

## EMS State of the Science 2019: A Gathering of Eagles XXI



**Friday March 1  
&  
Saturday March 2**

**Sheraton Dallas Hotel  
400 North Olive Street  
Dallas, TX 75201**

# ECMO Allegretto: *The Milan Out-of-Hospital ECLS Algorithm*

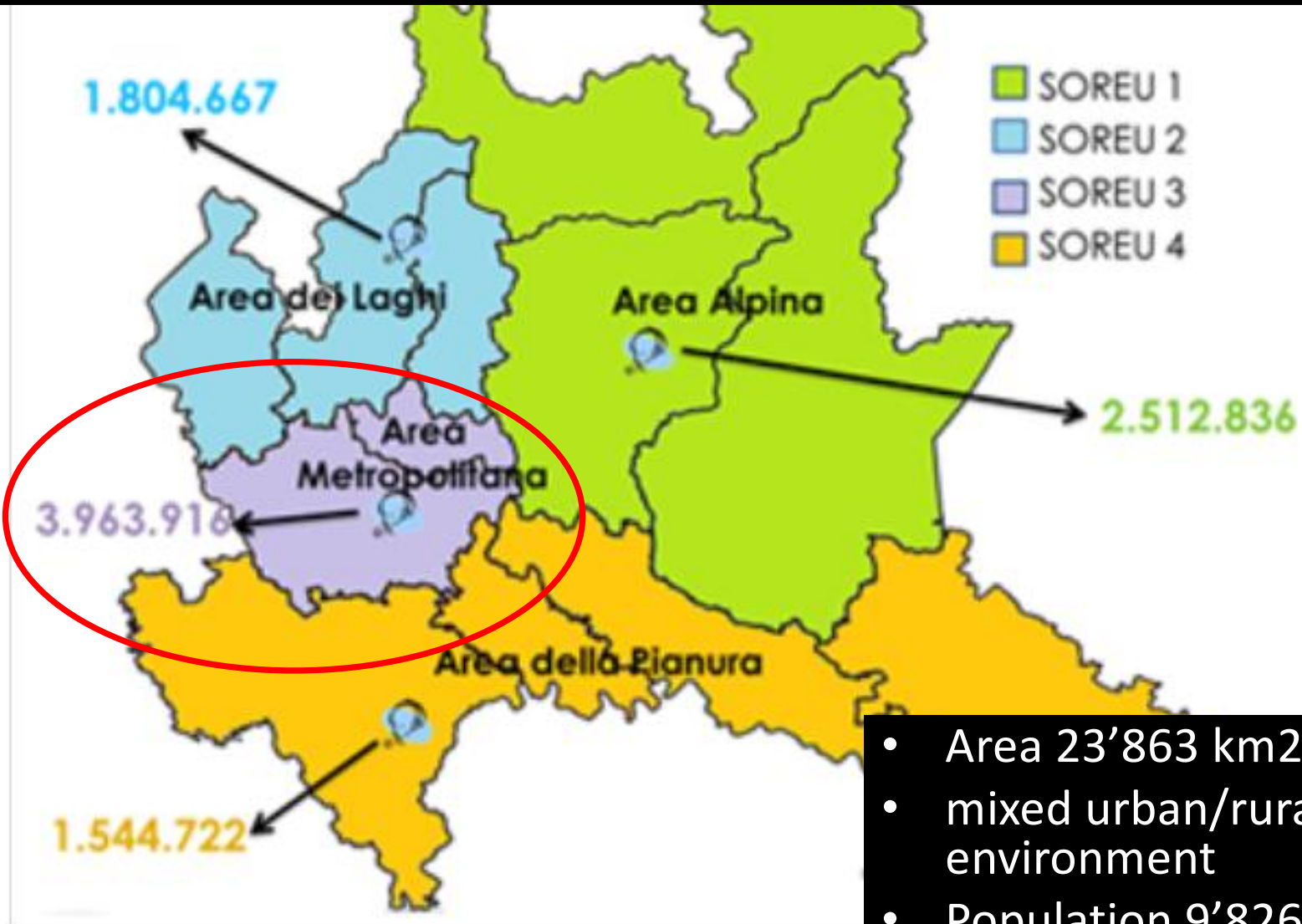


SOREU Metropolitana Clinical Supervisor: Prof. R. Fumagalli

NO CONFLICT OF INTEREST

