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CARDIAC POSTOPERATIVE MANAGEMENT

## TOP 5 CARDIAC DIGITAL DRAINAGE ANSWERS GUIDE

Automated Chest Tube Clog Clearance, Reduced Complications, Cost-Savings, and More: The **Top 5 Questions About Thoraguard®** Intelligent Chest Tube Management in Cardiac Surgery

> 1100 ml 1000 ml 900 ml 800 mL 700 mL 600 mL 500 mL 400 mL 300 ml



Safeguard patient recovery.

This document answers the questions you may have about automated clog-clearing chest tubes and digital drainage with **Thoraguard** following cardiac surgery, from its impact on earlier ambulation to the ways it can financially benefit your organization.



19%

of patients affected by complications from fluid buildup in the chest cavity<sup>2</sup>

Making the move away from legacy drains to the Thoraguard Automated Clog Clearance Chest Tubes and digital drainage system can help accelerate recovery, improve outcomes, and is a key element of the Enhanced Recovery After Cardiac Surgery (ERAS-C) Society guidelines which gives a strong recommendation (Class 1-B) to maintenance of chest tube patency without breaking the sterile field.

## How does Thoraguard result in better drainage?

#### Thoraguard's unique fully automated self-clearing chest tube actively clears fluid from the chest without the need for human activation or subjective interpretation.

Based on a 2022 study, Thoraguard results in more comprehensive shed blood evacuation when compared to traditional chest tubes, with 75% more complete first-hour output and 12% greater total output.<sup>3\*</sup>



## 2 What impact does Thoraguard have on postoperative complications?

Thoraguard reduces complications by automatically clearing chest tubes of drained blood and ensuring superior drainage. This can reduce complications such as pleural effusions, pericardial effusions, cardiac tamponade, low cardiac output, and postoperative atrial fibrillation (POAF).

Recent data has shown a **40% reduction in new POAF after cardiac surgery**,<sup>5</sup> which leads to reduced need for reintervention and faster recovery.

The use of Thoraguard has also been shown to result in a significant reduction in patient-reported pain scores<sup>5</sup> when compared to conventional tubes due to its smaller chest tube size.



	THORAGUARD	CONVENTIONAL
POAF rate⁵	18.1%	30.8%
Postoperative pain score: Day 3 <sup>5</sup>	5	6
Postoperative pain score: Discharge <sup>5</sup>	0	3
Chest tube patency	<b>98</b> % <sup>4</sup>	64%7

# **3** How does Thoraguard enable enhanced recovery?

Thoraguard provides continuously applied chest tube suction from the operating room to the intensive care unit and during recovery, facilitating rapid ambulation in any setting.

With the portability to move with patients, Thoraguard provides a convenient replacement to wall suction with no need for auxiliary portable suction or additional tubing, which can limit or prevent early ambulation.

Additionally, Thoraguard offers self-clearing chest tubes to combat clogging in alignment with ERAS-C guidelines, which recommend the maintenance of chest tube patency without breaking the sterile barrier or manually stripping or milking chest tubes<sup>3</sup>, as well as provide accurate digital fluid management.





CONTINUOUS SUCTION FOR EARLIER AMBULATION GUIDELINE-SUPPORTED CLOG PREVENTION



INTEGRATED SUCTION FOR USE ACROSS ALL CARE UNITS



# 4 What financial benefits can digital drainage with Thoraguard provide for my organization?

By reducing complications that waste resources, prolong recovery, and drive up costs, Thoraguard is helping health organizations avoid reintervention, improve workflow, and lower costs.

Thoraguard continuously drains shed blood and fluids from around the heart to improve recovery and reduces exposure to shed blood which can cause an inflammatory response that triggers complications such as POAF<sup>6,7</sup>

### LESS REINTERVENTION = LOWER COSTS

# 1 in **5 ††††**

Studies have found that nearly 1 in 5 patients who undergo cardiac surgery are **affected by complications** from fluid buildup in the chest cavity.<sup>7</sup>



These complications could result in an additional cost of approximately **\$14,200 per patient** affected by poor drainage.<sup>8</sup>

For patients with POAF, the cost rises to an additional **\$16,000 per patient**.<sup>9,10</sup>

#### 5 How can Thoraguard improve workflow and safety within my organization?

Thoraguard reduces workload on overburdened staff by bringing objective digital fluid measurement and historic trends monitoring, enabling improved communication and alignment. With integrated safety alarms, staff can have confidence that chest drains are functioning reliably.

Thoraguard's automated chest tube clearance can eliminate the need for manual stripping or milking, while the self-monitoring system alerts care teams of abnormal events, such as excess drainage, line kinks, and other system disruptions. Reducing burden on staff by bringing reliability to digital fluid measurement and trends monitoring is tremendously beneficial to all staff. Facilitating mobilization, improving communication, and integrated safety alarms improve workflow along with patient outcomes in the procedures that are the financial lifeblood of most hospitals.

#### **CONTINUOUS TRENDS MONITORING**

informs clinical decisions with 6-, 12-, and 24-hour drainage trends



#### **ACTIVE SYSTEM MONITORING**

alerts care teams of abnormal events or disruptions



#### Make the intelligent choice to optimize your cardiac surgery outcomes

## THORAGUARD®

info@centese.com | 888.220.0040 | centese.com/cardiac-surgery



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**Indications for use:** The Thoraguard System is indicated for use in aspiration and removal of surgical fluids, tissue, gases, bodily fluids or infectious materials. The Thoraguard System is indicated for all situations where chest drains are applied; especially for thoracic drainage in the pleural and mediastinal cavity in situations such as pneumothorax, after cardiac or thoracic surgery (post-operative), thorax injury, pleural effusion, pleural empyema or other related conditions. The Thoraguard System is intended for use on patients in appropriate care settings.

**Caution:** Federal (US) law restricts Thoraguard to sale by or on the order of a physician. Thoraguard is not cleared for use outside of the US.

#### BRING YOUR CHEST DRAINAGE INTO THE MODERN ERA

# THORAGUARD®



Learn more about Thoraguard for thoracic post-operative management at centese.com/cardiac-surgery

Scan to learn more

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