

# Top Articles of 2016

## Turning Evidence into Practice

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Interim Director  
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# Roadmap

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- Case based interactive format
- Multiple articles per case
- Quick hitters and Short takes
- Summary of suggested practice changes

# Learning Objectives

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1. *Describe* the primary conclusions
2. *Identify* changes to your practice
3. *Implement* these practice changes

# Journals Reviewed...

- Jan 2016 – Dec 2016
  - N Engl J Med
  - JAMA; JAMA Intern Med
  - J Gen Intern Med
  - J Hospit Med
  - Lancet; Stroke; Ann Emerg Med; PLOS Med
  - Am J Med; Am Heart J; Am J Cardiol
  - Ann Intern Med + ACP J Club
  - Crit Care Med; Am J Respir Crit Care Med
  - Circulation, J Am Coll Cardiol, JACC HF
  - BMJ, Chest, Clin J Am Soc Nephrol
  - ACP Plus, BMJ Online update, J Watch

# Disclosures

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- None relevant

# Acknowledgements

- Jeffrey J. Glasheen, MD

University of Colorado School of Medicine

- Joseph Li, MD

Harvard Medical School

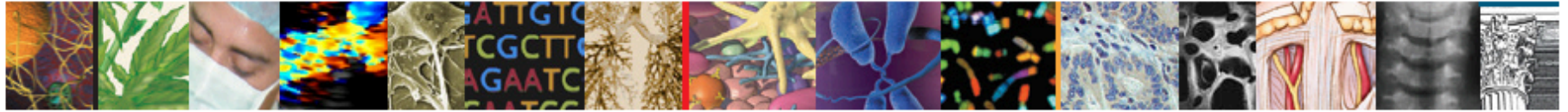
- Anneliese Schleyer, MD

University of Washington

- Brad Sharpe, MD

UCSF School of Medicine

# Notables in 2016



# *The* NEW ENGLAND JOURNAL *of* MEDICINE



Perspective  
SEPTEMBER 15, 2016

## **Zero to 50,000 — The 20th Anniversary of the Hospitalist**

Robert M. Wachter, M.D., and Lee Goldman, M.D., M.P.H.



## THE EMERGING ROLE OF “HOSPITALISTS” IN THE AMERICAN HEALTH CARE SYSTEM

THE explosive growth of managed care has led to an increased role for general internists and other primary care physicians in the American health care system. This change is welcome in many respects, since generalists have perennially been undervalued by health care institutions, payers, and even patients.<sup>1-3</sup> The greater prominence of generalism has led to an increase in the number of medical students who choose careers in primary care,<sup>4</sup> expanded job opportunities for generalists,<sup>5</sup> and a modest increase in the incomes of primary care physicians.<sup>6</sup>

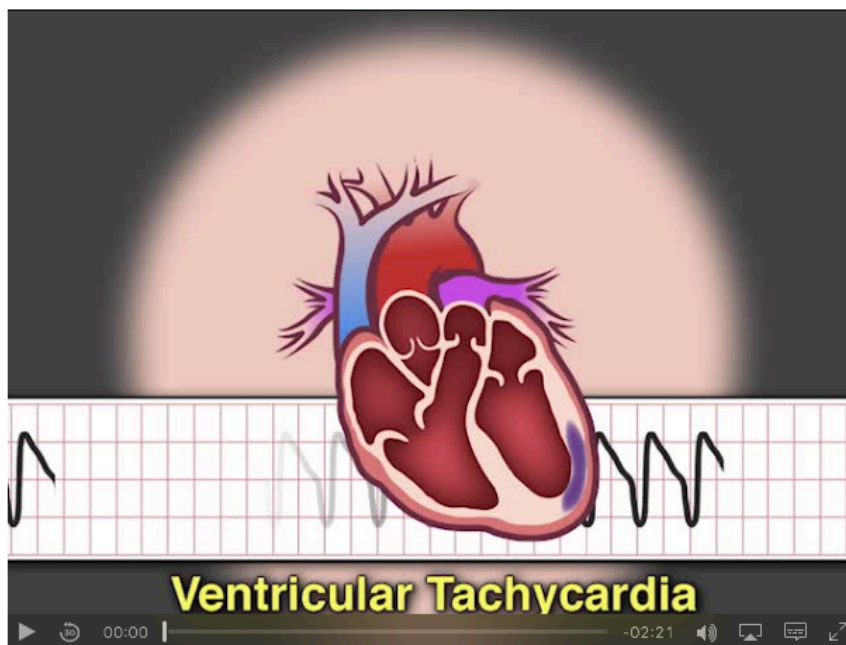


QUICK TAKE VIDEO SUMMARY

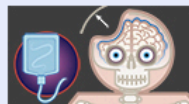
## Drugs or Ablation in Ventricular Tachycardia

Recurrent ventricular tachycardia is associated with high mortality and morbidity. An ICD can be effective, but the shocks are painful and upsetting. Antiarrhythmic drugs and catheter ablation can suppress tachycardia; which strategy is better? New research findings are summarized in a short video.

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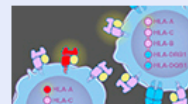
MORE QUICK TAKE VIDEOS



Decompressive  
Craniectomy and TBI



The ZOE-70 Trial



Cord-Blood Transplant



ART to Prevent HIV  
Transmission

## Introducing *Annals* for Hospitalists: New Knowledge, Novel Formats, and Unique Perspectives

If you practice hospital medicine, where do you go to find the latest evidence relevant to your practice? Odds are, you spend time wading through several journals, Web sites, or other publications looking for information pertinent to hospitalists—and feel guilty when you don't have time to do this. With the introduction of *Annals* for Hospitalists, we hope to simplify your search for information that matters most to you.

This new feature is a collaboration between the University of Michigan Hospitalist Program and *Annals of Internal Medicine*. The feature editors (D.H.W. and V.C.) will comb through all *Annals of Internal Medicine* articles and ACP Journal Club summaries of articles in the broader literature to identify those most applicable to the practice of hospital medicine. They also will highlight important takeaway points and collate all this information in a monthly alert, which you can have delivered to your e-mail account by signing up at [www.annals.org](http://www.annals.org). These alerts also will be archived in a new section called *Annals* for Hospitalists (<http://go.annals.org/hospitalist>). Because we know you may want even more information, *Annals* for Hospitalists also will link to other hospital medicine content from ACP, including the most-read ACP JournalWise alerts and *ACP Hospitalist*.

In addition, *Annals* for Hospitalists will include a special monthly commentary titled Inpatient Notes. Written by thought leaders in various fields, these articles will provide unique perspectives on contemporary or controversial topics in hospital medicine. We consider Inpatient Notes to be the crown jewel of *Annals* for Hospitalists and are delighted that Dr. Robert (Bob) Wachter, one of the founders of hospital medicine, has written the first commentary. In his inaugural commen-

tary, Dr. Wachter discusses the proliferation, promise, and peril epitomized by health care's digitalization. Focusing on the shortfalls of electronic health systems, as well as lessons learned from other fields, he explains why hospitalists will be crucial in bringing about the unrealized potential of this technology.

We believe that *Annals* for Hospitalists will provide a compelling new way for hospitalists to stay abreast of salient information from *Annals of Internal Medicine* and the ACP, and to keep pace with emerging ideas in the field. We hope you enjoy this debut edition, and we look forward to having you return each month.

David H. Wesorick, MD  
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Ann Arbor, Michigan

Christine Laine, MD, MPH  
Editor in Chief

**Disclosures:** Disclosures can be viewed at [www.acponline.org/authors/icmje/ConflictOfInterestForms.do?msNum=M16-1400](http://www.acponline.org/authors/icmje/ConflictOfInterestForms.do?msNum=M16-1400).

**Requests for Single Reprints:** David H. Wesorick, MD, University of Michigan, 3119 Taubman Center, Box 0376, 1500 East Medical Center Drive, Ann Arbor, MI 48109; e-mail, [davidwes@med.umich.edu](mailto:davidwes@med.umich.edu).

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## Annals for Hospitalists



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University of Michigan and the VA Ann Arbor Health System



If you practice hospital medicine, *Annals* for Hospitalists simplifies your search for information that matters most to you.

