



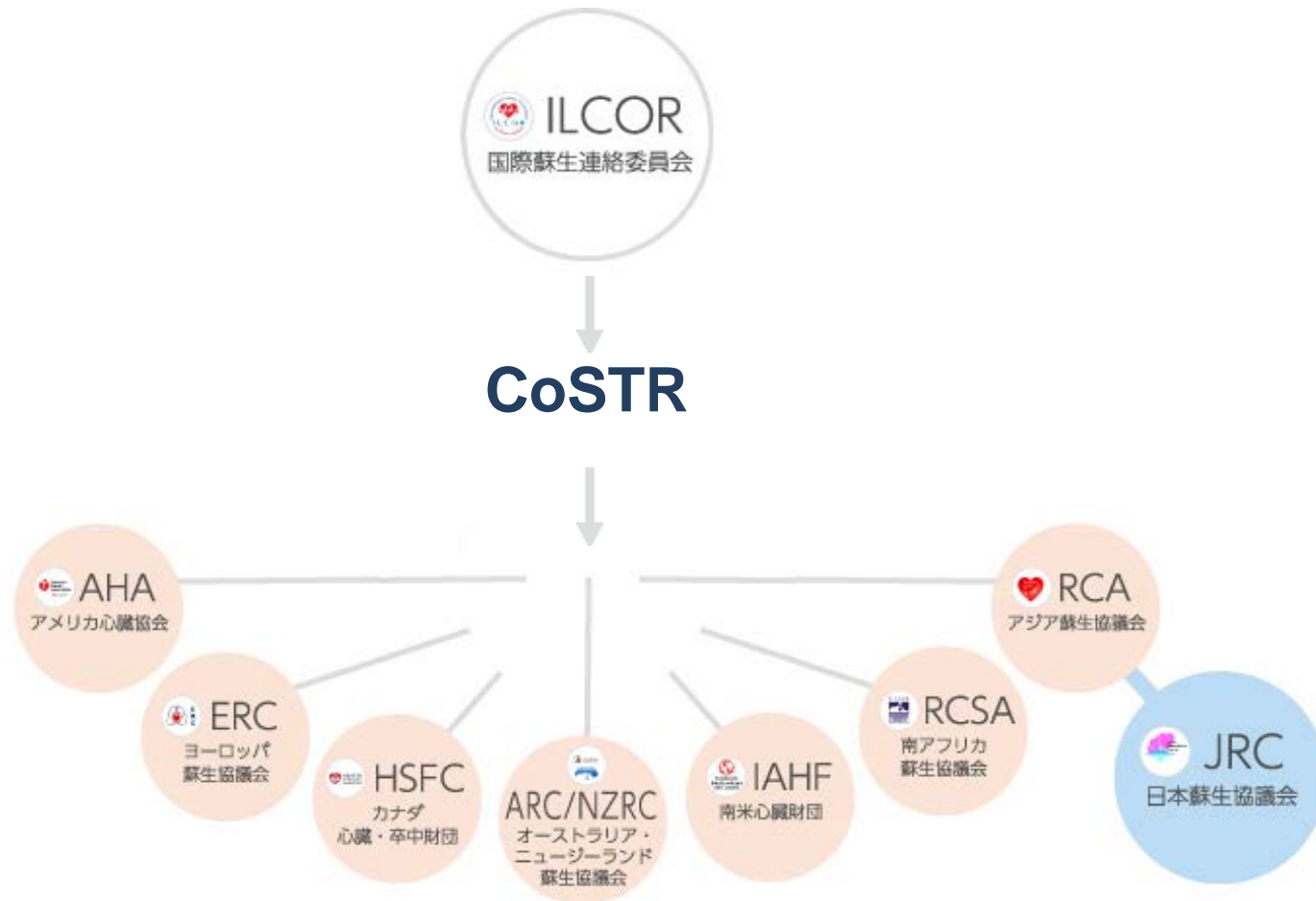
EMERGENCY LIFE-SAVING TECHNIQUE ACADEMY
Kyushu, Japan

ILCOR CoSTR 2015後の 心肺蘇生に関する学術的知見

救急救命九州研修所

畑中哲生

蘇生ガイドラインの枠組み



GRADE system

	社会復帰	生存	心拍再開
	Christenson J, 2009;1241.	Christenson J, 2009;1241.	
	Sell RE, 2010;822.	Sell RE, 2010;822.	Sell RE, 2010;822.
		Vaillancourt C, 2011;1501.	Vaillancourt C, 2011;1501.
Certainty	Low	Low	Moderate

