



# O futuro da monitoração e da ventilação mecânica na UTI

REALIZAÇÃO:



PATROCÍNIO GOLD:



PATROCÍNIO:



APOIO:



# The New England Journal of Medicine

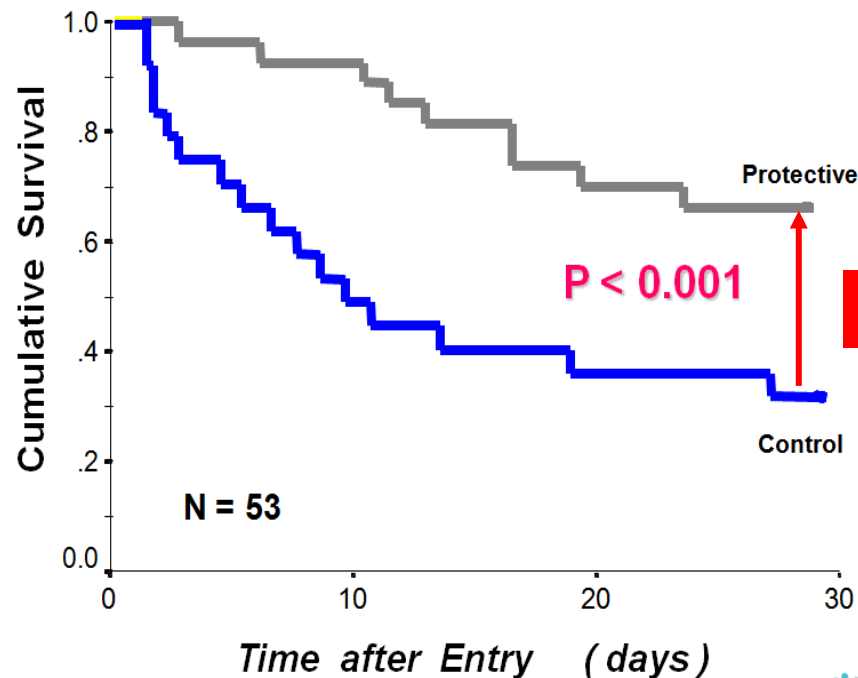
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VOLUME 338

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NUMBER 6

## Survival function - Amato et al.

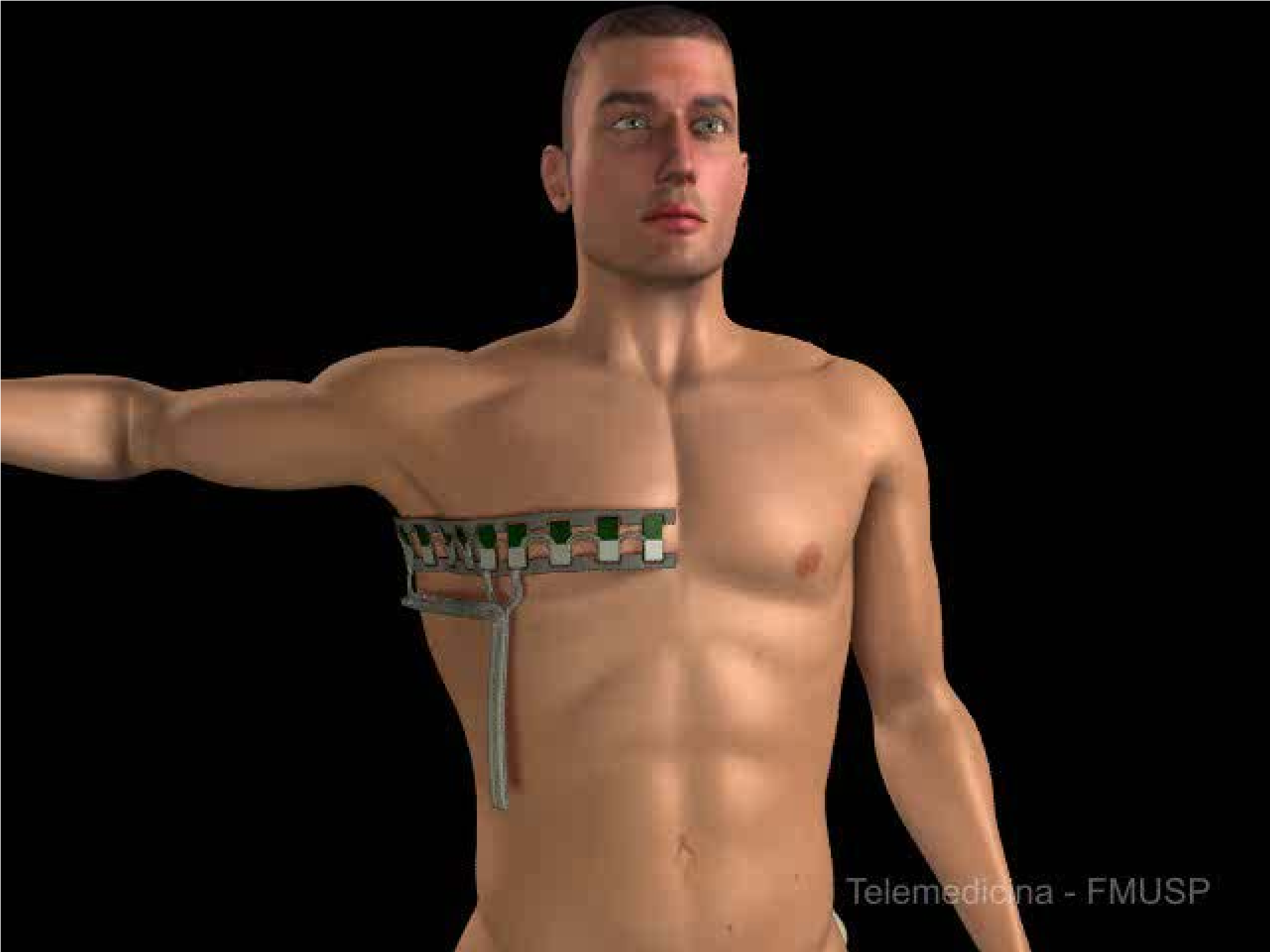


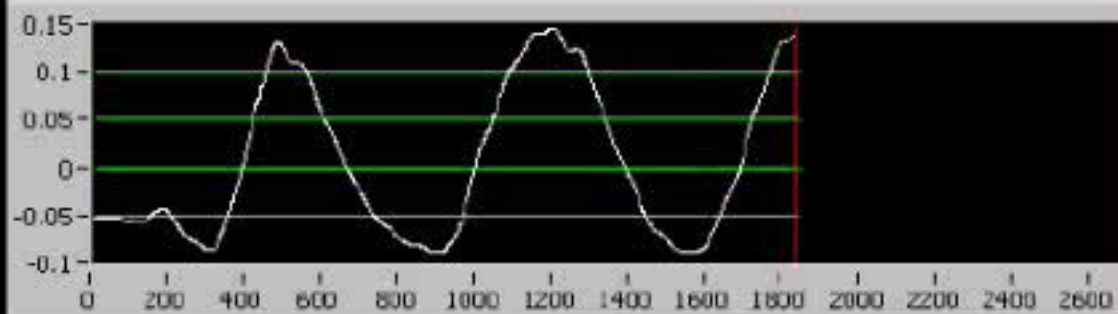
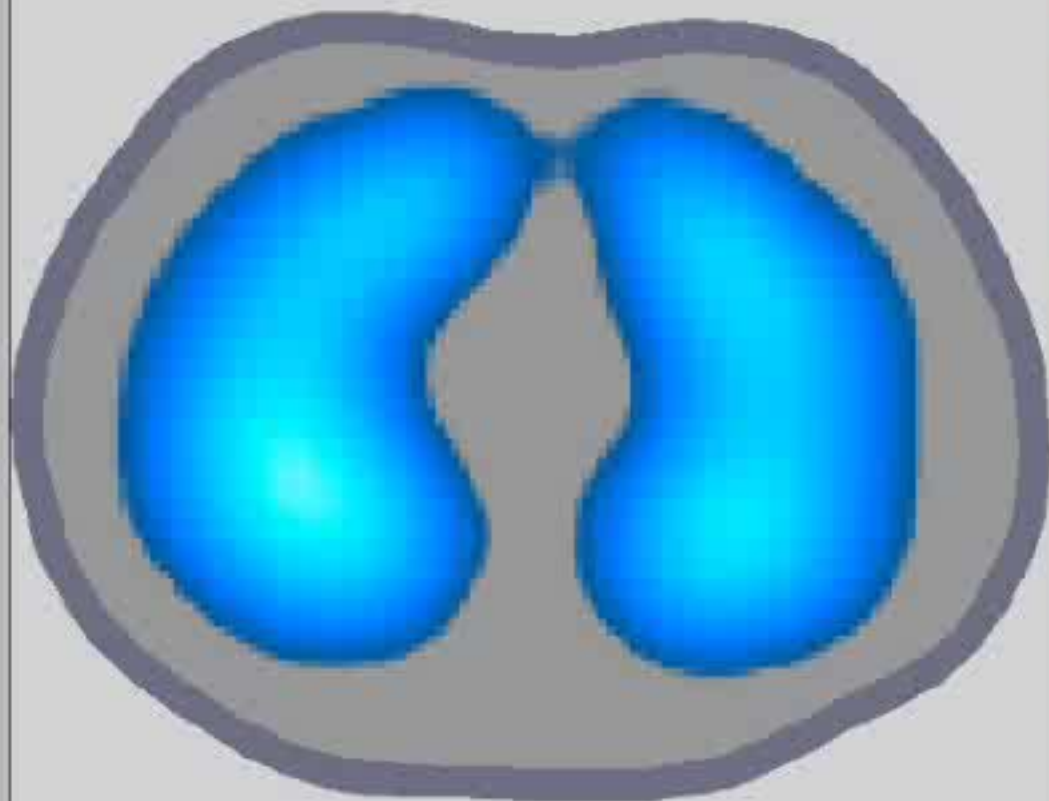
## STRATEGY ON MORTALITY IN THE PRESS SYNDROME

