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ED ETICA

TRIESTE 17-18 OTTOBRE 2025

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CONGRESSO NAZIONALE
SICUT 2025



Analgesia mediante blocchi loco-regionali

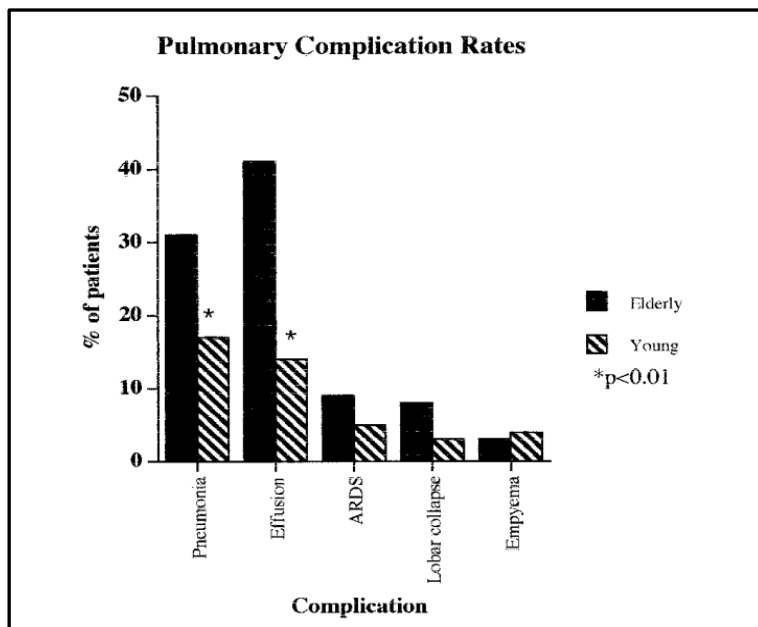
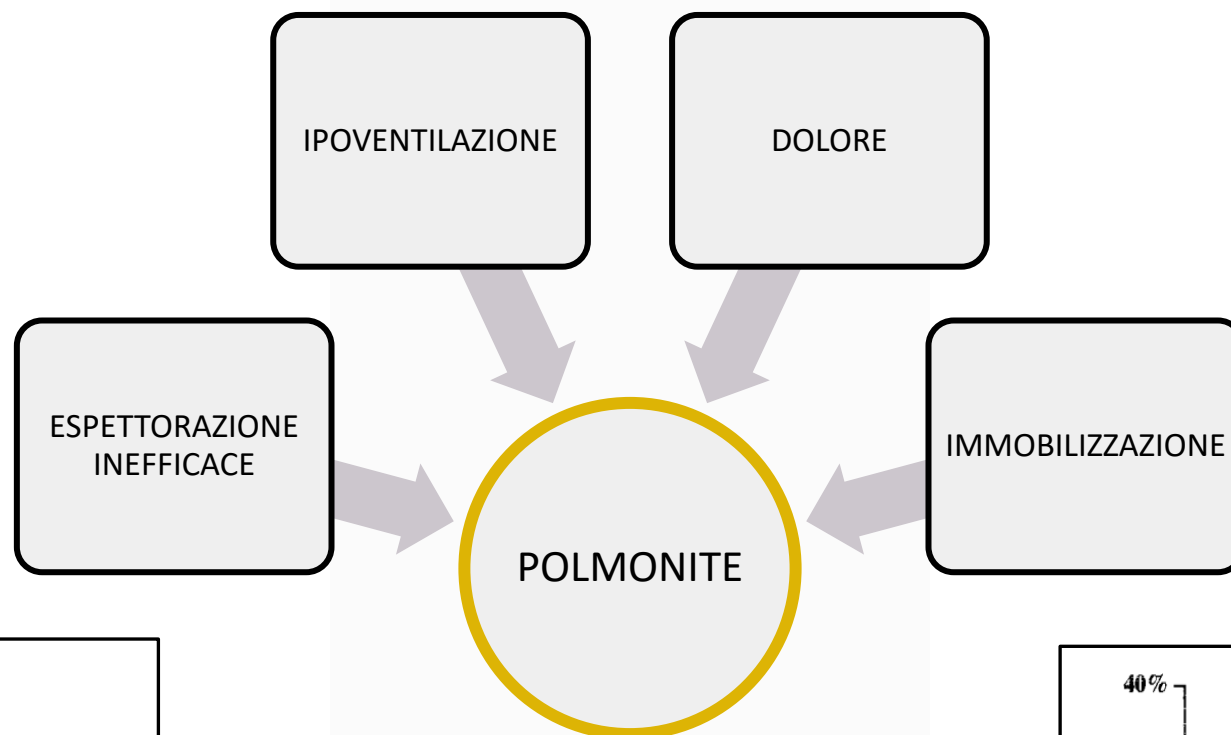
TRAMARIN JACOPO

DIRIGENTE MEDICO

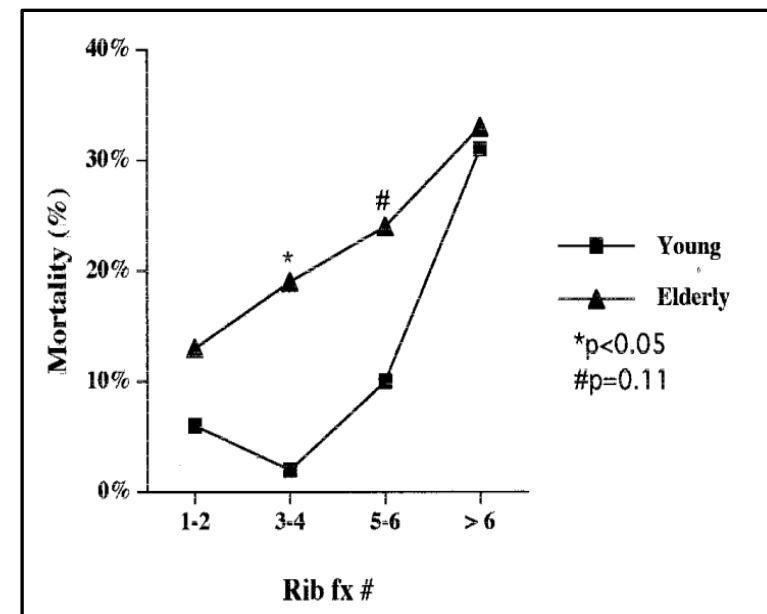
SC ANESTESIA E RIANIMAZIONE TIPO

AZIENDA SANITARIA UNIVERSITARIA GIULIANO
ISONTINA (ASUGI)

OSPEDALE DI CATTINARA



- 25% dei traumi in PS
- Riscontro patologico più frequente nei traumi toracici
- Mortalità direttamente correlata a #Fx
- △ over 65
- Incidenza in aumento



Trauma/Critical Care

Prospective study of long-term quality-of-life after rib fractures

Jeff Choi, MD, MSc^{a,b,*}, Suleman Khan, BSc^{b,c}, Dina Sheira, BSc^{b,c}, Nicholas A. Hakes^b, Layla Aboukhater, BSc^{b,c}, David A. Spain, MD, FACS^{a,b}

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Prospective Study of Long-Term Quality-of-Life after Rib Fractures

One-year after discharge*

40%

Rib Pain

30%

Not back to work

Revised Trauma-specific quality-of-life questionnaire



Emotional
well-being



Functional
engagement



Physical well-being
& Recovery

Action items



Counsel patients:
expect prolonged convalescence



Research: how to improve
long-term outcomes?

*N=139 enrolled, 72 (52%) follow-up rate

North Pacific Surgical Association

The contribution of rib fractures to chronic pain and disability



Stephanie Gordy, M.D., Loïc Fabricant, M.D., Bruce Ham, M.D., Richard Mullins, M.D., John Mayberry, M.D.*

Division of Trauma, Critical Care, & Acute Care Surgery, Department of Surgery, Oregon Health & Science University, Portland, OR, USA

KEYWORDS:

Rib fractures;
Flail chest;
Chronic pain;
Disability

Abstract

BACKGROUND: The contribution of rib fractures to chronic pain and disability is not well described.

METHODS: Two hundred three patients with rib fractures were followed for 6 months. Chronic pain was assessed using the McGill Pain Questionnaire Pain Rating Index and Present Pain Intensity (PPI) scales. Disability was defined as a decrease in work or functional status.

