The 2nd KNIH-KSC Joint Symposium
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Acute Myocardial Infarction Cohort

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연구 배경


SCAAR
Svenska Coronar Angiografi- och Angioplastik Registret
World Health Organization
KAMIR
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한국인 급성 심근경색증의 현황에 대한 등록연구
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우리나라에서 지난 30 여 년 동안 순환기 질환은 사회 경제적인 발전과 함께 급속한 서구화를 초래하였다. 심장질환은 한국인 사망원인 중 4대 사망원인 중 하나로 자리 잡고 있는데다 최근에는 고혈압, 허혈성 심질환이 급증하고 있다.
우리나라의 급성 심근경색증 사망률의 증가를 둔화시키기 위해서 위험요인에 대한 체계적인 연구를 통하여 발생률 예방을 위한 대책이 국가적인 차원과 개인적인 차원에서 마련되어야 하며, 급성 심근경색증 발생예측모델이 개발되어야 개인별 예방대책이 가능하게 된다. 이런 연구는 전국의 수 개 병원과 지역사회의 자원을 활용한 협력연구체계를 구성하여 수행해야만 소정의 목적을 달성할 수 있다. 그리고 궁극적으로는 healthy heart program을 개발하여 건강증진사업에 활용해야 효과적인 급성 심근경색증 발생률과 사망률 감소를 위해 한국실정에 맞는 급성 심근경색증의 치료 방법을 설정하여 한국인 급성 심근경색증의 예방 및 효율적인 치료 지침을 마련하는데 그 목적을 가지고 KAMIR(Korea Acute Myocardial Infarction Registry)가 시작 되었다.

연구목표

Banner Link
배너링크서비스

- 대한순환기학회 The Korean Society of Circulation
- 대한내과학회 The Korean Association of Internal Medicine
- 대한고혈압학회 The Korean Society of Hypertension
- 한국심초음파학회
- 중재시술연구회
- 부정맥연구회

KAMIR: Korea Acute Myocardial Infarction Registry

Principal Investigator: Jeong MH

Sub-investigators: Kim YJ, Kim CJ, Cho MC, Ahn YK

Co-investigators: **57 primary PCI centers**

Ko YP, Koo BG, Gwon HC, Kim KS, Kim DI, Kim MH, Kim BO, Kim SW, Kim SJ, Kim YJ, Kim JK, Kim CJ, Kim TI, Rha SW, Rhew JY, Park GS, Park SW, Park SH, Bae JH, Seong IW, Seung KB, Ahn YK, Ahn TH, Yang JY, Oh SK, Yoon Jh, Lee HS, Lee MY, Lee SH, Lee SW, Rhim JY, Jeong KT, Jeong MH, Chung WS, Jeong HJ, Cho MC, Cho JH, Cho JM, Joo SJ, Jin DG, Jin SW, Chae SC, Chae IH, Chae JK, Choi DH, Tahk SJ, Han KR, Hur SH, Hwang JY

Steering Committee:

Park SJ, Jang YS, Seung KB, Chung WS, Cho JG, Kim YJ, Kim CJ, Cho MC, Yoon JH, Chae IH, Jeong MH

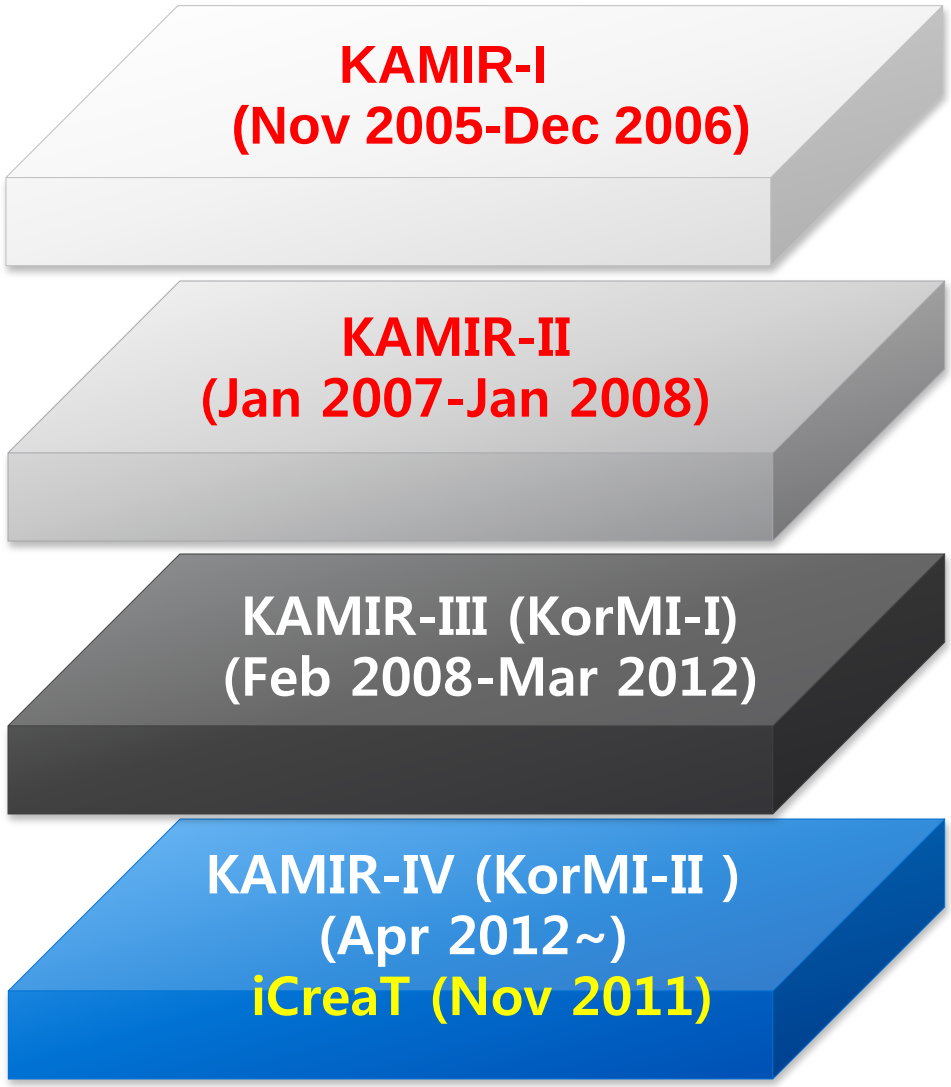
Purpose of KAMIR Study

1. On-line registration of Korean AMI patients
2. Early detection of high risk patients
3. Risk factor documentation and analysis
4. New therapeutic strategy for AMI
5. Effective prevention strategy for AMI

Flow Sheet of KAMIR Study

1. • Acute Myocardial Infarction Network
2. • Risk factors and In-hospital Treatment Data Base Establishment
3. • Identification of Current AMI Diagnosis and Treatment in Korea
4. • 6 month to 1 year Follow-up : Clinical Outcome Database Establishment
5. • Korean AMI : Diagnosis and Treatment Guideline Establishment

Four Phases of KAMIR Study



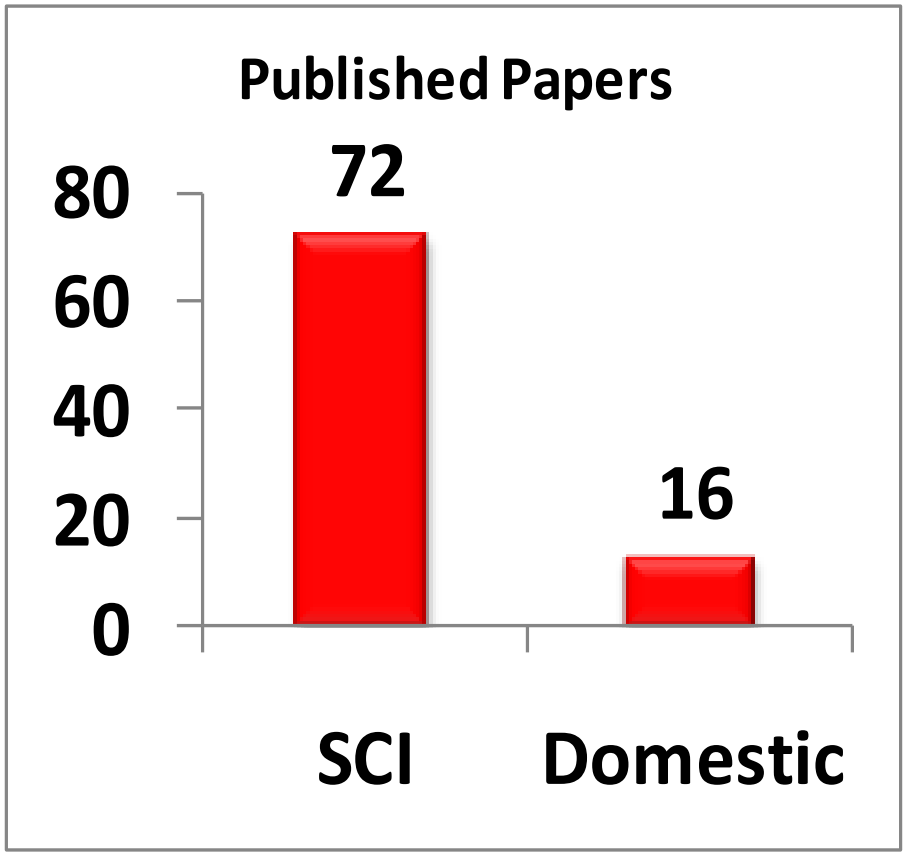
N=8,489

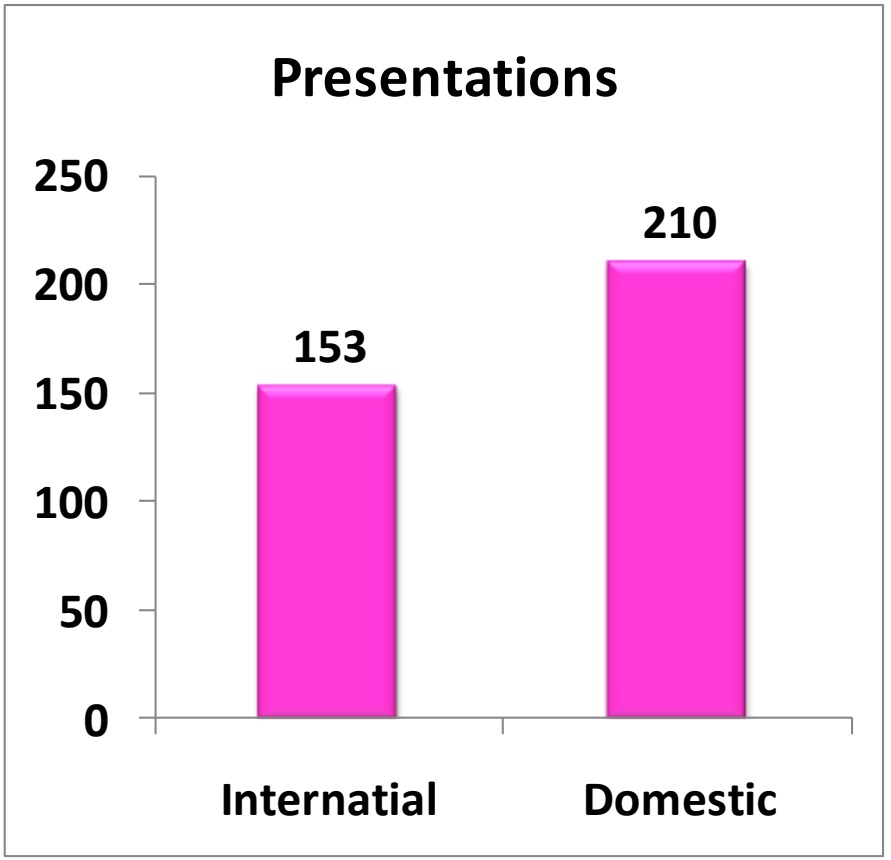
N=6,381
(14,870)

N=24,600
(39,470)

N=7,121
(46,591)

KAMIR Publications and Presentations (2006~2012)





Special Invited Lectures at 2012 Japanese Circulation Society And American College of Cardiology

Triple Versus Dual Antiplatelet Therapy in Patients With Acute ST-Segment Elevation Myocardial Infarction Undergoing Primary Percutaneous Coronary Intervention

Kang-Yin Chen, MD; Seung-Woon Rha, MD; Yong-Jian Li, MD; Kanhaiya L. Poddar, MBBS; Zhe Jin, MD; Yoshiyasu Minami, MD; Lin Wang, MD; Eung Ju Kim, MD; Chang Gyu Park, MD; Hong Seog Seo, MD; Dong Joo Oh, MD; Myung Ho Jeong, MD; Young Keun Ahn, MD; Taek Jong Hong, MD; Young Jo Kim, MD; Seung Ho Hur, MD; In Whan Seong, MD; Jei Keon Chae, MD; Myeong Chan Cho, MD; Jang Ho Bae, MD; Dong Hoon Choi, MD; Yang Soo Jang, MD; In Ho Chae, MD; Chong Jin Kim, MD; Jung Han Yoon, MD; Wook Sung Chung, MD; Ki Bae Seung, MD; Seung Jung Park, MD; for the Korea Acute Myocardial Infarction Registry Investigators

