2018 NuVasive® Reimbursement Guide

Assisting physicians and facilities in accurate billing for NuVasive implants and instrumentation systems.

NUVASIVE

Contents

I. Introduction

This Reimbursement Guide has been prepared to assist physicians and facilities ("providers") in accurate billing for NuVasive® implants and instrumentation systems. The NuVasive corporate headquarters houses a state-of-the-art education center and cadaver operating lab, designed to provide training and education to physicians on these implant and instrumentation technologies.

The information contained in this guide details our general understanding of the application of certain codes to NuVasive products. It is the provider's responsibility to determine and submit appropriate codes, charges, and modifiers for the products and services rendered. Payors may have additional or different coding and reimbursement requirements. Therefore, before filing any claim, providers should verify these requirements in writing with local payors. For more information, visit **www.nuvasive.com**.

Spine Reimbursement Support

800-211-0713 or reimbursement@nuvasive.com

Working with professional medical societies and legislators, NuVasive has taken an active role regarding reimbursement for spine products and procedures. To assist providers with coding and denial issues, **NuVasive established Spine Reimbursement Support assistance, available at 800-211-0713 or reimbursement@nuvasive.com.** Please use this resource for reimbursement questions regarding any of the NuVasive products and associated procedures.

II. Physician Coding and Payment

When physicians bill for services performed, payors require the physician to assign a Current Procedural Terminology (or CPT®) code to classify or identify the procedure performed. These CPT codes are created and maintained by the American Medical Association (AMA) and are reviewed and revised on an annual basis. The most commonly used CPT codes are referred to as Category I codes and are five-digit codes accompanied by narrative descriptions.

The AMA assigns a number of relative value units (or RVUs) to most CPT codes to represent the physician work, malpractice costs, and practice expenses associated with a given procedure or service. Medicare annually revises a dollar conversion factor that, when multiplied by the code's RVUs, results in the national Medicare reimbursement for that procedure. Most private payors also consider a code's RVUs when establishing physician fee schedules.

Industrial or work-related injury cases are usually paid according to state-established fee schedules or percentage of billed charges. A state-appointed agency or private third party payors handle administration of workers' compensation benefits and claims.

Fusion Facilitating Technologies

The following CPT codes are generally used to report a decompression and/or arthrodesis procedure. The codes listed here are examples only, not an exhaustive listing. It is always the physician's responsibility to determine and submit appropriate codes, charges, and modifiers for the services that were rendered.

CPT Coding for Arthrodesis Using the NuVasive® MaXcess® System

NASS provided coding guidance for physicians when performing a fusion through an anterolateral approach. During an XLIF® lateral approach procedure, the patient is typically positioned laterally in order to spread the abdominal muscles to approach the lumbar spine via a retroperitoneal exposure. The iliopsoas muscle is either split or mobilized to access the anterior spine from the lateral approach. The target of this approach is the vertebral body and anterior interspace. The physician is therefore performing an anterior fusion through an anterolateral approach. For this reason, NASS recommended the use of the anterior arthrodesis CPT code 22558, as well as the applicable instrumentation code(s) to describe the procedure.

When obtaining preauthorization for this procedure, please keep the following key points in mind:

- Medical necessity for the fusion must be established through relevant patient diagnosis codes.
- Preauthorization should be requested for all relevant procedure codes for the case (e.g., anterior arthrodesis, posterior arthrodesis, instrumentation, graft material, nerve monitoring, etc.).

Decompression Procedure Codes

CPT® Code[1]	Modifier (if warranted)	Procedure Description
62380		Endoscopic decompression of spinal cord, nerve root(s), including laminotomy, partial facetectomy, foraminotomy, discectomy and/or excision of herniated intervertebral disc; 1 interspace, lumbar
63001		Laminectomy with exploration and/or decompression of spinal cord and/or cauda equina, without facetectomy, foraminotomy or discectomy (e.g., spinal stenosis), 1 or 2 vertebral segments; cervical
63003		Laminectomy with exploration and/or decompression of spinal cord and/or cauda equina, without facetectomy, foraminotomy or discectomy (e.g., spinal stenosis), 1 or 2 vertebral segments; thoracic
63005		Laminectomy with exploration and/or decompression of spinal cord and/or cauda equina, without facetectomy, foraminotomy or discectomy (e.g., spinal stenosis), 1 or 2 vertebral segments; lumbar, except for spondylolisthesis
63015		Laminectomy with exploration and/or decompression of spinal cord and/or cauda equina, without facetectomy, foraminotomy or discectomy (e.g., spinal stenosis), more than 2 vertebral segments; cervical
63016		Laminectomy with exploration and/or decompression of spinal cord and/or cauda equina, without facetectomy, foraminotomy or discectomy (e.g., spinal stenosis), more than 2 vertebral segments; thoracic
63017		Laminectomy with exploration and/or decompression of spinal cord and/or cauda equina, without facetectomy, foraminotomy or discectomy (e.g., spinal stenosis), more than 2 vertebral segments; lumbar

Decompression Procedure Codes (cont.)

CPT® Code[1]	Modifier (if warranted)	Procedure Description
63020	-50	Laminotomy (hemilaminectomy), with decompression of nerve root(s), including partial facetectomy, foraminotomy and/or excision of herniated intervertebral disc; 1 interspace, cervical
63030	-50	Laminotomy (hemilaminectomy), with decompression of nerve root(s), including partial facetectomy, foraminotomy and/or excision of herniated intervertebral disc; 1 interspace, lumbar
63035	-50	Laminotomy (hemilaminectomy), with decompression of nerve root(s), including partial facetectomy, foraminotomy and/or excision of herniated intervertebral disc; each additional interspace, cervical or lumbar (list separately in addition to code for primary procedure)
63040	-50	Laminotomy (hemilaminectomy), with decompression of nerve root(s), including partial facetectomy, foraminotomy and/or excision of herniated intervertebral disc, re-exploration, single interspace; cervical
63042	-50	Laminotomy (hemilaminectomy), with decompression of nerve root(s), including partial facetectomy, foraminotomy and/or excision of herniated intervertebral disc, re-exploration, single interspace; lumbar
63043		Laminotomy (hemilaminectomy), with decompression of nerve root(s), including partial facetectomy, foraminotomy and/or excision of herniated intervertebral disc, re-exploration, single interspace; each additional cervical interspace (list separately in addition to code for primary procedure)
63044		Laminotomy (hemilaminectomy), with decompression of nerve root(s), including partial facetectomy, foraminotomy and/or excision of herniated intervertebral disc, re-exploration, single interspace; each additional lumbar interspace (list separately in addition to code for primary procedure)
63045		Laminectomy, facetectomy and foraminotomy (unilateral or bilateral with decompression of spinal cord, cauda equina and/or nerve root[s] [e.g., spinal or lateral recess stenosis]), single vertebral segment; cervical
63046		Laminectomy, facetectomy and foraminotomy (unilateral or bilateral with decompression of spinal cord, cauda equina and/or nerve root[s], [e.g., spinal or lateral recess stenosis]), single vertebral segment; thoracic
63047		Laminectomy, facetectomy and foraminotomy, (unilateral or bilateral with decompression of spinal cord, cauda equina and/or nerve root[s], [e.g., spinal or lateral recess stenosis]), single vertebral segment; lumbar
63048		Laminectomy, facetectomy and foraminotomy (unilateral or bilateral with decompression of spinal cord, cauda equina and/or nerve root[s], [e.g., spinal or lateral recess stenosis]), single vertebral segment; each additional segment, cervical, thoracic, or lumbar (list separately in addition to code for primary procedure)
63055		Transpedicular approach with decompression of spinal cord, equina and/or nerve root(s) (e.g., herniated intervertebral disc), single segment; thoracic
63056		Transpedicular approach with decompression of spinal cord, equina and/or nerve root(s) (e.g., herniated intervertebral disc), single segment; lumbar (including transfacet or lateral extraforaminal approach) (e.g., far lateral herniated intervertebral disc)

Decompression Procedure Codes (cont.)

CPT® Code[1]	Modifier (if warranted)	Procedure Description
63057		Transpedicular approach with decompression of spinal cord, equina and/or nerve root(s) (e.g., herniated intervertebral disc), single segment; each additional segment, thoracic or lumbar (list separately in addition to code for primary procedure)
63064		Costovertebral approach with decompression of spinal cord or nerve root(s) (e.g., herniated intervertebral disc), thoracic; single segment
63075		Discectomy, anterior, with decompression of spinal cord and/or nerve root(s), including osteophytectomy; cervical, single interspace
63076		Discectomy, anterior, with decompression of spinal cord and/or nerve root(s), including osteophytectomy; cervical, each additional interspace (list separately in addition to code for primary procedure)
63077		Discectomy, anterior, with decompression of spinal cord and/or nerve root(s), including osteophytectomy; thoracic, single interspace
63078		Discectomy, anterior, with decompression of spinal cord and/or nerve root(s), including osteophytectomy; thoracic, each additional interspace (list separately in addition to code for primary procedure)
63081		Vertebral corpectomy (vertebral body resection), partial or complete, anterior approach with decompression of spinal cord and/or nerve root(s); cervical, single segment
63082		Vertebral corpectomy (vertebral body resection), partial or complete, anterior approach with decompression of spinal cord and/or nerve root(s); cervical, each additional segment (list separately in addition to code for primary procedure)
63085		Vertebral corpectomy (vertebral body resection), partial or complete, transthoracic approach with decompression of spinal cord and/or nerve root(s); thoracic, single segment
63086		Vertebral corpectomy (vertebral body resection), partial or complete, transthoracic approach with decompression of spinal cord and/or nerve root(s); thoracic, each additional segment (list separately in addition to code for primary procedure)
63087		Vertebral corpectomy (vertebral body resection), partial or complete, combined thoracolumbar approach with decompression of spinal cord, cauda equina or nerve root(s), lower thoracic or lumbar; single segment
63088		Vertebral corpectomy (vertebral body resection), partial or complete, combined thoracolumbar approach with decompression of spinal cord, cauda equina or nerve root(s), lower thoracic or lumbar; each additional segment (list separately in addition to code for primary procedure)
63090		Vertebral corpectomy (vertebral body resection), partial or complete, transperitoneal or retroperitoneal approach with decompression of spinal cord, cauda equina or nerve root(s), lower thoracic, lumbar, or sacral; single segment
63091		Vertebral corpectomy (vertebral body resection), partial or complete, transperitoneal or retroperitoneal approach with decompression of spinal cord, cauda equina or nerve root(s), lower thoracic, lumbar, or sacral; each additional segment (list separately in addition to code for primary procedure)