RESULTS: The prevalence of chronic pain was 22% and disability was 53%. Acute PPI predicted chronic pain. Associated injuries, bilateral rib fractures, injury severity score, and number of rib fractures were not predictive of chronic pain. No acute injury characteristics were predictive of disability. Among 89 patients with isolated rib fractures, the prevalence of chronic pain was 28% and of disability was 40%. No injury characteristics predicted chronic pain. Bilateral rib fractures and acute PPI predicted disability.

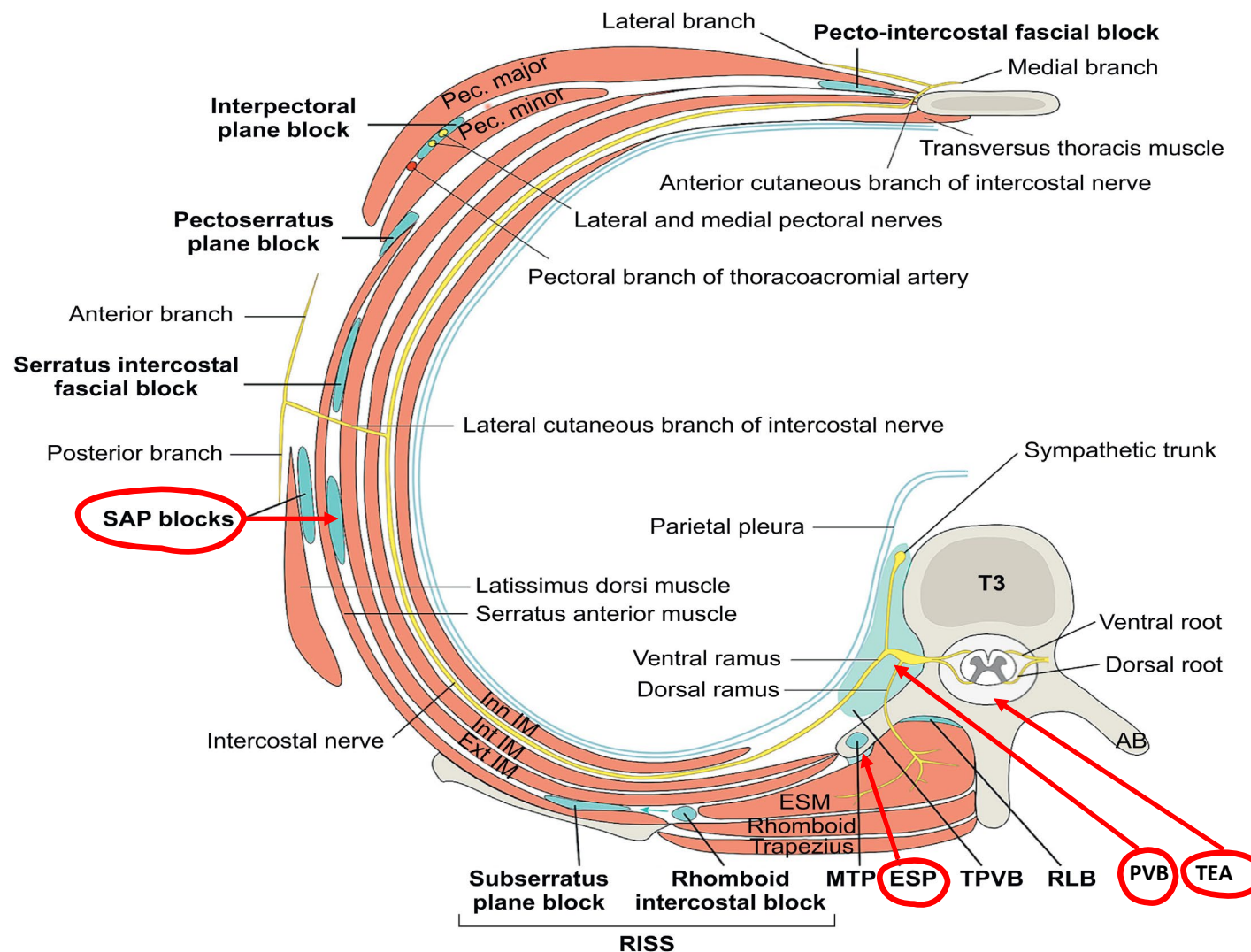
CONCLUSION: The contribution of rib fractures to chronic pain and disability is significant but unpredictable with conventional injury descriptors.

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Editorial

Regional anaesthesia for rib fractures: too many choices, too little evidence

K. El-Boghdady^{1,2} and M. D. Wiles³



Editorial

Regional anaesthesia for rib fractures: too many choices, too little evidence

K. El-Boghdadly^{1,2} and M. D. Wiles³

First author, year	Study design	Number of patients	Authors’ conclusion
Singh, 2023	RCT	40	ESP provides similar analgesia to TEA with better hemodynamic stability
Mostafa, 2022	RCT	60	ESP can be considered a safe and effective alternative to thoracic epidural analgesia in unilateral flail chest
Zhao, 2022	RCT	80	RLB was a more effective analgesic method than ESP in multiple rib fractures
El Malla, 2021	RCT	50	Both ESP and SAPB provided safe and effective pain relief in traumatic rib fractures
Elawamy, 2022	RCT	60	ESP was as effective as thoracic PVB with fewer adverse effects
Elmansy, 2023	Randomized comparative study	52	ESP was superior to IVPCA
Armin, 2022	Randomized non-blinded trial	50	ESP was superior to intercostal nerve block for pain control
Riley, 2020	Retrospective	34	ESP and SAPB are safe and effective, no difference in MME
Adhikary, 2019	Retrospective	79	ESP associated with improved inspiratory capacity and analgesic outcomes without instability
			... (continua)

First author, year	Study design	Number of patients	Authors’ conclusion
Rehab, 2023	RCT	70	Continuous SAPB is a safe and effective alternative to TPVB for unilateral multiple rib fractures.
Tekşen, 2021	RCT	60	SAPB as part of multimodal analgesia is safe and effective in reducing acute pain.
Bhalla, 2021	Retrospective	14	No difference between SAPB and TEA/PVB in pain scores or respiratory function.
Diwan, 2021	Retrospective	72	SAPB is opioid-sparing, effective, and should be considered early in patients with MRFs.
Beard, 2020	Retrospective	354	SAPB, TEA, and TPVB all reduce pain and improve respiratory function.
Hernandez, 2019	Retrospective	34	SAPB is better than TEA for rib fracture analgesia.
Kring, 2022	Interventional	20	SAPB reduced pain at rest and increased vital capacity.
Schnekenburger, 2021	Prospective observational	20	Ultrasound-guided SAPB is feasible and effective in ED.
Harrington, 2022	Retrospective case series	13	SAPB can be safely performed in prehospital and retrieval settings.
Singh, 2022	Retrospective case series	7	SAPB provides effective analgesia.
			...(continua)

Comparison of safety and efficacy of thoracic epidural block and erector spinae plane block for analgesia in patients with multiple rib fractures: A pilot single-blinded, randomised controlled trial

