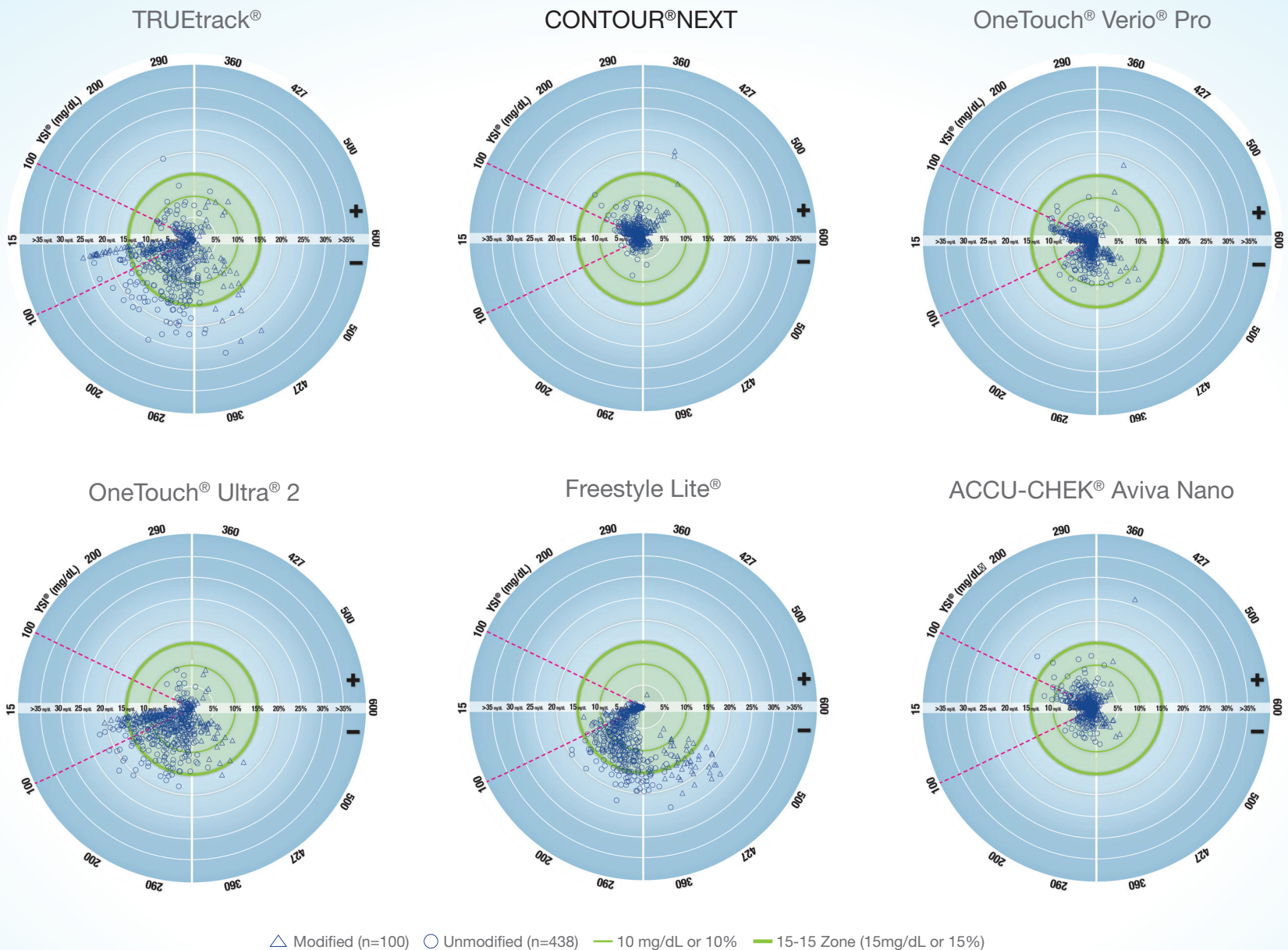


# CONTOUR®NEXT

Proven highly accurate by demonstrating results close to lab reference values<sup>1,2,4</sup>



Radar plots illustrating the accuracy and precision of six blood glucose monitoring systems<sup>1</sup>



CONTOUR®NEXT BGM system: Proven highly accurate by meeting the ISO 15197:2013 accuracy requirement<sup>\*2,3</sup>

Speak to your Ascensia representative or call 1.800.432.9131 to request CONTOUR®NEXT Meter samples today.

