

# *MEDICAL MYTH MENACE*



New York ACEP Scientific Assembly 2019







Three Stormtroopers from Star Wars stand in a hallway with blue circular patterns on the wall. Each trooper has a red text overlay on their chest. The trooper on the left holds a blaster with both hands. The trooper in the middle holds a blaster with both hands. The trooper on the right holds a blaster with both hands.

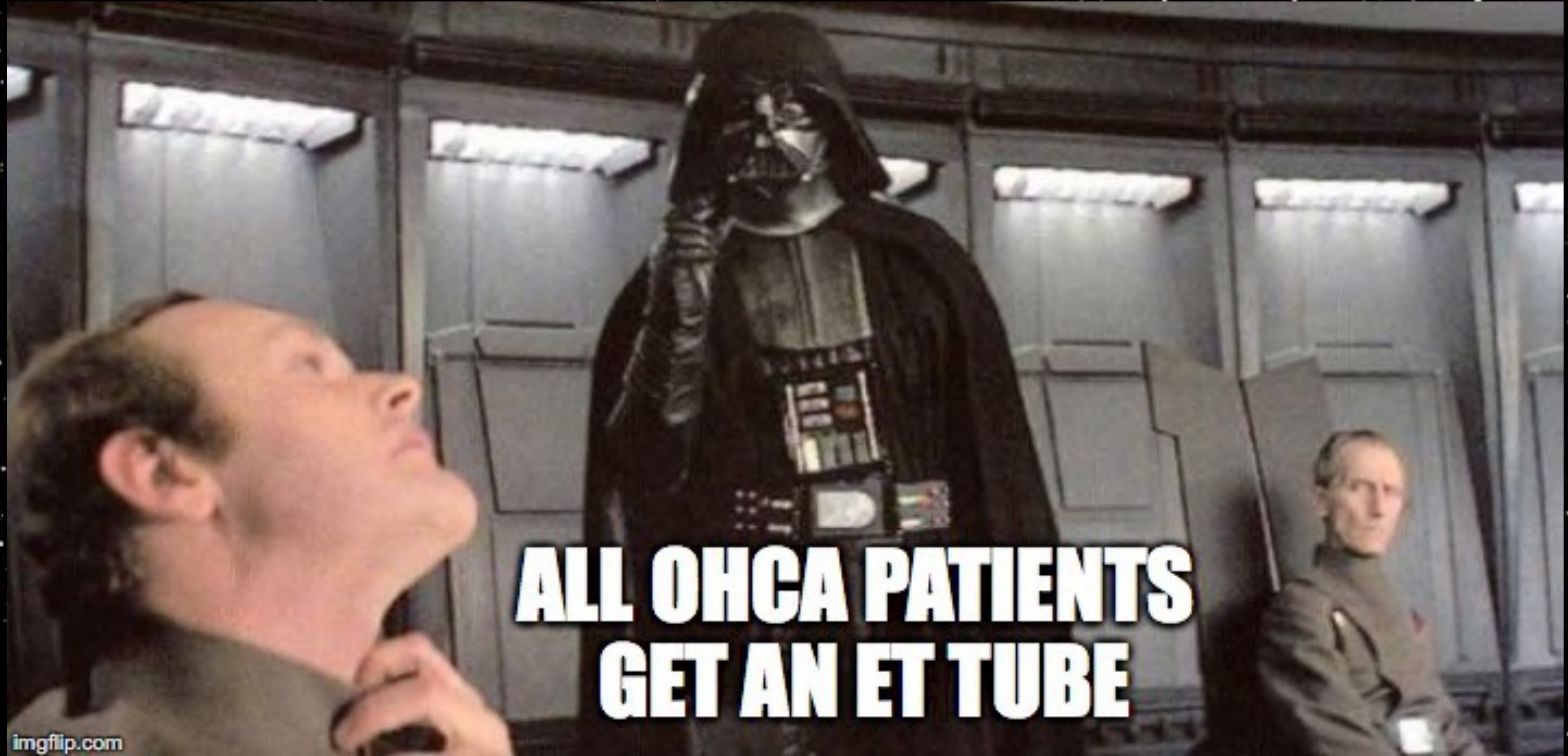
**NNT OF  
ONE**

**IT ALL  
DEPENDS**

**BE A  
SKEPTIC**



# **MYTH #1:**





# Effect of a Strategy of a Supraglottic Airway Device vs Tracheal Intubation During Out-of-Hospital Cardiac Arrest on Functional Outcome