Spine Arthrodesis and Arthroplasty Procedure Codes

Procedure	CPT® Code[1]	Procedure Description
Posterior Fusion	22595	Arthrodesis, posterior technique, atlas-axis (C1-C2)
	22600	Arthrodesis, posterior or posterolateral technique, single level; cervical below C2 segment
	22610	Arthrodesis, posterior or posterolateral technique, single level; thoracic, with lateral transverse technique, when performed
	22612	Arthrodesis, posterior or posterolateral technique, single level; lumbar, with lateral transverse technique, when performed
	22614	Each additional vertebral segment (list separately in addition to code for primary procedure)
	27279	Arthrodesis, sacroiliac joint, percutaneous or minimally invasive (indirect visualization), with image guidance, includes obtaining bone graft when performed, and placement of transfixing device
	27280	Arthrodesis, open, sacroiliac joint, including obtaining bone graft, including instrumentation, when performed
PLIF or TLIF	22630	Arthrodesis, posterior interbody technique, including laminectomy and/or discectomy to prepare interspace (other than for decompression), single interspace; lumbar
	22632	Each additional interspace (list separately in addition to code for primary procedure)
Anterior Fusion	22551	Arthrodesis, anterior interbody, including disc space preparation, discectomy, osteophytectomy, and decompression of spinal cord and/or nerve root(s); cervical below C2
	22552	Arthrodesis, anterior interbody, including disc space preparation, discectomy, osteophytectomy and decompression of spinal cord and/or nerve roots; cervical below C2, each additional interspace (list separately in addition to code for separate procedure)
	22554	Arthrodesis, anterior interbody technique, including minimal discectomy to prepare interspace (other than for decompression); cervical below C2
	22556	Arthrodesis, anterior interbody technique, including minimal discectomy to prepare interspace (other than for decompression); thoracic
	22558	Arthrodesis, anterior interbody technique, including minimal discectomy to prepare interspace (other than for decompression); lumbar
	22585	Arthrodesis, anterior interbody technique, including minimal discectomy to prepare interspace (other than for decompression); each additional interspace (list separately in addition to code for primary procedure)
	22586	Arthrodesis, pre-sacral interbody technique, including disc space preparation, discectomy, with posterior instrumentation, with image guidance, includes bone graft when performed, L5-S1

Spine Arthrodesis and Arthroplasty Procedure Codes (cont.)

Procedure	CPT® Code[1]	Procedure Description
Combined Fusion	22633	Arthrodesis, combined posterior or posterolateral technique with posterior interbody technique, including laminectomy and/or discectomy sufficient to prepare interspace (other than for decompression); single interspace and segment, lumbar (Do not report with 22612 or 22630 at the same level)
	22634	Arthrodesis, combined posterior or posterolateral technique with posterior interbody technique, including laminectomy and/or discectomy sufficient to prepare interspace (other than for decompression); each additional interspace and segment, lumbar (Do not report with 22612 or 22630 at the same level) (list separately in addition to code for primary procedure) (Use 22634 in conjunction with 22633)
Cervical Disc Arthroplasty	22856	Total disc arthroplasty (artificial disc), anterior approach, including discectomy with end plate preparation (includes osteophytectomy for nerve root or spinal cord decompression and microdissection), single interspace, cervical (Do not report 22856 in conjunction with 69990) (For additional interspace cervical total disc arthroplasty, use 0092T)
	22858	Total disc arthroplasty (artificial disc), anterior approach, including discectomy with end plate preparation (includes osteophytectomy for nerve root or spinal cord decompression and microdissection), second level, cervical (list separately in addition to code for primary procedure)
	22861	Revision including replacement of total disc arthroplasty (artificial disc), anterior approach, single interspace; cervical (Do not report 22861 in conjunction with 69990)
	22864	Removal of total disc arthroplasty (artificial disc), anterior approach, single interspace; cervical 22864 in conjunction with 22861, 69990) (For additional interspace removal of cervical total disc arthroplasty, use 0095T)

Grafting and Lumbar Instrumentation Procedure Codes

Procedure	CPT® Code[1]	Procedure Description
Allograft & Autograft	20930	Allograft, morselized, or placement of osteopromotive material, for spine surgery only (list separately in addition to code for primary procedure)
	20931	Allograft, structural, for spine surgery only (list separately in addition to code for primary procedure)
	20936	Autograft for spine surgery only (includes harvesting the graft); local (e.g., ribs, spinous process, or laminar fragments) obtained from same incision (list separately in addition to code for primary procedure)
	20937	Autograft for spine surgery only (includes harvesting the graft); morselized (through separate skin or fascial incision) (list separately in addition to code for primary procedure)
	20938	Autograft for spine surgery only (includes harvesting the graft); structural, bicortical or tricortical (through separate skin or fascial incision) (list separately in addition to code for primary procedure)
	20939	Bone marrow aspiration for bone grafting, spine surgery only, through separate skin or fascial incision (List separately in addition to code for primary procedure)
Posterior Instrumentation	0221T	Placement of a posterior intrafacet implant(s), unilateral or bilateral, including imaging and placement of bone graft(s) or synthetic device(s), single level; lumbar
	22840	Posterior non-segmental instrumentation (e.g., Harrington rod technique, pedicle fixation across 1 interspace, atlantoaxial transarticular screw fixation, sublaminar wiring at C1, facet screw fixation) (list separately in addition to code for primary procedure)
	22841	Internal spinal fixation by wiring of spinous processes (list separately in addition to code for primary procedure)
	22842	Posterior segmental instrumentation (e.g., pedicle fixation, dual rods with multiple hooks and sublaminar wires); 3 to 6 vertebral segments (list separately in addition to code for primary procedure)
	22843	Posterior segmental instrumentation (e.g., pedicle fixation, dual rods with multiple hooks and sublaminar wires); 7 to 12 vertebral segments (list separately in addition to code for primary procedure)
	22844	Posterior segmental instrumentation (e.g., pedicle fixation, dual rods with multiple hooks and sublaminar wires); 13 or more vertebral segments (list separately in addition to code for primary procedure)
Anterior Instrumentation	22845	Anterior instrumentation; 2 to 3 vertebral segments (list separately in addition to code for primary procedure)
	22846	Anterior instrumentation; 4 to 7 vertebral segments (list separately in addition to code for primary procedure)
	22847	Anterior instrumentation; 8 or more vertebral segments (list separately in addition to code for primary procedure)

Grafting and Lumbar Instrumentation Procedure Codes (cont.)

Procedure	CPT® Code[1]	Procedure Description
Biomechanical Devices*	22853	Insertion of interbody biomechanical device(s) (e.g., synthetic cage, mesh) with integral anterior instrumentation for device anchoring (e.g., screws, flanges), when performed, to intervertebral disc space in conjunction with interbody arthrodesis, each interspace (list separately in addition to code for primary procedure)
	22854	Insertion of intervertebral biomechanical device(s) (e.g., synthetic cage, mesh) with integral anterior instrumentation for device anchoring (e.g., screws, flanges), when performed, to vertebral corpectomy(ies) (vertebral body resection, partial or complete) defect, in conjunction with interbody arthrodesis, each contiguous defect (list separately in addition to code for primary procedure)
	22859	Insertion of intervertebral biomechanical device(s) (e.g., synthetic cage, mesh) with integral anterior instrumentation for device anchoring (e.g., screws, flanges), when performed, to vertebral corpectomy(ies) (vertebral body resection, partial or complete) defect, in conjunction with interbody arthrodesis, each contiguous defect (list separately in addition to code for primary procedure)

** For additional clarification regarding these CPT codes, see Appendix*

Surgical Modifiers in Spine Surgery

The following are surgical modifiers that may be used by spine surgeons to describe specific surgical circumstances, as described by AMA CPT. For complete information on modifiers, refer to AMA CPT 2018 edition.

Surgical Session or Same Day Modifiers

These modifiers are appended to indicate a specific circumstance that occurred during a surgical procedure or the same day as a surgical procedure.

Modifier 22 Increased Procedural Services

When the work required to provide a service is substantially greater than typically required, the service may be identified by adding modifier 22 to the usual procedure code. Documentation must support the substantial additional work and the reason for the additional work (i.e., increased intensity, time, technical difficulty of procedure, severity of patient's condition, physical and mental effort required). Note: This modifier should not be appended to an E/M service.

Modifier 50 Bilateral Procedure

Unless otherwise identified in the listings, bilateral procedures that are performed at the same session should be identified by adding modifier 50 to the appropriate 5-digit code.

Modifier 51 Multiple Procedures

When multiple procedures, other than E/M services, Physical Medicine and Rehabilitation services or provision of supplies (e.g., vaccines), are performed at the same session by the same provider, the primary procedure or service may be reported as listed. The additional procedure(s) or service(s) may be identified by appending modifier 51 to the additional procedure(s) or service code(s).

Note: This modifier should not be appended to designated "add-on" codes.

Modifier 52 Reduced Services

Under certain circumstances, a service or procedure is partially reduced or eliminated at the physician's discretion. Under these circumstances, the service provided can be identified by its usual procedure number and the addition of modifier 52, signifying that the service is reduced. This provides a means of reporting reduced services without disturbing the identification of the basic service.

Note: For hospital outpatient reporting of a previously scheduled procedure/service that is partially reduced or canceled as a result of extenuating circumstances, or those that threaten the well-being of the patient prior to or after administration of anesthesia, see modifiers 73 and 74. (See modifiers approved for ambulatory surgical center (ASC)/outpatient hospital use.)

Modifier 53 Discontinued Procedure

Under certain circumstances, the physician may elect to terminate a surgical or diagnostic procedure. Due to extenuating circumstances or those that threaten the well-being of the patient, it may be necessary to indicate that a surgical or diagnostic procedure was started but discontinued. This circumstance may be reported by adding modifier 53 to the code reported by the physician for the discontinued procedure.