#### Radar plot description<sup>1</sup>

A radar plot is a new way to show the differences between blood glucose meter readings and the laboratory reference values in meter performance evaluations. The radar plot uses polar coordinates to position data points, rather than placement within the x- and y-axes of a more traditional graph. Radar plots are a different way to graphically show data, similar to Modified Bland-Altman plots. Accuracy on the graph is represented by how close the data points are to the center: the closer the point to the center, the more accurate. Precision, on the other hand, is measured by how the dots fall on top of each other: the more spread out, the less precise.

Furthermore, the data points in the top half of the circle above the horizontal line represent BGM system readings that overestimated the actual value when compared to the 'true' laboratory value at the center. The data points in the bottom half of the circle represent readings that underestimated the actual value. Each data point represents the difference or 'error' from the true laboratory value at the center; the outer band shows the Yellow Springs Instrument (YSI) laboratory values increasing from 15 mg/dL to 600 mg/dL. The data points demonstrating the difference from YSI values <100 mg/dL from the BGM system reading are between the magenta dashed lines and are in mg/dL; those data points demonstrating the difference from YSI values >100 mg/dL from the BGMS reading are outside the magenta lines and are percentages.

The distance from the centre, or 'truth' according to the YSI laboratory value, represents the magnitude of the BGMS error; if a data point is at the centre then there is zero error or the BGMS reading is identical to the laboratory value. The error of the BGMS result compared to the laboratory reference result at the centre is greater the further out from the centre the data point resides. The points within the bold green outer circle represent readings within  $\pm 15$  mg/dL or  $\pm 15\%$  error versus laboratory reference comparisons at <100 mg/dL and >100 mg/dL, respectively, to demonstrate how the BGMS compares to the ISO 15197:2013 accuracy requirements.

The study from which the data for these radar plots was taken evaluated the performance of the CONTOUR®NEXT blood glucose monitoring (BGM) system compared with 5 BGMS systems from other companies (Accu-Chek® Aviva Nano, FreeStyle Lite®, OneTouch® Ultra® 2, OneTouch® Verio® Pro, TRUEtrack®). A total of 146 subjects were included. Subjects were managed by the site staff to either safely lower or raise their blood glucose levels. Each subject had 1 capillary blood sample drawn at 3 different times for immediate testing on the 6 BGM systems and the YSI, for a total of 438 natural capillary blood samples. Extreme glucose levels not safely obtained directly from subjects were achieved by blood sample manipulation (i.e. glycolysis or addition of glucose solution in vitro). Blood samples achieved in this manner are referred to as 'modified'. System accuracy was assessed by mean absolute difference (MAD) and mean absolute relative difference (MARD) across several glucose ranges, with <70 mg/dL evaluated by MAD as the primary end point.<sup>4</sup>

<sup>\*</sup>95% of the measured glucose values need to fall within either  $\pm 15$  mg/dL of the average measured values of the reference measurement procedure at glucose concentrations <100 mg/dL or within  $\pm 15\%$  at glucose concentrations  $\geq 100$  mg/dL. 99% of individual glucose measured values need to fall within zones A and B of the Consensus Error Grid (CEG) for type 1 diabetes.<sup>3</sup>

**References:** 1. Pardo S et al. Evaluating the accuracy and precision of 6 blood glucose monitoring systems using radar plots. Poster presented at the 14th Annual Meeting of the Diabetes Technology Society (DTS), November 6–8, 2014; Bethesda, MD. 2. Bernstein R, et al. A New Test Strip Technology Platform for Self-Monitoring of Blood Glucose. J Diabetes Sci Technol. 2013; 7 (5): 1386-1399. 3. International Organization for Standardization. In vitro diagnostic test systems - requirements for blood glucose monitoring systems for self-testing in managing diabetes mellitus. Geneva, Switzerland: International Organization for Standardization; 2013. 4. Klaff LJ, et al. Accuracy Evaluation of Contour Next Compared with Five Blood Glucose Monitoring Systems Across a Wide Range of Blood Glucose Concentrations Occurring in a Clinical Research Setting. Diabetes Technology & Therapeutics. Volume 17, Number 1, 2015.

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