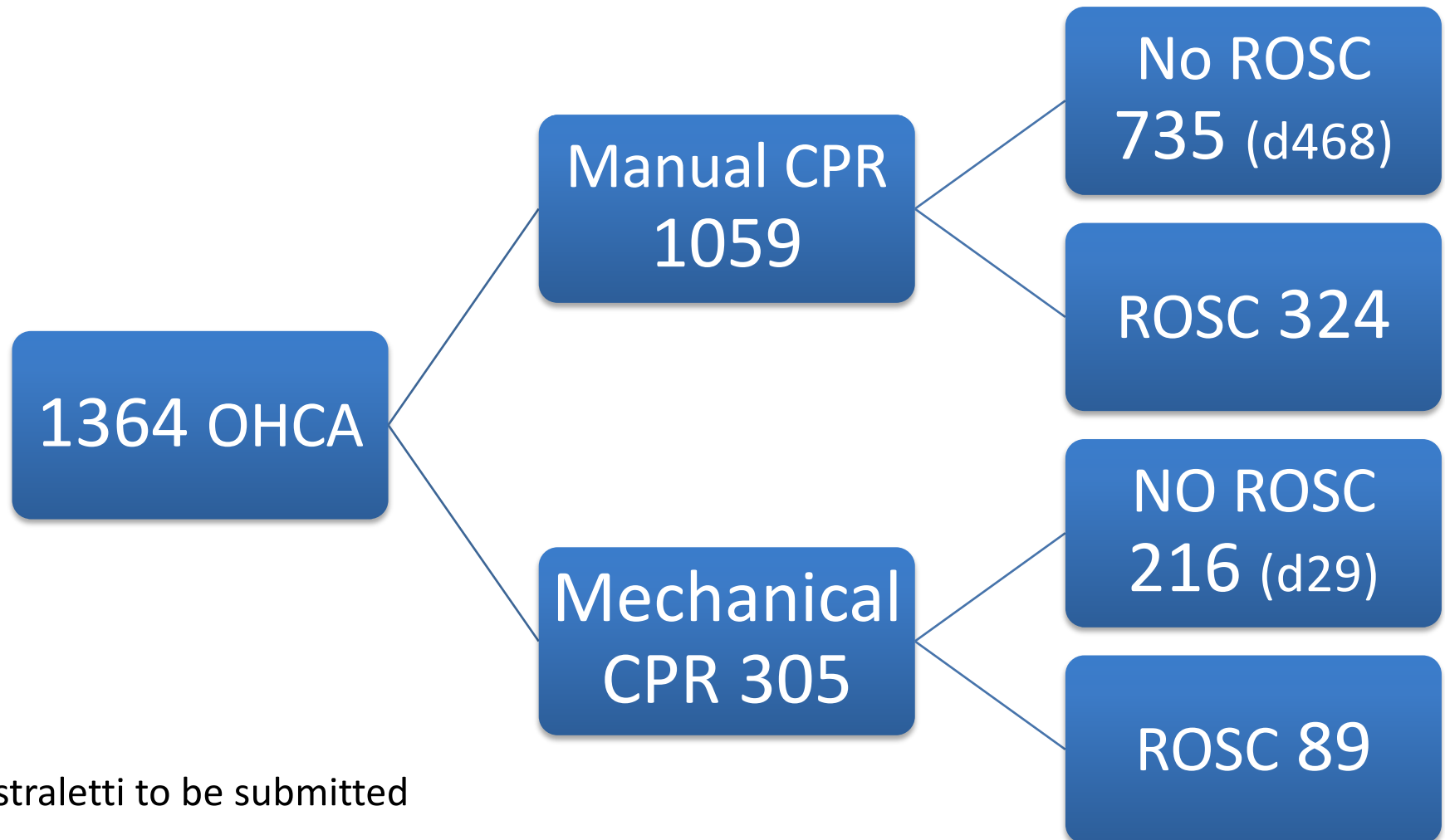


## Headquarters of regional emergency system



- Area 23'863 km<sup>2</sup>
- mixed urban/rural environment
- Population 9'826'141

# SOREUM AGENCY retrospective analysis



Mistraletti to be submitted

# Survival

	Manual MCE	Mechanical MCE
emergency	316(30.2)	168(55.8)
24h	240(23.8)	112(38.4)
ICU	129(12.9)	46(15.4)
H	116(11.6)	44(15.1)