GRADE system

Study Design	Certainty of Evidence	Lower if	Higher if
RCT	High Moderate	Risk of bias Inconsistency	Large effect Dose response
Observational study	Low Very low	Indirectness Imprecision Publication bias	Confounders

CoSTR 2017 updates

■ C:V ratio

- bystander: CCのみ or 30:2
- 口頭指導: 胸骨圧迫のみ
- 院内CPA 30:2 → 非同期
- **EMS: 30:2 or 非同期BVM**

Minimally Interrupted Cardiac Resuscitation

- 患者接触
- 胸骨圧迫のみのCPR 2分x3サイクル
- 必要に応じ電気ショック
- その後速やかに気管挿管

CoSTR 2018 updates

- 抗不整脈薬 (VF/VT, 成人・小児)
 - アミオダロン or リドカイン
 - No マグネシウム
 - ブレチリウム? ニフェカレント? ソタロール?

- ECPR (成人)
 - 可能な施設では
 - 通常のCPRに反応しない場合

- 低血糖に対するブドウ糖の投与方法 (First Aid)
 - 口腔内塗布より、内服

(JRCホームページで公開予定)

CoSTR 2018 updates (draft or worksheet)

- 新生児の蘇生における酸素濃度(満期・早産新生児)
 - 100%酸素よりも21%酸素(空気)

- 救急患者に対する酸素投与(成人)
 - 100%酸素よりも21%酸素(空気)

CoSTR 2018 updates

- 通信指令員による心停止の認識
- CPR中のリズムチェックのタイミング
- 血管収縮薬(アドレナリン)



CoSTR 2018 updates

ORIGINAL ARTICLE

A Randomized Trial of Epinephrine in Out-of-Hospital Cardiac Arrest

G.D. Perkins, C. Ji, C.D. Deakin, T. Quinn, J.P. Nolan, C. Scomparin, S. Regan,
J. Long, A. Slowther, H. Pocock, J.J.M. Black, F. Moore, R.T. Fothergill, N. Rees,
L. O'Shea, M. Docherty, I. Gunson, K. Han, K. Charlton, J. Finn, S. Petrou,
N. Stallard, S. Gates, and R. Lall, for the PARAMEDIC2 Collaborators*

