

# Body Surface Area Estimation In Girls With Turner Syndrome: Implications For Interpretation Of Aortic Sized Index

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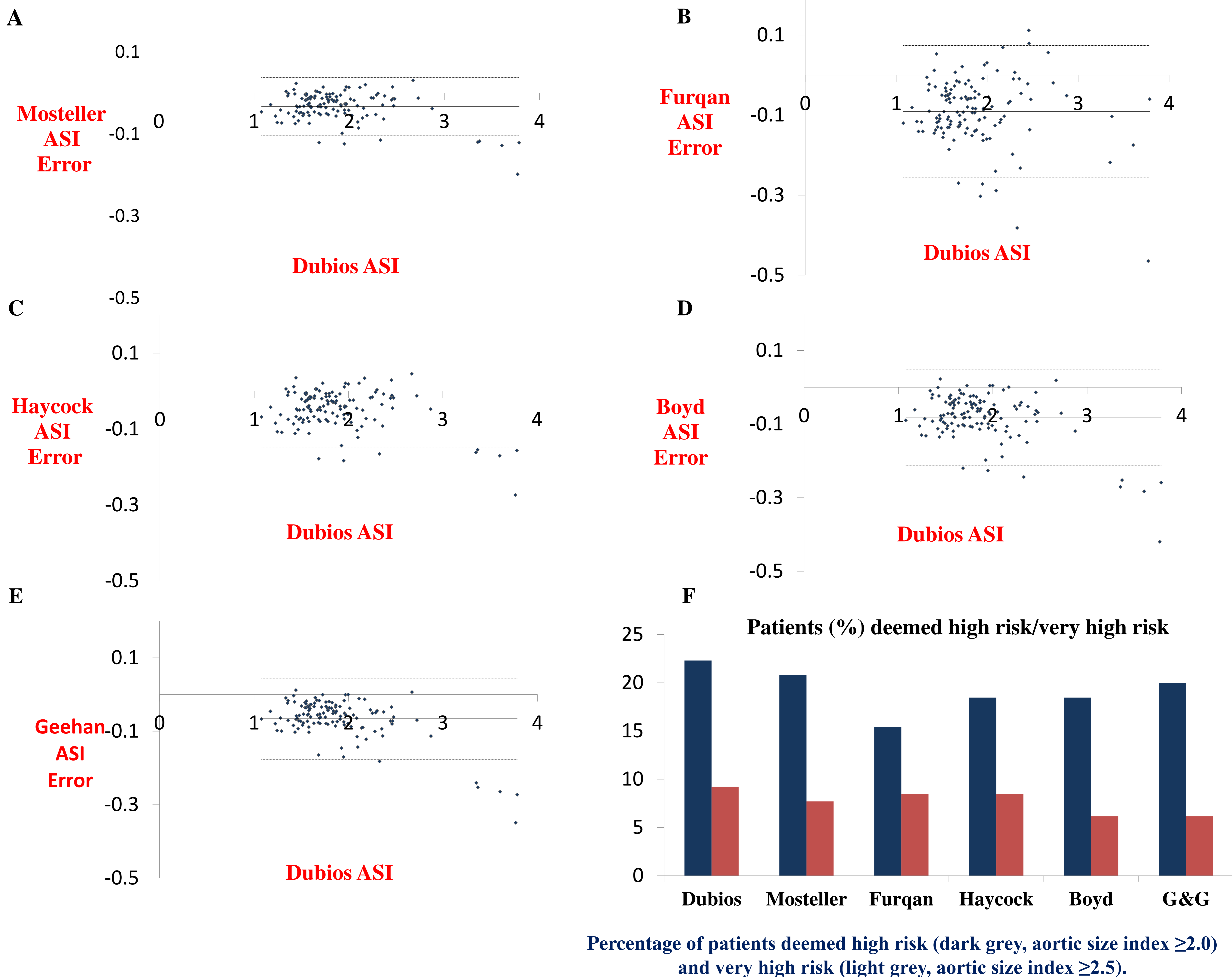
## Background

Aortic sized index (ASI) is currently recommended as a measure of the risk of aortic dissection in Turner Syndrome (TS). ASI is derived by dividing aortic dimensions by body surface area (BSA). There are multiple equations to estimate BSA. We examine the impact of different BSA formula selection on ASI and subsequent risk category in a cohort of patient with TS.

## Methods

130 patients with TS who had aortic root measurements at the Sinus of Valsalva on echocardiogram and height, weight measurements were included. ASI were calculated using different BSA formulae. Bland-Altman plots of ASI derived using Dubios BSA equation and differences of ASI derived from the other equations were presented.

## Results



## Conclusion

Whilst limits of agreement of ASI in TS derived using five different BSA equations in comparison to ASI using Dubois are high, our study demonstrated that,

- 1) Agreement was poorer at higher ASI.
- 2) Proportion of individuals with ASI  $> 2.0$  cm/m<sup>2</sup> and 2.5 cm/m<sup>2</sup> are different simply by using a different BSA equation to derive ASI.

Given the significant clinical implications, we believe that more accurate and robust methods of evaluating dissection risk in TS are needed.

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