

# Prevalence and Prognostic value of Decline in platelet count In patients undergoing PCI

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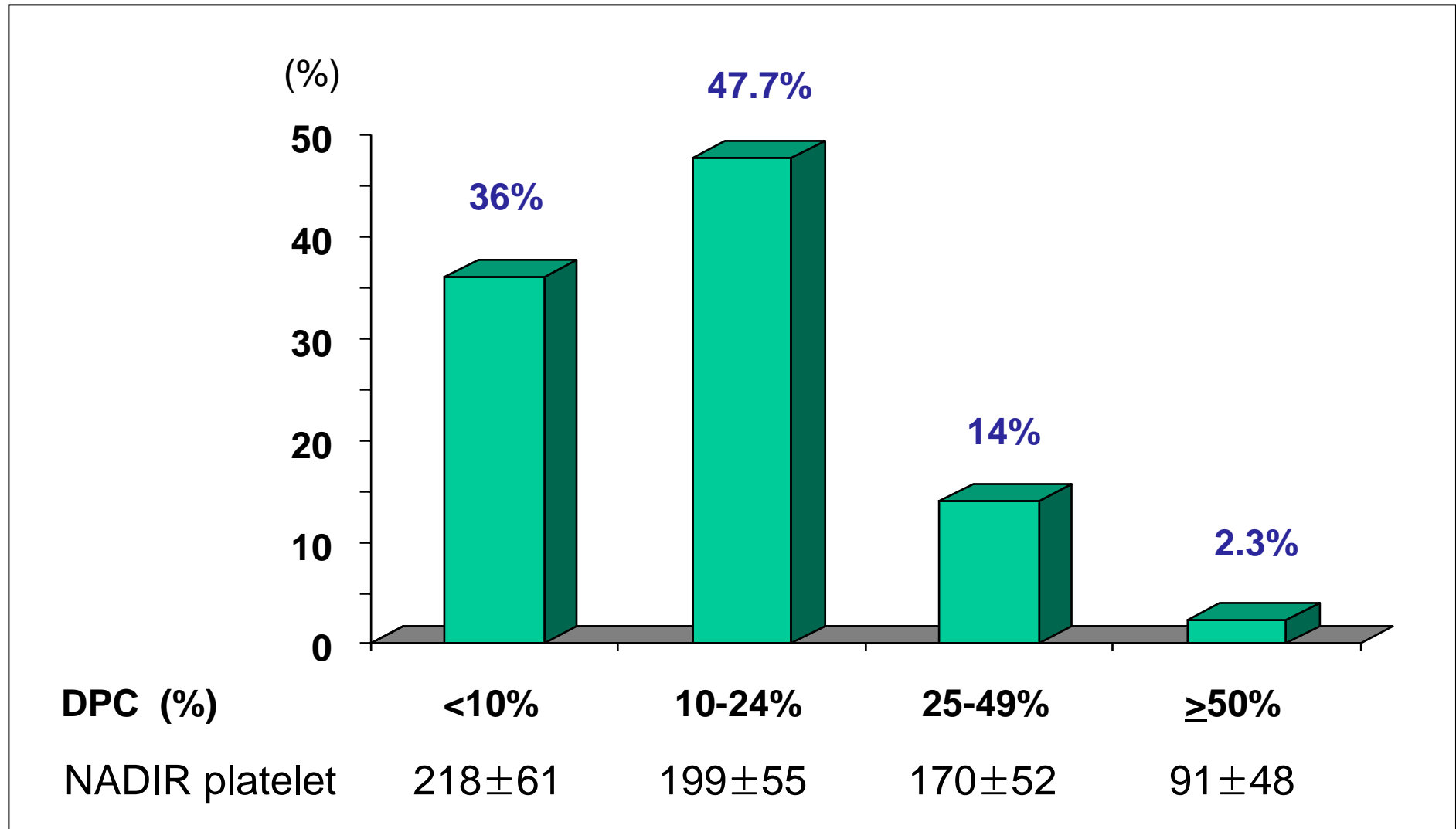
# METHODS

