Changes in the distribution of lumbar lordosis following L5-S1 sparing minimally invasive deformity surgery

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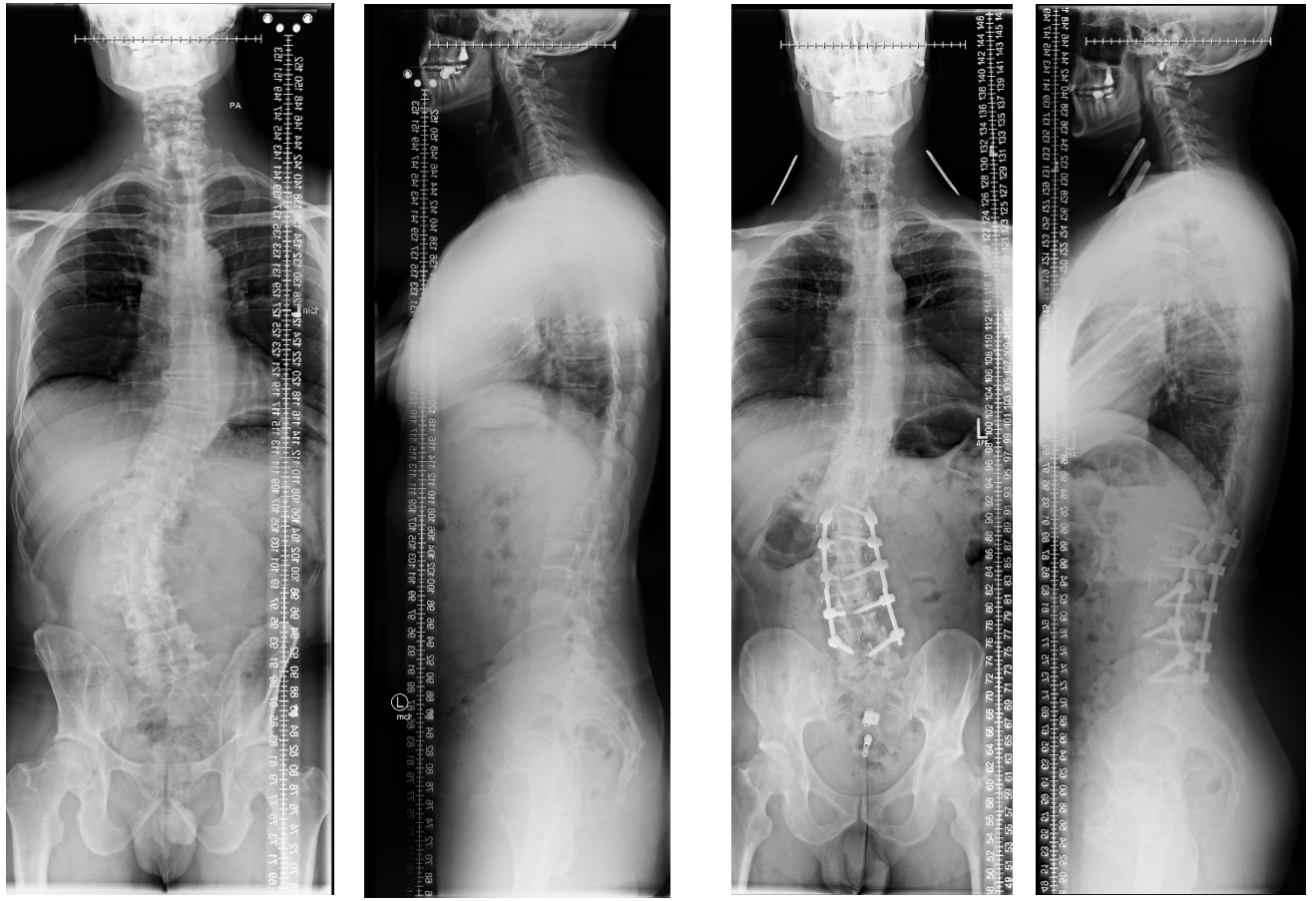
Introduction:

