

# American Spine Registry (ASR)

## 2023 Fact Sheet

The American Spine Registry (ASR) launched in January 2020 with two modules: Degenerative Lumbar Spine and Degenerative Cervical Spine. This report provides a preview of the data in the ASR.

ASR, a partnership between the American Association of Neurological Surgeons (AANS) and the American Academy of Orthopaedic Surgeons (AAOS), represents a collaboration to enhance and improve the quality of spine care by providing spine surgeons access to a national data-collection program. The partnership incorporates the resources and experiences of both organizations.

*Thank you to the ASR Executive Committee and ASR Data Use Committee for their contributions and leadership in bringing this registry report to fruition.*

### ASR Executive Committee

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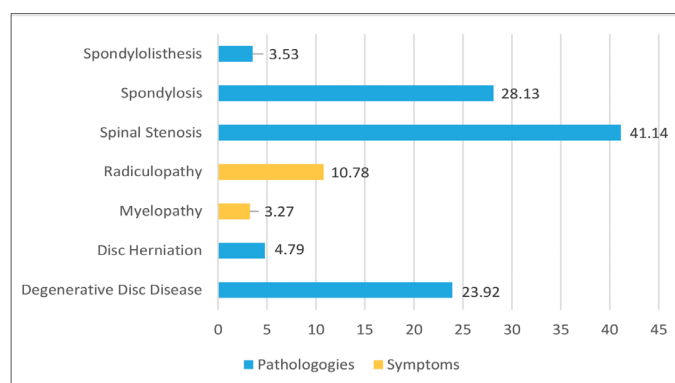
### ASR Data Use Committee

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**Table 1** ASR Volume

Module	Procedures	Patients
<b>Cervical</b>	55,504	49,278
<b>Lumbar</b>	109,614	94,623

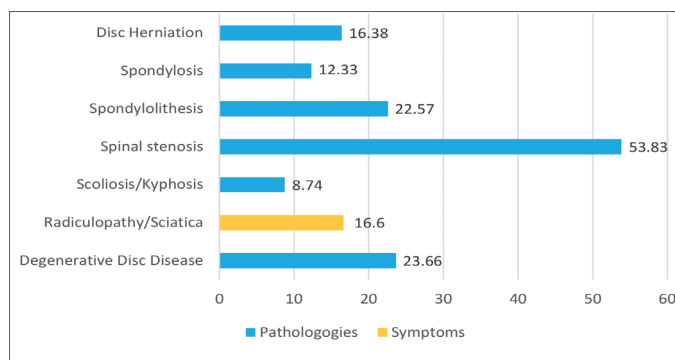
**Figure 1** Cervical Rates of Reported Diagnoses (N=55,504)\*



\*Cases may include more than one reported diagnosis

\*\*ICD-10 codes of myelopathy and radiculopathy may be reported in association with other pathological diagnosis codes

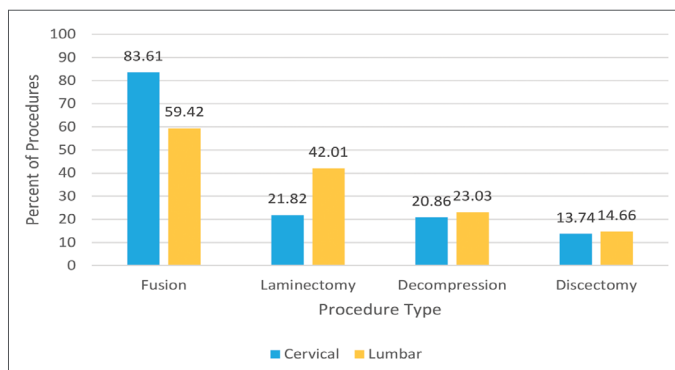
**Figure 2** Lumbar Rates of Reported Diagnoses (N=109,614)\*