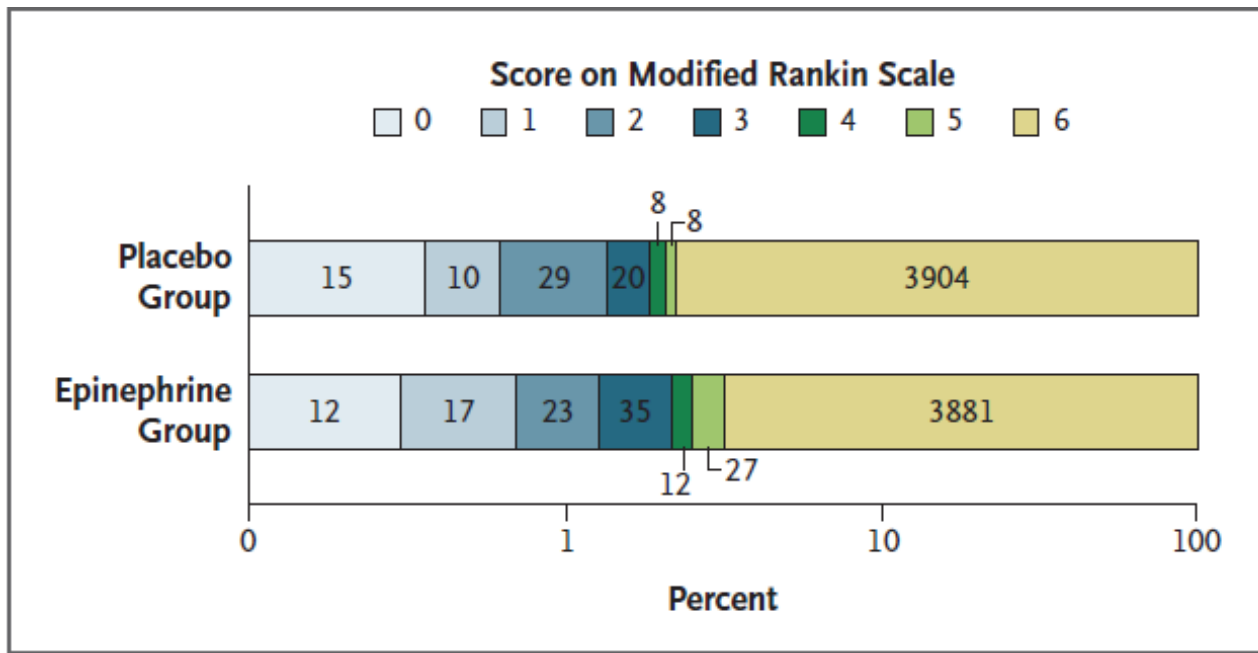
CoSTR 2018 updates

ORIGINAL ARTICLE

A Randomized Trial of Epinephrine in Out-of-Hospital Cardiac Arrest

Placebo controlled randomized trial

G.D. Perkins, C. Ji, C.D. Deakin, T. Quinn, J.P. Nolan, C. Scomparin, S. Regan, J. Long, A. Slowther, H. Pocock, J.J.M. Black, F. Moore, R.T. Fothergill, N. Rees, L. O'Shea, M. Docherty, I. Gunson, K. Han, K. Charlton, J. Finn, S. Petrou, N. Stallard, S. Gates, and R. Lall, for the PARAMEDIC2 Collaborators*



	AdrnIn (n=4045)	Saline (n=3999)
Survival	3.2%	2.4%
Neurologically intact	2.2%	1.9%

CoSTR 2018 updates

ORIGINAL ARTICLE

A Randomized Trial of Epinephrine in Out-of-Hospital Cardiac Arrest

G.D. Perkins, C. Ji, C.D. Deakin, T. Quinn, J.P. Nolan, C. Scomparin, S. Regan, J. Long, A. Slowther, H. Pocock, J.J.M. Black, F. Moore, R.T. Fothergill, N. Rees, L. O'Shea, M. Docherty, I. Gunson, K. Han, K. Charlton, J. Finn, S. Petrou, N. Stallard, S. Gates, and R. Lall, for the PARAMEDIC2 Collaborators*

Placebo controlled randomized trial

- Primary outcomeは "survival"
- 外傷性心停止 (1.6%) を含む
- 薬剤投与が遅い(接触後15分)
- 生存率が低い (2.4-3.2% vs 7.7%)



A Randomized Trial of Epinephrine in Out-of-Hospital Cardiac Arrest

G.D. Perkins, C. Ji, C.D. Deakin, T. Quinn, J.P. Nolan, C. Scomparin, S. Regan, J. Long, A. Slowther, H. Pocock, J.J.M. Black, F. Moore, R.T. Fothergill, N. Rees, L. O'Shea, M. Docherty, I. Gunson, K. Han, K. Charlton, J. Finn, S. Petrou, N. Stallard, S. Gates, and R. Lall, for the PARAMEDIC2 Collaborators*

