

M E D I C A L

# **Ain't Nothing Basic about BLS**

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**Professor of Emergency Medicine**



Albany Medical Center

# Disclosure

- \* No academic conflict of interest
- \* No financial conflict of interest
- \* Employed by Town of Colonie and AMC
- \* Unpaid advisor to many
- \* Paid advisor to few...
- \* A loooong time ago, in a place far, far, far away,  
I was an EMT!



# Further disclosure...

- \* If I say something offensive, I am sorry
- \* If I say something controversial, I am not sorry, but hope to prompt thought and conversation
- \* Please feel free to raise a hand and add to the discussion

# Upon completion of the program, participants will be able to:

- \* Describe why they should be proud of being EMS providers
- \* Identify opportunities for increasing the impact of BLS in their systems
- \* Specify the next steps development of BLS skills
- \* Recall how proud they should be to be BLS providers



**Five Quad**

**Volunteer Ambulance Service**

University at Albany, State University of New York

NEW YORK STATE  
CERTIFIED

EMS

FIVE-QUAD VAS

8-12

SVA

FIVE-QUAD 180











A friend of mine once said...

“Bad BLS never killed anyone,  
but bad ALS can kill ‘em dead”

# Simple tenets of medicine

- \* Air goes in and out
- \* Blood goes round and round
- \* Red stuff stays on the inside

# Simple tenets of medicine

- \* The Air \_\_\_\_\_
- \* The Blood \_\_\_\_\_
- \* And the Red stuff \_\_\_\_\_

**Ok, now we're all done!**



KINGS CO. HOSPITAL  
AMBULANCE

PUBLIC CHARITIES

7

**The Air goes in and out...**





# Resuscitation

# A history of resuscitation

- \* 800 BC Elisha performed mouth to mouth successfully (2 Kings)
- \* Drowning common killer
  - Inversion attempted
  - Victim on trotting horse or rolling barrel
- \* 1741 Mouth to mouth recommended for drowning victims
- \* Heat connected with life
  - 1500s bellows used to blow air into mouth
  - 1700s blew tobacco smoke into rectum



**“If one of us dies of an overdose,  
probably 10 who were about to won’t...”**

**Phillip Seymour Hoffman (in *Time* reported by Aaron Sorkin)**

Casey Lynn, 22,



passed away  
April 2, 2014  
after a long  
courageous battle  
with the disease

of addiction.



# Opioid Overdose Impacts All Socio-Economic Groups and Regions

Who is at risk of overdose?

- \* People from all walks of life
- \* People who use opioids for pain control
- \* Young people who are experimenting with drugs or who have drug dependence
- \* Long time drug users, often after a period of abstinence (rehab, prison, recovery)

***Opioid overdoses occur in urban, rural and suburban areas of the state***



# How Overdose Occurs

Slow breathing



Breathing stops



Lack of oxygen may cause brain damage



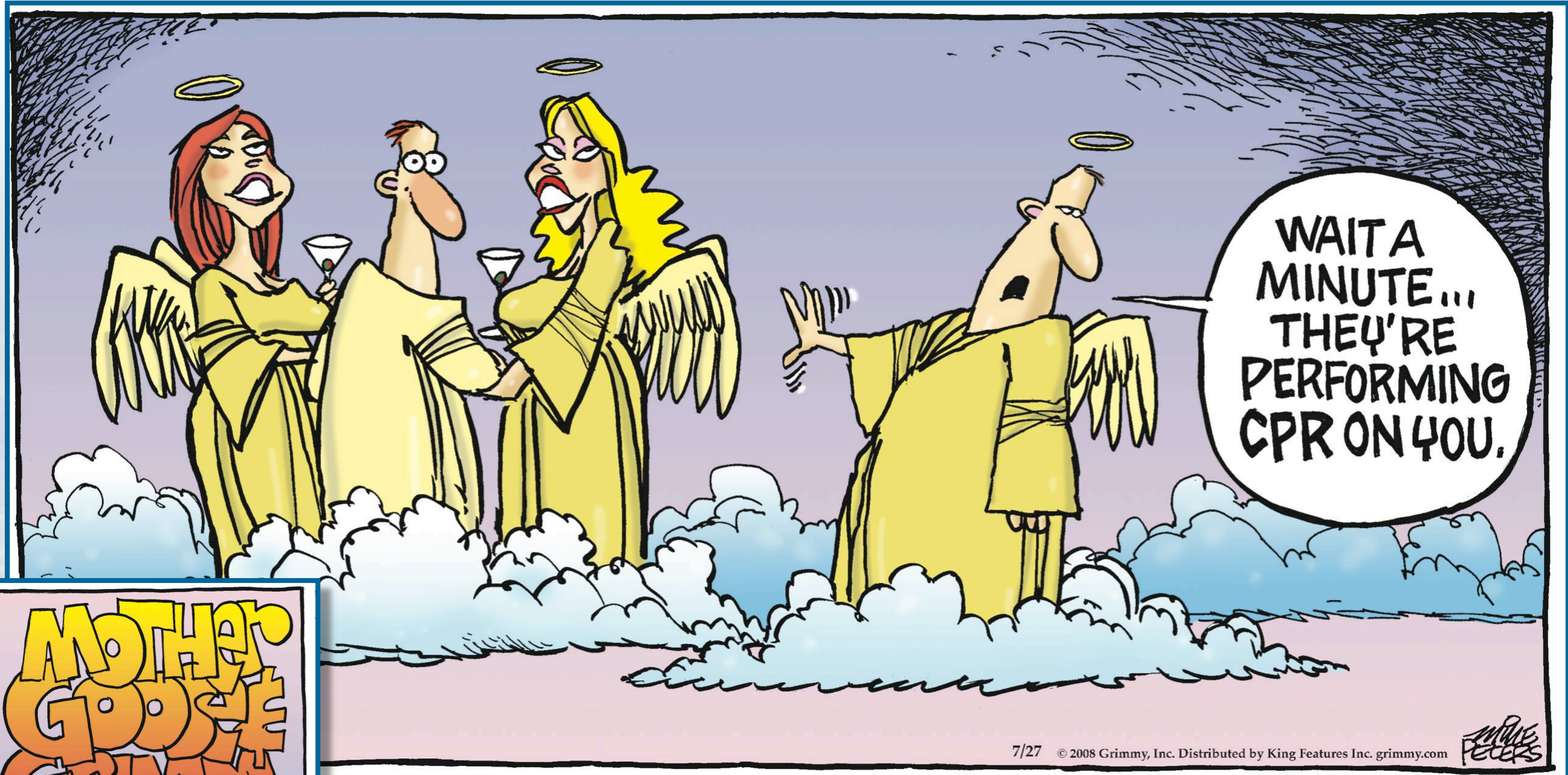
Heart stops



Death



The blood goes round and round....