Note: This modifier is not used to report the elective cancellation of a procedure prior to the patient's anesthesia induction and/or surgical preparation in the operating suite. For ASC/outpatient hospital reporting of a previously scheduled procedure/service that is partially reduced or canceled as a result of extenuating circumstances, or those that threaten the well-being of the patient prior to or after administration of anesthesia, see modifiers 73 and 74. (See modifiers approved for ASC/outpatient hospital use.)

Modifier 59 Distinct Procedural Service

Under certain circumstances, it may be necessary to indicate that a procedure or service was distinct or independent from other non-E/M services performed on the same day. Modifier 59 is used to identify procedures/services, (other than E/M services), that are not normally reported together, but are appropriate under the circumstances. Documentation must support a different session, different procedure or surgery, different site or organ system, separate incision/excision, separate lesion, or separate injury (or area of injury in extensive injuries) not ordinarily encountered or performed on the same day by the same individual. However, when another already established modifier is appropriate, it should be used rather than modifier 59. Only if no more descriptive modifier is available, and the use of modifier 59 best explains the circumstances, should modifier 59 be used.

Note: Medicare and some private payors have adopted new guidelines and alternative coding requirement for the use of modifier 59. Please consult each payor for its specific guidelines.

Modifier 76 Repeat Procedure or Service by Same Physician or Other Qualified Healthcare Professional

It may be necessary to indicate that a procedure or service was repeated by the same physician or other qualified healthcare professional subsequent to the original procedure or service. This circumstance may be reported by adding modifier 76 to the repeated procedure or service.

Note: This modifier should not be appended to an E/M service.

Modifier 77 Repeat Procedure by Another Physician or Other Qualified Healthcare Professional

It may be necessary to indicate that a basic procedure or service was repeated by another physician or other qualified healthcare professional subsequent to the original procedure or service. This circumstance may be reported by adding modifier 77 to the repeated procedure or service.

Note: This modifier should not be appended to an E/M service.

Global Period Modifiers

These modifiers are appended to a subsequent procedure performed during the global period of an original procedure.

Modifier 58 Staged or Related Procedure or Service by the Same Physician During the Postoperative Period

It may be necessary to indicate that the performance of a procedure or service during the postoperative period was: (a) planned or anticipated (staged); (b) more extensive than the original procedure; or (c) for therapy following a surgical procedure. This circumstance may be reported by adding modifier 58 to the staged or related procedure.

Note: For treatment of a problem that requires a return to the operating/procedure room (e.g., unanticipated clinical condition), see modifier 78.

Modifier 78 Unplanned Return to the Operating/Procedure Room by the Same Physician or Other Qualified Healthcare Professional Following Initial Procedure for a Related Procedure During the Postoperative Period

It may be necessary to indicate that another procedure was performed during the postoperative period of the initial procedure (unplanned procedure following initial procedure). When this procedure is related to the first, and requires the use of an operating/procedure room, it may be reported by adding modifier 78 to the related procedure. (For repeat procedures, see modifier 76.)

Modifier 79 Unrelated Procedure or Service by the Same Physician During the Postoperative Period

The physician may need to indicate that the performance of a procedure or service during the postoperative period was unrelated to the original procedure. This circumstance may be reported by using modifier 79. (For repeat procedures on the same day, see modifier 76.)

Surgeon Role Modifiers

These modifiers are used when more than one surgeon participates in a surgical procedure.

Modifier 62 Two Surgeons

When 2 surgeons work together as primary surgeons performing distinct part(s) of a procedure, each surgeon should report his/her distinct operative work by adding modifier 62 to the procedure code and any associated add-on code(s) for that procedure, as long as both surgeons continue to work together as primary surgeons. Each surgeon should report the co-surgery once, using the same procedure code. If additional procedure(s), (including add-on procedure(s)), are performed during the same surgical session, separate code(s) may also be reported with modifier 62 added.

Note: If a co-surgeon acts as an assistant in the performance of additional procedure(s) during the same surgical session, those services may be reported using separate procedure code(s) with modifier 80 or modifier 82 added, as appropriate.

Modifier 80 Assistant Surgeon

Surgical assistant services may be identified by adding modifier 80 to the usual procedure number(s).

Modifier 81 Minimum Assistant Surgeon

Minimum surgical assistant services are identified by adding modifier 81 to the usual procedure number.

Modifier 82 Assistant Surgeon (when qualified resident surgeon not available)

The unavailability of a qualified resident surgeon is a prerequisite for use of modifier 82, appended to the usual procedure code number(s).

NVM5® Intraoperative Monitoring System

For coding and billing information regarding physician-driven intraoperative monitoring during spinal surgery, please see the *2018 NVM5 Intraoperative Monitoring (IOM) Reimbursement Guide* (18-NUVA-0630).

Medicare Note: According to National Correct Coding Initiative (NCCI) edits and the description of CPT codes 95940 and 95941, intraoperative monitoring may not be reported separately by the operating surgeon or anesthesiologist. Monitoring by the surgeon or anesthesiologist is considered a bundled component of the surgery.

IOM Codes

- CPT codes 95940 and 95941 represent the IOM component of the study/studies and are add-on codes. CPT code 95940 or 95941 must always be billed together with the primary nerve monitoring procedure code. CPT code 95940: continuous IOM in the O.R., one-on-one monitoring requiring personal attendance, each 15 minutes. CPT code 95941: continuous IOM from outside the O.R. (remote or nearby) or for monitoring of more than one case while in the O.R., per hour.
- Medicare requires use of HCPCS code G0453 for IOM from outside the O.R. Multiple cases can be monitored simultaneously, but the monitoring professional can only bill one case at a time. HCPCS code G0453: continuous IOM from outside the O.R. (remote or nearby), per patient (attention directed exclusively to one patient), each 15 minutes.

Navigation Coding Updates

Below are key points to consider when reporting CPT code 61783.

- Includes spinal applications, which allows for navigation using a stereotactic technique to identify anatomy for precise treatments and for avoidance of vital structures.
- The application of the procedure is to help identify anatomy, and more specifically, to aid with instrument placement. Primary fusion procedure codes where pedicle screws are inserted to facilitate fusion are appropriate if covered by the payor.
- Not applicable for spinal decompression for degenerative spine disease or disc replacement (codes 63030, 63042, 63047). Exceptions could include tumor-related surgeries.
- Possible primary codes include: 22600, 22610, and 22612.

NVM5® Computer-Assisted Surgery Applications

NVM5 Guidance aids physicians in the placement of pedicle screws through pre-planned angle measurements and integrated EMG information.

NVM5 Computer-assisted Surgery Primary Code				
CPT®	**Description**	**2018 Conversion Factor**	**RVU**	**2018 National Medicare Payment**
61783	Stereotactic computer-assisted (navigational) procedure; spinal (list separately in addition to code for primary procedure)	$35.99 See CY 2018 PFS Final Rule: Relative Value File	6.81	$245.10

III. Hospital Inpatient Coding and Payment

Payment under Medicare for inpatient hospital services is based on a classification system determined by patient diagnosis known as Medicare Severity—Diagnosis Related Groups (MS-DRGs). Under MS-DRGs, a hospital is paid at a predetermined, specific rate for each Medicare discharge. Fixed prices are established for hospital services, based on the patient diagnosis(es) and procedure(s) performed and are paid regardless of the actual cost the hospital incurs when providing the services.

MS-DRGs take into consideration length of stay, the number of services provided, and the intensity of services. The system was designed to give hospitals incentives to provide care more efficiently and appropriately document patient diagnoses and procedures performed.

Only one MS-DRG is assigned to a patient for a particular hospital admission, and determined by ICD-10-CM diagnoses and procedure codes.

NuVasive® Technology

ICD-10-CM Procedure Codes

On October I, 2015 the United States transitioned from ICD-9 to ICD-10 as the medical code set for medical diagnoses and inpatient hospital procedures. Please reach out to the NuVasive Spine Reimbursement Support Line regarding ICD-10 procedure codes. In the Addendum to this guide, a chart outlines possible ICD-9 procedure codes for spine procedures associated with NuVasive technology and the corresponding ICD-10 procedure codes.

Non-Medicare Reimbursement

Many commercial payors reimburse hospitals using Medicare DRGs and associated payment rates as benchmarks for contracted rates while others reimburse on a per diem basis. Disposables, implants, or instrumentation associated with NuVasive® products generally are coded under Revenue Code 270: Medical/Surgical Supplies, 272: Sterile Medical/Surgical Supplies, or 278: Medical/Surgical Supplies and Devices, Other Implants. Payment will be according to the terms of the payor contract. For HCPCS codes (including C-codes) that may be relevant to NuVasive technology, see Section 4 on page 14.

MS-DRGs

The MS-DRGs most likely applicable for reporting a spine procedure utilizing NuVasive® technology are:

MS-DRG[2]	Description	FY2018 Spinal MS-DRG and Medicare Unadjusted Payment
	Laminectomy/Discectomy/Disc Arthroplasty	
518	Back and Neck Procedures Except Spinal Fusion with MCC or Disc Device/Neurostimulator	$17,413.40
519	Back and Neck Procedures Except Spinal Fusion with CC	$10,842.33
520	Back and Neck Procedures Except Spinal Fusion without CC and MCC	$7,783.57
	Anterior/Posterior Fusion	
453	Combined Anterior/Posterior Spinal Fusion with MCC (360)	$58,717.12
454	Combined Anterior/Posterior Spinal Fusion with CC	$39,163.23
455	Combined Anterior/Posterior Spinal Fusion without CC and MCC	$30,613.60
	Complex Fusion	
456	Spinal Fusion Except Cervical with Spinal Curvature, Malignancy, or 9+ Fusions with MCC	$55,478.23
457	Spinal Fusion Except Cervical with Spinal Curvature, Malignancy, or 9+ Fusions with CC	$41,027.72
458	Spinal Fusion Except Cervical with Spinal Curvature, Malignancy, or 9+ Fusions without CC and MCC	$32,347.88
	Lumbar Fusion	
459	Spinal Fusion Except Cervical with MCC	$36,395.74
460	Spinal Fusion Except Cervical without MCC	$24,204.55
	Cervical Fusion	
471	Cervical Spinal Fusion with MCC	$29,657.51
472	Cervical Spinal Fusion with CC	$17,201.14
473	Cervical Spinal Fusion without CC and MCC	$13,812.19

IV. Outpatient Facility Coding and Payment

Hospital Outpatient

A procedure is considered to be performed in a hospital outpatient department when the procedure is performed in a facility that is administratively and financially linked to a hospital and the patient is registered at the hospital, but not admitted as an inpatient.