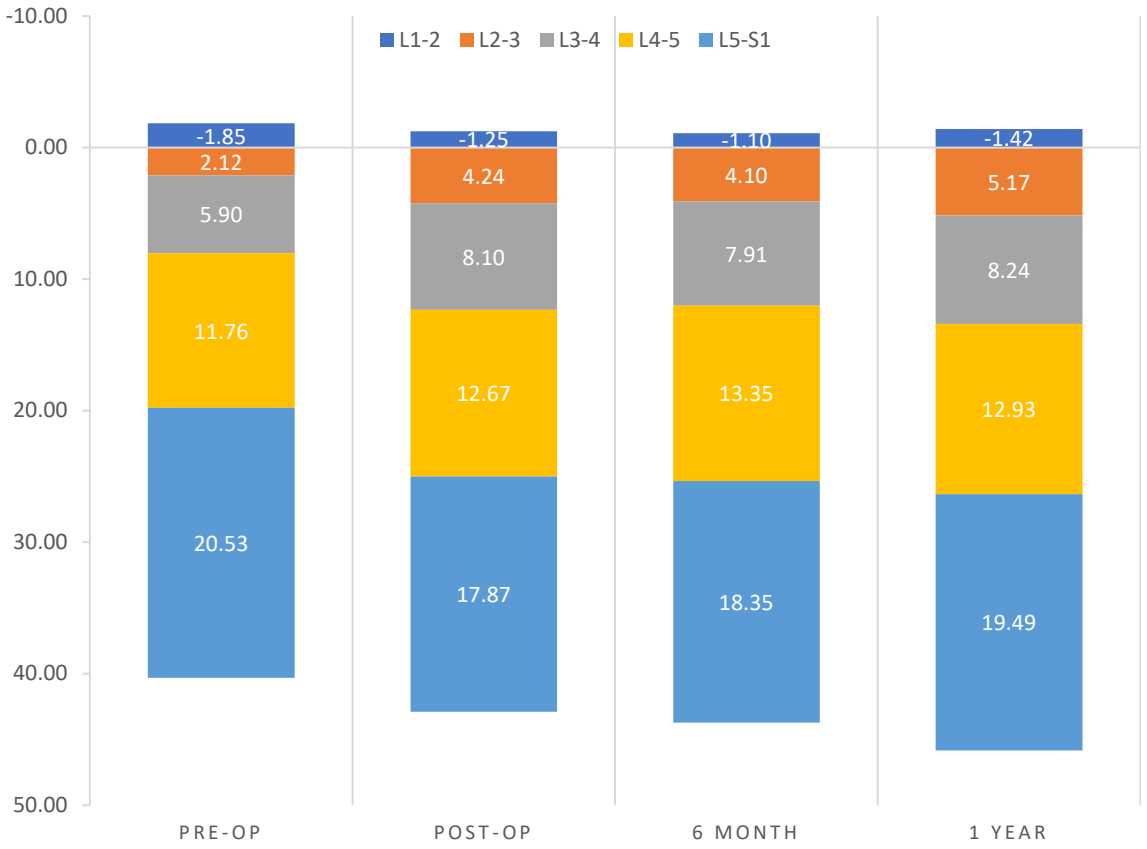
- Short-segment minimally invasive lateral interbody fusion can be used to treat certain lumbar spinal deformities while sparing the L5-S1 disc space
- Our study aimed to evaluate how L5-S1 sparing MIS deformity surgery affects regional and global spinal alignment parameters