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MICHAEL  
PETERS





## Sports » Olympics

# Marathon runner with heart attack recovering

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BOSTON (AP) — A 64-year-old man running in the Boston Marathon had a heart attack and was revived along the side of the course.

Race officials say he is in stable condition at the Beth Israel Deaconess Medical Center in Boston. Authorities would not identify him, but they said he was from out of state.

James Hooley, with the Boston EMS, said the man had a heart attack less than two miles from the end of the race. He staggered to the ground, and bystanders helped resuscitate him with chest compressions until first aid workers arrived with a defibrillator.

A total of 1,324 runners in the field of more than 26,000 received first aid of some sort along the route or at the finish. Thirty-three were taken to hospitals for treatment.

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A B C D E F

G H I J K L M

N O P Q R S

T U V W X Y Z



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# C = Compressions

1878 – Boehm, closed chest massage - cats

1892 – Maass, closed chest - human

1900 – Prevost and Batelli defibrillate

1947 – Beck, open-chest defibrillation  
“hearts too good to die...”

1958 -1962 – Kouwenhoven, Safar, CPR!

# C = Compressions

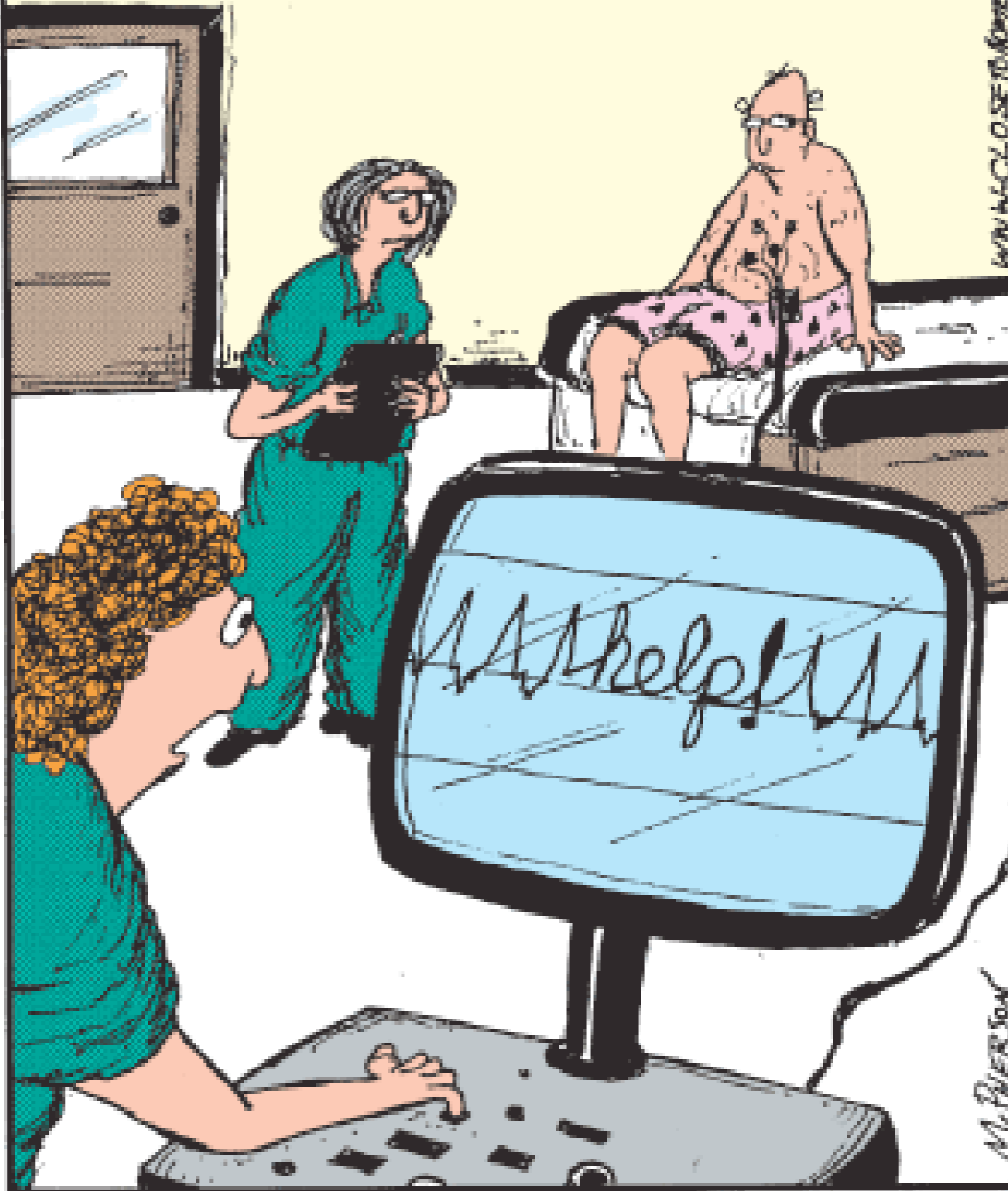
- \* How should we do compressions?
  - Continuous?
  - 15:2, 30:2, 100,000:2?
- \* Compression/decompression?
- \* Mechanical vs. manual?
- \* High performance CPR



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"Hey, Lori! Take a look at Mr. Geckler's EKG!"

# D = Defibrillation

- \* 1788 Dr. Charles Kite
- \* “An Essay on the Recovery of the Apparently Dead”
- \* Describes 1st successful defibrillation in 1774
- \* An important factor in “recovery of the apparently dead, is the time that elapses before proper remedies are applied”
- \* We still use this principle today: Time=Myocardium

# D = Defibrillation

- \* Electricity works
- \* Biphasic or monophasic?
- \* Rectilinear or other waveform?
- \* Escalating?
- \* Sequential or single shock?

