



## BrainCool AB (publ) - New guidelines from European Resuscitation Council published

The ERC guidelines recommend targeted temperature management (TTM) for adults after either OHCA or in-hospital cardiac arrest (IHCA) (with any initial rhythm) who remain unresponsive after return of spontaneous circulation (ROSC). Cooling shall be initiated as quickly as possible after ROSC to ensure optimal functional and neurological outcome by maintaining a constant target temperature between 32°C and 36°C for at least 24 h, by using a cooling device with feedback loop. This important update clearly shows cooling treatment shall be started as soon as possible and once the target temperature is achieved, a device like BrainCool/IQool system equipped with automated temperature feedback loop mechanisms should be used to keep the patient's temperature at goal with minimal fluctuations and also to avoid fever for at least 72h after ROSC in patients who remain in coma.

The newly published guidelines are in line with the US guidelines from American Heart Association (please find highlights from the AHA guidelines enclosed) to include patients with any initial rhythm for both out of the hospital cardiac arrest (OHCA) and in-hospital cardiac arrest, which expands the patient group with non-shockable cardiac arrest influenced by the Hyperion study. Hyperion (randomized, multi-center trial) was designed to investigate the effect of therapeutic temperature management at 33°C or 37°C in this group of patients with non-shockable cardiac arrest. The study conducted in 25 French ICU's, showed a statistical significance in favor of hypothermia treatment in non-shockable patients (**n=584**). The primary result was positive: more patients in the hypothermia group had a favorable neurologic status at day 90 (10.2% vs. 5.7%,  $p=0.047$ ), the result being statistically significant. Although BrainCool/IQool was not part of this study, the study opens up the further implementation of temperature management in this segment, as this is the largest study population in this very sick patient group showing statistically significant results. Also, it recommends against the use of rapid infusion of large volumes of cold fluid into the blood immediately after ROSC for the induction of hypothermia in the prehospital setting due to significant hemodynamic adverse effects.

Enclosed documents / references

<https://www.cprguidelines.eu/assets/guidelines/RESUS-8995-Exec-Summary.pdf>

<https://www.nejm.org/doi/full/10.1056/NEJMoa1906661>

### CEO Martin Waleij comments

The new ERC guidelines will serve as yet another important tool for the development of TTM within cardiac arrest. This combined with the quick development of treatment of neurological fever serves as a solid foundation for strong growth in the TTM space the coming years.

BrainCool continues the mission that all cardiac arrest patients should be cooled at the earliest opportunity in a hospital or at field emergency setting with the aim and objective to improve survival and neurological recovery. Our solution the BrainCell concept will target, the problem with limitations of previous products in the treatments chain of cardiac arrest patients, as well as

expanding the concept into neurology. BrainCell, our solution linking RhinoChill™ and BrainCool™ System will target the problem with limitations of previous products in the treatment chain of cardiac arrest patients, as well as expanding the concept into neurology. This will enable health-care personnel to easily, effectively and immediately initiate cooling of the brain after Sudden Cardiac Arrest (SCA). The BrainCell solution ensures long-term cooling during multiple days, completing the chain of treatment."

#### About the BrainCell concept

BrainCool continue their mission that all cardiac arrest patients should be cooled at the earliest opportunity in a hospital or at field emergency setting with the aim and objective to improve survival and neurological recovery.

Our solution the BrainCell concept will target, the problem with limitations of previous products in the treatments chain of cardiac arrest patients, as well as expanding the BrainCool™ System, BrainCell enables health-care personnel to easily and effectively and most importantly immediately initiate cooling of the brain immediately after the SCA (RhinoChill™). The BrainCell ensures long-term cooling during multiple days (BrainCool™), completing the chain of treatment."

#### **For more information**

Martin Waleij - CEO  
+46 - 733 -93 70 76  
E-mail: martin.waleij@braincool.se

#### **About BrainCool AB (publ)**

BrainCool AB (publ) is an innovative medical device company that develops, markets, and sells leading medical cooling systems for indications and areas with significant medical benefits within the healthcare sector. The company focuses on two business segments, Brain Cooling and Oncology. BrainCool AB (publ) is based in Lund, Sweden, and its share is listed on Spotlight Stock Market.