

LOOKING BACK / LOOKING AHEAD



NOTHING TO DISCLOSE

KEN MILNE



www.TheSGEM.com

SOUTH HURON HOSPITAL

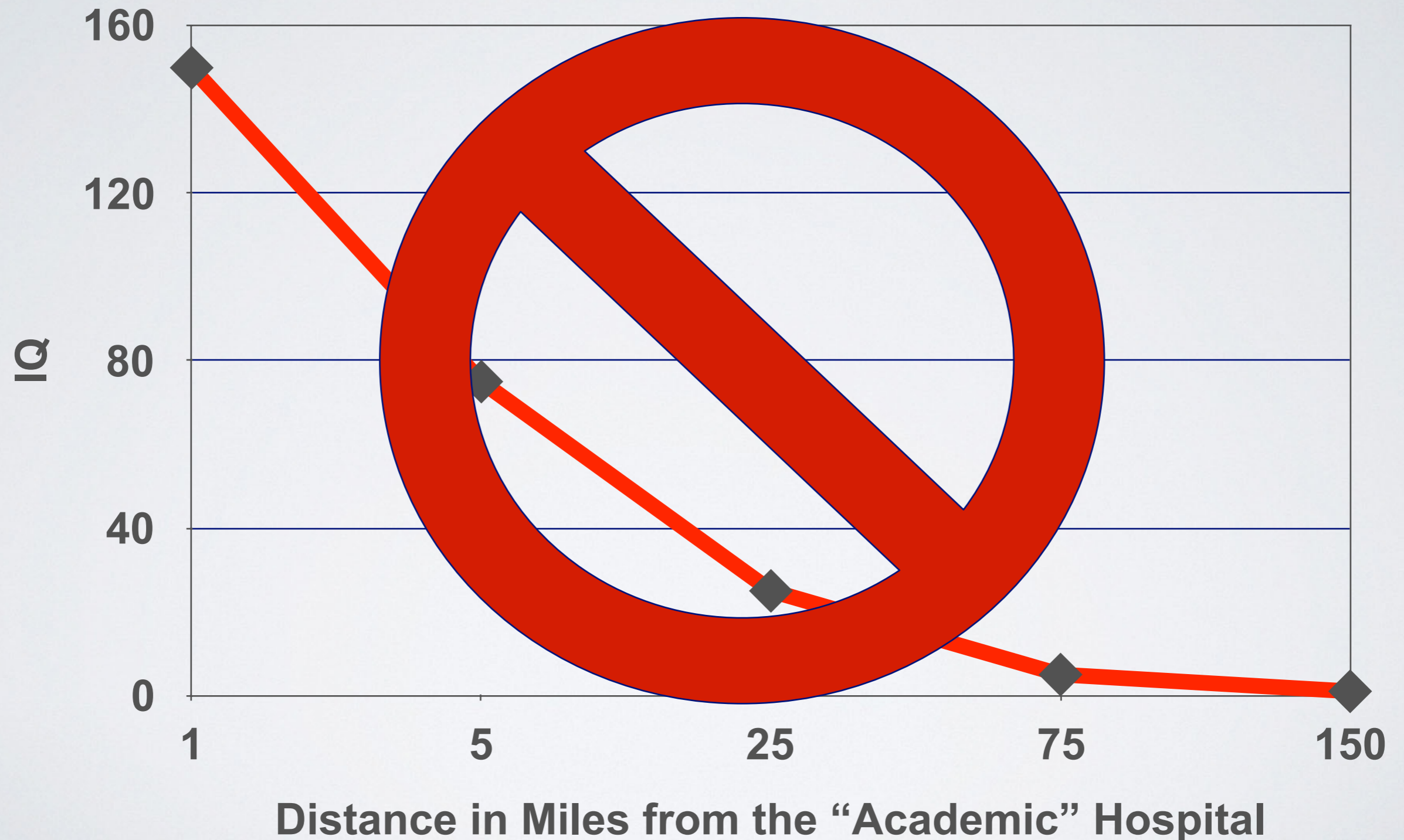


The Little Hospital that Does...