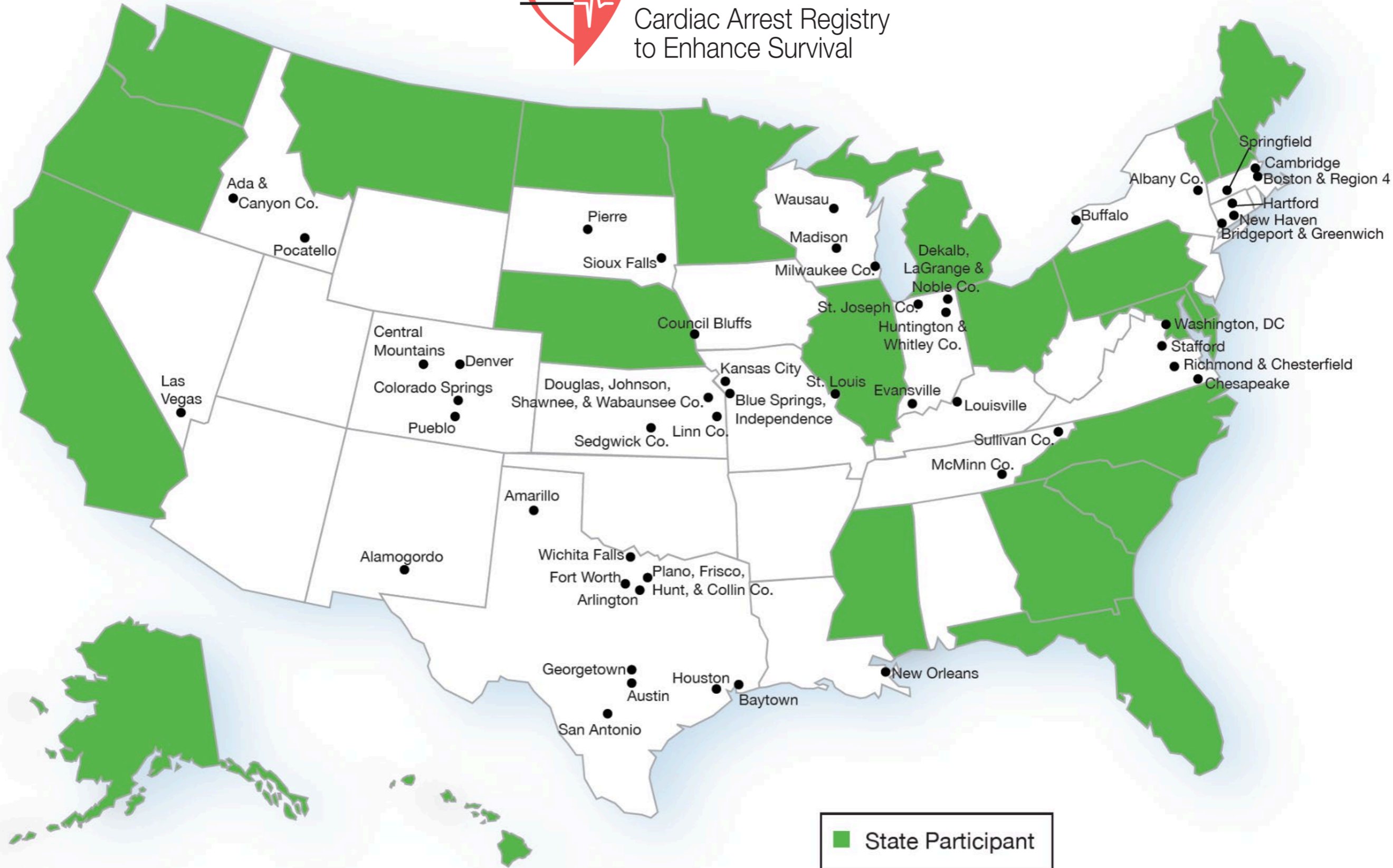






# CARES

Cardiac Arrest Registry  
to Enhance Survival



■ State Participant

**The Red stuff stays on the inside...