

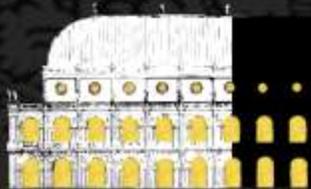
CONGRESSO NAZIONALE IRC 2023



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LA RIVOLUZIONE DEI SISTEMI



Italian  
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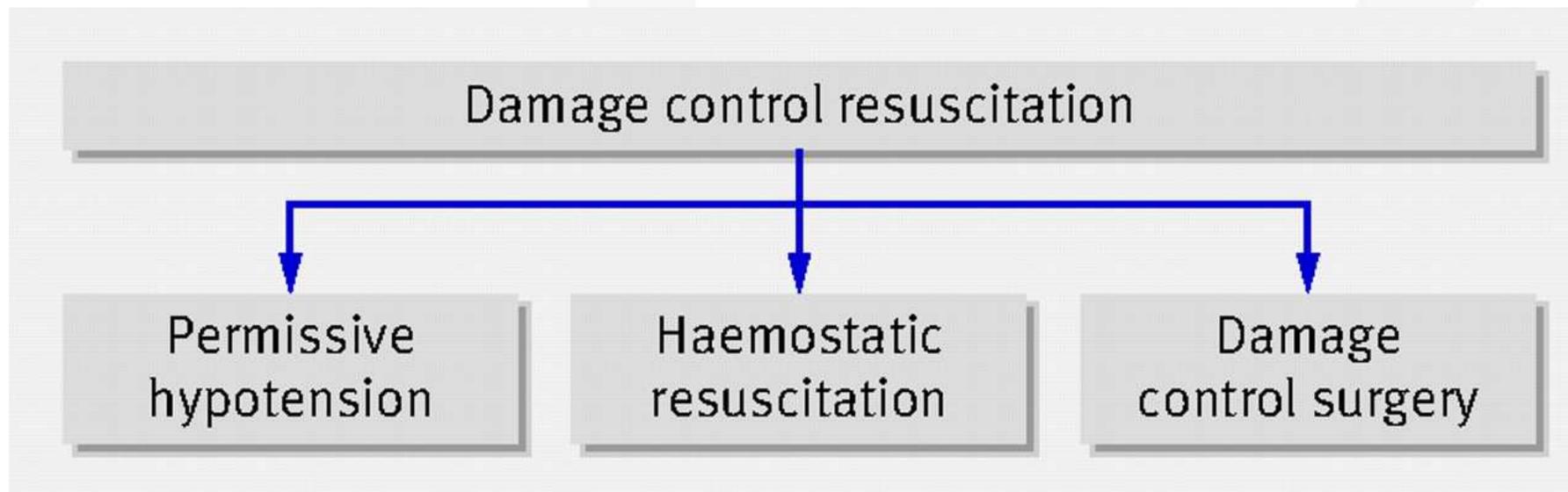
# SURGICAL RESUSCITATION

GREGORIO TUGNOLI  
CHIRURGIA DEL TRAUMA  
OSPEDALE MAGGIORE-BOLOGNA

## Premessa: quale chirurgo del trauma?

Dell'inquadramento e gestione di tutti i traumi degli organi addominali, dei reni e della vescica e di tutti i traumi toracici che non richiedano competenze specifiche

E, comunque, se è vero che l'emorragia è la principale causa di morte evitabile, il chirurgo non può non essere presente nel trauma team



Jansen J O et al. *BMJ* 2009;338:bmj.b1778

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**BMJ**

# Surgical resuscitation

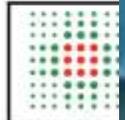
OBIETTIVO



COME?

