Motion preservation surgery

The primary goal of motion preservation surgery in the spine is to maintain normal or near normal motion in an attempt to prevent adverse outcomes commonly seen with conventional spinal fusion, most notably the development of adjacent-level degenerative disc disease. Several different surgical approaches have been developed to preserve motion in the lumbar spine, including total disc replacement, partial disc (nucleus) replacement, interspinous spacers, dynamic stabilization devices, and total facet replacement devices. The design of devices varies greatly. The devices are created using a similar rationale but are unique in design relative to their lumbar counterparts [1)].

1)
Murtagh R, Castellvi AE. Motion preservation surgery in the spine. Neuroimaging Clin N Am. 2014 May;24(2):287-94. doi: 10.1016/j.nic.2014.01.008. Review. PubMed PMID: 24792608.