**





Show shark activity within the last

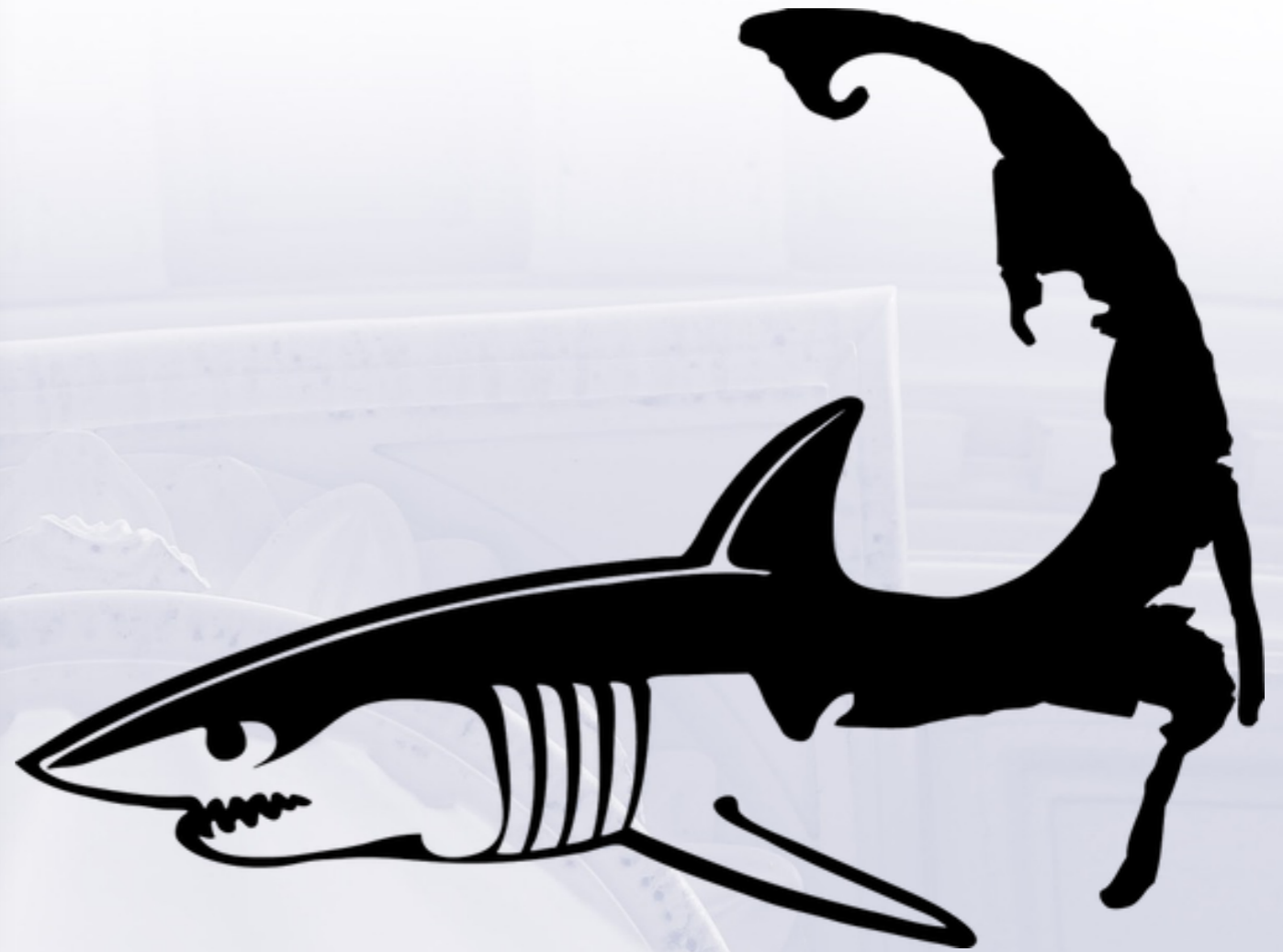
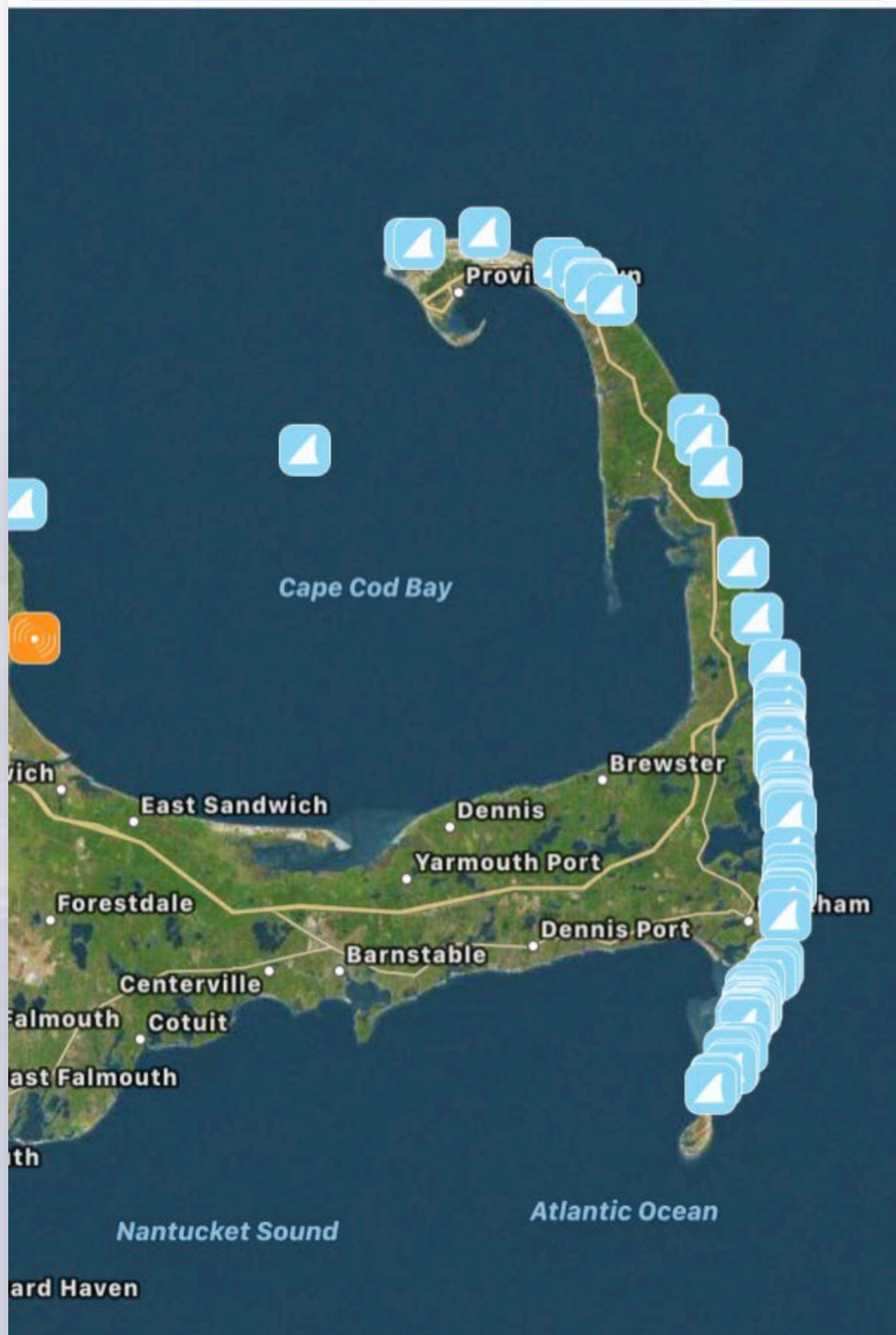
Year

