etiometry

Transforming critical care *data* into clinical *insights*

The Etiometry Platform
Advancing clinical decision-support

》 *Data aggregation & visualization*

》 *Patient risk analytics*

》 *Archiving & reporting database*

The Etiometry Advantage

Etiometry Inc. is a leader in clinical decision-support software for the intensive care environment. Our technologies provide valuable clinical insight and analysis at the point of care for recognition of subtle changes in patient condition to avoid complications and speed recovery. We are committed to improving patient outcomes, increasing caregiver efficiency, and lowering costs of care through intelligent use of data.

The Etiometry Platform is designed to enhance clinical decision-support and improve the quality of patient care through better use of available patient data. Our platform delivers this in three ways:

›› The data aggregation and visualization software provides access, visibility, and context to individual patient data.

›› The risk analytics software provides clinicians with personalized projections of dynamic patient conditions.

›› The data archiving and reporting software supports clinical research and quality improvement initiatives to inform, educate, and improve patient care.
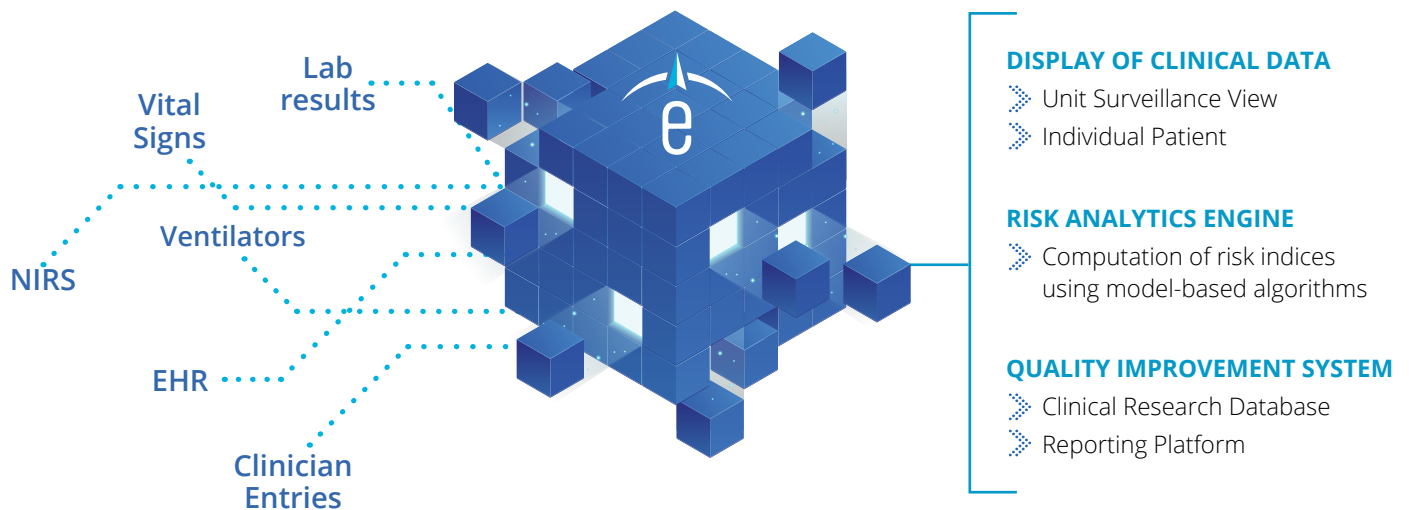
The Etiometry Platform is an end-to-end software solution for the collection, analysis, visualization, and archiving of ICU patient data. It is designed to facilitate the use of all available data to support and improve the management of patients requiring intensive care.

The Etiometry Platform includes three integrated software components:

- T3 Data Aggregation and Visualization Software
- Risk Analytics Engine
- Quality Improvement System

DEVICE INTERFACE & DATA AGGREGATION

Lab results

Vital Signs

NIRS

Ventilators

EHR

Clinician Entries

DISPLAY OF CLINICAL DATA
- Unit Surveillance View
- Individual Patient

RISK ANALYTICS ENGINE
- Computation of risk indices using model-based algorithms

QUALITY IMPROVEMENT SYSTEM
- Clinical Research Database
- Reporting Platform

T3 Data Aggregation & Visualization Software (T3) is an FDA 510(k) cleared software application that performs the fundamental tasks of collection, visualization, and archiving of patient data. The clinical data management software allows user-defined presentation of trended current and historical patient data for a thorough patient assessment and clinical decision-support.