BARBAS, M.D., DENISE MACHADO MEDEIROS, M.D.,  
SCHETTINO, M.D., GERALDO LORENZI-FILHO, M.D.,  
CARLOS MUNOZ, M.D., ROSELAINE OLIVEIRA, M.D.,  
ROBERTO RIBEIRO CARVALHO, M.D.

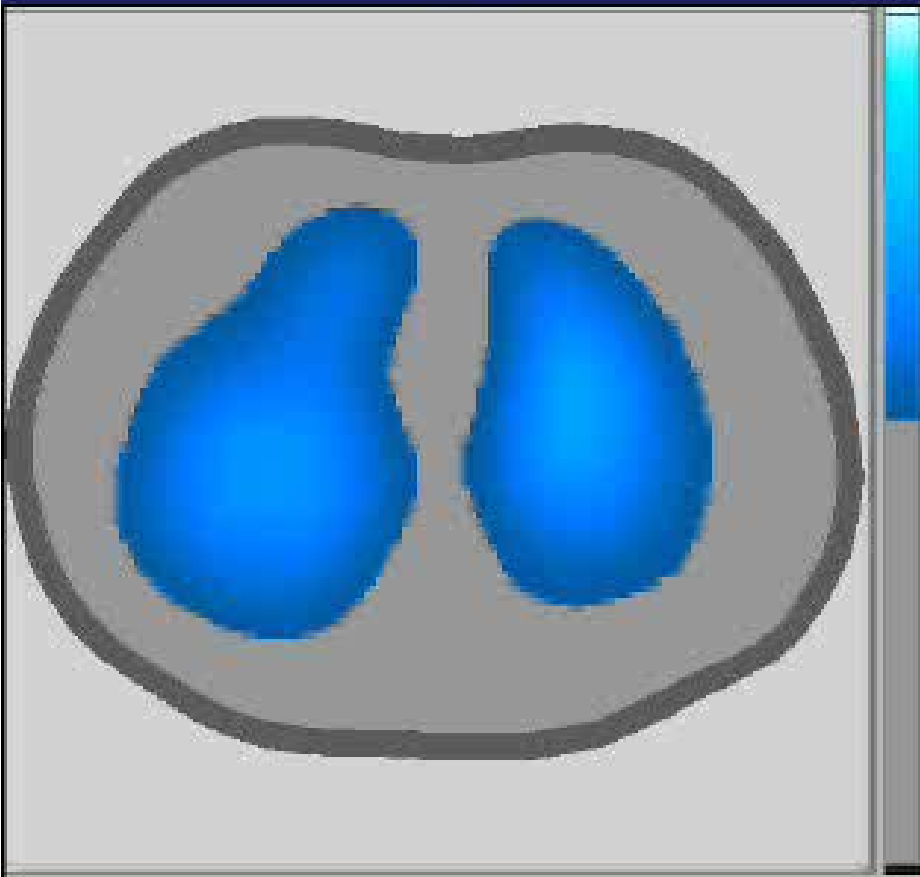
*Almost doubled the survival rate*

damage  
ecular-  
capillary interface, alterations in per-  
meability,<sup>4</sup> and edema<sup>5-7</sup> have repeat-  
been shown to occur in animals subjected to  
erse patterns of mechanical ventilation.  
n clinical practice, however, the “mechanical  
tch” caused by conventional ventilation has been  
nd to be detrimental in only a few uncontrolled  
ies.<sup>8-11</sup> Large variations in the susceptibility of  
ividual animal species<sup>12</sup> and the apparent success  
mechanical ventilation based on a strategy of  
g the lowest positive end-expiratory pressure  
EP) that results in acceptable oxygenation<sup>13,14</sup>  
suggest that the devastating effects observed in ani-

