

AKTi!A

PUBLICATION

Blood Pressure Monitoring Journal
Vol 25 – Issue 2 – P 105-109
April 2020

LOCATION

Neuchatel Regional Hospital (HNE)
Switzerland

CITATION

C. Pellaton, A.Vybornova, S. Fallet, L.Marques, O. Grossenbacher, B. De Marco, V. Chapuis, M. Bertschi, B. Alpert, J. Solà “Cuffless systolic and diastolic blood pressure estimation at the wrist via an optical device: comparison to intraarterial measurement”

FULL STUDY

https://journals.lww.com/bpmonitoring/Abstract/2020/04000/Accuracy_testing_of_a_new_optical_device_for.8.aspx

Aktiia versus Invasive Arterial Lines

AKTiA OPTICAL BLOOD PRESSURE MONITOR ACCURATE COMPARED TO INTRA-ARTERIAL MEASUREMENTS

“ *The new optical technique appears to be capable of replacing more traditional methods of BP estimation.* ”

STUDY SUMMARY

The objective of this study was to compare the systolic (S) and diastolic (D) blood pressure (BP) estimations from the Aktiia optical device at the wrist with invasive measurements performed on patients scheduled for radial arterial catheterization in the ICU. Optical signals were automatically processed by a library of algorithms from Aktiia SA (OBPM -optical blood pressure monitoring algorithms).

KEY DEMOGRAPHICS

n=16

study participants

14/9

male/female

32-87 (65.7)

Age: Range (Mean)

27.8-44.0 (27.7)

BMI: Range (Mean)

2-6 (2.4)

Skin color: Range (Mean)*

**Fitzpatrick Scale*

KEY FINDINGS

SD

standard deviation of the error

7.1 mmHg

SBP

2.9 mmHg

DBP

< 8 mmHg

ISO81060-2 target

TAKEAWAY

The aim of the present study was to compare SBP and OBP estimations from the OBPM technology developed by Aktiia during hemodynamic variations naturally occurring in the ICU. The obtained performances confirm the potential of Aktiia OBPM algorithms in estimating BP in a noninvasive and reliable manner.