



the science of innovation

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UNeMed currently offers a variety of licensing options and collaborative development opportunities with the University of Nebraska Medical Center

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Pleuraleak

Technology Fields: Medical Devices - Cardiovascular

Technology ID: 265

Summary

Approximately 1.5 million pleural effusions are diagnosed each year as a result of thoracic injury caused by trauma, surgery or cancer. Chest tubes are implemented to remove fluid and air from the pleural space. Current chest drainage systems monitor air leaks by visualizing air bubbles within the collection canister and often leave physicians to make uncertain and subjective decisions. Unfortunately, there are no devices capable of detecting air leaks while working with the current systems. Inventors at the University of Nebraska have developed a unique system that integrates into the existing chest tube drainage to quantify pleural air leaks. The Pleuraleak system consists of two fluid sensors, an adaptor, a 3-way connector for the existing wet seal, and a graphical user interface. The first sensor is in direct communication with the chest tube to sense the presence of an air leak, while the second sensor acts as a validation system. The Pleuraleak system can be effectively used to determine if a patient has an air leak, quantify the magnitude and changes of the air leak, and monitor lung healing. Immediate determination of the presence or absence of an air leak in patients with a chest tube results in a more objective evaluation, clinical decision and patient management. Additionally, the Pleuraleak system may allow for earlier and safer removal of a chest tube, reduced patient discomfort or pain, and consequently, shorter hospital stays.

Market Value

This unique air leak sensor integrates into existing chest drainage systems to detect, quantify and monitor air leaks, and as a result, allows physicians to make a more objective evaluation and decision regarding patient management.

Features and Benefits

- Compatible with existing chest drainage systems
- Provides an additional monitoring to the visualization of air bubbles within the collection canister, allowing for objective evaluation of air leaks
- Built-in validation system to confirm the presence of an air leak detected by the first fluid sensor

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