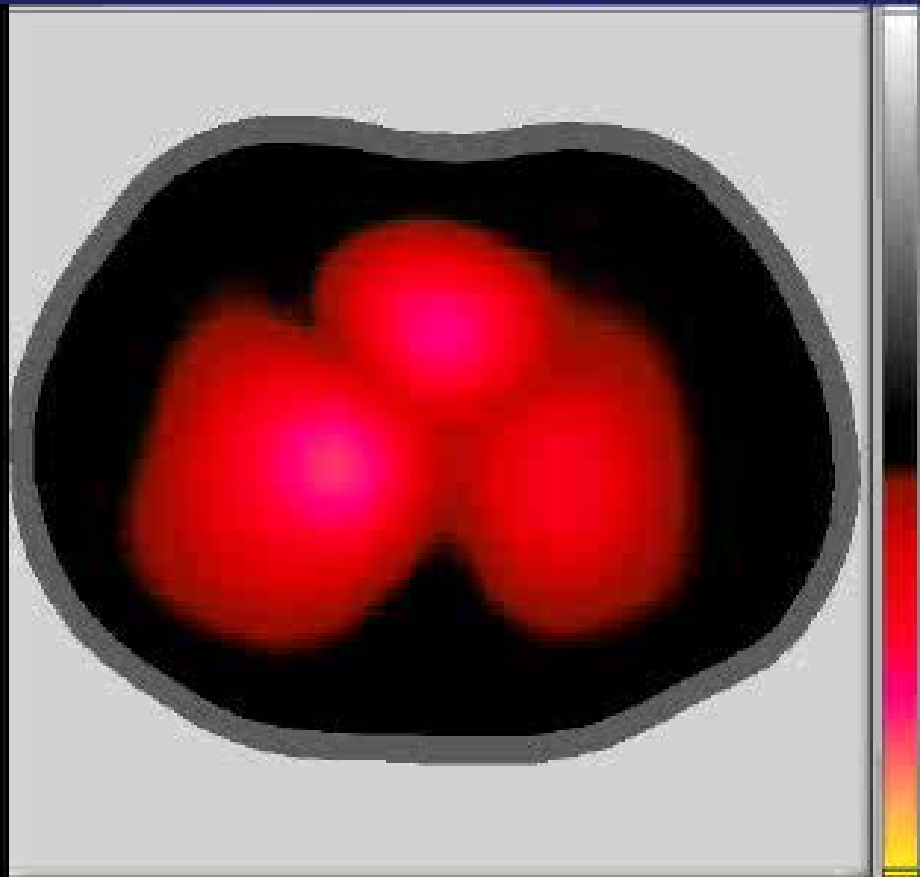




Ventilation gated EIT



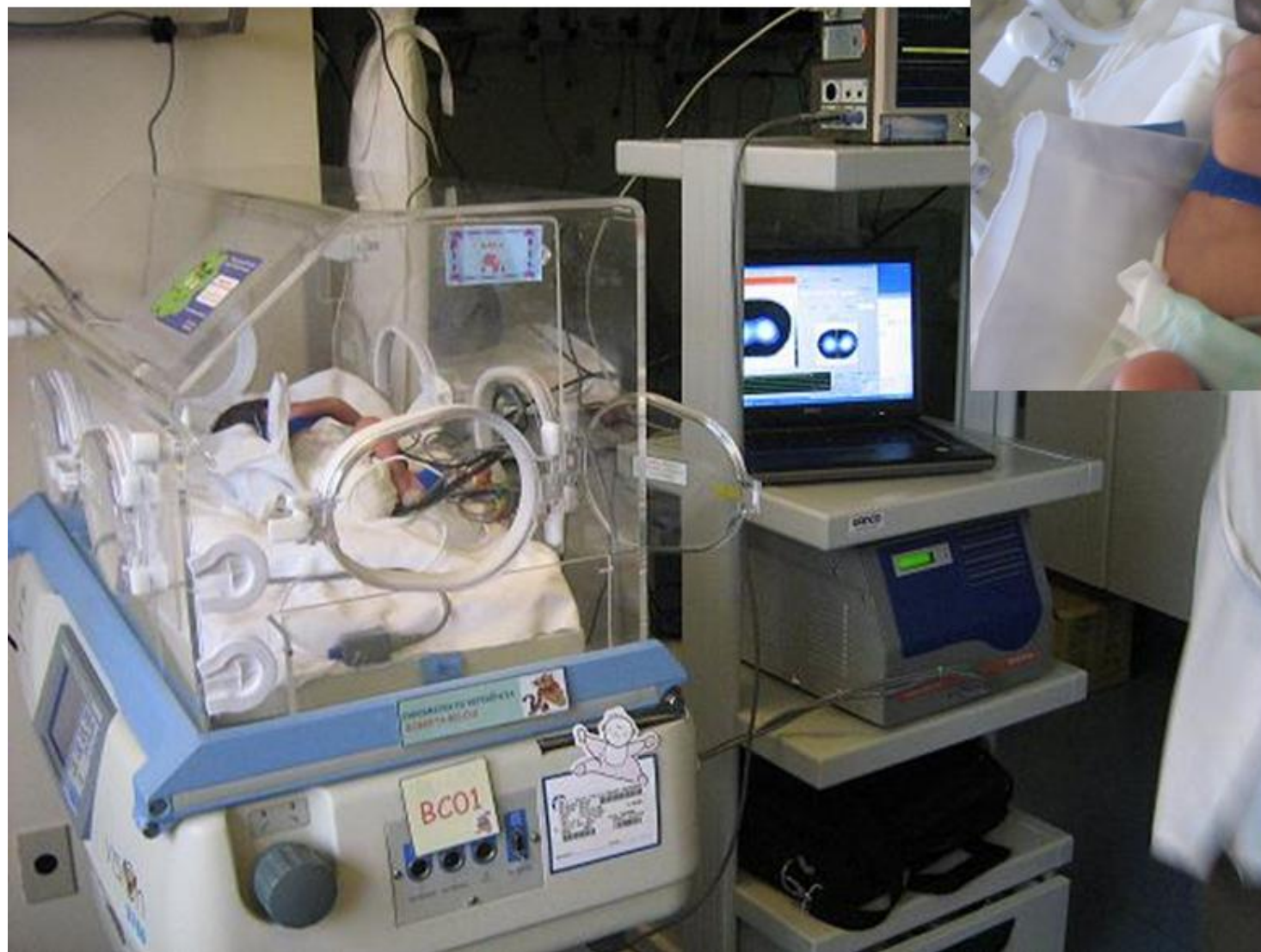
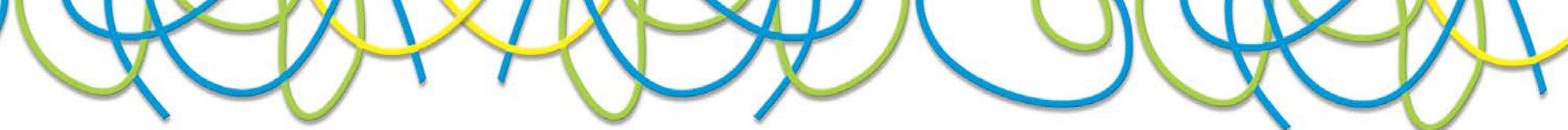
ECG gated EIT





- Hospital Israelita Albert Einstein
  - Instituto do Coração (**INCOR**)
  - Hospital das Clínicas - **USP**
  - Universidade Federal do **Pernambuco**
  - University of Leipzig (**Alemanha**)
  - Uppsala University (**Suécia**)
  - Fundación Jiménez Díaz (**Espanha**)
  - Massachussetts General Hospital – **Harvard**
  - Hospital Sirio Libanes
  - Instituto do Cancer (**ICESP**)
  - Universidade Federal do Ceará
  - Hospital São Luiz
- entre outros



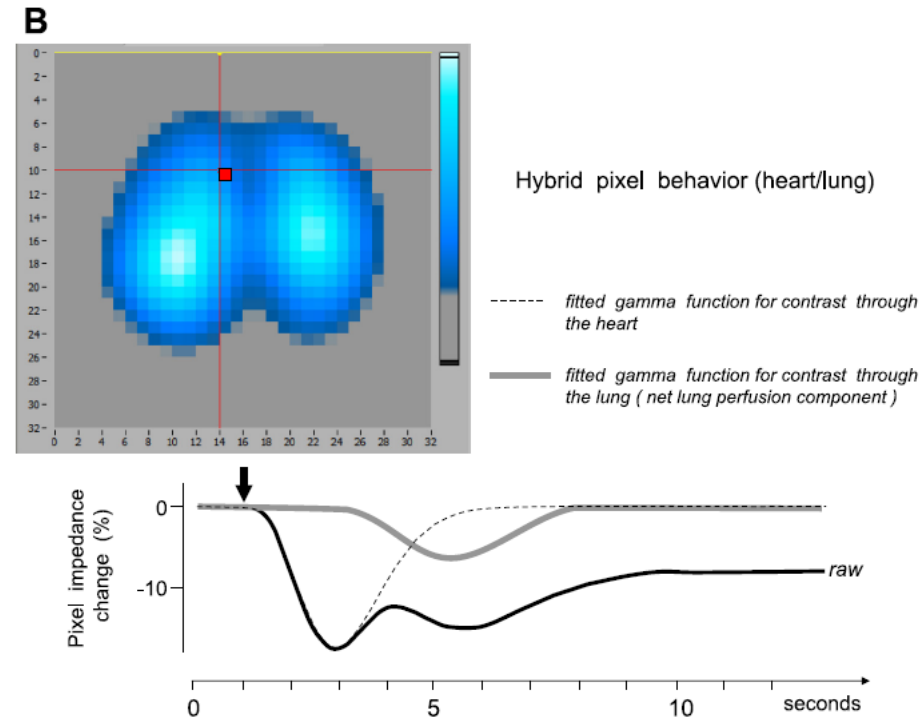
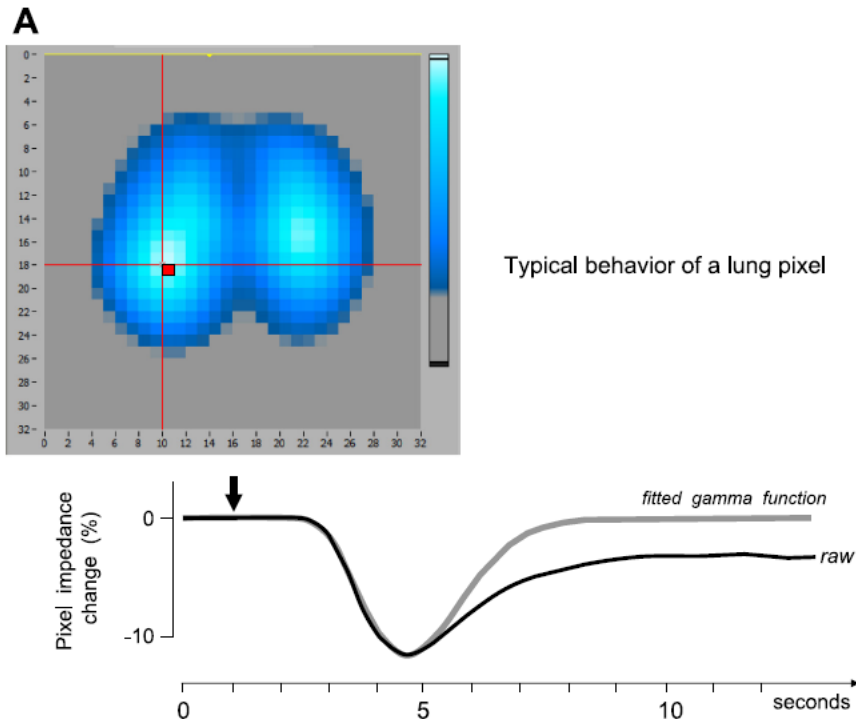


