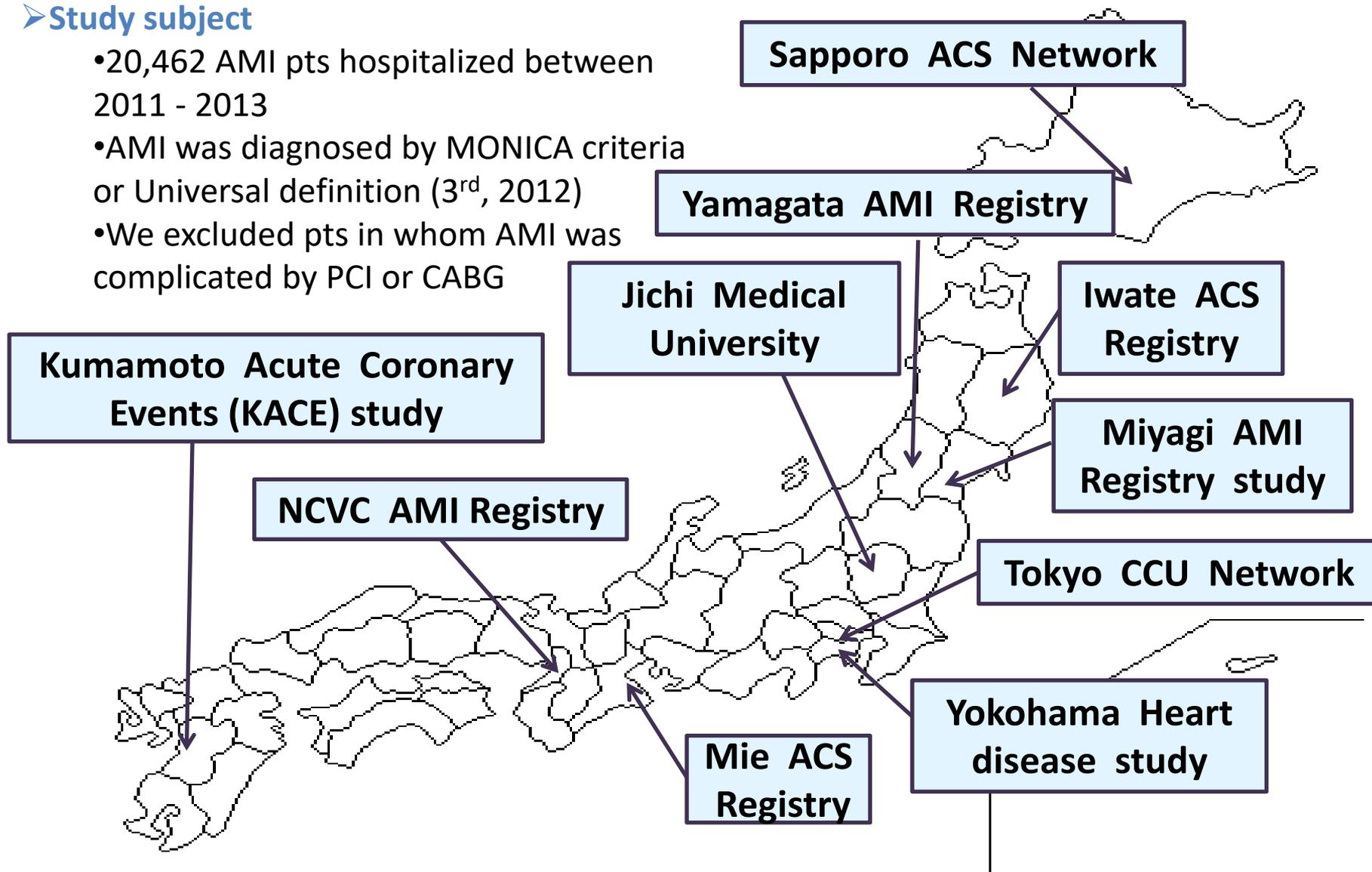
**I have no conflicts of interest to disclose  
concerning a presentation.**

# The Japan Acute Myocardial Infarction Registry (JAMIR)

The JAMIR has been established to integrate 10 regional registries and develop a nationwide real-world database of patients with acute myocardial infarction (AMI).

