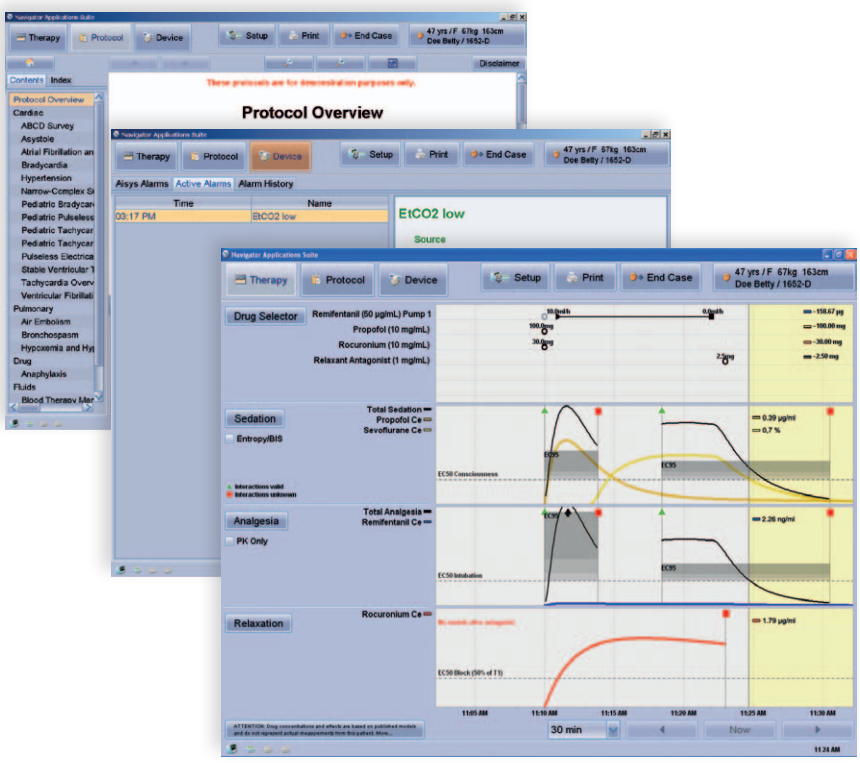
GE Healthcare

Navigator Applications Suite software



Helps to increase clinical decision-making confidence with predictive drug modeling for intravenous and inhaled anesthetic drugs combined with measured patient values

Clinical tool for managing balanced anesthesia

The Navigator* Applications Suite software enables clinicians to manage anesthesia in a balanced way with pharmacokinetic/pharmacodynamic modeling and prediction. Hospital specific care protocols, GE's device diagnostics and monitored patient data provide further guidance & assistance to tailor anesthesia to the patient's specific needs.

Navigator Therapy

- Visualizes pharmacokinetic (PK) and pharmacodynamic (PD) models of select sedation, analgesic and relaxation drugs
- Displays modeled synergistic effect of inhaled anesthetic drugs with four opioids
- Displays modeled synergistic effect of propofol with four opioids
- Projects future modeled effect site concentrations
- Displays measured Entropy and BIS values on sedation graph
- Connects to a range of infusion pumps - volumetric, TIVA, TCI - to minimize manual drug data entry
- Provides two-way communication interface to IT systems
- Displays comprehensive trend information on administered drugs

Navigator Protocol

- Configurable to give you immediate access to specific standard operating procedures of your hospital at point of care
- Configurable to include emergency treatment protocols, such as resuscitation algorithms, airway management protocols or other clinically relevant information
- Index search function to locate information required
- Configurable to display measured hemodynamic and ventilation parameters while viewing care protocols

Navigator Device

- Clear and specific guidance with visual step-by-step instructions on how to resolve a technical alarm with the anesthesia delivery system
- Technical instructions quickly available at point of care

Technical Data

Navigator Applications Suite Software, General

- Navigator software can be installed to a computer meeting minimum hardware and OR environmental requirements
- Optimized for use through touch screen or optional keyboard and mouse
- Navigator Therapy visualizes PK/PD models in the Sedation Graph, Analgesia Graph and Neuromuscular Graph
- Shows measured Entropy and BIS values in the sedation graph
- Administered drugs displayed in Drugs and Fluids Graph
- Trend and PK/PD time scales available: 10 & 30 minutes, 1 hour, 2 hour and 4 hour
- The predictive PK/PD component is 2.5, 7.5, 15, 30 or 60 minutes depending on the time scale selected
- Configurable drug library facilitates drug entry. Support for generic or trade names in various concentrations
- Drug entry method for intravenous drugs: manual or automatic from infusion pump. Inhaled anesthetic drugs are recorded automatically by the system (measured EtAA from Compact Airway Module)
- Customizable care protocols are in an easy-to-navigate HTML format using Oracle Help for Java. Measured hemodynamic and ventilation parameter trends are in trend window associated with the protocols
- Navigator supports Aisys, Avance and ADU anesthesia systems and approved GE patient monitors

Networked system features

- Access to hospital Intranet or Internet at point of care
- Navigator supports bidirectional data interface to external systems

PK/PD Models, General [1]

- Plot of normalized effect site concentrations (Ce) over time to the drug´s EC50
- Pharmacodynamic reference effects shown:
  - Sedation Graph: EC50 consciousness
  - Analgesia Graph: EC50 intubation
  - Neuromuscular Block Graph: EC50 block (50 % of T1)
- Visualization of synergistic pharmacodynamic model includes:
  - Sedation Graph: probability of consciousness, and therapy windows from 50 % to 95 %
  - Analgesia Graph: probability of intubation, and therapy windows for intubation from 50 % to 95 %
- Navigator uses PK/PD models derived from published literature. For detailed information regarding PK/PD models' accuracy and errors in relation to individual patients, refer to Navigator Applications Suite User's Manual.

Patient demographic range:

height	150-190 cm / 59.1-74.8 in
weight	40-140 kg / 88.2-308.6 lb
age	18-90 years

1 The drug concentrations and effects shown are based on published models and do not represent actual measurements from the patient.

PK/PD Models, Drugs

Inhaled anesthetic drugs	desflurane, enflurane, halothane, isoflurane, sevoflurane, nitrous oxide
Anesthetic drugs	midazolam, propofol, thiopental
Analgesic drugs	alfentanil, fentanyl, remifentanil, sufentanil
Muscle relaxants	mivacurium, pancuronium, rocuronium, vecuronium

PK/PD Models, Multidrug Models [2]

- Interactions between inhaled anesthetic drugs (desflurane, enflurane, isoflurane, halothane, sevoflurane and N_2O) and any combination of alfentanil, fentanyl, sufentanil and remifentanil
- Interactions between propofol and any combination of alfentanil, fentanyl, sufentanil or remifentanil

2 Interactions between propofol and inhaled anesthetic drugs are not available

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GE imagination at work

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