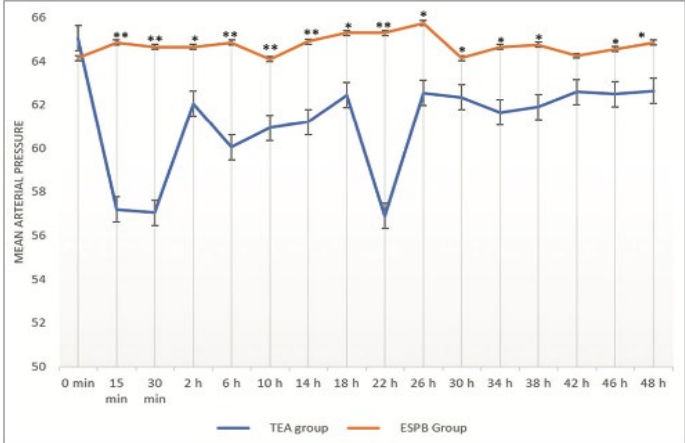
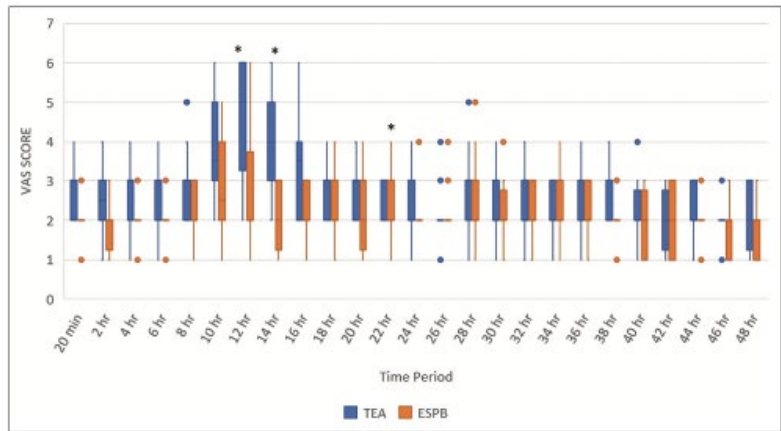
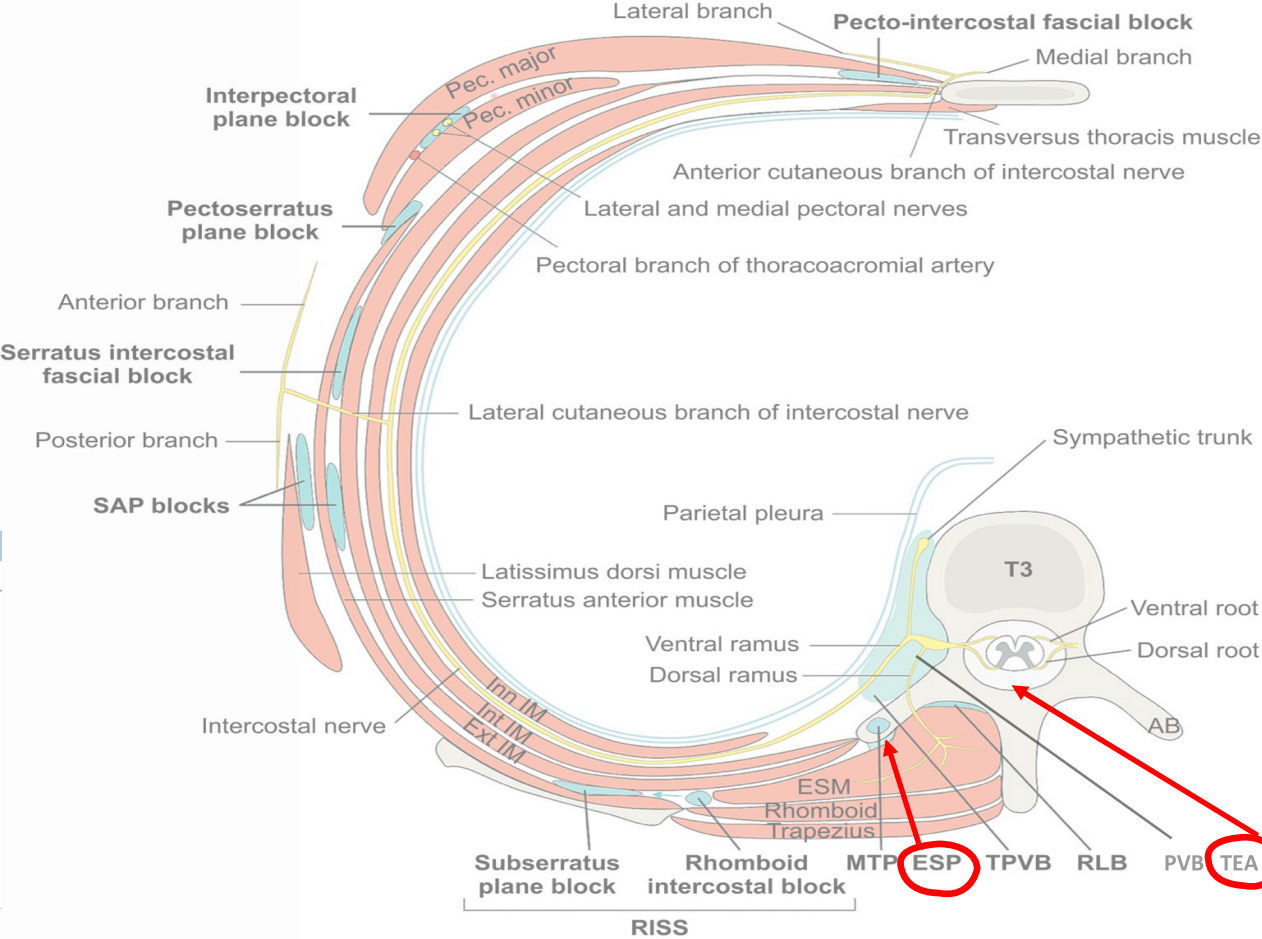
Singh, Swati; Avinash, Raja; Jaiswal, Shreyas; Kumari, Anita

Author Information

Indian Journal of Anaesthesia 67(7):p 614-619, July 2023. | DOI: 10.4103/ija.ija_844_21

Table 1: Demographic and clinical characteristics

	TEA group (n=20)	ESPB group (n=20)	P
Age (years)	34.9±9.5	35.4±10.1	0.84
Sex (M/F)	15/5	14/6	0.73
BMI (kg/m²)	26.7±1.5	25.2±1.8	0.53
Rib fracture (unilateral/bilateral)	18/2	16/4	0.52
Number of fractured ribs (3/4/5)	14/4/2	16/2/2	0.34
Chest tube insertion (right/left/none)	3/5/12	5/3/12	0.45
Associated injury	18	17	0.75
Lower limb injury	10	11	
Upper limb surgery	5	6	
Solid organ injury	3	0	
Radiographic scoring system	3 (3, 3)	3 (3, 3)	0.88



Analgesia similare

Dose Morfina paragonabile

< ipotensioni gruppo ESP



OPEN ACCESS

Multicenter longitudinal cross-sectional study comparing effectiveness of serratus anterior plane, paravertebral and thoracic epidural for the analgesia of multiple rib fractures

Laura Beard ¹, Carl Hillermann ², Emma Beard ³, Sue Millerchip ²,
Rajneesh Sachdeva ¹, Fang Gao Smith ⁴, Tonny Veenith ^{1,4}