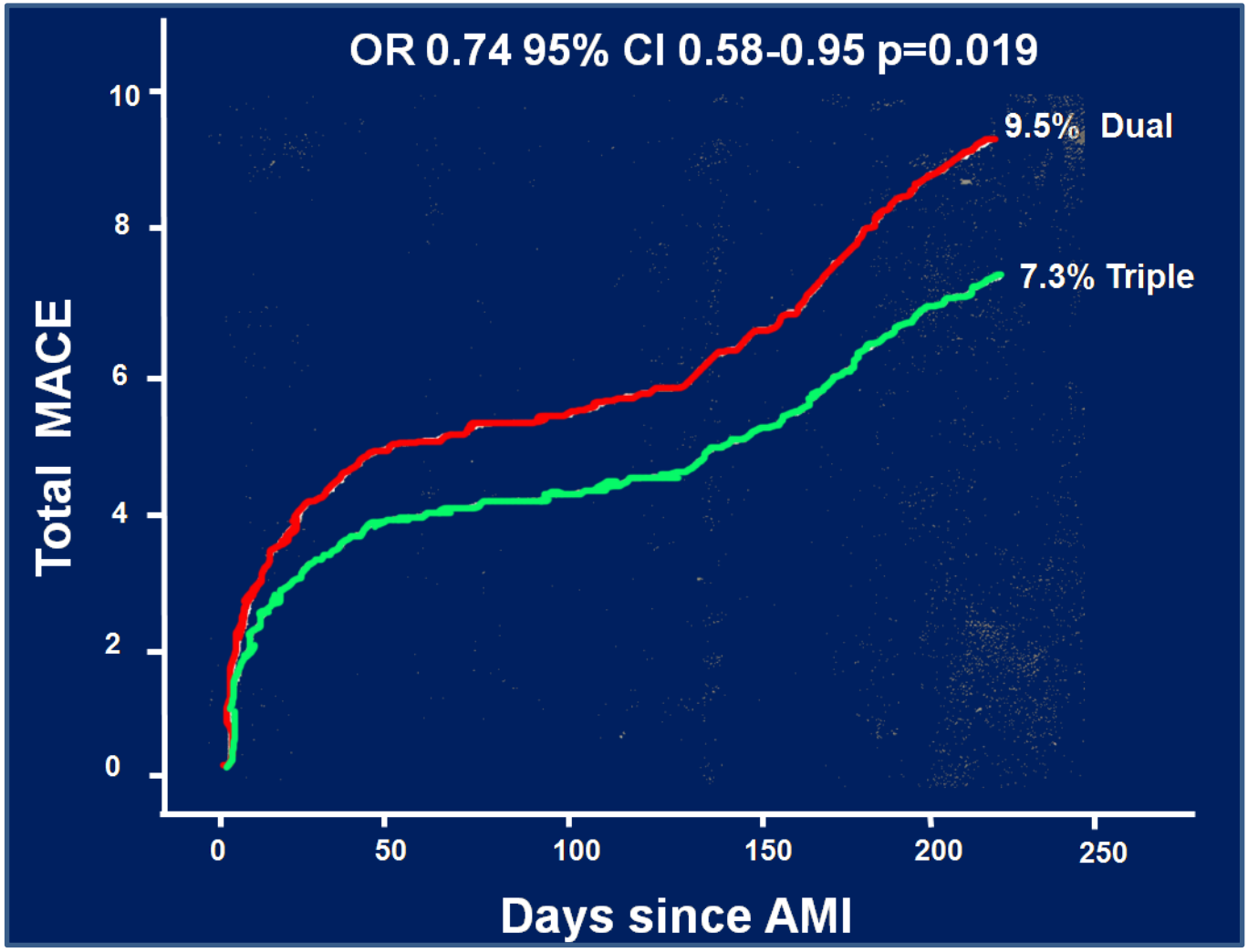
Background—Whether triple antiplatelet therapy is superior or similar to dual antiplatelet therapy in patients with acute ST-segment elevation myocardial infarction undergoing primary percutaneous coronary intervention in the era of drug-eluting stents remains unclear.

Methods and Results—A total of 4203 ST-segment elevation myocardial infarction patients who underwent primary percutaneous coronary intervention with drug-eluting stents were analyzed retrospectively in the Korean Acute Myocardial Infarction Registry (KAMIR). They received either dual (aspirin plus clopidogrel; dual group; n=2569) or triple (aspirin plus clopidogrel plus cilostazol; triple group; n=1634) antiplatelet therapy. The triple group received additional cilostazol at least for 1 month. Various major adverse cardiac events at 8 months were compared between these 2 groups. Compared with the dual group, the triple group had a similar incidence of major bleeding events but a significantly lower incidence of in-hospital mortality. Clinical outcomes at 8 months showed that the triple group had significantly lower incidences of cardiac death (adjusted odds ratio, 0.52; 95% confidence interval, 0.32 to 0.84; P=0.007), total death (adjusted odds ratio, 0.60; 95% confidence interval, 0.41 to 0.89; P=0.010), and total major adverse cardiac events (adjusted odds ratio, 0.74; 95% confidence interval, 0.58 to 0.95; P=0.019) than the dual group. Subgroup analysis showed that older (>65 years old), female, and diabetic patients got more benefits from triple antiplatelet therapy than their counterparts who received dual antiplatelet therapy.

Conclusions—Triple antiplatelet therapy seems to be superior to dual antiplatelet therapy in patients with ST-segment elevation myocardial infarction undergoing primary percutaneous coronary intervention with drug-eluting stents. These results may provide the rationale for the use of triple antiplatelet therapy in these patients. (***Circulation*. 2009;119:3207-3214.**)

KAMIR Investigators. *Circulation* 2009;119:3207-14

Triple vs. Dual antiplatelet therapy in AMI Pts



KAMIR Investigators. *Circulation* 2009;119:3207-14

2010 년 일본 심장학회지 Review Article 게재

Journal of Cardiology (2010) 56, 1–7

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Review

Current management of acute myocardial infarction: Experience from the Korea Acute Myocardial Infarction Registry

Doo Sun Sim (MD), Myung Ho Jeong (MD, PhD)*, Jung Chaee Kang (MD, PhD)

KAMIR Investigators. *J Cardiol 2010;56:1-7*

Contents lists available at ScienceDirect

International Journal of Cardiology

journal homepage: www.elsevier.com/locate/ijcard

A new risk score system for the assessment of clinical outcomes in patients with non-ST-segment elevation myocardial infarction

Hyun Kuk Kim [a], Myung Ho Jeong [a,*], Youngkeun Ahn [a], Jong Hyun Kim [b], Shung Chull Chae [c], Young Jo Kim [d], Seung Ho Hur [e], In Whan Seong [f], Taek Jong Hong [g], Dong Hoon Choi [h], Myeong Chan Cho [i], Chong Jin Kim [j], Ki Bae Seung [k], Wook Sung Chung [k], Yang Soo Jang [h], Seung Woon Rha [l], Jang Ho Bae [m], Jeong Gwan Cho [a], Seung Jung Park [n]
other Korea Acute Myocardial Infarction Registry Investigators
Korea Acute Myocardial infarction Registry (KAMIR) Study Group of Korean Circulation Society

A B S T R A C T

Background and objectives: Prediction for long-term clinical outcomes in patients with non-ST elevation acute coronary syndrome is important as well as early risk stratification. The aim of this study is to develop a simple assessment tool for better early bedside risk stratification for both short- and long-term clinical outcomes.
Subjects and methods: 2148 patients with non-ST-segment elevation myocardial infarction (NSTEMI) (64.9 ± 12.2 years, 35.0% females) were enrolled in a nationwide prospective Korea Acute Myocardial Infarction Registry (KAMIR). A new risk score was constructed using the variables related to one year mortality: TIMI risk index (17.5–30: 1 point, >30: 2 points), Killip class (II: 1 point, >II: 2 points) and serum creatinine (≥ 1.5 mg/dL: 1 point), based on the multivariate-adjusted risk relationship. The new risk score system was compared with the Global Registry of Acute Coronary Events (GRACE) and TIMI risk scores during a 12-month clinical follow-up.
Results: During a one year follow-up, all causes of death occurred in 362 patients (14.3%), and 184 (8.6%) patients died in the hospital. The new risk score showed good predictive value for one year mortality. The accuracy for in-hospital and one year post-discharge mortality rates, the new risk score demonstrated significant differences in predictive accuracy when compared with TIMI and GRACE risk scores.
Conclusion: A new risk score in the present study provides simplicity with accuracy simultaneously for early risk stratification, and also could be a powerful predictive tool for long-term prognosis in NSTEMI.

KAMIR Investigators. Int J Cardiol *2010;145:450-4*

Table 2
Univariate analysis for predictors of one year mortality.

Characteristics	β coefficiency	*P* value	HR (95% CI)
TIMI risk index			
17.5–30	1.045	<0.001	2.84 (1.68–4.81)
>30	2.379	<0.001	10.79 (6.58–17.70)
Female	0.757	<0.001	2.13 (1.86–2.44)
Risk factors			
Hypertension	0.515	<0.001	1.67 (1.32–2.13)
Diabetes mellitus	0.639	<0.001	1.90 (1.51–2.39)
Hypercholesterolemia	−0.257	0.19	0.77 (0.53–1.13)
Current smoker	−0.786	<0.001	0.46 (0.34–0.61)
Family history	−0.285	0.27	0.75 (0.45–1.25)
At least 3 risk factors	−0.070	0.71	0.93 (0.65–1.34)
Previous history			
Regular aspirin medication	0.517	<0.001	1.68 (1.30–2.17)
Stroke or PAD	0.838	<0.001	2.31 (1.73–3.09)
Significant coronary stenosis	0.652	<0.001	1.92 (1.51–2.43)
On admission Killip class			
Killip class			
II	1.392	<0.001	4.02 (2.89–5.59)
III–IV	2.238	<0.001	9.37 (7.20–12.21)
Severe angina symptom	−0.294	0.17	0.75 (0.49–1.14)
ST-segment depression	0.564	<0.001	1.76 (1.40–2.21)
Serum creatinine ≥ 1.5 mg/dL	1.806	<0.001	6.08 (4.83–7.67)

CI = confidence interval; HR = hazard ratio; TIMI = thrombolysis in myocardial infarction.
TIMI risk index = (heart rate × [age/10]^2) / systolic blood pressure.
PAD = peripheral artery disease.

KAMIR Investigators. Int J Cardiol *2010;145:450-4*

Table 3
Independent predictors of one year mortality.

Characteristics	β coefficiency	*P* value	HR (95% CI)
TIMI risk index			
17.5–30	0.708	0.009	2.03 (1.19–3.46)
>30	1.631	<0.001	5.11 (3.07–8.05)
Killip class			
II	0.952	<0.001	2.59 (1.84–2.77)
III–IV	1.456	<0.001	4.29 (3.20–5.75)
Serum creatinine ≥ 1.5 mg/dL	1.091	<0.001	2.97 (2.32–3.83)

CI = confidence interval; HR = hazard ratio; TIMI = thrombolysis in myocardial infarction.

KAMIR Investigators. Int J Cardiol *2010;145:450-4*

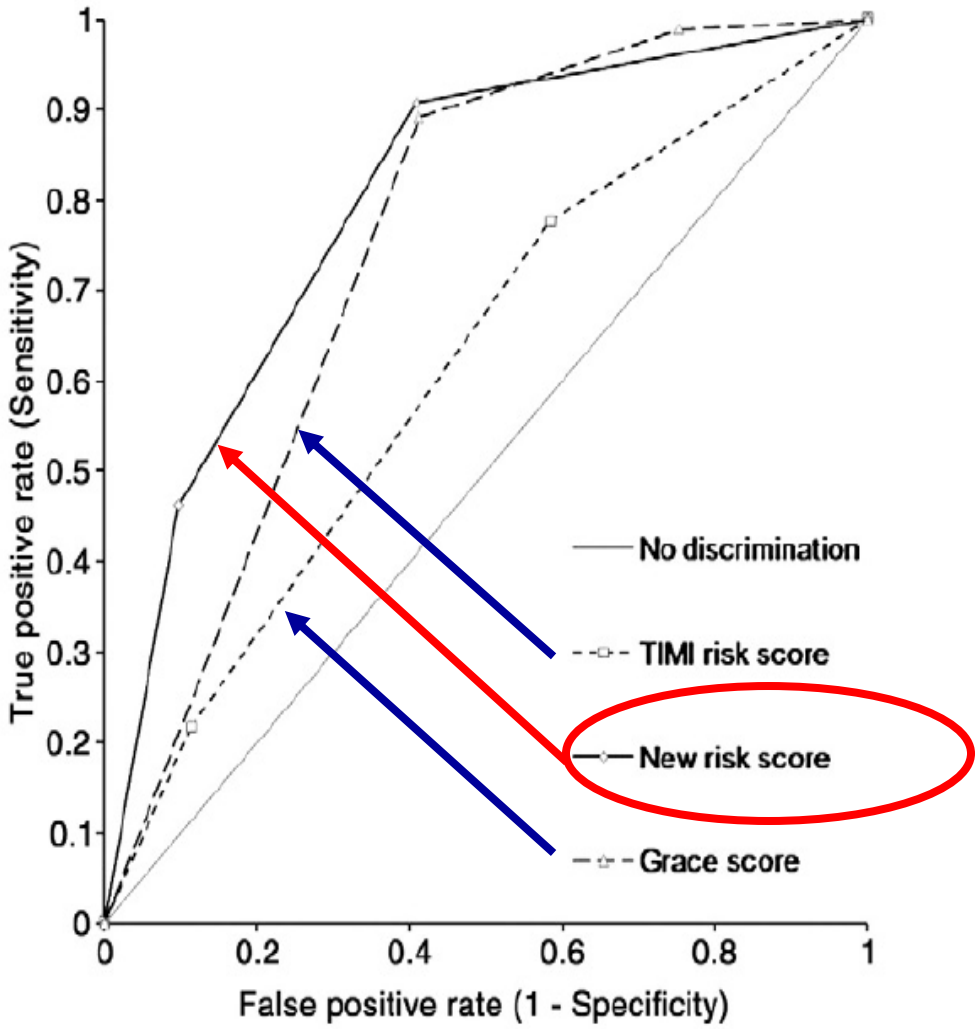

Fig. 4. Receiver-operating characteristic curves of the new risk score, GRACE and TIMI risk scores for post-discharge for one year mortality.