The AIRWAYS-2 Randomized Clinical Trial

***BENGER ET AL AEM 2018***



P	• Patient
I	• Intervention
C	• Comparison
O	• Outcome



# ***KEY RESULTS AND LIMITATIONS***

n=9,296

73yo

1/3 women



Cluster

Bias ETI Group

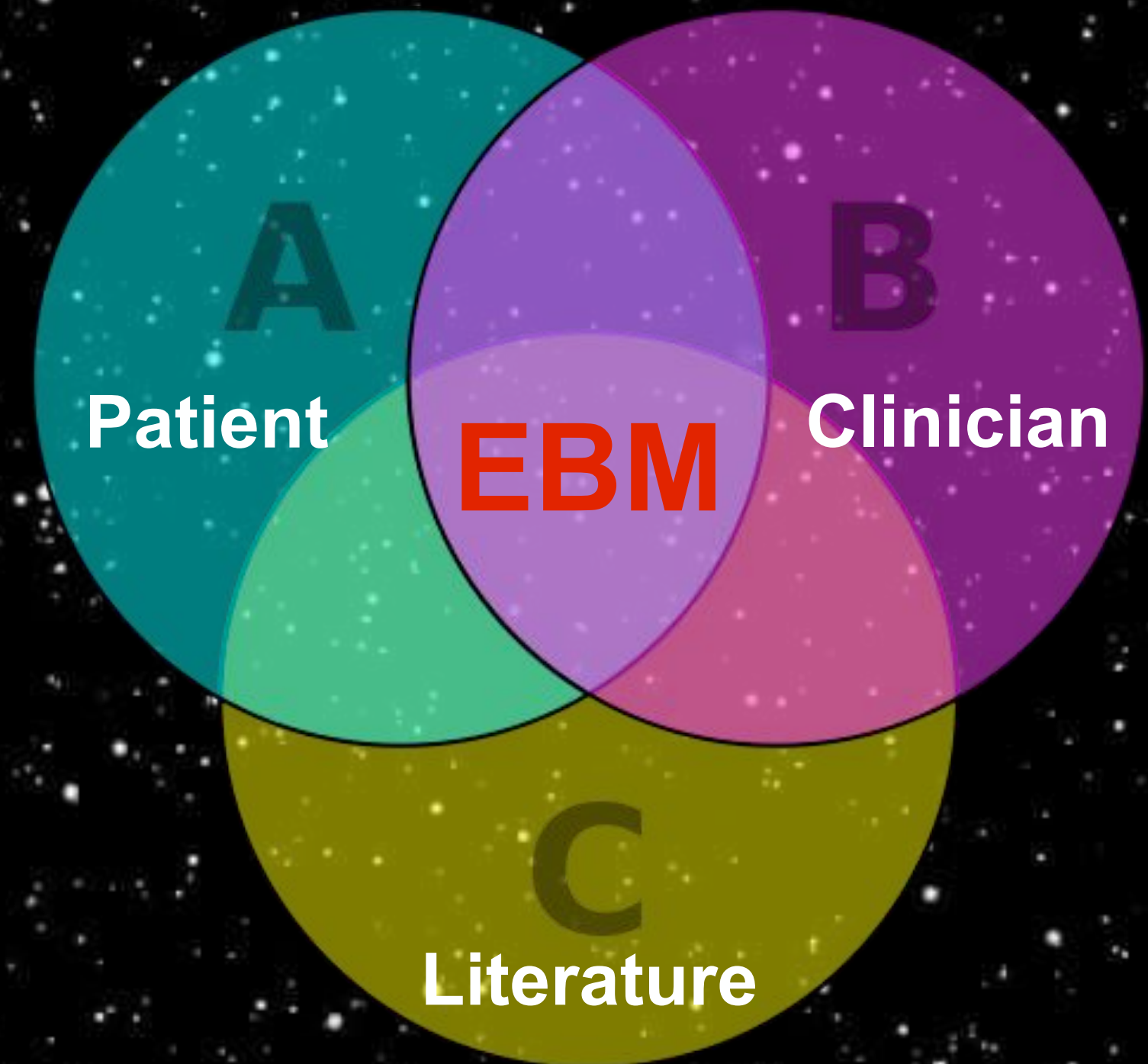
Low 1st Pass

***A SUPRAGLOTTIC AIRWAY  
WAS NON-INFERIOR TO ETI***



# ***AIRWAYS IN NON-TRAUMATIC OHCA***

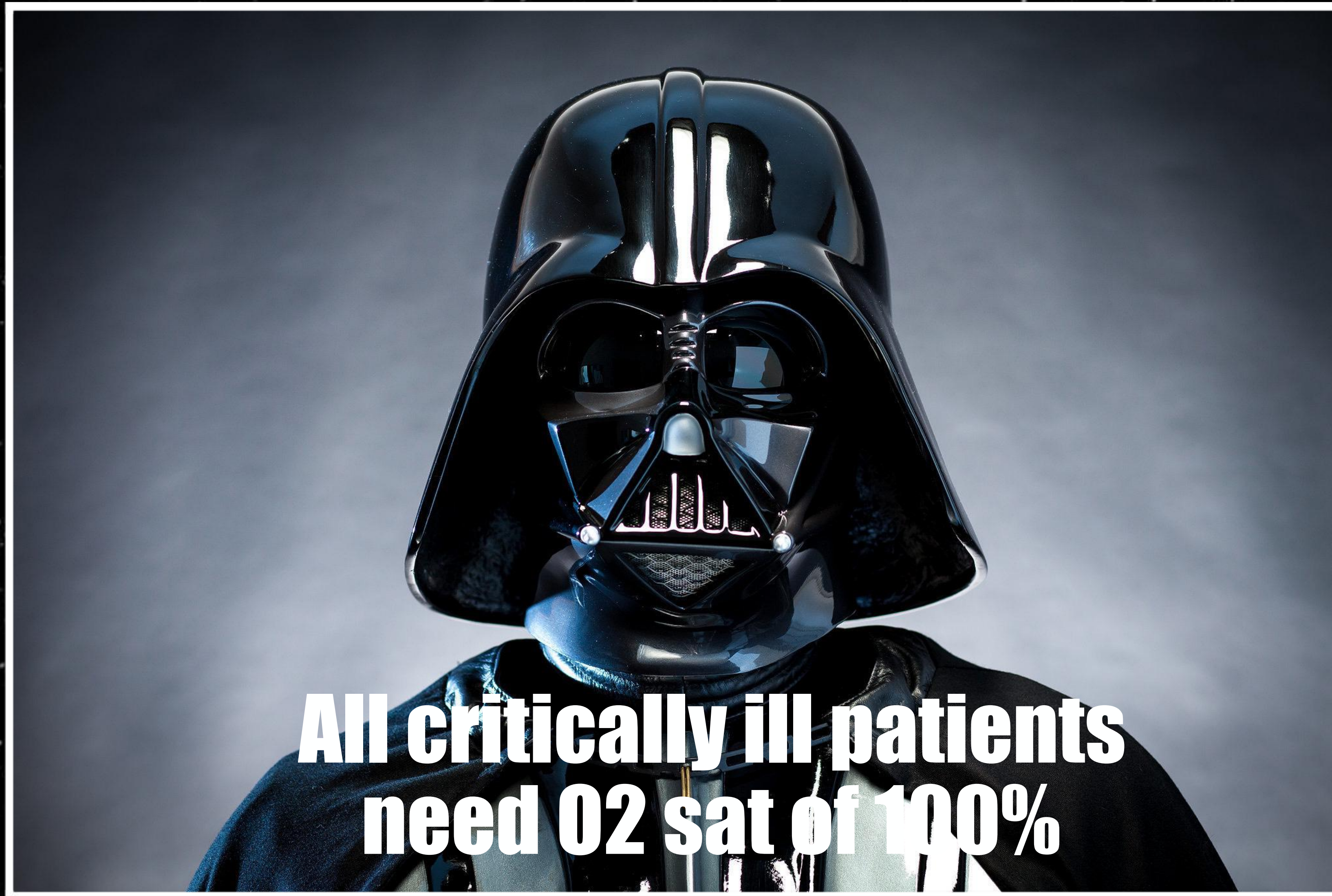
***IN ADULTS WITH OHCA, KEY FACTORS FOR SURVIVAL WITH GOOD NEUROLOGICAL OUTCOME ARE EARLY DEFIBRILLATION AND HIGH-QUALITY CPR. AIRWAY STRATEGIES DO NOT SEEM TO BE AS IMPORTANT.***



***SCGM#247***



# ***ED MYTH #2:***



**All critically ill patients  
need O2 sat of 100%**



# Mortality and morbidity in acutely ill adults treated with liberal versus conservative oxygen therapy (IOTA): a systematic review and meta-analysis