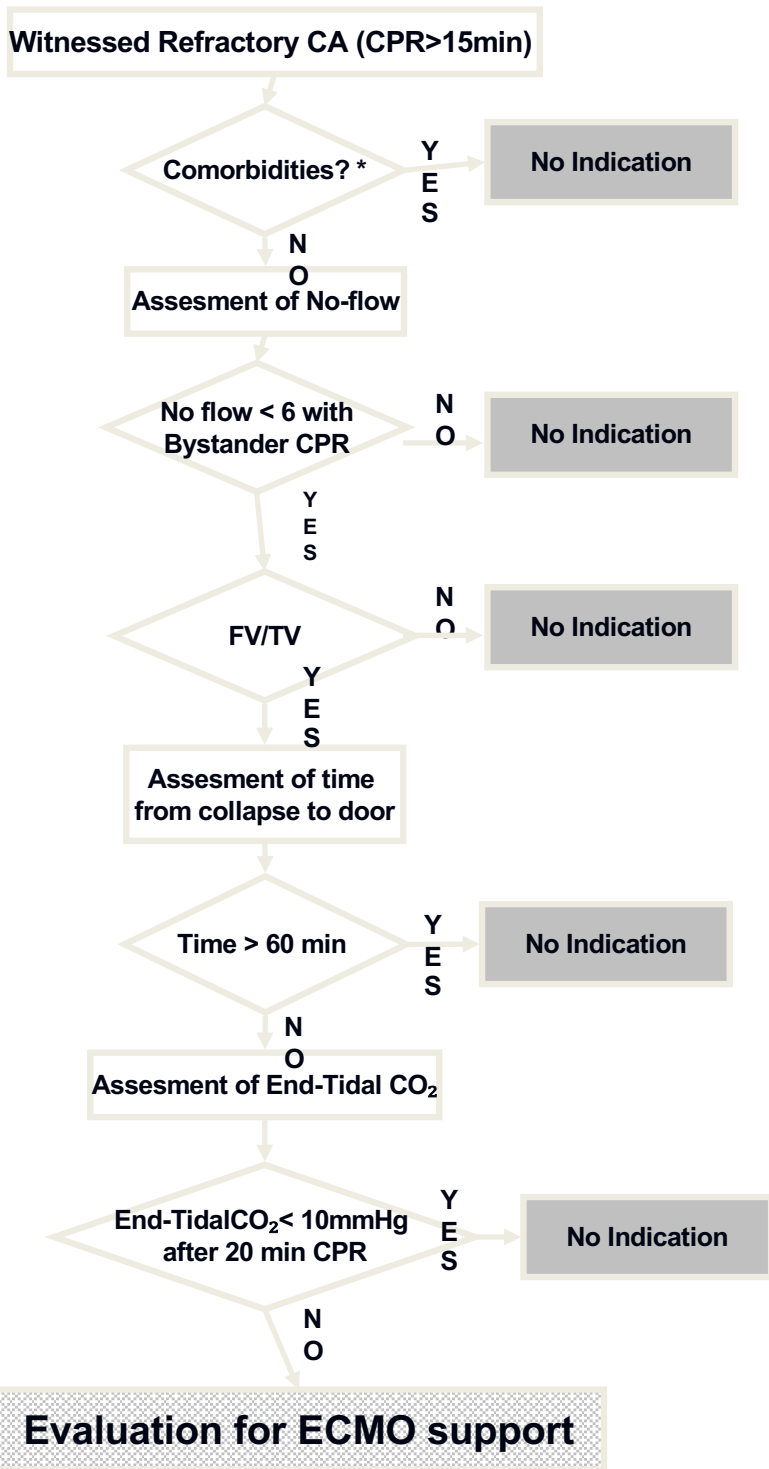
# ECLS data

	ECLS 106	SURVIVAL 6	DONATION 13
AGE	54 (42-63)	41 (38-50)	52 (44-55)
SHOCKABLE RYTHM	73 (68.9%)	6 (100%)	7 (53.9%)
NO FLOW TIME	9 (6-12)	7 (6-8)	10 (6-13)
MCPR	81 ( 76.4%)	6 (100 %)	12 (92.3%)

Mistraletti to be submitted

# Restrictive

AGE  
12-70



- \* Comorbidities:
- terminal malignancy
  - aortic dissection
  - severe peripheral arteriopathy
  - severe cardiac failure without transplant indication
  - severe aortic valve failure.

MCPR

# Liberal

AGE:  
12-70

Witnessed Refractory CA (CPR>15min)

Comorbidities? \*

YES

No Indication

NO

Assesment of No-flow

No flow < 12 with  
Bystander CPR

YES

NO

FV/TV

NO

No Indication

YES

Assesment of time  
from collapse to door

Time > 60 min

YES

No Indication

NO

Assesment of End-Tidal CO<sub>2</sub>

End-TidalCO<sub>2</sub>< 10mmHg  
after 20 min CPR

YES

No Indication

NO

Evaluation for ECMO support

- \* Comorbidities:
- terminal malignancy
  - aortic dissection
  - severe peripheral arteriopathy
  - severe cardiac failure without transplant indication
  - severe aortic valve failure.

MCPR



# Ecls in out of hospital cardiac arrest

5 hospitals grant an ECLS-team 24/7

- San Gerardo (Monza) ( Prof.G. Foti)
- San Raffaele (Milan) ( Dr. F.Pappalardo)
- Humanitas (Rozzano) ( Prof. M. Cecconi)
- Sacco (Milan) ( Dr E. Catena)
- Policlinico( Milan)( Prof.A Pesenti)

**WORKS ARE IN PROGRESS**





This work had been possible by the collaboration of:

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G.Bassi M.D.

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M. Migliari M.D.

F. Pappalardo M.D.

And by all the people ( technicians, nurses and doctors) working for the  
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**THANKS**

Roberto.fumagalli@unimib.it