## ➤ Study subject

- 20,462 AMI pts hospitalized between 2011 - 2013
- AMI was diagnosed by MONICA criteria or Universal definition (3<sup>rd</sup>, 2012)
- We excluded pts in whom AMI was complicated by PCI or CABG



# Results; Overall patient characteristics of JAMIR

		<b>n=20,462</b>	
▶ Age, yrs, mean (SD)	68.8 (13.3)	▶ Use of ambulance, %	78.9
▶ Sex, male, %	74.7	Emergency CAG, %	89.6
CAD Presentation, %		Anterior MI, %	47.6
▶ STEMI	79.7	Culprit LMT, %	3.0
Killip classification, %		▶ PCI, %	87.9
1	71.8	Final TIMI flow, %	
2	11.8	Grade 0	2.1
3	6.3	1	1.2
4	10.1	2	5.2
Risks, %		3	91.6
Hypertension	63.6	▶ In-hospital death, %	8.3
Diabetes	32.8	(Cardiac death, %	6.6)
Dyslipidemia	46.2		
Smoking	34.5		

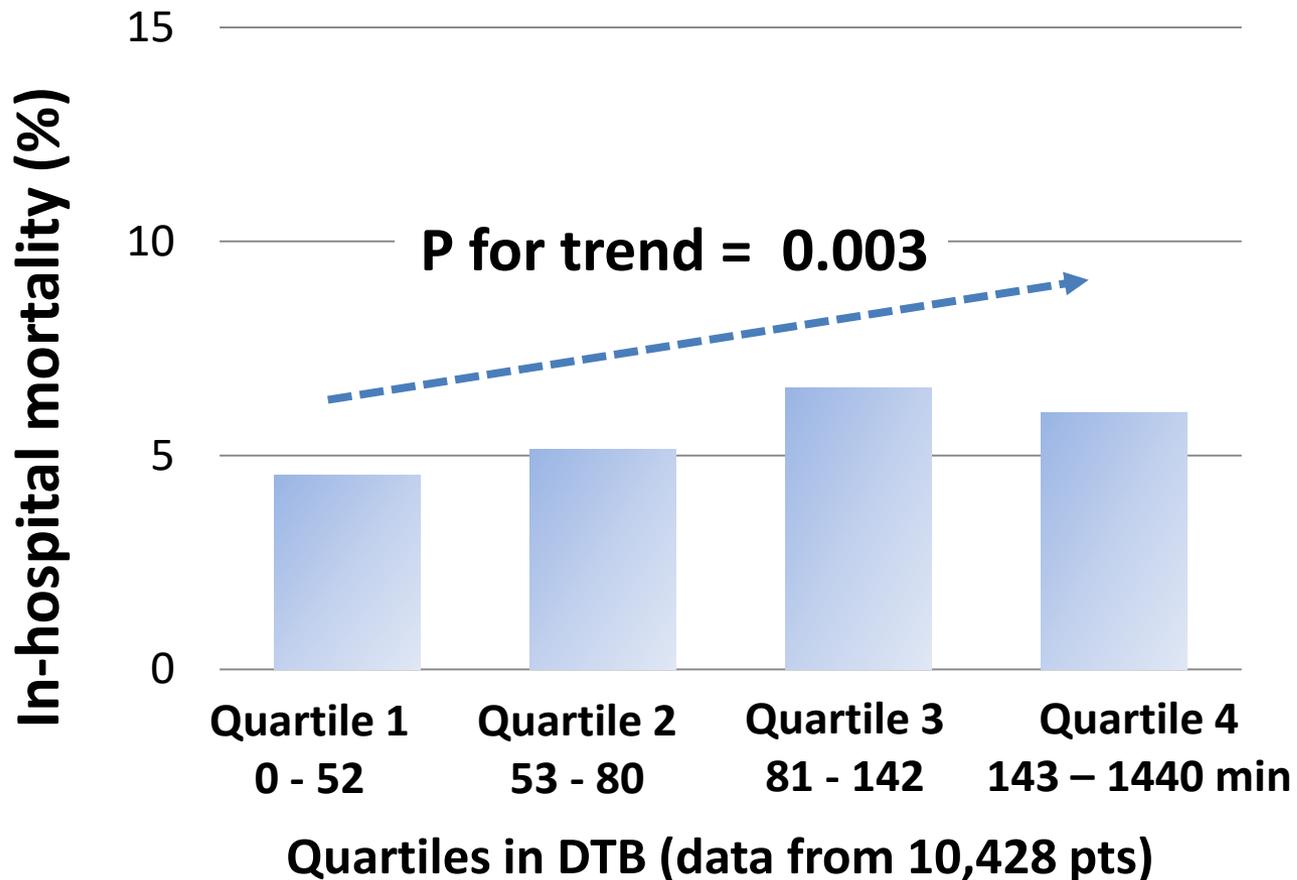
# Relationship between door to balloon (DTB) time and in-hospital mortality in patients treated with) PCI

DTB time was associated with in-hospital mortality.