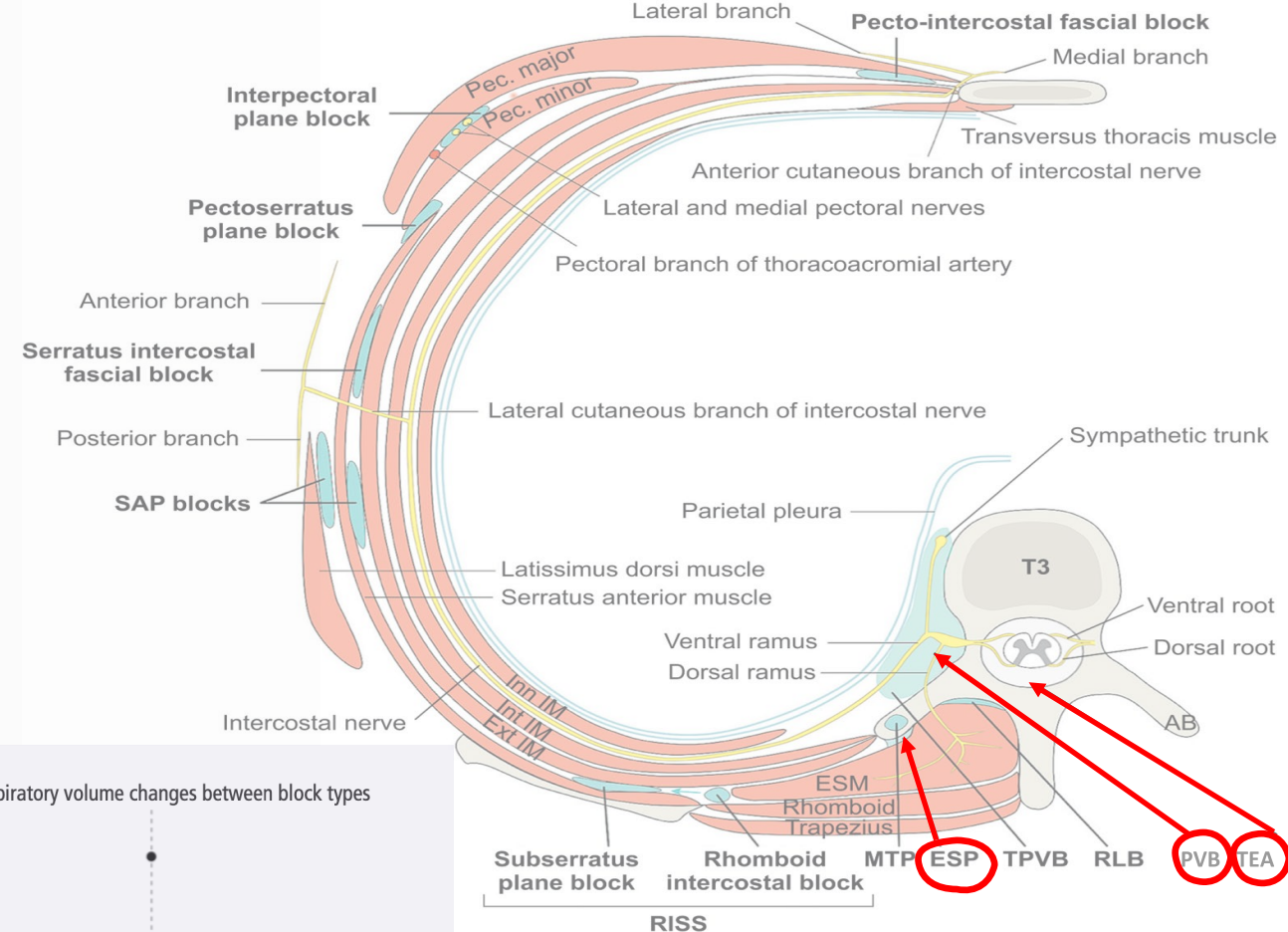
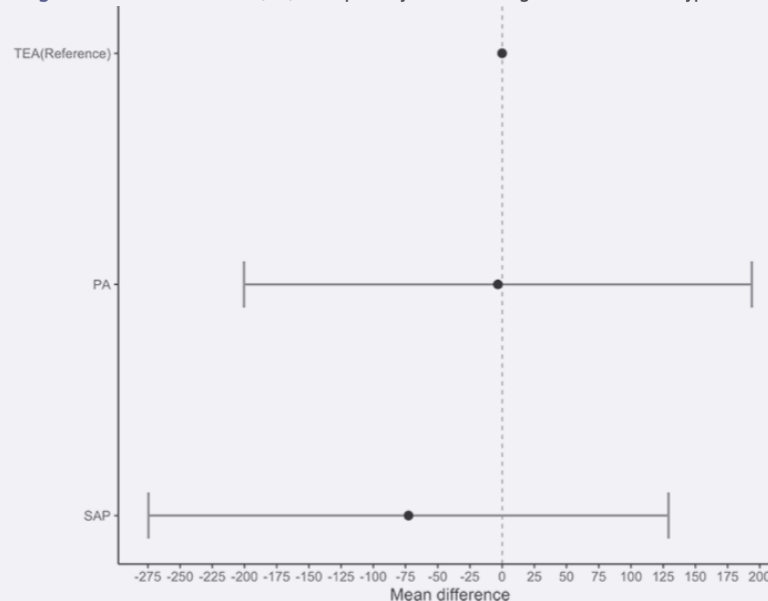
BMJ Journals

Regional Anesthesia & Pain Medicine

Table 2 Prepain and postpain scores overall and as a function of block type

	Preblock	Postblock
Overall, n (%)		
No pain	1 (0.5)	20 (10.1)
Mild pain	3 (1.5)	111 (55.8)
Moderate pain	42 (21.1)	66 (33.2)
Severe pain	153 (76.9)	2 (1.0)
SAP, n (%)		
No pain	1 (1.6)	7 (11.5)
Mild pain	2 (3.3)	27 (44.3)
Moderate pain	10 (16.4)	25 (41.0)
Severe pain	48 (78.7)	2 (3.3)
PA, n (%)		
No pain	0 (0.0)	2 (3.6)
Mild pain	0 (0.0)	36 (64.3)
Moderate pain	13 (23.2)	18 (32.1)
Severe pain	43 (76.8)	0 (0.0)
TEA, n (%)		
No pain	0 (0.0)	11 (13.4)
Mild pain	1 (1.2)	48 (58.5)
Moderate pain	19 (23.8)	23 (28.1)
Severe pain	62 (75.6)	0 (0.0)

Figure 2 Mean difference (CIs) in inspiratory volume changes between block types



PVB o TEA o SAP

DOLORE

FN. RESP.

Serratus Anterior Plane Blocks for Early Rib Fracture Pain Management

The SABRE Randomized Clinical Trial

Christopher Partyka, MBBS, BMedSci, MD^{1,2,3}; Stephen Asha, MD^{4,5}; Melanie Berry, MD^{6,7,8}; [et al](#)

POPULATION

129 Men, 78 Women



Adults with clinically suspected or radiologically proven rib fractures

Mean age, 71 y

INTERVENTION

210 Patients randomized



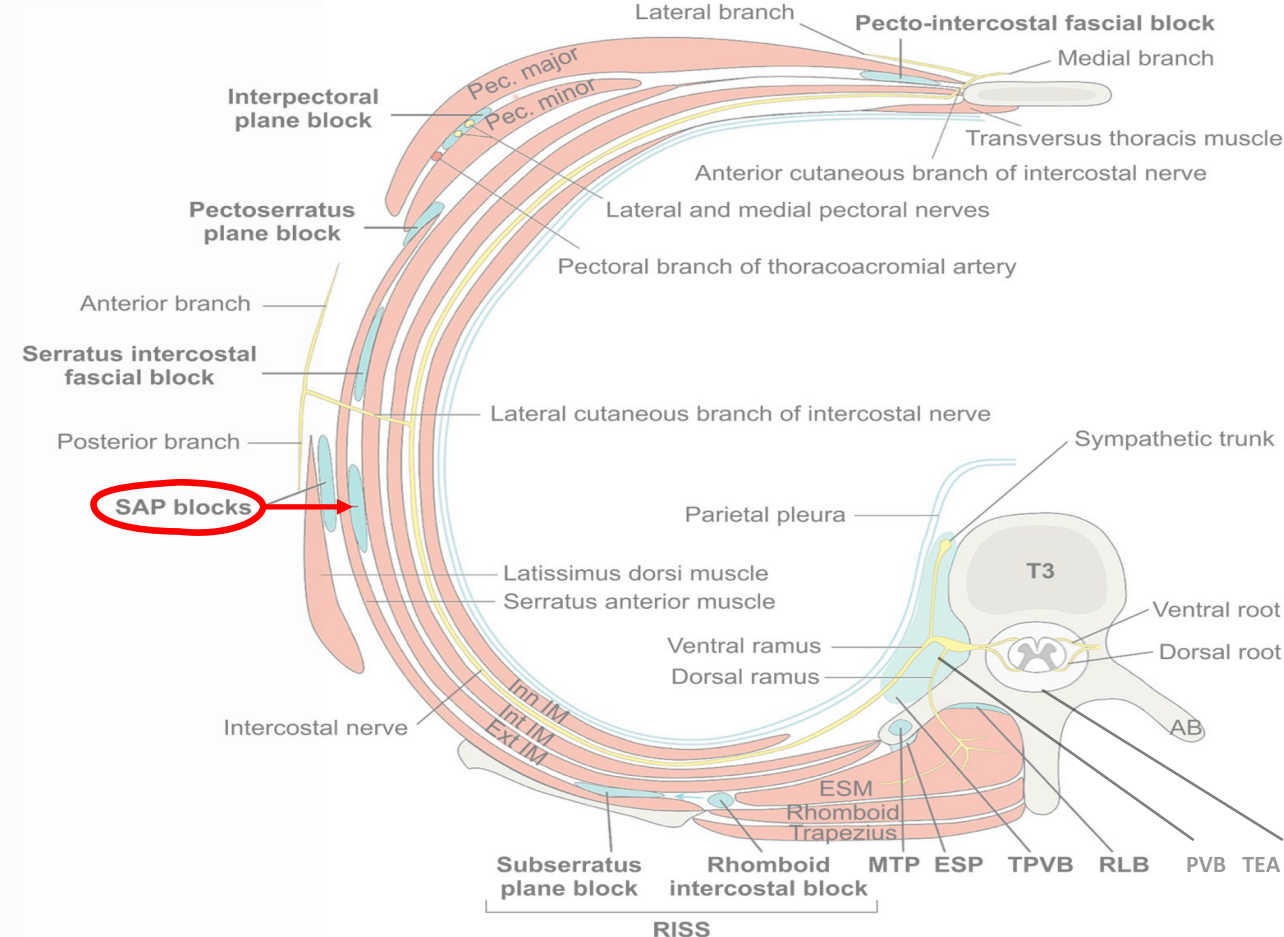
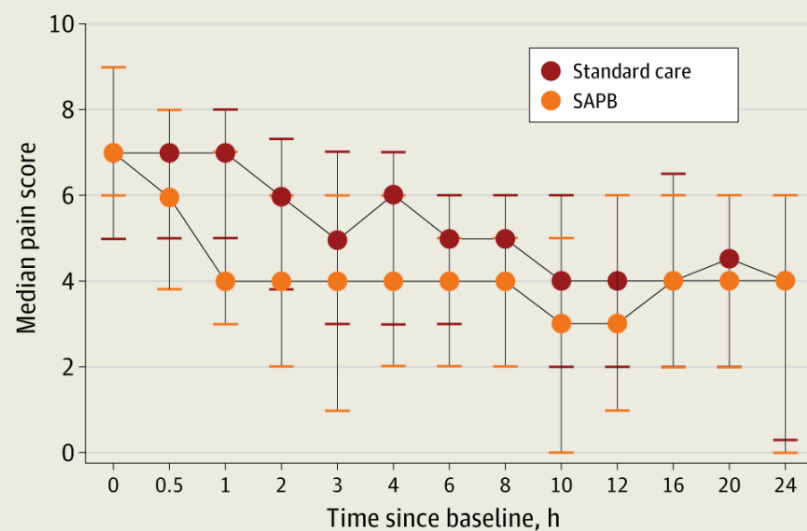
105 Serratus anterior plane block (SAPB)