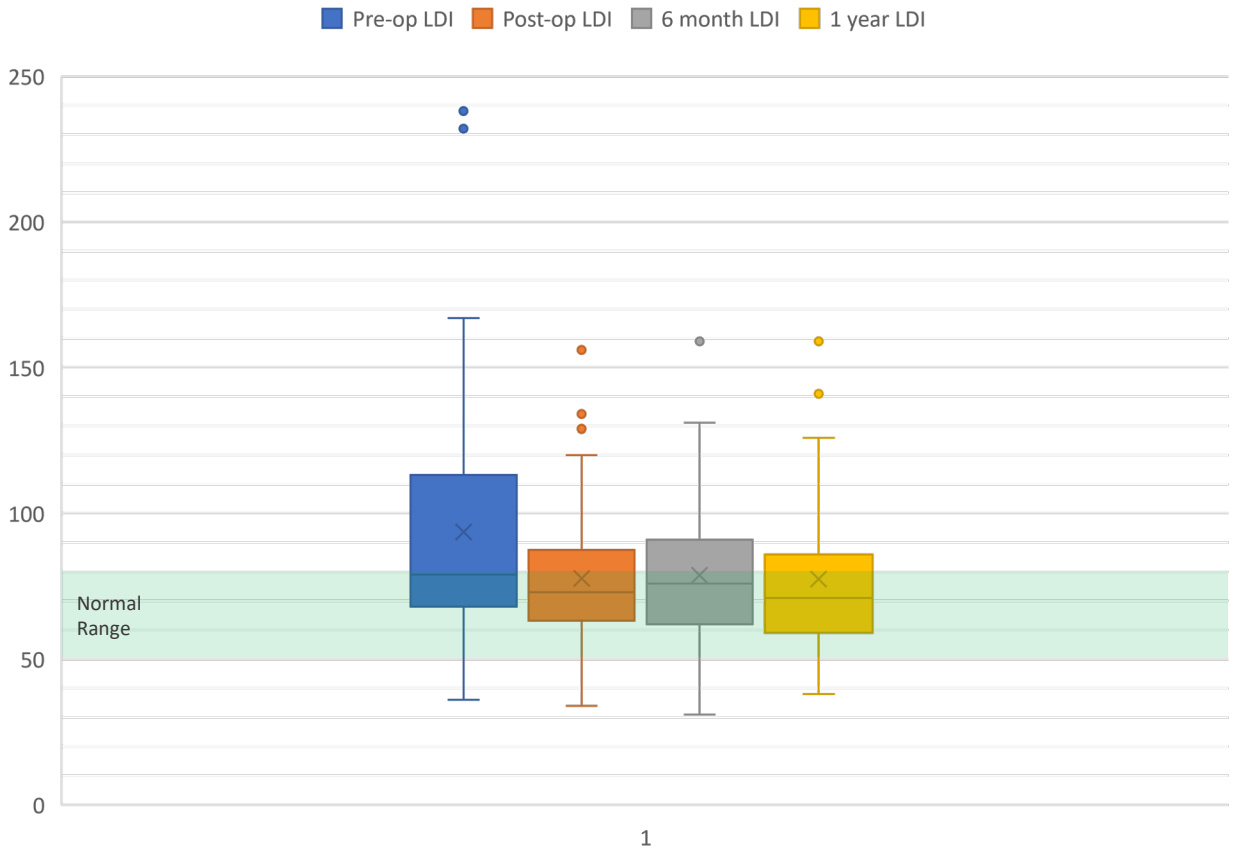
Methods:

- Retrospectively analyzed 49 patients who underwent L1-L5 or L2-L5 lateral lumbar interbody fusion with or without posterior fixation for adult spinal deformity
- Compared pre-operative and post-operative standing scoliosis x-rays to evaluate for changes in sagittal and coronal alignment measures

