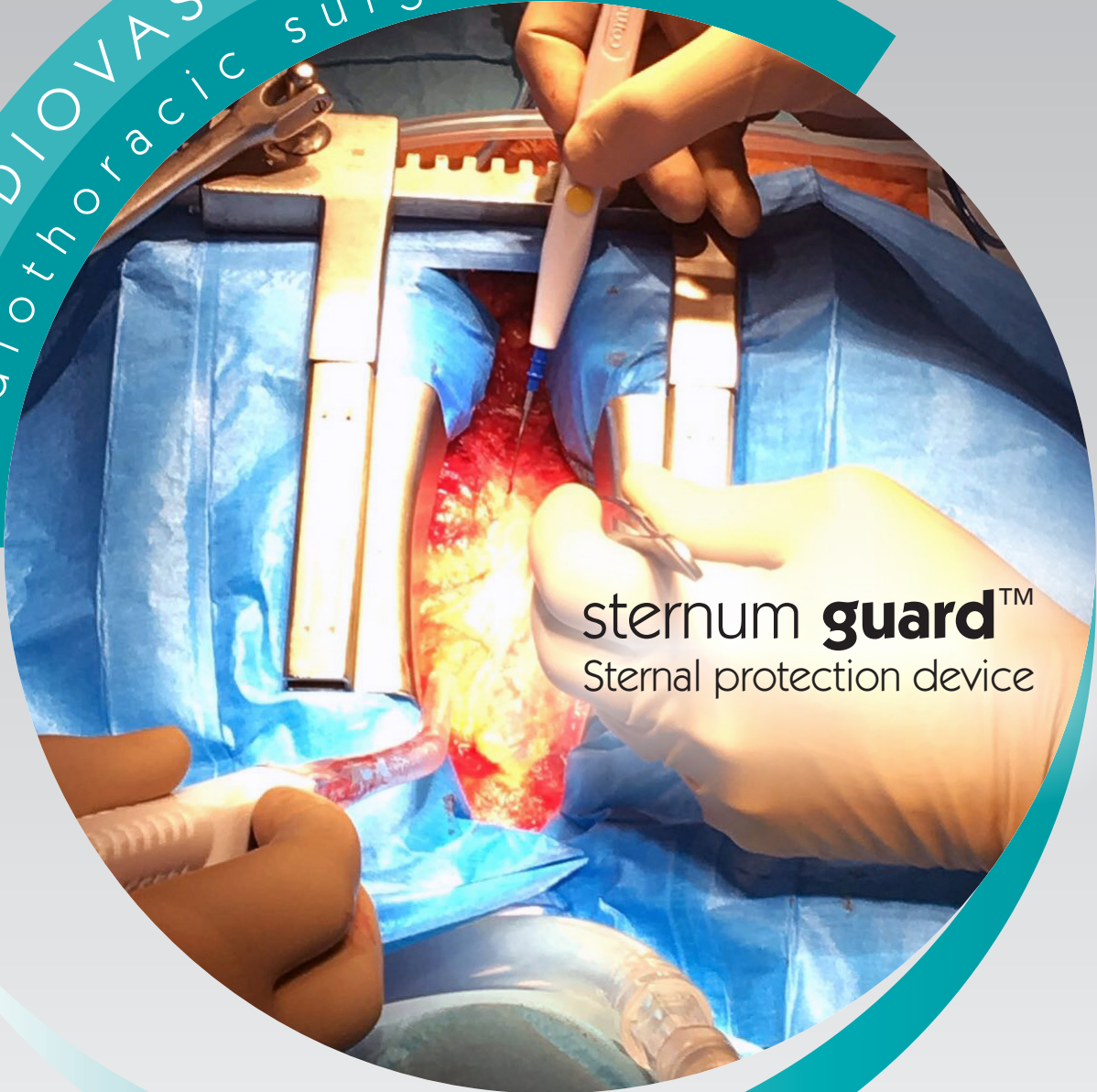




CARDIOVASCULAR
Cardiothoracic surgery



sternum **guard**™
Sternal protection device



Value Life

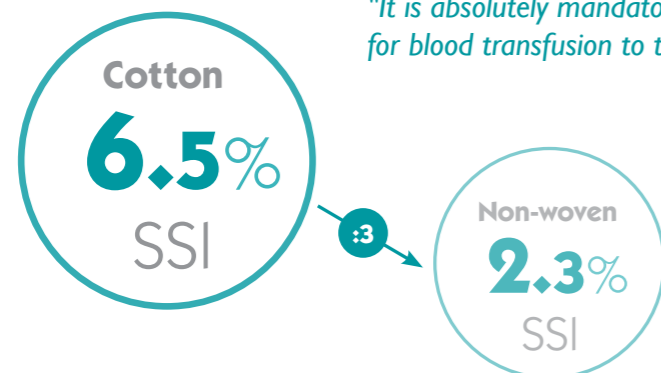
Challenges related to sternal protection and blood loss

Challenges	Mechanism	Consequences
<ul style="list-style-type: none"> Mechanical lesions (edges, sternum and tissue damage) Elderly patient Osteoporosis 	<ul style="list-style-type: none"> Poor mechanical protection caused by insufficient thickness of draping or no protection 	<ul style="list-style-type: none"> Ischemia of subcutaneous tissues Sternum lesions Poor healing Poor bone consolidation Pseudarthrosis and parietal pain
<ul style="list-style-type: none"> Intraoperative blood loss 	<ul style="list-style-type: none"> Bone marrow: rich in red cells and hemorrhagic Osteoporotic