INTRODUCTION
In emergency situations, detection of direct oral anticoagulants (DOACs) needs to be fast, but this is not always feasible. With the recent availability of a accurate dipstick point-of-care, DOACs can be rapidly detected in urine. However, the inter-observer agreement of this visual analysis needs evaluation.

AIM
This study aims to define (ad 1) the inter-centre and (ad 2) inter-observer agreement of the analysis of DOACs in urine samples of patients treated with factor Xa inhibitors or thrombin inhibitor dabigatran by means of DOAC Dipstick test.

METHOD
Ad 1
The inter-centre agreement was analysed from the results of a prospective, open-label, controlled, non-randomized, multicentre study performed in Germany including subjects treated with an oral direct factor Xa inhibitor (DXI) or the oral thrombin inhibitor (DTI) dabigatran. The true positive and true negative rate of the factor Xa inhibitor and thrombin inhibitor DOAC Dipstick test was compared with the results obtained by liquid chromatography tandem mass spectrometry (LC-MS/MS) from urine samples of subjects.

Ad 2
The inter-rater reliability was analysed from data obtained from an international laboratory study including 13 centres and 10 DOAC samples of patients treated with apixaban, rivaroxaban and dabigatran and controls without anticoagulants.

REFERENCES

RESULTS
Ad 1: Eight hundred and eighty of 904 included subjects were evaluable from 18 German centres for analysis. 

- The rate of false results for the specific DXI and DTI pads were 2.8% and 0.7%, respectively (Ref. 1).
- The difference between centres was not significant for DXA and the number of false results with DTI pads was insufficient to perform statistical analyses.
- Concentration of DOACs in urine, false negative and false positive visual evaluation of pads for DXI and DTI of DOAC Dipstick (tables 1 to 4).

CONCLUSIONS
The present study shows that DOAC Dipstick test is determined with a very high agreement between centres and between observers encouraging further multinational evaluation.

ACKNOWLEDGEMENTS
Study centres: Dietmar Trenk, MD, Dietmar, Julia Hommek, MD, Stefan Legewie, MD, Bad Kissingen; Cornelia Piper, MD, Ingadottor Potratz, MD, Bad Oeynhausen; Harald Darius, MD, Lorentz Reil, MD, Robert Klamroth, MD, Corinna Kubick Hoffmann, MD, Ana Maria Orlicic, MD; Christoph Sucker, MD, Berlin; Steffen Schnupp, MD, Ismael Cisse, MD, Christian Mahnkopf, MD, Thomas Mischie, MD, Coburg; Rupert Bauerens, MD, Jörg Herold, MD, Darmstadt; Frank Mensel, MD, Frank Dessau-Rudolf; Jan Bayer-Westendorf, MD, Sandra Marten, MD, Christine Naus, MD, Sebastian Schellong, MD, Carsten Müller, MD, Dresden; Eckhard Lindhoff-Lasch, MD, Barbara Zyldek, MD, Frankfurt; Daniel Dürscheid, MD, Roland Giesen, MD, Christoph Olivier, MD, Freiburg; Florian Langer, MD, Mina Voigtlander, MD, Hamburg; Martin Grünwald, MD, Heidenheim; Ingo Ahrens, MD, Timo Böhmke, MD, Köln; Ute Schlos, MD, Michael Krause, MD, Leipzig; Ulrich Wolf, MD, Stahlsdorf; Ulrich Overhoff, MD, Fabian Krämer, MD, Siegen.

CONFICT OF INTEREST
JL, FL: Managing director DOASENSE; RB, JBW, CW: consultancy fee DOASENSE; JD, IE, MC, PV, SH: none.

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