

# Letters

## *In Response:*

En1 We appreciate the comments of Li *et al.* We would like to respond to them as follows: How can the true preoperative capacity for spontaneous correction and compensation be accurately estimated? Up until now, I believe there has not been an adequate answer to this question. Flexibility is not the only determinant of assessment of the capacity. Couple motions and motion behavior are the other determinants and, indeed, might be more important ones. After all, spontaneous correction of lumbar curve depends on cooperation and coordination of corrective forces. Flexibility can be assessed by supine or standing side-bending, fulcrum bending, push-prone, or traction films. Determining which of these is more representative for the capacity is onerous. Our study demonstrates the best possible correction (83%) and marked overcorrection [correction/flexibility ( $C/F$ ) = 2.4] of thoracic curve by CBT for 37 major thoracic-compensatory C modifier lumbar curve was echoed by the best correction (81%) of the lumbar curve, which exceeded the original capacity for spontaneous correction represented by the flexibility of lumbar curve ( $C/F$  = 1.2), and no postoperative decompensation. It is reasonable to conclude that CBT can maximize selective thoracic correction and enhance the capacity for spontaneous correction of lumbar curve, no matter if the flexibility is assessed by supine or standing side-bending films.

Comparing Lenke<sup>1</sup> and PUMC<sup>2</sup> classification systems, Lenke classification has broader curve criteria for selective thoracic fusion and more patients with major thoracic-compensatory lumbar curve (MTCL) can be treated with selective thoracic fusion than fusions following PUMC guidelines; but, the treatment technique is limited by avoiding derotation and overcorrection, and the resulted correction is inferior to PUMC series (tho-

racic curve: 36% *vs.* 60%, lumbar curves: 33% *vs.* 64%).<sup>3,4</sup> It seems the broader curve criteria are to have more MTCL curves successfully treated by selective thoracic fusion, the more restriction of the corrective forces provided is necessary to prevent postoperative decompensation, which results in worse correction. In this study, we designed a check mechanism at the caudad end of thoracic curve to force or guide all thoracic corrective forces to the same direction as required for correction of the lumbar curve, and allowed for maximizing thoracic and lumbar correction in patients with Lenke 1C or 2C idiopathic scoliosis. We are undertaking a prospective study to explore if CBT can add more selective thoracic fusions compared with fusions following Lenke guidelines. Preliminary results indicate that it can. Percent correction is not the only concentration in these studies.

We do appreciate the opportunity to respond to your comment and we hope that we have been able to elaborate on our thoughts to explain our study better.

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## AUTHOR QUERIES

**AUTHOR PLEASE ANSWER ALL QUERIES**

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