A single injection of local anesthetic adjacent to the serratus muscle plus standard care



105 Standard care

Protocolized rib-fracture care bundles



SAPB group miglior score NRS

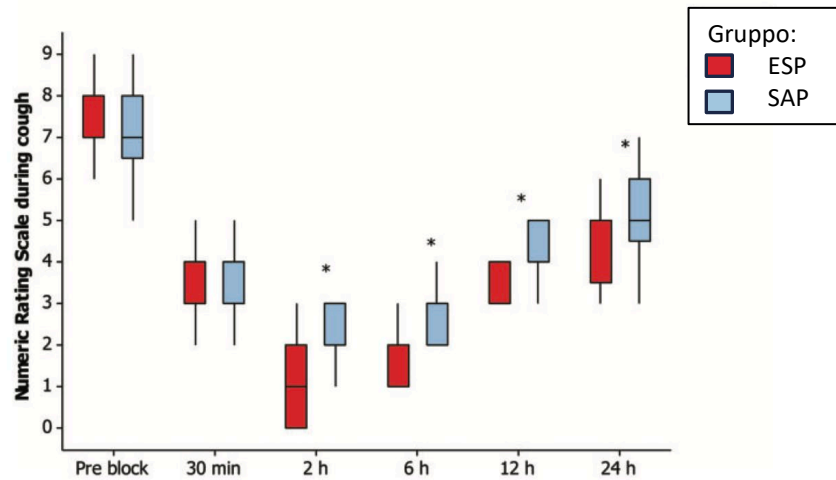
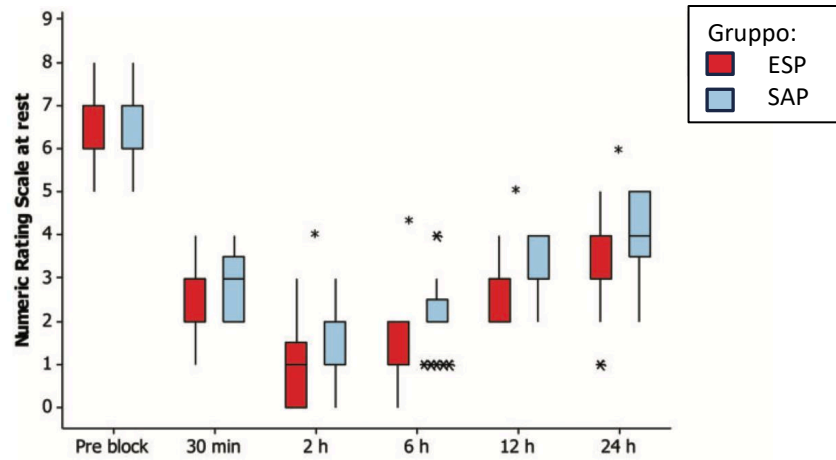
SAPB group < oppioidi

Stessa incidenza di polmonite

Stessa durata degenza

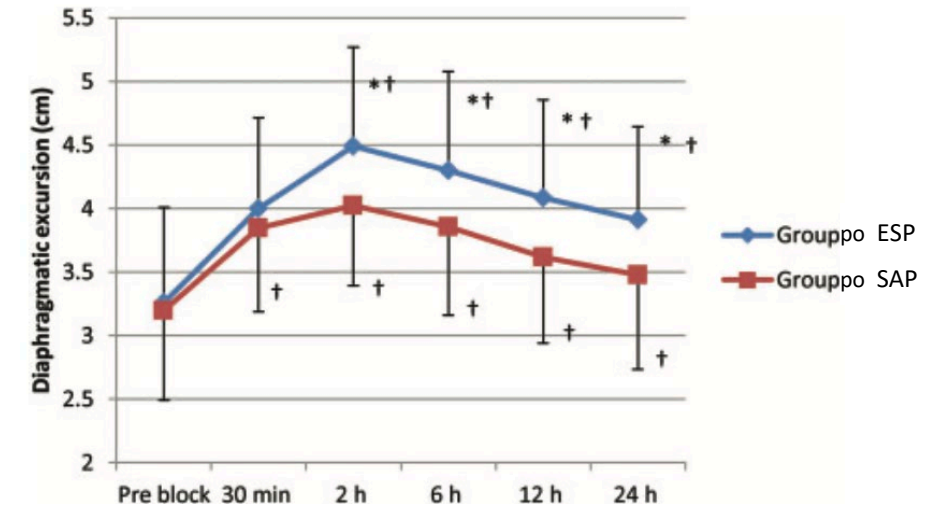
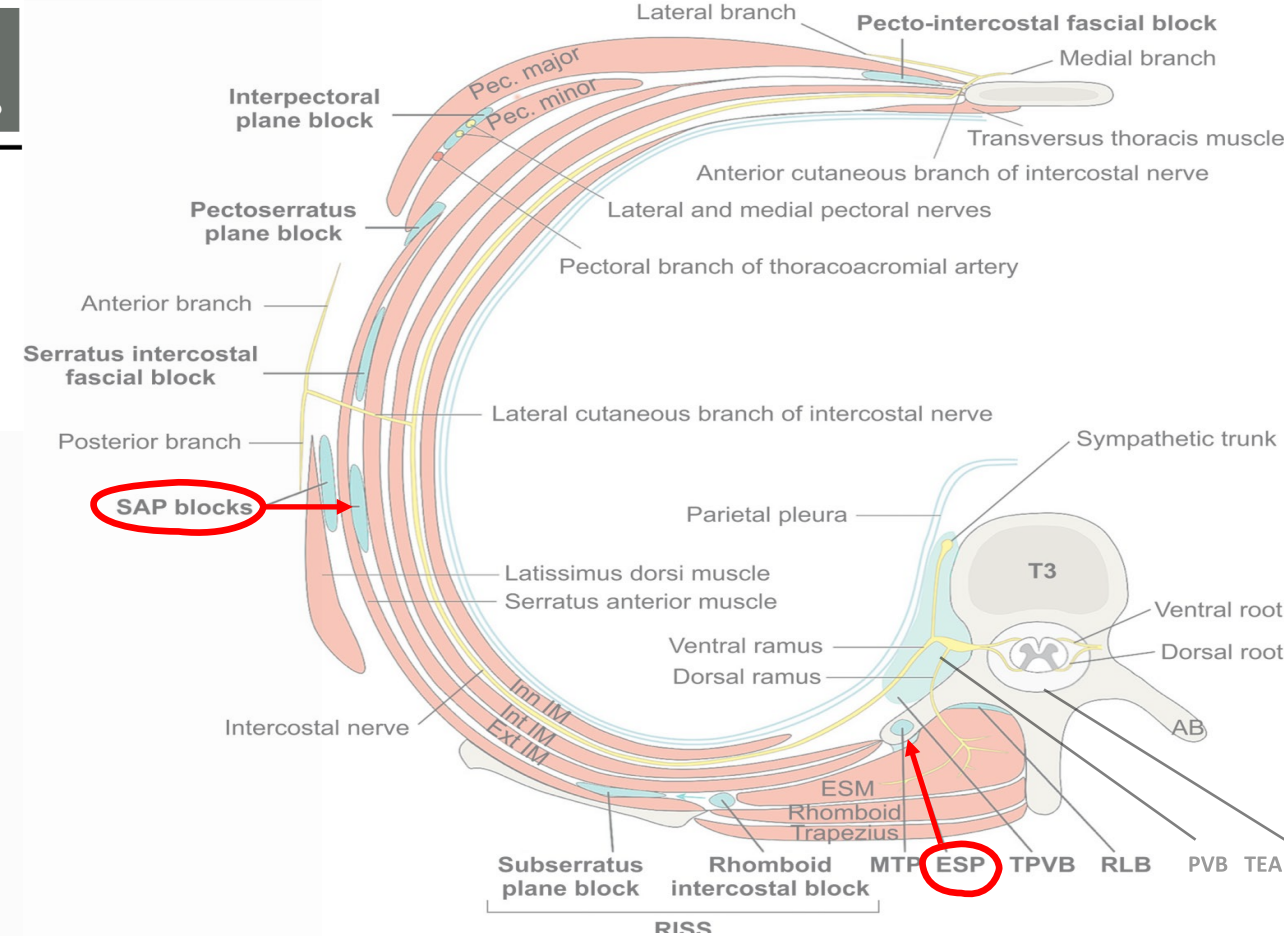
The Effect of Erector Spinae Block versus Serratus Plane Block on Pain Scores and Diaphragmatic Excursion in Multiple Rib Fractures. A Prospective Randomized Trial

