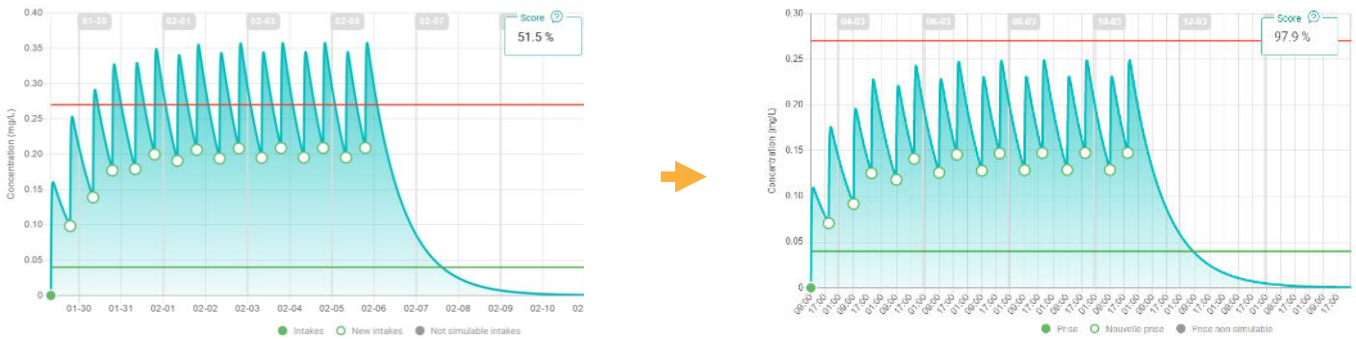
ExactCure has developed a **Digital Therapeutics** solution that simulates in-silico the concentration of drugs in the blood of patients, depending on their personal characteristics (age, weight, gender, renal and liver function, genotype, etc.). The goal is to bring this tool to both healthcare professionals (HCPs) and patients, to ultimately avoid underdoses, overdoses and drug-drug interactions.

Our tool comes from three years of fundamental research with a top tier research institute called Inria. We use Artificial Intelligence, as well as biomathematics and Natural Language Processing (NLP), to integrate and aggregate PKPD data from scientific literature into meta-models of drugs. A meta-model can therefore integrate the impact of multiple patient variables. Our personalized simulation technology can be integrated into third-party platforms thanks to our API.

Our CE-marked, **Class I Medical Device** can be used during clinical trials (phase 2b, 3 and 4) and to accompany marketed drugs:

Value Proposition : Clinical Trials	Value Proposition : Marketed Drugs
✓ Identify adverse events linked to comedications rather than the molecule tested	✓ Secure the use of the drug on the market
✓ Submit a stronger case to Health Authorities, guaranteeing a better control of the drug in the population	✓ Personalize medication treatments
✓ Detect outlier patients earlier on	✓ Provide an incentive to HCPs to use your molecule rather than another
✓ Obtain RWE, as we can correlate patient feedback with the simulated blood concentration of the drug	✓ Obtain RWE, as we can correlate patient feedback with the simulated blood concentration of the drug
✓ Develop drugs that are personalized for patients	✓ Obtain a greater market share thanks to a differentiating and disruptive tool
✓ Monitor cohorts remotely and in real-time	✓ Deliver "beyond the pill" services to drugs on the market
✓ Generate virtual patients by re-combining characteristics of real patients	✓ Empower patients and promote better treatment management

Healthcare professionals can access their web application, which is dedicated to the personalization of drug treatments based on the personal characteristics of patients. Below is an example of a 55 year old woman, who weighs 45kg and who has a strong renal impairment.



With the usual dose of dabigatran (110mg/2/day), this patient has an overexposure and is thus at risk of an overdose (graph on the left). In fact, she is only 51.5% of the time within the recommended exposure window, which is found between the red and green lines. However, with a reduced dose (75mg/2/day), this patient is no longer at risk of an overdose and is now 97.9% of the time within the therapeutic window (graph on the right).

Patients have access to a mobile app, allowing them to be at the centre of care and helping them to better use drugs. They can view their personalized drug simulations and input the intake of other drugs (over-the-counter drugs, treatment prescribed by another HCP...), in order to check for potential drug-drug interactions. They can use the mobile app to improve their adherence and engagement with their medical treatments. They also have the opportunity to input any symptoms or adverse events they are experiencing, as well as, patient-reported outcomes (PROs). ExactCure will then be able to correlate this latter data with the simulated blood concentration of the drug.

Collaborations & Achievements

Our disruptive approach is being recognized by the health ecosystem:

- We have established a partnership with **Elsevier** on their PharmaPendium® platform, a world-class source for high-quality preclinical, clinical and post-market data.
- We have also established a partnership with **Vidal**, the French leader of medical information. We have integrated our personalized simulation into their Vidal Sentinel interface, used by clinicians in hospitals.
- We are part of a consortium that was selected for a **European H2020 project** "Simulation of 2Cardiac Devices & Drugs for in-silico Testing and Certification" over 4 years.
- Our tool is currently being validated in an experimentation with **Dômes Pharma**, a veterinary pharmaceutical company.
- We have just signed a contract with **UPSA**, a French pharmaceutical company, to develop a digital companion (white-label mobile app) for part of their drug portfolio, which will be used by patients.

Likewise, we have put into place a number of projects with hospitals and healthcare professionals such as research projects with:

- The **Cochin Hospital** in Paris for two molecules used for the treatment of kidney cancer.
- The **Hospital of Nice** for three molecules used for the treatment of transplant patients.

We have received the iLab award from the French Ministry of Research, the Seal of Excellence from the European Commission and the "Most innovative INNOLABS start-up" award from the European commissioner in charge of emerging industries. ExactCure was mentioned in an article by the Harvard Business Review and we were a speaker at MIT's "AI for Healthcare" summit.

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