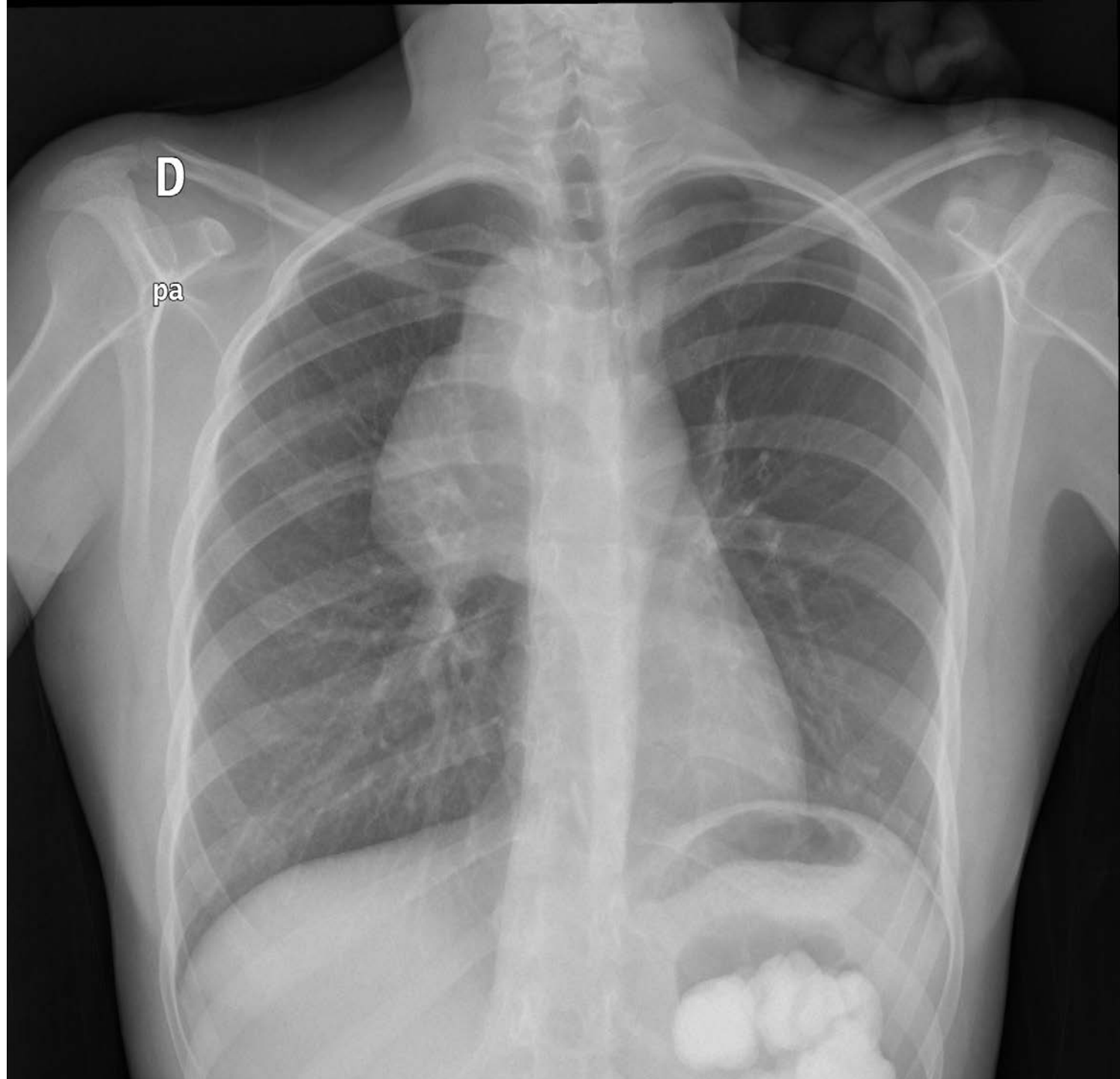


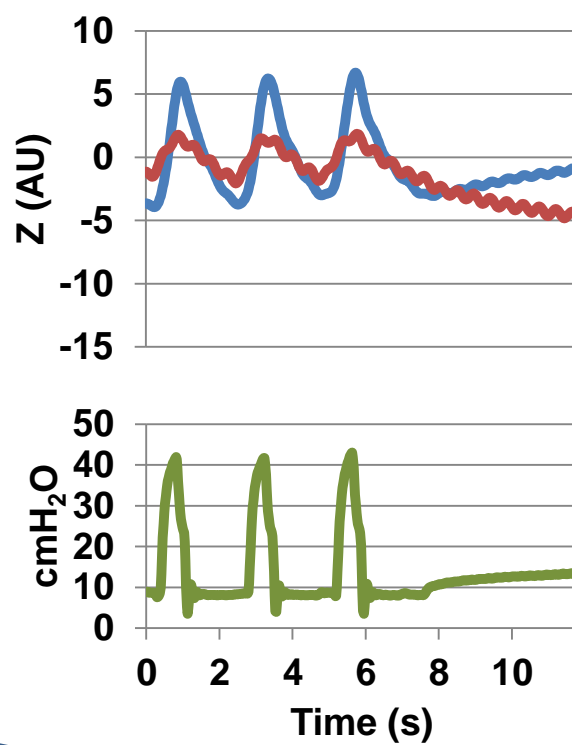
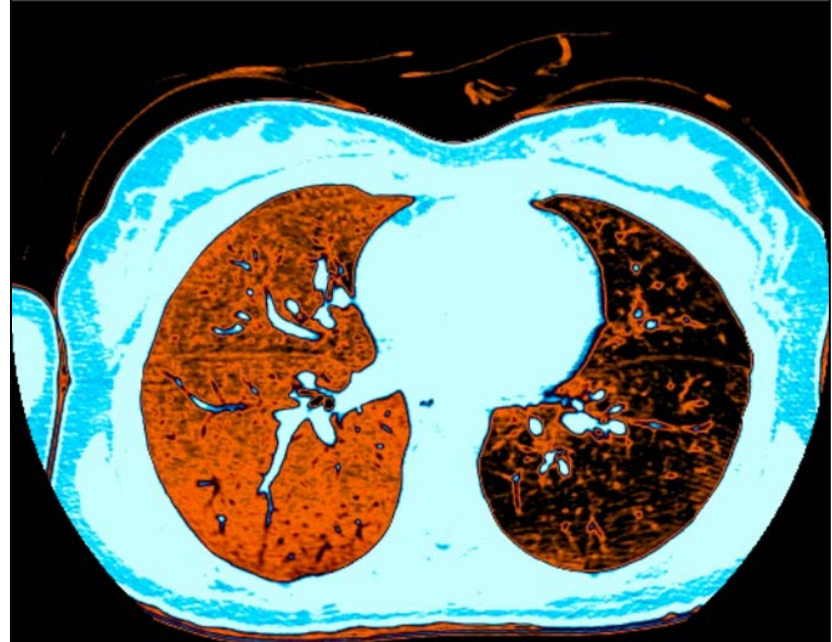


# Regional lung perfusion estimated by electrical impedance tomography in a piglet model of lung collapse

João Batista Borges,<sup>1,8</sup> Fernando Suarez-Sipmann,<sup>1,2</sup> Stephan H. Böhm,<sup>3</sup> Gerardo Tusman,<sup>4</sup> Alexandre Melo,<sup>5</sup> Enn Maripuu,<sup>6</sup> Mattias Sandström,<sup>6</sup> Marcelo Park,<sup>7</sup> Eduardo L. V. Costa,<sup>8,9</sup> Göran Hedenstierna,<sup>10</sup> and Marcelo Amato<sup>8</sup>