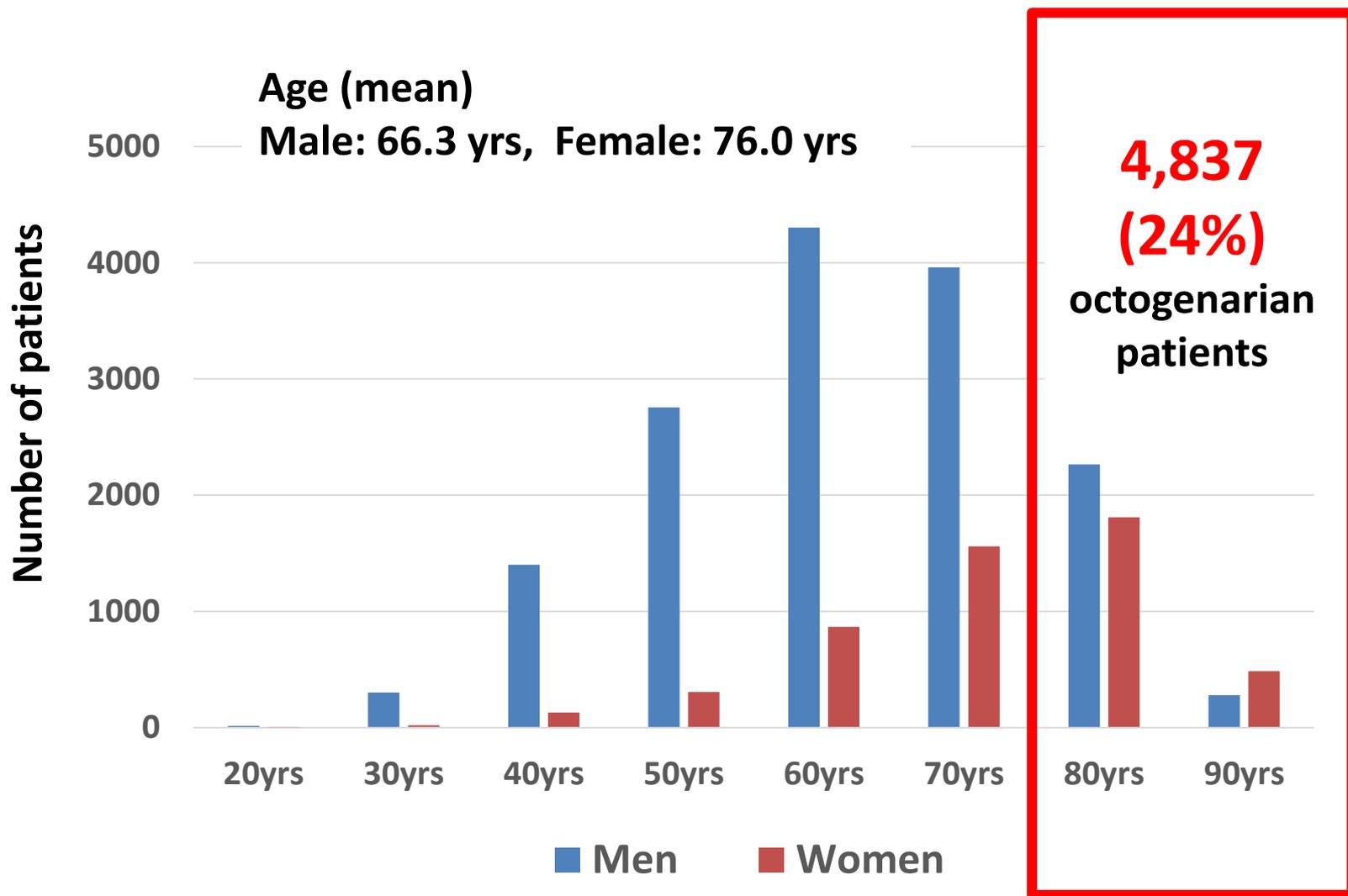
**Door to balloon time (min)**

**Median: 81min**

Interquartile ranges: 53 – 142min



# Age distribution of JAMIR (n=20,462)



# Subanalysis focusing on high-aged ( $\geq 80$ years) population

The JAMIR consists of **20,596 AMI cases**  
from January 2011 to December 2013

Unknown age, sex and in-hospital mortality cases  
and AMI cases aged 20 or less (n=134)