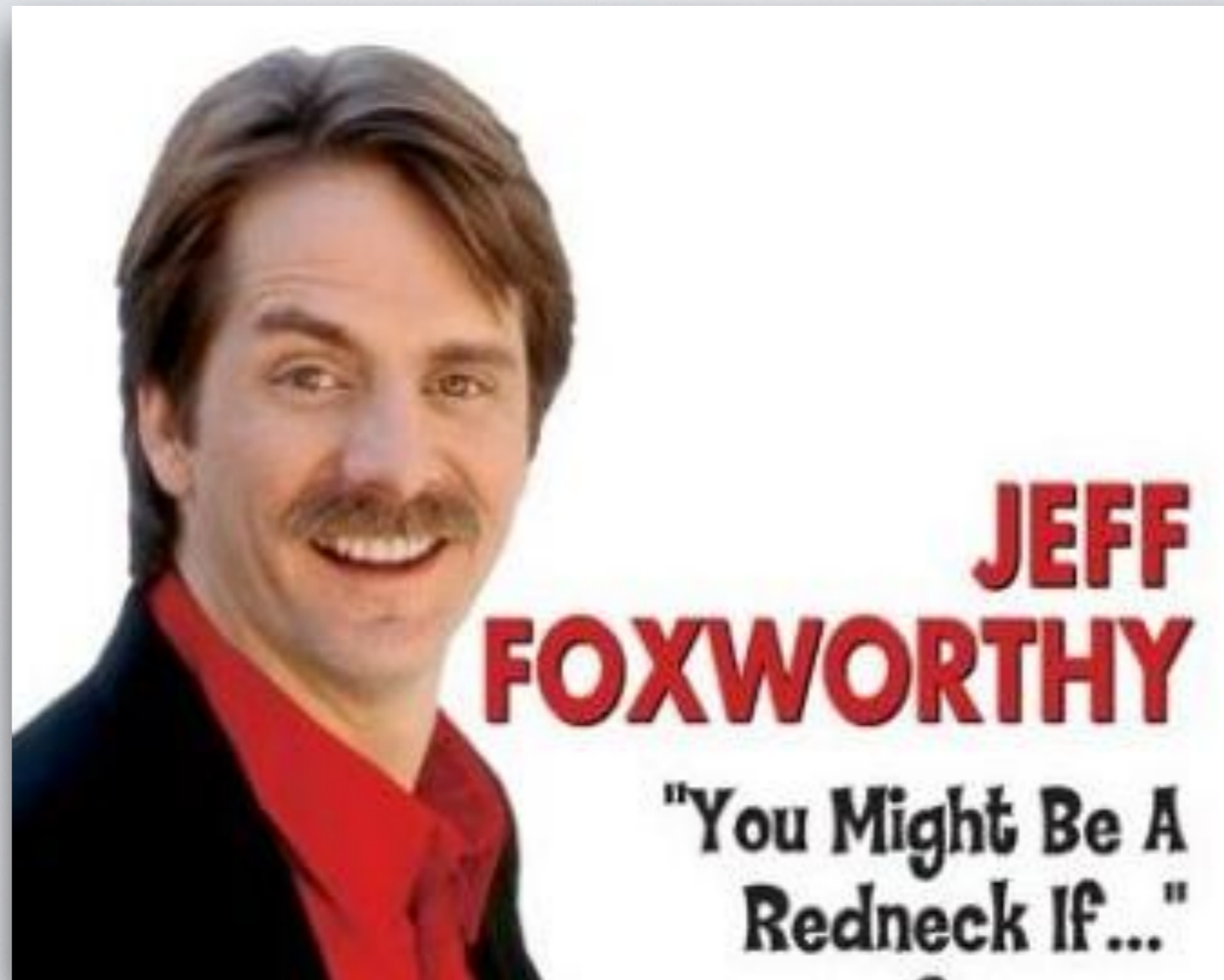
MYTH #1: INTELLIGENCE IS DIRECTLY RELATED TO FLOOR OF HOSPITAL



MYTH #2: INTELLIGENCE IS INVERSELY RELATED TO DISTANCE FROM A CITY



AUDIENCE PARTICIPATION



**YOU MIGHT WORK
IN A RURAL ED**

IF THE ONLY CAT SCAN YOU CAN GET
HAS FOUR LEGS...



You Might Work in a Rural ED

IF YOUR HOSPITAL IS KNOWN AS A LEVEL ONE
TRACTOR TRAUMA CENTRE...



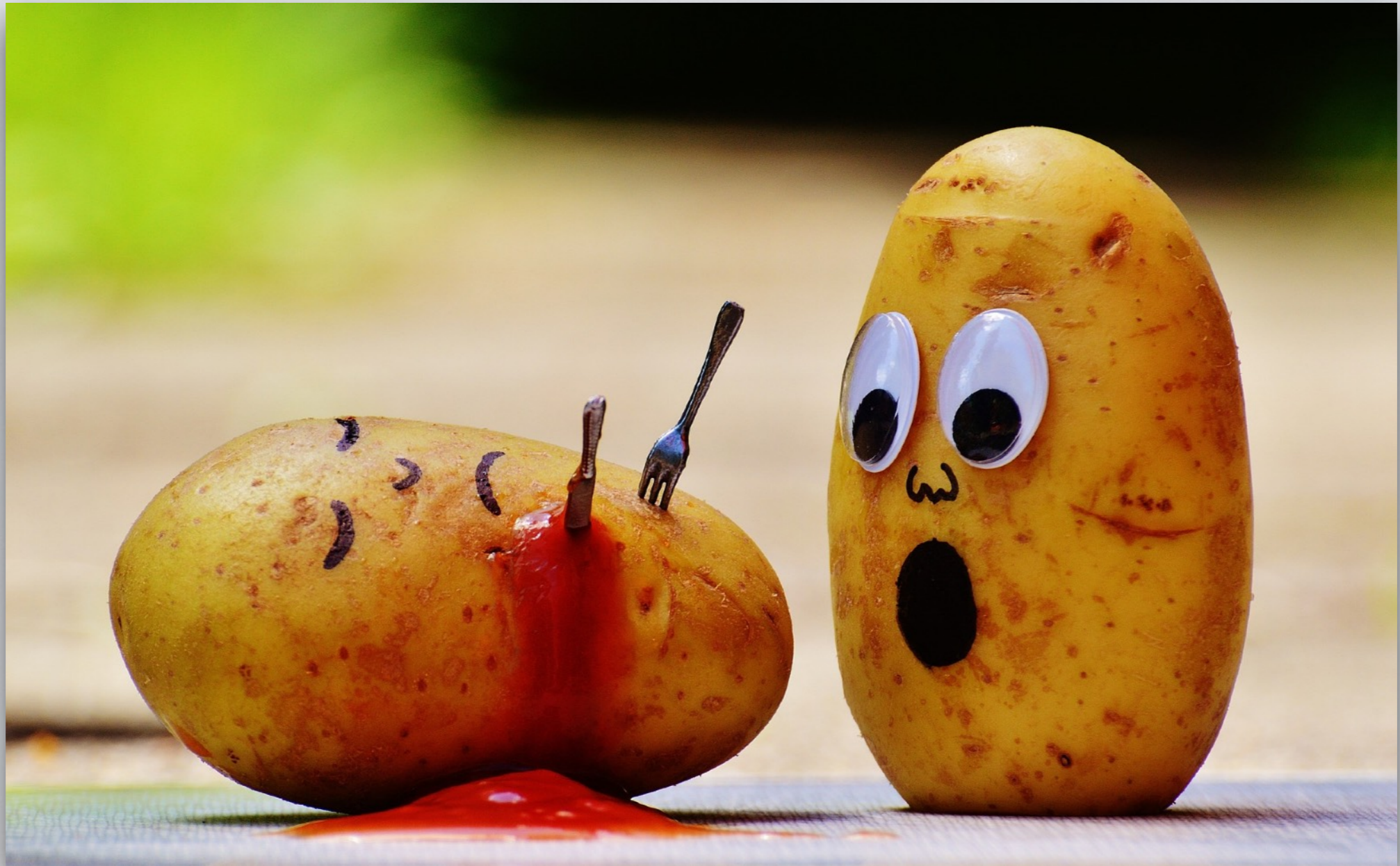
You Might Work in a Rural ED

IF PEOPLE DROP THEIR PANTS IN THE GROCERY STORE
AND ASK YOU TO DIAGNOSE THEIR RASH...



You Might Work in a Rural ED

IF YOUR MASSIVE TRANSFUSION PROTOCOL IS
BOTH UNITS OF “O” NEGATIVE BLOOD...



