

VALEIA – POWER TO BREATHE



connecting technology
with human well-being

Problem

- It has not yet technologically been possible to use magnetic stimulation for **specific small target body regions**.
- Many types of invasive methods have to be replaced by **non-invasive stimulation**.
- Intensive care ventilation leads to long-term damage to the lungs caused by positive pressure and to „critical illness polyneuropathy“. Patients suffer from a diffuse, symmetrical respiratory muscle weakness.

Solution

- Valeia eliminates the risk of infection through percutaneous diaphragm pacing for partial or complete respiratory ventilation.
- Valeia´s therapeutic approach is based on transcutaneous neuromuscular electrical stimulation of the respiratory muscles during ventilation. Valeia shortens the weaning period after intensive care ventilation.
- PonteMed has acquired the patents from the Medical University of Vienna and has already successfully registered for international protection. One patent is for focused stimulation, the other for safety monitoring.
- In the next step, this invention – named Valeia – will be developed into a marketable product.

Market

- Europe owns in average 11.5 ICUs per 100,000 inhabitants (2012), what leads to a total number of approx. 85,000 ICUs.
- North America owns approx. 90,000 ICUs (2019) and the rest of the world is estimated with additional 200,000 units.
- During Corona crisis the number of ICUs increased dramatically.
- Most of these ICUs are equipped with ventilation devices.