***CHU ET AL THE LANCET 2018***



P	• Patient
I	• Intervention
C	• Comparison
O	• Outcome



# ***KEY RESULTS AND LIMITATIONS***

25 RCTs  
n=16,037



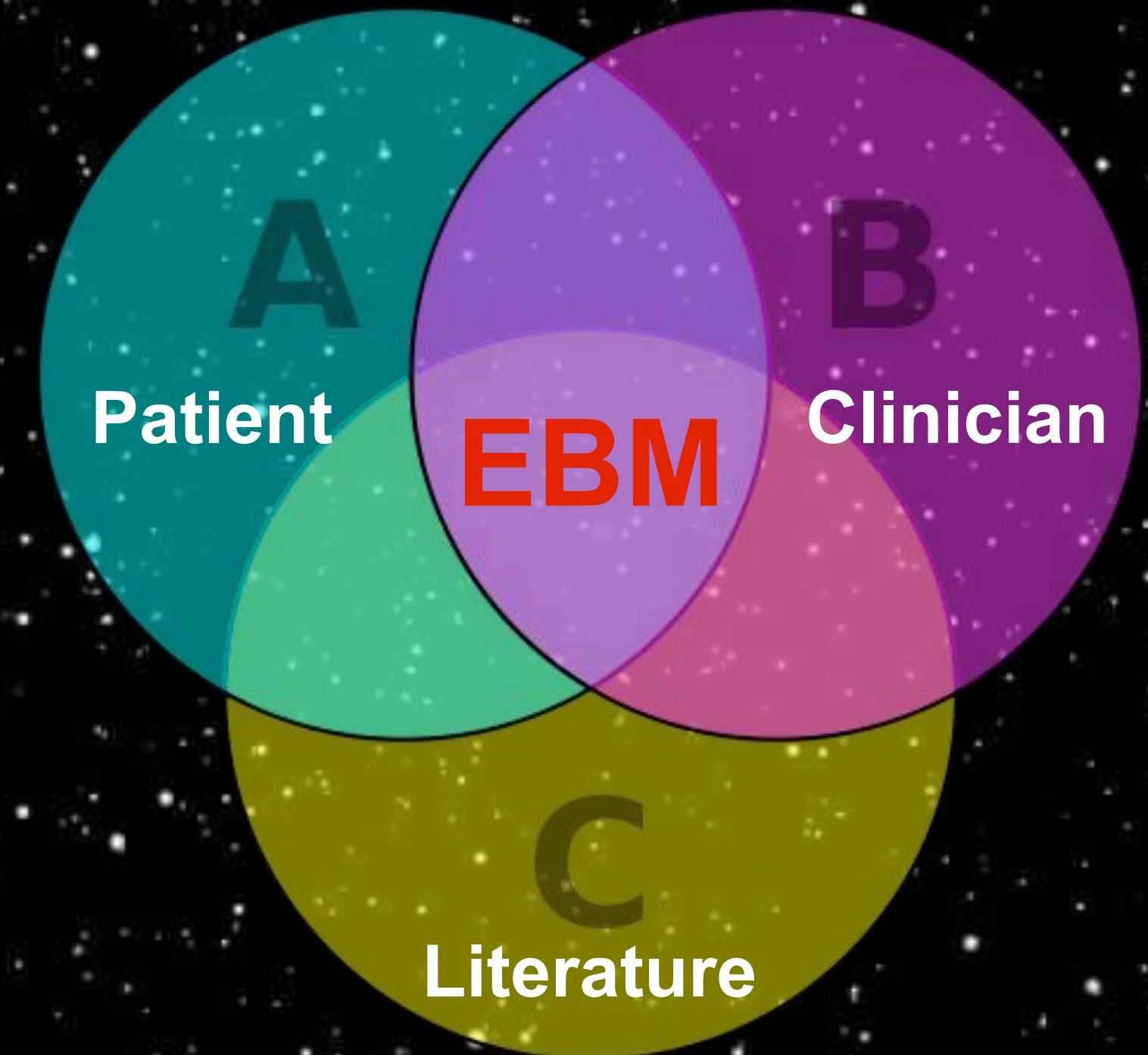
4 RCTs 3/4 of deaths  
All were negative  
Wide 95% CI

***LIBERAL O2 INCREASED RISK OF DEATH.  
MORBIDITY WAS SIMILAR BETWEEN GROUPS.***



# ***LIBERAL VS. CONSERVATIVE O2***

***THE GOAL OF OXYGEN  
THERAPY SHOULD NOT  
USUALLY BE 100% IN  
CRITICALLY ILL PATIENTS BUT  
RATHER AIM FOR THE MID  
90'S%.***