The Outpatient Prospective Payment System (OPPS) groups procedures into Ambulatory Payment Classifications (APCs).

Each APC encompasses services that are clinically similar and require similar resources.
APCs group together services, supplies, drugs, and devices that are used in particular procedures.
Each APC has a separate payment rate that is meant to account for all of the items used in the procedure.
Each APC is assigned a relative payment weight, based on the median costs of the services within the APC.
Transitional pass-through payments have been established for certain approved "new or innovative medical devices" and allow for additional payment outside the APC.
Many private payors use the APC payment rates established by Medicare to determine contracted rates with hospitals.

Decompression and Arthrodesis Codes

Not all procedures are payable by Medicare in the outpatient site of service. Additionally, Medicare bundles payment for add-on procedure codes in the hospital outpatient setting. The following comprehensive APCs (C-APCs) and associated payment rates are applicable to spine decompression and arthrodesis codes:

CPT® Code[1]	APC[3]	APC Description	2018 National Medicare Average Reimbursement[2]
62380	5114	Level 4 Musculoskeletal Procedures	$5.606.03
63001	5114	Level 4 Musculoskeletal Procedures	$5.606.03
63003	5114	Level 4 Musculoskeletal Procedures	$5.606.03
63005	5114	Level 4 Musculoskeletal Procedures	$5.606.03
63015	5114	Level 4 Musculoskeletal Procedures	$5.606.03
63017	5114	Level 4 Musculoskeletal Procedures	$5.606.03
63020	5114	Level 4 Musculoskeletal Procedures	$5.606.03
63030	5114	Level 4 Musculoskeletal Procedures	$5.606.03
63035	N/A	N/A	Packaged service
63040	5114	Level 4 Musculoskeletal Procedures	$5,219.36
63042	5114	Level 4 Musculoskeletal Procedures	$5,219.36
63045	5114	Level 4 Musculoskeletal Procedures	$5,219.36
63046	5114	Level 4 Musculoskeletal Procedures	$5,219.36
63047	5114	Level 4 Musculoskeletal Procedures	$5,219.36
63048	N/A	N/A	Packaged service
63055	5114	Level 4 Musculoskeletal Procedures	$5,219.36
63056	5114	Level 4 Musculoskeletal Procedures	$5,219.36
63057	N/A	N/A	Packaged service
63064	5114	Level 4 Musculoskeletal Procedures	$5,219.36
63066	N/A	N/A	Packaged service
63075	5114	Level 4 Musculoskeletal Procedures	$5,219.36
63076	N/A	N/A	Packaged service
22551	5115	Level 5 Musculoskeletal Procedures	$10,122.22
22554	5115	Level 5 Musculoskeletal Procedures	$10,122.22
22585	N/A	N/A	Packaged service
22612	5115	Level 5 Musculoskeletal Procedures	$10,122.22
22614	N/A	N/A	Packaged service
22840	N/A	N/A	Packaged service
22842	N/A	N/A	Packaged service
22845	N/A	N/A	Packaged service
22853	N/A	N/A	Packaged service
22854	N/A	N/A	Packaged service
22856	5116	Level 6 Musculoskeletal Procedures	$15,369.94
22858	N/A	N/A	Packaged Service
22859	N/A	N/A	Packaged Service

Ambulatory Surgical Center

To be eligible to receive facility fees, a center must be certified and/or accredited as an Ambulatory Surgical Center (ASC).

Non-Medicare Reimbursement

Commercial and work-related injury payors may reimburse fusion procedures on an outpatient basis. Facilities may choose to preauthorize (relative to benefits) prior to the procedure. Payors may allow additional payment for disposables, fixation, or instrumentation associated with procedures billed under Revenue Code 270: Medical/Surgical Supplies, 272: Sterile Medical/Surgical Supplies, or 278: Medical/Surgical Supplies and Devices, Other Implants. Payment will be according to the terms of the contract or as line item supplies at cost plus markup.

Decompression and Fusion Codes

Procedure Code	Description	2018 ASC CMS Payment Rates
22551	Neck spine fusion & removal below c2	$7,336.71
22552	Additional neck spine fusion	Packaged service
22554	Neck spine fusion	$7,070.59
22585	Additional spinal fusion	Packaged service
22612	Lumbar spine fusion	$4,981.42
22614	Spine fusion extra segment	Packaged service
22840	Insert spine fixation device	Packaged service
22842	Insert spine fixation device	Packaged service
22845	Insert spine fixation device	Packaged service
22853	Insj biomechanical device	Packaged service
22854	Insj biomechanical device	Packaged service
22856	Cerv artific diskectomy	$11,213.08
22858	Second level cer diskectomy	Packaged service
22859	Insj biomechanical device	Packaged service
27279	Arthodesis sacroiliac joint	$12,455.80

Decompression Codes

Procedure Code	Description	2018 ASC CMS Payment Rates
62380	Endoscopic decompression l interspace lumbar	$2,721.78
63001	Remove spine lamina 1/2 crvl	$2,721.78
63003	Remove spine lamina 1/2 thrc	$2,721.78
63005	Remove spine lamina 1/2 lmbr	$2,721.78
63020	Neck spine disk surgery	$2,721.78
63030	Low back disk surgery	$2,721.78
63042	Laminotomy single lumbar	$2,721.78
63044	Laminotomy addl lumber	Packaged service
63045	Remove spine lamina 1 crvl	$2,721.78
63046	Remove spine lamina 1 thrc	$2,721.78
63047	Remove spine lamina 1 lmbr	$2,721.78
63055	Decompress spinal cord thrc	$2,721.78
63056	Decompress spinal cord lumbar	$2,721.78

Facility Device and Implant Codes

C-codes report drugs, biologicals, and devices eligible for transitional pass-through payments and for items classified in new technology Ambulatory Payment Classifications (APCs) under the Outpatient Prospective Payment System (OPPS). The following information highlights certain product codes that may or may not be relevant to surgical cases performed using NuVasive® products:

Master HCPCS Supply Listing[4]	
Surgical tray	A4550
Electrodes, per pair	A4556
Lead wires, per pair	A4557
Surgical supply, miscellaneous	A4649
Noncovered item or service	A9270
Anchor/Screw for opposing bone-to-bone or soft tissue-to-bone (implantable)	C1713
Connective tissue, non-human (includes synthetic)	C1763
Connective tissue, human	C1762
Implantable/insertable device for device intensive procedure, not otherwise classified	C1889
Prosthetic implant, not otherwise specified	L8699

Revenue Codes[5]	
Medical/Surgical supplies	0270
Medical/Surgical supplies: Nonsterile supplies	0271
Medical/Surgical supplies: Sterile supplies	0272
Medical/Surgical supplies: Other implants	0278

V. Coding and Payment Scenarios

The following scenarios provide examples of possible coding options when using NuVasive® technology. While each manufacturer has their own trademark or marketing names for various technology, it is important to use the appropriate clinical terminology when reporting procedures.

Cervical Anterior Scenarios

ACDF, C5-C6, with NuVasive Helix ACP™ or Archon® ACP System, Triad® CR, and Osteocel® Cellular Allograft—anterior cervical decompression and fusion with anterior plate instrumentation, structural allograft, morselized allograft.

CPT® Code[1]	Description	Possible MS-DRG
22551	Arthrodesis, anterior interbody, including disc space preparation, discectomy, osteophytectomy and decompression of spinal cord and/or nerve roots; cervical below C2	471, 472, or 473
22845	Anterior instrumentation; 2 to 3 vertebral segments (list separately in addition to code for primary procedure)	N/A
20930	Allograft, morselized, or placement of osteopromotive material, for spine surgery only (list separately in addition to code for primary procedure)	N/A
20931	Allograft, structural, for spine surgery only (list separately in addition to code for primary procedure)	N/A

ACDF, C5-C6, with Helix ACP or Archon ACP System, CoRoent® Small, and Osteocel Cellular Allograft–anterior cervical decompression and fusion with anterior plate instrumentation, synthetic intervertebral device, morselized allograft.

CPT Code	Description	Possible MS-DRG
22551	Arthrodesis, anterior interbody, including disc space preparation, discectomy, osteophytectomy and decompression of spinal cord and/or nerve roots; cervical below C2	471, 472, or 473
22845-59	Anterior instrumentation; 2 to 3 vertebral segments (list separately in addition to code for primary procedure)	N/A
22853	Insertion of interbody biomechanical device(s) (e.g., synthetic cage, mesh) with integral anterior instrumentation for device anchoring (e.g., screws, flanges) when performed to intervertebral disc space in conjunction with interbody arthrodesis, each interspace	N/A
20930	Allograft, morselized, or placement of osteopromotive material, for spine surgery only (list separately in addition to code for primary procedure)	N/A
20931	Allograft, structural, for spine surgery only (list separately in addition to code for primary procedure)	N/A

Cervical Anterior Scenarios (cont.)

ACDF, C5-C6, with NuVasive® Helix ACP™ or Archon® ACP System, CoRoent® Small, and morselized autograft—anterior cervical decompression and fusion with anterior plate instrumentation, synthetic intervertebral device, morselized autograft from the iliac crest through a separate incision.

CPT® Code[1]	Description	Possible MS-DRG
22551	Arthrodesis, anterior interbody, including disc space preparation, discectomy, osteophytectomy and decompression of spinal cord and/or nerve roots; cervical below C2	471, 472, or 473
22853	Insertion of interbody biomechanical device(s) (e.g., synthetic cage, mesh) with integral anterior instrumentation for device anchoring (e.g., screws, flanges) when performed to intervertebral disc space in conjunction with interbody arthrodesis, each interspace	N/A
22845-59	Anterior instrumentation; 2 to 3 vertebral segments (list separately in addition to code for primary procedure)	N/A
20937	Autograft for spine surgery only (includes harvesting the graft); morselized (through separate skin or fascial incision) (list separately in addition to code for primary procedure)	N/A

ACDF, C5-C6, with CoRoent Small Interlock™, and Osteocel® Cellular Allograft—anterior cervical decompression and fusion with synthetic intervertebral device and morselized allograft.