SENZA DIAGNOSTICA  
NEL PIU' BREVE TEMPO POSSIBILE  
NEL MODO PIU' SEMPLICE POSSIBILE

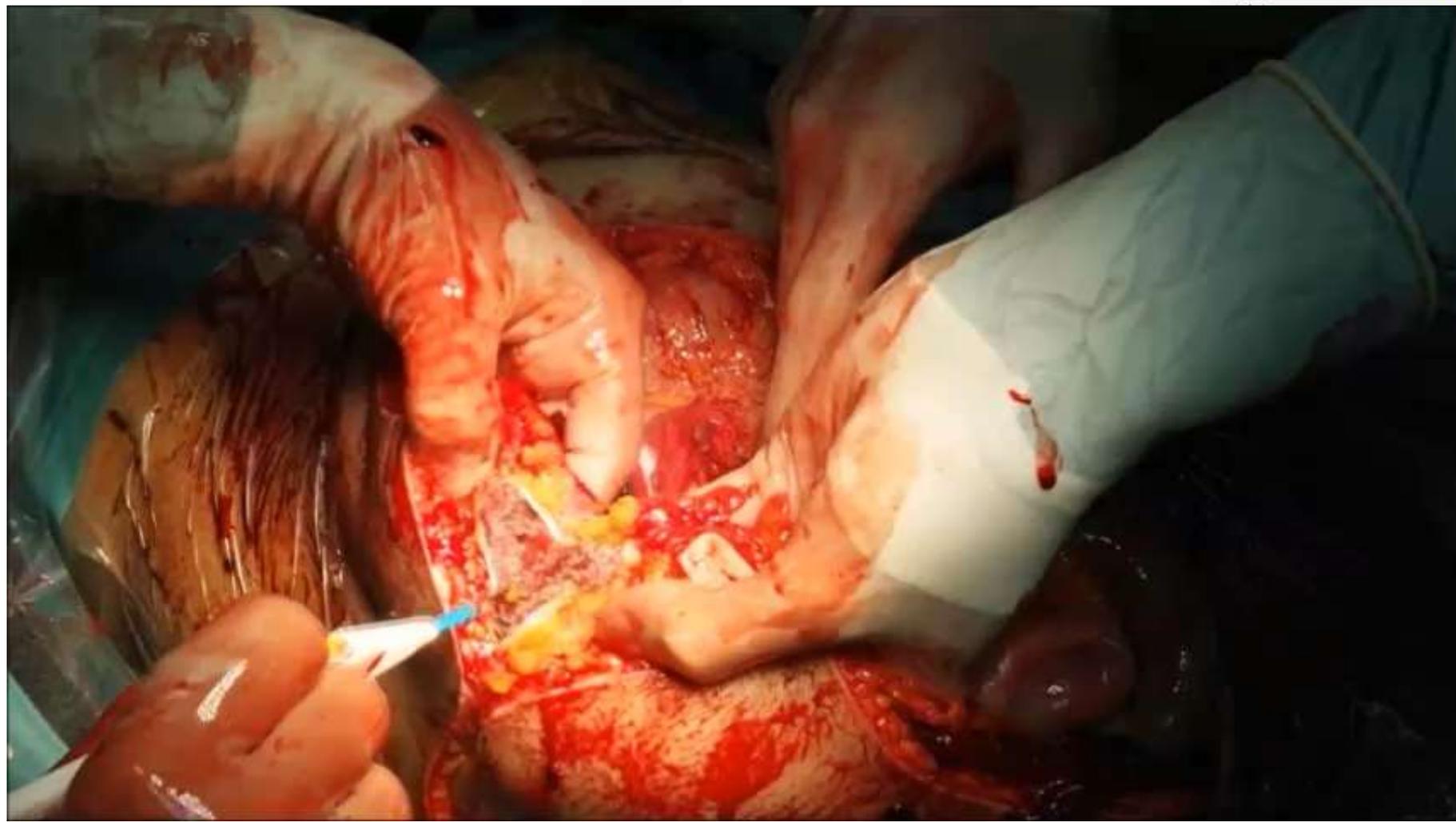
# Il fattore «tempo» e la DCS



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attuabil  
“damag





# Surgical resuscitation

Jang et al. *Scandinavian Journal of Trauma, Resuscitation and Emergency Medicine* (2016) 24:3  
DOI 10.1186/s13049-016-0196-5