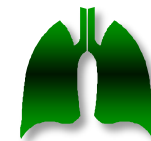












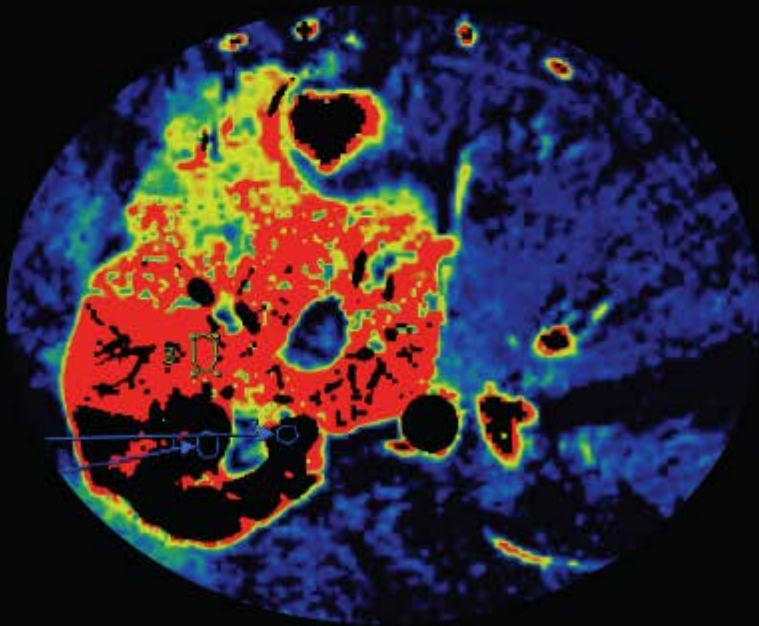
**58**  
**%**

**42**  
**%**

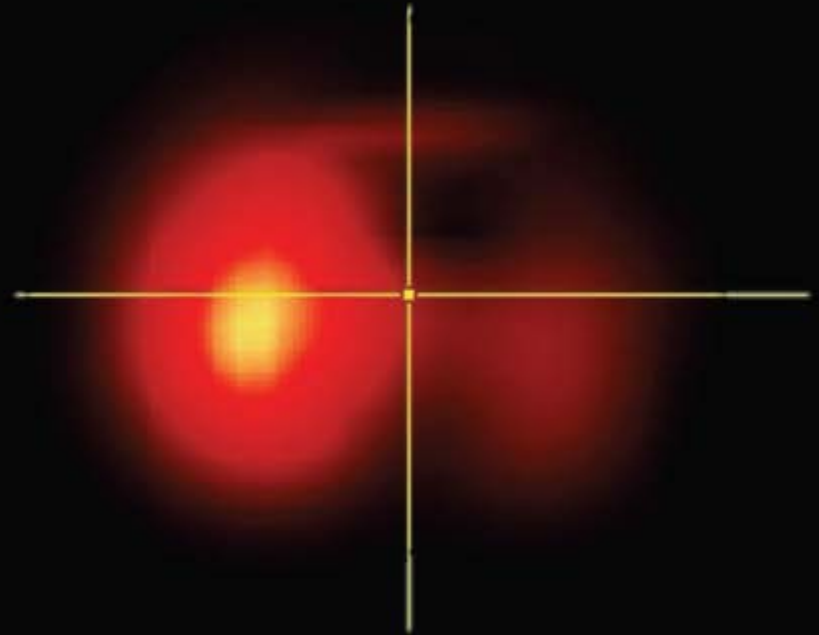
Ongoing study about tromboemboli detection using EIT : one experimental study (pigs) and one clinical study at the emergency service of Hospital das Clínicas da FMUSP