Study population  
**20,462 AMI cases**

**AMI cases aged  $\geq 80$  yrs**  
**(n=4,837)**

Octogenarian group

**AMI cases aged  $< 80$  yrs**  
**(n=15,625)**

Non-octogenarian group

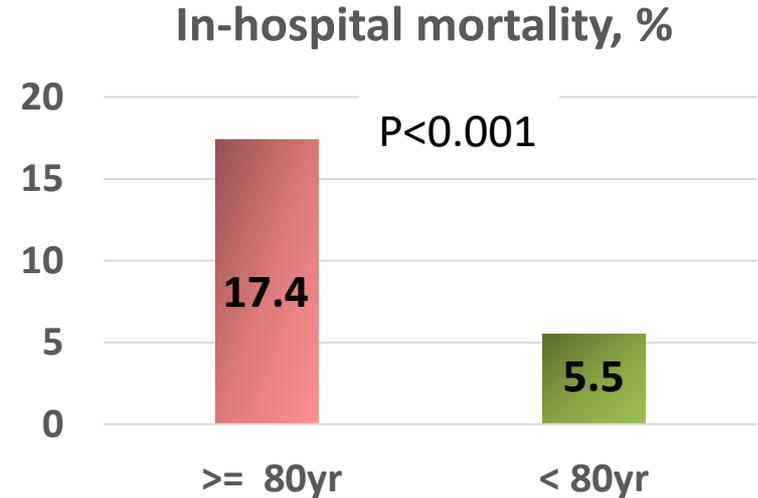
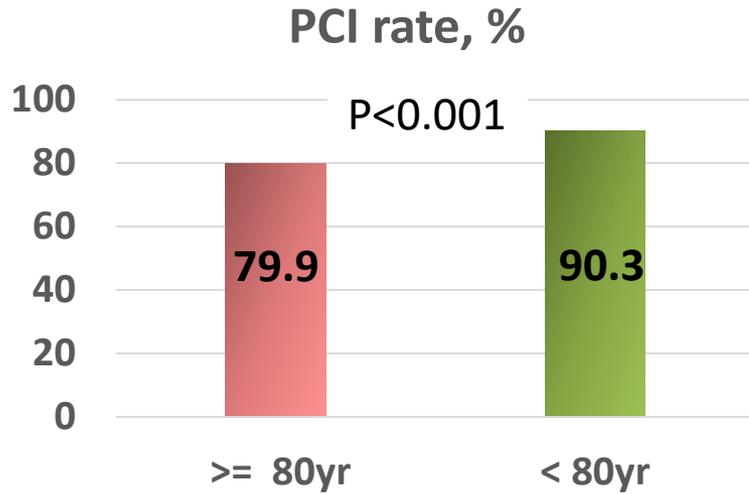
# Comparison of clinical characteristics between patients aged $\geq 80$ yrs and those aged $<80$ yrs

	$\geq 80$ yrs (n=4,837)	$< 80$ yrs (n=15,625)	p value
→ Sex, male, %	52.6	81.5	$< 0.001$
Age, mean (SD)	85.2 (4.3)	63.7 (10.8)	$< 0.001$
CAD presentation, %			
→ STEMI	76.3	80.7	$<0.001$
→ Killip classification, %			
1	57.5	76.2	$< 0.001$
2	17.3	10.1	
3	11.6	4.7	
4	13.6	9.0	
	42.5	23.8	
Risks, %			
Hypertension	70.4	61.4	$<0.001$
Diabetes	28.9	34.0	$<0.001$
Dyslipidemia	34.8	49.9	$<0.001$
Smoking	14.3	40.7	$<0.001$

