

# Precision of acetabular cup placement in robotic integrated total hip arthroplasty

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## Publication

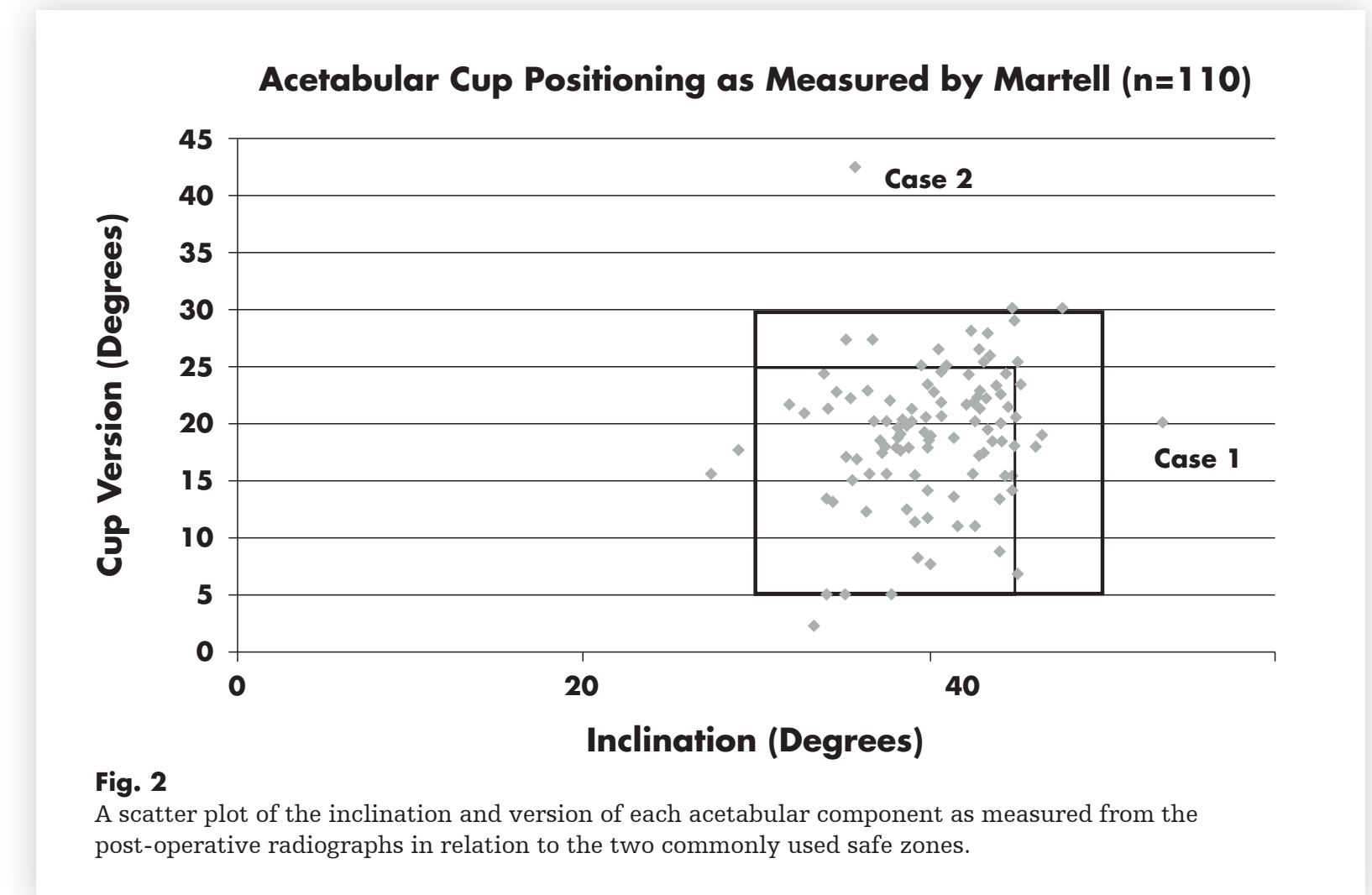
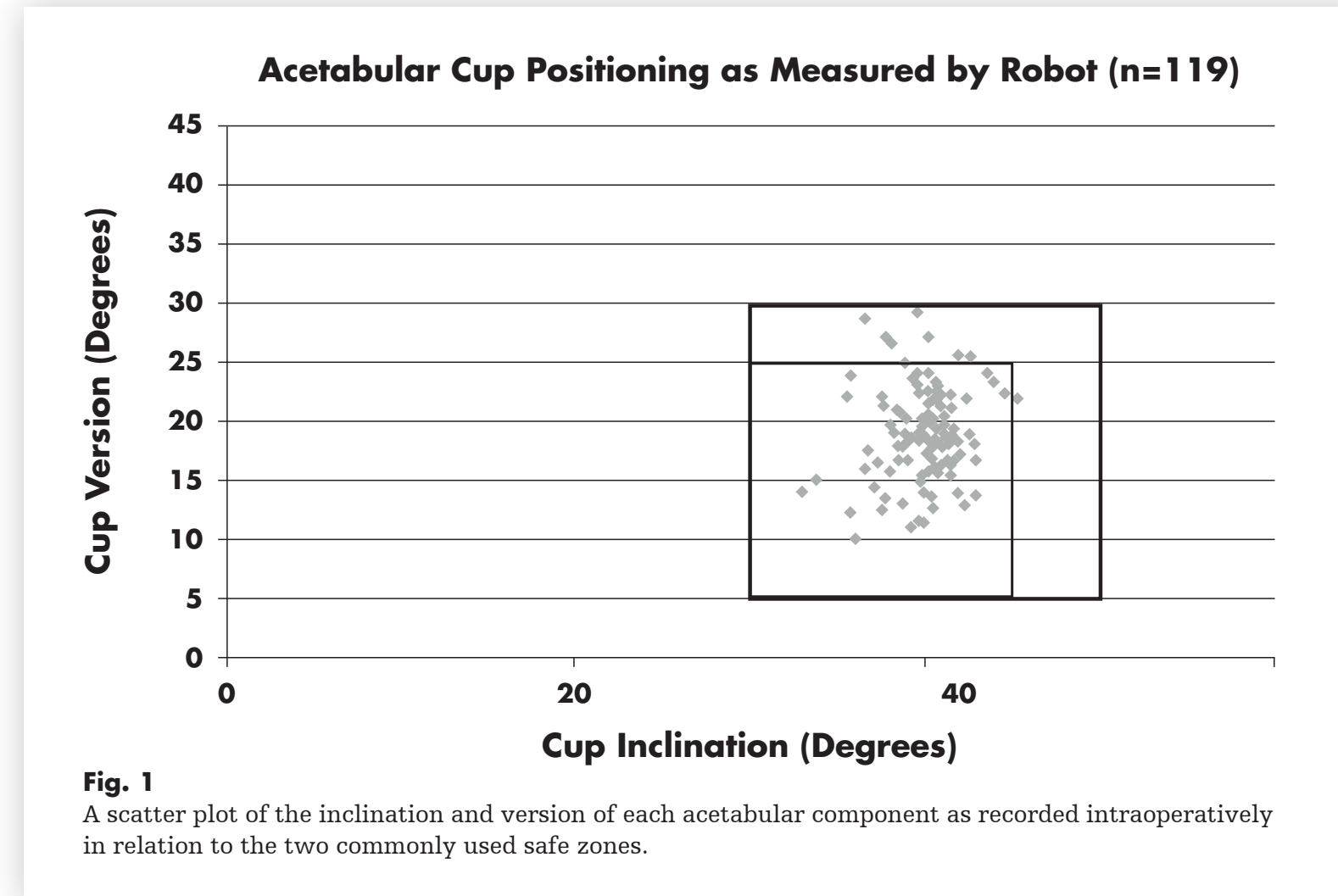
Hip Int 2015; 25(6):531-536

## Aims

The aim of this study was to assess the efficacy of robotic-arm assisted acetabular component placement during total hip arthroplasty (THA).

## Methods

120 patients underwent primary THA at 4 different medical centres. A preoperative pelvic CT protocol was used to plan socket placement followed by robotic-arm assisted acetabular preparation and cup insertion. Intraoperative cup position was recorded and postoperative placement measured using Martell suite analysis software.



## Results

Using a 95% predictive intervals, robotic-arm cup placement was within +/-4 degrees of planned position in 95% of cases. Applying these data to the Callanan safe zone, (30-45° of inclination; 5-25° of anteversion), 96% of sockets were within the defined safe zone. Data from this study confirms that intraoperative robotic assistance allows for precision of preparation and position of the acetabular cup to plan during total hip arthroplasty.

## Reference:

Elson L, Douchis J, Illgen R, Marchand R, et al. Precision of acetabular cup placement in robotic integrated total hip arthroplasty. Hip Int 2015; 25(6):531-536.

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