KAMIR Investigators. Int J Cardiol *2010;145:450-4*

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Benefit of Early Statin Therapy in Patients With Acute Myocardial Infarction Who Have Extremely Low Low-Density Lipoprotein Cholesterol

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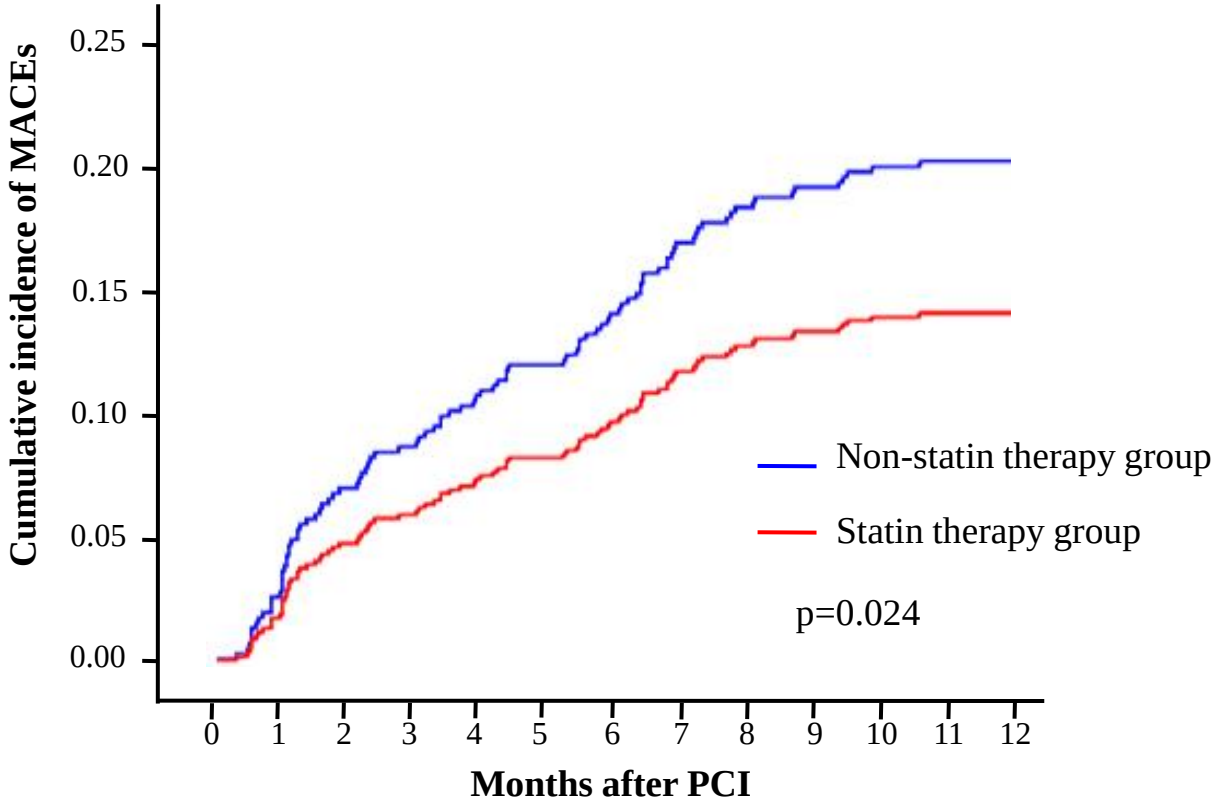
KAMIR Investigators. *J Am Coll Cardiol 2011;58:1664-71*

Statin therapy in AMI patients with LDL-C levels < 70 mg/dL



No.at risk	1,054	894	780	680
Statin therapy group	607	529	457	400
Non-statin therapy group	447	365	323	280

KAMIR Investigators. ***J Am Coll Cardiol 2011;58:1664-71***

2011 년 미국 심장학회지
새로운 KAMIR Score 발표

Hospital Discharge Risk Score System for the Assessment of Clinical Outcomes in Patients With Acute Myocardial Infarction (Korea Acute Myocardial Infarction Registry [KAMIR] Score)

Hyun Kuk Kim, MD[a], Myung Ho Jeong, MD[a,*], Youngkeun Ahn, MD[a], Jong Hyun Kim, MD[b], Shung Chull Chae, MD[c], Young Jo Kim, MD[d], Seung Ho Hur, MD[e], In Whan Seong, MD[f], Taek Jong Hong, MD[g], Dong Hoon Choi, MD[h], Myeong Chan Cho, MD[i], Chong Jin Kim, MD[j], Ki Bae Seung, MD[k], Wook Sung Chung, MD[k], Yang Soo Jang, MD[h], Seung Woon Rha, MD[l], Jang Ho Bae, MD[m], Jeong Gwan Cho, MD[a], and Seung Jung Park, MD[n], and Other Korea Acute Myocardial Infarction Registry Investigators

Assessment of risk at time of discharge could be a useful tool for guiding postdischarge management. The aim of this study was to develop a novel and simple assessment tool for better hospital discharge risk stratification. The study included 3,997 hospital-discharged patients with acute myocardial infarction who were enrolled in the nationwide prospective Korea Acute Myocardial Infarction Registry-1 (KAMIR-1) from November 2005 through December 2006. The new risk score system was tested in 1,461 hospital-discharged patients who were admitted from January 2007 through January 2008 (KAMIR-2). The new risk score system was compared to the Global Registry of Acute Coronary Events (GRACE) postdischarge risk model during a 12-month clinical follow-up. During 1-year follow-up, all-cause death occurred in 228 patients (5.7%) and 81 patients (5.5%) in the development and validation cohorts, respectively. The new risk score (KAMIR score) was constructed using 6 independent variables related to the primary end point using a multivariable Cox regression analysis: age, Killip class, serum creatinine, no in-hospital percutaneous coronary intervention, left ventricular ejection fraction, and admission glucose based on multivariate-adjusted risk relation. The KAMIR score demonstrated significant differences in its predictive accuracy for 1-year mortality compared to the GRACE score for the developmental and validation cohorts. In conclusion, the KAMIR score for patients with acute myocardial infarction is a simpler and better risk scoring system than the GRACE hospital discharge risk model in prediction of 1-year mortality. (Am J Cardiol 2011;107:965–971)

Table 3
Multivariate analysis for predictors of one-year mortality

Characteristics	Beta Coefficient	p Value	HR (95% CI)
Age (years)			
65–74	0.871	0.001	2.39 (1.44–3.97)
>75	1.468	<0.001	4.34 (2.59–7.28)
Killip class			
II	0.850	0.001	2.34 (1.39–3.94)
III to IV	1.401	<0.001	4.06 (2.54–6.50)
No percutaneous coronary intervention	0.797	<0.001	2.22 (1.65–2.98)
Serum creatinine ≥1.5 mg/dl	0.580	0.012	1.79 (1.13–2.81)
Left ventricular ejection fraction <40%	0.805	<0.001	2.24 (1.47–3.41)
Admission glucose >180 mg/dl	0.417	0.040	1.52 (1.02–2.26)

KAMIR Investigators. *Am J Cardiol 2011;107:965-71*

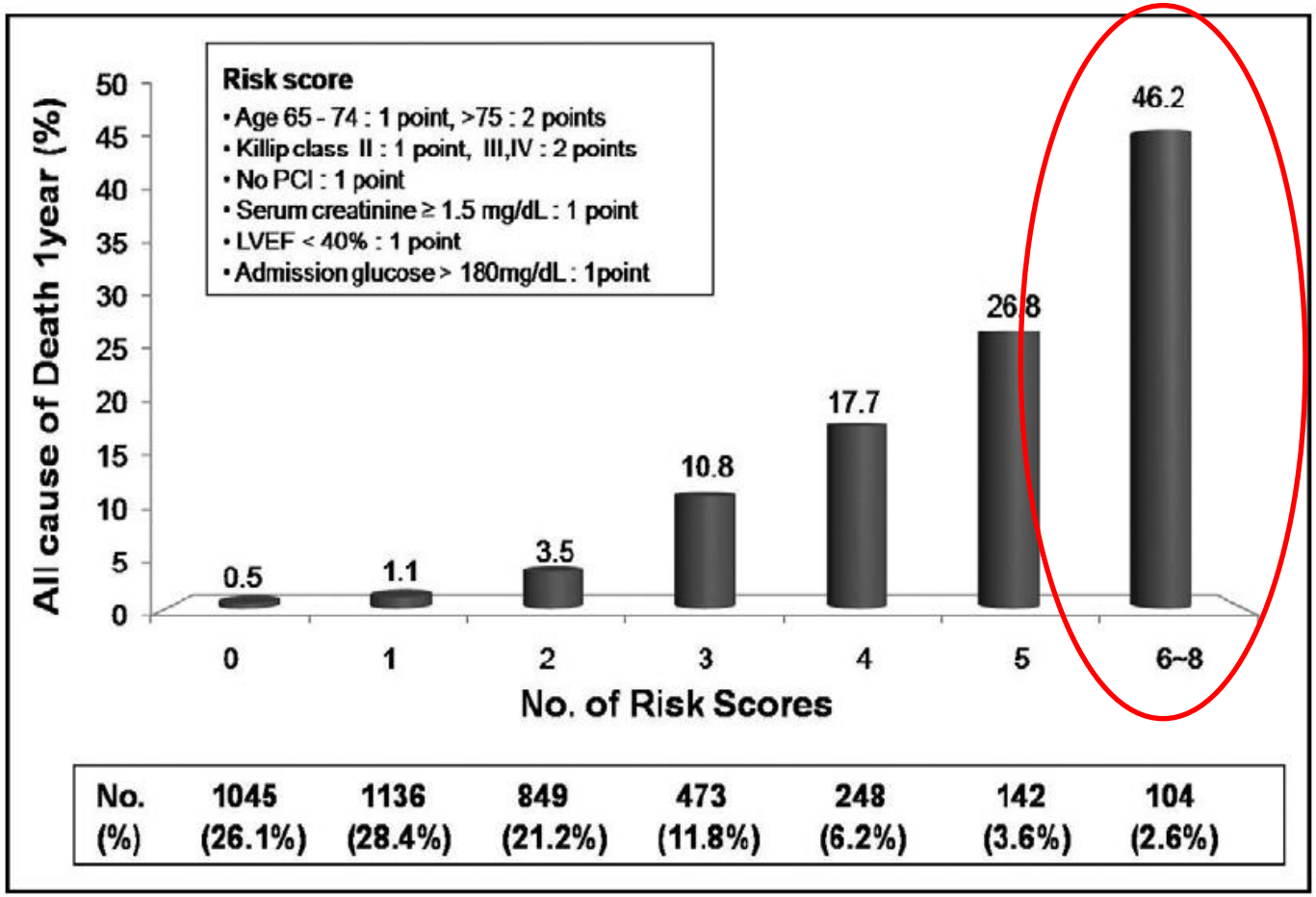


Figure 1. A new risk score predicting 1-year death from acute myocardial infarction. LVEF = left ventricular ejection fraction.

KAMIR Investigators. *Am J Cardiol 2011;107:965-71*

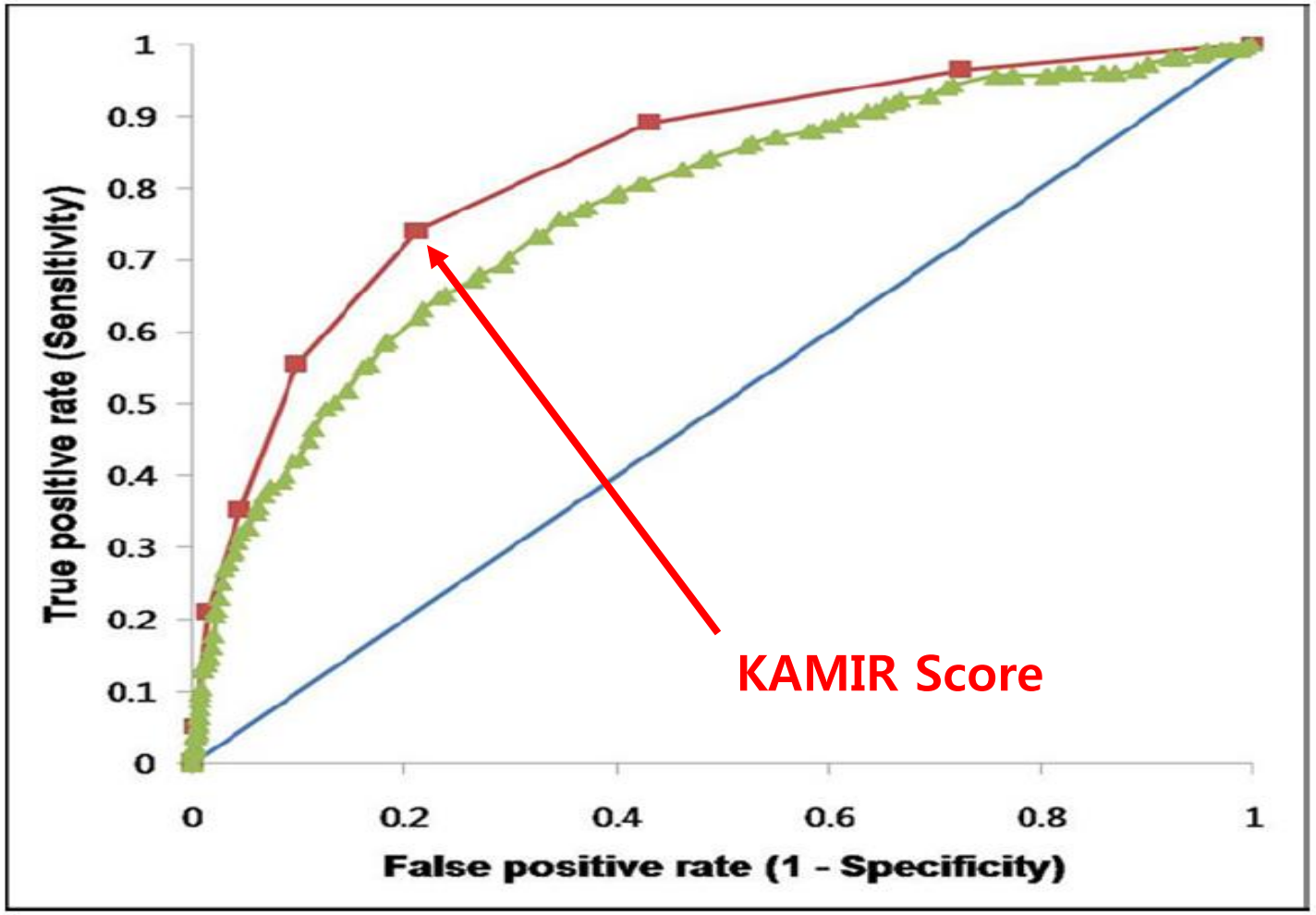


Figure 2. Receiver operator characteristic curves of no discrimination *(solid line)*, new risk score *(squares)*, and Global Registry of Acute Coronary Events score *(triangles)* for 1-year mortality in patients with acute myocardial infarction.

KAMIR Investigators. *Am J Cardiol 2011;107:965-71*

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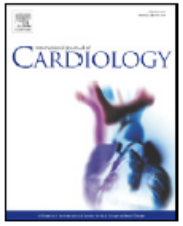

Editorial

The efficacy and safety of drug-eluting stents in patients with acute myocardial infarction: Results from Korea Acute Myocardial Infarction (KAMIR)

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ABSTRACT

There are controversies about the use of drug-eluting stent (DES) in patients with acute myocardial infarction (AMI). Recent trials of DES in patients with AMI have shown the relative safety of DES. However, some physicians hesitate to use DES in AMI patients because of increased risk of stent thrombosis and death. We summarized in this article about the efficacy and safety of DES in AMI patients who were enrolled in Korea Acute Myocardial Infarction Registry (KAMIR).