Developed with the University of Michigan Hospital Medicine Program and the VA Ann Arbor Health System, *Annals* for Hospitalists provides monthly highlights from *Annals of Internal Medicine* and ACP Journal Club and "Inpatient Notes"—unique perspectives on contemporary topics in hospital medicine.

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# Antithrombotic Therapy for VTE Disease

## CHEST Guideline and Expert Panel Report

*Clive Kearon, MD, PhD; Elie A. Akl, MD, MPH, PhD; Joseph Ornelas, PhD; Allen Blaivas, DO, FCCP; David Jimenez, MD, PhD, FCCP; Henri Bounameaux, MD; Menno Huisman, MD, PhD; Christopher S. King, MD, FCCP; Timothy A. Morris, MD, FCCP; Namita Sood, MD, FCCP; Scott M. Stevens, MD; Janine R. E. Vintch, MD, FCCP; Philip Wells, MD; Scott C. Woller, MD; and COL Lisa Moores, MD, FCCP*

*Chest* 2016;149:315-352.



JAMA Internal Medicine | Special Communication

# Sugar Industry and Coronary Heart Disease Research

## A Historical Analysis of Internal Industry Documents

Cristin E. Kearns, DDS, MBA; Laura A. Schmidt, PhD, MSW, MPH; Stanton A. Glantz, PhD

Early warning signals of the coronary heart disease (CHD) risk of sugar (sucrose) emerged in the 1950s. We examined Sugar Research Foundation (SRF) internal documents, historical reports, and statements relevant to early debates about the dietary causes of CHD and assembled findings chronologically into a narrative case study. The SRF sponsored its first CHD research project in 1965, a literature review published in the *New England Journal of Medicine*, which singled out fat and cholesterol as the dietary causes of CHD and downplayed evidence that sucrose consumption was also a risk factor. The SRF set the review's objective, contributed articles for inclusion, and received drafts. The SRF's funding and role was not disclosed. Together with other recent analyses of sugar industry documents, our findings suggest the industry sponsored a research program in the 1960s and 1970s that successfully cast doubt about the hazards of sucrose while promoting fat as the dietary culprit in CHD. Policymaking committees should consider giving less weight to food industry-funded studies and include mechanistic and animal studies as well as studies appraising the effect of added sugars on multiple CHD biomarkers and disease development.

*JAMA Intern Med.* doi:10.1001/jamainternmed.2016.5394

Published online September 12, 2016. Corrected on October 3, 2016.

- ← Invited Commentary
- + Author Audio Interview
- + Supplemental content

**Author Affiliations:** Author affiliations are listed at the end of this article.

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*JAMA Intern Med* 2016;online pub Sept 12<sup>th</sup>.

# **ACC/AHA Task Force Statement**

## **Further Evolution of the ACC/AHA Clinical Practice Guideline Recommendation Classification System**

### **A Report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines**

#### **ACC/AHA TASK FORCE MEMBERS**

Jonathan L. Halperin, MD, FACC, FAHA, Chair; Glenn N. Levine, MD, FACC, FAHA, Chair-Elect;  
Sana M. Al-Khatib, MD, MHS, FACC, FAHA; Kim K. Birtcher, PHARMD, AACC;  
Biykem Bozkurt, MD, PHD, FACC, FAHA; Ralph G. Brindis, MD, MPH, MACC;  
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Lee A. Fleisher, MD, FACC, FAHA; Federico Gentile, MD, FACC;  
Samuel Gidding, MD, FAHA; Mark A. Hlatky, MD, FACC; John Ikonomidis, MD, PHD, FAHA;  
José Joglar, MD, FACC, FAHA; Susan J. Pressler, PHD, RN, FAHA;  
Duminda N. Wijeyesundera, MD, PHD

*Circulation* 2016;133:1426-1428.

**Table 1. ACC/AHA Recommendation System: Applying Class of Recommendation and Level of Evidence to Clinical Strategies, Interventions, Treatments, or Diagnostic Testing in Patient Care\* (Updated August 2015)**

CLASS (STRENGTH) OF RECOMMENDATION	LEVEL (QUALITY) OF EVIDENCE†
<b>CLASS I (STRONG)</b> <span>Benefit &gt;&gt;&gt; Risk</span>  Suggested phrases for writing recommendations: <ul style="list-style-type: none"> <li>■ Is recommended</li> <li>■ Is indicated/useful/effective/beneficial</li> <li>■ Should be performed/administered/other</li> <li>■ Comparative-Effectiveness Phrases‡:                             <ul style="list-style-type: none"> <li>○ Treatment/strategy A is recommended/indicated in preference to treatment B</li> <li>○ Treatment A should be chosen over treatment B</li> </ul> </li> </ul>	<b>LEVEL A</b>  <ul style="list-style-type: none"> <li>■ High-quality evidence‡ from more than 1 RCT</li> <li>■ Meta-analyses of high-quality RCTs</li> <li>■ One or more RCTs corroborated by high-quality registry studies</li> </ul>
<b>CLASS IIa (MODERATE)</b> <span>Benefit &gt;&gt; Risk</span>  Suggested phrases for writing recommendations: <ul style="list-style-type: none"> <li>■ Is reasonable</li> <li>■ Can be useful/effective/beneficial</li> <li>■ Comparative-Effectiveness Phrases‡:                             <ul style="list-style-type: none"> <li>○ Treatment/strategy A is probably recommended/indicated in preference to treatment B</li> <li>○ It is reasonable to choose treatment A over treatment B</li> </ul> </li> </ul>	<b>LEVEL B-R</b> <span>(Randomized)</span>  <ul style="list-style-type: none"> <li>■ Moderate-quality evidence‡ from 1 or more RCTs</li> <li>■ Meta-analyses of moderate-quality RCTs</li> </ul>
<b>CLASS IIb (WEAK)</b> <span>Benefit ≥ Risk</span>  Suggested phrases for writing recommendations: <ul style="list-style-type: none"> <li>■ May/might be reasonable</li> <li>■ May/might be considered</li> <li>■ Usefulness/effectiveness is unknown/unclear/uncertain or not well established</li> </ul>	<b>LEVEL B-NR</b> <span>(Nonrandomized)</span>  <ul style="list-style-type: none"> <li>■ Moderate-quality evidence‡ from 1 or more well-designed, well-executed nonrandomized studies, observational studies, or registry studies</li> <li>■ Meta-analyses of such studies</li> </ul>
<b>CLASS III: No Benefit (MODERATE)</b> <span>Benefit = Risk</span> <i>(Generally, LOE A or B use only)</i>  Suggested phrases for writing recommendations: <ul style="list-style-type: none"> <li>■ Is not recommended</li> <li>■ Is not indicated/useful/effective/beneficial</li> <li>■ Should not be performed/administered/other</li> </ul>	<b>LEVEL C-LD</b> <span>(Limited Data)</span>  <ul style="list-style-type: none"> <li>■ Randomized or nonrandomized observational or registry studies with limitations of design or execution</li> <li>■ Meta-analyses of such studies</li> <li>■ Physiological or mechanistic studies in human subjects</li> </ul>
<b>CLASS III: Harm (STRONG)</b> <span>Risk &gt; Benefit</span>  Suggested phrases for writing recommendations: <ul style="list-style-type: none"> <li>■ Potentially harmful</li> <li>■ Causes harm</li> <li>■ Associated with excess morbidity/mortality</li> <li>■ Should not be performed/administered/other</li> </ul>	<b>LEVEL C-EO</b> <span>(Expert Opinion)</span>  Consensus of expert opinion based on clinical experience

COR and LOE are determined independently (any COR may be paired with any LOE).

A recommendation with LOE C does not imply that the recommendation is weak. Many important clinical questions addressed in guidelines do not lend themselves to clinical trials. Although RCTs are unavailable, there may be a very clear clinical consensus that a particular test or therapy is useful or effective.

\* The outcome or result of the intervention should be specified (an improved clinical outcome or increased diagnostic accuracy or incremental prognostic information).