You Might Work in a Rural ED

LOOKING BACK

DISSERTATIO MEDICA
INAUGURALIS
DE
SYNOCHO CASTRENSI;

	Blood Letting	No Blood Letting
Alive	148/183(80.9%)	177/183 (96.7%)
Dead	35/183 (19.1%)	6/183 (3.3%)

RITE ET LEGITIME CONSEQUENDIS;
ERUDITORUM EXAMINI SUBJICIT
ALEXANDER HAMILTON,
Scotus,
AD EXERCITUM BRITANNICUM
CHIRURGUS.

NNH 6

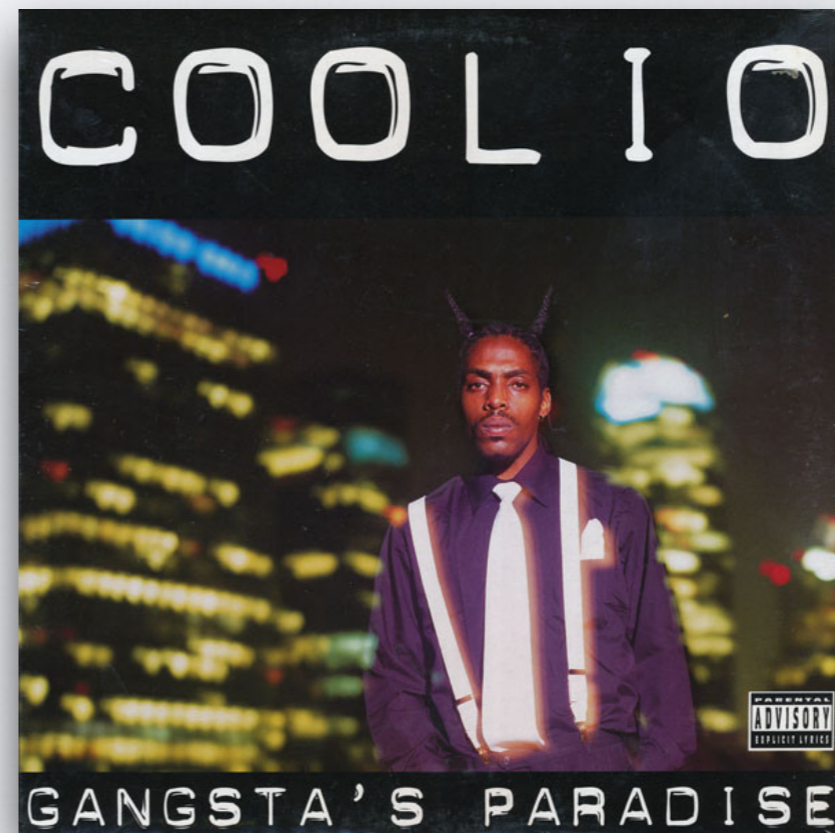
Blood Letting

TIME TRAVEL



Rural: Excellent Adventure

LOOKING BACK: 1995



THE SECRET OF NINDS

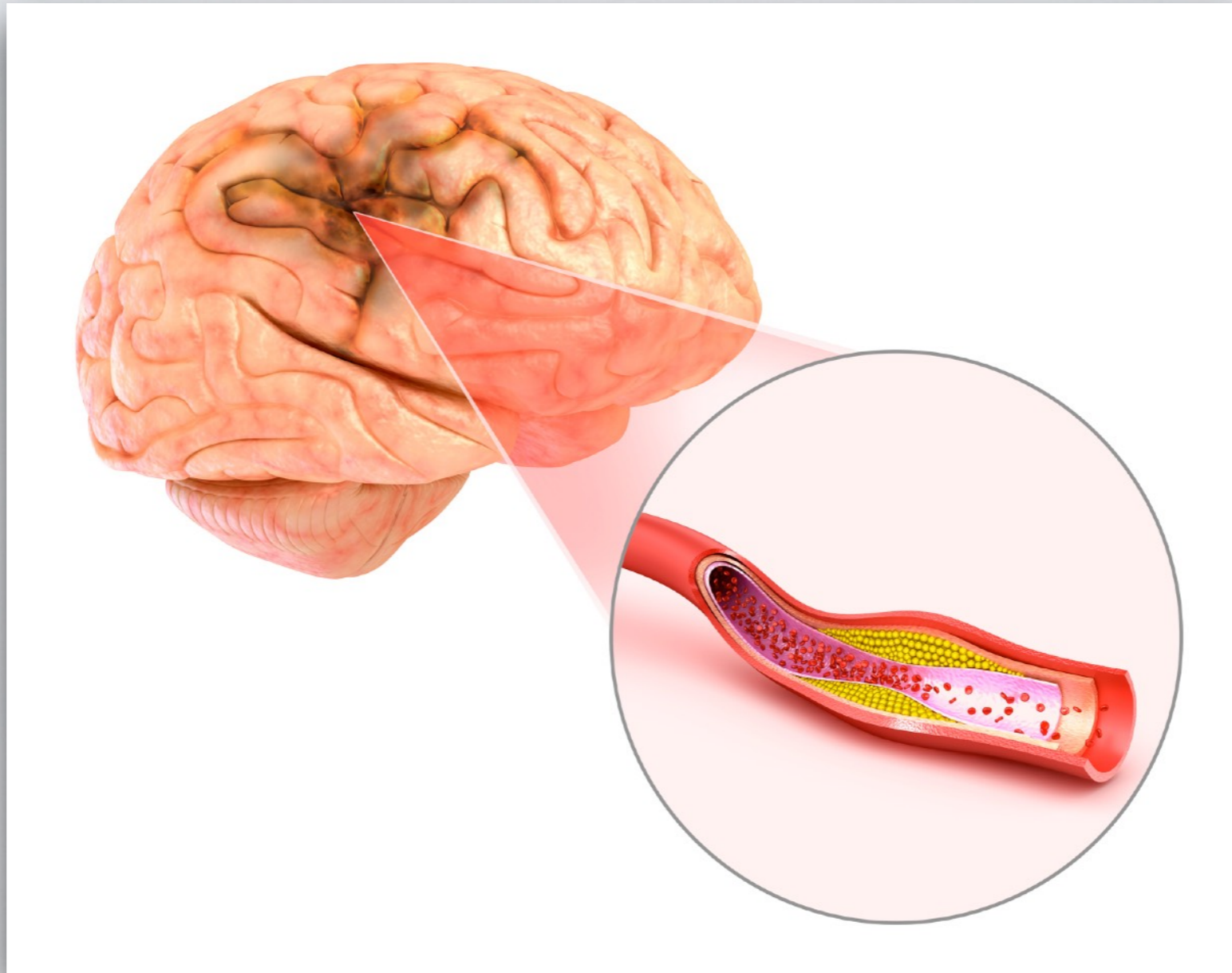


NEJM 1995

1995-2012

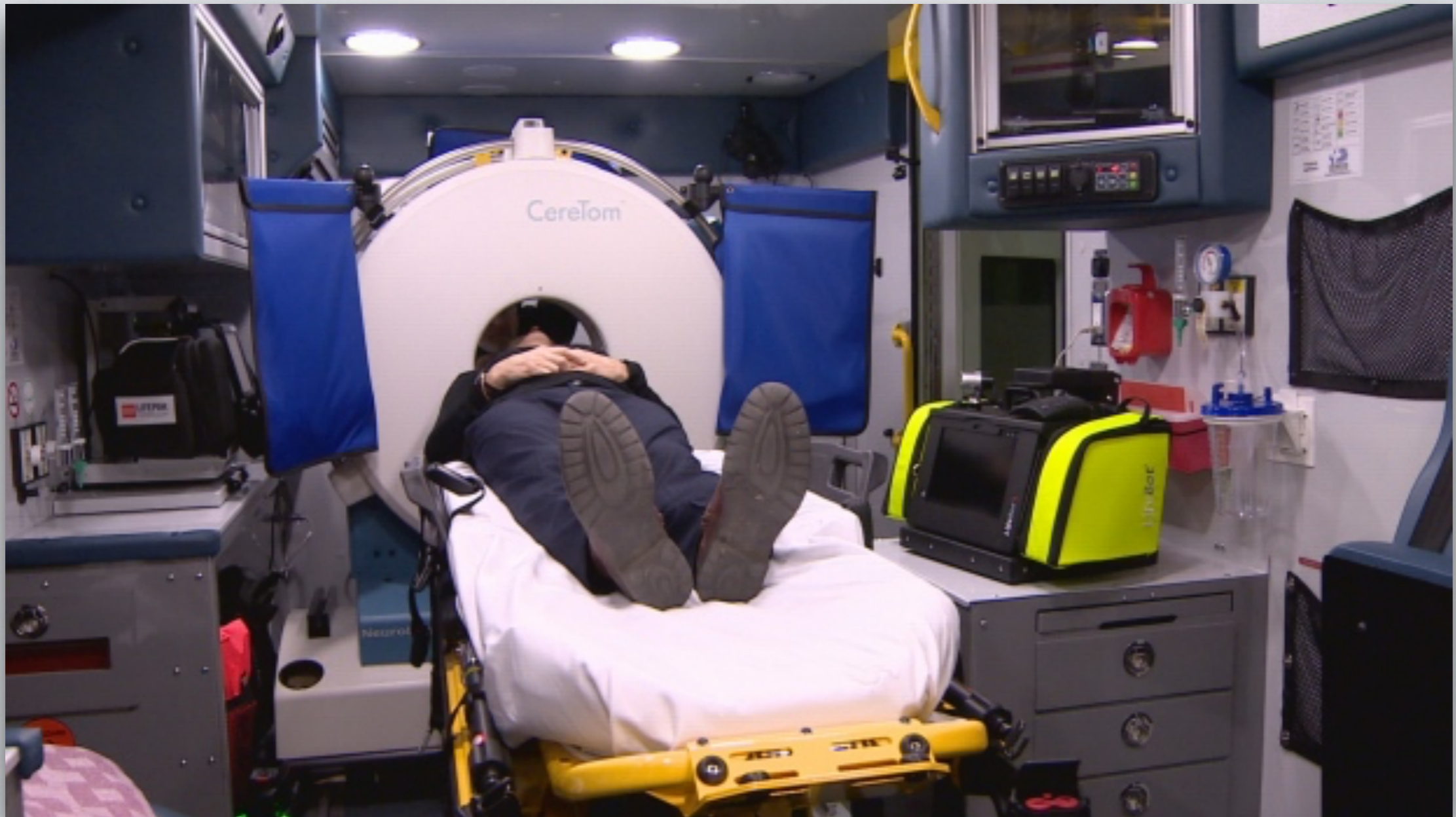
Trial	Journal	Time	Primary Benefit	Harm
MAST -Italy (n=622)	Lancet 1995	<6hr	None	Increased early death
ECASS-I (n=620)	JAMA 1995	<6hr	None	Benefit not outweigh the risk
NINDS-I (n=291)	NEJM 1995	<3hr	None	No difference
NINDS -II (n=333)	NEJM 1995	<3hr	~13% absolute benefit mRS at 90d	Increase ICH
MAST - Eu (n=310)	NEJM 1996	<6hr	None	Stopped early due to harm
ASK (n=340)	JAMA 1996	<4hr	None	Stopped early due to harm
ECASS-II (n=800)	Lancet 1998	<6hr	None	No difference
ATLANTIS-B (n=613)	JAMA 1999	3-4hr	None	Stopped early <i>"unlikely to prove beneficial"</i>
ATLANTIS-A (n=142)	Stroke 2000	<6hr	None	Stopped early due to harm
ECASS-III (n=821)	NEJM 2008	3-4.5hr	7% absolute benefit	Increase ICH
DIAS-2 (n=193)	Lancet 2009	3-9hr	None	No difference
IST-3 (n=3035)	Lancet 2012	<6hr	None	No difference