アドレナリン

- アドレナリンはおそらく有効
- 遅ければ効果は薄い
- 投与量は少なめがよい？

酸素投与

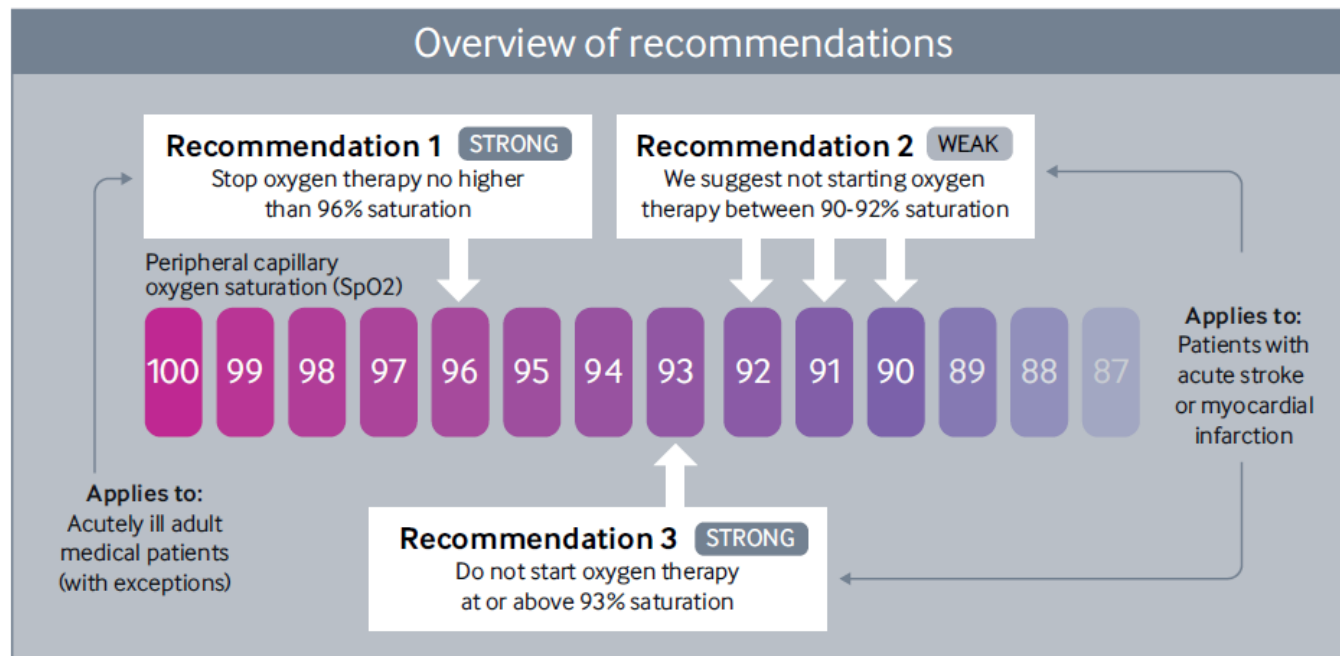


RAPID RECOMMENDATIONS

Oxygen therapy for acutely ill medical patients: a clinical practice guideline

BMJ, 2018

RAPID RECOMMENDATIONS



気道確保

JAMA | **Original Investigation**

**Effect of a Strategy of Initial Laryngeal Tube Insertion
vs Endotracheal Intubation on 72-Hour Survival in Adults
With Out-of-Hospital Cardiac Arrest**
A Randomized Clinical Trial

JAMA, 2018

- **72時間後生存率:18.3% vs 15.4% (p=0.04)**
- **社会復帰率:7.1% vs 5.1% (p=0.02)**

JAMA | **Original Investigation**

**Effect of Bag-Mask Ventilation vs Endotracheal Intubation
During Cardiopulmonary Resuscitation on Neurological
Outcome After Out-of-Hospital Cardiorespiratory Arrest**
A Randomized Clinical Trial