† For comparative-effectiveness recommendations (COR I and IIa; LOE A and B only), studies that support the use of comparator verbs should involve direct comparisons of the treatments or strategies being evaluated.

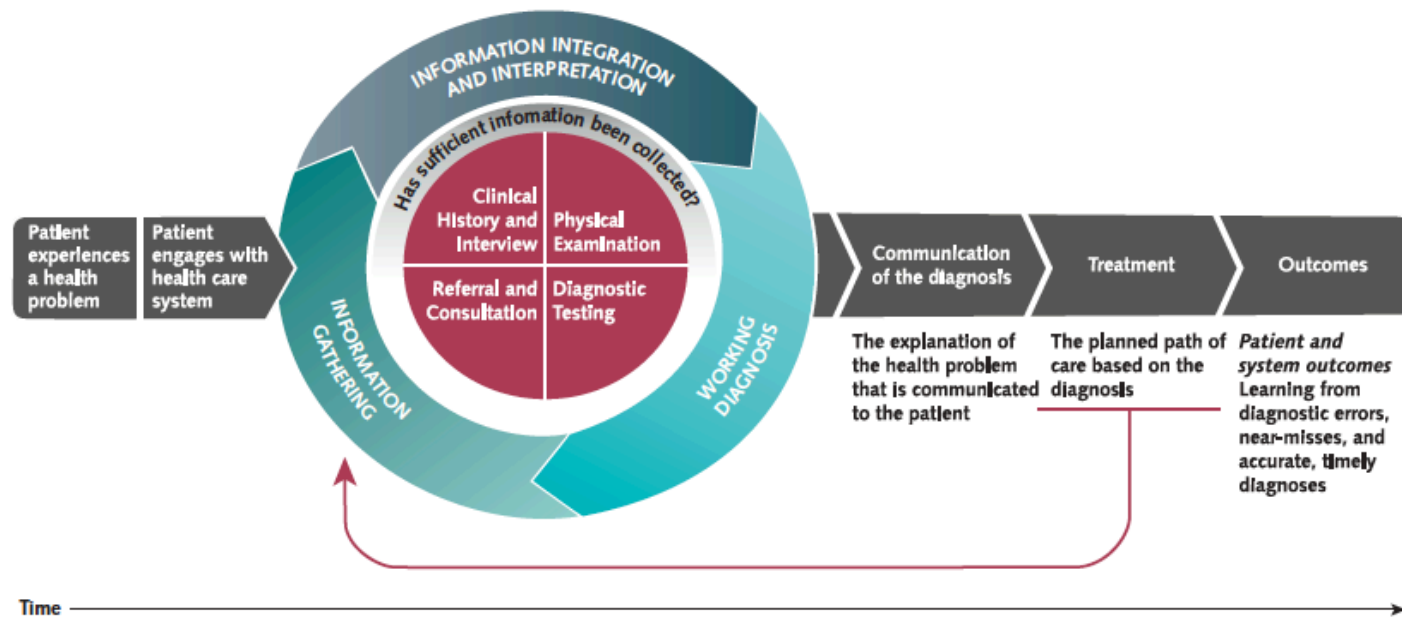
‡ The method of assessing quality is evolving, including the application of standardized, widely used, and preferably validated evidence grading tools; and for systematic reviews, the incorporation of an Evidence Review Committee.

COR indicates Class of Recommendation; EO, expert opinion; LD, limited data; LOE, Level of Evidence; NR, nonrandomized; R, randomized; and RCT, randomized controlled trial.



**John R. Ball, MD, JD, and Erin Balogh, MPH**

**Figure.** The committee's visualization of the diagnostic process illustrates its complexity and the need for collaboration among clinicians, patients, and their families to achieve accurate, timely diagnosis.



Special Communication

# CDC Guideline for Prescribing Opioids for Chronic Pain— United States, 2016

Deborah Dowell, MD, MPH; Tamara M. Haegerich, PhD; Roger Chou, MD

*JAMA* 2016;315:1624-1645.

# Case 1

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A 67 y/o man presents with three days of productive cough, fevers, fatigue, and chest pain.

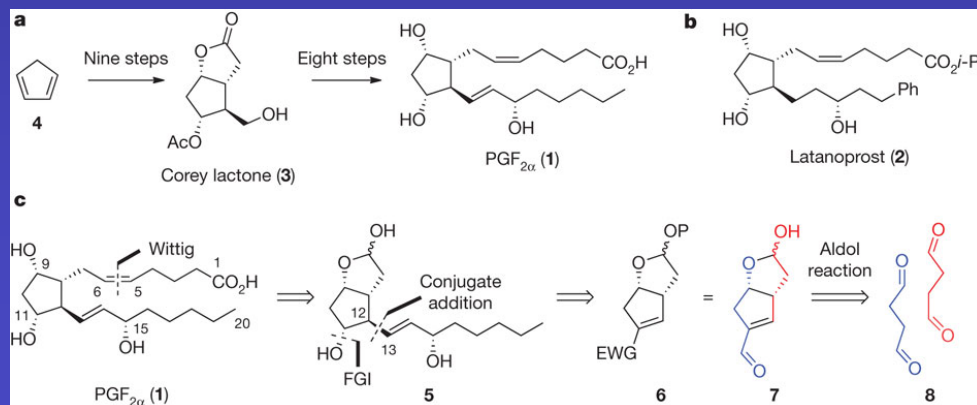
BP 96/64, HR 102, Temp 101.1, RR 24, SaO2 92% on RA. Ill appearing, rales R base

CXR no infiltrate, UA neg, blood cx drawn, WBC 15K, creat 1.5

ER begins empiric ceftriaxone + azithromycin and calls you re: pt with "septicemia."

# Inner monologue w/ ER...

- A. *Not sure what 'septicemia is,' this is 'Severe Sepsis'*
- B. *Should I ask what the qSOFA score is??*
- c. *Yes. I dread learning why SIRS is so wrong*
- D. *Hmm. It's all about the prostaglandins...*



Special Communication | **CARING FOR THE CRITICALLY ILL PATIENT**

# The Third International Consensus Definitions for Sepsis and Septic Shock (Sepsis-3)

Mervyn Singer, MD, FRCP; Clifford S. Deutschman, MD, MS; Christopher Warren Seymour, MD, MSc; Manu Shankar-Hari, MSc, MD, FFICM; Djillali Annane, MD, PhD; Michael Bauer, MD; Rinaldo Bellomo, MD; Gordon R. Bernard, MD; Jean-Daniel Chiche, MD, PhD; Craig M. Coopersmith, MD; Richard S. Hotchkiss, MD; Mitchell M. Levy, MD; John C. Marshall, MD; Greg S. Martin, MD, MSc; Steven M. Opal, MD; Gordon D. Rubenfeld, MD, MS; Tom van der Poll, MD, PhD; Jean-Louis Vincent, MD, PhD; Derek C. Angus, MD, MPH

*JAMA* 2016;315:801-810.

# Sepsis-3 Definitions

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Objective: Evaluate and update definitions for sepsis  
Design: Task force—meetings, Delphi, voting  
Participants: 19 international experts  
Goals: Limitations, definitions; clarity

*JAMA* 2016;315:801-810.

# Sepsis-3: Limitations

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**Previous models focus too much on inflammation**

*JAMA* 2016;315:801-810.

# Sepsis-3: Limitations

**Previous models focus too much on inflammation**

**Misleading that sepsis proceeds through continuum**

*JAMA* 2016;315:801-810.



# Sepsis-3: Limitations

**Previous models focus too much on inflammation**

**Misleading that sepsis proceeds through continuum**

**The term “severe sepsis” is redundant...**

# Sepsis-3: Definitions

**“Life-threatening organ dysfunction caused by a dysregulated host response to infection...”**

*JAMA* 2016;315:801-810.