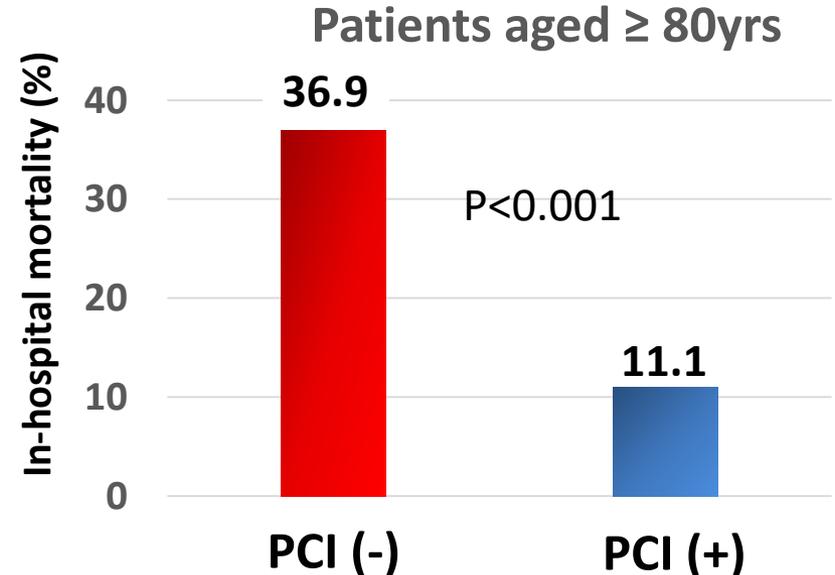
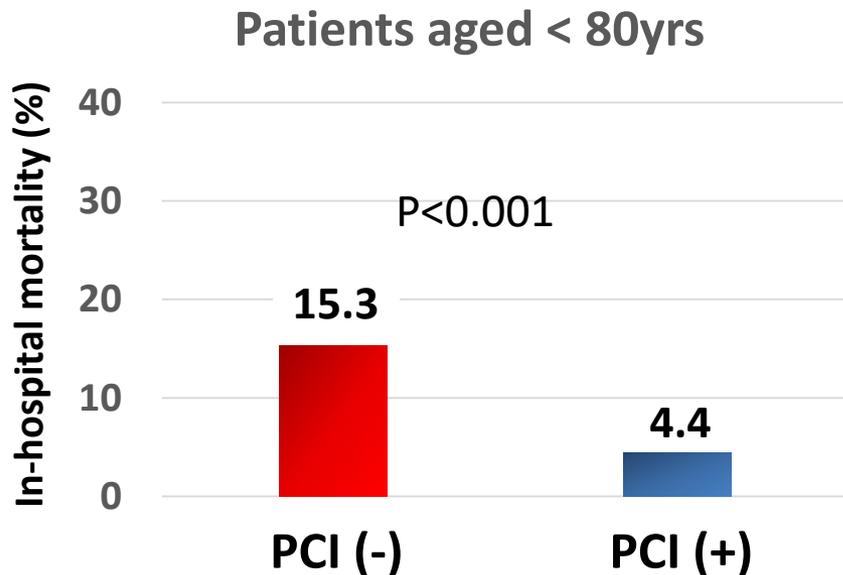
# (Continued)

	≥ 80yrs (n=4,837)	< 80yrs (n=15,625)	p value
Transportation, %			
→ Use of ambulance	80.8	78.3	0.043
Self	15.8	19.1	
In-hospital onset	3.4	2.6	
Emergency CAG, %	79.0	92.9	<0.001
Anterior MI, %	45.8	48.1	0.010
Culprit LMT, %	3.4	2.9	0.186
→ PCI, %	79.9	90.3	<0.001
Final TIMI flow, %			
Grade 0	2.5	2.0	0.002
1	1.4	1.1	
2	6.4	4.9	
3	89.8	92.0	
→ In-hospital death, %	17.4	5.5	<0.001
(Cardiac death, %)	14.1	4.2	<0.001