Scandinavian Journal of Trauma,  
Resuscitation and Emergency Medicine

ORIGINAL RESEARCH

Open Access



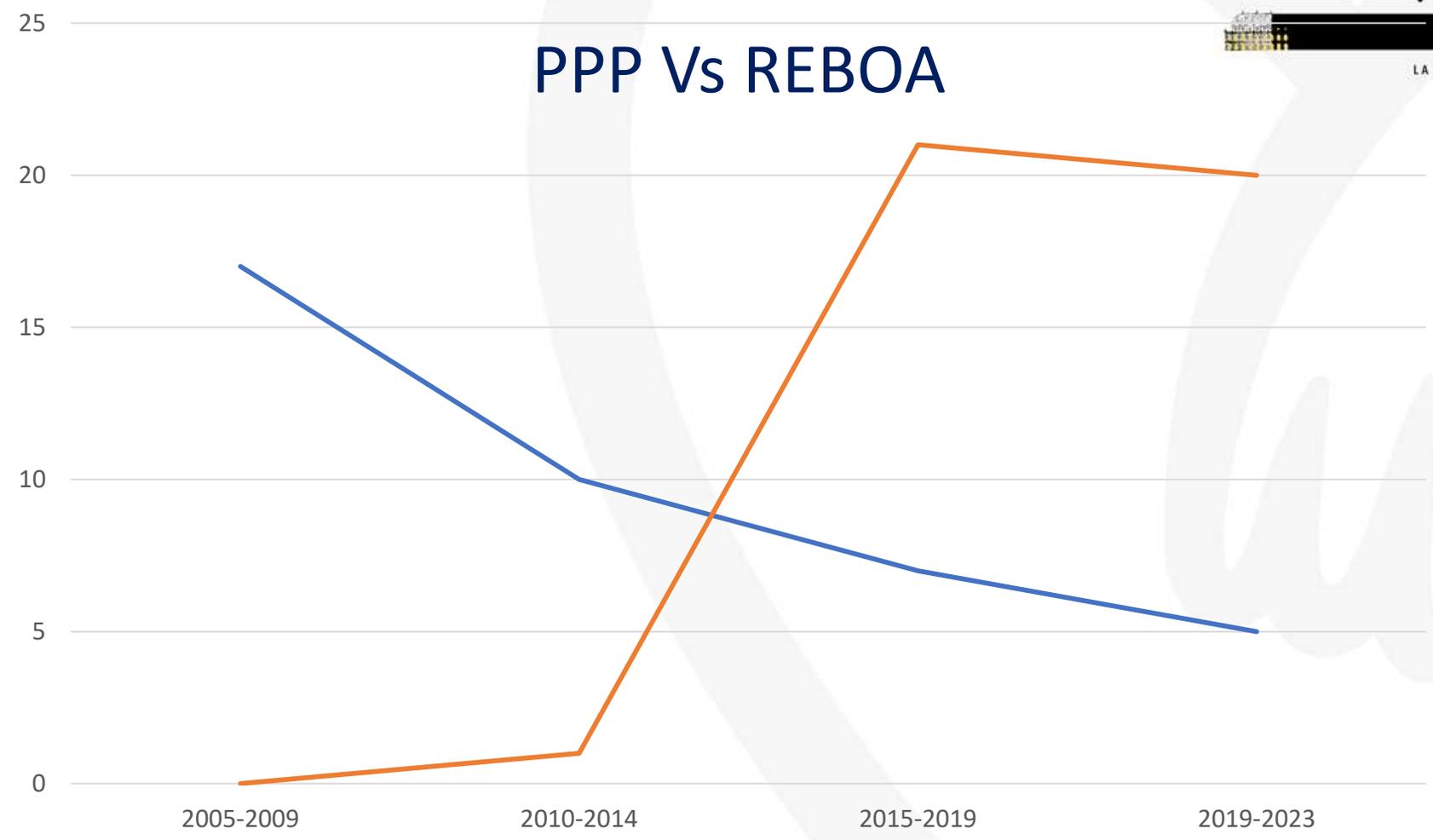
Preperitoneal pelvic packing in patients with hemodynamic instability due to severe pelvic fracture: early experience in a Korean trauma center

Ji Young Jang, Hongjin Shim, Pil Young Jung, Seongyup Kim and Keum Seok Bae\*





# PPP Vs REBOA



# Surgical resuscitation

## 1. Indications

Classic indications:

1. Penetrating trauma injuries with pre-hospital cardiac arrest.
2. Blunt and penetrating trauma suffering cardiac arrest upon arrival to the hospital or while in the trauma bay.
3. Patients with blunt and penetrating trauma suffering cardiac arrest while undergoing surgical procedures in the operating room, e.g. laparotomy or repair of peripheral vascular injuries.