# Sepsis-3: Definitions

**“Life-threatening organ dysfunction caused by a dysregulated host response to infection...”**

**Sequential Organ Failure Assessment (SOFA) score of 2 or more:**

**Mortality > 10%**

# Sepsis-3: Definitions

## Quick SOFA (qSOFA)

$RR \geq 22 / \text{min}, GCS < 13,$   
 $SBP \leq 100 \text{ mm Hg}$

$qSOFA \geq 2 = \text{Mortality RR 3-14}$

Original Investigation | CARING FOR THE CRITICALLY ILL PATIENT

# Assessment of Clinical Criteria for Sepsis For the Third International Consensus Definitions for Sepsis and Septic Shock (Sepsis-3)

Christopher W. Seymour, MD, MSc; Vincent X. Liu, MD, MSc; Theodore J. Iwashyna, MD, PhD; Frank M. Brunkhorst, MD; Thomas D. Rea, MD, MPH; André Scherag, PhD; Gordon Rubenfeld, MD, MSc; Jeremy M. Kahn, MD, MSc; Manu Shankar-Hari, MD, MSc; Mervyn Singer, MD, FRCP; Clifford S. Deutschman, MD, MS; Gabriel J. Escobar, MD; Derek C. Angus, MD, MPH

*JAMA* 2016;315:762-774.

# Sepsis-3 Clinical Criteria

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- Question: Evaluate validity of clinical criteria of sepsis
- Design: Retrospective cohort
- Participants: 148,907 encounters suspected infection
- 1° outcome: Area under receiver operating curves of SIRS, SOFA, qSOFA, and LODS, i.e. accuracy

# SIRS



*Chest* 1992;101:1644-1655.

# Sepsis-Related Organ Failure Assessment (SOFA)

1. Partial pressure of oxygen
2. FiO<sub>2</sub>
3. Plt count
4. Glasgow coma scale
5. Bilirubin
6. Level of hypotension
7. Creatinine

*Intensive Care Med* 1996;22:707-710; MD Calc



# Sequential Organ Failure Assessment (SOFA)

1. Partial pressure of oxygen
2. FiO<sub>2</sub>
3. Plt count
4. Glasgow coma scale
5. Bilirubin
6. Level of hypotension
7. Creatinine

# Logistic Organ Dysfunction System (LODS)

1. Partial pressure of oxygen
2. HR and BP
3. Plt count, WBC
4. Glasgow coma scale
5. Bilirubin
6. PT
7. BUN
8. Creatinine
9. Urine output

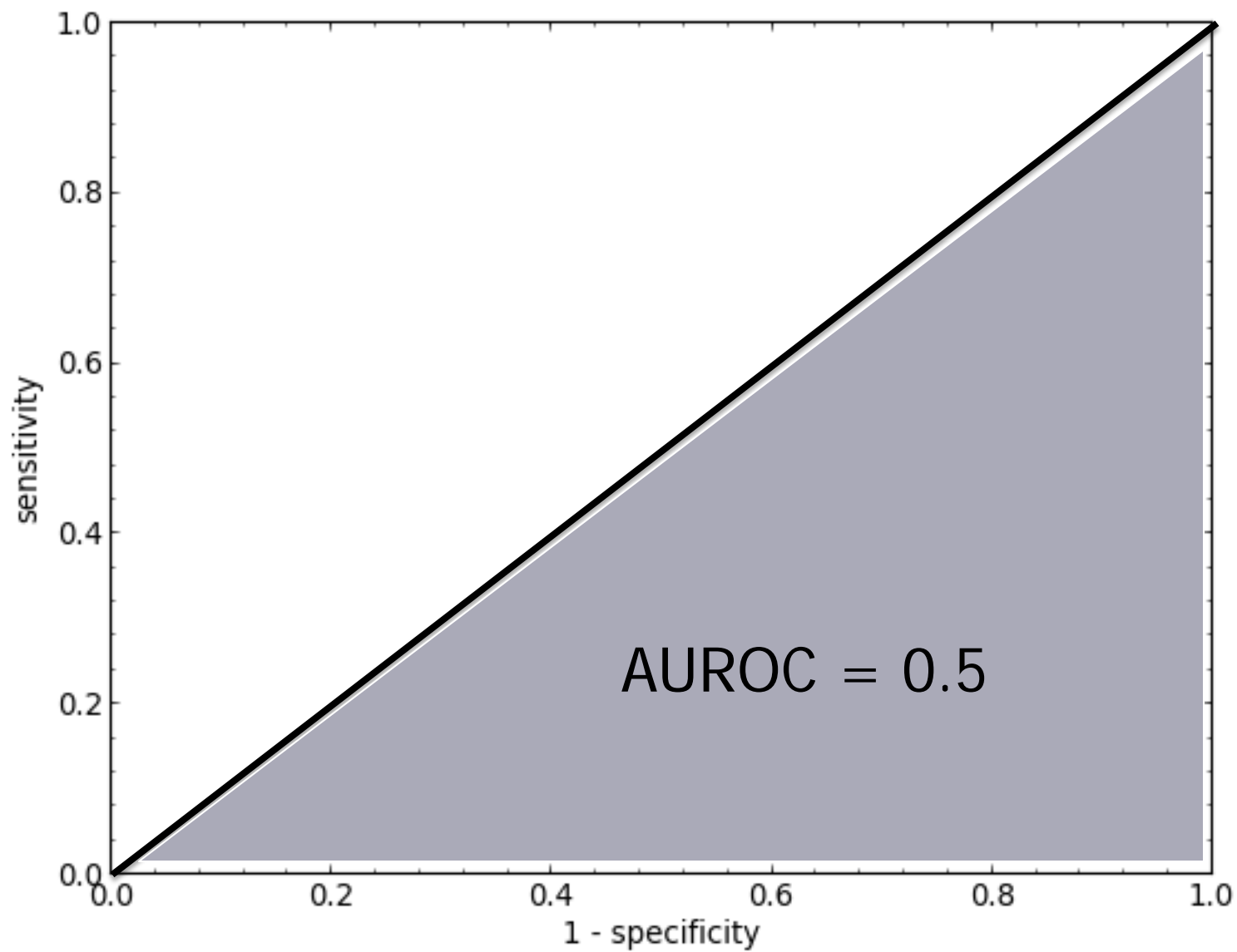
*JAMA* 1996;276:802-810.