## EMBOLIA – 1.5 ml

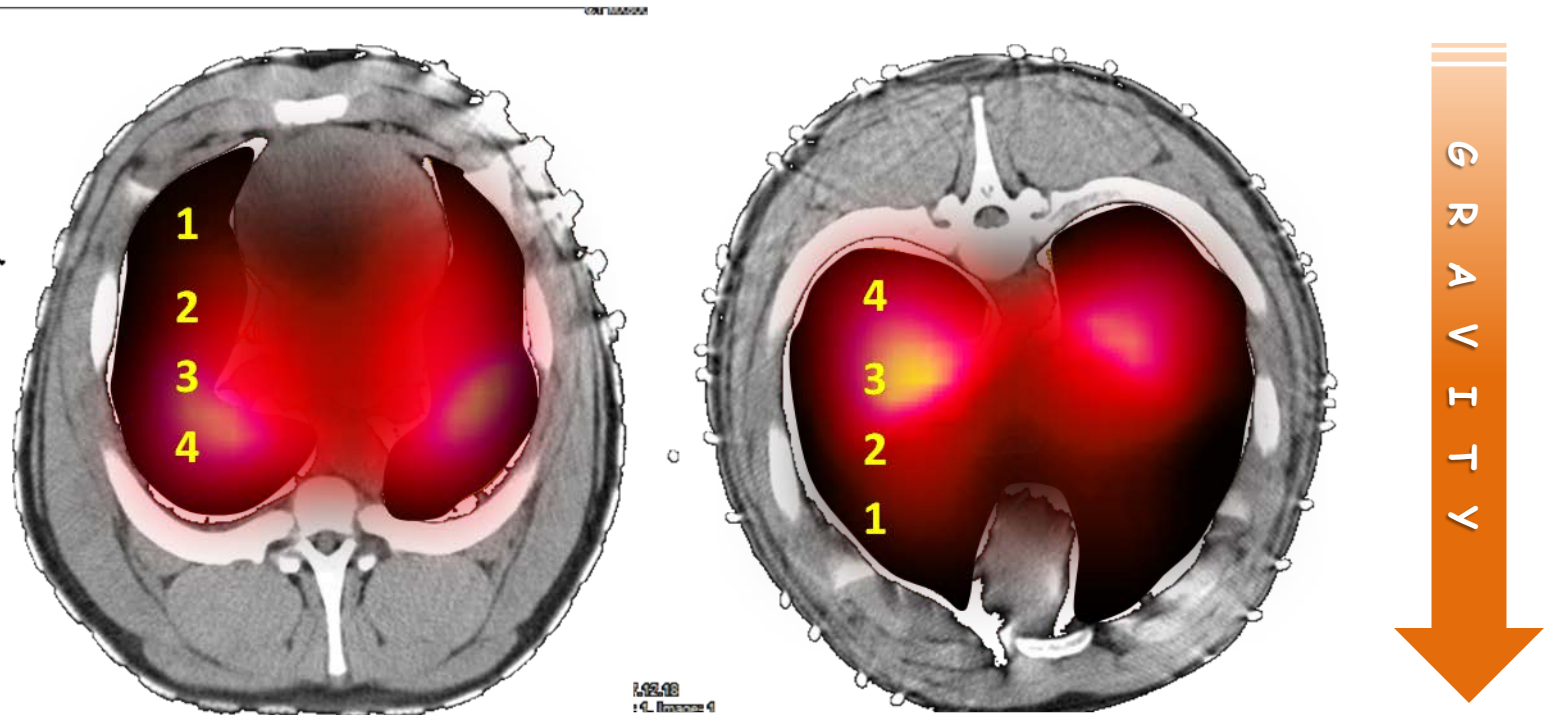
CT DUAL ENERGY

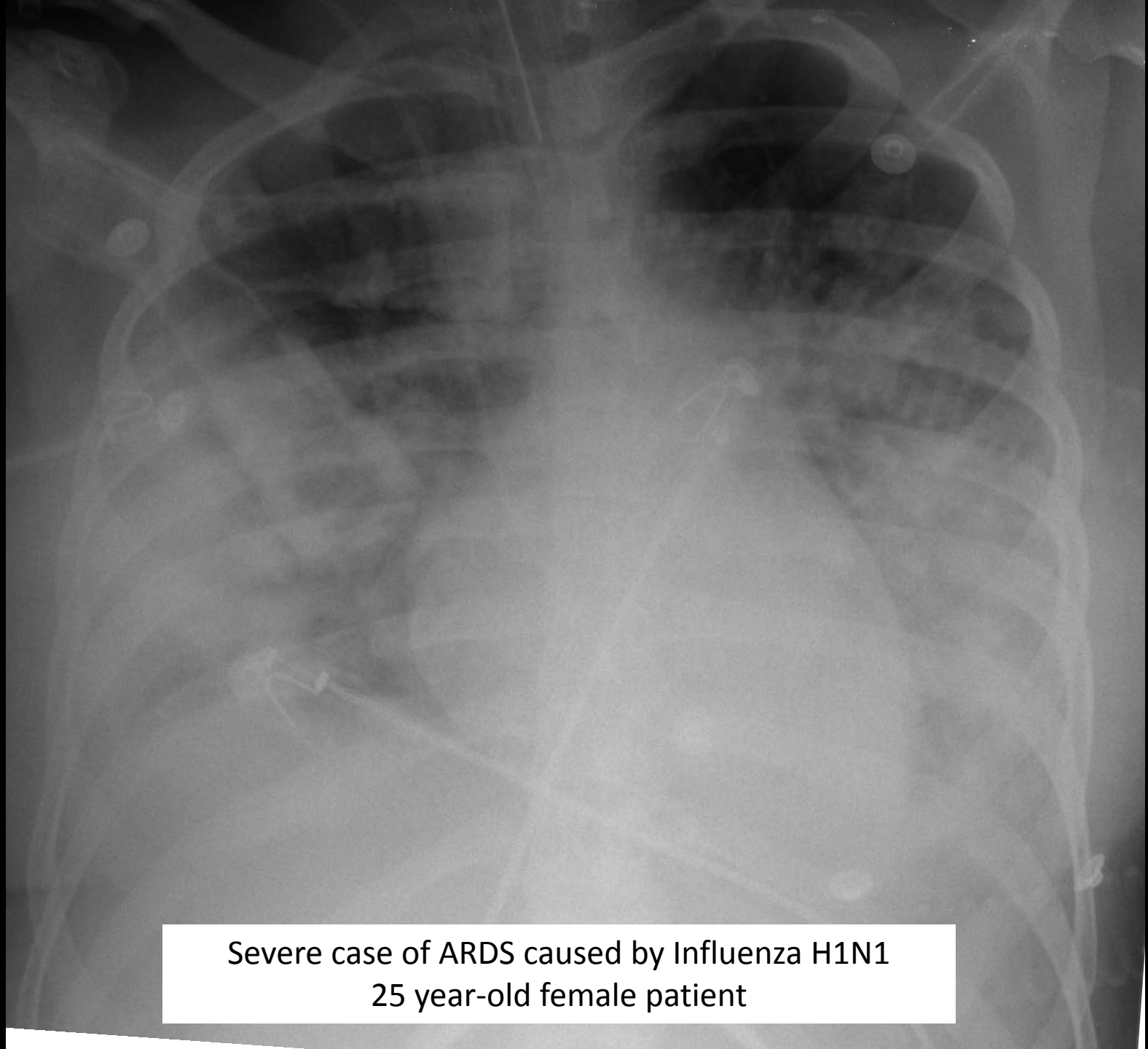


PERFUSION EIT



# Regional Blood Flow by EIT

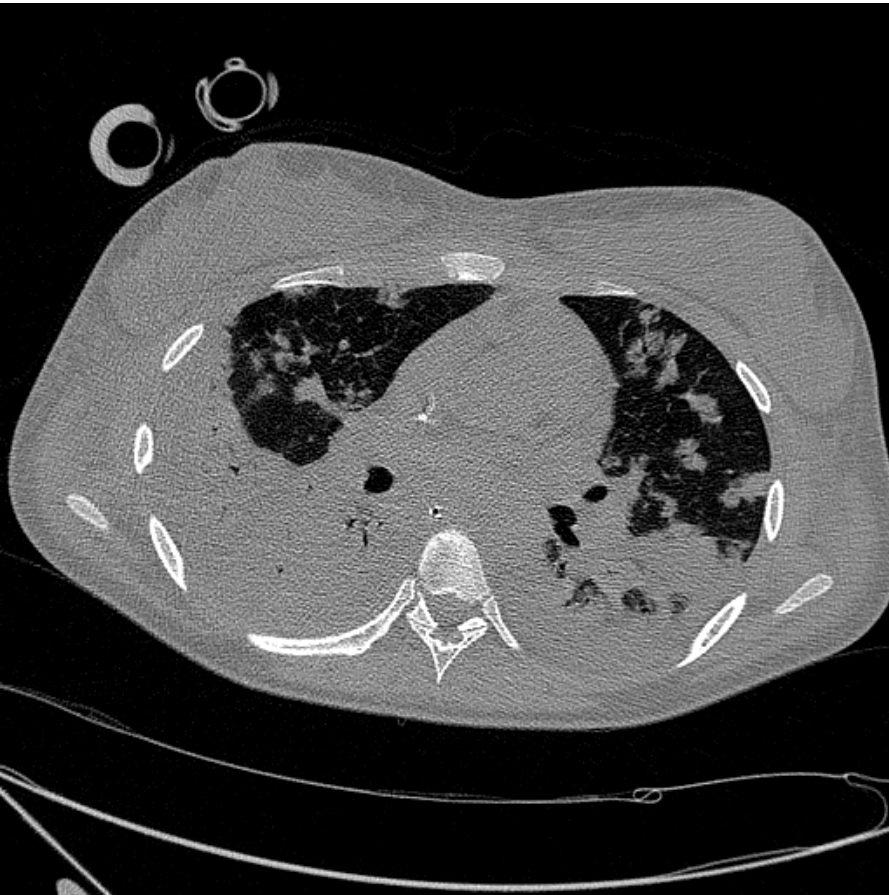




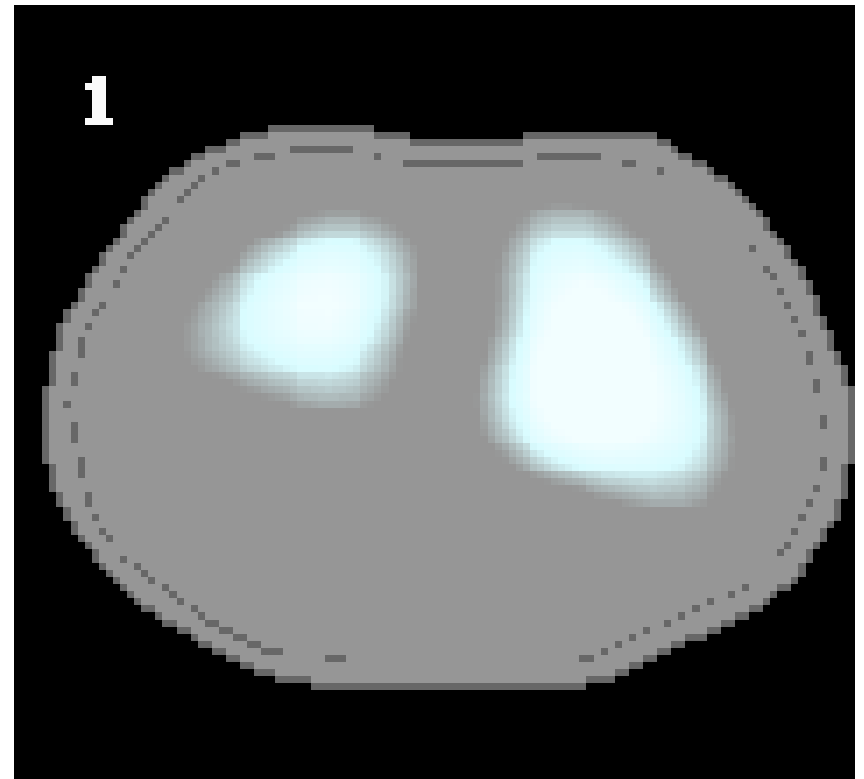
Severe case of ARDS caused by Influenza H1N1  
25 year-old female patient