Month

Week

2 Days

All Sharks






**SEVERE  
BLEEDING  
FIRST AID  
CALL 911**

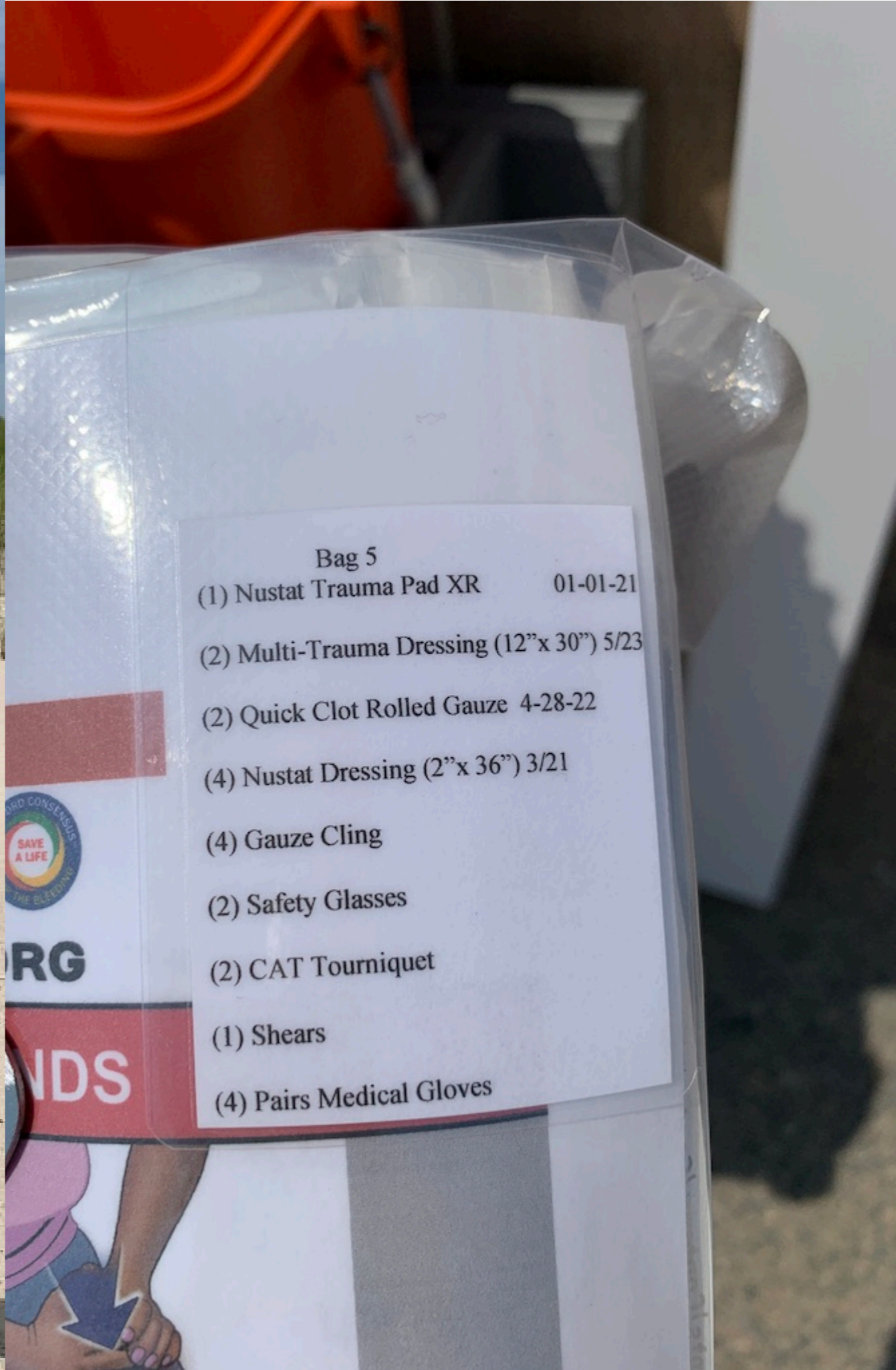
**YOU COULD SAVE A LIFE**

Most shark bite victims survive because of first aid initiated from bystanders.

While shark bites generally result in minor lacerations, which require immediate first aid in order to stop the blood flow, first aid training opportunities and more information visit [www.sharkbite.com](http://www.sharkbite.com)



Call 911 for Emergencies.



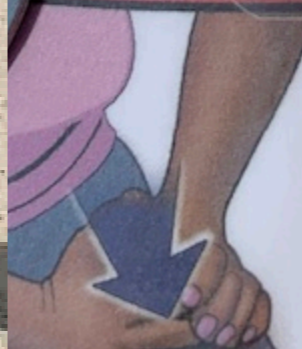
**Bag 5**

- (1) Nustat Trauma Pad XR 01-01-21
- (2) Multi-Trauma Dressing (12"x 30") 5/23
- (2) Quick Clot Rolled Gauze 4-28-22
- (4) Nustat Dressing (2"x 36") 3/21
- (4) Gauze Cling
- (2) Safety Glasses
- (2) CAT Tourniquet
- (1) Shears
- (4) Pairs Medical Gloves



**RG**

**IDS**



# Hypotension in Trauma

- \* Blunt & penetrating
- \* < 10% trauma victims
- \* True civilian rate: 6% – 8%
- \* Military rate: 15-18%

# Early Death – 1/3

- ✱ Non-survivable trauma
  - Death at scene or trauma room
- ✱ Stable rate since Crimean War
- ✱ Not reduced by trauma system development

# Non-Hemorrhagic Causes – 1/3

- \* Pneumothorax
- \* Pericardial tamponade
- \* Bowel perforation
- \* Substance ingestion
- \* Medical conditions
- \* Spinal shock

# Hemorrhagic Causes – 1/3

- \* Hypotension secondary to blood loss
- \* Focus of the “Stop the Bleed” campaign
- \* Focus of fluid resuscitation debate

# TCCC has lead to MARCH

- \* Massive hemorrhage
- \* Airway
- \* Respirations
- \* Circulation
- \* Head injury

