

Headline

Nuvasive's XLIF, Medtronic's DLIF, other lateral fusion techniques likely to see increased adoption despite pricing pressure - surgeons

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Intelligence Details

Nuvasive's (NASDAQ:NUVA) XLIF, Medtronic's (NYSE:MDT) DLIF, and other lateral fusion procedures are likely to see increased uptake, despite pricing pressure for spinal devices, orthopaedic surgeons said.

Extreme lateral interbody fusion (XLIF) and direct lateral interbody fusion (DLIF) are two of the leading lateral fusion procedures. They are currently being used to address spine disorders, such as painful disc degeneration or disruption, with an approach from the side (lateral) of the patient, as opposed to an approach from the back (posterior) or the front (anterior). Other companies in the space include Globus Medical, Synthes, and DePuy. However, Nuvasive is the dominant player in the lateral fusion space.

XLIF is a minimally disruptive procedure because the procedure is performed through one or more small incisions as opposed to a traditional procedure which requires a large incision to reach the spine either through the front of the back, explained Dr Choll Kim, associate clinical professor at University of California at San Diego, founder of the Society for Minimally Invasive Spine Surgery, and a past voting member of the FDA Orthopedic Devices Panel. He noted that the XLIF procedure is now a major part of his practice and the procedure is the most useful for fusions of three or more levels.

Kim noted that XLIF may be more expensive than a transforaminal lumbar interbody fusion (TLIF) procedure or open surgery, depending on the hospital contract with the manufacturer. However, the economic cost due to a longer hospital stay and complications with open surgery is likely high as well. Surgeons who observe minimally disruptive procedures for the first time are genuinely surprised with the postoperative outcome and the speedy patient recovery, said Kim. In the long term, lateral fusion compared to a traditional approach may not make much difference but in the short term, the difference is significant especially because open surgery has a high rate of complications. "You would never want to put a family member through the trauma of open back surgery, when this minimally disruptive alternative is available," added Kim.

Dr Rayshad Oshtory, a surgeon from Post Street Surgery Center in San Francisco, said that the trend in spine surgery is towards minimally invasive procedures with many recent developments in that area. The lateral approach is revolutionary and there are several benefits attached to it such as a smaller incision. He added that you can also fit a bigger cage and more bone graft. Additionally, there is no need to push aside bowel contents and there is less risk of damaging blood vessels, he noted.

Company:

Globus Medical, Inc.
Medtronic, Inc.
Nuvasive, Inc.
Synthes GmbH

Company

Globus Medical Inc.

Intelligence Type(s)

Product Development

Topic

Medical Devices

Intelligence Grade

Strong evidence

Sub-sectors

Medical equipment and services

Country

USA

Deal Value (millions)

1,370 USD

Oshtory noted that Nuvasive's main focus is on lateral fusion and it has also been doing it the longest compared to any other company. Most people would agree that TLIF is much more technically demanding compared to the XLIF and less stable biomechanically, Oshtory added.

Dr Andrew Hecht, chief of orthopedic spine surgery at Mount Sinai School of Medicine, said that lateral fusion procedures are a great addition to the "toolbox" and for the right patient they can be very helpful. He noted that Nuvasive has grown a lot based on the XLIF procedure but may face some steep competition as Medtronic and other competitors increasingly enter this space.

Approaches designed to have the same outcomes with less invasive means are catching on now compared to previous fusion techniques, said Dr Clayton Dean, a spine surgeon at the Maryland Spine Center at Mercy Medical Center. Older procedures have known complications rates, whereas complication data from the newer lateral procedures is still being generated. One major complication is the risk of motor and sensory nerve injury when traversing the lumbosacral plexus, Dean said. "The last thing you want to do is impart damage on nerve roots that exit the spine," since the nerve roots are irritated to begin with in these patients, he added. The risk of nerve damage is at the forefront of a surgeons' mind when performing such a procedure, but a real-time way of monitoring sensory and motor potential minimizes irreversible damage at the spinal cord level, Dean added.

XLIF removes the need for an access surgeon, which is a benefit over prior procedures, said Dr Michael Duffy, an orthopaedic spine surgeon at Texas Back Institute. This is significant especially at smaller centers that do not always have an access surgeon available, he added.

Pricing pressure may not impact adoption

Several surgeons and spinal company executives interviewed by this news service agreed that the price pressure was very "real" for spinal devices. However, they noted that the pressure was unlikely to have a major impact on the uptake of lateral fusion procedures.

Oshtory, who recently attended a meeting at Sutter Health, a health system in Northern California that serves more than 100 California cities and towns, said that a majority of the discussion at the meeting was centered on pricing for spinal devices. However, the cost for the XLIF procedure can likely be justified because of the benefits, he noted. He said that the price currently is fairly comparable to anterior cages, but the price to the institution may vary based on individual contracts.

Overall a hospital sees savings due to shorter stays, he noted. Because of increased competition in the space as more companies emerge, the thought is that maybe the manufacturers could be convinced to lower the price as well, Oshtory added.

Kim said that Nuvasive is likely to see increased competition for XLIF not only from other lateral fusion techniques but also existing surgical procedures. However, there will likely also be an increase in the market size because patients who previously did not undergo surgery or treatment due to the invasiveness of open surgery will likely consider this minimally invasive alternative. "Surgery was too big of a deal before," said Kim, but the market may now be bigger.

These minimally disruptive technologies will continue to grow and will see greater adoption, Kim said.

Patrick Williams, vice president of finance and investor relations at Nuvasive, said that currently about 20% of the procedures are done through a minimally invasive approach. However, the next few years may result into a paradigm shift with advancement in technology, along with patient advocacy -- with as many as 80% of the procedures being done in a minimally invasive fashion, he added.

Williams noted that pricing pressure is not new to spine and it has been there for decades. Nuvasive aims to mitigate pricing pressure by being innovative and introducing several new products each year, he added.

Nuvasive has a market cap of USD 1.37bn.

by Viral Gandhi

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