***SGEM#243***



# **MYTH #3:**



**RAPID A.FIB NEEDS TO BE SHOCKED EARLY**



# *The* NEW ENGLAND JOURNAL *of* MEDICINE

ESTABLISHED IN 1812

APRIL 18, 2019

VOL. 380 NO. 16

Early or Delayed Cardioversion in Recent-Onset Atrial Fibrillation

***PLUYMAEKER ET AL NEJM 2019***



P	• Patient
I	• Intervention
C	• Comparison
O	• Outcome



# ***KEY RESULTS AND LIMITATIONS***

n=437

65yo

40% women



Selection Bias

Unbalanced

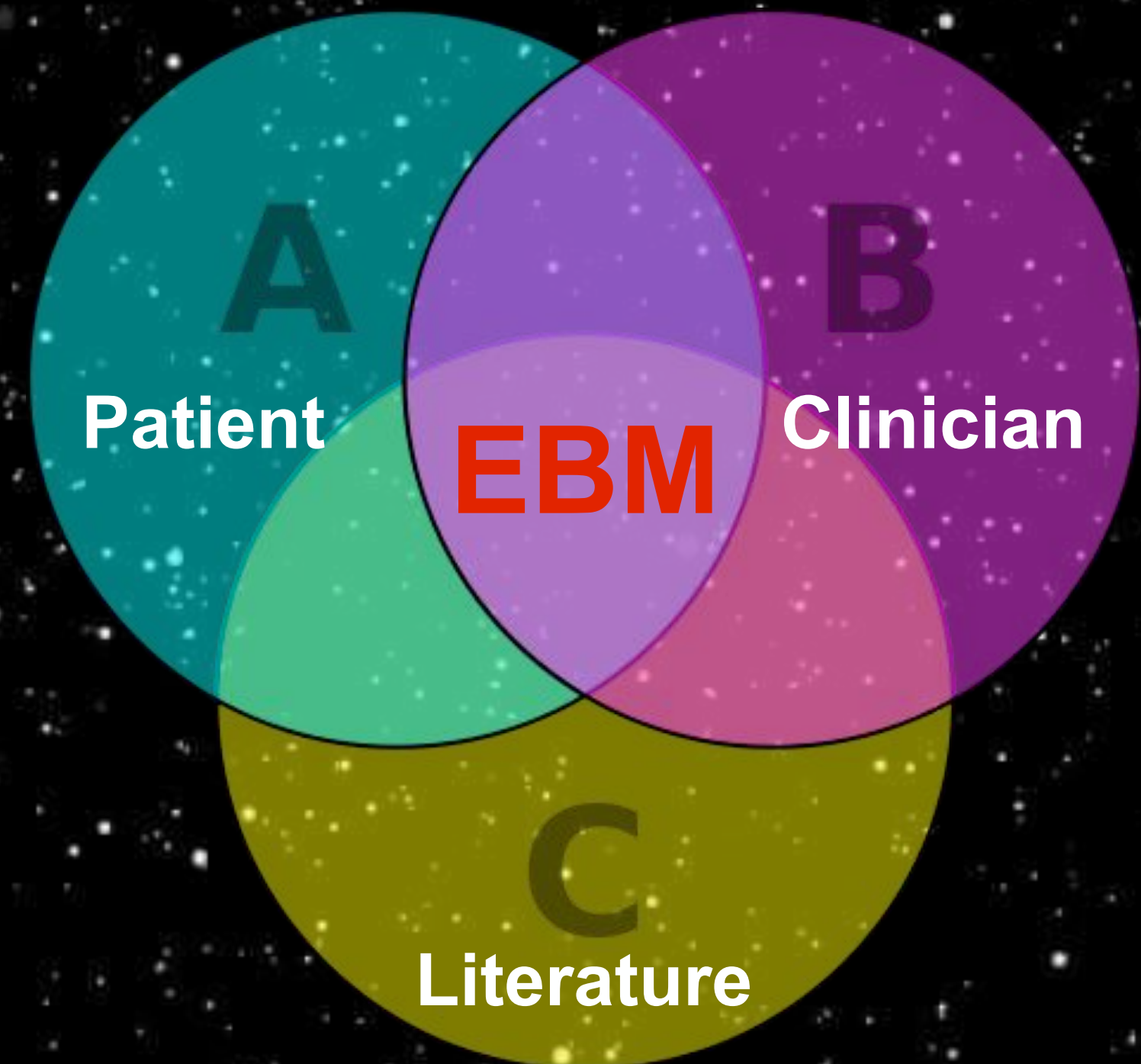
ITT not PP

***NON-INFERIOR: 91% VS. 94%***



# ***EARLY VS. DELAYED CARDIOVERSION***

***BOTH DELAYED AND  
EARLY CARDIOVERSION OF  
ACUTE ONSET A. FIB  
ACHIEVE HIGH RATES OF  
SINUS RHYTHM IN THEIR  
PATIENTS AT THE TIME OF  
A 4-WEEK FOLLOW UP.***



***SCGM#260***



# **MYTH #4:**



**PROBIOTICS CAN HELP IN  
PEDIATRIC GASTROENTERITIS**



ORIGINAL ARTICLE

*Lactobacillus rhamnosus* GG versus Placebo  
for Acute Gastroenteritis in Children