# The rate of PCI and in-hospital mortality in patients aged $\geq 80$ yrs and those aged $< 80$ yrs



# In-hospital mortality in patients with PCI and those without PCI



# Multivariate analysis; Risks for in-hospital mortality in octogenarian patients

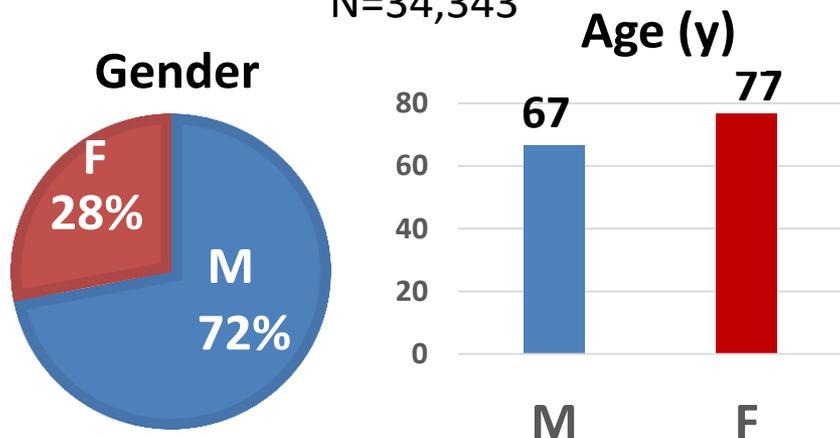
	Unadjusted			Adjusted		
	OR	95%CI	p value	OR	95%CI	p value
Sex, male	0.77	(0.66 - 0.89)	0.001	1.14	(0.83 - 1.56)	0.411
<b>▶ CAD Presentation</b>						
<b>STEMI</b>	1.51	(1.20 - 1.91)	<0.001	1.72	(1.13 - 2.63)	0.011
<b>▶ Killip classification</b>						
<b>1</b>	1.00			1.00		
<b>2</b>	2.87	(2.20 - 3.75)	<0.001	2.26	(1.48 - 3.46)	0.006
<b>3</b>	5.36	(4.09 - 7.02)	0.002	4.60	(2.92 - 7.25)	0.045
<b>4</b>	17.97	(14.13 - 22.84)	<0.001	12.37	(8.40 - 18.2)	<0.001
Risks						
Hypertension	0.99	(0.83 - 1.18)	0.914	1.03	(0.73 - 1.44)	0.866
Diabetes	1.01	(0.85 - 1.21)	0.891	0.97	(0.70 - 1.36)	0.875
<b>▶ Dyslipidemia</b>	0.56	(0.47 - 0.67)	<0.001	0.53	(0.37 - 0.76)	0.001
Smoking	0.75	(0.58 - 0.97)	0.026	0.91	(0.57 - 1.43)	0.673
Transportation						
Ambulance	1.60	(1.26 - 2.04)	0.079	1.70	(0.96 - 3.00)	0.650
Self	1.00					
In-hospital onset	1.65	(1.04 - 2.63)	0.216	2.33	(0.98 - 5.55)	0.123
<b>▶ Anterior MI</b>	1.71	(1.43 - 2.06)	<0.001	1.75	(1.29 - 2.38)	<0.001
<b>▶ non-PCI</b>	4.71	(3.96 - 5.60)	<0.001	2.56	(1.64 - 3.99)	<0.001