ACUTE CVA NOW



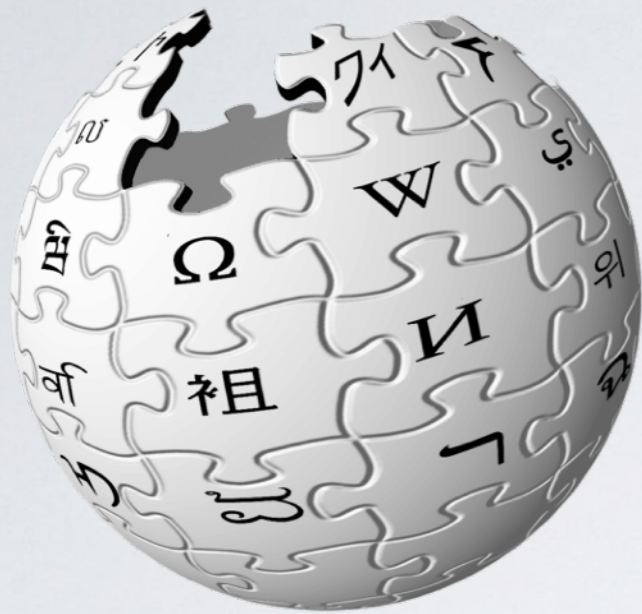
Endovascular Treatment

LOOKING AHEAD: CVA

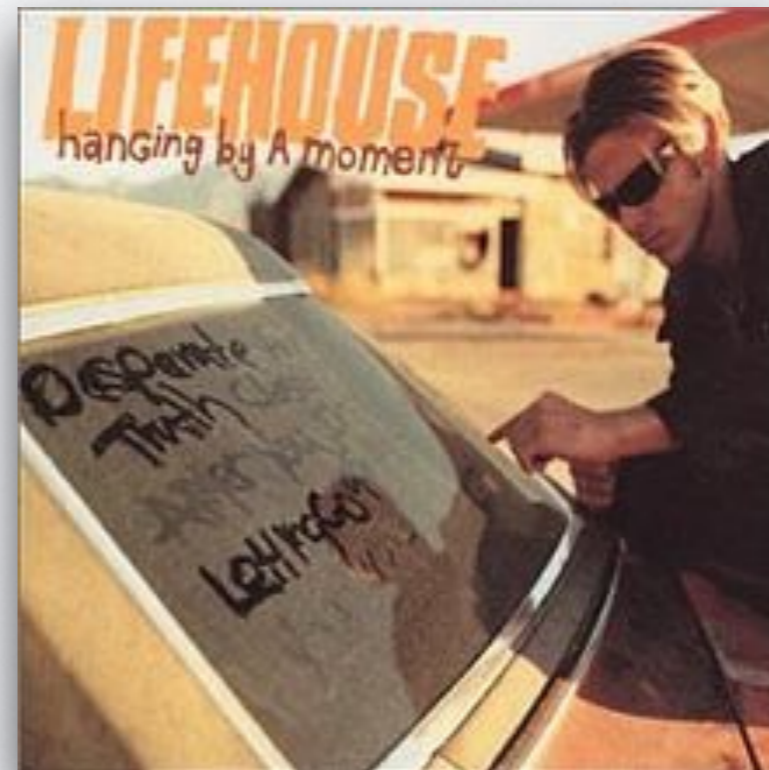


CT Scanners in Ambulances?

LOOKING BACK: 2001



WIKIPEDIA
The Free Encyclopedia



EGDT



Rivers et al 2001 NEJM

2014-15



The NEW ENGLAND JOURNAL of MEDICINE

[HOME](#)[ARTICLES & MULTIMEDIA ▾](#)[ISSUES ▾](#)[SPECIALTIES & TOPICS ▾](#)[FOR AUTHORS ▾](#)[CME >](#)

ORIGINAL ARTICLE

A Randomized Trial of Protocol-Based Care for Early Septic Shock

The ProCESS Investigator
N Engl J Med 2014; 371



The NEW ENGLAND JOURNAL of MEDICINE

[HOME](#)[ARTICLES & MULTIMEDIA ▾](#)[ISSUES ▾](#)[SPECIALTIES & TOPICS ▾](#)[FOR AUTHORS ▾](#)[CME >](#)

ORIGINAL ARTICLE

Goal-Directed Resuscitation for Patients with Early Septic Shock

The ARISE Investigator
N Engl J Med 2014; 371



The NEW ENGLAND JOURNAL of MEDICINE

[HOME](#)[ARTICLES & MULTIMEDIA ▾](#)[ISSUES ▾](#)[SPECIALTIES & TOPICS ▾](#)[FOR AUTHORS ▾](#)[CME >](#)

ORIGINAL ARTICLE

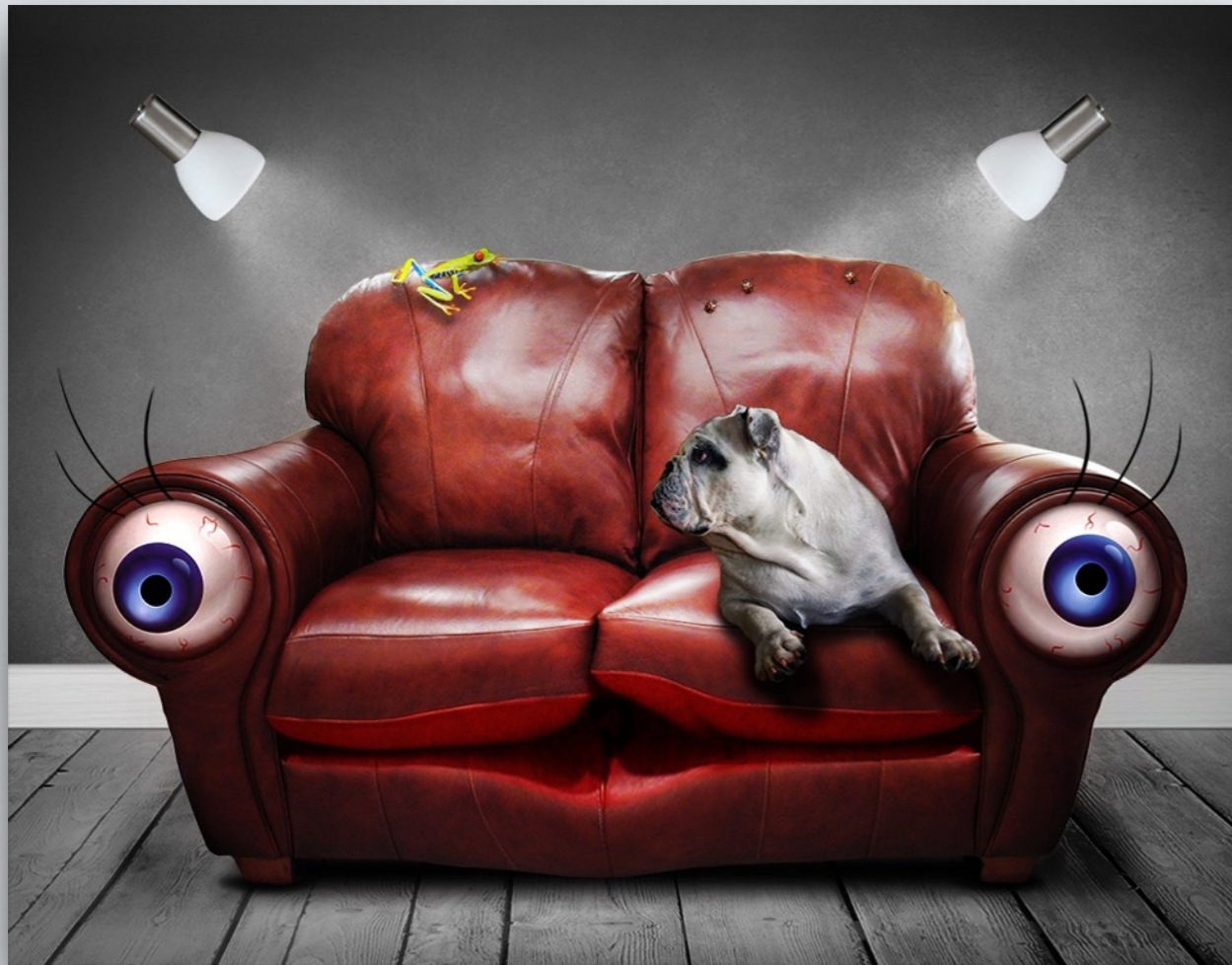
Trial of Early, Goal-Directed Resuscitation for Septic Shock