***SCHNODOWER ET AL NEJM 2018***



P	• Patient
I	• Intervention
C	• Comparison
O	• Outcome



# ***KEY RESULTS AND LIMITATIONS***

n=971

1.4yo

5% Admitted



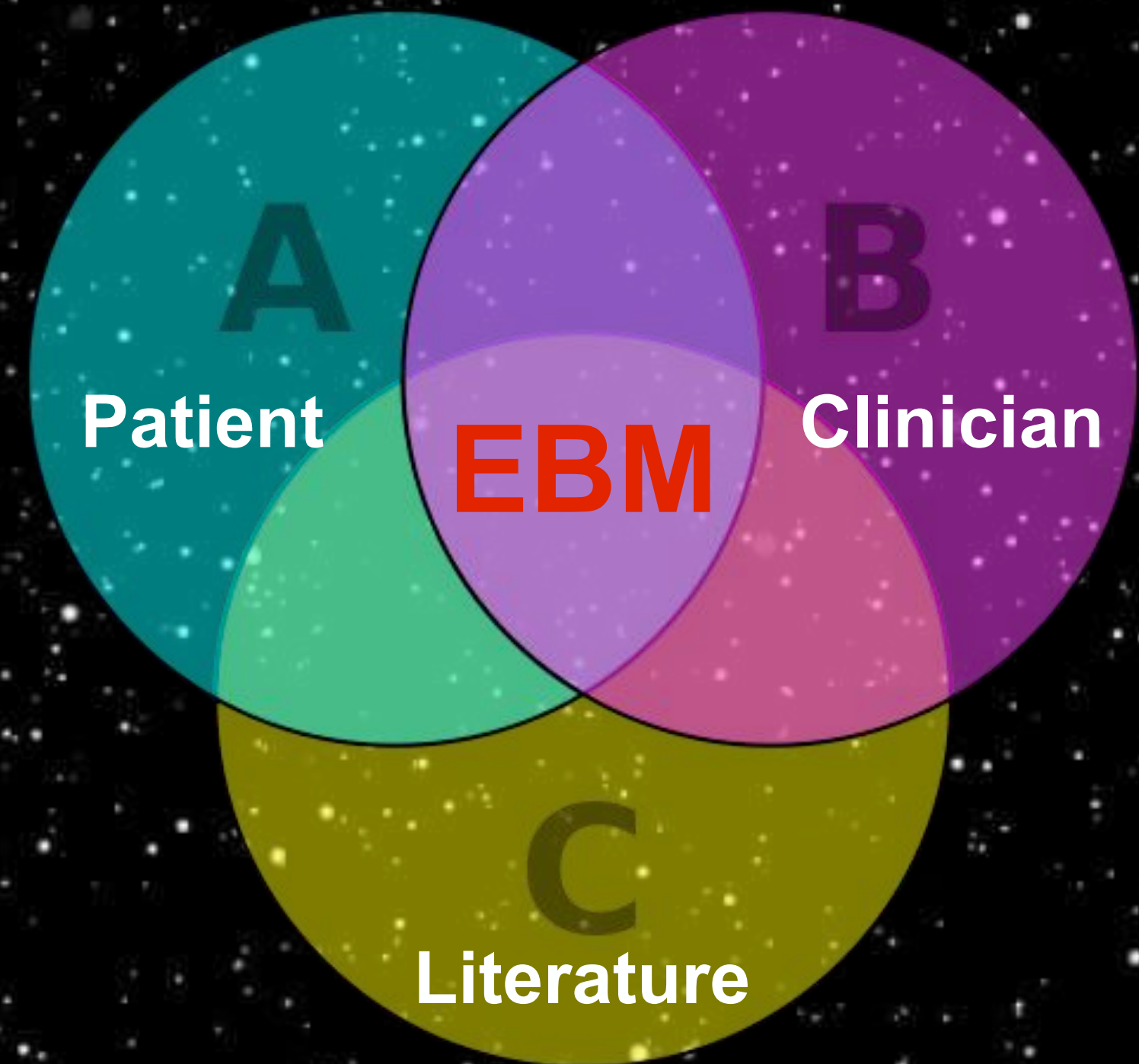
Not all the same  
Only *L. rhamnosus*  
Abx gastroenteritis