Expanded indications:

1. Blunt trauma with cardiac arrest prior to hospital arrival.



## 3. Objectives of resuscitative thoracotomy

1. Control of thoracic hemorrhage
2. Relief of cardiac tamponade
3. Immediate repair of cardiac injuries
4. Open cardiac massage to restore cardiac output and circulation
5. Control of abdominal hemorrhage by cross-clamping of the descending thoracic aorta
6. Control of major thoracic vascular or pulmonary hilar injuries (Fig. 1).
7. Internal defibrillation in patients with ventricular fibrillation cardiac arrest.





World J Surg (2013) 37:1273–1283  
DOI 10.1007/s00268-013-1961-5

World Journal  
of Surgery

## Bilateral Anterior Thoracotomy (Clamshell Incision) Is the Ideal Emergency Thoracotomy Incision: An Anatomic Study

Eric R. Simms · Alexandros N. Flaris ·  
Xavier Franchim · Michael S. Thomas ·  
Jean-Louis Callot · Eric J. Voight

Published online: 23 February 2013  
© Società Internazionale di Chirurgia 2013

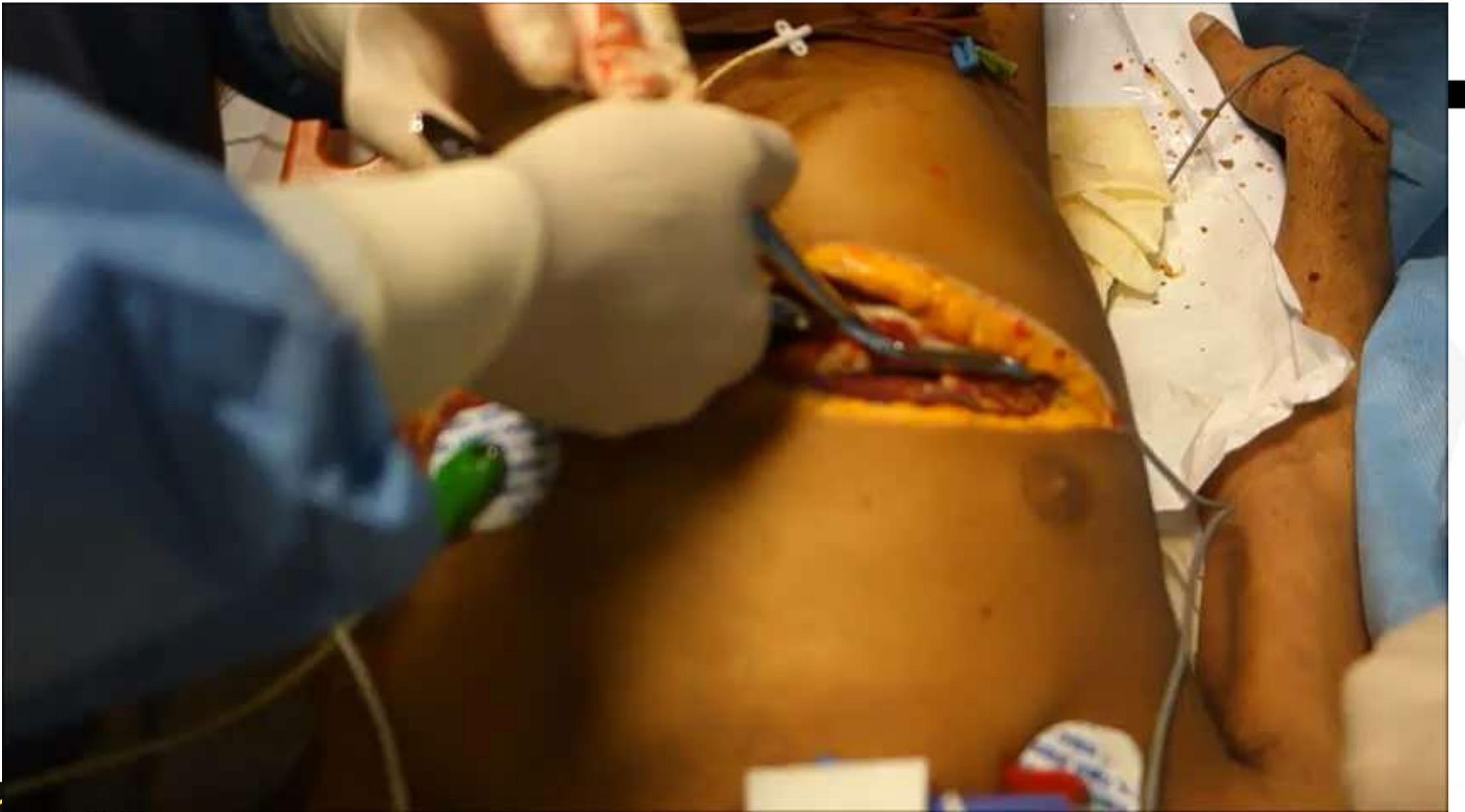
CONGRESSO NAZIONALE IRC 2013  
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# Results