\*Cases may include more than one reported diagnosis

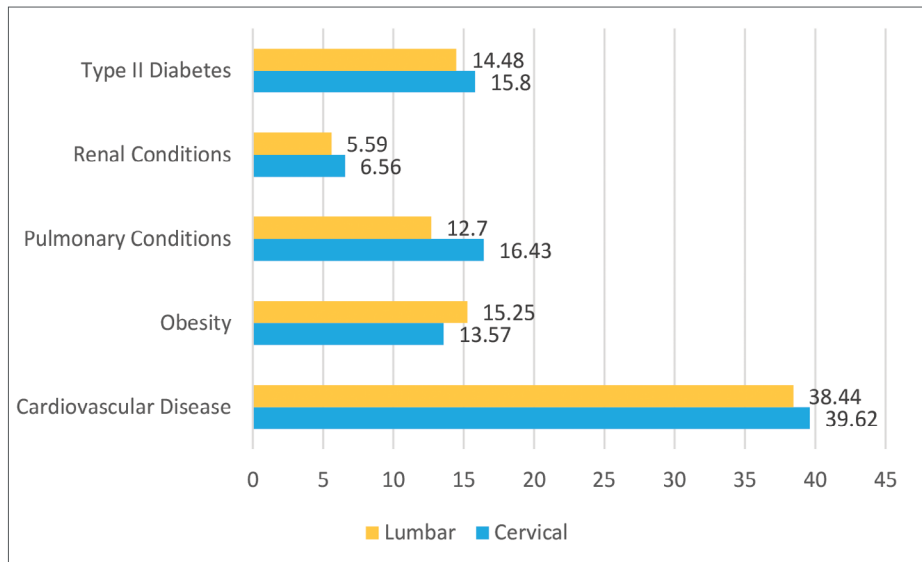
\*\*ICD-10 codes of myelopathy and radiculopathy may be reported in association with other pathological diagnosis codes

**Figure 3** ASR Rates of Reported Procedure Types (Cervical N = 55,504; Lumbar N = 109,614)\*



\*Cases may include more than one reported procedure

**Figure 4** ASR Comorbidity Rates (Cervical N = 55,504; Lumbar N = 109,614)\*



\*Cases may include more than one reported comorbidity diagnosis

\*\*Obesity rates were determined by the presence of any of the following ICD-9/10 codes: 278.00-278.02; E66.01-E66.9; V85.30-V85.45; Z68.30-Z68.45

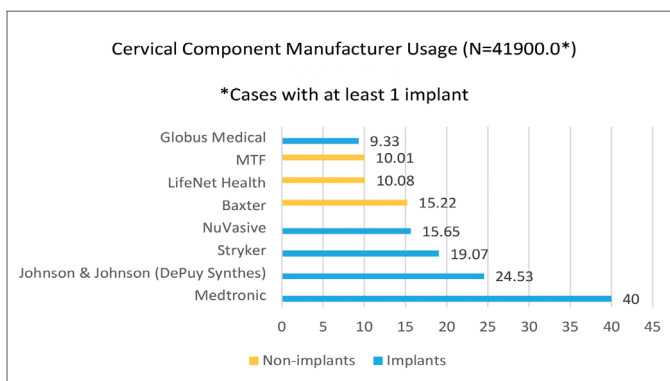
**Table 2** Rates of Cervical Fusion and Associated Surgical Approaches (Vanguard Operative Form)

Fusion		Approach		
	Total (N=7,079)	Anterior (N = 5,624)	Posterior (N= 1,399)	Combined (N= 56)
<b>Fusion</b>	4,986(70.4%)	4,282 (85.8%)	670 (13.4%)	34(0.68%)
<b>Non-Fusion</b>	2,093 (29.5%)	1,342 (64.1%)	729 (34.8%)	22(1.1%)

**Table 3** Rates of Lumbar Fusion and Associated Surgical Approaches (Vanguard Operative Form)

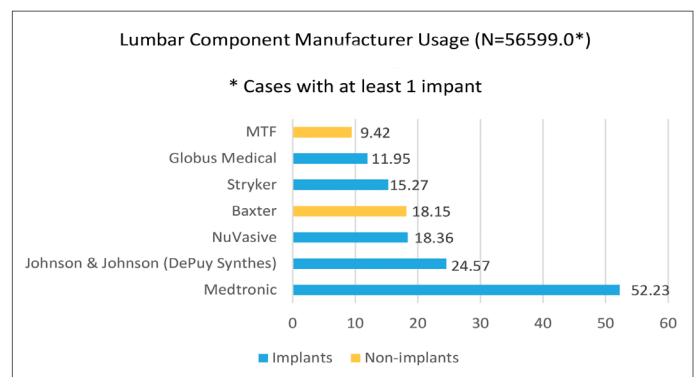
Fusion		Approach			
	Total (N=15,923)	Anterior/Oblique (N=583)	Transposas (N= 322)	Posterior (N=14,571)	Combined (N= 447)
<b>Fusion</b>	5,611 (35.2%)	366 (6.5%)	202(3.6%)	4,716 (84.0%)	327(5.8%)
<b>Non-Fusion</b>	10,312 (64.7%)	217 (2.1%)	120 (1.1%)	9,855(95.5%)	120(1.1%)