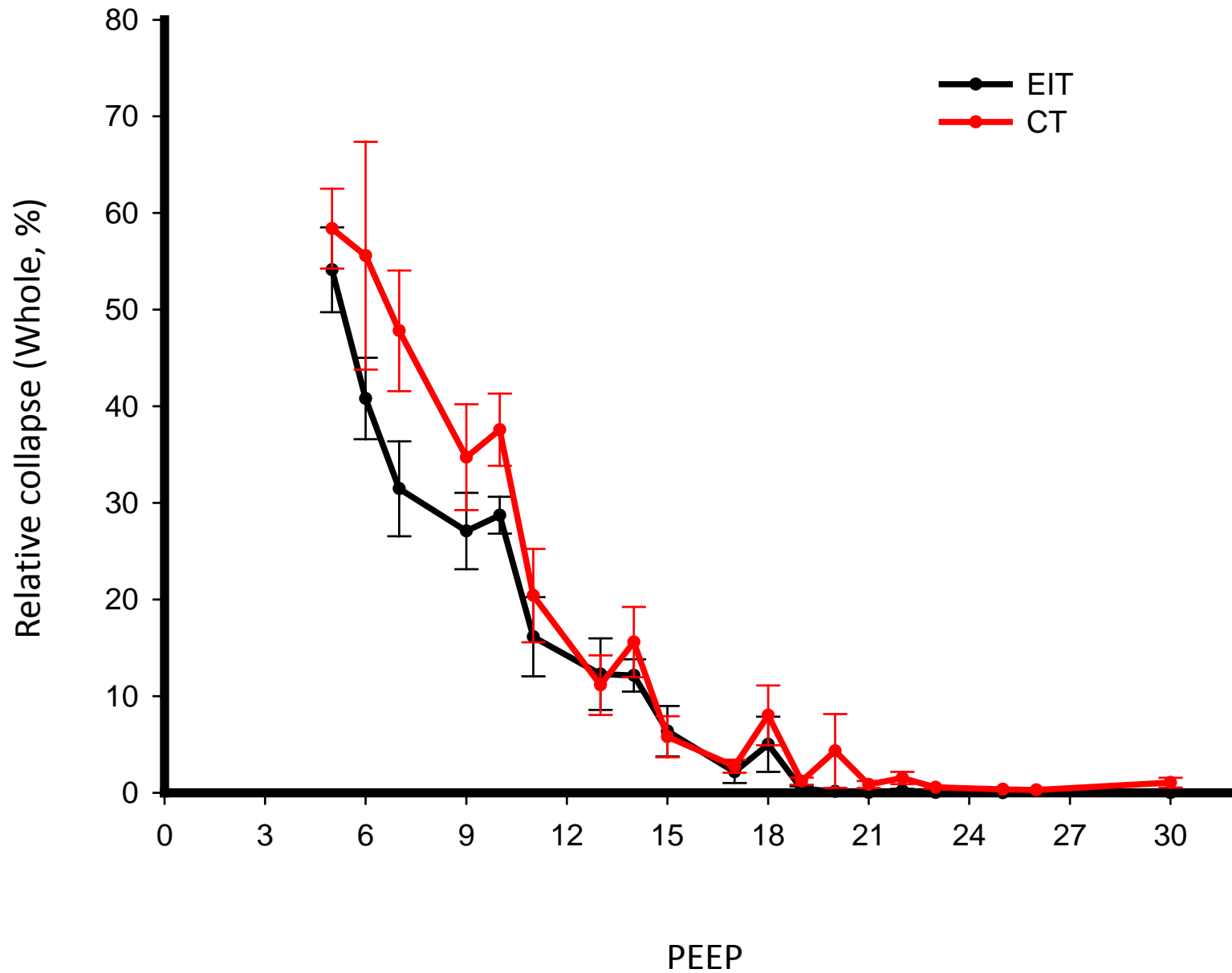
Computerized tomography



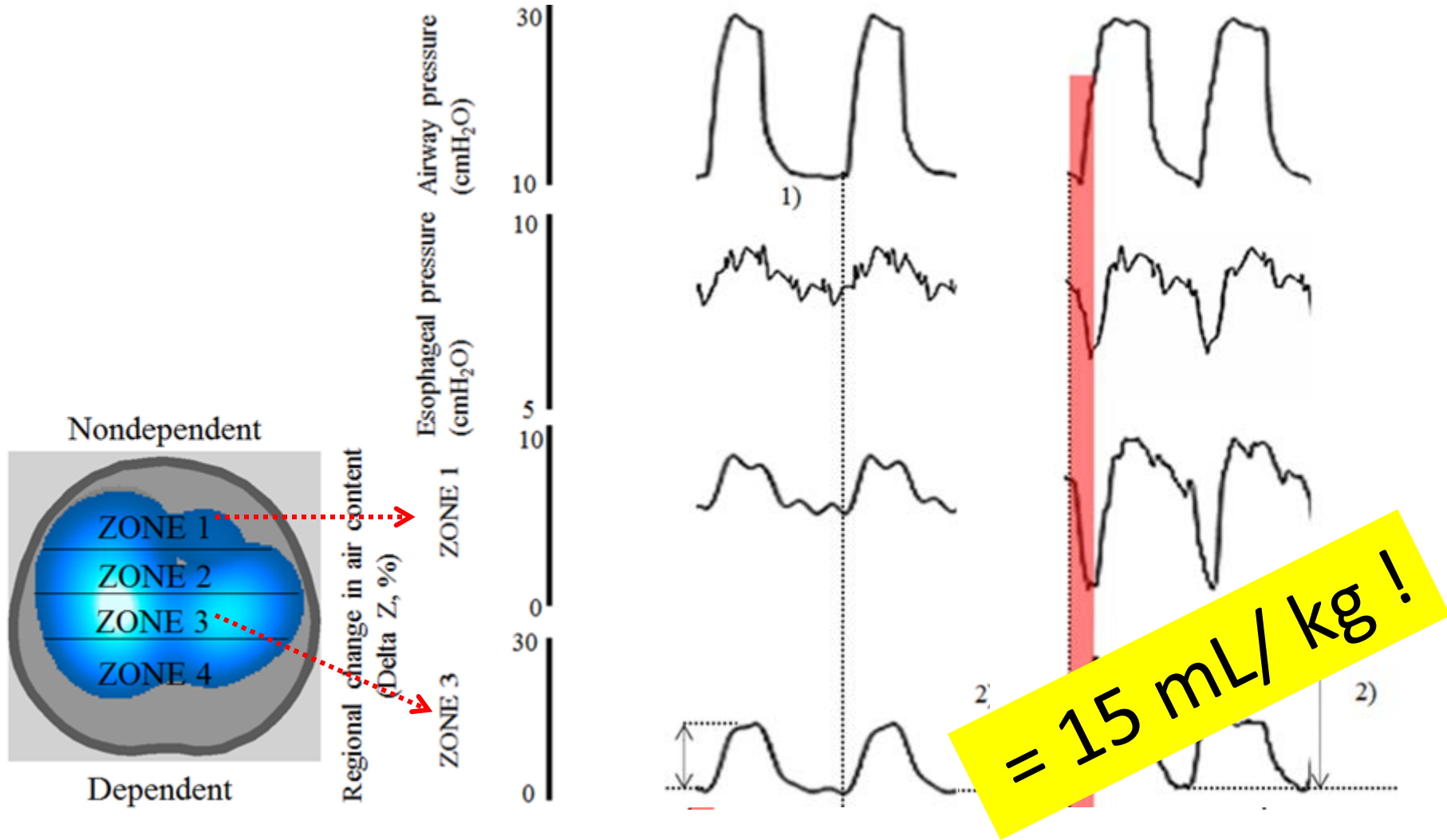
EIT image – hyperdistended areas during high PEEP (23)



Error bars - SE



# local change in air content



Regional change in air content  
(Delta Z, %)

Dependent      Nondependent

ZONE 4

ZONE 3

ZONE 2

ZONE 1

Esophageal pressure  
(cmH<sub>2</sub>O)

Flow  
(L/sec)