Updates in Surgery (2019) 71:121–127  
<https://doi.org/10.1007/s13304-018-0607-4>

ORIGINAL ARTICLE



## Outcomes and indications for emergency thoracotomy after adoption of a more liberal policy in a western European level 1 trauma centre: 8-year experience

Edoardo Segalini<sup>1</sup> · Luca Di Donato<sup>2</sup> · Arianna Birindelli<sup>1</sup> · Alice Piccinini<sup>3</sup> · Alberto Casati<sup>1</sup> · Carlo Coniglio<sup>4</sup> · Salomone Di Saverio<sup>1,5</sup> · Gregorio Tugnoli<sup>1</sup> · Bologna Trauma Team collaborative group

Received: 7 March 2018 / Accepted: 11 November 2018 / Published online: 26 December 2018  
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### ERT indications

	SBP<60/Extremis	CA in ER during DC Resuscitation	PEA US: cardiac contraction	Asystole US: No cardiac contraction, No pericardial effusion
Penetrating Trauma	<b>YES</b>	<b>YES</b>	<b>YES</b> If CA <15'	Grey zone*
Blunt Trauma	Thorax → <b>YES</b>	<b>YES</b>	<b>YES</b> If CA <10'	<b>NO</b>
	Abdomen/Pelvis → first Laparotomy/REBOA			
Massive TBI Age Comorbidities	Grey zone*	Grey zone*	Grey zone*	<b>NO</b>

\* Grey zone: Decision must be discussed with Trauma Leader and Trauma Surgeon

# Results



**Table 1** The outcomes after ET during the period between January 1st, 2010 and December 31st, 2012, before the adoption of the more liberal policy