***NO STATISTICAL DIFFERENCE  
BETWEEN GROUPS***



# ***PROBIOTICS FOR PEDIATRIC GASTROENTERITIS***

***PRESCRIBING L  
RHAMNOSUS TO  
CHILDREN WITH ACUTE  
GASTROENTERITIS  
CANNOT BE  
RECOMMENDED AT  
THIS TIME.***



***SGEM#254***



ORIGINAL ARTICLE

# Multicenter Trial of a Combination Probiotic for Children with Gastroenteritis

Stephen B. Freedman, M.D.C.M., Sarah Williamson-Urquhart, B.Sc.Kin.,

***NO STATISTICAL DIFFERENCE***

## Probiotics for the prevention of pediatric antibiotic-associated diarrhea (Review)

Guo Q, Goldenberg JZ, Humphrey C, El Dib R, Johnston BC

***MODERATE BENEFIT NNT 9***



# **MYTH #5:**



**REBOA IS PROVEN TO SAVE LIVES**



JAMA Surgery | Original Investigation

# Nationwide Analysis of Resuscitative Endovascular Balloon Occlusion of the Aorta in Civilian Trauma

***JOSEPH ET AL JAMA SURGERY 2019***



P	• Patient
I	• Intervention
C	• Comparison
O	• Outcome



# ***KEY RESULTS AND LIMITATIONS***

n=140

43yo, 3/4 male

ISS of 28



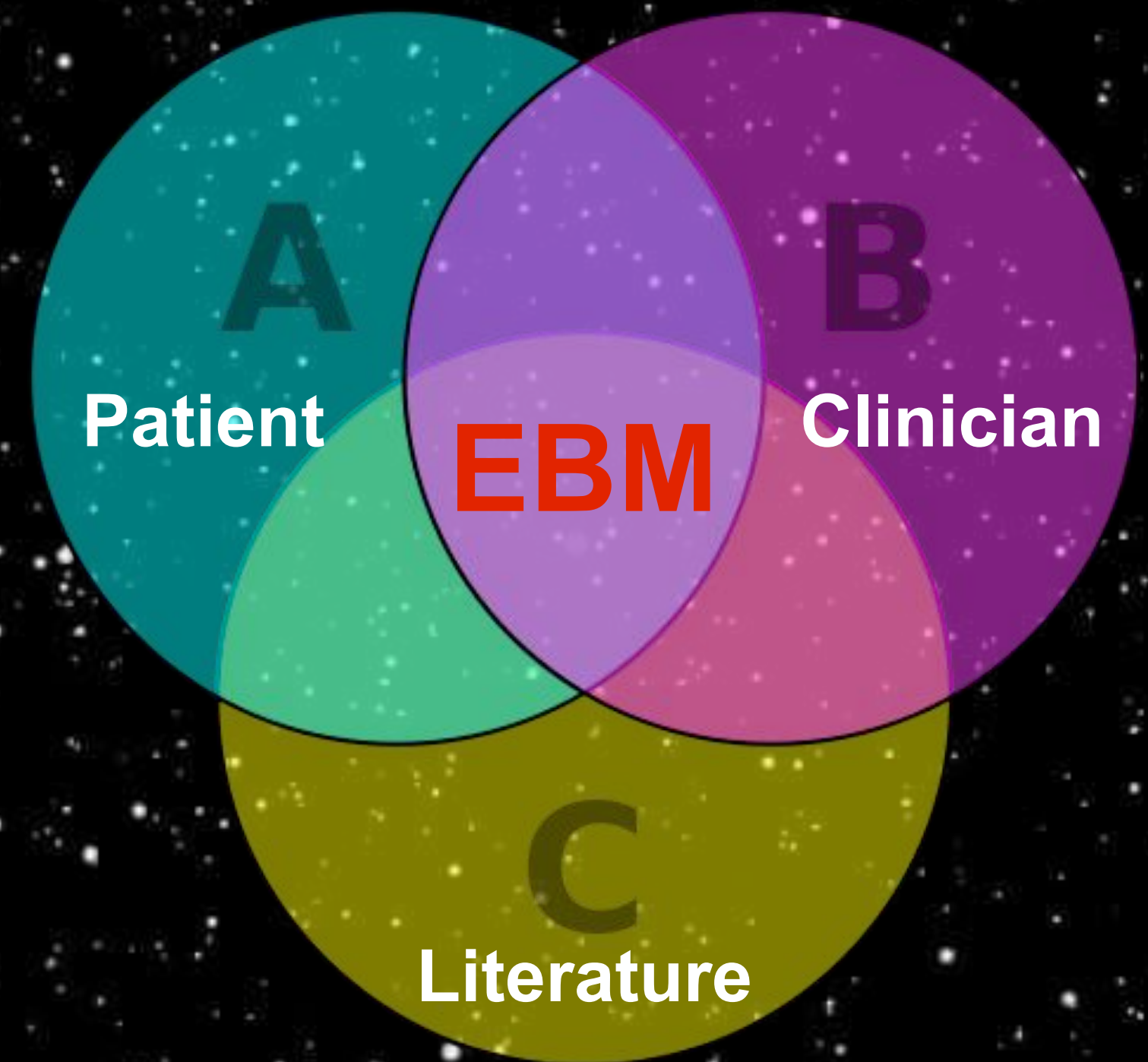
Observational  
Propensity Matched  
Burden of Proof

***MORTALITY HIGHER IN REBOA GROUP***



# REBOA

***THERE MAY BE  
SUBSTANTIAL BENEFIT IN  
SELECT GROUPS OF TRAUMA  
PATIENTS, BUT THESE  
GROUPS ARE NOT YET  
KNOWN.***