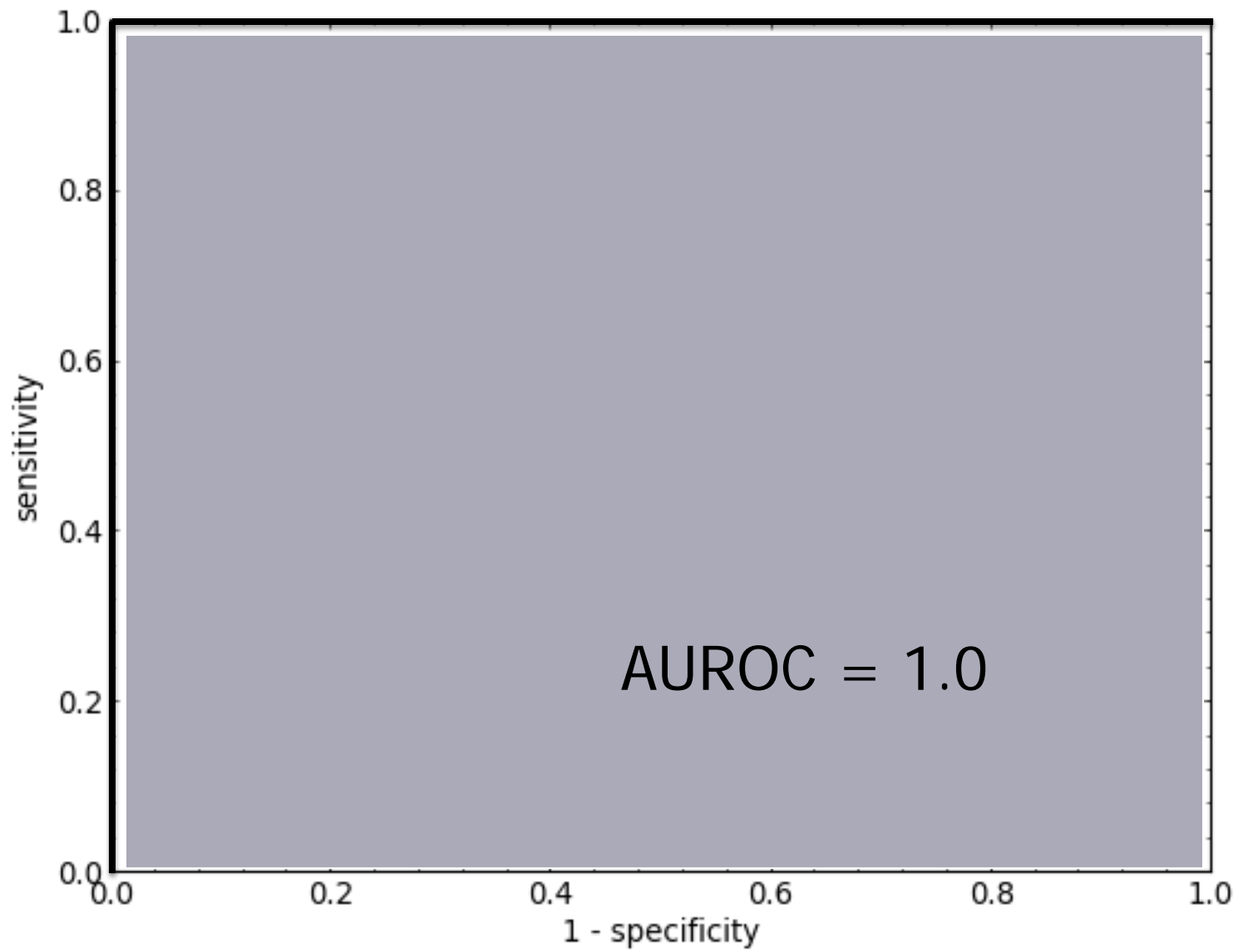






TAKE  
A  
DEEP BREATH





# Sepsis-3 Results ICU

	AUROC	95%C.I.	p
SIRS			

# Sepsis-3 Results ICU

	AUROC	95%C.I.	p
SIRS	0.64	0.62-0.66	



# Sepsis-3 Results ICU

	AUROC	95%C.I.	p
SIRS	0.64	0.62-0.66	
qSOFA	0.66	0.64-0.68	

# Sepsis-3 Results ICU

	<b>AUROC</b>	<b>95%C.I.</b>	<b>p</b>
SIRS	0.64	0.62-0.66	
qSOFA	0.66	0.64-0.68	
SOFA	0.74	0.73-0.76	< 0.001

# Sepsis-3 Results ICU

	AUROC	95%C.I.	p
SIRS	0.64	0.62-0.66	
qSOFA	0.66	0.64-0.68	
SOFA	0.74	0.73-0.76	< 0.001
LODS	0.75	0.73-0.76	< 0.001

# Sepsis-3 Results non-ICU

	AUROC	95%C.I.	p
SIRS			

# Sepsis-3 Results non-ICU

	AUROC	95%C.I.	p
SIRS	0.76	0.75-0.77	

# Sepsis-3 Results non-ICU

	AUROC	95%C.I.	p
SIRS	0.76	0.75-0.77	
SOFA	0.79	0.78-0.80	< 0.001

# Sepsis-3 Results non-ICU

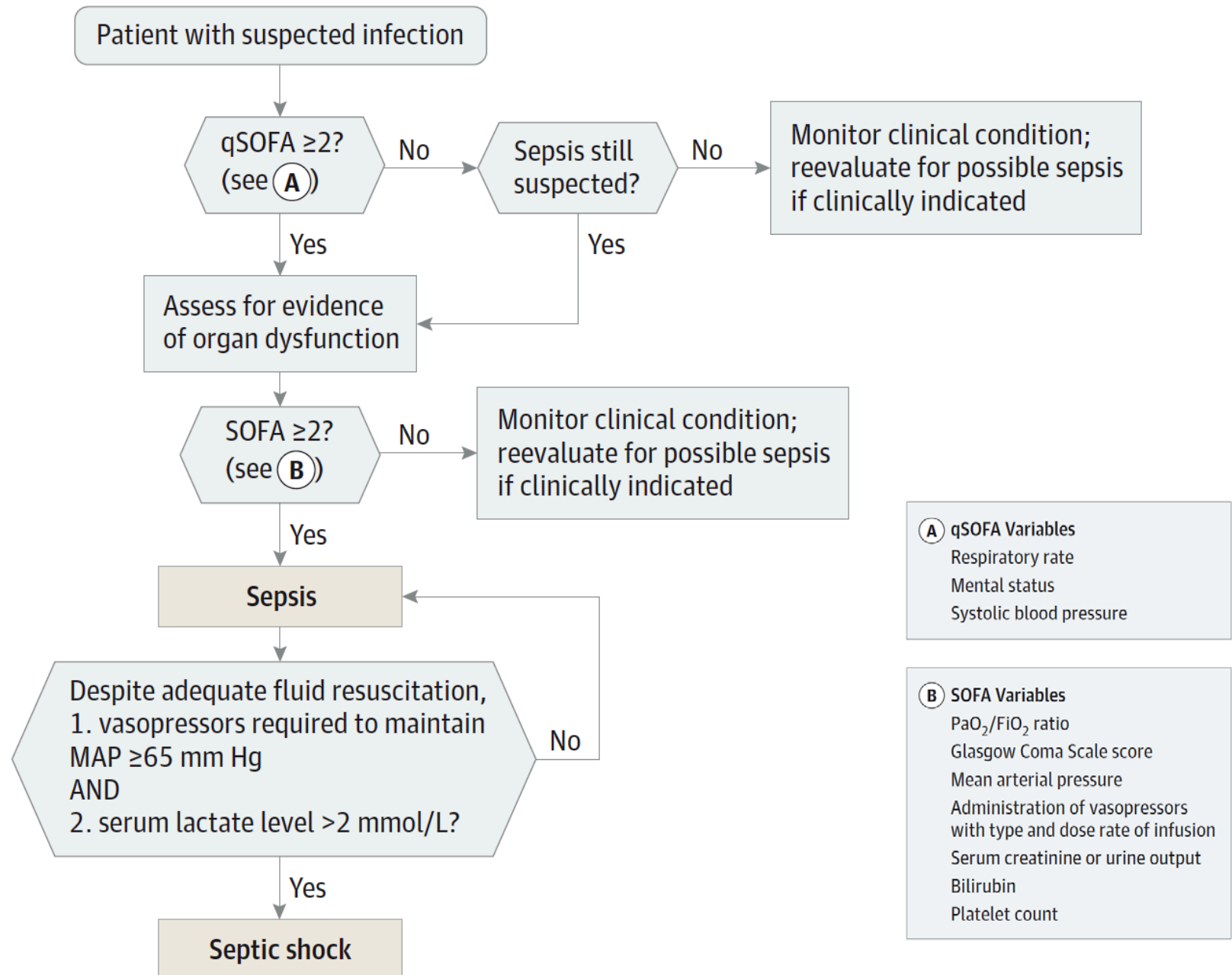
	<b>AUROC</b>	<b>95%C.I.</b>	<b>p</b>
SIRS	0.76	0.75-0.77	
SOFA	0.79	0.78-0.80	< 0.001
qSOFA	0.81	0.80-0.82	< 0.001

# Sepsis-3 Clinical Criteria

- Question: Evaluate validity of clinical criteria of sepsis
- Design: Retrospective cohort
- Participants: 148,907 encounters suspected infection
- 1° outcome: Area under receiver operating curves of SIRS, SOFA, qSOFA, and LODS
- Conclusions: In the ICU, SOFA and LODS better than SIRS and qSOFA; outside the ICU, qSOFA better than SOFA and SIRS



Figure. Operationalization of Clinical Criteria Identifying Patients With Sepsis and Septic Shock



# New Sepsis Criteria

## A Change We Should Not Make

*Steven Q. Simpson, MD, FCCP*  
*Kansas City, KS*



CrossMark



PODCAST

*Chest* 2016;149:1117-1118.