Dina Ahmed El Malla, MD,* Rehab Abd El fattah Helal, MD,* Tamer Atef Mohamed Zidan, MD,[†] and Mona Blough El Mourad, MD*



Conclusion

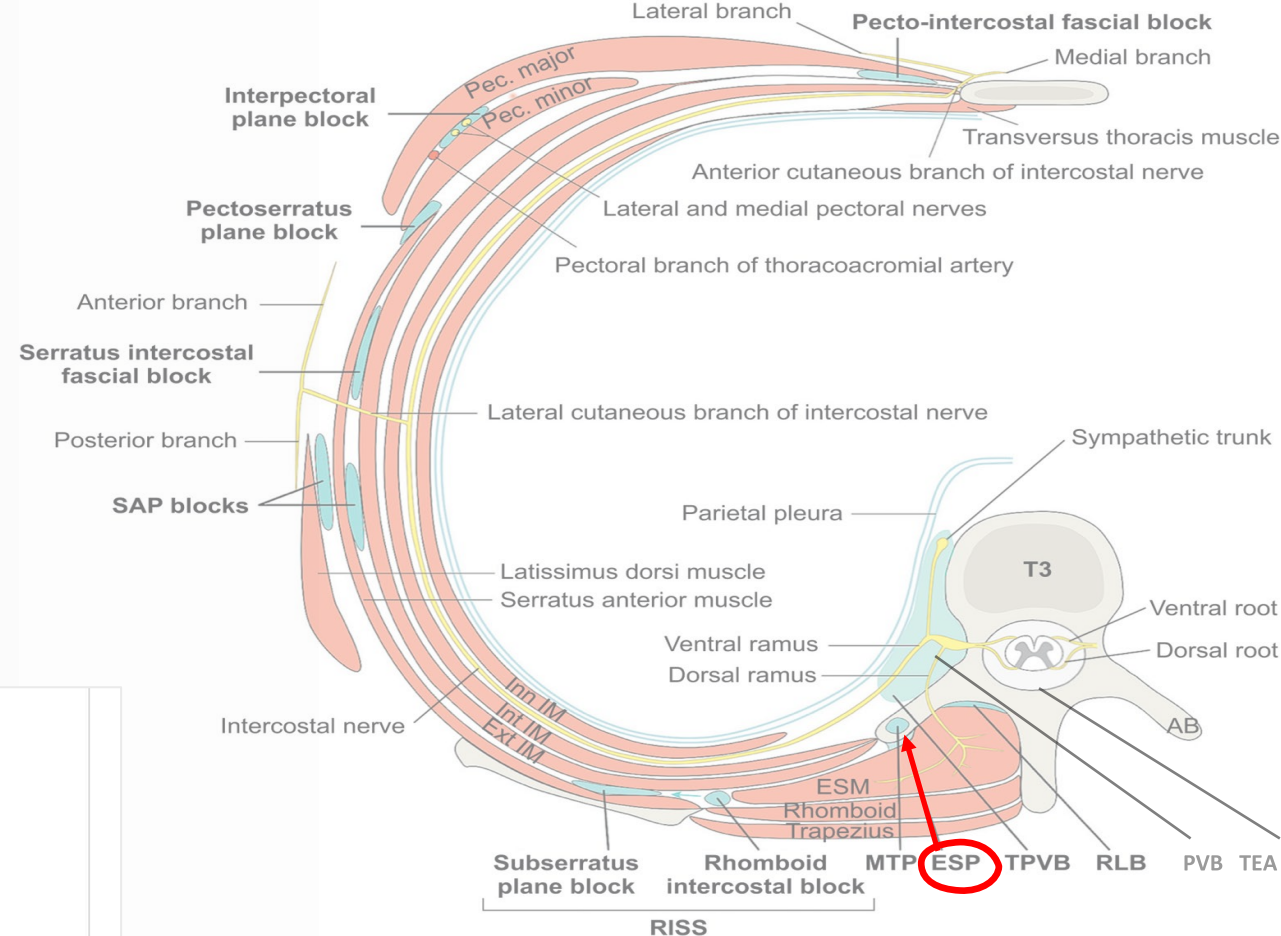
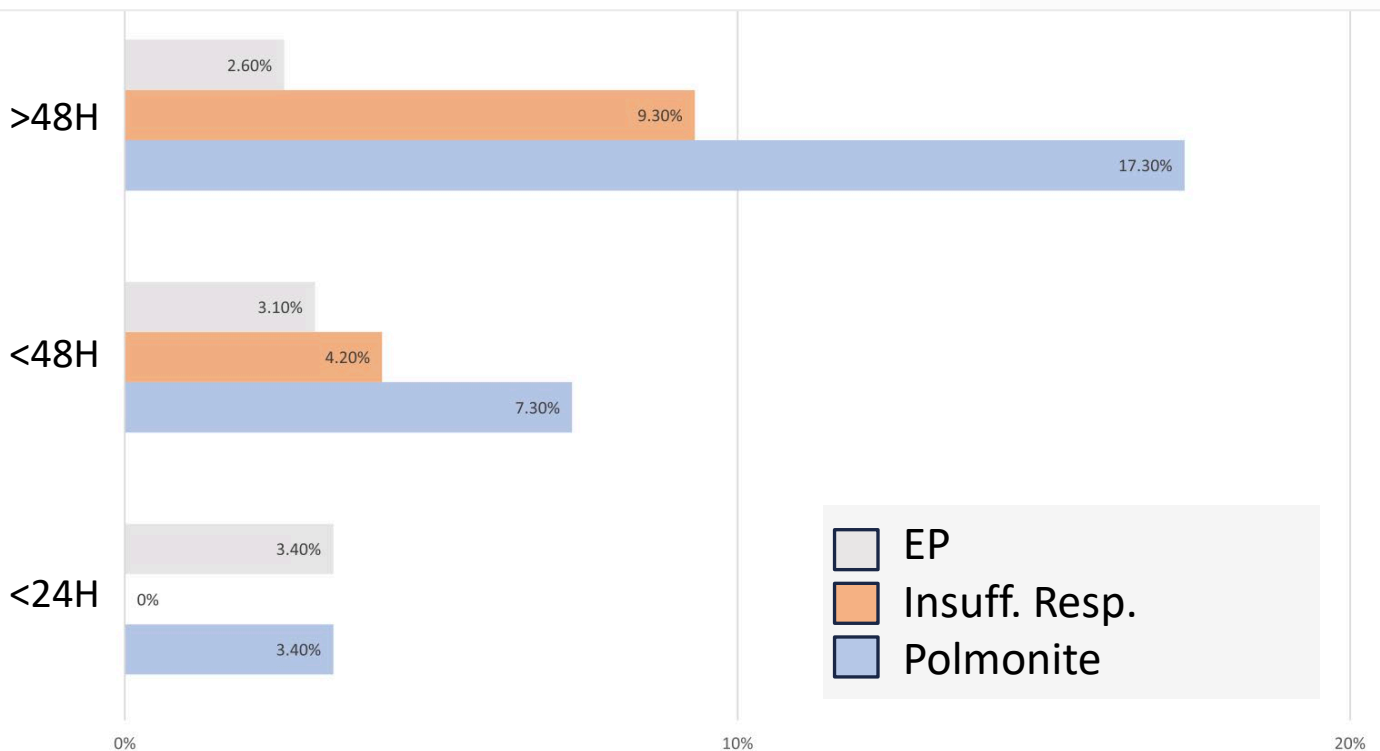
The results of this prospective study indicated that both ESPB and SAPB were effective in managing pain following rib fracture, with ESPB being advantageous over SAPB in lowering the pain scores, reducing the opioid consumption, as well as improving the diaphragmatic excursion in patients with multiple rib fractures but without attaining clinical significance.