# Massive hemorrhage

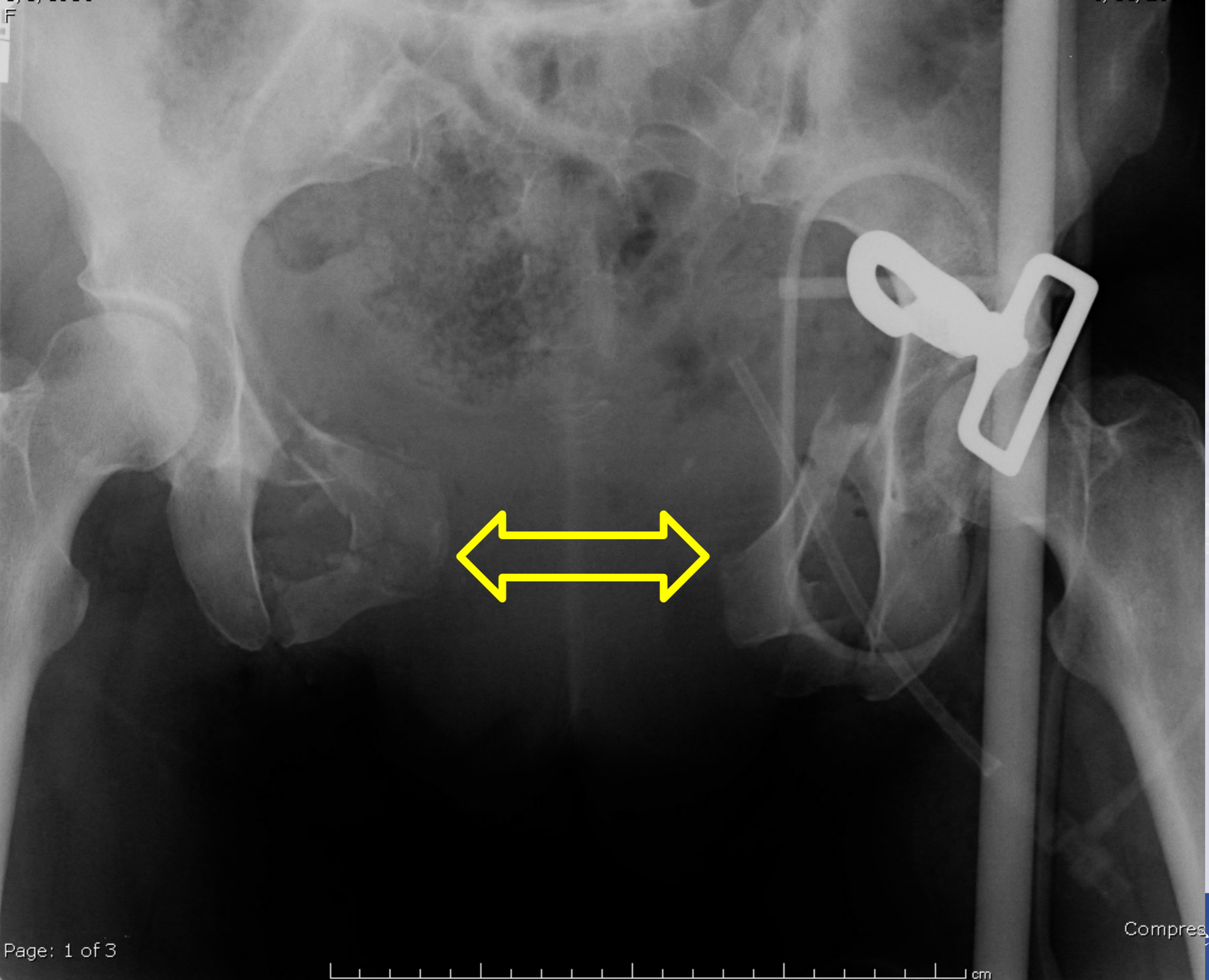
- \* Hemostatic dressings
- \* Tourniquets
- \* Pelvic binders