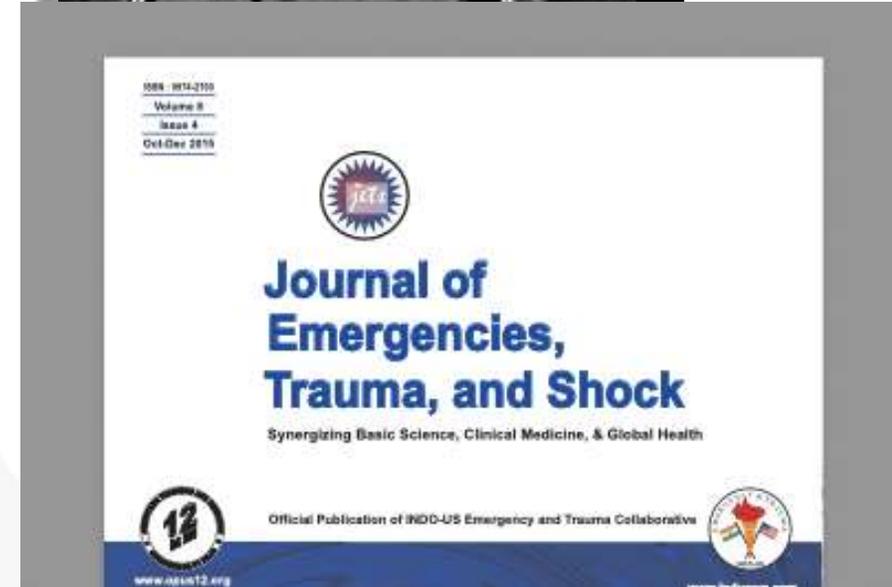
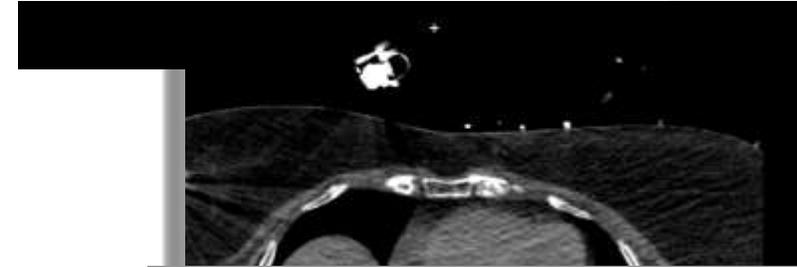
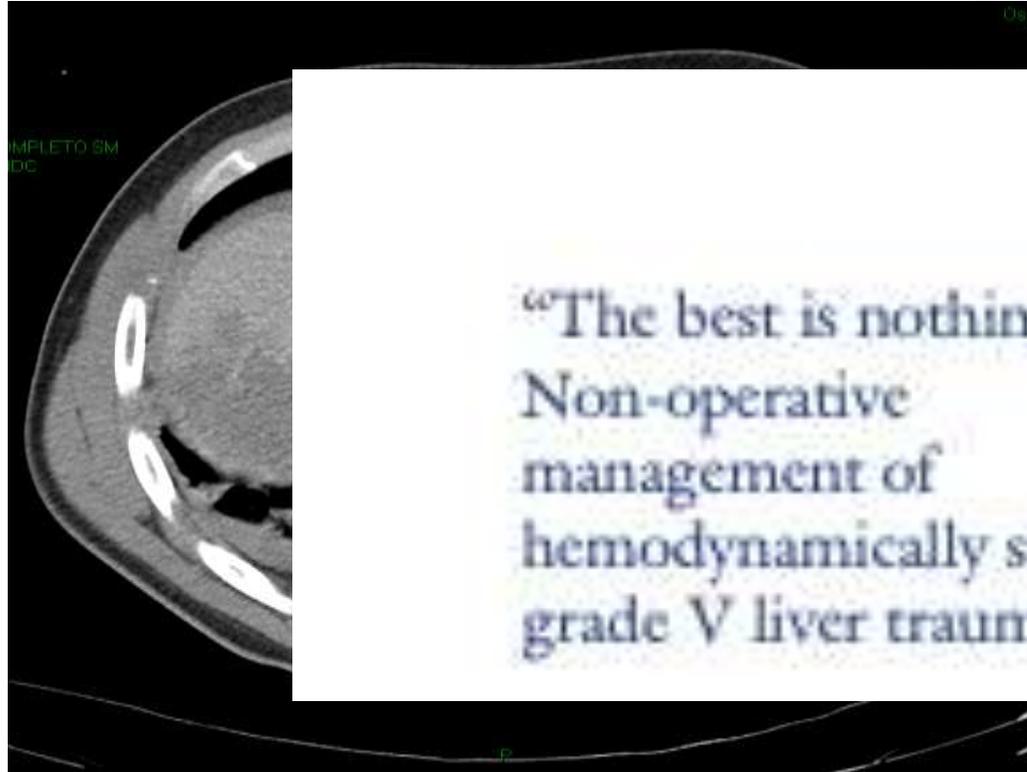
2010–2012	Total	Dead during ERT	Survived to the ERT	Dead in ICU	Survived
Patients	10	6 60%	4 40%	3 30%	1 10%

**Table 2** The outcomes after the adoption of the more liberal policy, during the period between January 1st, 2013 and May 31st, 2017

2013–2017	Total	Dead during ERT	Survived to the ERT	Dead in ICU	Survived
Patients	17	9 52.9%	8 47%	4 23.5%	4 23.5%

2018-2023	Total	Dead during ERT	Survived to the ERT	Dead in ICU	Survived
Patients	23	18 78,2%	5 21,7%	1 4,3%	4 17,3%

The best is.....



