Validation of the Microlife BP A3 PC upper arm blood pressure monitor in patients with diabetes mellitus according to the ANSI/AAMI/ISO 81060-2:2013 protocol

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Objective **The aim of the present study was to validate the blood pressure (BP) measurement device, Microlife BP A3 PC, in patients with diabetes mellitus, according to the ANSI/AAMI/ISO 81060-2:2013 protocol.**

Patients and methods **In 85 individuals aged 56–88 years, with predefined criteria for diabetes mellitus, BP measurements on the upper arm were performed alternately using the Microlife BP A3 PC and a standard mercury reference sphygmomanometer. A total of 333 comparisons were included for analysis.**

Results **The mean difference between the Microlife BP A3 PC and the reference was −1.5 ± 6.3 mmHg for systolic BP (SBP) and −1.3 ± 5.2 mmHg for diastolic BP (DBP) according to criterion 1 of the protocol. For SBP, a total of 209 of the 333 measurements were within the range of 5 mmHg (62.8%), whereas the corresponding numbers for DBP were 232 of 333 (69.7%). For criterion 2, the intraindividual differences for the test device and the reference were −1.50 ± 4.73 mmHg for SBP and −1.30 ± 4.55 mmHg for DBP, thus being within the defined ranges provided by the protocol.**

Conclusion **The Microlife BP A3 PC fulfilled the requirements of criteria 1 and 2 of the ANSI/AAMI/ISO 81060-2:2013 protocol and can also be recommended for BP measurement in diabetic patients. *Blood Press Monit* 00:000–000**

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