patients Elderly patients Insufficient hemostasis 	<ul style="list-style-type: none"> Significant blood loss Transfusion risks
<ul style="list-style-type: none"> Surgical site infection (SSI) 	<ul style="list-style-type: none"> Maceration Bacterial proliferation due to wet surgical site Particle release from cotton 	<ul style="list-style-type: none"> Superficial infections Deep infections: sternitis, mediastinitis <ul style="list-style-type: none"> - Extremely costly (19 500-34 000\$)¹ - Increased morbidity and mortality¹

Recommendations to prevent SSI ^{2,3}

"Up to 60% of SSIs have been estimated to be preventable by using evidence-based guidelines."

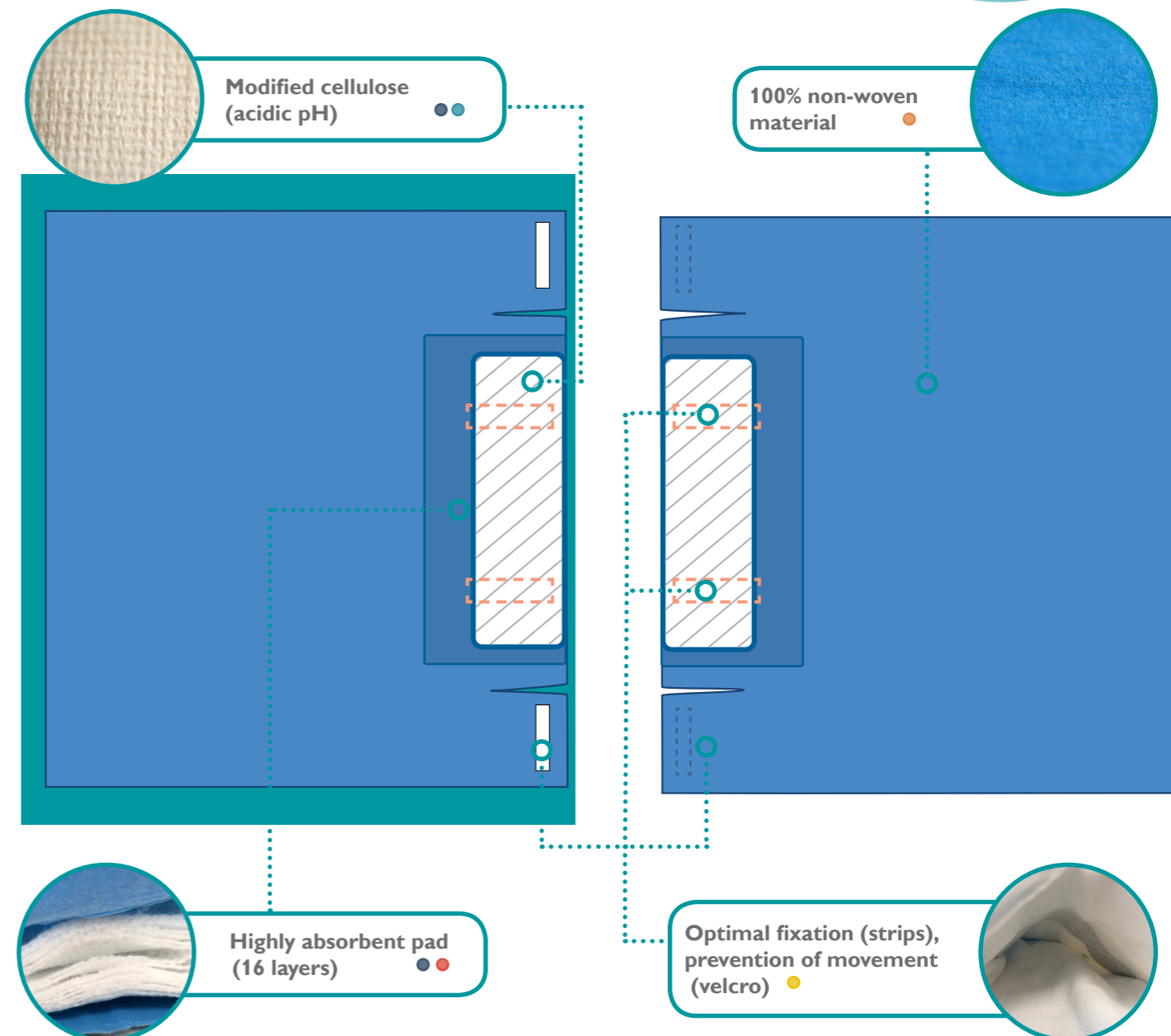
"It is absolutely mandatory to reduce blood loss and the need for blood transfusion to the greatest extent possible"



