Press release June 12, 2020

New Scientific Publication with Rhinochill System in One of The Most Prestigious High Rank Medical Journal (The Intensive care medicine journal)

The publication, published online today , titled "***Time to intra-arrest therapeutic hypothermia in out-of-hospital cardiac arrest patients and its association with neurologic outcome: a propensity matched sub-analysis of the PRINCESS trial***" is to be part of the coming June issue of the prestigious Journal of Intensive Care Medicine (impact factor 18.97 in 2018). Intensive Care Medicine is a monthly peer reviewed medical journal covering intensive care or critical care and emergency medicine. The publication authored by the research group of the PRINCESS trial (Dr. Per Nordberg *et al*) and two US key opinion leaders (Drs Benjamin Abella and Lance Becker). https://link.springer.com/content/pdf/10.1007/s00134-020-06024-3.pdf

The study was an analysis of collected data from the PRINCESS trial published in JAMA last May. The objective was to investigate the association between early initiation of intra-arrest therapeutic hypothermia and neurologic outcome in out-of-hospital cardiac arrest. An early treatment group was defined as patients randomized by the EMS <20 minutes from the time of the cardiac arrest. In patients with initial shockable rhythm (VF/VT patients), the difference in CPC 1-2 was 50.9% versus 29.8%, (p-value = 0.003), and in the proportion with complete recovery CPC 1 (patients with complete neurological recovery) was 47.4% versus 21.1% (*p-value* = 0.008). Cerebral performance category scale (CPC) is a scale of 1 – 5 assessing brain recovery (see reference 1 below pic)

Dr Per Nordberg, MD PhD Center for Resuscitation Science vid Karolinska Institute comments;

"These results entirely match the concept "the earlier, the better" of intra-arrest cooling seen in experimental trials and to our knowledge this is the first time that this association has been shown in a clinical trial on patients"

"As a result of the scientific publications from the Princess trial, where we have shown that intra-arrest cooling is safe and effective to cool cardiac arrest patients, we expect that international guidelines for pre hospital cooling to change and consider RhinoChill as an option to induce hypothermia already in the field.

CEO Martin Waleij comments:

This important scientific publication, by the research groups in Stockholm and Brussels alongside with major US KOL´s in the temperature management space, clearly shows *that* cooling treatment shall be started as soon as *possible. It further shows that time* to target temperature effects drastically the results of survival and improved neurological outcome for cardiac arrest patients (see reference 2 below pic).

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About the publication

The authors conclude that "*Intra-arrest cooling initiated by the emergency medical services within 20 min from cardiac arrest was associated with improved favorable neurologic outcome and complete recovery in patients with initial shockable rhythms. These results entirely match the concept of intra-arrest cooling seen in experimental trials, and to our knowledge, this is the first time that this association has been shown in a clinical trial. No outcome differences were seen in patients with initial non-shockable rhythms.*" However, one possible *explanation for this result is that* the patients were randomized prior to ROSC which make direct comparison difficult. Authors comments that "*When patients with non-shockable rhythms, especially asystole, are included in randomized cardiac arrest trials, the potential benefits of a specific intervention may be masked due to the extreme poor chances of survival in that specific group*"

In a recent published Hyperion study (randomized, multi-center trial conducted in 25 French ICU´s) of cardiac arrest patients with non-shockable rhythms in New England Journal of Medicine on October 5th 2019, showed a statistical significance in favor of hypothermia treatment in non-shockable patients which opens up the further implementation of temperature management in these patients. The time to target of the patients in this trial was well over 7 hours compared with the 101 minutes of the RhinoChill™ arm in the Princess trial.

CEO Martin Waleij concludes;

Although the statistically objective of the Princess trial was not to measure full recovery (CPC 1), the most striking outcome of this landmark clinical trial was that measurements of CPC 1, ***that is full neurological recovery*** *was achieved in both patient groups (CPC 1) were statically significant (p 0.02).*

This fact, combined with the evidence of this scientific publication (the earlier cooling the better result, see reference 1 pic) indicate large potential health economic gains and improved survival in important patient groups, within cardiac arrest but potentially as well within the stroke population.

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 concept into neurology.

By the integration of RhinoChill™ and BrainCool™, 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."

Reference 1

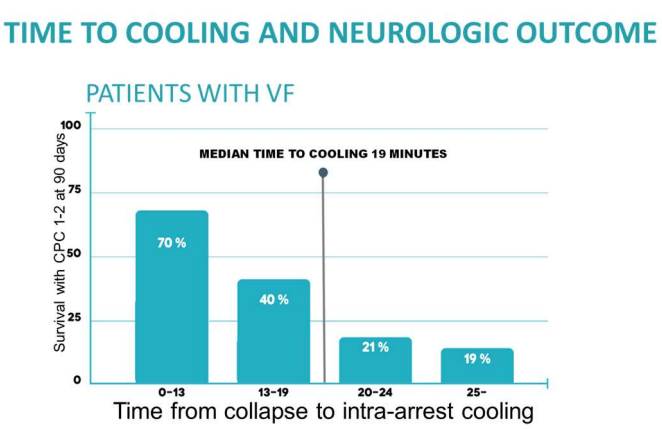

Figure 1

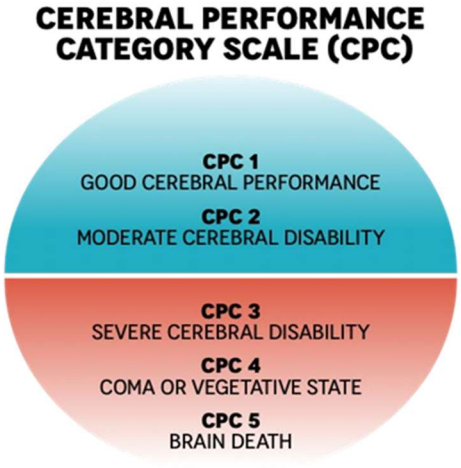

Figure 2

This information is information that BrainCool (publ) is obliged to make public pursuant to the EU Market Abuse Regulation. The information was submitted for publication, through the agency of the contact person set out herein, on June 12, 2020.

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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 Pain Management. BrainCool AB (publ) is based in Lund, Sweden, and its share is listed on Spotlight Stock Market.