KAMIR Investigators. *Int J Cardiol 2013; 163:1-4*

2013년 J Kor Med Sci Review Article 게재

REVIEW
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New Horizons of Acute Myocardial Infarction: From the Korea Acute Myocardial Infarction Registry

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As the first nationwide Korean prospective multicenter data collection registry, the Korea Acute Myocardial Infarction Registry (KAMIR) launched in November 2005. Through a number of innovative approaches, KAMIR suggested new horizons about acute myocardial infarction (AMI) which contains unique features of Asian patients from baseline characteristics to treatment strategy. Obesity paradox was existed in Korean AMI patients, whereas no gender differences among them. KAMIR score suggested new risk stratifying method with increased convenience and an enhanced accuracy for the prediction of adverse outcomes. Standard loading dose of clopidogrel was enough for Asian AMI patients. Triple antiplatelet therapy with aspirin, clopidogrel and cilostazol could improve clinical outcomes than dual antiplatelet therapy with aspirin and clopidogrel. Statin improved clinical outcomes even in AMI patients with very low LDL-C levels. The rate of percutaneous coronary intervention was higher and door-to-balloon time was shorter than the previous reports. Zotarolimus eluting stents as the 2nd generation drug-eluting stent (DES) was not superior to the 1st generation DES, in contrast to the western AMI studies. KAMIR made a cornerstone in the study of Korean AMI and expected to be new standards of care for AMI with the renewal of KAMIR design to overcome its pitfalls.

Key Words: Acute Myocardial Infarction; ST-Elevation Myocardial Infarction; Non-ST-Elevation Myocardial Infarction

KAMIR Investigators. *J Korean Med Sci 2013; 28:173-180*

Weak points of KAMIR Study

NIH 국립보건연구원 Korea National Institute of Health

- 초기 대한심장학회의 지원을 받아 환자 등록이 이루어졌으나 체계적 지원이 없음에 따라 연구의 확대 및 자료 활용, 추적 관찰에 제한이 있음

지속적인 추적관찰 및 Nationwide data 구축을 위해서는 현재의 Know-how와 지원이 절실히 필요함

2011. 7. 1. 국립보건연구원 학술연구용역사업

질병관리본부

NIH 국립보건연구원 Korea National Institute of Health

급성 심근경색 환자 예후 및 관리지표 발굴을 위한 전향적 추적관찰연구

연구책임자 정 명 호

연구 개발 목표

급성 심근경색증 급성기, 아급성기, 중장기적인 예후 추적

↓

예후에 영향을 미치는 인자 분석 및 선정

↓

선정된 인자를 통한 급성 심근경색증 환자의 예후 예측 모델 개발

↓

예후 예측 모델을 통한 관리기술 개발

↓

예후 개선 효과 및 경제성 분석

↓

향후 보건관리 정책에 활용

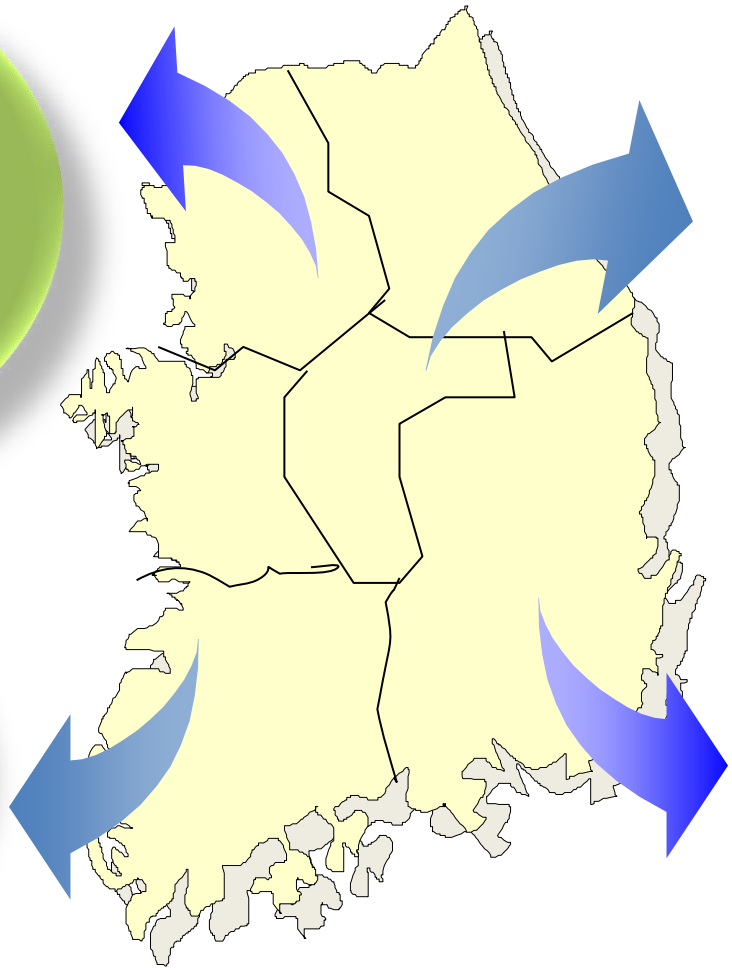
연구 수행체계

NIH 국립보건연구원 Korea National Institute of Health

1차 년도 사업 평가를 통해 개선된 연구 프로토콜에 기초한
전국적인 임상 연구 네트워크 운영

가천의대
가톨릭의대
고려의대
서울의대
서울대분당병원
성균관의대

충남의대
충북의대



전남의대
전북의대
원광의대

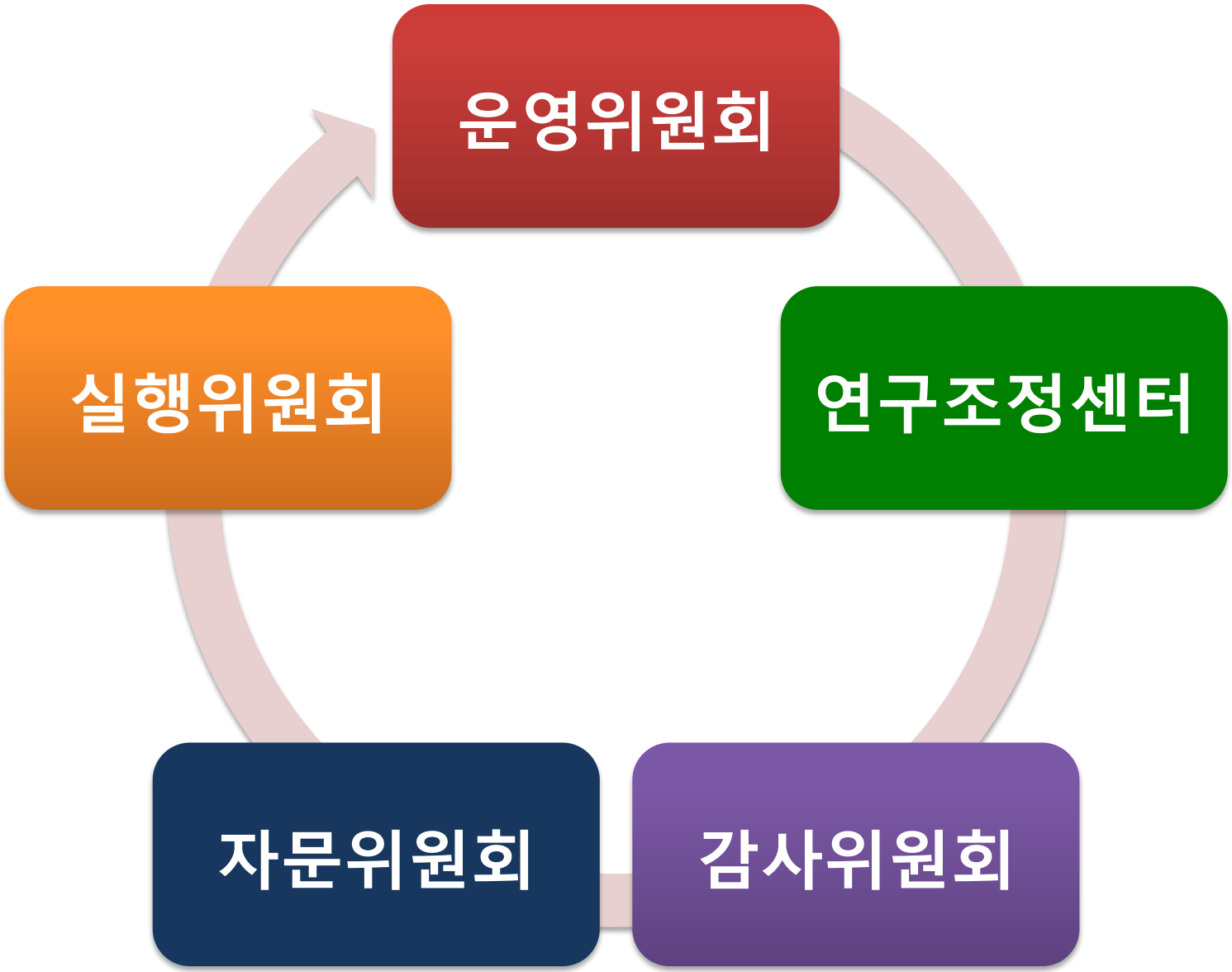
영남의대
경북의대
계명의대
부산의대

참여 연구자

NIH 국립보건연구원 Korea National Institute of Health

		책임연구원	공동연구원
서울·경인지역	가천의대	안태훈	강웅철
	가톨릭의대	승기배	장기육
	고려의대	오동주	나승운
	서울대분당병원	최동주	윤창환
	서울의대	김효수	구본권
	성균관의대	권현철	최승혁
중부·강원지역	충남의대	성인환	정진옥
	충북의대	황경국	김상민
영남지역	경북의대	채성철	박헌식
	계명의대	김권배	허승호
	부산의대	차광수	이한철
	영남의대	김영조	박종선
호남지역	원광의대	오석규	이상재
	전남의대	안영근	김주한
	전북의대	채제건	이상록

연구위원회 구성



연구내용

NIH 국립보건연구원 Korea National Institute of Health

준비단계

환자등록단계

추적조사단계

3차년도 연구 진행중

2011년
- 환자등록체계 운영을 위한 프로토콜을 개발하고 개발된 프로토콜에 기반아여 pilot study 진행

2012년
- 환자등록체계 운영
- 연구네트워크 구성
- 표준화를 위한 질관리 프로그램 운영

2013년
- 환자등록체계 운영
- 원내사망, 6개월사망률 등 단기예후를 설명하는 예후지표 제공

2014년
- 환자등록체계 운영
- 국외 연구네트워크 구성 및 협력연구 진행
- 중기 예후를 평가할 수 있는 지표 (1년 사망률을 기준) 에 대한 타당성평가 및 신규지표 발굴

2015년
- 환자등록체계 운영
- 추적결과 분석하여 한국형 예후예측모델 개발 및 타당성평가
- 장기 예후지표 타당성평가 및 신규지표 생산 - 2년 사망률

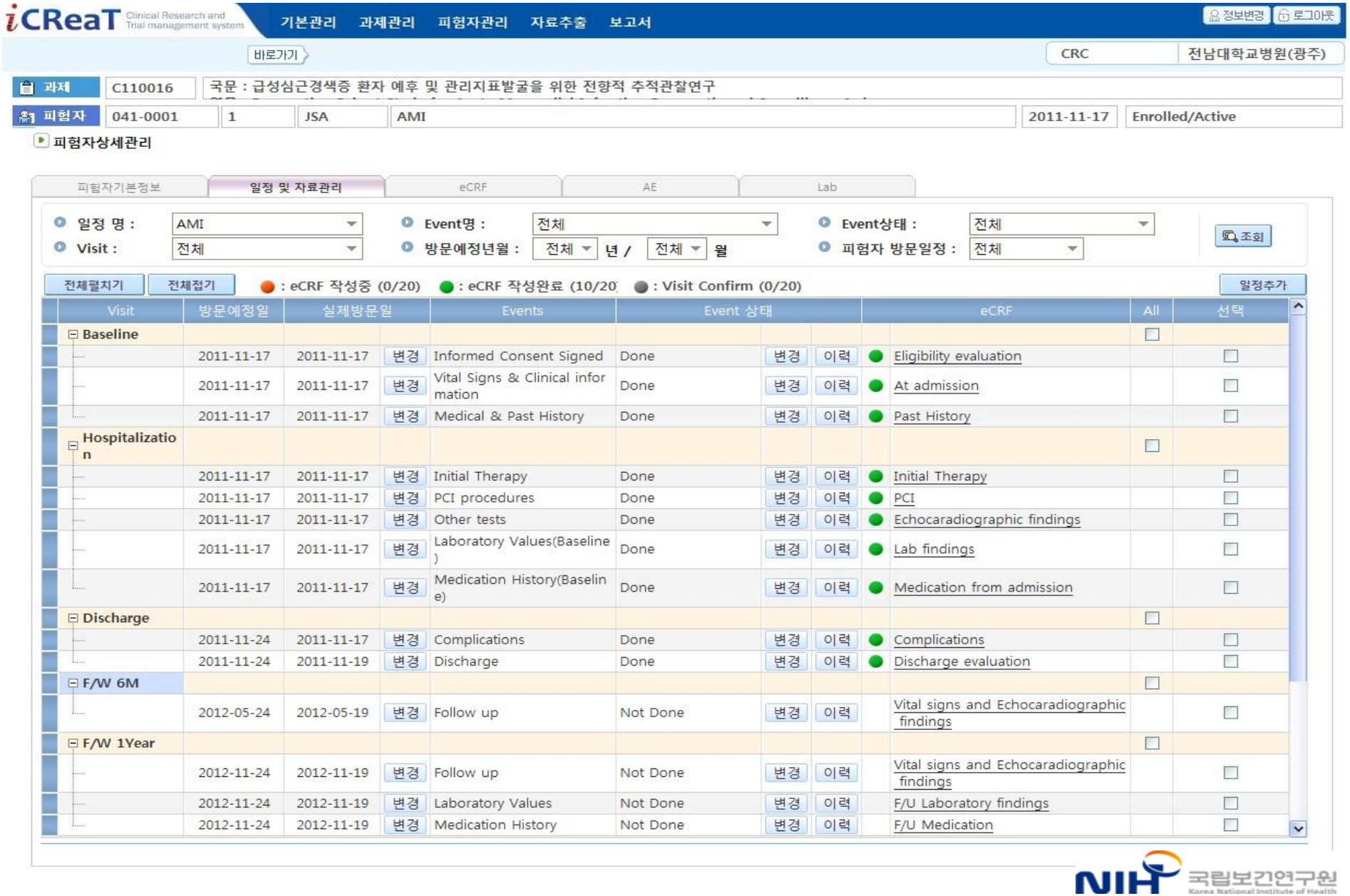
2016년
- 환자등록체계 운영
- 장기 예후지표 타당성평가 및 신규지표 생산 - 3년 사망률)
- 임상 및 보건분야에 적용가능성 평가와 관련된 보건정책수립의 방향제시

