Life/Health sciences / Measurement & Instrumentation - Health

# SMART RÉA

**Predicting the depth of anesthesia is a challenge for anesthesiologists because brain variables are difficult to measure. We propose a system for predicting the depth of anesthesia based only on non-brain physiological variables and usually measured during general anesthesia.**

ERGANEO
L'AVENIR EST FAIT D'AUDACE

## PRESENTATION

A lack of anesthesia exposes the patient to awakening during surgery; conversely, an excess of anesthesia increases the risk of postoperative cardiac and neurological complications. A precise optimization of the depth of anesthesia must therefore be sought, in particular for fragile, elderly or co-morbid patients. Our system takes into account the data from the usual monitoring of patients and by integrating them at a high frequency during general anesthesia, allows to deduce the depth of anesthesia. In an alternative model, we propose to add the analysis results of an EEG channel to the model to significantly increase the accuracy of the prediction.

## APPLICATIONS

- Anesthesia Follow up
- Multimodal monitoring (HR, MeanBP, RR, EEG)
- Depth of anesthesia
- Perioperative optimization
- Resuscitation sedation

> Machine Learning  -  Predictive algorithm  -  Individual medicine
> Depth of anesthesia  -  Multimodal monitoring  -  General anesthesia

## COMPETITIVE ADVANTAGES

- Prediction of the depth of anesthesia without taking into account cerebral variables
- Prediction based on 4 variables usually monitored during general anesthesia
- Optimization of the depth of anesthesia
- Gradual increase of the database to continuously improve the performance of the model

## INTELLECTUAL PROPERTY

Patent Pending, December 2019

## CONTACT

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## DEVELOPMENT PHASE

☑ POC
☑ Offline Tests only