Paul R. Mouncey, M.Sc., Tiffany M. Osborn, M.D., G. Sarah Power, M.Sc., David A. Harrison, Ph.D., M. Zia Sadique, Ph.D., Richard D. Grieve, Ph.D., Rahi Jahan, B.A., Sheila E. Harvey, Ph.D., Derek Bell, M.D., Julian F. Bion, M.D., Timothy J. Coats, M.D., Mervyn Singer, M.D., J. Duncan Young, D.M., and Kathryn M. Rowan, Ph.D., for the ProMISe Trial Investigators

SEPSIS NOW

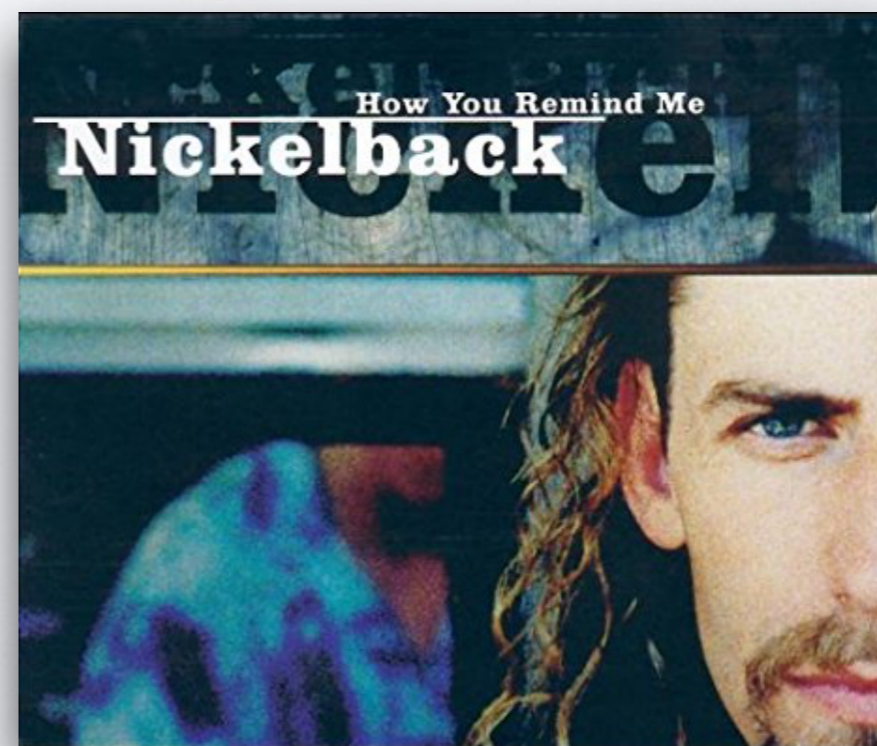


LOOKING AHEAD: SEPSIS



**qSOFA or
Vitamin C Cocktail?**

LOOKING BACK: 2002



THERAPEUTIC HYPOTHERMIA



Two studies in NEJM 2002

2013-2016



The NEW ENGLAND
JOURNAL of MEDICINE

HOME

ARTICLES & MULTIMEDIA ▾

ISSUES ▾

SPECIALTIES & TOPICS ▾

FOR AUTHORS ▾

CME ▸

ORIGINAL ARTICLE

Targeted Temperature Management at 33°C versus 36°C after
Cardiac Arrest

Effect of Prehospital Induction of Mild Hypothermia on Survival and Neurological Status Among Adults With Cardiac Arrest A Randomized Clinical Trial

Francis Kim, MD¹; Graham Nichol, MD, MPH¹; Charles Maynard, PhD²; et al

JAMA

ORIGINAL RESEARCH ARTICLE

Induction of Therapeutic Hypothermia During Out-of-Hospital Cardiac Arrest Using a Rapid Infusion of Cold Saline The RINSE Trial (Rapid Infusion of Cold Normal Saline)

Stephen A. Bernard, Karen Smith, Judith Finn, Cindy Hein, Hugh Grantham, Janet E. Bray, Conor Deasy, Michael Stephenson,
Teresa A. Williams, Lahn D. Straney, Deon Brink, Richard Larsen, Chris Cotton, Peter Cameron