CPT Code	Description	Possible MS-DRG
22551	Arthrodesis, anterior interbody, including disc space preparation, discectomy, osteophytectomy and decompression of spinal cord and/or nerve roots; cervical below C2	471, 472, or 473
22853	Insertion of interbody biomechanical device(s) (e.g., synthetic cage, mesh) with integral anterior instrumentation for device anchoring (e.g., screws, flanges) when performed to intervertebral disc space in conjunction with interbody arthrodesis, each interspace	N/A
20937	Autograft for spine surgery only (includes harvesting the graft); morselized (through separate skin or fascial incision) (list separately in addition to code for primary procedure)	N/A

Cervical Disc Arthroplasty (CDA) with PCM® Cervical Disc.

CPT Code	Description	Possible MS-DRG
22856	Total disc arthroplasty (artificial disc) anterior approach, including discectomy to prepare interspace (other than for decompression) single interspace: cervical	518

Cervical Posterior Scenarios

Posterior fusion with VuePoint® OCT and Osteocel Cellular Allograft—Posterior cervical arthrodesis, C5-C6, using posterior non-segmental fixation and bone graft substitute.

CPT® Code	Description	Possible MS-DRG
22600	Arthrodesis, posterior or posterolateral technique, single level; cervical below C2 segment	471, 472, or 473
22840	Posterior non-segmental instrumentation (e.g., Harrington rod technique, pedicle fixation across 1 interspace, atlantoaxial transarticular screw fixation, sublaminar wiring at C1, facet screw fixation) (list separately in addition to code for primary procedure)	N/A
20930	Allograft, morselized, or placement of osteopromotive material, for spine surgery only (list separately in addition to code for primary procedure)	N/A

Cervical laminectomy and decompression, C5-C6, with Leverage® LFS fixation—Posterior cervical laminectomy, decompression, and fixation using posterior non-segmental instrumentation and bone marrow aspirated from the iliac crest through a separate fascial incision.

CPT Code[1]	Description	Possible MS-DRG
63001	Laminectomy with exploration and/or decompression of spinal cord and/or cauda equina, without facetectomy, foraminotomy or discectomy (e.g., spinal stenosis), 1 or 2 vertebral segments; cervical	518, 519, or 520
22840	Posterior non-segmental instrumentation (e.g., Harrington rod technique, pedicle fixation across 1 interspace, atlantoaxial transarticular screw fixation, sublaminar wiring at C1, facet screw fixation) (list separately in addition to code for primary procedure)	N/A
38220-59	Bone marrow, aspiration only	N/A

Thoracolumbar Anterior Scenarios

Thoracic interbody fusion, T11-T12, through an anterolateral incision with grafting material—Anterior thoracic interbody arthrodesis with placement of a synthetic intervertebral device and an autograft from the same incision.

CPT Code	Description	Possible MS-DRG
22556	Arthrodesis, anterior interbody technique, including minimal discectomy to prepare interspace (other than for decompression); thoracic	456, 457, 458, 459, or 460
22853	Insertion of interbody biomechanical device(s) (e.g., synthetic cage, mesh) with integral anterior instrumentation for device anchoring (e.g., screws, flanges) when performed to intervertebral disc space in conjunction with interbody arthrodesis, each interspace	N/A
20936	Autograft for spine surgery only (includes harvesting the graft); local (e.g., ribs, spinous process, or laminar fragments) obtained from same incision (list separately in addition to code for primary procedure)	N/A

Lumbar fusion, L4-L5, through an anterior or anterolateral incision with CoRoent® XL, Triad®, and autograft—Anterior lumbar interbody fusion with placement of a synthetic intervertebral device and autograft obtained from the iliac crest through a separate incision.

CPT® Code	Description	Possible MS-DRG
22558	Arthrodesis, anterior interbody technique, including minimal discectomy to prepare interspace (other than for decompression); lumbar	456, 457, 458, 459, or 460
22853	Insertion of interbody biomechanical device(s) (e.g., synthetic cage, mesh) with integral anterior instrumentation for device anchoring (e.g., screws, flanges) when performed to intervertebral disc space in conjunction with interbody arthrodesis, each interspace	N/A
20937	Autograft for spine surgery only (includes harvesting the graft); morselized (through separate skin or fascial incision) (list separately in addition to code for primary procedure)	N/A
20931	Allograft, structural, for spine surgery only	N/A

Lumbar fusion, L4-L5, through an anterior or anterolateral incision with CoRoent XL, Triad, and XLIF Decade™ Plate, or CoRoent XLR, Triad, and Brigade® ALIF plate—Anterior lumbar interbody arthrodesis with placement of a synthetic intervertebral device, autograft obtained from the iliac crest through a separate incision, and an anterior plate.

CPT Code	Description	Possible MS-DRG
22558	Arthrodesis, anterior interbody technique, including minimal discectomy to prepare interspace (other than for decompression); lumbar	456, 457, 458, 459, or 460
22845-59	Anterior instrumentation; 2 to 3 vertebral segments (list separately in addition to code for primary procedure)	N/A
22853	Insertion of interbody biomechanical device(s) (e.g., synthetic cage, mesh) with integral anterior instrumentation for device anchoring (e.g., screws, flanges) when performed to intervertebral disc space in conjunction with interbody arthrodesis, each interspace	N/A
20937	Autograft for spine surgery only (includes harvesting the graft); morselized (through separate skin or fascial incision) (list separately in addition to code for primary procedure)	N/A
20931	Allograft, structural, for spine surgery only	N/A

Thoracolumbar Anterior Scenarios (cont.)

Complete corpectomy, L2, and fusion through an anterior or anterolateral incision with X-CORE® 2 and autograft (local) with Traverse® anterior plate—Corpectomy, anterior lumbar interbody fusion, L1-L2, L2-L3, placement of synthetic intervertebral devices, corpectomy defect, L1-L3, autograft from the same incision, and anterior plate.

CPT® Code	Description	Possible MS-DRG
63090	Vertebral corpectomy (vertebral body resection), partial or complete, transperitoneal or retroperitoneal approach with decompression of spinal cord, cauda equina or nerve root(s), lower thoracic, lumbar, or sacral; single segment	518, 519,or 520
22558-51	Arthrodesis, anterior interbody technique, including minimal discectomy to prepare interspace (other than for decompression); lumbar	456, 457, 458, 459, or 460
22585	Arthrodesis, anterior interbody technique, including minimal discectomy to prepare interspace (other than for decompression); each additional interspace	N/A
22845-59	Anterior instrumentation; 2 to 3 vertebral segments (list separately in addition to code for primary procedure)	N/A
22854	Insertion of intervertebral biomechanical device(s) (e.g., synthetic cage, mesh) with integral anterior instrumentation for device anchoring (e.g., screws, flanges), when performed, to vertebral corpectomy(ies) (vertebral body resection, partial or complete) defect, in conjunction with interbody arthrodesis, each contiguous defect (list separately in addition to code for primary procedure)	N/A
20936	Autograft for spine surgery only (includes harvesting the graft); local (e.g., ribs, spinous process, or laminar fragments) obtained from same incision (list separately in addition to code for primary procedure)	N/A

Costovertebral approach thoracic discectomy with X-CORE® Mini, autograft, and Osteocel® Cellular Allograft—Costovertebral thoracic discectomy, autograft, and morselized allograft.

CPT Code[1]	Description	Possible MS-DRG
63064	Costovertebral approach with decompression of spinal cord or nerve root(s) (e.g., herniated intervertebral disc), thoracic; single segment	518, 519, or 520
20936	Autograft for spine surgery only (includes harvesting the graft); local (e.g., ribs, spinous process, or laminar fragments) obtained from same incision (list separately in addition to code for primary procedure)	N/A
20930	Allograft, morselized, or placement of osteopromotive material, for spine surgery only (list separately in addition to code for primary procedure)	N/A

Anterior fusion, L4-L5 through an anterior approach Brigade®-H and autograft, and PLF with Precept® or SpheRx® DBR® III and Osteocel® Cellular Allograft, with Anterior Longitudinal Ligament Release and Osteotomy (Osteotomy only with the determination of a rigid/ankylosed spine). Anterior lumbar interbody arthrodesis with placement of a synthetic intervertebral device and autograft from the iliac crest through a separate incision and posterolateral lumbar arthrodesis, L4-L5, with non-segmental instrumentation and morselized allograft.

CPT® Code[1]	Description	Possible MS-DRG
22558-51	Arthrodesis, anterior interbody technique, including minimal discectomy to prepare interspace (other than for decompression); lumbar	456, 457, 458, 459, or 460
22224-51	Osteotomy of spine, including discectomy, anterior approach, single vertebral segment; lumbar	N/A
22853	Insertion of interbody biomechanical device(s) (e.g., synthetic cage, mesh) with integral anterior instrumentation for device anchoring (e.g., screws, flanges) when performed to intervertebral disc space in conjunction with interbody arthrodesis, each interspace	N/A
20936	Autograft for spine surgery only (includes harvesting the graft); local (e.g., ribs, spinous process, or laminar fragments) obtained from same incision (list separately in addition to code for primary procedure)	N/A

Anterolateral fusion, L4-L5 through an anterior or anterolateral approach with CoRoent® XL-H, or Brigade-H and autograft, and PLF with Precept or SpheRx DBR III and Osteocel Cellular Allograft, with Anterior Longitudinal Ligament Release and Osteotomy (Osteotomy only with the determination of a rigid/ankylosed spine). Anterior lumbar interbody arthrodesis with placement of a synthetic intervertebral device and autograft from the iliac crest through a separate incision and posterolateral lumbar arthrodesis, L4-L5, with non-segmental instrumentation and morselized allograft with osteotomy.