2017년
- 한국형 급성심근경색증 예후예측모델의 타당성 평가
- 추적조사 진행, 1년사망률 확정

2018년
- 추적조사 진행 2년사망률 확정

2019년
- 추적조사진행 3년사망률 확정

국립보건원 웹기반 임상연구관리시스템을 이용한 중앙관리



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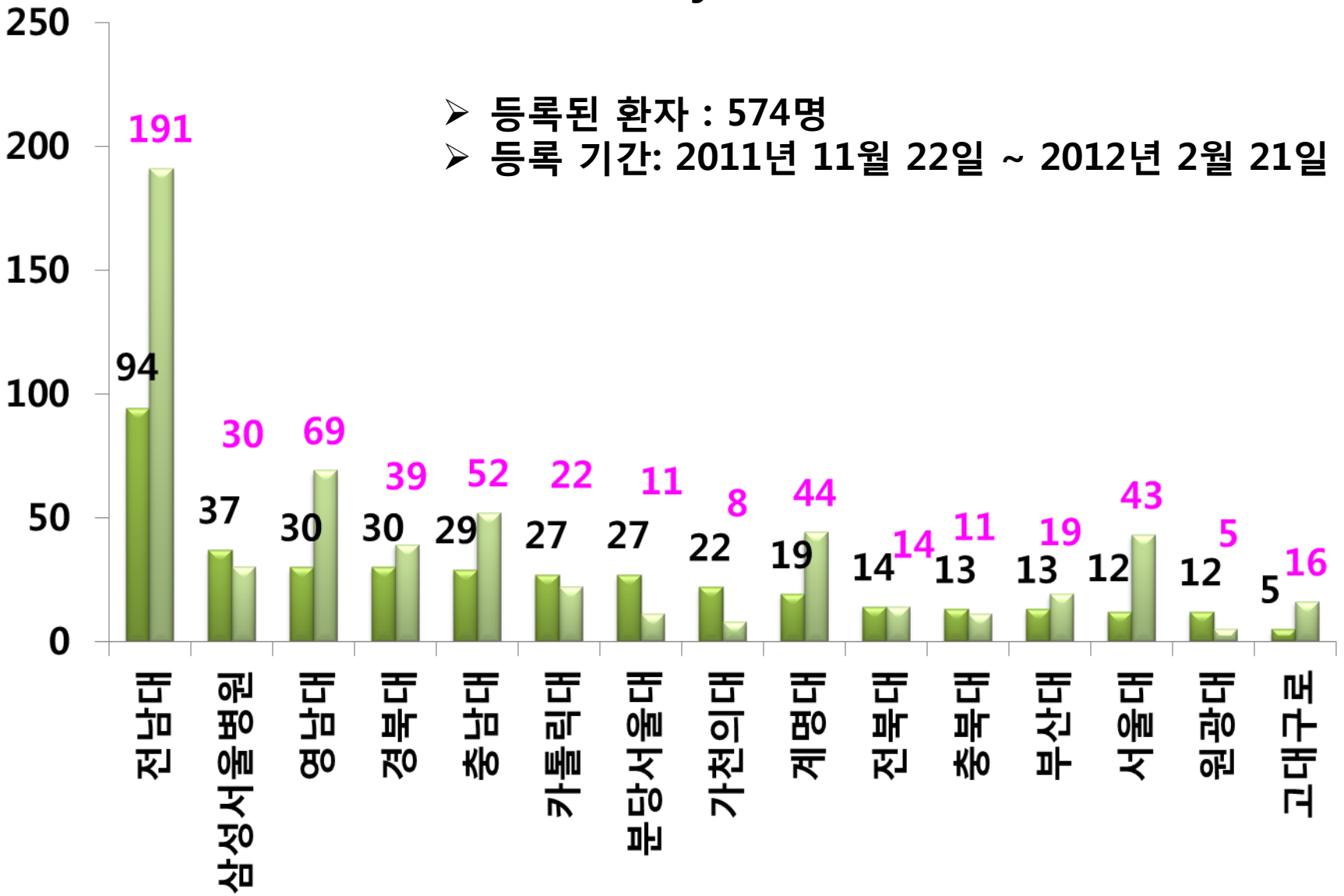
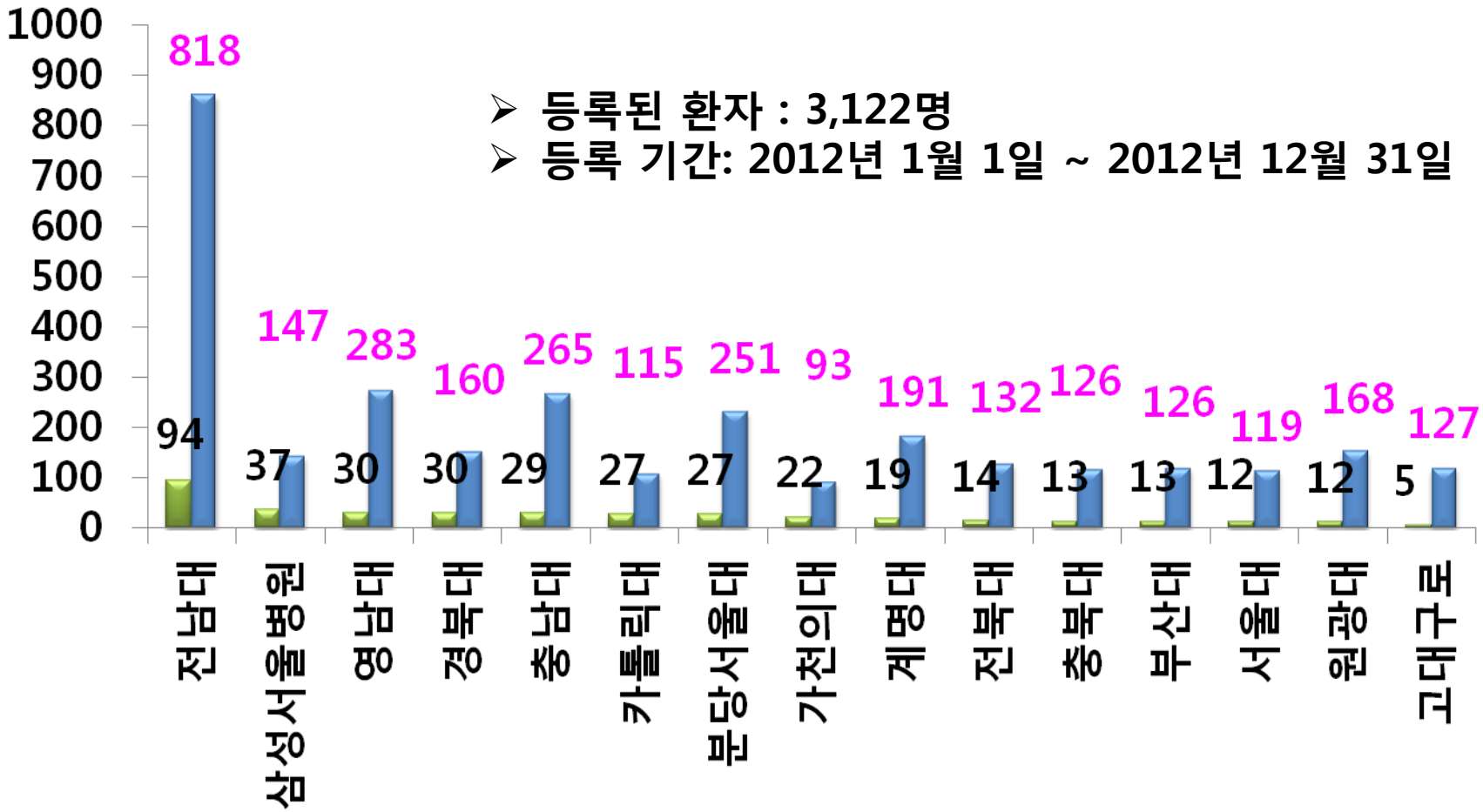
1차년도 (2011) 연구 성과

Pilot study 진행



- 등록된 환자 : 574명
- 등록 기간: 2011년 11월 22일 ~ 2012년 2월 21일

2차년도 (2012) 연구 성과



지역별 분류화 및 질병 발병율 고려 시 균등 등록이 이루어지고 있음

급성심근경색증 분류

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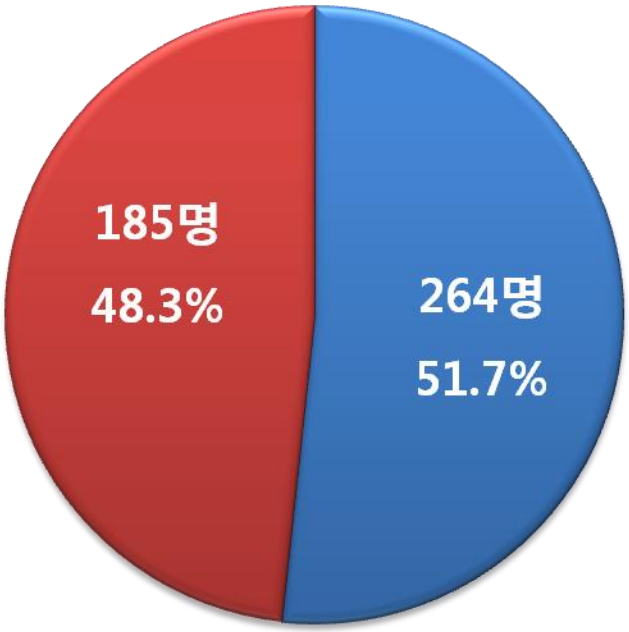
1차년도 결과