Circulation

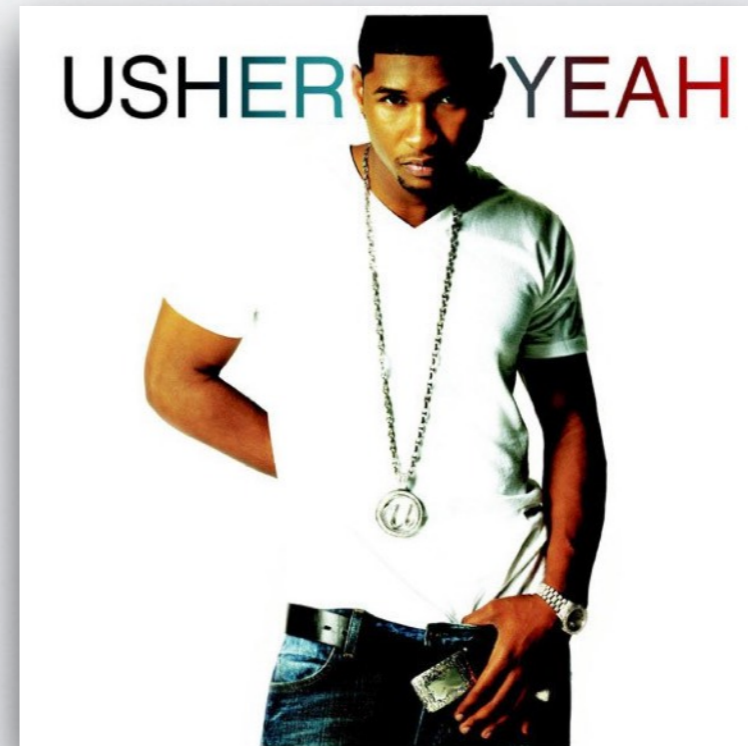
TTM NOW?



LOOKING AHEAD:TTM



LOOKING BACK: 2004



OPALS



Stiell et al NEJM 2004

2009-2017

November 25, 2009

Intravenous Drug Administration During Out-of-Hospital Cardiac Arrest A Randomized Trial

JAMA

Theresa M. Olasveengen, MD; Kjetil Sunde, MD, PhD; Cathrine Brunborg, MSc; et al

Effect of adrenaline on survival in out-of-hospital cardiac arrest: A randomised double-blind placebo-controlled trial☆

Resuscitation

Ian G. Jacobs  , Judith C. Finn, George A. Jelinek, Harry F. Ozer, Peter L. Thompson

Prehospital Advanced Cardiac Life Support for Out-of-hospital Cardiac Arrest: A Cohort Study



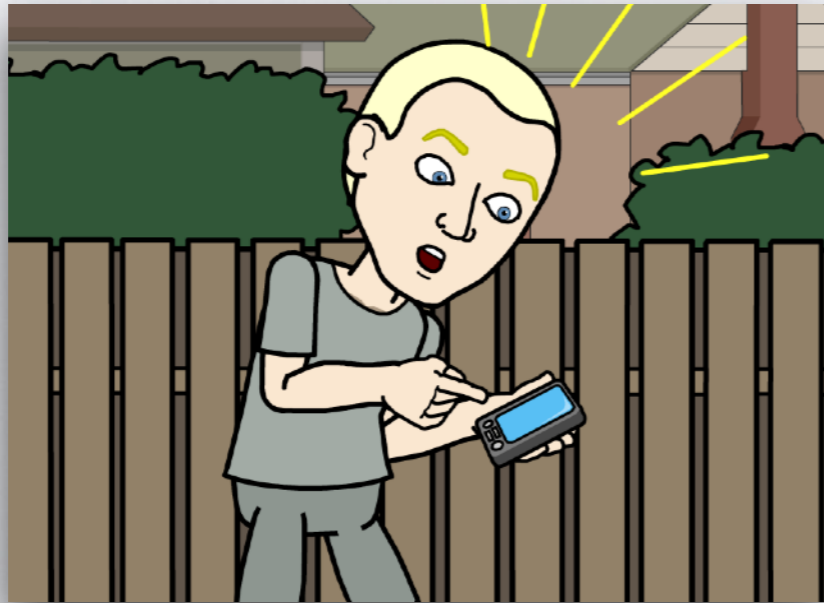
Alexis Cournoyer, MD, Éric Notebaert, MD, MSc, Massimiliano Iseppon, MD, Sylvie Cossette, PhD, Luc Londei-Leduc, MD, Yoan Lamarche, MD, MSc, Judy Morris, MD, MSc, Éric Piette, MD, MSc, Raoul Daoust, MD, MSc, Jean-Marc Chauny, MD, MSc, Catalina Sokoloff, MD, Yiorgos Alexandros Cavayas, MD, Jean Paquet, PhD and André Denault, MD, PhD

OHCA NOW

OHCA

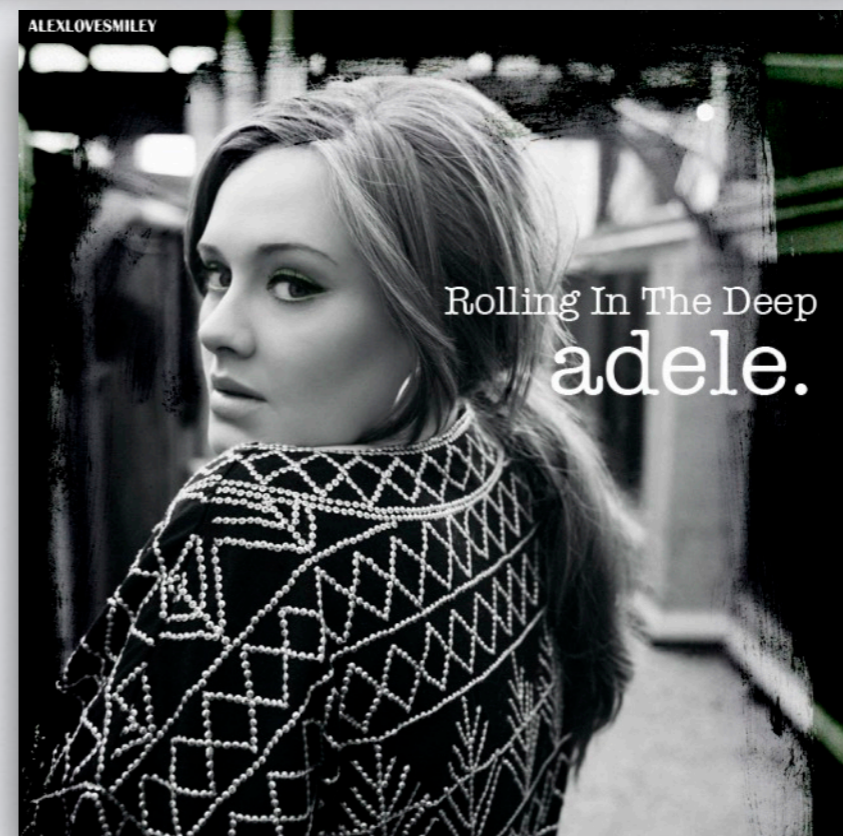


LOOKING AHEAD: OHCA



Drones, Crowd Sourcing CRP and ECMO

LOOKING BACK: 2011



CT SCAN TO RULE OUT SAH



Perry et al BMJ 2011

2015-2016

ORIGINAL CONTRIBUTION

An Observational Study of 2,248 Patients Presenting With Headache, Suggestive of Subarachnoid Hemorrhage, Who Received Lumbar Punctures Following Normal Computed Tomography of the Head



David Sayer, MRCS*, Ben Bloom, FRCER, Katalin Fernando, MD, Stuart Jones, FRCPath, Sally Benton, FRCPath, Shumontha Dev, FRCER, Sathish Deverapalli, MBBS, and Tim Harris, FRCER

Neurology. 2015 May 12;84(19):1927-32. doi: 10.1212/WNL.0000000000001562. Epub 2015 Apr 10.