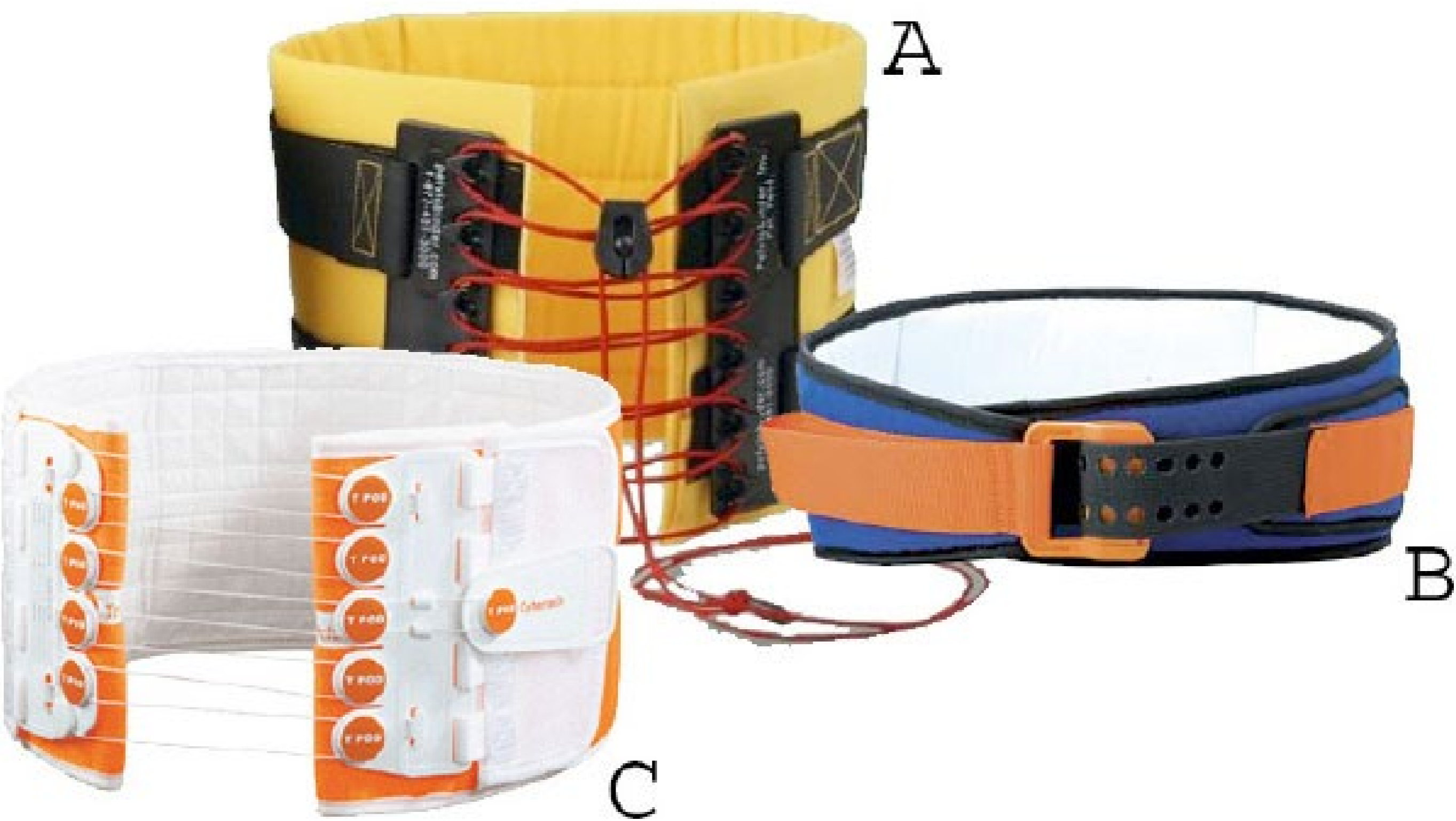




ARMY







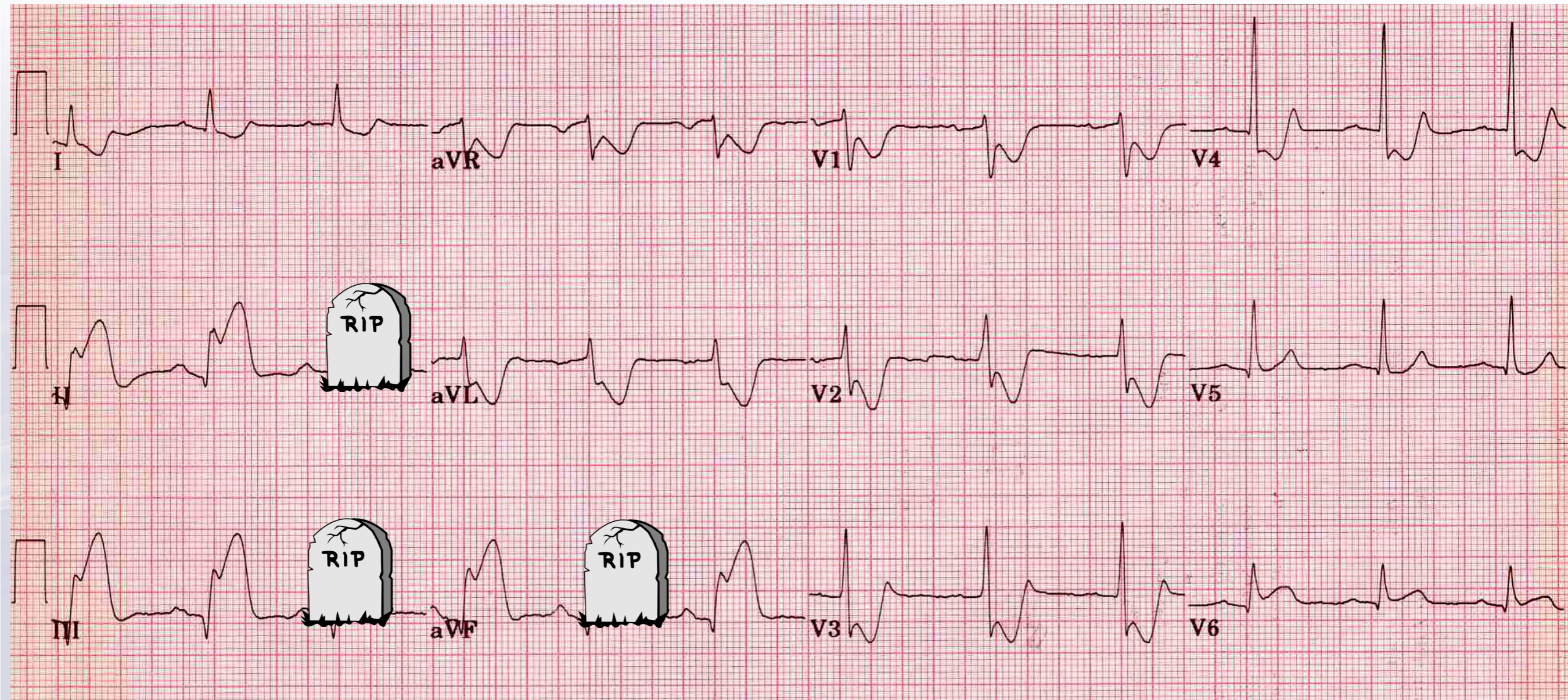




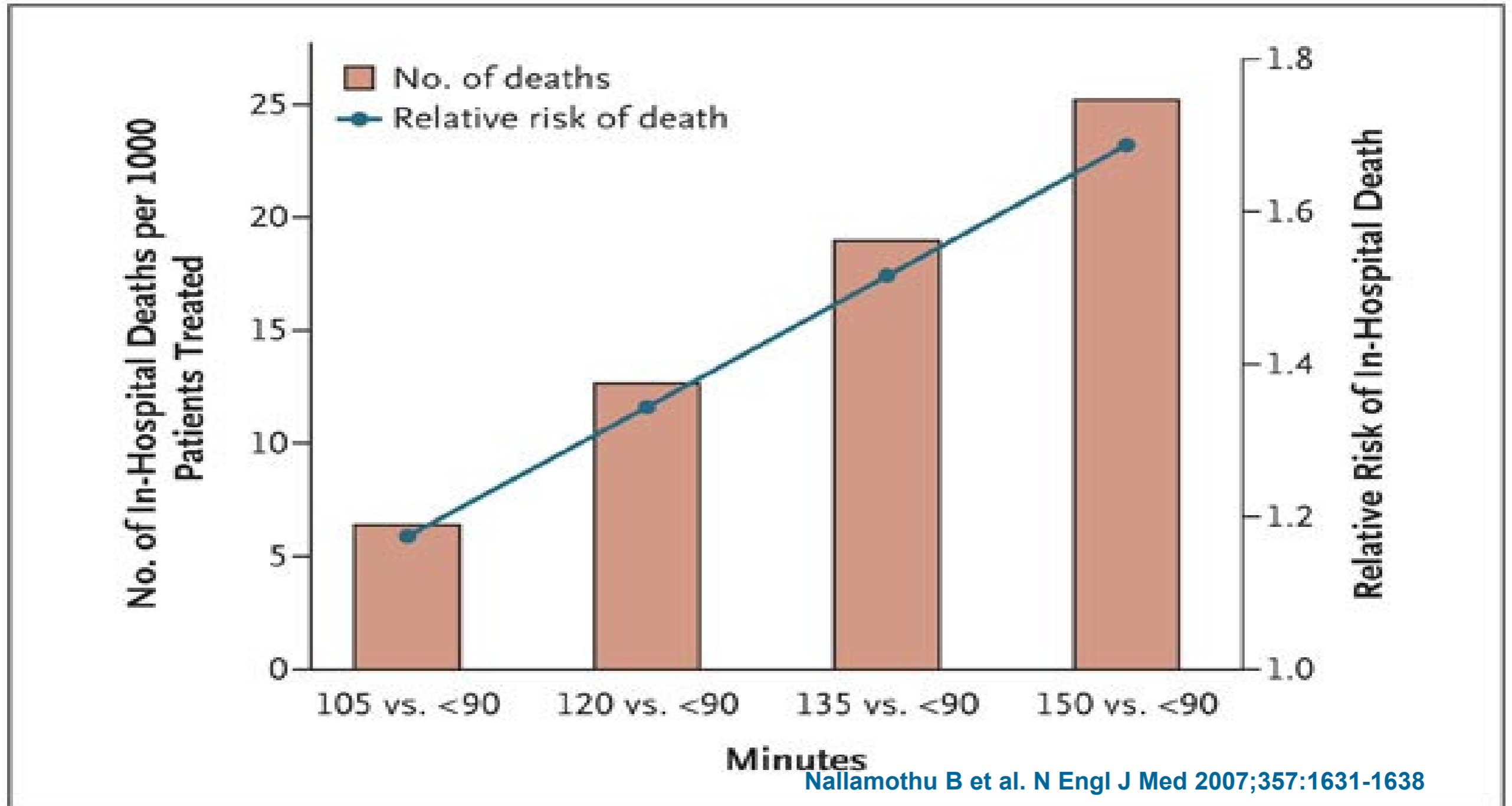




# What is a STEMI?



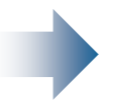
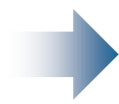
# Background



