

THORAGUARD°

Safeguard patient recovery. Automatically.

Inspired by surgeons. Innovated by Centese.

Cardiothoracic surgeons and their teams have long been frustrated by the limitations of legacy chest tubes and drains. These systems have failed to keep up with advancements in the field. At Centese, we heard the call for innovation. We listened to clinicians to thoroughly understand how analog chest drains fail to meet their needs. We envisioned a digital solution, and designed the first smart, automated chest tube management system.

Thoraguard Intelligent Chest Tube Management System

Specifically developed to optimize cardiothoracic recovery, Thoraguard leaves archaic systems and manual processes behind. Clinicians can now experience intelligent chest tube management where patients' recoveries are safeguarded—digitally, continuously, and automatically.



Data show that patient outcomes can hinge on chest tube performance¹⁻⁵

Poor chest tube performance can result in deadly complications, extended hospital stays, wasted resources, and unnecessary costs.¹⁻⁵ Digital chest tube systems can help optimize outcomes by reducing chest tube duration, shortening hospital stays, enabling earlier ambulation, and improving patient satisfaction.¹

Not all digital chest tube systems are created alike

The Thoraguard Intelligent Chest Tube Management System is the first and only system with the digital intelligence to precisely measure air leaks, calculate fluid drainage trends, and maintain chest tube patency*—all hands-free. This all-in-one, portable, compact system can be used universally to optimize cardiothoracic recoveries.¹⁻⁶

ON GUARD - SMART SAFEGUARDS + ALERTS



- Integrates sensors and software for continuous monitoring
- Alerts care teams of abnormal events or disruptions (e.g., rapid drainage, line kinks, disconnects)

THE FIRST AND ONLY SYSTEM WITH AUTOMATIC CHEST TUBE CLEARING*



- ▶ Eliminates the need for manual tube stripping or milking
- Incorporates soft and flexible small-bore chest tubes for enhanced patient comfort

INTUITIVE INTERFACE WITH REAL-TIME CLINICAL INSIGHTS + ALERTS

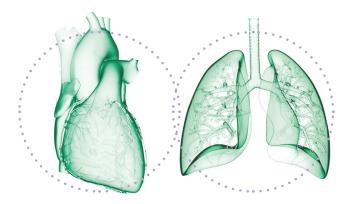


- ▶ Precisely quantifies air leaks with its best-in-class resolution and historical trend display
- Monitors, measures, and digitally displays hourly drainage volume and trends for objective patient assessment

Smart, all-in-one, compact, portable system from chest tube to canister

THORAGUARD®

Make the intelligent choice to optimize your cardiothoracic surgery outcomes.



Clinicians prefer Thoraguard

In a clinical study evaluating the Thoraguard Chest Tube Management System, clinicians were surveyed about their experience with both traditional and competitive digital systems⁶:

- 100% of surgeons agreed Thoraguard provided better clinical information vs analog systems
- 100% of surgeons and nurses agreed Thoraguard is better for patient ambulation
- 100% of surgeons wanted to keep using Thoraguard

Whether you're a specialist or a generalist, we think you'll find the Thoraguard Intelligent Chest Tube Management System highly intuitive, responsive, and *smart*.

Schedule your Thoraguard trial today | 888.220.0040

REFERENCES:

1. Geraci TC, Chang SH, Shah SK, Kent A, Cerfolio RJ. Postoperative air leaks after lung surgery predictors, intraoperative techniques, and postoperative management. *Thorac Surg Clin.* 2021;31(2):161-169. 2. Engelman DT, Ali WB, Williams JB, et al. Guidelines for perioperative care in cardiac surgery: Enhanced recovery after surgery society recommendations. *JAMA Surg.* 2019;154(8):755-766. 3. Pompili C, Detterbeck F, Papagiannopoulos K, et al. Multicenter international randomized comparison of objective and subjective outcomes between electronic and traditional chest drainage systems. *Ann Thorac Surg.* 2014;98(2):490-497. 4. Mayor JM, Lazarus DR, Casal RF, et al. Air leak management with digital drainage reduces length of stay after lobectomy. *Ann Thorac Surg.* 2018;106(6):1647-1653. 5. Cerfolio RJ, Bryant AS. The benefits of continuous and digital air leak assessment after elective pulmonary resection: A prospective study. *Ann Thorac Surg.* 2008;86(2):396-401. 6. Data on File, Centese, Inc.

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.

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