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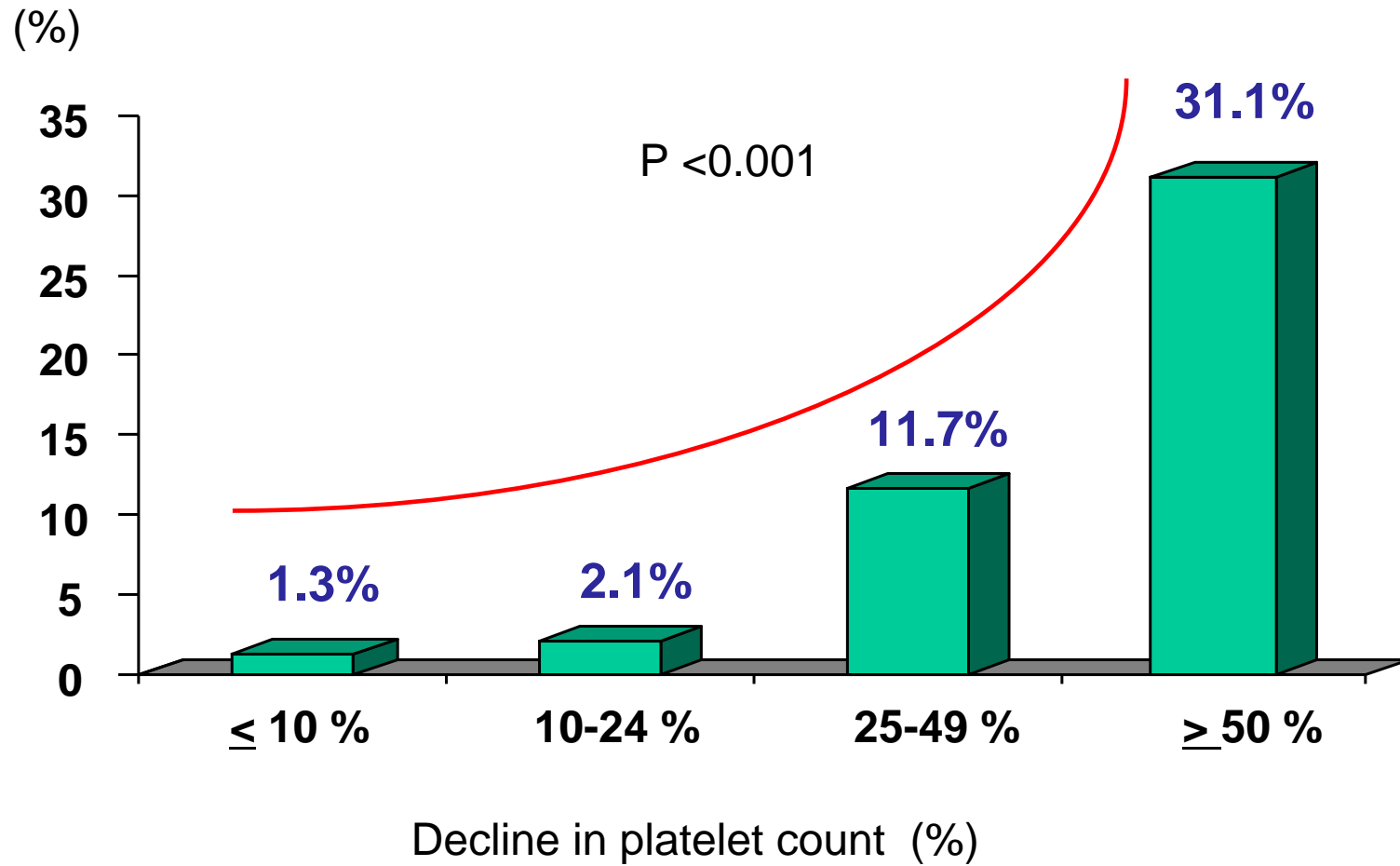


- ❑ Retrospective analysis
  - ❑ Between 2003 and 2006, 10146 consecutive patients undergoing PCI at our institution were included
  - ❑ 4 groups according to the level of DPC
    - ❑  $\leq 10\%$  = no decline
    - ❑ 10–24% = minor decline
    - ❑ 25–49% = moderate decline
    - ❑  $\geq 50\%$  = severe decline
- ❑ Exclusion criteria
  - ❑ Cardiogenic shock on admission
  - ❑ Platelet count at baseline  $< 100$  G/L
  - ❑ Post-procedure platelet count greater than baseline
  - ❑ Coronary artery surgery during hospitalization
  - ❑ Thrombolysis
- ❑ Endpoints:
  - ❑ In hospital Major bleeding
  - ❑ The composite Death–MI at one month