CPT Code[1]	Description	Possible MS-DRG
22224	Lumbar	N/A
22558	Arthrodesis, anterior interbody technique, including minimal discectomy to prepare interspace (other than for decompression); lumbar	453, 454, or 455
22612-51	Arthrodesis, posterior or posterolateral technique, single level; lumbar (with lateral transverse technique, when performed)	N/A
22853	Insertion of interbody biomechanical device(s) (e.g., synthetic cage, mesh) with integral anterior instrumentation for device anchoring (e.g., screws, flanges) when performed to intervertebral disc space in conjunction with interbody arthrodesis, each interspace	N/A
22840	Posterior non-segmental instrumentation (e.g., Harrington rod technique, pedicle fixation across 1 interspace, atlantoaxial transarticular screw fixation, sublaminar wiring at C1, facet screw fixation) (list separately in addition to code for primary procedure)	N/A
20937	Autograft for spine surgery only (includes harvesting the graft); morselized (through separate skin or fascial incision) (list separately in addition to code for primary procedure)	N/A
20930	Allograft, morselized, or placement of osteopromotive material, for spine surgery only (list separately in addition to code for primary procedure)	N/A

Lumbar Combined Anterior-Posterior Scenarios

Anterolateral fusion, L4-L5, through an anterior or anterolateral approach with CoRoent® XL or XLR and autograft, and PLF with Precept®, Reline®,or SpheRx® DBR® III, Triad®, and Osteocel® Cellular Allograft—Anterior lumbar interbody arthrodesis with placement of a synthetic intervertebral device and autograft from the iliac crest through a separate incision and posterolateral lumbar arthrodesis, L4-L5, with non-segmental instrumentation and morselized allograft.

CPT® Code[1]	Description	Possible MS-DRG
22558	Arthrodesis, anterior interbody technique, including minimal discectomy to prepare interspace (other than for decompression); lumbar	453, 454, or 455
22612-51	Arthrodesis, posterior or posterolateral technique, single level; lumbar (with lateral transverse technique, when performed)	N/A
22853	Insertion of interbody biomechanical device(s) (e.g., synthetic cage, mesh) with integral anterior instrumentation for device anchoring (e.g., screws, flanges) when performed to intervertebral disc space in conjunction with interbody arthrodesis, each interspace	N/A
22840	Posterior non-segmental instrumentation (e.g., Harrington rod technique, pedicle fixation across 1 interspace, atlantoaxial transarticular screw fixation, sublaminar wiring at C1, facet screw fixation) (list separately in addition to code for primary procedure)	N/A
20937	Autograft for spine surgery only (includes harvesting the graft); morselized (through separate skin or fascial incision) (list separately in addition to code for primary procedure)	N/A
20930	Allograft, morselized, or placement of osteopromotive material, for spine surgery only (list separately in addition to code for primary procedure)	N/A
20931	Allograft, structural, for spine surgery only	N/A

Lumbar Posterior-Posterolateral Scenarios

PLIF/TLIF, L4-L5, with CoRoent, Precept, Reline, SpheRx, or Armada®, and FormaGraft® collagen bone graft matrix—Combined posterior lumbar interbody arthrodesis and posterolateral lumbar arthrodesis with placement of a synthetic intervertebral device, non-segmental instrumentation, bone marrow aspirated from the iliac crest through a separate incision, and morselized allograft.

CPT Code[1]	Description	Possible MS-DRG
22633	Arthrodesis, combined posterior or posterolateral technique with posterior interbody technique including laminectomy and/or discectomy sufficient to prepare interspace (other than for decompression), single interspace and segment; lumbar (do not report with 22612 or 22630 at the same level)	456, 457, 458, 459, or 460
22853	Insertion of interbody biomechanical device(s) (e.g., synthetic cage, mesh) with integral anterior instrumentation for device anchoring (e.g., screws, flanges) when performed to intervertebral disc space in conjunction with interbody arthrodesis, each interspace	N/A
22840	Posterior non-segmental instrumentation (e.g., Harrington rod technique, pedicle fixation across 1 interspace, atlantoaxial transarticular screw fixation, sublaminar wiring at C1, facet screw fixation) (list separately in addition to code for primary procedure)	N/A
20939-59	Bone marrow aspiration for bone grafting, spine surgery only, through separate skin or fascial incision (List separately in addition to code for primary procedure)	N/A
20930	Allograft, morselized, or placement of osteopromotive material, for spine surgery only (list separately in addition to code for primary procedure)	N/A

VI. Technology Overview

Cervical

Anterior/Interbody Procedures

- The *Archon® Anterior Cervical Plate system* is designed to stabilize the anterior column of the cervical spine after an ACDF (anterior cervical discectomy and fusion).
- The *NuVasive® Helix ACP™ (Anterior Cervical Plate) family of systems* (NuVasive Helix ACP, NuVasive Helix Mini ACP™,NuVasive Helix-T ACP™, and NuVasive Helix-Revolution ACP™) are designed to stabilize the anterior column of the cervical spine after an ACDF.
- The *CoRoent® Small Interlock™ system* is a standalone anterior cervical interbody fusion system indicated for use in a single level from C2-T1.
- The *CoRoent Small family of implant systems* is designed to be placed in the interbody space in the cervical spine to help restore interbody height and stabilize the anterior column of the spine, and is indicated for use in a single level from C2-T1. (**Note:** Requires supplemental fixation.)
- The *PCM® Cervical Disc* is designed to replace the degenerated cervical disc at a single level from C3-C7, providing support for the vertebrae while allowing for movement of the joint.

Posterior Procedures

- The *VuePoint® OCT Fixation system* is designed to stabilize the posterior column of the cervical spine (via sub-laminar hooks) and upper thoracic spine (via pedicle screws or sub-laminar hooks).
- The *Leverage® LFS system* (allograft and plate) is designed to stabilize the posterior column of the cervical and upper thoracic spine via laminoplasty allograft and plates.

Thoracolumbar

Anterior/Lateral Procedures

- The *XLIF Decade™ Plate system* is designed to stabilize the anterior column of the spine during a fusion via an anterolateral approach.
- *StruXure™ Lateral Deformity Fixation system* is designed for multi-level segmental stabilization of the anterior column of the spine via an anterolateral approach.
- The *BASE™ Interfixated Titanium system, Brigade® ALIF plate system*, and *Brigade Hyperlordotic ALIF system* are designed to stabilize the anterior column of the spine from an anterior approach.
- The *CoRoent XL/XLR Interbody Implant systems* are designed to be placed in the interbody space in the lumbar spine, along with supplemental fixation, to help restore interbody height and stabilize the anterior column of the spine. It is indicated for one or two contiguous levels from L2-S1. The CoRoent Thoracolumbar Implants are indicated for interbody fusions at one or two contiguous levels in the thoracic and lumbar spine from T1-T2 to L5-S1. The devices are cleared for use with autogenous bone graft and supplemental spinal fixation.
- The *Brigade Standalone ALIF* is an interfixated thoracolumbar interbody fusion system.
- The *X-CORE® 2 Expandable VBR system* is designed for restoring interbody height, restoring alignment, and stabilizing the spine.
- The *Traverse® Anterior Plating system* is designed to stabilize the anterior column of the spine during corpectomy procedures.

Posterior Procedures

- The *Reline®, SpheRx®*, and *Armada® systems* are universal instrumentation sets consisting of pedicle screws, hooks, rods, and various other connectors.
- The *CoRoent® Large family* (Narrow, Wide, Tapered, Contoured, Impacted, Large Oblique, MP, TLIF Anterior and Oblique) of interbody products is designed for interbody stabilization during posterior interbody approaches, such as PLIF and TLIF. (**Note:** Requires supplemental fixation.) It is indicated for one or two contiguous levels from L2-S1.
- The *Affix® II Spinous Process Plating system* is used as posterior instrumentation to achieve posterior stabilization and fusion following either a posterior decompression (e.g., laminectomy) or interbody fusion (ALIF, PLIF, and TLIF).
- The *Reline MAS® system* is a universal instrumentation set consisting of pedicle screws, rods, and various other connectors.
- *NuVasive® Power* is a comprehensive surgical power platform designed to work with quarter square systems for tapping and screw delivery.
- The *Magec® system* is a noninvasive solution for growth modulation in pediatric deformity, featuring proprietary magnetic technology, allowing surgeons to externally adjust a growing rod construct in a clinical setting.

Instruments

The *MaXcess® systems* are universally applicable, full-featured, retractor systems which can be used to access the cervical, thoracic, and lumbar spine during a variety of spine procedures. The MaXcess systems give the physician direct, open visualization, including illumination, for the surgery while minimizing disruption to the patient's anatomy.

Biologics

- *Osteocel® Cellular Allograft* is an allograft cellular bone matrix. Osteocel Plus and Osteocel Pro are product categories that utilize Osteocel technology.
- *FormaGraft® Collagen Bone Graft Matrix* is a collagen- and mineral-based bone graft substitute for use in filling bony voids.
- The *Triad® Allograft system* is comprised of machined, saline-packaged allograft, designed to be implanted in the intervertebral space in cervical or lumbar spinal fusion procedures.
- The *ExtenSure® H2™ Allograft system* is implanted via a posterior approach during posterior decompression and fusion procedures.
- *Propel™ DBM Putty* is a demineralized bone matrix for use as a bone graft extender as filler for gaps and voids that are not intrinsic to the stability of the bony structure.

NVM5® Intraoperative monitoring system

The *NVM5 system i*s a versatile tool, incorporating proprietary methods of providing intraoperative monitoring and innovative computer assisted surgical technologies such as Bendini® and NuvaMap™ O.R. When used for intraoperative monitoring, NVM5 combines intraoperative electrically stimulated EMG and spontaneous EMG activity to assess possible nerve root irritation or injury during spine surgery. Patented software algorithms* help provide the physician with real-time data to help assess a patient's neurophysiologic status. Spinal cord integrity is assessed using MEPs or SSEPs, whereby a controlled stimulation elicits a response that is transmitted through the spinal cord and measured at recording sites. Electrodes record activity during the procedure, providing information about the health and function of the spinal cord and/or specific spinal nerves.