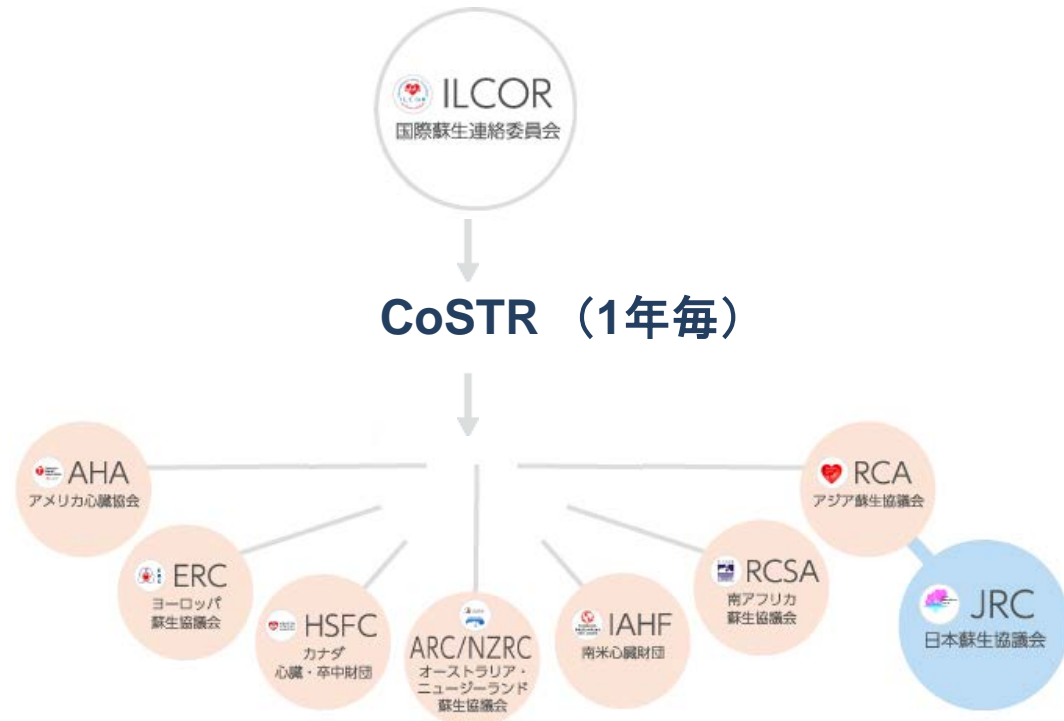
JAMA, 2018

- **28日後社会復帰率:4.3% vs 4.2% (p=0.04)**
- **非劣性・劣性を証明できず**

G2020のtime frame

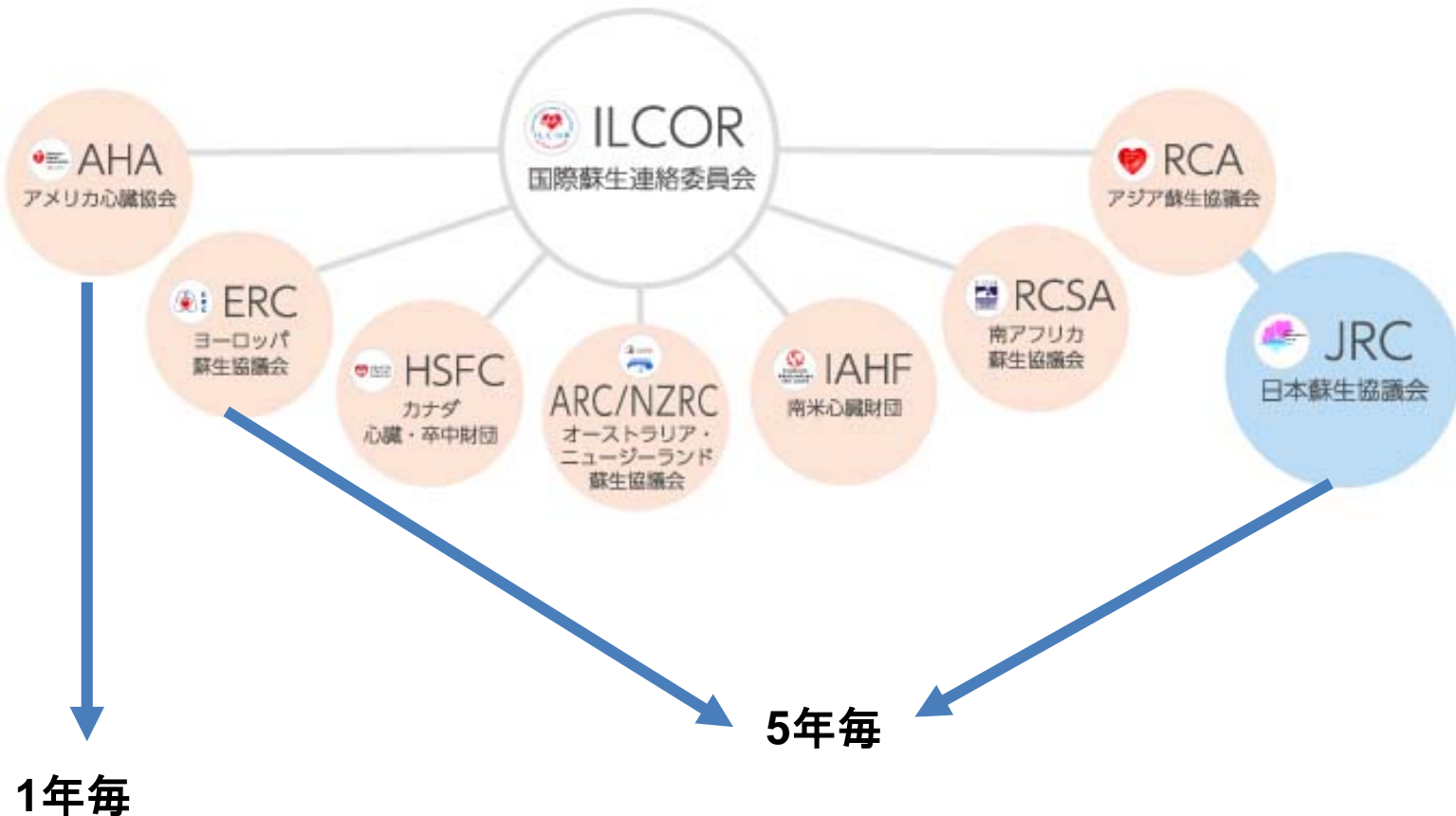
■ CoSTR:

1年毎 → 5年毎



G2020のtime frame

■ 各国のガイドラインは？



G2020のtime frame

- JRCでは:
 - ガイドラインは5年毎
 - CoSTR updateを吟味・翻訳
 - ホームページに公開

JRC JAPAN RESUSCITATION COUNCIL WEBSITE

JRC 日本蘇生協議会