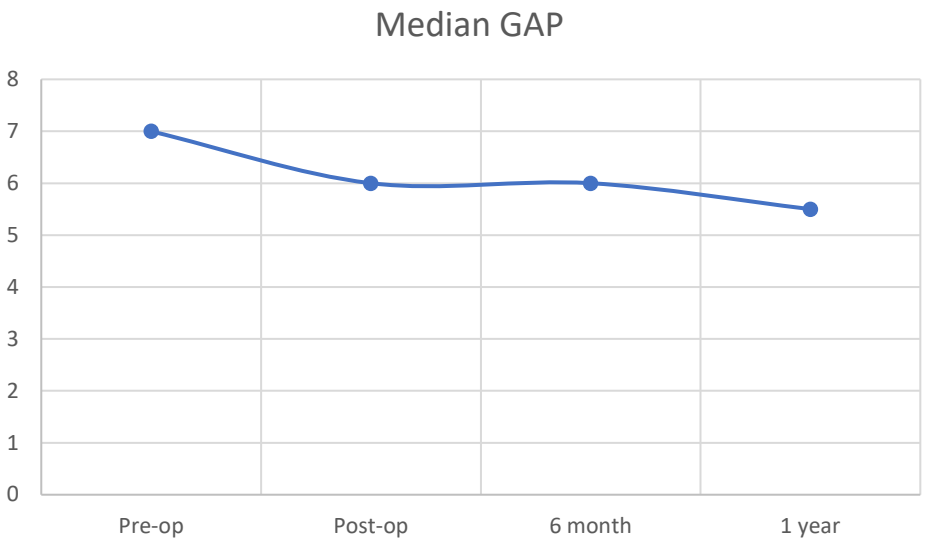
Following L1-5 or L2-5 fusion for lumbar spinal deformity, lumbar lordosis increases while also shifting to the proximal lumbar spine

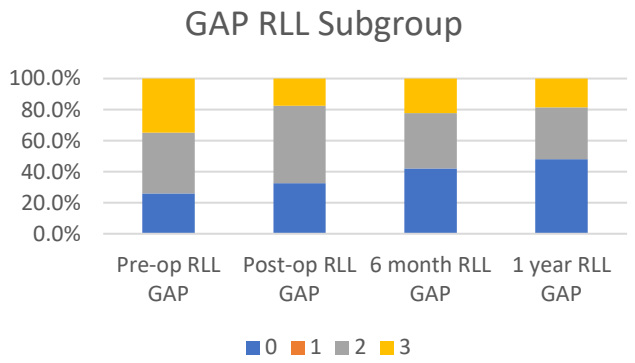


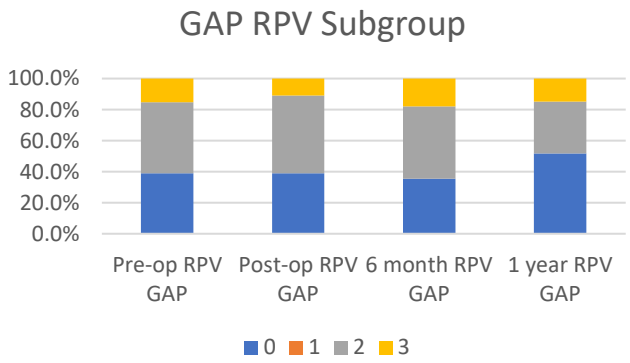
Shifting lordosis to the proximal lumbar spine may help correct a hyperlordotic maldistribution of lumbar lordosis

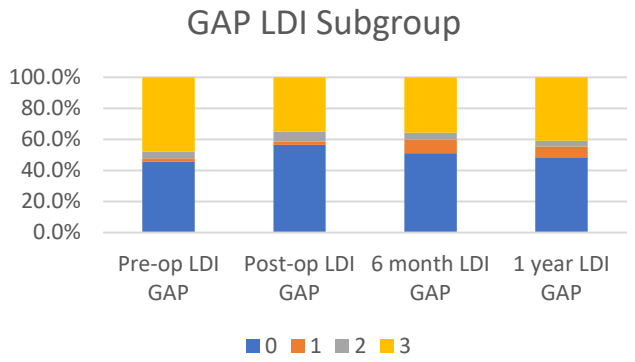


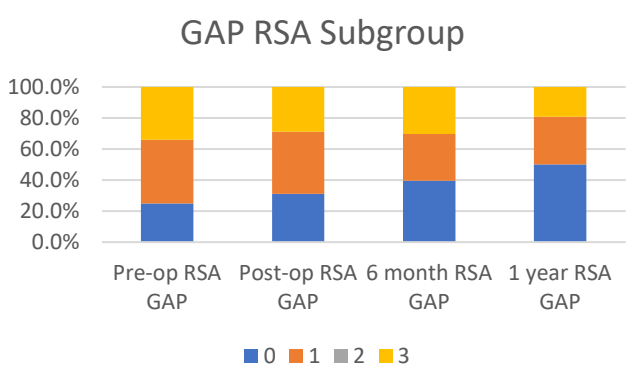
Overall GAP score and GAP subgroup scores decreased significantly following surgery