"Switching from cotton to Non-woven drastically reduces SSIs"

1. Andreas Beckman and all. Sternal surgical site infection prevention – Is there any room for improvement? European Journal Cardio-Thoracic Surgery 40(2011) 347-351.
 2. Strategies to Prevent Surgical Site Infections in Acute Care Hospitals: 2014 Update. Cambridge University Press on behalf of The Society for Healthcare Epidemiology of America
 3. Moylan J.A., Fitzpatrick K.T., Davenport K.E. "Reducing wound infections - Improved gown and drape barrier performance", Archives of Surgery, Feb. 1987, vol. 122 : 152-157

sternum **guard**: Complements measures for SSI prevention and sternal protection



Follow the colour-coding to see **sternum guard's** benefits

Complementing measures for SSI prevention

- Haemostatic effect ^{4,5} through a natural reaction to compression and blood absorption
- Limitation of bacterial proliferation ⁵ by decreasing the pH
- Coverage of the entire incision angle and subcutaneous tissue
- Very low particle release

Sternal protection

(Prevention of lesions and post-operative pain)

- Specific mechanical protection

Convenience

- Easy and ready to use
- Maintaining a dry surgical site

4. Fischer CP1, et al. A prospective, randomized, controlled trial of the efficacy and safety of fibrin pad as an adjunct to control soft tissue bleeding during abdominal, retroperitoneal, pelvic, and thoracic surgery. J Am Coll Surg. 2013 Sep;217(3):385-93.
 5. K. M. Lewis, DVM et al. Comparison of regenerated and non-regenerated oxidized cellulose hemostatic agents. Eur Surg. 2013; 45(4): 213-220

Technical information

Product name	Incision size	Size		Code
		Length (cm)	Width (cm)	
sternum guard Small (Paediatric)	< 16 cm	25	25	40.90.11
sternum guard Medium	17 – 22 cm	35	35	40.90.10
sternum guard Large	> 22 cm	48	50	40.90.12

sternum **guard** complies with **EN 13795***, with a high performance level**

*EN 13795 aims to prevent the transmission of infectious agents between patients and surgical staff during surgery and other invasive procedures, leading directly to a fight against nosocomial infections.

**High performance is defined as: "product intended to be used for surgeries to high exposure to body fluids or other, with many mechanical constraints or long surgeries"

CARDIOVASCULAR SURGERY

For further information, please contact: questions@vygon.com

The specifications given in this brochure are for information only and are not, under any circumstances, of a contractual nature.

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