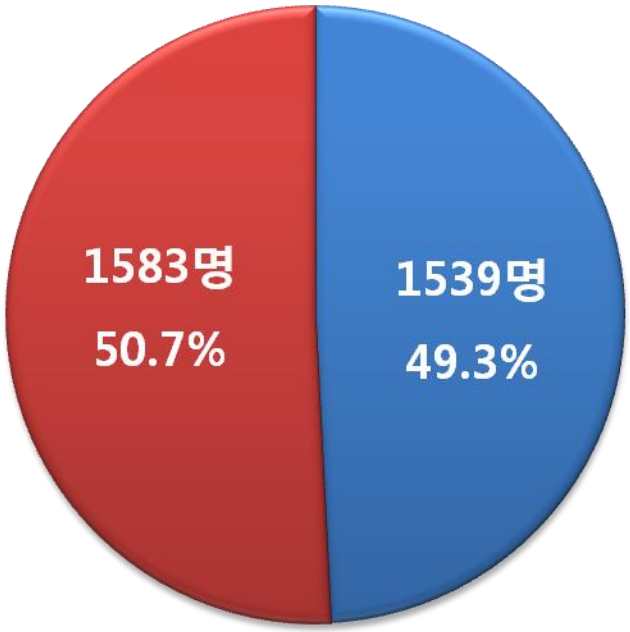
진단명



- ST분절 상승 심근경색증
- 비ST분절 상승 심근경색증

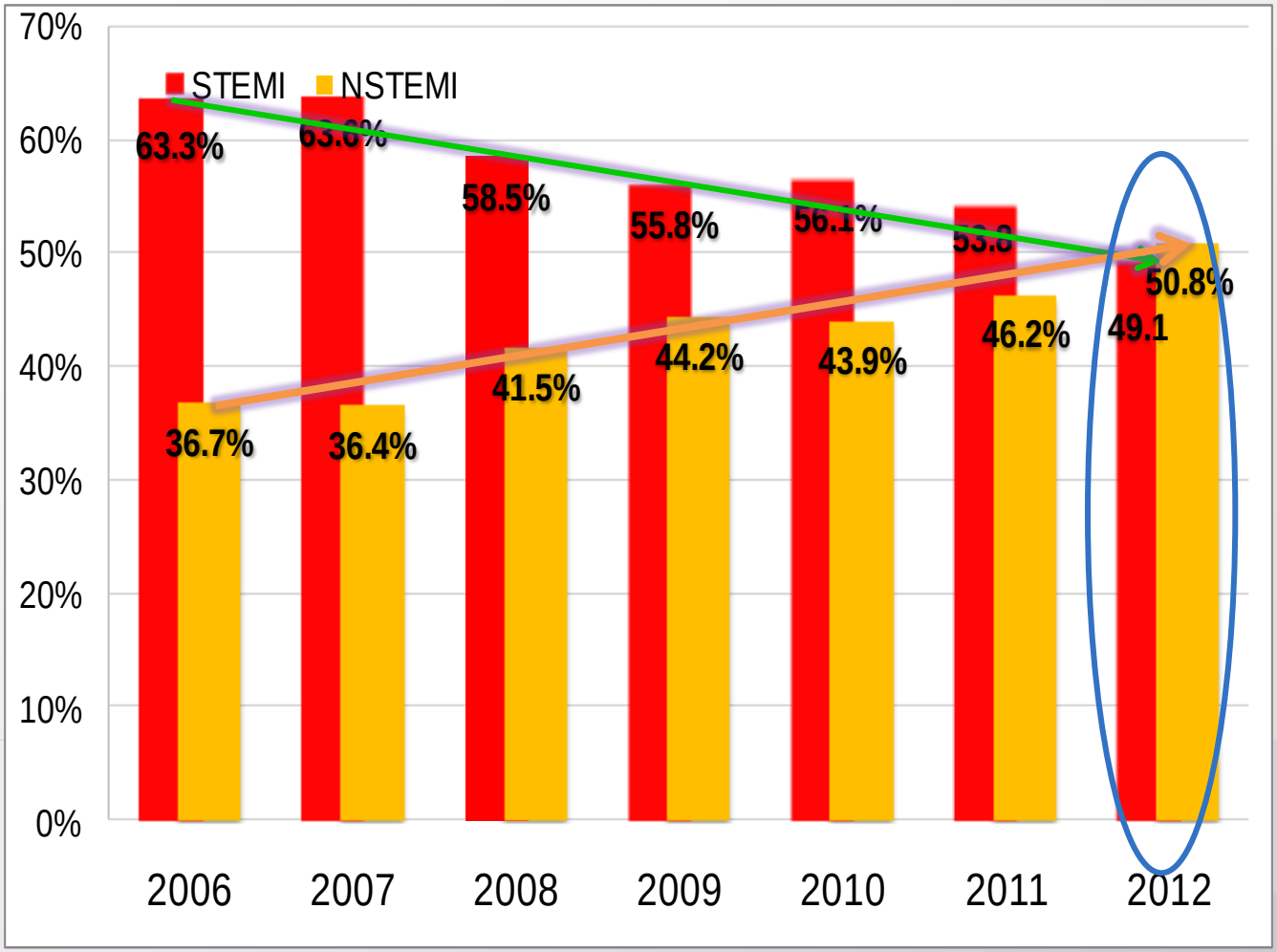
2차년도 결과

진단명

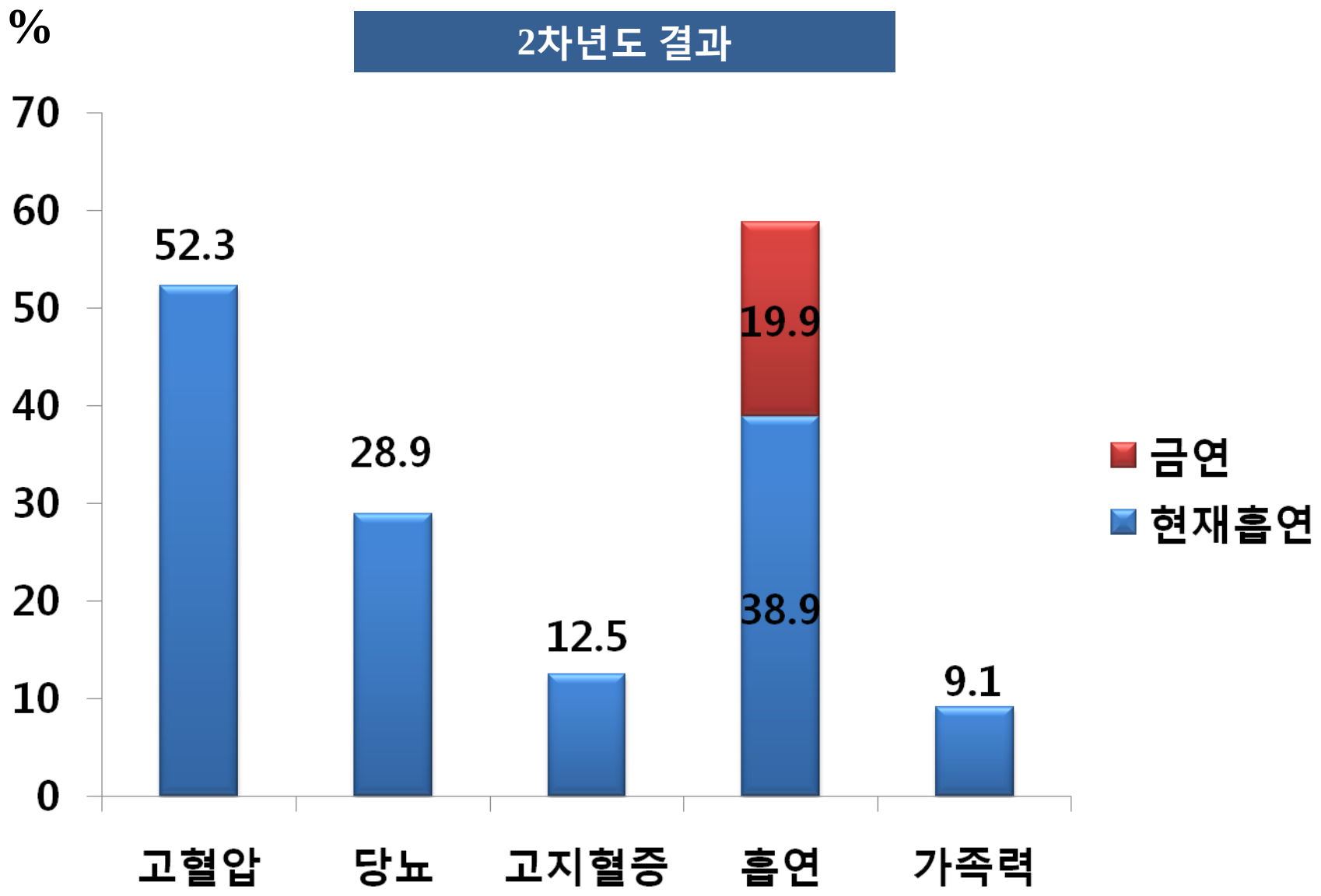


- ST분절 상승 심근경색증
- 비ST분절 상승 심근경색증

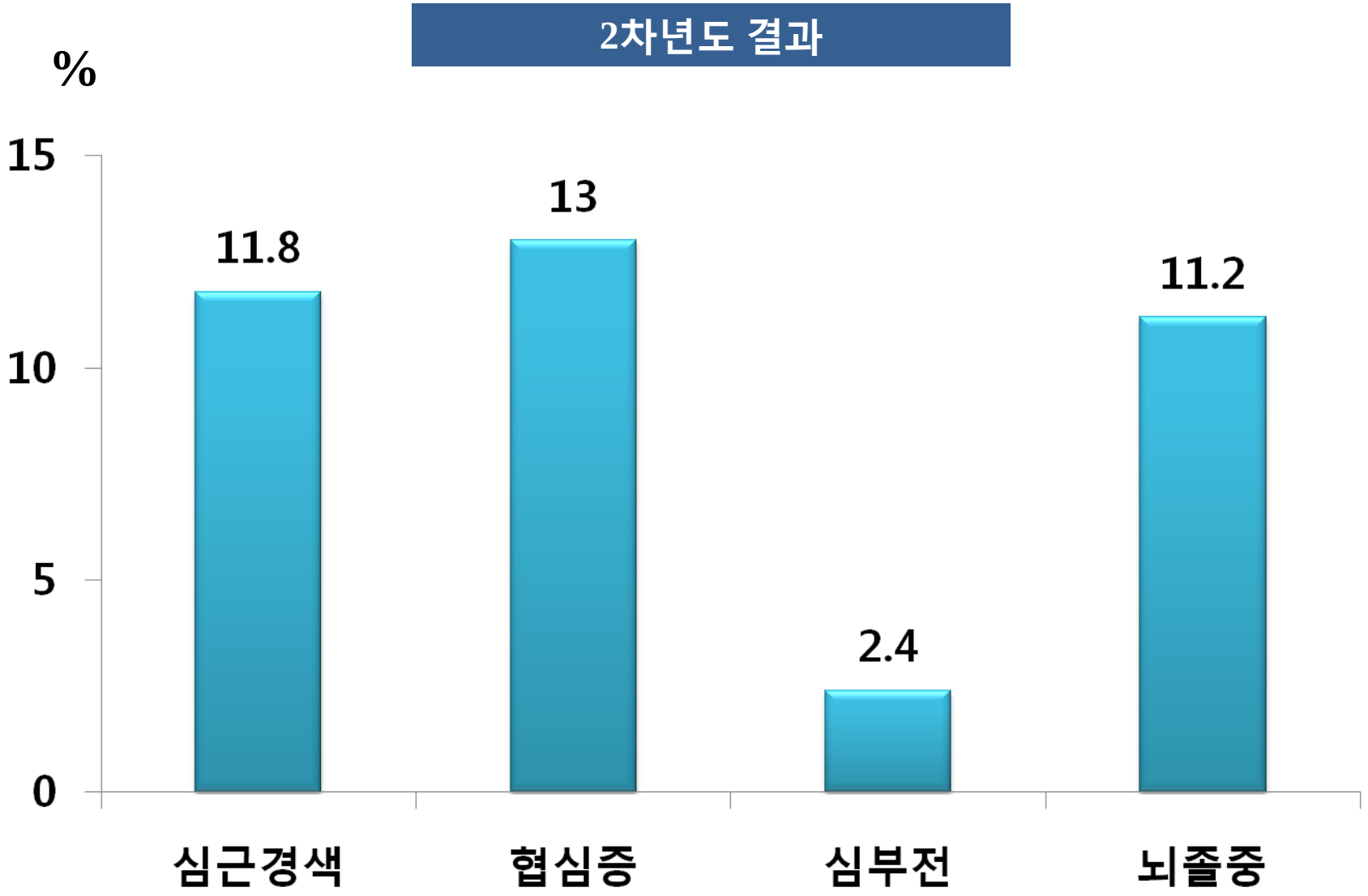
2012 대한심장학회 구연내용



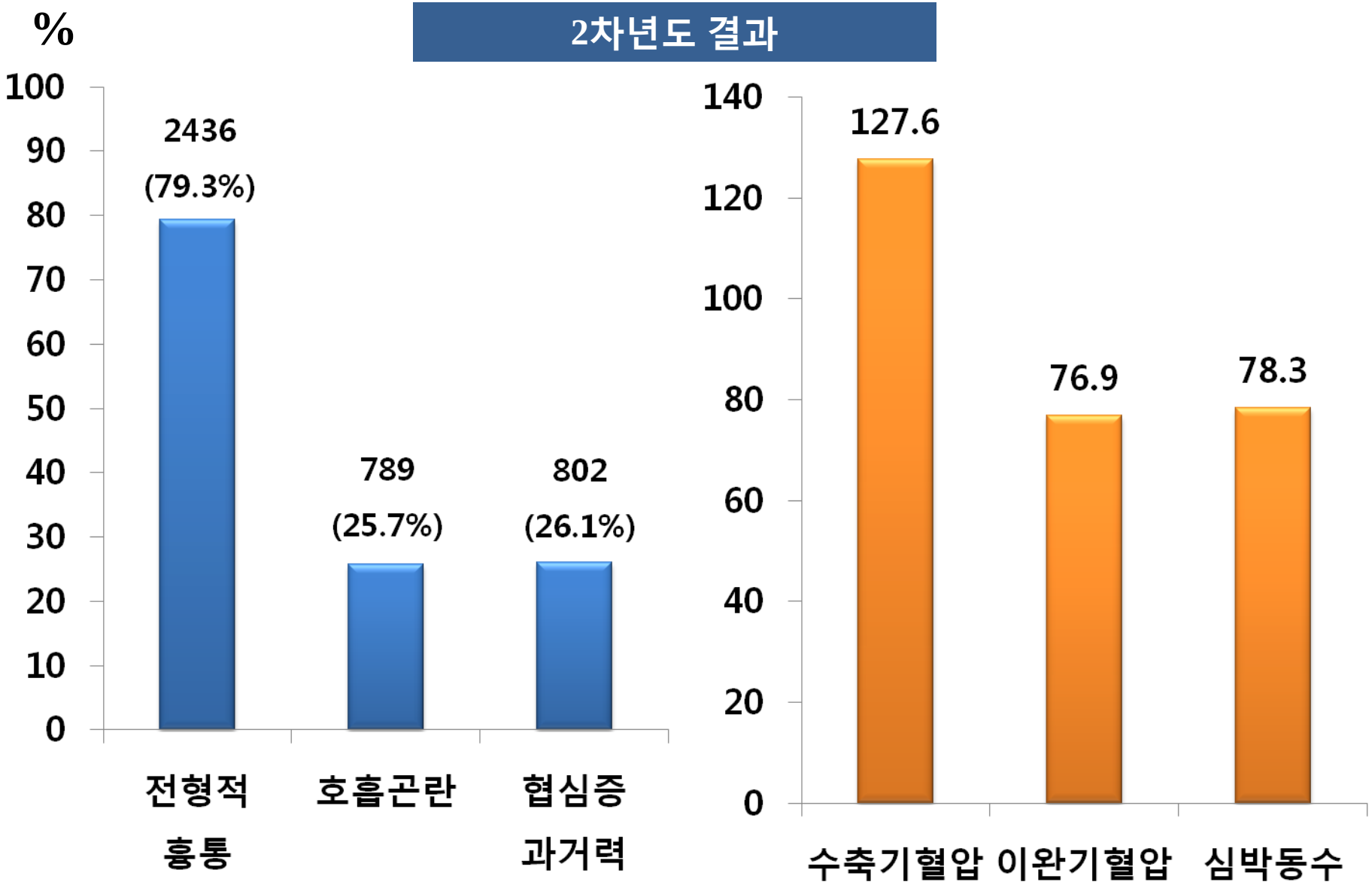
위험인자


%
2차년도 결과
70
60
50
40
30
20
10
0
52.3
28.9
12.5
19.9
38.9
9.1
금연
현재흡연
고혈압
당뇨
고지혈증
흡연
가족력