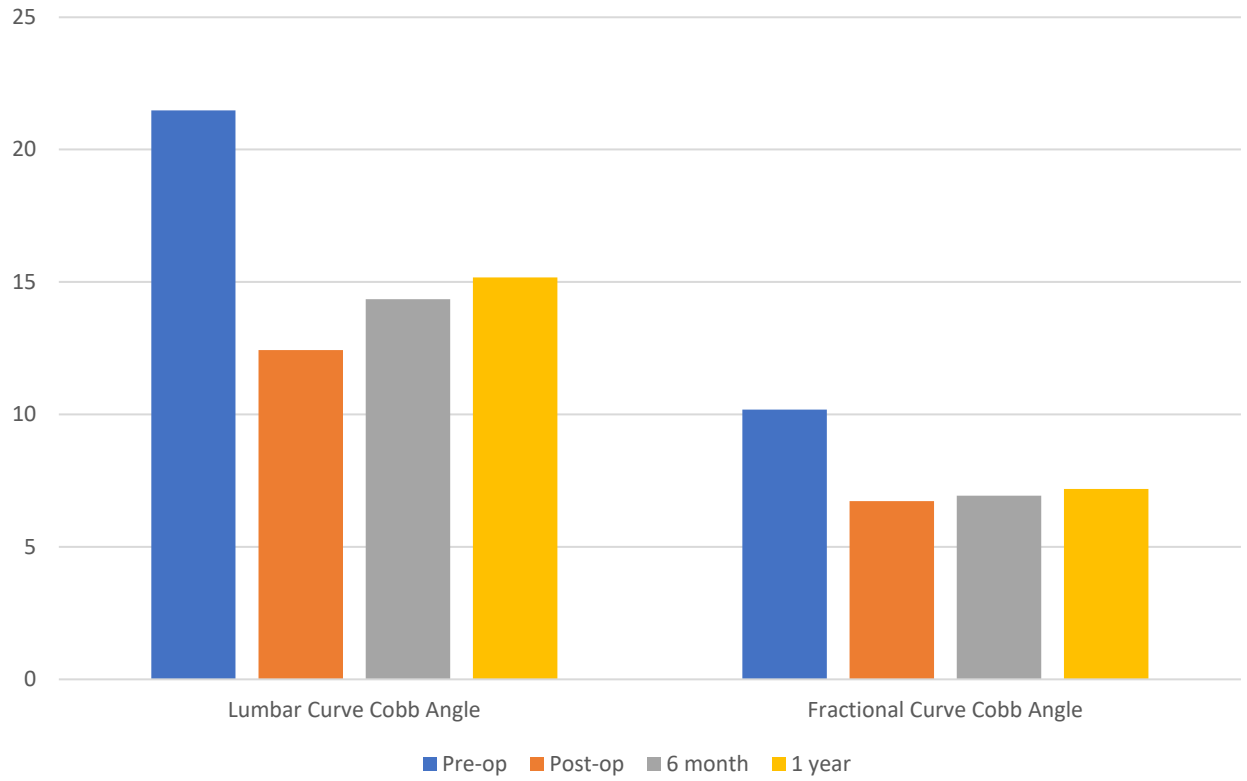








Coronal lumbar curve Cobb angles and fractional curve Cobb angles were significantly decreased, while overall coronal alignment was preserved



	Pre-op	Post-op	6 month	1 year
Bao type A	84.4%	73.3%	88.6%	88.5%
Bao type B	13.3%	4.4%	6.8%	7.7%
Bao type C	2.2%	22.2%	4.5%	3.8%