# PREVALENCE OF DECLINE IN PLATELET COUNT



# IN HOSPITAL MAJOR BLEEDING



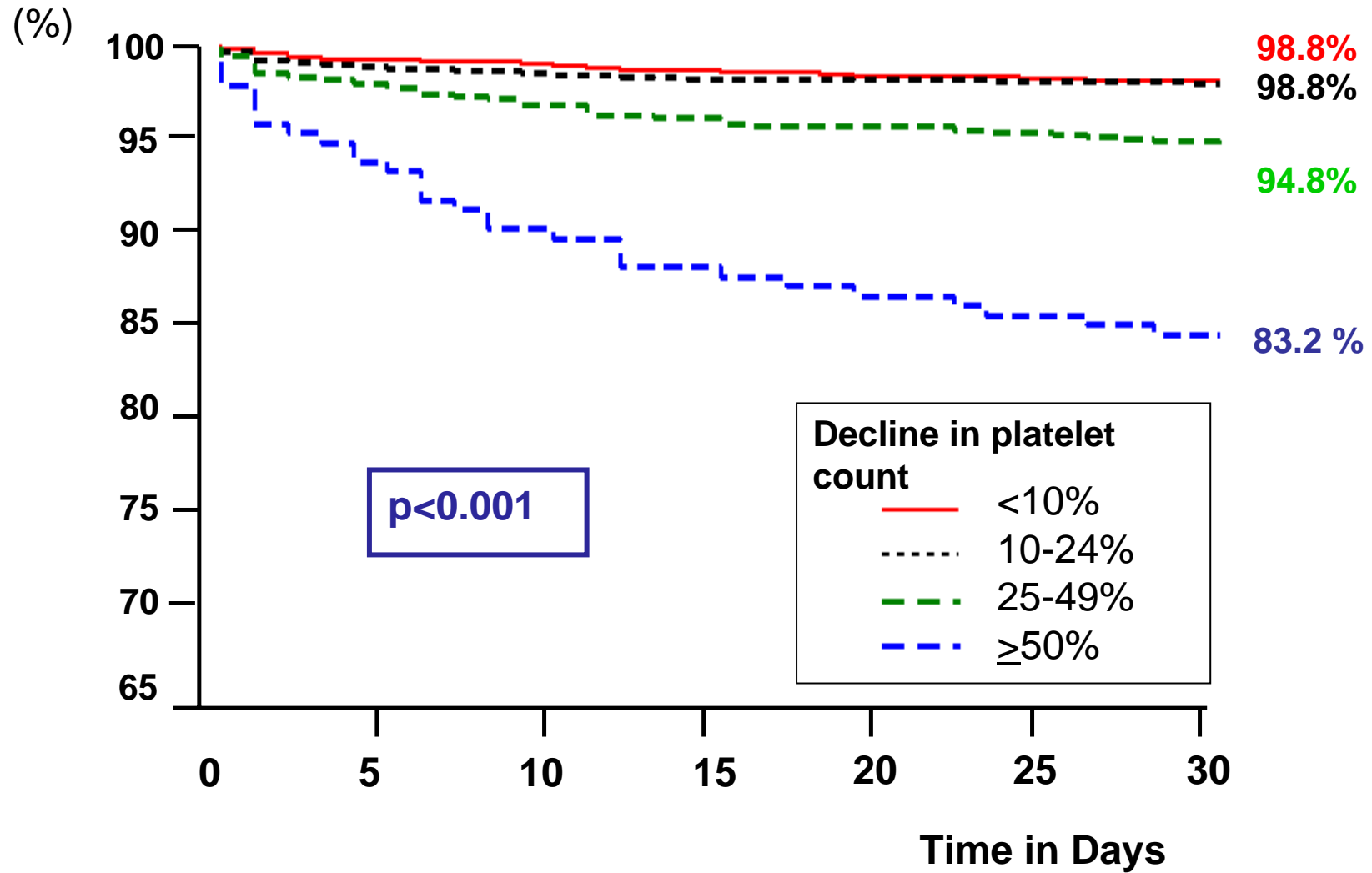
# INDEPENDENT PREDICTORS OF MAJOR BLEEDING

variable	OR	95% CI	p
Age	1.02	1.01-1.03	0.004
Male sex	0.68	0.48-0.94	0.02
UA/ non STEMI	1.68	1.11-2.53	0.01
Hematocrit baseline	1.12	1.09-1.16	0.0001
IABP	1.57	1.02-2.44	0.04
Heparin use	1.99	1.34-2.97	0.001

## **DPC**

≤ 10%	1.0	1.0	-
10-24%	1.3	0.85-2.05	0.2
<b>25-49%</b>	<b>3.47</b>	<b>2.20-5.50</b>	<b>0.0001</b>
<b>≥50%</b>	<b>4.43</b>	<b>2.28-8.61</b>	<b>0.0001</b>

# DEATH-MI AT 30 DAYS



# INDEPENDENT PREDICTORS OF DEATH-MI AT 30 DAYS

Variable		<i>Hazard Ratio</i>	<i>95 % CI</i>	<i>P</i>
Age		1.0	1.0–1.0	0.01
Hypercholesterolemia		0.7	0.5–0.9	0.01
Diabetes		1.5	1.1–2.0	0.02
History of MI		1.7	1.2–2.4	0.002
History of PCI		0.6	0.4–0.9	0.02
UA/non STEMI		1.5	1.0–2.4	0.06
Intra-aortic balloon pump		1.6	1.1–2.5	0.02
Procedural Acute Renal Failure		1.8	1.1–3.1	0.03
DPC	[<10%]	1.0	–	
	[10–24%]	1.0	0.7–1.6	0.8
	[25–49%]	1.9	1.2–3.0	0.007
	[≥50%]	3.2	1.7–6.3	0.001

# CONCLUSION



- ❑ Decline in platelet count is a **powerful independent predictor** of both **ischemic and hemorrhagic** events
- ❑ The clinical impact of decline in platelet count is not limited to patients with a **severe decline ( $\geq 50\%$ )**
- ❑ **Moderate decline (25-49%)** is also a great predictor of both ischemic and hemorrhagic events
- ❑ The **prevalence** of decline with a clinical impact on the prognosis ( $\geq 25\%$ ) is important, up to **16.3%**
- ❑ All therapies used in PCI should avoid to provoke decline in platelet count  $\geq 25\%$ .