# New Sepsis Criteria

## A Change We Should Not Make



*Steven Q. Simpson, MD, FCCP*  
*Kansas City, KS*

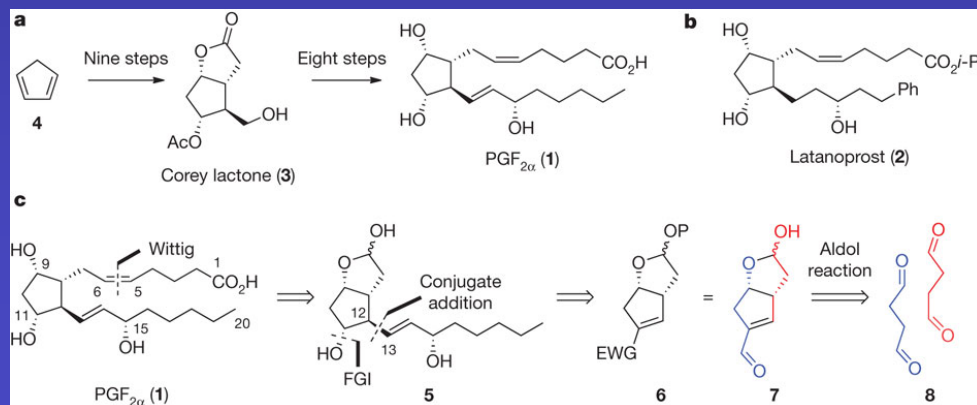


1. SIRS wasn't meant to define sepsis
2. Who uses SOFA?
3. "Surviving Sepsis" Campaign – do we start all over again?
4. Caution please

*Chest* 2016;149:1117-1118.

# Inner monologue w/ ER...

- A. *Not sure what 'septicemia is,' this is 'Severe Sepsis'*
- B. *Should I ask what the qSOFA score is??*
- c. *Yes. I dread learning why SIRS is so wrong*
- D. *Hmm. It's all about the prostaglandins...*



# PNA & Sepsis Short Takes

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CT chest showed an infiltrate in 33% of pts with suspected PNA and clear CXR. *Am J Respir Crit Care Med* 2016;192:974-982.

Continuous infusion B-lactams better than intermittent dosing in severe sepsis. *Am J Respir Crit Care Med* 2016;194:681-691.

# Sniffing out significant “Pee values”: genome wide association study of asparagus anosmia

Sarah C Markt,<sup>1</sup> Elizabeth Nuttall,<sup>1</sup> Constance Turman,<sup>4</sup> Jennifer Sinnott,<sup>1,5</sup> Eric B Rimm,<sup>1,2,6</sup> Ethan Ecsedy,<sup>7</sup> Robert H Unger,<sup>1</sup> Katja Fall,<sup>1,8,9</sup> Stephen Finn,<sup>10</sup> Majken K Jensen,<sup>2,6</sup> Jennifer R Rider,<sup>1,11</sup> Peter Kraft,<sup>1,3,4</sup> Lorelei A Mucci<sup>1,6,9</sup>

## CONCLUSION

A large proportion of people have asparagus anosmia. Genetic variation near multiple olfactory receptor genes is associated with the ability of an individual to smell the metabolites of asparagus in urine. Future replication studies are necessary before considering targeted therapies to help anosmic people discover what they are missing.

*BMJ* 2016;355:i6071.

# Case 2

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82 y/o woman on an inpatient palliative care service is seen in consultation for distressing hallucinations.

Physical examination and thorough review of medications do not identify a culprit etiology.

U/A negative, TSH and Chem normal.

The primary team is asking about pharmacologic options for treatment...

# Which of the following are true?

- A. Risperidone increases extrapyramidal sx
- B. Risperidone decreases delirium severity
- C. Degree of QTc prolongation predicts excess CV risk with antipsychotics.
- D. All of the above are true.
- E. Hello *Vitamin H*.



Medical & Science

## Vitamin H

means

Haldol; in the case of a drug addict, it means Heroin



JAMA Internal Medicine | Original Investigation

# Efficacy of Oral Risperidone, Haloperidol, or Placebo for Symptoms of Delirium Among Patients in Palliative Care A Randomized Clinical Trial

Meera R. Agar, PhD; Peter G. Lawlor, MB; Stephen Quinn, PhD; Brian Draper, MD; Gideon A. Caplan, MBBS;  
Debra Rowett, BPharm; Christine Sanderson, MPH; Janet Hardy, MD; Brian Le, MBBS; Simon Eckermann, PhD;  
Nicola McCaffrey, PhD; Linda Devilee, MBus; Belinda Fazekas, BN; Mark Hill, PhD; David C Currow, PhD

*JAMA Intern Med* 2017;177:34-42.

# Delirium Treatment

- Question: Efficacy of risperidone and haloperidol in treating distressing delirium in palliative care
- Design: Placebo controlled RCT
- Patients: 247 adults with delirium + distress inpatient palliative care services in Australia
- 1° Outcome: Improvement in delirium symptom score
- 2° Outcome: Delirium severity, midazolam use, EPS, sedation, and survival

*JAMA Intern Med* 2017;177:34-42.

# Delirium Treatment

	Ris	Hal	plac	P
1° Outcome	↑	↑		0.009
Del severity	↑	↑		<0.001

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Midazolam	↑	↑		0.01

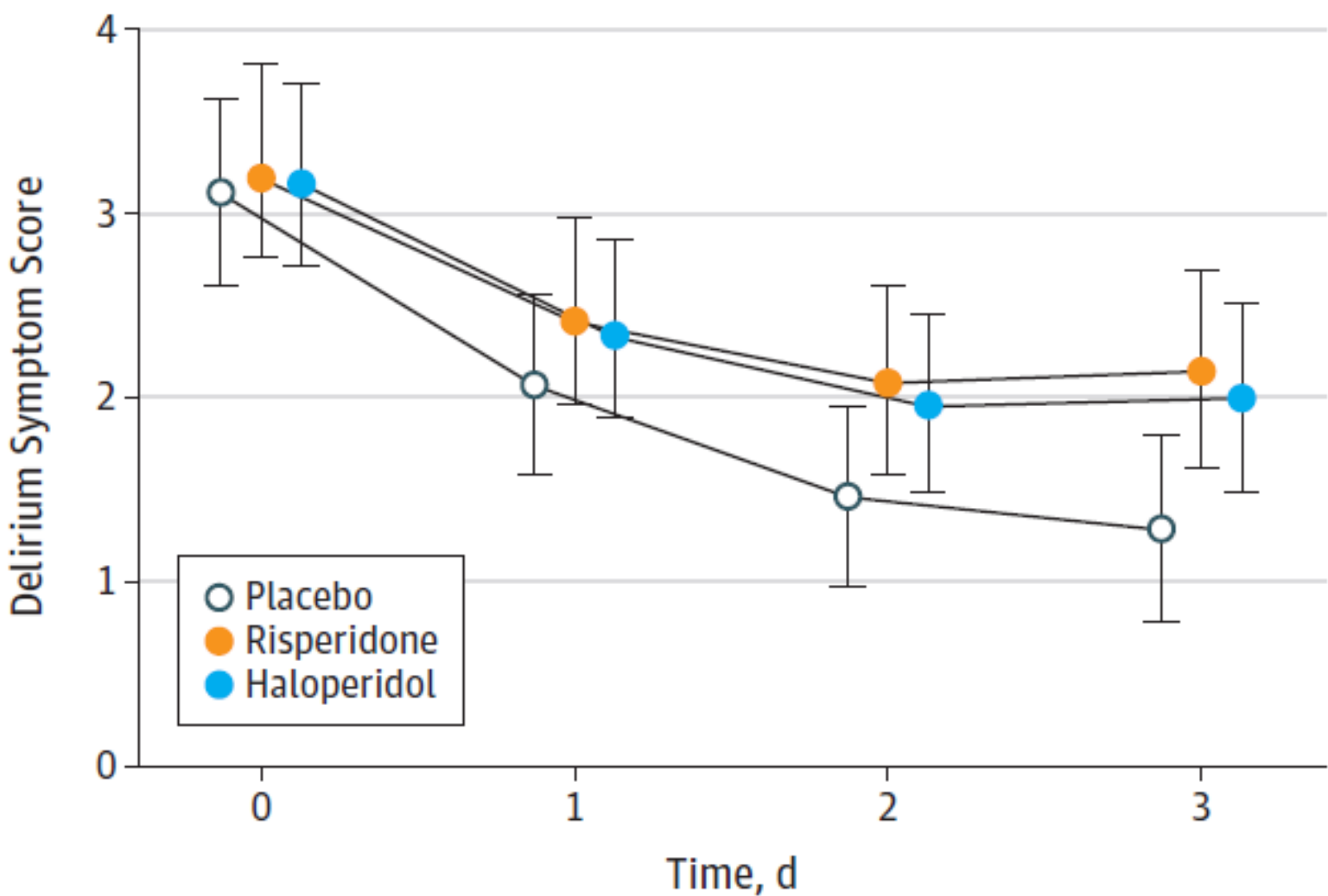
# Delirium Treatment

	Ris	Hal	plac	P
1° Outcome	↑	↑		0.009
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EPS	↑	↑		0.01