CT within 6 hours of headache onset to rule out subarachnoid hemorrhage in nonacademic hospitals.

Blok KM¹, Rinkel GJ¹, Majoie CB¹, Hendrikse J¹, Braaksma M¹, Tijssen CC¹, Wong YY¹, Hofmeijer J¹, Extercatte J¹, Kerklaan B¹, Schreuder TH¹, ten Holter S¹, Verheul F¹, Harlaar L¹, Pruissen DM¹, Kwa VI¹, Brouwers PJ¹, Remmers MJ¹, Schonewille WJ¹, Kruijdt ND¹, Vergouwen MD².

Neurology

EVIDENCE-BASED DIAGNOSTICS

Spontaneous Subarachnoid Hemorrhage: A Systematic Review and Meta-analysis Describing the Diagnostic Accuracy of History, Physical Examination, Imaging, and Lumbar Puncture With an Exploration of Test Thresholds



Christopher R. Carpenter, MD, MSc, Adnan M. Hussain, MD, Michael J. Ward, MD, MBA, Gregory J. Zipfel, MD, Susan Fowler, Jesse M. Pines, MD, MBA, MSCE, and Marco L. A. Sivilotti, MD, MSc

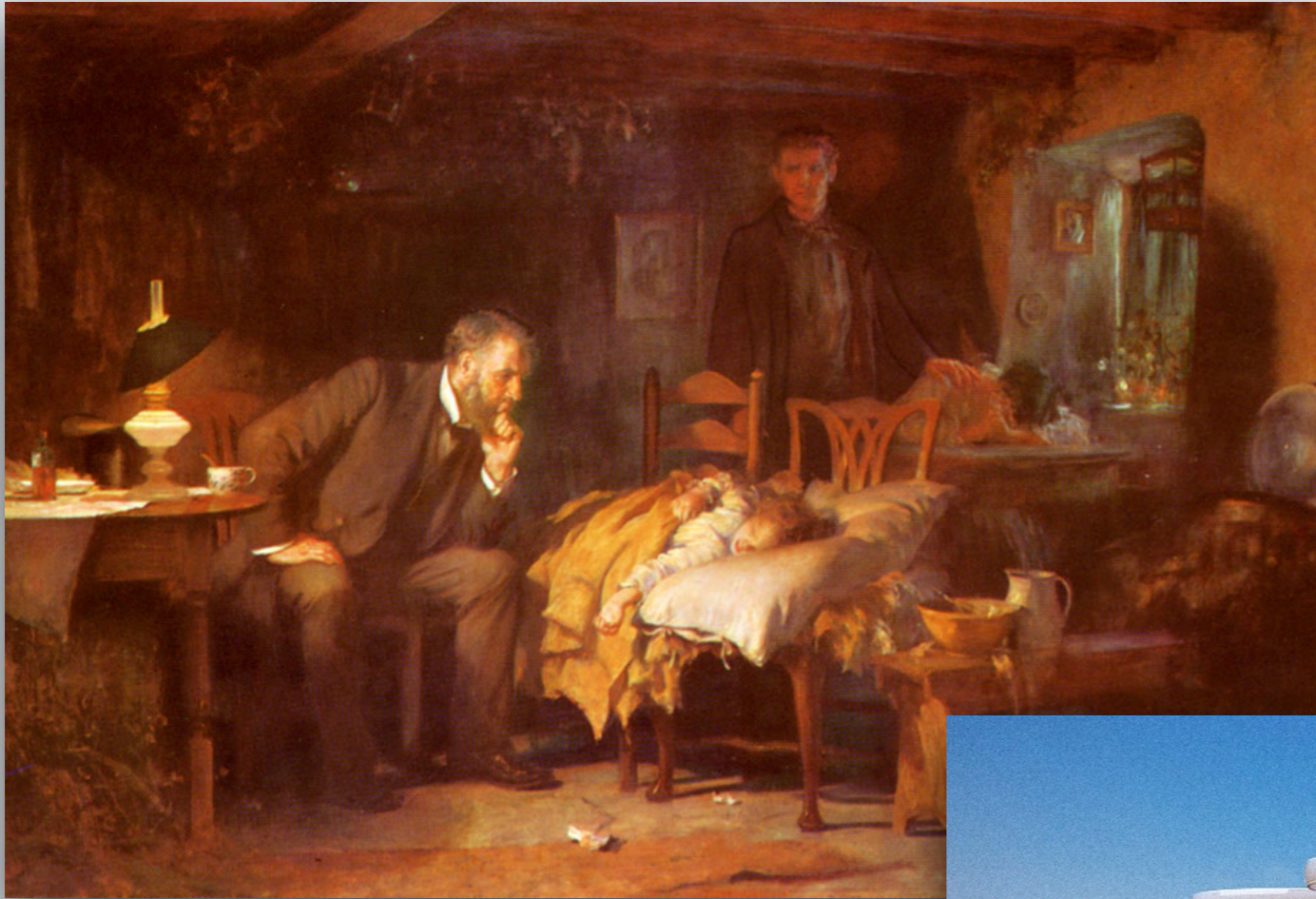
RULE OUT SAH NOW



LOOKING AHEAD: SAH



LOOKING BACK / LOOKING AHEAD?



Presented by: Comprehensive Advanced Life Support (CALS) Program



4th CALS Conference on Rural Emergency Care

calsprogram.org



Friday, Sept. 29, 2017

Continuing Education & Conference Center
U of MN - St. Paul Campus - St. Paul, MN

LOOKING BACK / LOOKING AHEAD



NOTHING TO DISCLOSE