**U.S. Patent No. 7,522,953*

Addendum A

Healthcare Acronyms

A	
AARP	American Association of Retired Persons
AHA	American Hospital Association
AHIP	America's Health Insurance Plans
AHRQ	Agency for Healthcare Research and Quality
ALOS	Average Length of Stay
AMA	American Medical Association
APC	Ambulatory Payment Classification
ASC	Ambulatory Surgery Center
B	
BCBS	BlueCross BlueShield
C	
CC	Complications and Comorbidities
CMS	Centers for Medicare & Medicaid Services (formerly known as HCFA)
CMS-1500	Universal claim form for physician services (formerly known as HCFA-1500)
COB	Coordination of Benefits
COBRA	Consolidated Omnibus Budget Reconciliation Act
CPT®	Current Procedural Terminology
D	
DME	Durable Medical Equipment
DOS	Date of Service
DRG	Diagnosis Related Group (now MS-DRG)
E	
EDI	Electronic Data Interchange
EOB	Explanation of Benefits
ERISA	Employee Retirement Income Security Act
F	
FDA	Food and Drug Administration
FEHBP	Federal Employees Health Benefits Program
FFS	Fee-for-Service
H	
HCPCS	Healthcare Common Procedure Coding System
HHS	Department of Health & Human Services
HMO	Health Maintenance Organization
I	
ICD	International Classification of Diseases
M	
MAC	Medicare Administrative Contractor
MCC	Major Complications and Comorbidities
MCO	Managed Care Organization
MFS	Medicare Fee Schedule
MS-DRG	Medicare Severity – Diagnosis Related Group
N	
Non-PAR	Non-Participating Physician
NOS	Not Otherwise Specified
O	
OPPS	Outpatient Prospective Payment System
P	
PAR	Participating Physician
PCP	Primary Care Physician
PHO	Physician Hospital Organization
POS	Point-of-Service
PPO	Preferred Provider Organization
PPS	Prospective Payment System
PRO	Peer Review Organization
R	
RBRVS	Resource-Based Relative Value Scale
RVU	Relative Value Unit
T	
TPA	Third-Party Administrator
U	
UB-92	Uniform Billing 1992
UCR	Usual, Customary, and Reasonable
UPIN	Unique Physician Identification Number
UR	Utilization Review
URO	Utilization Review Organization

Addendum B

Glossary of Reimbursement Terms

A

Allowed Charges: Charges for services furnished by a healthcare provider, which qualify as covered expenses, paid in whole or in part by an insurer. Charges are subject to deductibles and/or coinsurance.

Ambulatory Payment Classification (APC): The basic unit of payment in the Medicare Prospective Payment System for outpatient visits or procedures (similar to DRGs).

Ambulatory Surgery Center (ASC): An organization that provides surgical services on an outpatient basis for patients who do not need to occupy an inpatient, acute care hospital bed. May be a component of a hospital or a freestanding, privately owned center.

Ancillary Services: Services other than hospital room and board, nursing and physician services.

Appeal: A process whereby the provider and/or beneficiary (or representative) exercises the right to request a review of a contractor determination to deny commercial insurance, Medicare coverage, or payment for a service in full or in part.

Assignment: A decision by a healthcare provider made in advance of submitting a claim to an insurer to accept the allowed charge and subsequent payment as payment in full.

Automated Claim Review: Claim review and determination made using system logic (edits). Automated claim reviews never require human intervention to make a claim determination.

B

Balance Billing: Billing the beneficiary for any fee in excess of that allowed by the insurance carrier. Providers should check with the patient's insurance carrier for any limitations on balance billing.

Beneficiary: A person eligible to receive benefits under a healthcare plan.

Benefit: The amount payable by the third-party payor to a claimant, assignee, or beneficiary.

Bundling: The use of a single payment for a group of related services or surgeries and principal procedures when performed together.

C

Capitation: A reimbursement system whereby a monthly payment is made to providers, based on membership rather than services provided. The payment covers contracted services and is paid in advance of care provided. Capitation is expressed as a "per member per month" amount. Under most capitation-based contracts, providers do not receive additional payment even if the costs of care exceed the fixed rate of payment.

Carrier: A commercial insurance company that writes and administers health insurance policies and pays claims. Centers for Medicare & Medicaid Services (CMS): The U.S. Government agency with responsibility for the administration of the Medicare and Medicaid programs (previously known as HCFA). www.cms.hhs.gov.

CHAMPUS (TRICARE): The former Civilian Health and Medical Program of the Uniformed Services, now known as TRICARE. A federally funded comprehensive health benefits program administered by the Department of Defense and designed to provide healthcare benefits to eligible veterans and their dependents.

Claim: A demand to an insurer, by the insured person or provider acting on behalf of the insured, for payment of benefits under a policy.

CMS-1500 (HCFA-1500): A universal insurance claim form mandated for Medicare billing and generally accepted by all insurance carriers for outpatient-based healthcare providers. Physicians and medical suppliers use the CMS-1500 claim form (previously known as the HCFA-1500).

Coinsurance: Beneficiary is responsible for a percentage of the overall cost of care after the care has been provided; e.g., Medicare beneficiaries are responsible for a 20% coinsurance amount on all outpatient Part B services.

Complications and Comorbidities (CC): There are three levels of severity in MS-DRGs, based upon assignment of secondary diagnosis codes. CCs reflect the second highest severity assignment and are included on the list if they could demonstrate that their presence leads to substantially increased hospital resource use.

Consolidated Omnibus Budget Reconciliation Act (COBRA): A federal law that allows and requires past employees to be covered under company health insurance plans for a set premium. This program gives individuals the opportunity to retain insurance when their current plan or position has been terminated.

Coordination of Benefits (COB): A provision in an insurance plan wherein a person covered under more than one group plan has benefits coordinated such that all payments are limited to 100% of the actual charge or allowance. Most plans also specify rules whereby one insurer is considered primary and the other is considered secondary.

Copayment: Like coinsurance, copayment is a cost-sharing arrangement for the beneficiary, although typically paid at the time that a service is provided; e.g., a $10 copayment for an office visit or an outpatient drug prescription.

CPT® (Current Procedural Terminology): The coding system for physicians' services, developed by the American Medical Association and the basis of the HCPCS coding system for physicians' services. Each procedure or service rendered by a physician is identified with a five-digit code. CPT codes are revised annually by the American Medical Association. www.amapress.com

Customary Charge: The provider's standard charge for a given service.

D

Date of Service (DOS): The specific date a service was provided to an individual under a particular health plan.

Deductible: A stipulated amount that the insured is required to pay toward the cost of medical treatment before the benefits of the insurance policy or program take effect.

Denial: The refusal of an insurer to cover an item or service under a healthcare plan or program.

Dependents: The spouse and/or children of the insured, as defined in the insurance contract.

Diagnosis Related Group (DRG): A system of classifying medical cases for payment on the basis of diagnostic codes. Used under Medicare's inpatient prospective payment system (IPPS) for inpatient hospital services. (DRG is now referred to as MS-DRG.) Durable Medical Equipment (DME): Any equipment that undergoes repeated use, is usable at home, and is not beneficial to a person without an illness or injury. Splinting, orthopaedic bracing, and wheelchairs are examples of DME.

E

Electronic Claim: A claim form that is processed and delivered from one computer to another via some form of magnetic media (e.g., magnetic tape, diskette) or via telecommunications.

Encounter Data: Claims that are not paid fee-for-service because they are the responsibility of the provider under the capitation agreement.

EOB (Explanation of Benefits): A form included with a check from the insurer explaining the benefits that were paid and/or charges that were rejected.

Evaluation & Management (E/M) Service: A professional service provided by physicians for the purpose of diagnosing and treating diseases and counseling and evaluating patients.

Exclusion: Specific services or conditions that a health insurance policy or program will not cover or will only do so at a limited rate.

Experimental Procedures: Medical procedures for which basic safety or effectiveness has not been established.

F

Fee-for-Service: Refers to paying medical providers a specified amount for individual services rendered.

Fee Schedule: A list of predetermined payments for medical services. For example, Medicare Part B reimburses physicians based on a fee schedule.

G

Global Surgery: The payment policy in the Medicare fee schedule stating that in addition to the procedure itself, the global surgical fee includes all related services and visits that occur within a designated time period (typically 90 days).

H

HCPCS (Healthcare Common Procedure Coding System): A two-level coding system, consisting of Level I CPT® codes and Level II codes for medical supplies, equipment, and drugs, etc.

Health Maintenance Organization (HMO): Prepaid health plans that provide a range of services in return for fixed monthly premiums or other payment method. Virtually any organization can sponsor an HMO, including the government, hospitals, employers, labor unions, and insurance companies.

I

ICD-10-CM (International Classification of Diseases, 10th Revision, Clinical Modifications): A standardized system of describing diagnoses and identifying codes for reporting treatment and diagnosis of health plan enrollees. The coding and terminology provide a uniform language that accurately designates primary and secondary diagnosis and ensures consistent communication on claim forms. Maintained jointly by the American Hospital Association and CMS.

Individual Practice Association (IPA) Model HMO: A healthcare model that contracts with an Individual Practice Association (IPA) entity to provide healthcare services in return for a negotiated fee. The IPA, in turn, contracts with physicians who continue in their existing individual or group practices.

Initial (Claim) Determination: The first adjudication made by a MAC (i.e., the Medicare affiliated contractor) following a request for Medicare (or insurance) payment.

M

Major Complications and Comorbidities (MCC): There are 3 levels of severity in MS-DRGs, based upon assignment of secondary diagnosis codes. MCCs reflect the highest severity assignment and are included on the list if they could demonstrate that their presence leads to substantially increased hospital resource use.

Medicaid: A state/federal government sponsored medical assistance program to enable eligible recipients to obtain essential medical care and services.

Medical Necessity: Medical information justifying that a service rendered was reasonable and appropriate for the diagnosis or treatment of a medical condition.

Medicare: A federal health insurance program for people age 65 or older, for disabled persons, and for those with end-stage renal disease.

Medicare Advantage: Under the Balanced Budget Act of 1997 (BBA97), Congress created a new Medicare Part C, known as Medicare Advantage, which allows CMS to contract with a number of managed care organizations including, but not limited to, health maintenance organizations, preferred provider organizations, provider service organizations, and medical savings accounts.

Medicare Contractor: An organization that enters into a legal agreement with the Department of Health & Human Services to handle specified administrative, payment, and review functions. These organizations are charged with the responsibility of ensuring payments are made only for services covered under Medicare Part A or Part B. They determine whether a particular service is covered under Medicare in the course of adjudicating a Medicare claim or conducting utilization and quality review.

Medi-Gap: Health insurance policies that provide benefits for services and costs, such as deductibles and coinsurance, not covered under the Medicare program.

N

Non-Participating Physician: A physician who does not sign a health plan participation agreement and therefore is not obligated to accept assignment on all claims.

P

Part A (Medicare): The Medicare hospital insurance program which covers hospital and related institutional care.