심뇌혈관질환 과거력

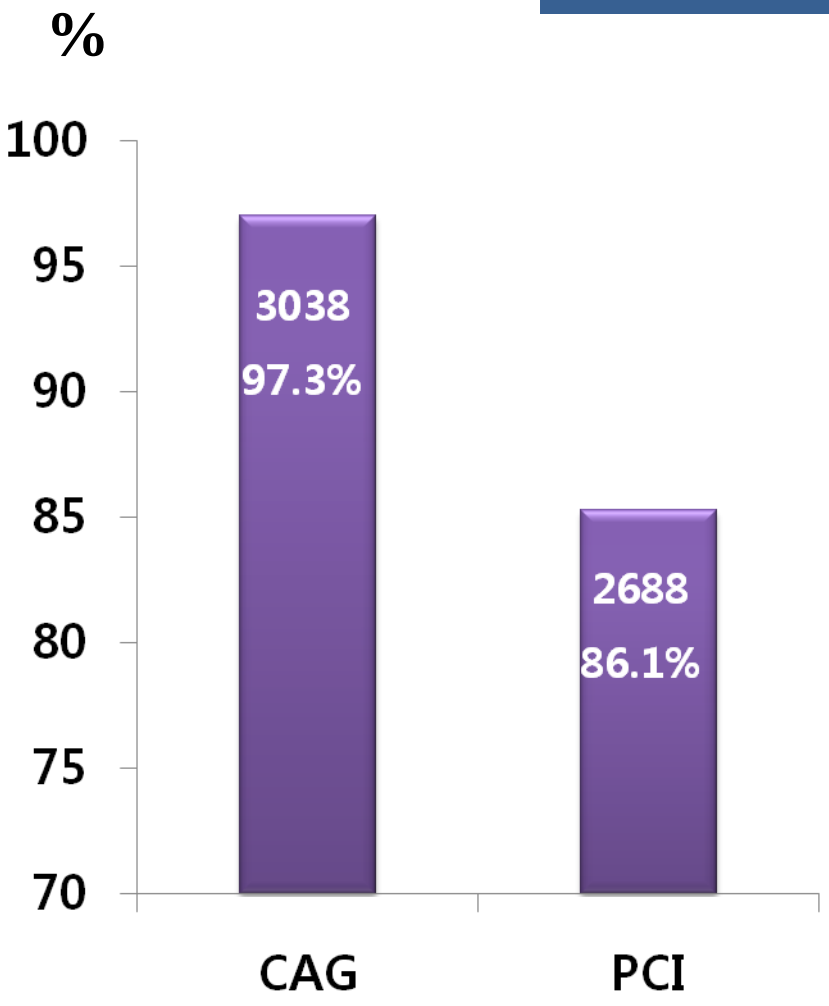


임상증상

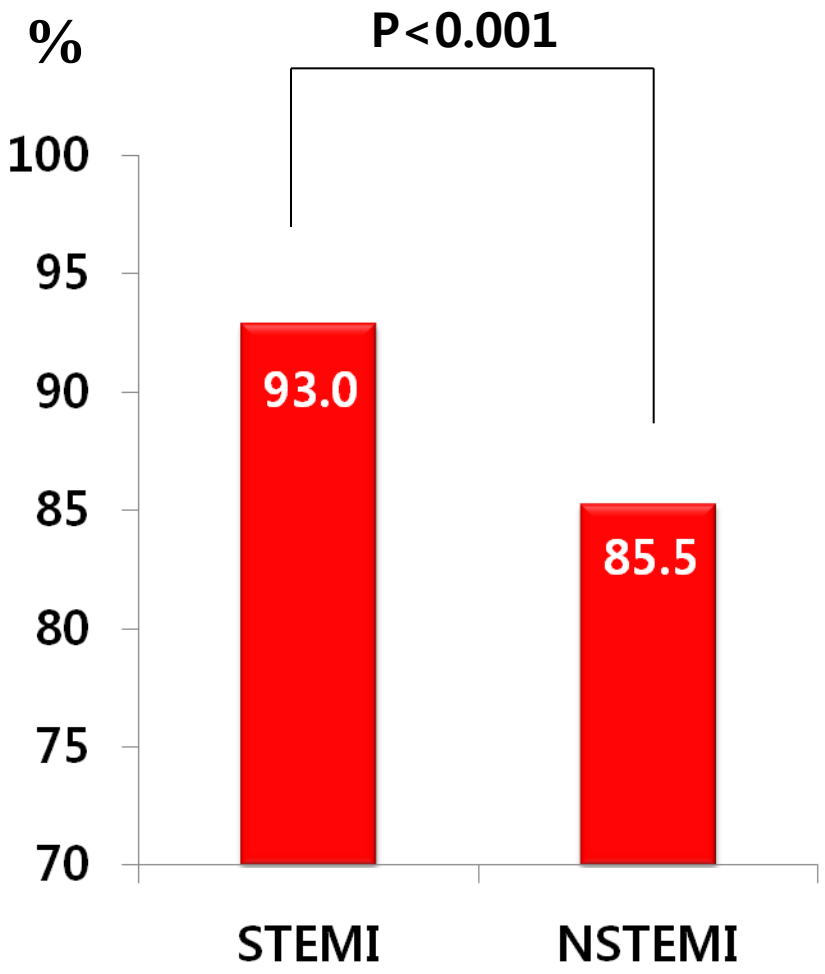

2차년도 결과
%
100
90
80
70
60
50
40
30
20
10
0
2436
(79.3%)
789
(25.7%)
802
(26.1%)
전형적 흉통
호흡곤란
협심증 과거력
140
120
100
80
60
40
20
0
127.6
76.9
78.3
수축기혈압
이완기혈압
심박동수