# Delirium Treatment

	Ris	Hal	plac	P
1° Outcome	↑	↑		0.009
Del severity	↑	↑		<0.001
Midazolam	↑	↑		0.01
EPS	↑	↑		0.01
Survival	17d	16d	26d	0.01

Figure 2. Secondary Multivariable Mixed-Model Analysis of Delirium



# Delirium Treatment

- Question: Efficacy of risperidone and haloperidol in treating distressing delirium in palliative care
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- 1° Outcome: Improvement in delirium symptom score
- 2° Outcome: Delirium severity, midazolam use, EPS, sedation, and survival
- Conclusion: Antipsychotics worsen delirium, increase EPS, and haloperidol increases mortality


*JAMA Intern Med* 2017;177:34-42.



# Which of the following are true?

- A. Risperidone increases extrapyramidal sx
- B. Risperidone decreases delirium severity
- C. Degree of QTc prolongation predicts excess CV risk with antipsychotics.
- D. All of the above are true.
- E. Hello *Vitamin H*.

*JAMA Intern Med* 2017;177:34-42.



Medical & Science

## Vitamin H

means






Haldol; in the case of a drug addict, it means Heroin

# Quick Hitter

**States Worse Than Death Among Hospitalized Patients With Serious Illnesses**

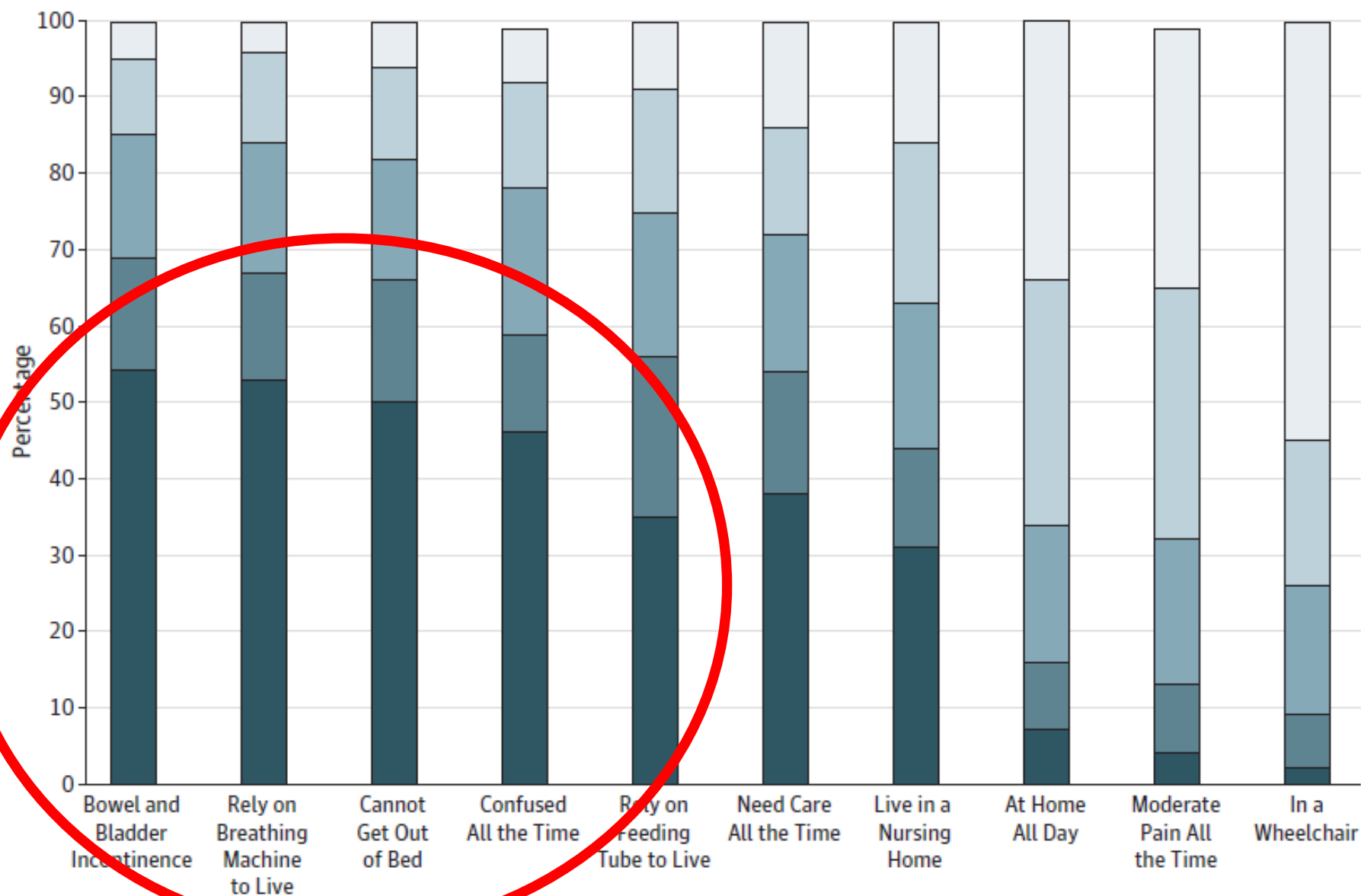
n=180

*JAMA Intern Med* 2016;176:1557-1559.

-  Much better than death
-  Somewhat better than death
-  Little bit better than death
-  Neither better nor worse than death
-  Worse than death

*JAMA Intern Med* 2016;176:1557-1559.

Figure. Ratings of States of Functional Debility Relative to Death by Hospitalized Patients With Serious Illnesses



# Choose Wisely



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## ORIGINAL RESEARCH

### Evaluation of Baseline Corrected QT Interval and Azithromycin Prescriptions in an Academic Medical Center

Rachael A. Lee, MD<sup>1\*</sup>, Allison Guyton, PharmD<sup>2</sup>, Danielle Kunz, RPh<sup>2</sup>, Gary R. Cutter, PhD<sup>3</sup>, Craig J. Hoesley, MD<sup>1</sup>

<sup>1</sup>Department of Medicine, Division of Infectious Diseases, University of Alabama at Birmingham, Birmingham, Alabama; <sup>2</sup>Department of Pharmacology, University of Alabama at Birmingham, Birmingham, Alabama; <sup>3</sup>Department of Biostatistics, University of Alabama at Birmingham, Birmingham, Alabama.

35% didn't get a baseline EKG

Of those that did, 60% had QTc prolongation...

*J Hospit Med* 2016;11:15-20.