Original Contribution

The association between erector spinae plane block timing and reduced rib fracture related respiratory complications: A cohort study

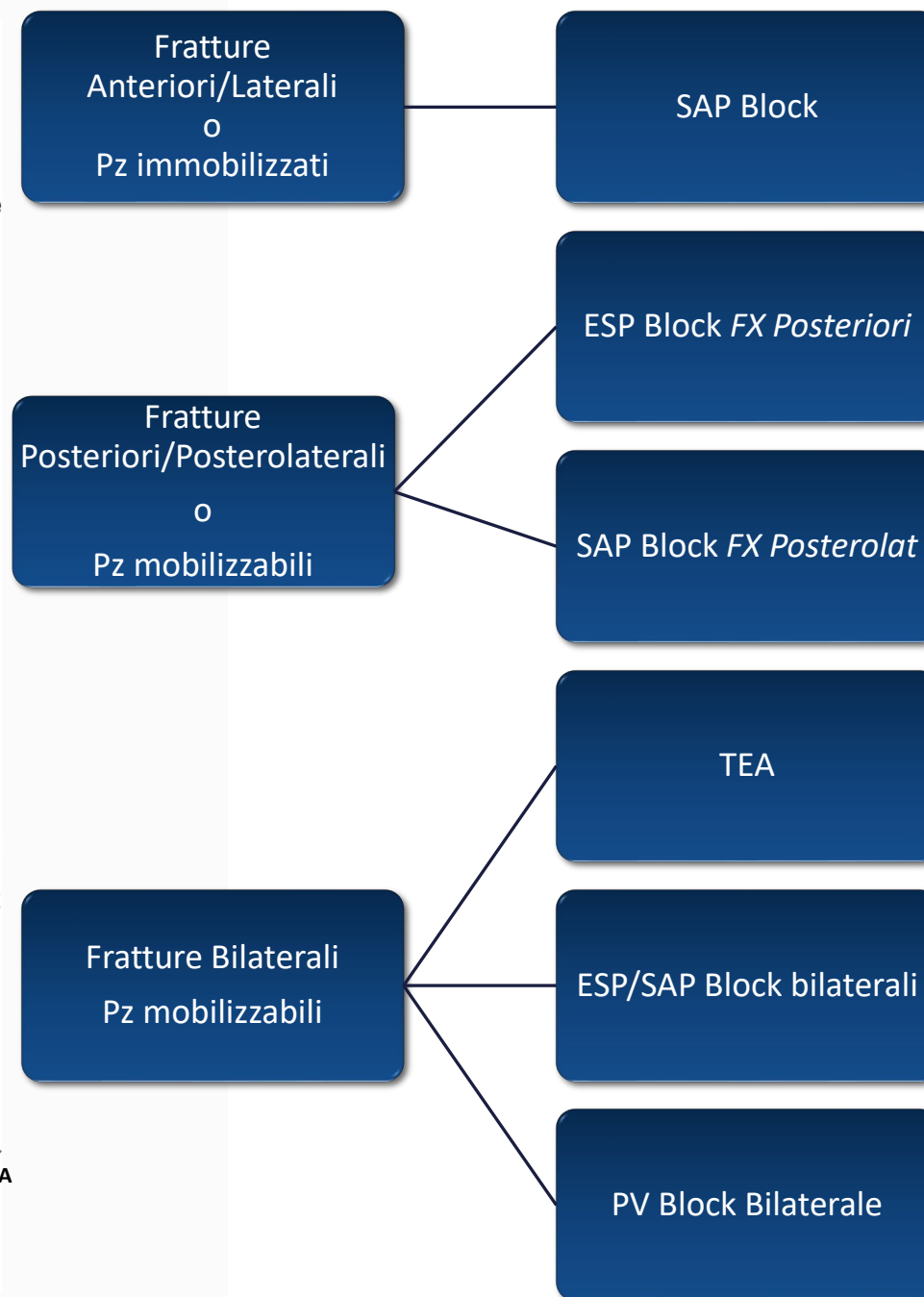
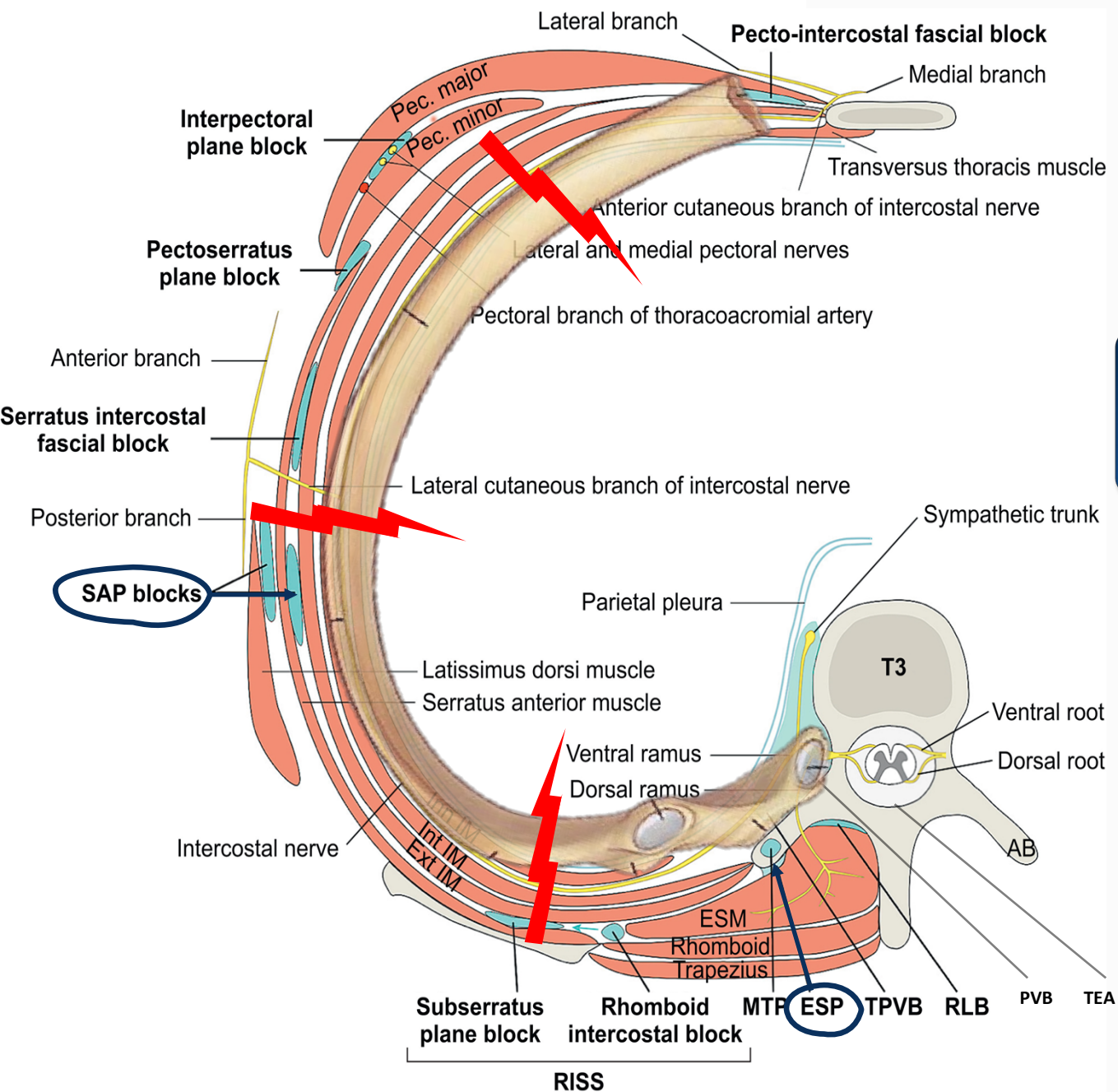
Jordanna Mladenovic ^a, Ryan N. Erskine ^b, Brooke Riley ^c, Andrew Mitchell ^d, Catherine Abi-fares ^d, Willem Basson ^d, Chris Anstey ^e, Leigh White ^{d f}  