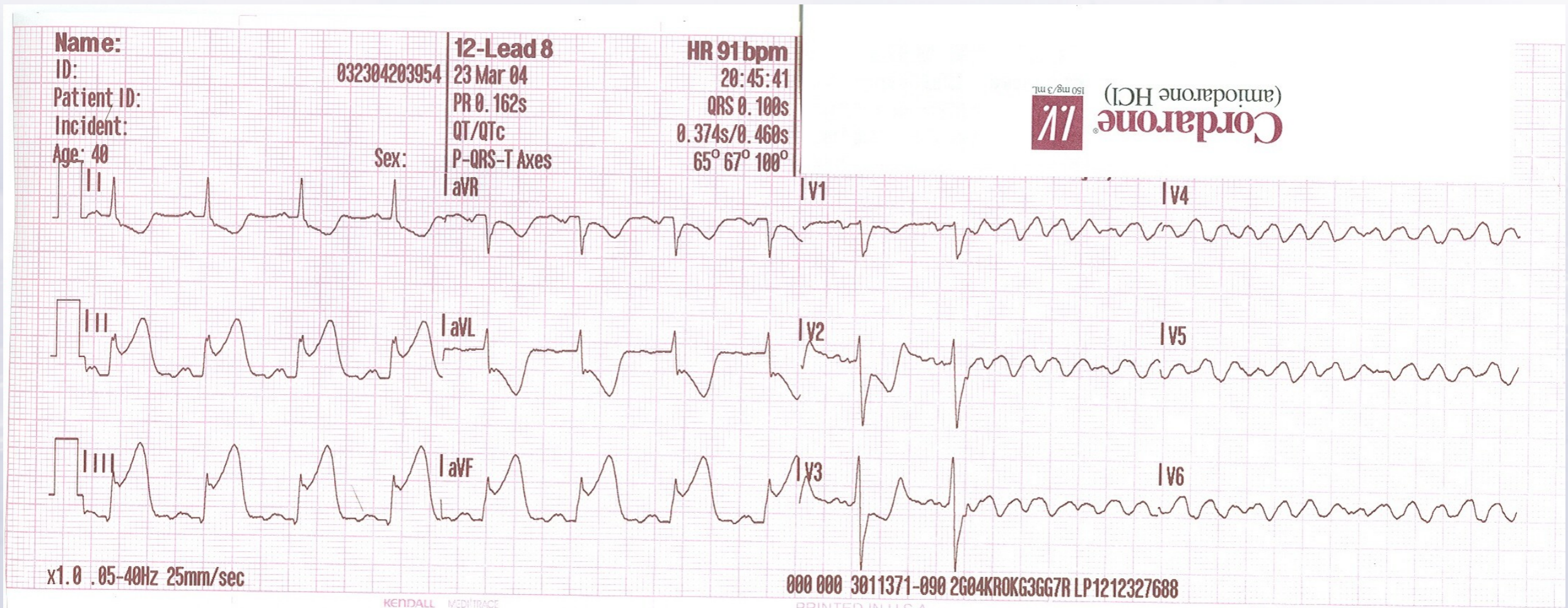
# STEMI system at work



Increasing loss of heart muscle



# Our fear...



# But what do you need?

- \* Drugs?
- \* Airway management?
- \* Paramedics?

# Bottom line?

- \* Basic life support ain't basic!
- \* EMTs save lives
- \* NEVER let anyone say you are “just an EMT”!



Thank you.



**Questions, thoughts or  
comments:**

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**518-488-8824**



**Albany Medical Center**







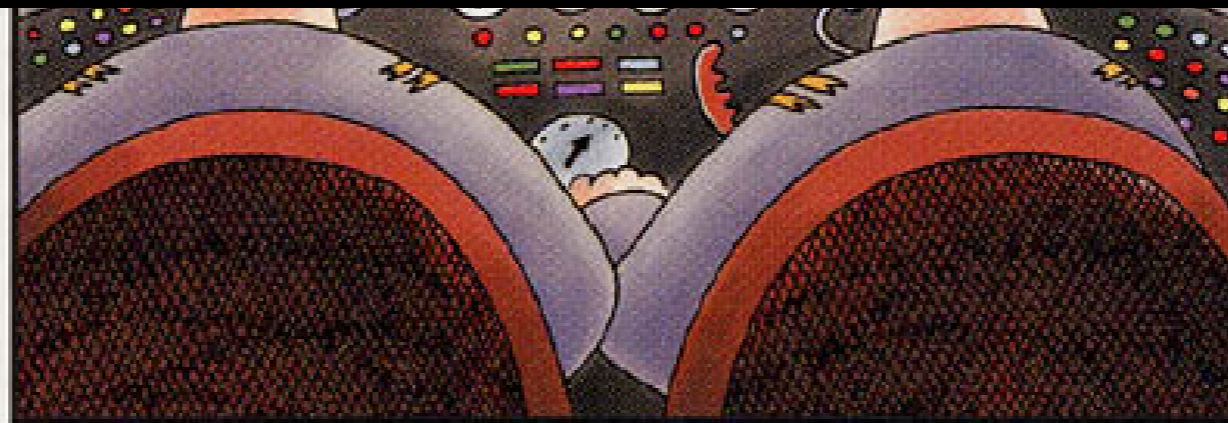
SHOCK







**The whole TEAM is responsible for what happens!**



"Say ... what's a mountain goat doing way up here in a cloud bank?"

**CAUTION**

**THIS SIGN HAS  
SHARP EDGES**

**DO NOT TOUCH THE EDGES OF THIS SIGN**



**ALSO, THE BRIDGE IS OUT AHEAD**









# EMERGENCY MEDICAL SERVICES



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# Timeless Truths

- ✱ It's what you don't say can kill you...or your patient.
- ✱ If something doesn't feel right it probably isn't.
- ✱ The worst emergency plan is no plan
- ✱ The next worse is two plans!
- ✱ As pulse goes up IQ goes down.