Risk Analytics Engine (RAE) transforms high-fidelity patient data collected by the T3 Software into risk indices that indicate the likelihood a patient will experience a harmful physiologic state. The RAE uses dynamic model-based algorithms and patient-specific data to help clinicians identify early stages of clinical deterioration and improve the management and health of individual patients.

Quality Improvement System (QIS) is a software application that provides long-term storage and accessibility of clinical data for research, quality improvement initiatives, and reporting. All data collected by the T3 Software is stored in a permanent database of high-fidelity, normalized, clinical data to facilitate single-site and multi-center research projects.

The T3 Data Aggregation and Visualization Software is designed to fully integrate available patient data into the clinical decision-making process. T3 Software provides comprehensive data collection, a physiological presentation, and archiving of patient data. Software integration is seamless and compatible with virtually any existing medical device and clinical monitoring systems in place.

DEVICE INTERFACE & DATA AGGREGATION
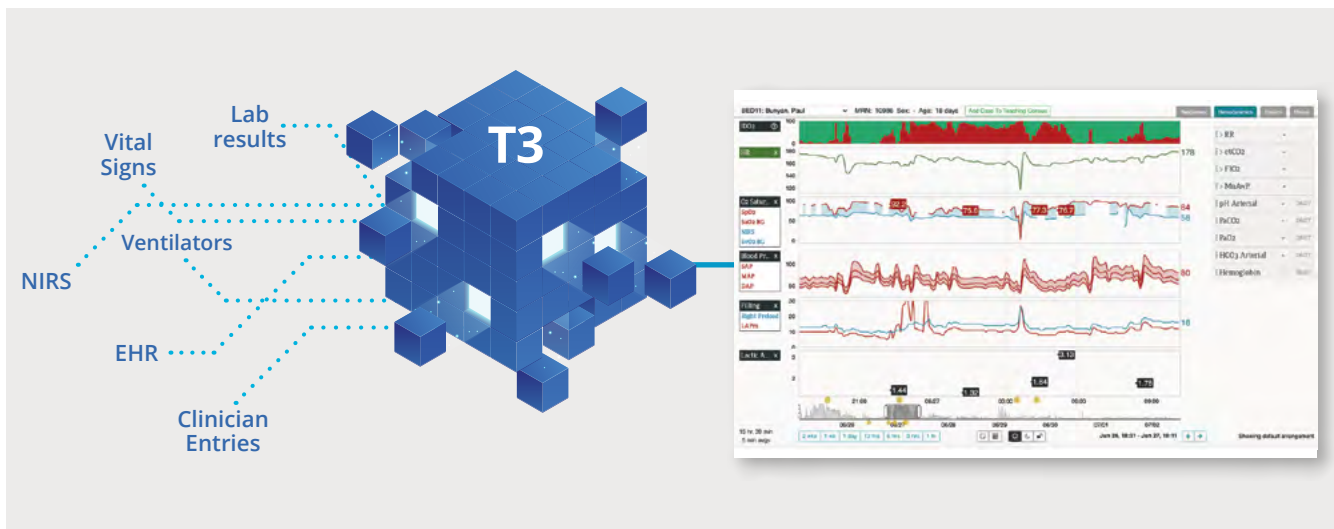
T3 provides a comprehensive longitudinal view of a patient with immediate access of up to two months of trended data.

Display Features

Smart Visualization Groups
Parameters are organized in 5 relevant physiologic groups.

Customized Display
Data displays can be customized for specific patients or user preference.