**Figure 5** Manufacturer Rates of Cervical Cases (N=41,949)\*



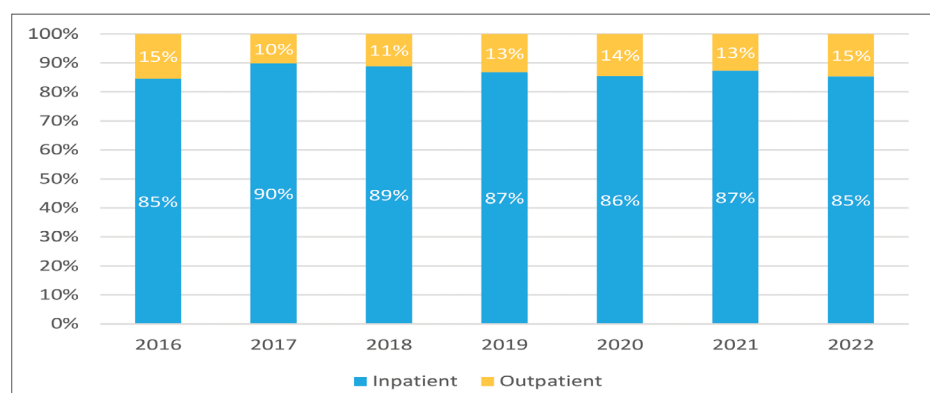
\*Includes cases with at least one implant reported. Usage may include non-implant products such as bone graft materials or navigation disposables produced by instrumentation manufacturers.

**Figure 6** Manufacturer Rates of Lumbar Cases (N=55,439)\*

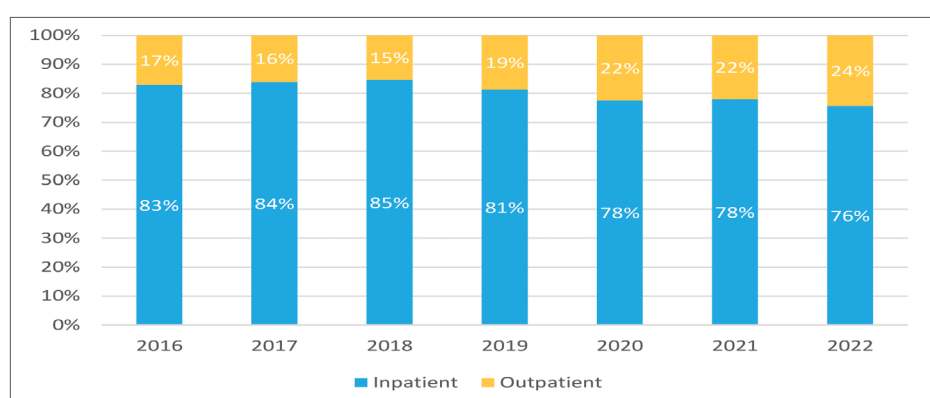


\*Includes cases with at least one implant reported. Usage may include non-implant products such as bone graft materials or navigation disposables produced by instrumentation manufacturers.

**Figure 7** Cervical Inpatient and Outpatient Procedure Cases (Cervical N = 55,254)



**Figure 8** Lumbar Inpatient and Outpatient Procedure Cases (Lumbar N=105,733)



**Table 4** MCIDs for Cervical Cases Associated with Preoperative and 1-Year Postoperative PROMs Scores (January 1, 2015 - September 30, 2022)

Patient Reported Outcome Measure	Prom Component	Patients with Preoperative Score	Patients with Linked Postop Scores	Response Rate, Preop and 1-Year	Patients with Meaningful Improvement*
Arm Pain NRS	Score	5,765	1,835	31.83%	63.81%
Neck Pain NRS	Score	5,890	1,866	31.68%	67.52%
Neck Disability Index	Score	6,704	2,119	31.61%	67.53%

\*Minimal Clinically Important Difference (MCID) of Patient-Reported Outcome Measures

**Table 5** MCIDs for Lumbar Cases Associated with Preoperative and 1-Year Postoperative PROMs Scores (January 1, 2015 - September 30, 2022)

Patient Reported Outcome Measure	Prom Component	Patients with Preoperative Score	Patients with Linked Postop Scores	Response Rate, Preop and 1-Year	Patients with Meaningful Improvement*
Back Pain NRS	Score	11,351	3,879	34.17%	67.13%
Leg Pain NRS	Score	11,174	3,879	34.71%	70.38%
Oswestry Disability Index	Score	12,817	4,538	35.41%	71.22%

\*Minimal Clinically Important Difference (MCID) of Patient-Reported Outcome Measures