



**Supplementary Fig. 3.** Intervertebral height index measurement using the modified distortion compensated Roentgen analysis method. The intervertebral height was defined as the average of anterior, middle, and posterior distance from upper and lower vertebral body to the midline. Then the intervertebral height index, the ratio of intervertebral height to the anterior and posterior diameters of the upper vertebral body, was calculated to eliminate individual differences.