ESP a >48h associato a complicanze respiratorie

ESP a >48h associato a > durata ricovero in ICU

No benefit blocco a 24h vs 48h

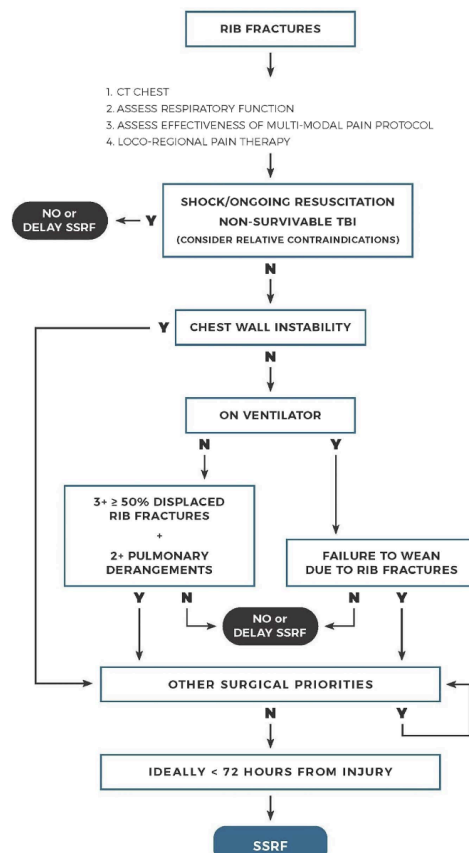


Chest Wall Injury Society guidelines for surgical stabilization of rib fractures: Indications, contraindications, and timing

id Bauman, Zachary M. DO, MHA, FACS, FACS; Tian, Yuqian MD; Doben, Andrew R. MD, FACS; Schubl, Sebastian D. MD, FACS, FSIS; Pieracci, Fredric M. MD, MPH; Kaye, Adam J. MD, MHA, FACS; Towe, Christopher W. MD; Patel, Bhavik MBBS, MS, FRACS, FACS; Kartiko, Susan MD, PhD, FACS; Whitbeck, Sarah Ann MBA, MEd, FACEHP; Sarani, Babak MD, FACS, FCCM; White, Thomas W. MD, FACS

Author Information 

Journal of Trauma and Acute Care Surgery 99(4):p 522-532, October 2025. | DOI: 10.1097/TA.0000000000004750 



Sermonesi et al.
World Journal of Emergency Surgery (2024) 19:33
<https://doi.org/10.1186/s13017-024-00559-2>

World Journal of
Emergency Surgery

REVIEW

Open Access

Surgical stabilization of rib fractures (SSRF): the WSES and CWIS position paper



bral fractures [279]. Recently, ultrasound-guided myofascial plane blocks such as the erector spinae plane blocks (ESPB) block and the serratus anterior plane blocks (SAPB) have been used to provide less invasive alternative pain management strategies, with low incidences of adverse effects while exhibiting similar levels of analgesia [280, 281]. Peripheral nerve blocks have significant potential and may be preferred to neuraxial techniques in the future; however, further research is needed to clarify the effectiveness and weaknesses of different techniques, the use of which in different centers often depends on the preferences and experience of the team [282]. The identification of the optimal pain management strategies in patients with rib fractures can allow to standardize their use during NOM in different centers and can contribute to improve patients' selection for surgical treatment.



SURGERY

STUMBL >10

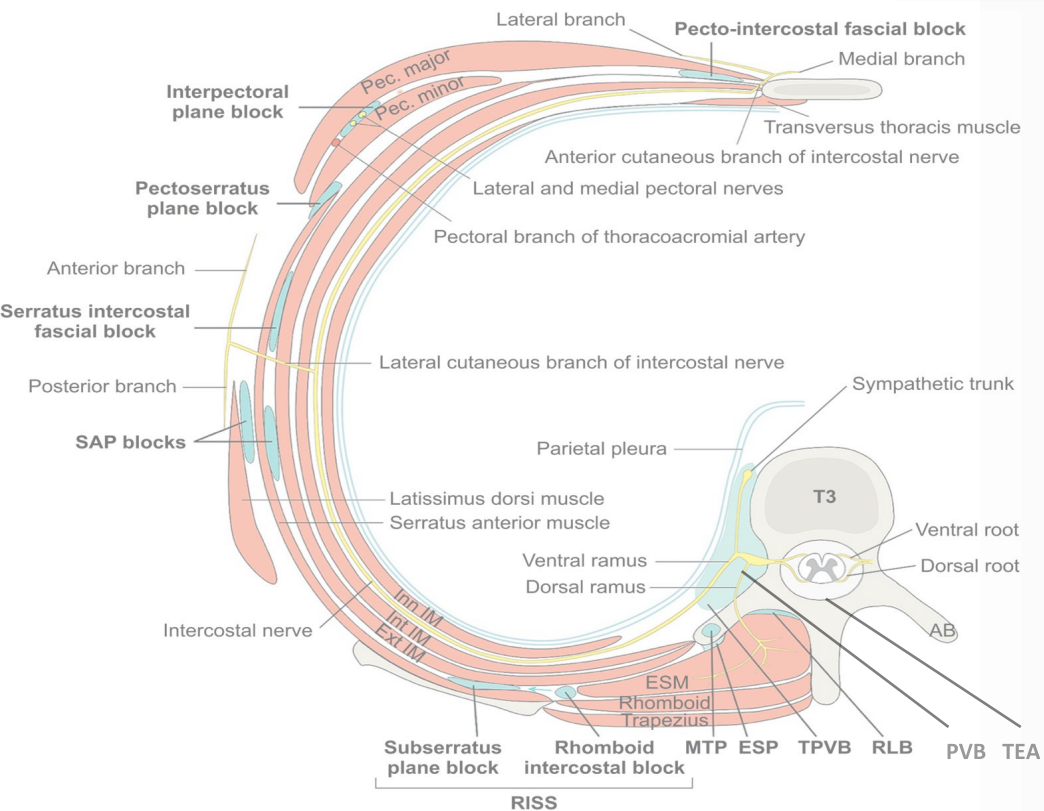
DOLORE NON
CONTROLLATO

NON OPIOID NAIVE

VITAL CAPACITY
<15ML/KG

FLAIL CHEST

FAILED WEANING



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Grazie

IL CHIRURGO QUANDO L'ANESTESISTA DEVE FARE IL BLOCCO



This little maneuver is gonna cost us 51 years