# SGEM#258

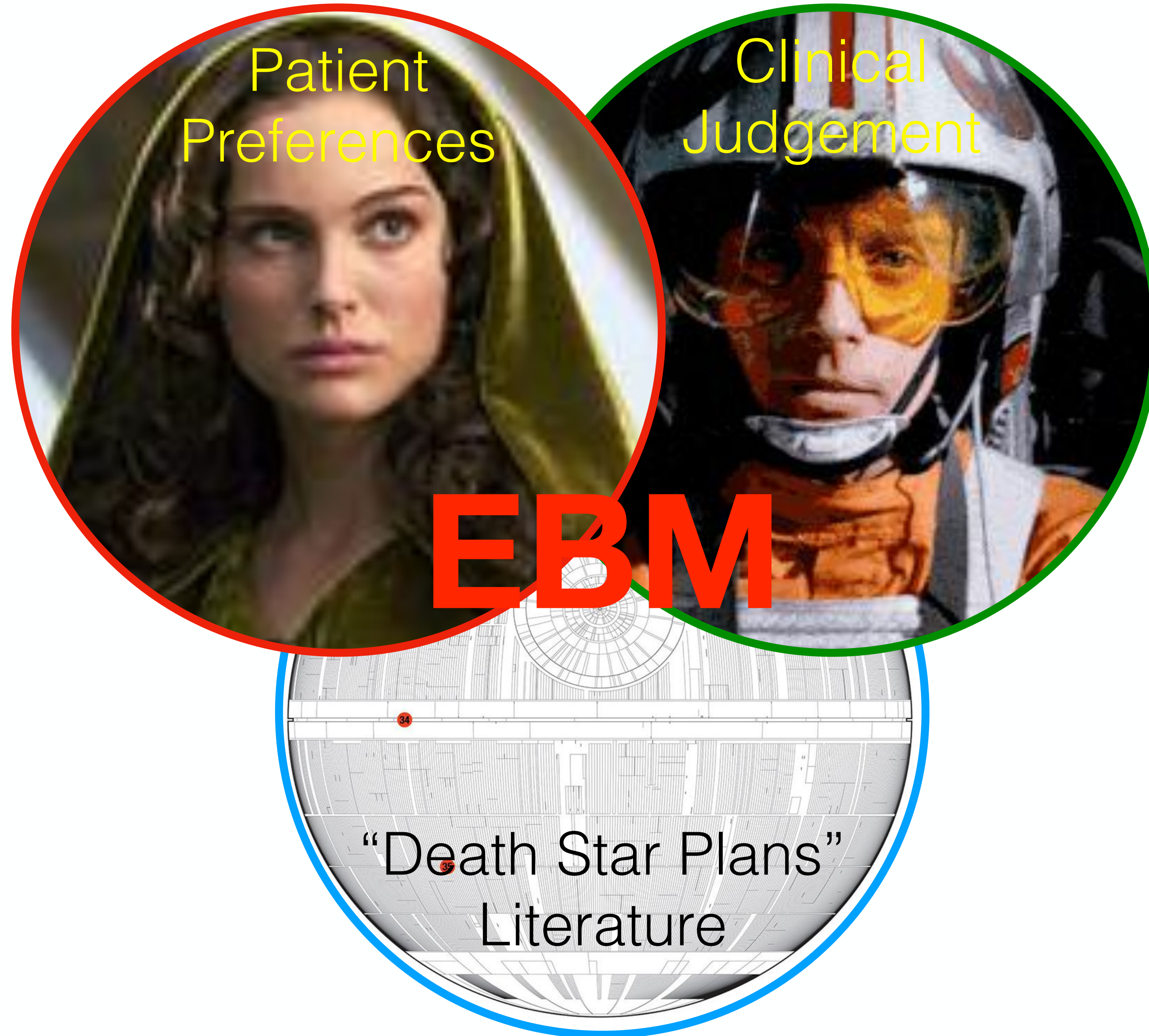


# ***SUMMARY: A MEDICAL MYTH MENACE***



- 1. ET FOR ALL OHCA - *SUPRAGLOTTIC OK***
- 2. TARGET O2 SAT 100% - *MID 90'S OK***
- 3. CARDIOVERT EARLY - *DELAYED OK***
- 4. PROBIOTICS - *NOT FOR PEDS GASTRO***
- 5. REBOA SAVES LIVES - *UNSURE***





**Sackett et al BMJ 1996**



Three Stormtroopers from Star Wars stand in a row in a hallway with blue circular patterns on the wall. The background above the hallway is a black sky with white stars. Each trooper is holding a blaster rifle. The trooper on the left has the text 'NNT OF ONE' on its chest, the middle one has 'IT ALL DEPENDS', and the right one has 'BE A SKEPTIC'.

**NNT OF  
ONE**

**IT ALL  
DEPENDS**

**BE A  
SKEPTIC**



**THE EBM WILL BE WITH YOU**

**ALWAYS**

imgflip.com

**Ken Milne [www.TheSGEM.com](http://www.TheSGEM.com)**