Surveillance View
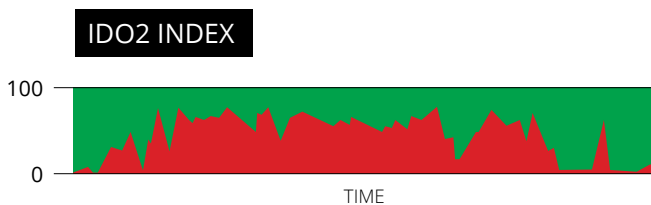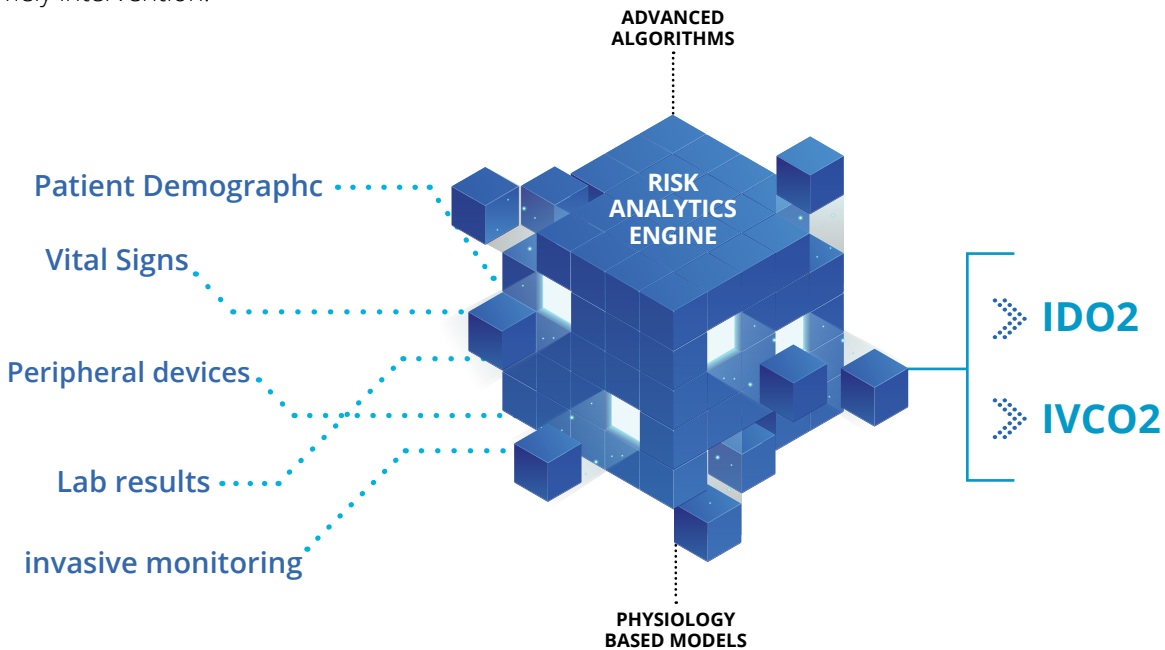Actively monitor all patients by area of care on one screen.

Laboratory Values
Individual lab values can be trended and selected for immediate access to complete lab results.

The Etiometry **Risk Analytics Engine (RAE)** uses dynamic model-based algorithms and the continuous stream of patient data from T3 to provide risk indices for inadequate delivery of oxygen and ventilatory failure/hypercapnia. This information aids the clinician in identifying early stages of clinical deterioration for timely intervention.

ADVANCED ALGORITHMS

Patient Demographc

Vital Signs

Peripheral devices

Lab results

invasive monitoring

RISK ANALYTICS ENGINE

IDO2

IVCO2

PHYSIOLOGY BASED MODELS

IDO2 INDEX

100

0

TIME

▷ The Index is continuously calculated and updated using the fundamental components of oxygen delivery.

▷ The Index is presented in a trended format to bring attention to the trajectory of the state of oxygen delivery.

▷ The parameters contributing to the IDO2 Index are simultaneously displayed and trended to aid in a more precise assessment of patient condition.

IVCO2 INDEX

100

0

TIME
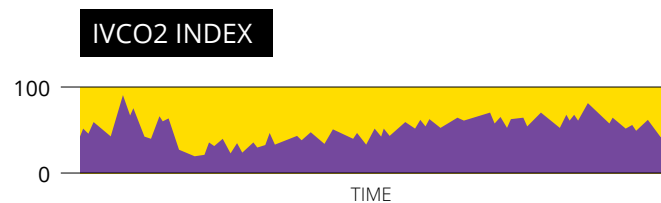
▷ The Index is continuously calculated and updated using the fundamental components that contribute to the elimination of carbon dioxide during mechanical ventilation.

▷ The Index is presented in a trended format to bring attention to the trajectory of respiratory status of the patient requiring mechanical ventilation.

▷ The parameters contributing to the IVCO2 Index are simultaneously displayed and trended to aid in a more precise patient assessment.

The Quality Improvement System is a high-fidelity clinical database which permanently stores data collected by the T3 Software for clinical research and continuous quality improvement initiatives. The QIS was designed to support clinical research and retrospective analysis of care processes for continuous refinement and proactive improvement of patient care processes.

Key Features

Web Interface
A web-based interface allows access to study cohorts with capabilities to convert to Excel and MATLAB.

Automated Reporting
Daily and monthly reviews of patient groups and performance metrics such as ventilator usage.

Data Normalization
All incoming data is normalized for compatibility and ease of use regardless of source.

Data Science Consultation
Etiometry's expert data scientists can provide assistance on data access and analysis.

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