

**Abstract: 221**

**FlexiCore<sup>®</sup> Disc Replacement vs. Fusion: Work Status and Pain Medication Usage at Three Years Post-surgery**

*J. Zucherman<sup>1</sup>, E. Woodard<sup>2</sup>, C. Theofilos<sup>3</sup>, R. Sasso<sup>4</sup>*

<sup>1</sup>St. Mary's Spine Center, San Francisco, CA, USA, <sup>2</sup>The New England Baptist Bone and Joint Institute, Boston, MA, USA, <sup>3</sup>Spine Center, Palm Beach Gdns, FL, USA, <sup>4</sup>Indiana Spine Group, Indianapolis, IN, USA

**Introduction:** Lumbar Degenerative Disc Disease (DDD) causes substantial pain and impairment of patients' activities of daily living. Spinal fusion is currently the standard treatment, but it limits motion at the operated level. Total disc replacement with FlexiCore<sup>®</sup> is intended to reduce back pain associated with lumbar DDD while permitting motion. This abstract reports the outcomes on FlexiCore<sup>®</sup> patient pain medication usage and work status from 4 of 23 sites participating in the FlexiCore<sup>®</sup> IDE trial.

**Methods:** The study was a prospective, multicenter, randomized (2:1), controlled trial. Patients were randomized 2:1 (FlexiCore<sup>®</sup>: fusion) and implanted at a single level between L1 and S1. Complete data is available for (FlexiCore<sup>®</sup> vs. fusion): 79 vs. 39 patients at pre-op and 48 vs. 20 patients at 3 years. Pain medication usage and work status were documented at each follow-up visit.

**Results:** Pain medication usage between groups was not statistically significant at any time point. However, within groups, the shift from pre-operative usage was significant in FlexiCore<sup>®</sup> patients only. The percentage of patients using pain medication dropped by 27% in FlexiCore<sup>®</sup> patients ( $p=0.0064$ ) as compared to 12% in the fusion group ( $p=0.3750$ ). At 3 years, 20% of FlexiCore<sup>®</sup> patients were unable to work due to their low back condition. This was significantly lower compared to pre-op ( $p=.0010$ ). In the fusion group, 26% of patients were unable to work due to their low back condition. These shifts were not statistically significant between groups.

**Conclusion:** Pain medication use in FlexiCore<sup>®</sup> patients had a greater reduction. More patients in the FlexiCore<sup>®</sup> group were able to resume work as compared to fusion. Full study data is needed to confirm the findings of this small sample size.