CAG / PCI

2차년도 결과

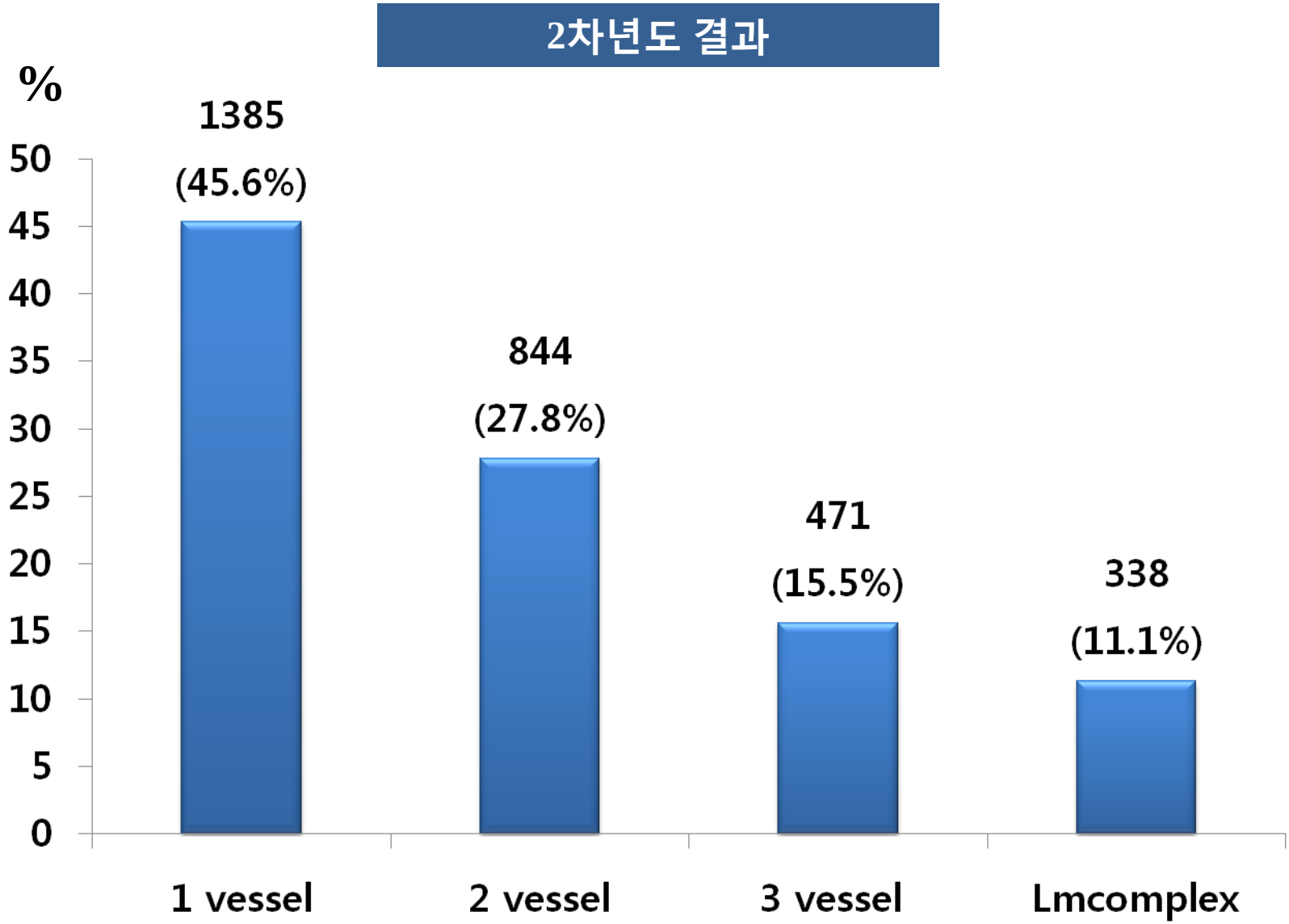


CAG and PCI rate

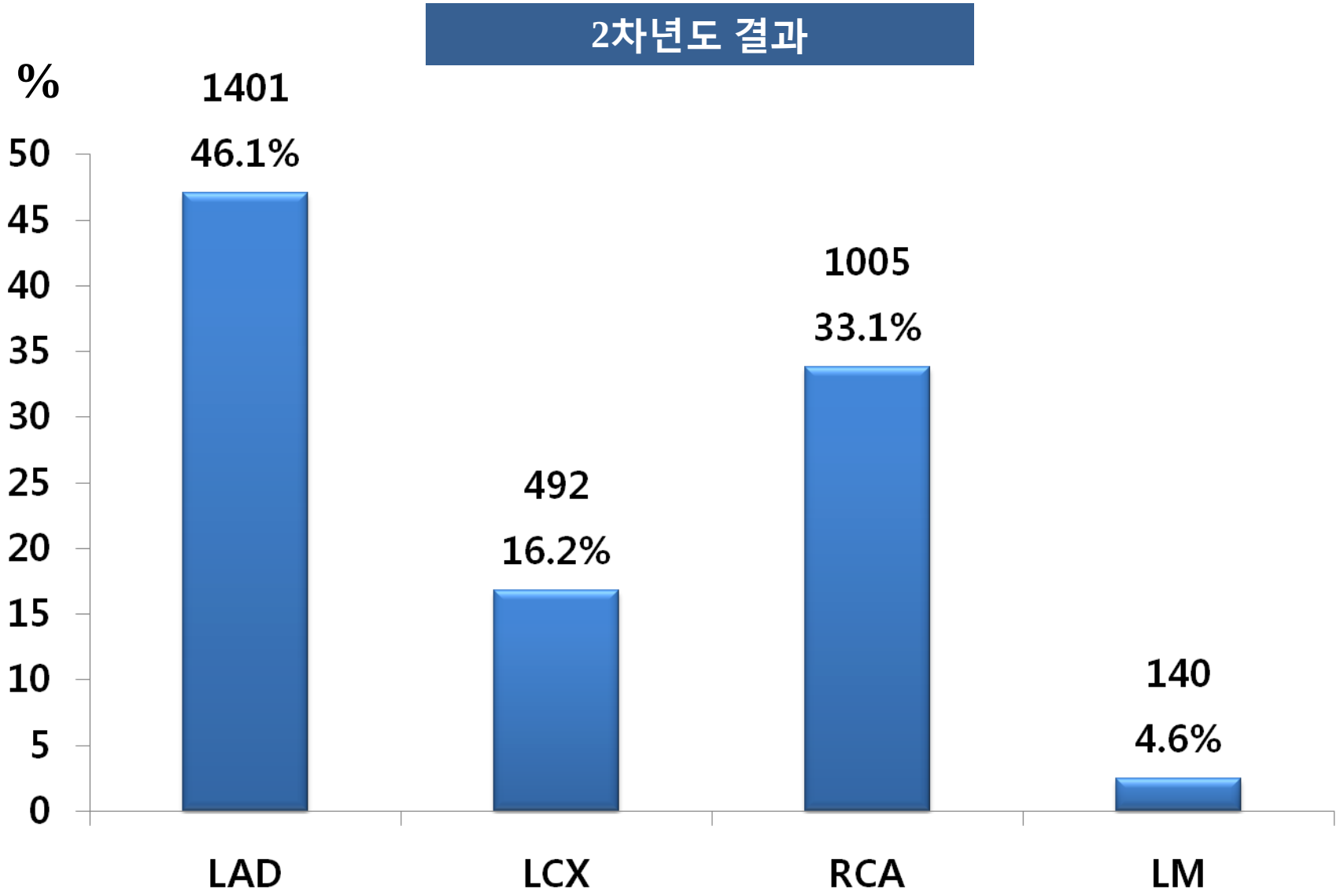


PCI rate

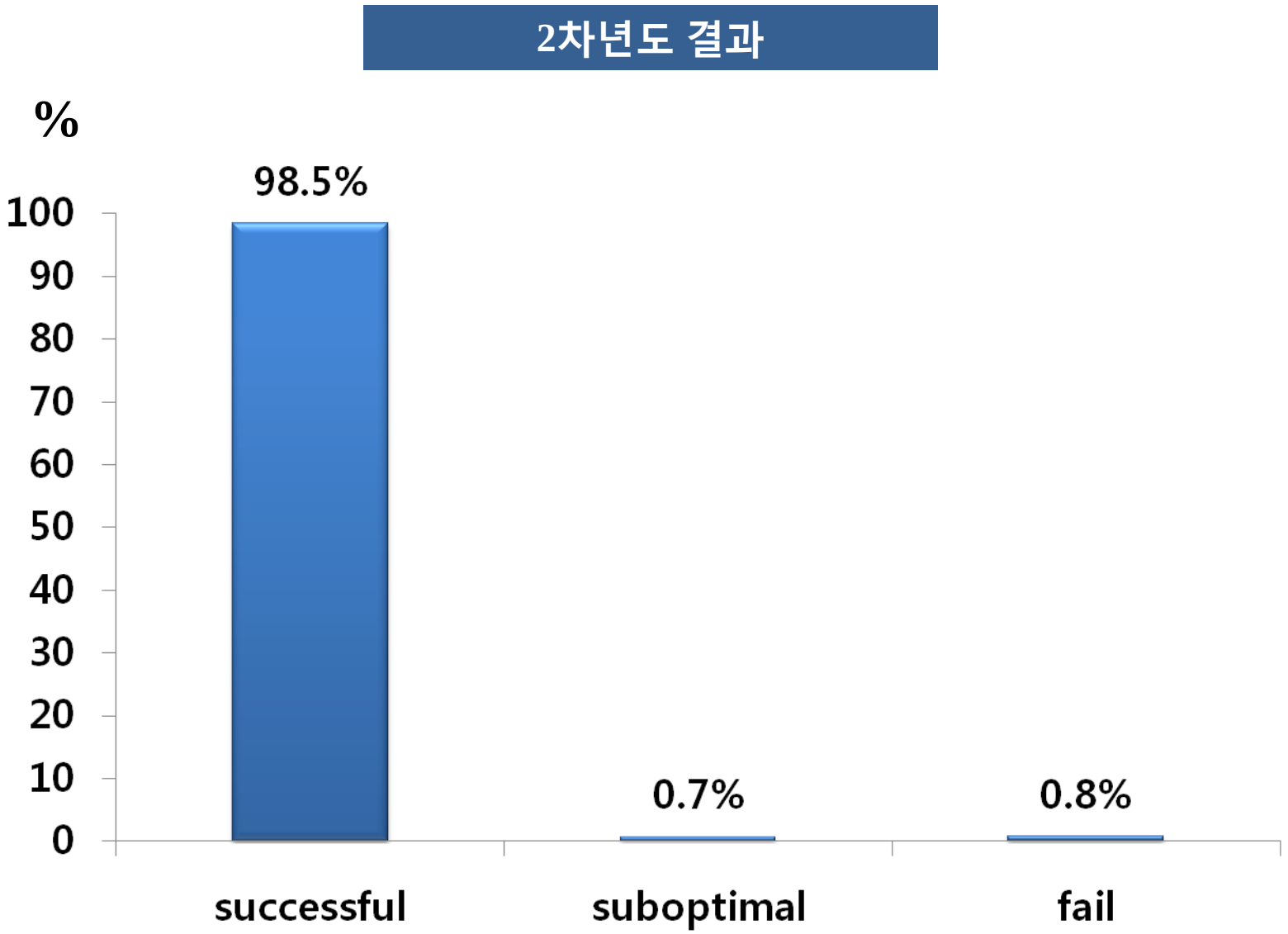
Coronary Angiographic Finding



Coronary Angiographic findings

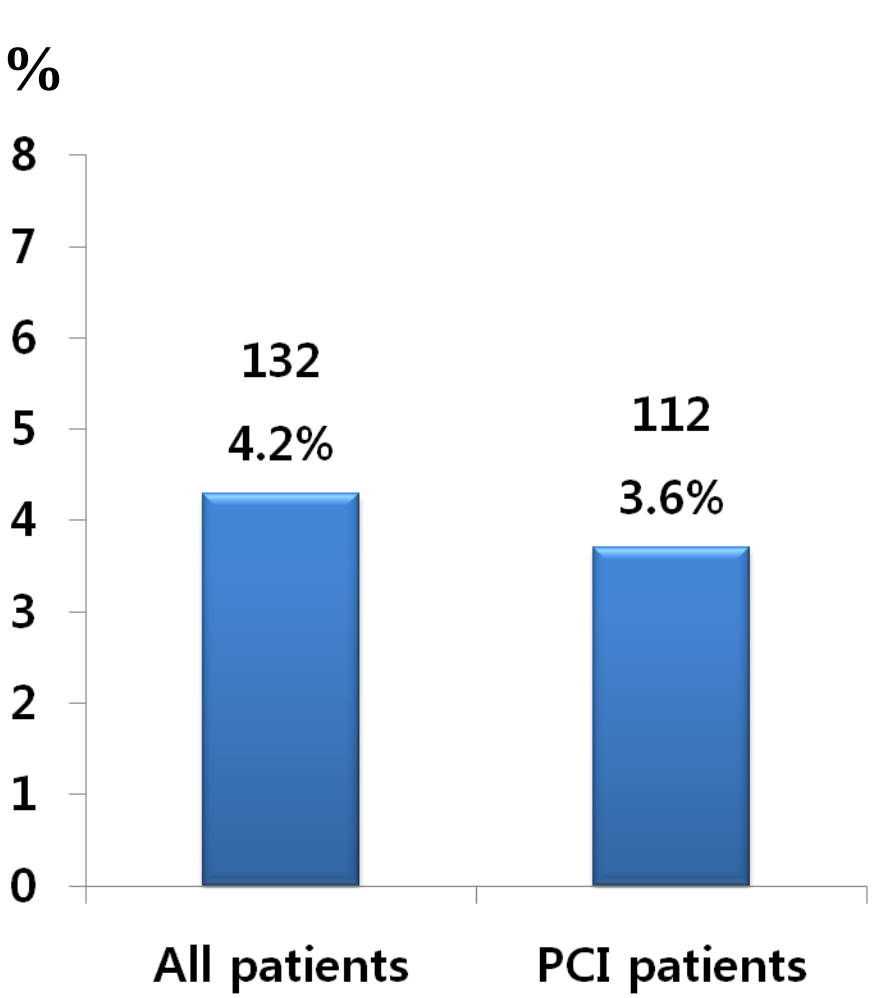


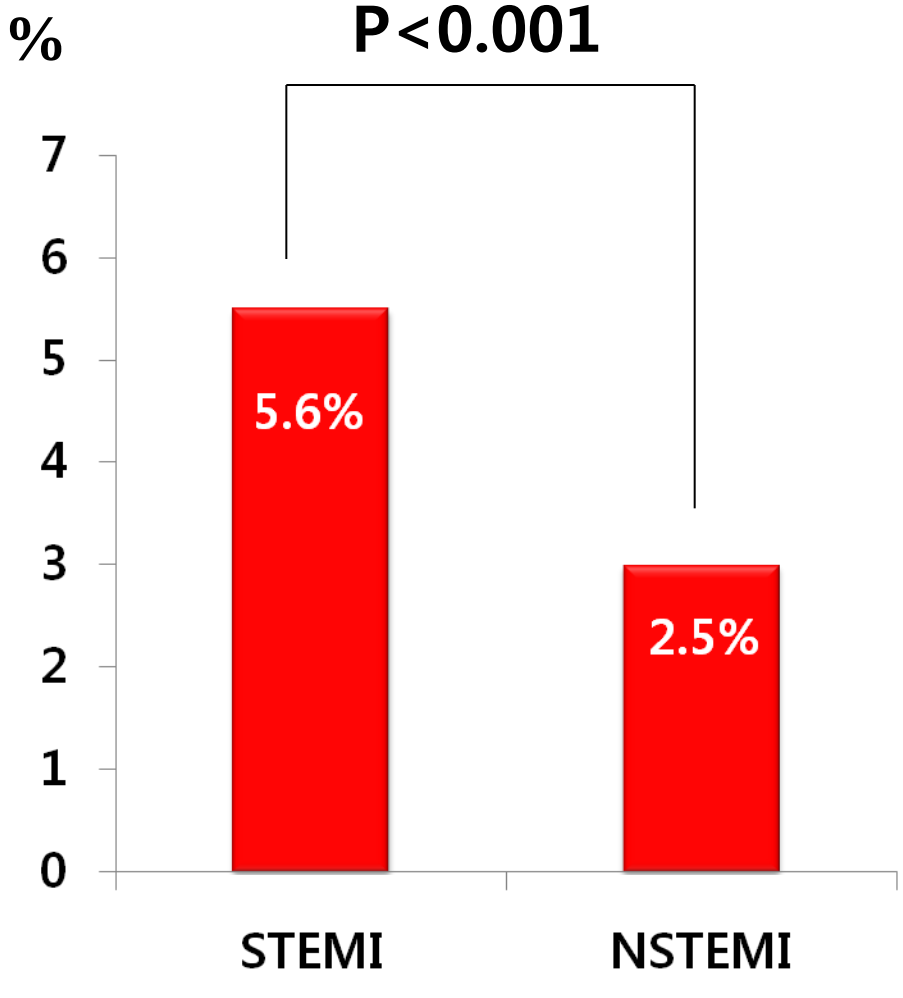
PCI Success Rate



In-hospital Mortality

2차년도 결과





2차년도 (2012) 연구 성과

환자등록체계에 참여하는 15개 대학병원을 중심으로 전문가 연구네트워크 개선

- 정기 모임을 통해 연구자 관심 상승 기대
- 화상회의 및 전화회의 방안 고려
- Audit 이후 향후 방안
- 입력 항목 관련 충실도 파악 및 불필요한 항목 관련 삭제
- eCRF로 지속적 monitoring 유지, 3차년도 audit 계획 중

KAMIR/KorMI website 통합 및 기존 연구자 Clone site로 영입 – 향후 모든 Center 영입

- 2012년 4월 19일 대한심장학회 연구자 모임- Clone Site 동의

연구수행 효율성 제고

NIH 국립보건연구원 Korea National Institute of Health

1. 주기적인 교육 실시

- 참여 연구자를 대상으로 과제 수행과 관련된 교육을 정기적으로 실시 (국립보건원 주관 한 달에 한번 실시)
- 책임연구원, 연구원, 연구보조원, 보조원을 대상으로 한 연 2회 교육 실시
- 교육 내용

  연구 프로토콜: 정의, 입력방법, 의문사항에 대한 점검

  연구 진행상황에 대한 feedback

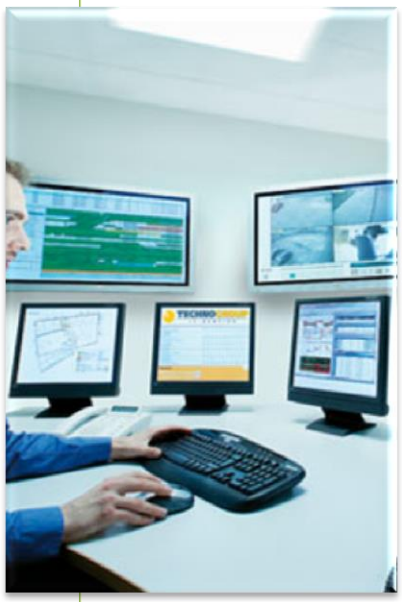
연구수행 효율성 제고

NIH 국립보건연구원 Korea National Institute of Health

2. 연구자원 활용을 위한 관리체계 운영

- 운영위원회 회의 개최
- 연구개시 후 중간보고 및 중요사항 발생시 수시 보고
- 상시적 자료 연구자 내부의 데이터 모니터링 및 management, validation, 연구자 외부의 점검 (audit) 방안 제시
- 현재 수행 중인 국내외 주요 연구에서의 임상 연구자원 및 생물학적 자원 활용 현황 검토 및 자문회의를 거쳐 최종 연구자원 활용 방안 제시

3. 자료의 모니터링



- 연구조정센터, 감사위원회 주도로 입력된 자료의 모니터링

- 연구조정센터

1) 상시적인 연구 진행 데이터 모니터링 및 분석

- 감사위원회

1) 연구조정센터로부터 주기적으로 제공된 수집데이터 모니터하고 연구 수행 정도 평가

2) 등록 상황, 추적 관찰 상황에 대해 전체 연구 기관 대비 각 참여 연구 기관의 참여도를 작성

3) 국가 대표 데이터 구축을 위한 지역 안배 균등성에 대한 평가

4) 자료 입력방법, 등록 상황, 추적 관찰 상황에 대한 철저한 모니터링 및 그 결과를 참여 연구 기관에 feedback

연구수행 효율성 제고

4. 연구기관 간에 bias 최소화

- Core-lab의 연구보조원 (코디네이터)가 각 센터를 방문하고 각 센터의 연구보조원 사이에 모임 및 교환 근무를 통하여 센터 간 bias를 최소화 함

- 각 연구기관마다 데이터 입력 및 관리를 일원화 하기 위해 연구 진행자에 대한 교육 상시화

연구네트워크 개선 및 운영

-급성심근경색증에 대한 임상적 치료와 예후인자 발굴을 위한 다양한 연구자가 참여하는 연구네트워크 구축

- 환자등록체계에 참여하는 15개 대학병원을 중심으로 전문가 연구네트워크

- 급성심근경색증 관련연구 활성화를 위한 각종 연구 활동 지원

- 향후 연구네트워크의 확대

- GRACE 등 다국적연구에 참여하고 협력연구를 진행하여 국제적 규모의 연구네트워크를 구축

전향적 추적관찰연구 시스템 관리 및 운영

- 15개 (향후 20개 이상) 대학병원이 환자등록에 참여함
- 당해 연도 3,000명의 연구대상자 등록 목표
- **단기 및 중장기 예후 예측 모델** 개발을 위한 1년 이상 FU 환자 80% 이상 데이터 베이스 구축
- 연구대상자의 지속적 참여율 향상을 위한 대책 수립, 수행

기존 연구와 통합발전 방안

- 국내 심근경색증 환자 등록 연구 분석

- 데이터 분석 및 통합

1) 연구조정센터 중심으로 'KAMIR' 데이터와 '급성 심근경색증 전향적 추적 관찰연구' 데이터 비교 분석

2) 통합 가능한 데이터 파악하여 통일된 데이터 입력 프로토콜 새로 개발 및 Clone site 운영

3) 2014년도 5개 센터 영입 예정

4) 새로운 통일된 데이터 입력 프로토콜에 따라 데이터를 통합 제공

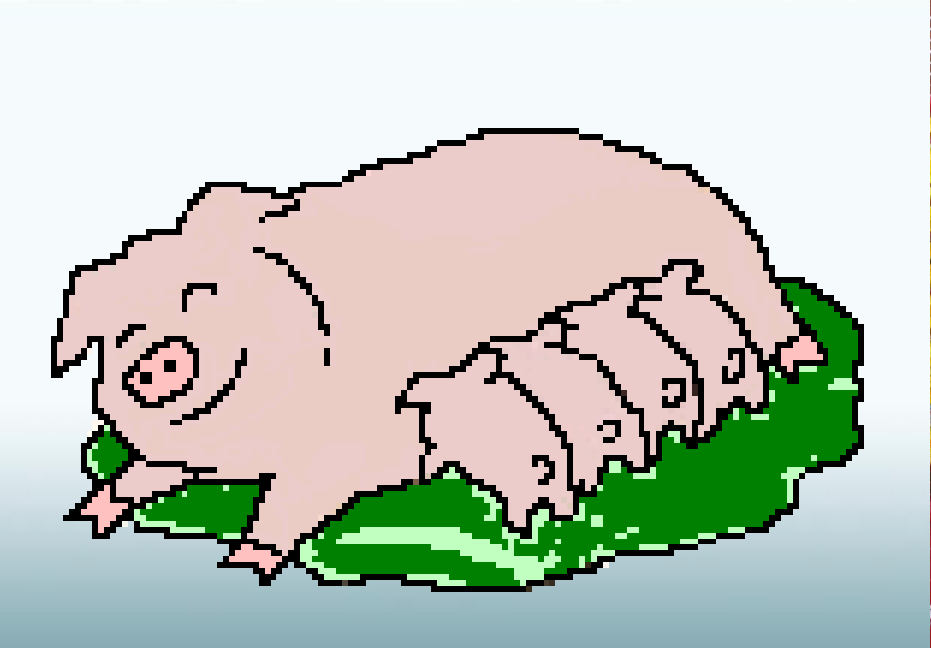
- 통합 데이터를 통한 새로운 목적 및 목표 도출

1) 연구 조정센터: KAMIR 발표 자료 분석

2)실행위원회: 통합 데이터를 통해 도출 가능한 새로운 목적 및 목표 설정

3) 운영위원회: 새로 제안된 목적 및 목표에 대한 검토 및 승인

그 동안 심근경색증 등록 연구 경험을 바탕으로 **국립보건원** 과제를 통하여 **대한심장학회** 내에 **심근경색증 연구회**를 설립하여 한국인 심근경색증 관리의 초석이 되겠습니다.



경청해 주셔서 대단히 감사합니다!

심장 질환 특성화 센터

April. 2012