# Quick Hitter

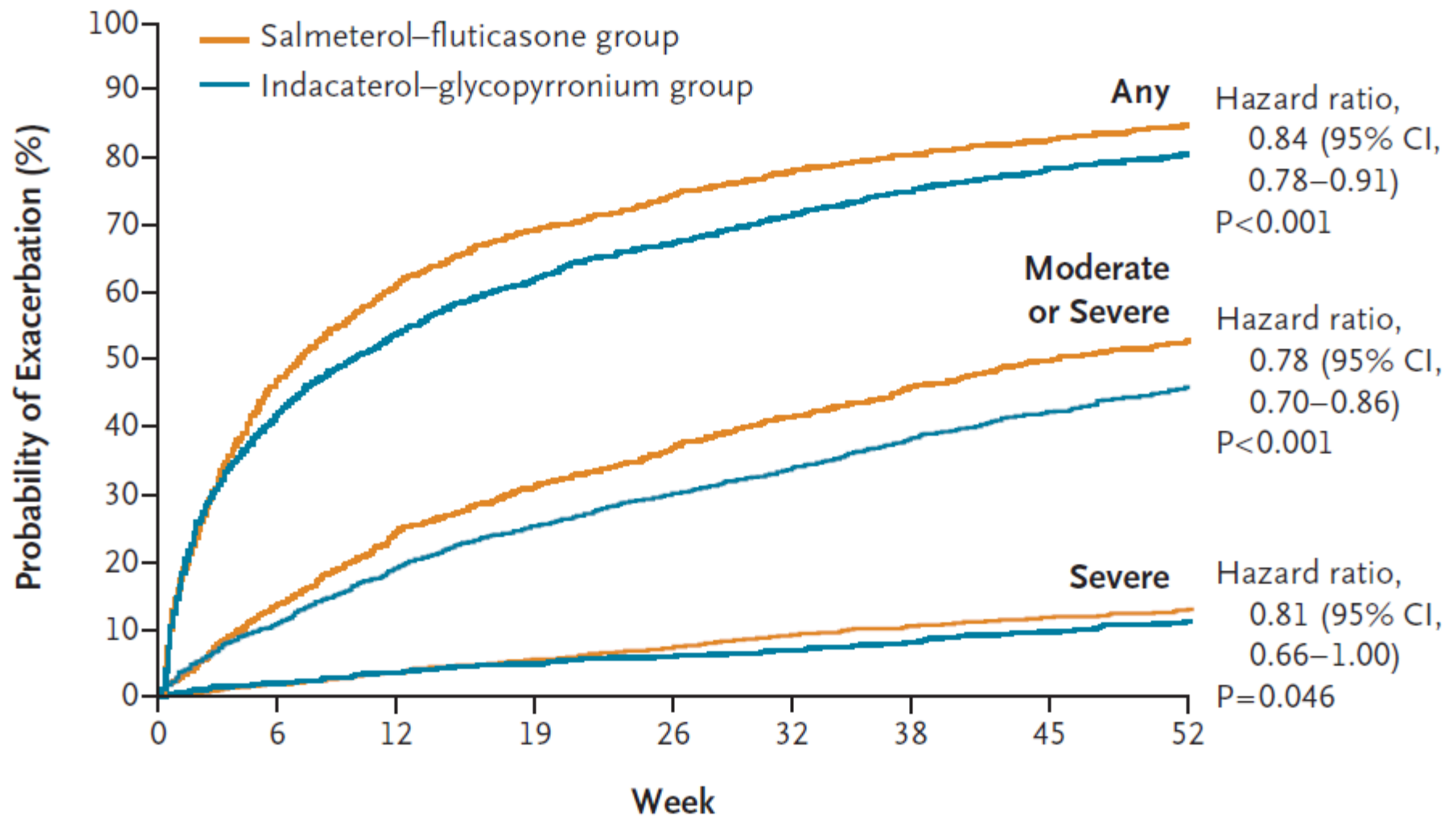
ORIGINAL ARTICLE

## Indacaterol–Glycopyrronium versus Salmeterol–Fluticasone for COPD

Jadwiga A. Wedzicha, M.D., Donald Banerji, M.D., Kenneth R. Chapman, M.D.,  
Jørgen Vestbo, M.D., D.M.Sc., Nicolas Roche, M.D., R. Timothy Ayers, M.Sc.,  
Chau Thach, Ph.D., Robert Fogel, M.D., Francesco Patalano, M.D.,  
and Claus F. Vogelmeier, M.D., for the FLAME Investigators\*

*N Engl J Med* 2016;374:2222-34.

# Time to First Exacerbation



However, does the FLAME trial provide sufficient data to support the use of a LABA–LAMA regimen over the use of a LABA–inhaled glucocorticoid regimen in patients in GOLD group C or D (i.e., high-risk patients) who have a history of exacerbations? The FLAME trial seems to indicate that the answer is yes.



# Quick Hitter

ORIGINAL ARTICLE

## Prevalence of Pulmonary Embolism among Patients Hospitalized for Syncope

Paolo Prandoni, M.D., Ph.D., Anthonie W.A. Lensing, M.D., Ph.D.,  
Martin H. Prins, M.D., Ph.D., Maurizio Ciammaichella, M.D., Marica Perlati, M.D.,  
Nicola Mumoli, M.D., Eugenio Bucherini, M.D., Adriana Visonà, M.D.,  
Carlo Bova, M.D., Davide Imberti, M.D., Stefano Campostrini, Ph.D.,  
and Sofia Barbar, M.D., for the PESIT Investigators\*

*N Engl J Med* 2016;375:1524-31.

# Quick Hitter

---

Idiopathic syncope: 25.4%

Syncope explained....still 12.7%

WE NEED TO TEST: Wells score,  
D-dimer, CT/V-Q

*N Engl J Med* 2016;375:1524-31.

# Dispelling the nice or naughty myth: retrospective observational study of Santa Claus

John J Park,<sup>1</sup> Ben G T Coumbe,<sup>2</sup> Esther H G Park,<sup>3</sup> George Tse,<sup>4</sup> S V Subramanian,<sup>5</sup> Jarvis T Chen<sup>5</sup>

## CONCLUSION

The results of this study dispel the traditional belief that Santa Claus rewards children based on how nice or naughty they have been in the previous year. Santa Claus is less likely to visit children in hospitals in the most deprived areas. Potential solutions include a review of Santa's contract or employment of local Santas in poorly represented regions.

*BMJ* 2016;355:i6355.

# Misc. Short Takes

---

About face: non-selective BB ok in advanced cirrhosis.  
*Hepatology* 2016;63:1968-1976.

Lille score at 4 days as good as at 7 days to determine  
steroid responsiveness in severe alcoholic hepatitis. *Am J*  
*Gastroenterol* 2016; online 6 December 2016;  
doi:10.1038/ajg.2016.539.

# Misc. Short Takes

---

Olanzapine effective for prevention of chemotherapy-induced nausea and vomiting. *N Engl J Med* 2016;375:134-42.

...But is associated with DRESS syndrome. Be careful. [FDA Report] *JAMA* 2016;315:2514.

Avoid cipro for uncomplicated UTI, acute sinusitis, and bronchitis unless other drugs have failed – disabling and potentially permanent tendon, muscle, and CNS. [FDA Report] *JAMA* 2016;315:2513.

# Cardiac Short Takes

---

Invasive strategy for NSTEMI superior to conservative in 80+ y/o pts. *Lancet* 2016;387:1057-65.

In VKA treatment, bleeding risk not higher in 80-89, mildly inc 90+ compared to 70-79. But clot risk increases. Treat on. *JAMA Intern Med* 2016;176:1176-1183.

# Practice Summary

## Things to Do:

1. Check out Annals for Hospitalists, NEJM Quick Take videos, and "Improving Diagnosis in Healthcare."
2. Use qSOFA / SOFA but not at the expense of early identification of sepsis.
3. Ask about preferences in serious illness re: 'what might be worse than death.'
4. Lille score at 4 days for severe ETOH Hep

# Practice Summary

## Things to Do:

5. Invasive NSTEMI mgnt for patients over 80 – they benefit.
6. Anticoagulate if over 80 and high risk – we overestimate bleeding risk.
7. Obtain baseline 12-lead if rx azithromycin and analyze carefully.
8. Look for PE in syncope – it's common.



# Practice Summary

## Things to Consider:

1. CT chest for suspected PNA if CXR neg and if it will impact management.
2. Continuous infusion B-lactam dosing in sepsis
3. Continuing BB in advanced cirrhosis.
4. Olanzapine for chemo-associated N/V
5. LABA+LAMA > LABA+inhaled steroid in COPD

# Practice Summary

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## Things Not to Do:

1. Antipsychotics in palliative care
2. Rx cipro for uncomplicated UTI, bronchitis, sinusitis

# Thank you!



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