Part B (Medicare): The Medicare supplementary medical insurance program, which covers the costs of physician services, outpatient lab, x-ray, DME, and certain other healthcare services. Participating Provider: A hospital, pharmacy, physician, or ancillary services provider who has contracted with a health plan to provide medical services for a determined fee or payment.

Point-of-Service Plan (POS): The newest type of managed care organization in which beneficiaries who decide to go outside the plan for healthcare services receive reduced benefits.

Preferred Provider Organization (PPO): An arrangement whereby an insurer or managing entity contracts with a group of healthcare providers who provide services at lower than usual fees in return for prompt payment and a guaranteed volume of patients.

Prior Authorization: An assessment of healthcare services by the insurer in advance of provision of services by the provider. This may be required under the healthcare plan or program, or may be performed routinely by the provider to ensure coverage and payment.

R

RBRVS (Resource-Based Relative Value Scale):
A government mandated relative value system (implemented in 1992) that is used for calculating national fee schedules for services provided to Medicare patients. Physicians are paid on relative value units (RVUs) for procedures and services. The three components of each established value include: work expense, practice expense, and malpractice expense.

S

Secondary Insurer: The insurer that is second in responsibility under Coordination of Benefits.

Self-insured/Self-funded: Employers fund benefit plans from their own resources without purchasing insurance. Self-funded plans may be self-administered, or the employer may contract with a third-party administrator.

Staff Model HMO: This healthcare model employs physicians to provide healthcare to its members. The HMO compensates the physicians by salary and incentive programs (e.g., Kaiser Permanente).

T

Third-Party Administrator (TPA): An organization that processes healthcare claims without bearing any insurance risk.

TRICARE (formerly known as CHAMPUS): Formerly named the Civilian Health and Medical Program of the Uniformed Services, TRICARE is a federally funded comprehensive health benefits program administered by the Department of Defense and designed to provide healthcare benefits to eligible veterans and their dependents.

U

UB-92 and UB-04: A uniform billing form required for submitting and processing claims for institutional providers.

Usual, Customary, and Reasonable (UCR): A term indicating fees charged for medical services that are considered normal, common, and in line with the prevailing fees in the provider's area.

Utilization Management: Activities that include admission/ pre-admission review, second surgical opinion, concurrent review, discharge planning, individual case management, focused review, and provider profiling.

Utilization Review: The process of reviewing services to determine if those services are or were medically necessary and appropriate. Utilization review may be performed in advance of services or retrospectively.

Addendum C

Biomechanical Spine Device Coding Clarification

In January 2017, the American Medical Association released the following new CPT codes to replace CPT code 22851. Application of intervertebral biomechanical devices(s) (e.g., synthetic cage(s), methylmethacrylate) to vertebral defect or interspace (List separately in addition to code for primary procedure):

22853 Insertion of interbody biomechanical device(s) (e.g., synthetic cage, mesh) with integral anterior instrumentation for device anchoring (eg, screws, flanges), when performed, to intervertebral disc space in conjunction with interbody arthrodesis, each interspace (List separately in addition to code for primary procedure).

Use **22853** in conjunction with 22100- 22102, 22110-22114, 22206, 22207, 22210- 22214, 22220-22224, 22310-22327, 22532, 22533, 22548-22558, 22590-22612, 22630, 22633, 22634, 22800-22812, 63001-63030,63040-63042, 63045-63047, 63050-63056, 63064, 63075, 63077, 63081, 63085, 63087, 63090, 63101, 63102, 63170-63290, 63300-63307

22854 Insertion of intervertebral biomechanical device(s) (e.g., synthetic cage, mesh) with integral anterior instrumentation for device anchoring (eg, screws, flanges), when performed, to vertebral corpectomy(ies) (vertebral body resection, partial or complete) defect, in conjunction with interbody arthrodesis, each contiguous defect (List separately in addition to code for primary procedure).

Use **22854** in conjunction with 22100- 22102, 22110-22114, 22206, 22207, 22210- 22214, 22220-22224, 22310-22327, 22532, 22533, 22548-22558, 22590-22612, 22630, 22633, 22634, 22800-22812, 63001-63030,63040-63042, 63045-63047, 63050-63056, 63064, 63075, 63077, 63081, 63085, 63087, 63090, 63101, 63102, 63170-63290, 63300- 63307

22859 Insertion of intervertebral biomechanical device(s) (e.g., synthetic cage, mesh, methylmethacrylate) to intervertebral disc space or vertebral body defect without interbody arthrodesis, each contiguous defect (List separately in addition to code for primary procedure).

Use **22859** in conjunction with 22100- 22102, 22110-22114, 22206, 22207, 22210- 22214, 22220-22224, 22310-22327, 22532, 22533, 22548-22558, 22590-22612, 22630, 22633, 22634, 22800-22812, 63001-63030,63040-63042, 63045-63047, 63050-63056, 63064, 63075, 63077, 63081, 63085, 63087, 63090, 63101, 63102, 63170-63290, 63300- 63307

CPT code **22853** is an add-on code that represents the additional work for insertion of a biomechanical device. It is reported when an interbody biomechanical device is placed into a discectomy defect for purposes of a spinal fusion, such as a posterior lumbar interbody fusion (PLIF) procedure or an anterior cervical discectomy and fusion (ACDF) procedure. The work occurs within the disc space and between two contiguous spinal segments, such as interbody biomechanical device placement at L4-L5 or C5-C6.

Code **22853** includes the integral anterior instrumentation for device anchoring that is part of some devices, such as a screw or flange that goes through the biomechanical device to anchor the cage into the disc space. The device anchoring is not the same as anterior instrumentation, which is reported separately when performed. Anterior instrumentation of the spine is denoted by the ability of the instrumentation to stabilize the spinal segment(s) as a standalone device without the cage present, such as with anterior cervical plating or anterior rod system fixation. If the plate is "integrated", and only used with the cage to keep it in the disc space and not able to be used as a standalone device for biomechanical support such as in a fracture or deformity, then you would not report 22845 and just 22853 or 22854 only. In addition, use of a posterior instrumentation to stabilize the spinal segment(s), such as posterior lumbar pedicle screw fixation, is reported separately.

Code **22854** differs from 22853 in that it is reported when an intervertebral biomechanical device is placed into a corpectomy defect for purposes of a spinal fusion, rather than a discectomy defect (22853). A corpectomy defect is created when a large portion of the vertebral body (defined as greater than 50% in the cervical spine, and greater than 33% in the thoracic and lumbar spine) is removed. The placement of the intervertebral biomechanical device typically crosses the disc spaces above and below the corpectomy defect, such as the placement of the intervertebral biomechanical device between C4-C6 for a C5 corpectomy, or placement of the intervertebral biomechanical device between T12-L2 for a lateral extracavitary arthrodesis for an L1 lateral extracavitary corpectomy. As with code 22853, code 22854 also includes the integral anterior instrumentation for

device anchoring that is part of some devices, such as a screw or flange that goes through the biomechanical device to anchor the cage into the disc space. Device anchoring is not the same as anterior instrumentation, because device anchoring cannot be used to stabilize the spinal segment(s) as a standalone device without the cage present. Posterior instrumentation to stabilize the spinal segment(s) placed in conjunction with the cage is reported separately.

Code **22859** differs from codes 22853 and 22854 in that it is reported when a spinal fusion is not performed. Code 22589 is reported when an intervertebral biomechanical device is placed into a discectomy or corpectomy defect without an interbody fusion, such as in cases of tumor or infection. For example, 22589 may be reported for spinal metastatic disease, such as an L1 lateral extracavitary corpectomy for tumor, followed by the placement of Steinmann pins and polymethylmethacrylate (PMMA) into the T12-L2 vertebral defect without the placement of a bone graft due to planned radiation therapy. As with codes 22853 and 22854, code 22859 also includes the integral anterior instrumentation for device anchoring (eg, screws, flanges) that are part of some devices, in addition to the Steinmann pins used for anchoring the PMMA bone cement, as these would not be able to stabilize the spinal segment(s) as a standalone device without the cage or PMMA present. Separate anterior or posterior instrumentation to stabilize the spinal segment(s) placed in conjunction with the cage is reported separately.

The creation of these codes resulted in the National Correct Coding Initiative (NCCI) bundling CPT codes 22853 and 22854 with CPT code(s) 22845-22847 anterior instrumentation when reported together on a claim. A coalition of spine societies met with Centers for Medicare and Medicaid Services (CMS) and the NCCI to clarify the intent of the new biomechanical device codes.

On November 21, the National Correct Coding Initiative (NCCI) provided clarification of previously finalized CCI edits bundling anterior instrumentation codes (22845-22847) with biomechanical device/cage codes 22853 and 22854. Acknowledging the difference between stand-alone cages with integral instrumentation/fixation for device anchoring and cages without integral instrumentation/fixation for device anchoring, the Centers for Medicare and Medicaid Services (CMS) has added the following information to the 2018 version of the National Correct Coding Initiative Policy Manual for Medicare Services, Chapter 4, Section F (Spine (Vertebral Column)), Subsection 10:

> *10. CPT codes 22853 and 22854 describe insertion of interbody biomechanical device(s) into intervertebral disc space(s). Integral anterior instrumentation to anchor the device to the intervertebral disc space when performed is not separately reportable. It is a misuse of anterior instrumentation CPT codes (e.g., 22845-22847) to report this integral anterior instrumentation. However, additional anterior instrumentation (i.e., plate, rod) unrelated to anchoring the device may be reported separately appending an NCCI-associated modifier such as modifier 59."*

References:
AMA CPT Assistant, March 2017
2018 version of the National Correct Coding Initiative Policy Manual for Medicare Services, Chapter 4, Section F (Spine (Vertebral Column)), Subsection 10

1 Current Procedural Terminology 2017, American Medical Association. Chicago, IL. CPT is a registered trademark of the American Medical Association. Current Procedural Terminology (CPT®) is copyright American Medical Association. All Rights Reserved. Applicable FARS/DFARS apply.
2 CMS FY2018 IPPS Final Rule; rates are not geographically adjusted.
3 CMS CY2018 OPPS Final Rule.
4 HCPCS codes are used for outpatient claims only and may or may not be reimbursed separately from the procedure payment.
5 Revenue codes are used on inpatient and outpatient claims for cost reporting. MS-DRG payments include the cost of all equipment and supplies associated with spine procedures.

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