

## MANAGEMENT OF SEVERE RIB FRACTURES



\* Image courtesy of Mario G. Gasparri, MD at Medical College of Wisconsin, USA

FLAIL CHEST OCCURS IN

**5-13%**

of patients with chest wall trauma<sup>1</sup>

WITH A MORTALITY RATE OF

**10-20%**

<sup>2,3,4,5</sup>

RIB FRACTURES PATIENTS SHOW

a prevalence of chronic pain of 22%<sup>6</sup> and disability of 53%<sup>6</sup>

## BENEFITS OF OPERATIVE FIXATION FOR SEVERE RIB FRACTURES

Operative fixation of flail chest injuries shows a **significant reduction** ( $p < 0.05$ ) compared to nonoperative rib fixation<sup>7</sup> in terms of

**56%**

lower risk of **mortality**  
(Risk ratio [SD] 0.44 [ $\pm$ 0.09])

**3.25**

less **ICU days**  
(SD  $\pm$ 1.29)

**41%**

lower risk of **pneumonia**  
(Risk ratio [SD] 0.59 [ $\pm$ 0.10])

**4.84**

less **hospital days**  
(SD  $\pm$ 1.98)

**48%**

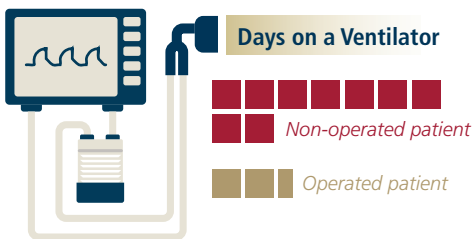
lower risk of **tracheotomy**  
(Risk ratio [SD] 0.52 [ $\pm$ 0.07])

**4.57**

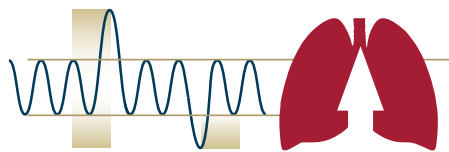
less **ventilator days**  
(SD  $\pm$ 0.59)

## MatrixRIB FIXATION SYSTEM | OPERATIVE TREATMENT RESULTS

The MatrixRIB System has been evaluated in **52 PUBLISHED STUDIES** involving **1,028 PATIENTS**<sup>8</sup>



**Significant reduction** of ventilator days from **9 to 2.7 days** from non-operated to operated patients<sup>9</sup>



Improvement of pulmonary function by **regaining 84%** Forced Vital Capacity (FVC) and **77%** Forced Expiratory Volume (FEV1)<sup>3</sup>

**90%**

of employed patients **returned to the same work at 8.5 weeks**<sup>10</sup>



**84%**

of patients had **NO PAIN** at **16 months**<sup>10</sup>

**Very satisfied** patients rating MatrixRIB System as **9.2 out of 10**<sup>10</sup>



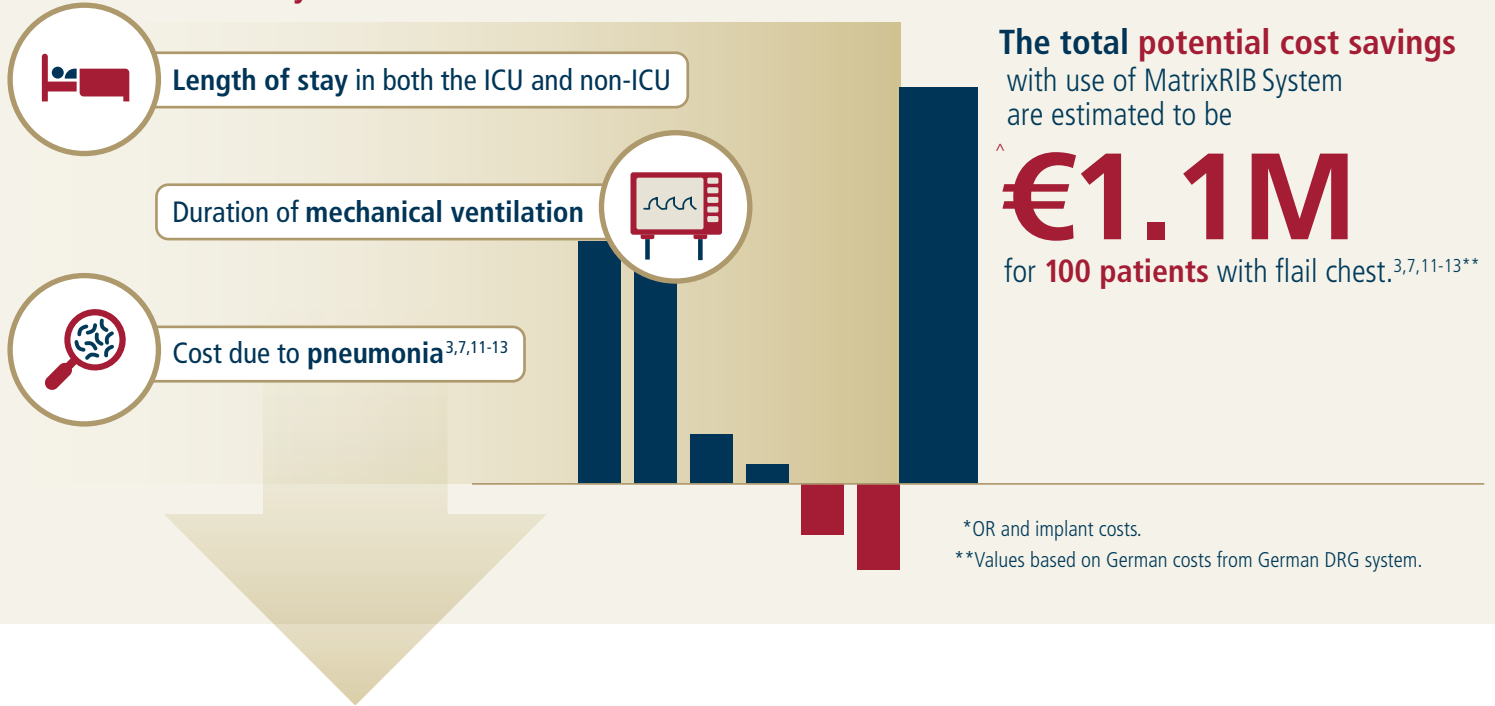
**94%**

of patients would **recommend the surgery** to friends/family<sup>10</sup>



# ECONOMIC IMPLICATIONS OF THE MatrixRIB SYSTEM

Increased cost of surgery\* is offset by decreased:



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<sup>^</sup>Cost saving calculations may not be in local currencies. The economic analysis was performed according to hospital data set in countries outside of Australia and New Zealand.



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