Yagi et al. monitored CBO in 20 patients with cardiac arrest by NIRS. On the arrival of patients at the emergency department, the attending physician immediately assessed whether the patient was eligible for this study after conventional advanced life support and, if eligible, measured CBO in the frontal lobe by NIRS. They found that in all patients, the cerebral blood flow waveform was in synchrony with the chest compressions. Moreover, the tissue oxygenation index increased following cardiopulmonary bypass (CPB) in patients undergoing CPB, including one patient in whom CBO was monitored using the NIRO-CCR1. In addition, although the NIRO-CCR1 could display the pulse rate (Tempo) in real-time, Tempo was not always detected, despite the detection of the cerebral blood flow waveform. This suggested that chest compressions may not have been effective, indicating that the NIRO-CCR1 also seems useful to assess the quality of CPR. This study suggests that the NIRO-CCR1 can measure CBO during CPR in patients with cardiac arrest as effectively as the NIRO-200NX; in addition, the new NIRO-CCR1 maybe even more useful, especially in prehospital fields (e.g. in an ambulance), since it is easy to carry [1)].

1)
Yagi T, Kawamorita T, Kuronuma K, Tachibana E, Watanabe K, Chiba N, Ashida T, Atsumi W, Kunimoto S, Tani S, Matsumoto N, Okumura Y, Yoshino A, Sakatani K. Usefulness of a New Device to Monitor Cerebral Blood Oxygenation Using NIRS During Cardiopulmonary Resuscitation in Patients with Cardiac Arrest: A Pilot Study. Adv Exp Med Biol. 2020;1232:323-329. doi: 10.1007/978-3-030-34461-0_41. PubMed PMID: 31893427.