# Infine.....surgical resuscitation: gestione dei conflitti

**Conflitto : processo di interazione tra individui che richiede uno sforzo per affermare risorse, potere, status, convinzioni, preferenze e desideri**

*(Rahim, Managing conflicts in organization, Quorum Books 2001)*

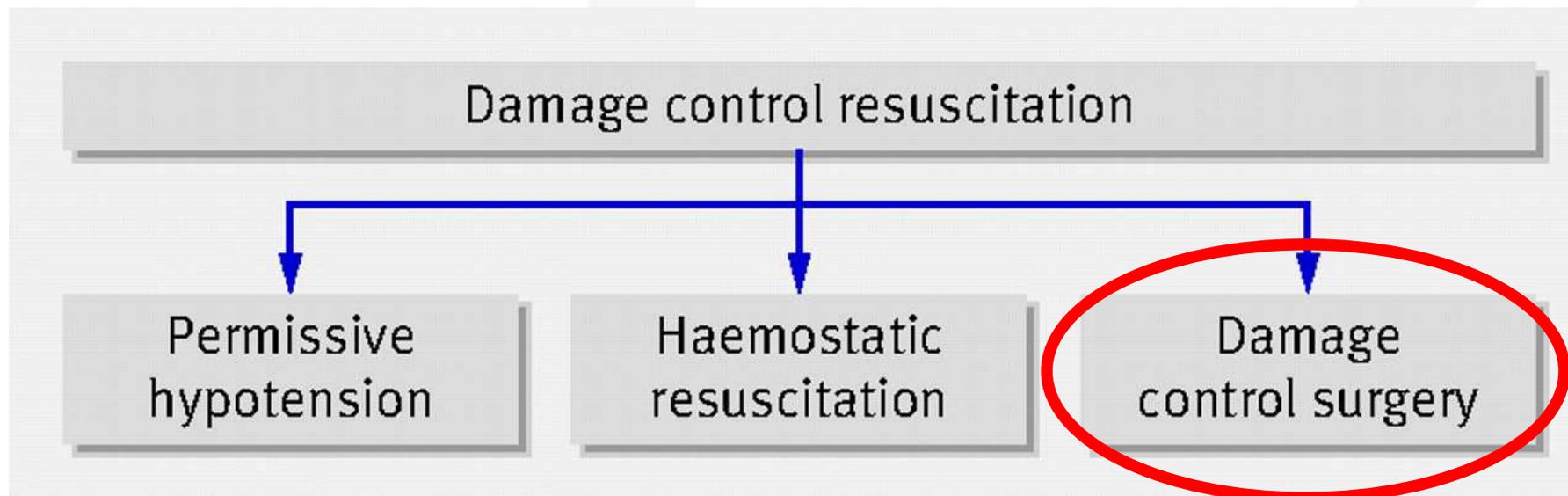
**I chirurghi entrano in conflitto più che qualsiasi altra categoria di medici ed i loro conflitti sono i più difficili da trattare. In sala operatoria le maggiori cause di conflitto riguardano le indicazioni, la tempistica, i ruoli, la sicurezza, la sterilità e il controllo delle situazioni critiche**

*(Skjorhammer, Studdert, Kresser)*

*(Lingard, Med Educ 2002)*

**Da molte fonti l'analisi e la risoluzione dei conflitti vengono indicate come una competenza indispensabile del chirurgo (L'American College of Surgeons, nell'ambito del corso "Surgeons as Leaders", include istruzioni per il trattamento di tali problematiche)**

# Conclusioni



Jansen J O et al. *BMJ* 2009;338:bmj.b1778

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BMJ





***GRAZIE PER LA VOSTRA ATTENZIONE!***

# Italian Resuscitation Council

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