# Key finding#1 : JAMIR data was well comparable with AMI data of JROAD-DPC which is the nationwide claim-based database

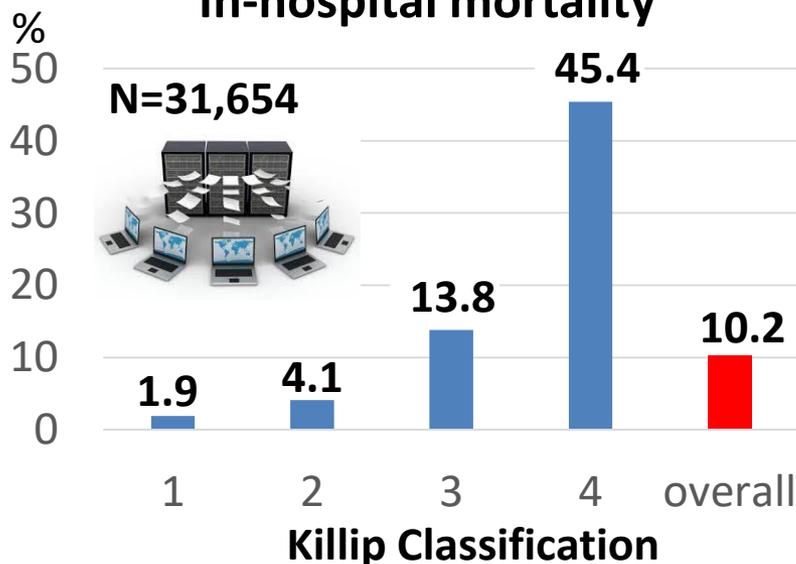
## JROAD-DPC

Nationwide claim-based database 2012

N=34,343



### In-hospital mortality

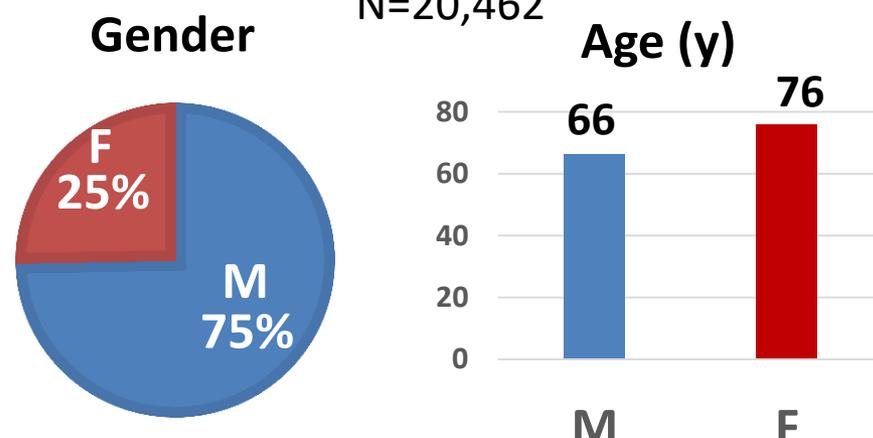


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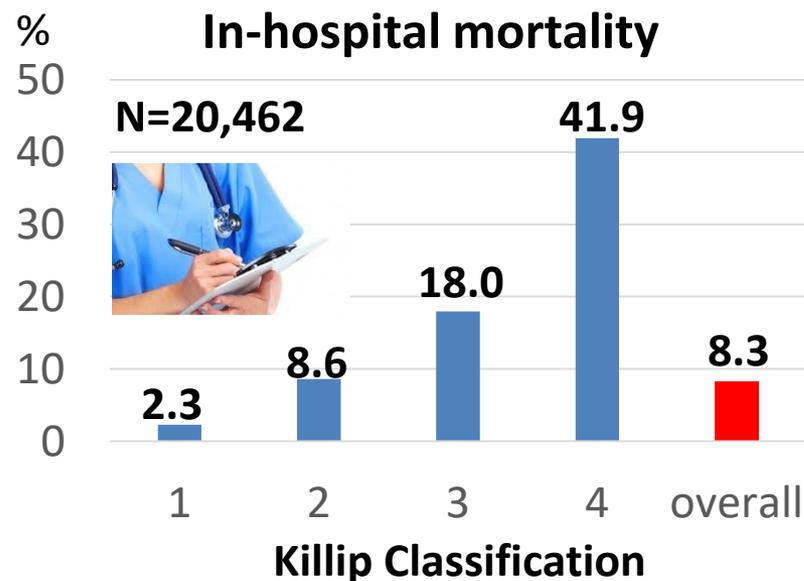
## JAMIR

Registry database 2011-2013

N=20,462



### In-hospital mortality



## Key finding#2 : Large scale cohort of JAMIR included high-risk and high-aged population

### Comparison of clinical characteristics among JAMIR and other registries

- Patients with JAMIR were characterized as older population (68.8yrs) and the higher prevalence of STEMI (79.7%) with advanced Killip class
- Although JAMIR included high-risk and high-aged population, in-hospital mortality was 8.3%, which seems to be associated with a high PCI rate (87.9%).

	JAMIR	KMAIR-NIH	GRACE	SCAAR	NRMI	MINAP
Region	Japan	South Korea	Europe, America	Sweden	US	UK
Time period	2011-0213	2011–2015	2004–2007	2003–2004	1994–2006	2012-2013
Sample size	20,462	13,624	28,449	19,771	542,008	118,075
Mean or median age (years)	<u>68.8</u>	64.1	65	65.7	64	68.5
Male (%)	74.7	73.5	68.4	72	59	66.8
STEMI (%)	<u>79.7</u>	48.2	35.9	22.6	41.8	53.5
Killip class≥2	<u>28.3</u>	21.7	NA	NA	NA	21.4
PCI rate (%)	<u>87.9</u>	87.4	NA	NA	64	65.6
In-hospital mortality (%)	<u>8.3</u>	3.9	NA	NA	8	7.1

# Conclusions

- In this Japanese registry of JAMIR characterized as the advanced age of the study population (including 24% of  $\geq 80$  year-old patients), the reasonable in-hospital outcomes may justify consideration of PCI for octogenarians with AMI.
- A real-world, large-scale JAMIR database of patients with AMI could provide useful information of medical care in the aging society.

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