0

10

0

30

0

10

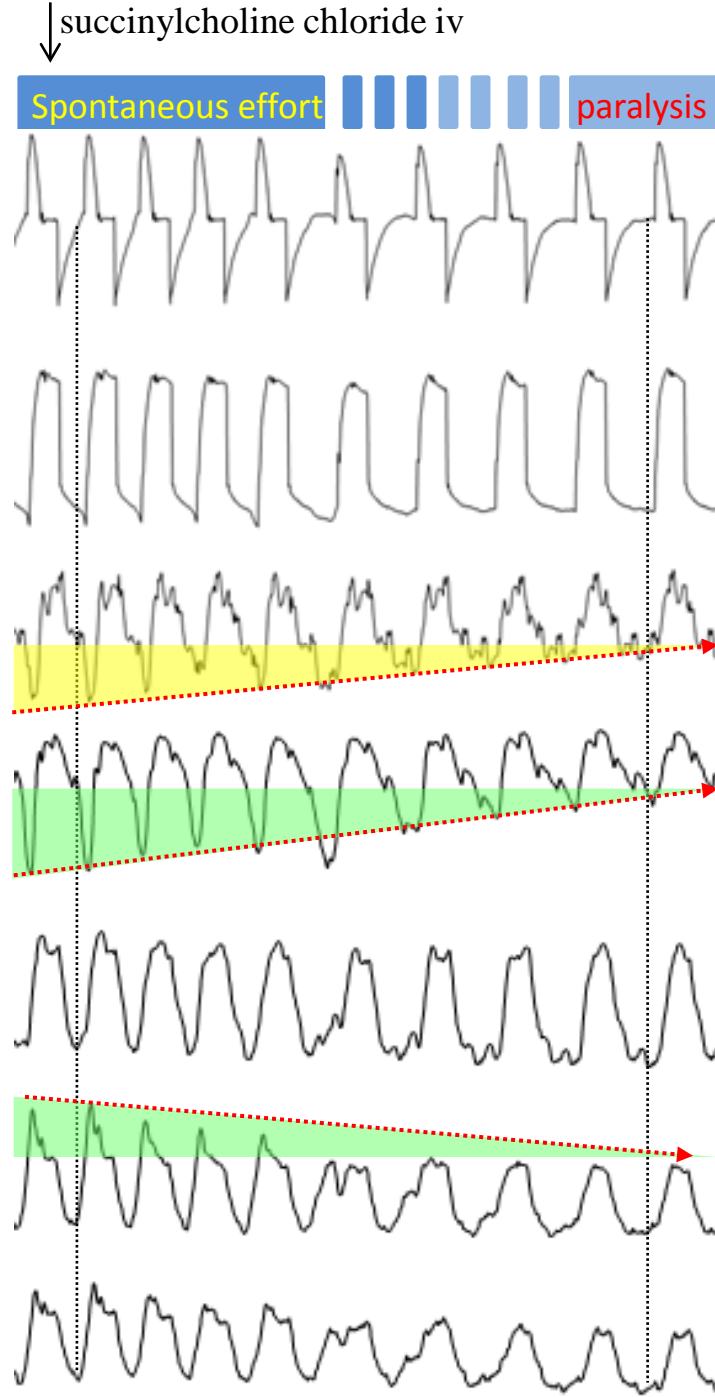
10

10

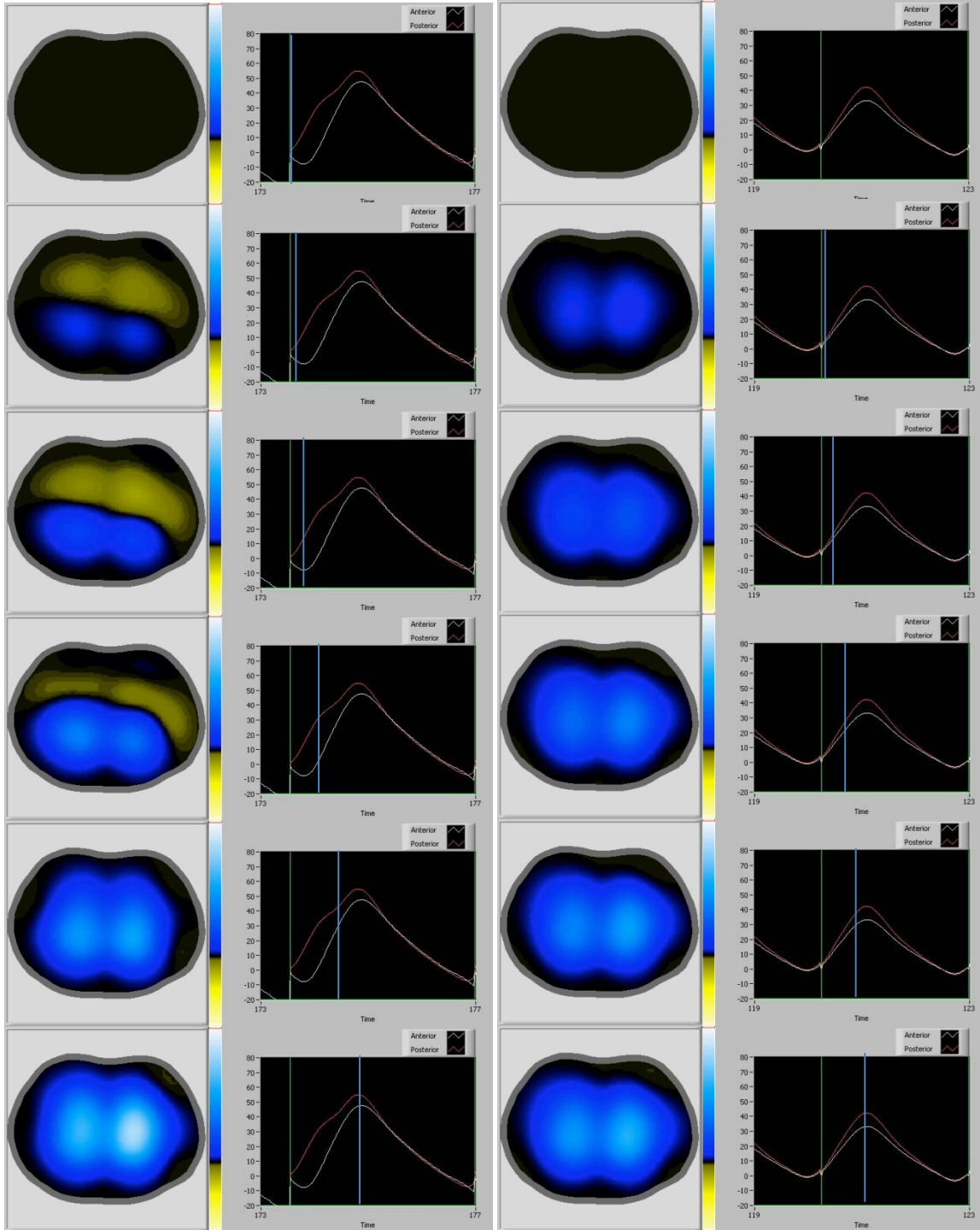
30

1

-1







R

L

kV 120.0

mA: 267

0.8 mm

Tilt: 0.0 degrees

750 ms

14:14:06

W=1200,L=-800

10mm/div

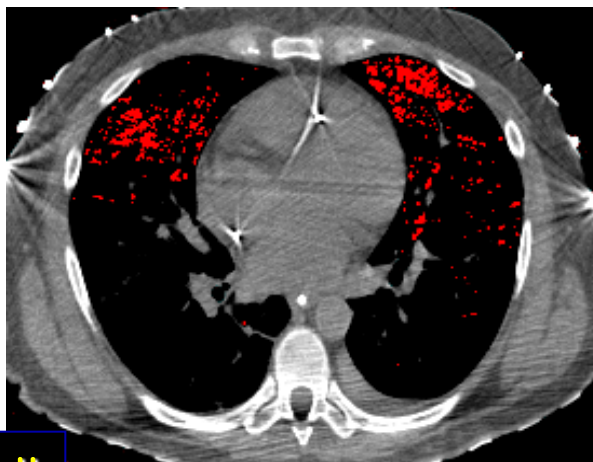
P



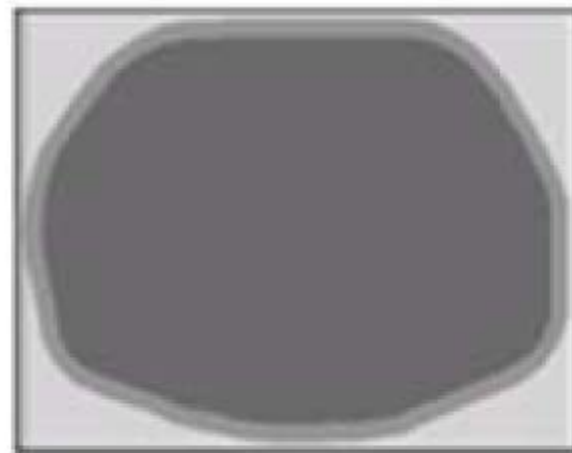
# Financiamento



Hyperdistension  
image

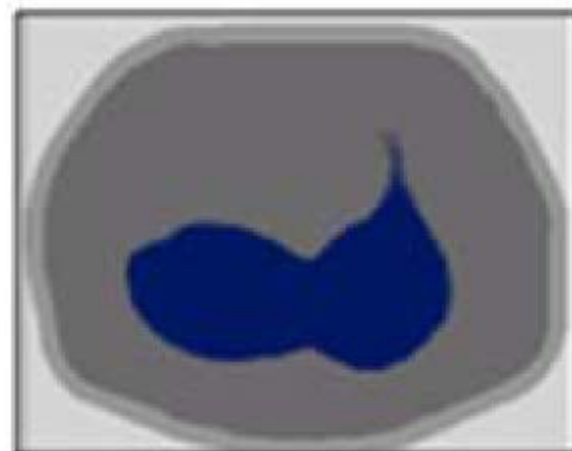


Cum. Collapse  
image



No arbitrary thresholds !!

Not biased by baseline  
densities !!



EIT

EIT





# Obrigado!

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Médico pneumologista  
Hospital das Clínicas - USP

REALIZAÇÃO:



PATROCÍNIO GOLD:



PATROCÍNIO:



APOIO:

