



CLINICAL GUIDELINES

CMM-609: Lumbar Fusion (Arthrodesis)

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EviCore
By ~~EVERNORTH~~

EviCore healthcare Clinical Decision Support Tool Diagnostic Strategies: This tool addresses common symptoms and symptom complexes. Imaging requests for individuals with atypical symptoms or clinical presentations that are not specifically addressed will require physician review. Consultation with the referring physician, specialist, and/or individual's Primary Care Physician (PCP) may provide additional insight.

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CMM-609: Lumbar Fusion (Arthrodesis)

CMM-609.1: General Guidelines

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Application of Guideline

- The determination of medical necessity for the performance of lumbar fusion (with or without osteotomy) is always made on a case-by-case basis.
- For additional timing and documentation requirements, see **CMM-600.1: Prior Authorization Requirements**.

Urgent/Emergent Indications/Conditions

- The presence of urgent/emergent indications/conditions warrants definitive surgical treatment. **Imaging findings noted in the applicable procedure section(s) are required.**
 - The following criteria are NOT required for confirmed urgent/emergent conditions:
 - provider-directed non-surgical management
 - proof of smoking cessation
 - absence of unmanaged significant mental and/or behavioral health disorders (e.g., major depressive disorder, chronic pain syndrome, secondary gain, opioid and alcohol use disorders)
 - time frame for repeat procedure
- Urgent/emergent conditions for lumbar fusion and/or osteotomy include ANY of the following:
 - traumatic spinal fractures or dislocations (with or without neural compression) when instability is present or decompression of the spinal canal is anticipated to result in iatrogenic instability
 - infection (e.g., discitis, epidural abscess, osteomyelitis) when instability is present or debridement and/or decompression is anticipated to result in iatrogenic instability
 - primary or metastatic neoplastic disease causing pathologic fracture, cord compression, when instability is present, or resection and/or decompression is anticipated to result in iatrogenic instability
 - a condition otherwise meeting criteria listed in the applicable procedure section(s) with documentation of severe debilitating pain and/or dysfunction to the point of being incapacitated

Health Equity Considerations

Health equity is the highest level of health for all individuals; health inequity is the avoidable difference in health status or distribution of health resources due to the social conditions in which individuals are born, grow, live, work, and age. Social determinants of health are the conditions in the environment that affect a wide range of health, functioning, and quality of life outcomes and risks. Examples include the following: safe housing, transportation, and neighborhoods; racism, discrimination, and violence; education, job opportunities, and income; access to nutritious foods and physical activity opportunities; access to clean air and water; and language and literacy skills.

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CMM-609.2: Osteotomy

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Posterior Column Osteotomy (PCO)

Lumbar posterior column osteotomy (PCO) (i.e., Smith-Peterson osteotomy [SPO] or Ponte osteotomy) is considered **medically necessary** (in addition to fusion) when ALL of the following criteria have been met:

- Performed for non-fixed deformity requiring 5° to 10° of correction (SPO) per spinal segment with EITHER of the following:
 - lumbar sagittal plane deformities where sagittal vertical axis (SVA) is >8cm or pelvic incidence-lumbar lordosis (PI-LL) is >15°
 - larger coronal deformities where there is limited flexibility and the Cobb angle is >30°
- Posterior column osteotomy is limited to a maximum of four (4) posterior column osteotomies performed in the apex of the deformity per correction surgery.
 - **Criteria exception:** There is no limit to posterior column osteotomies for correction of Scheuermann's kyphosis as this deformity is long, gradual, rounded, and amendable to more than four (4) posterior column osteotomies
- Criteria have been met in the applicable procedure-specific section:
 - **CMM-609.3: Pediatric Spinal Deformity**
 - **CMM-609.4: Lumbar Fusion (Arthrodesis) with Decompression (Indirect or Direct)**
 - **CMM-609.5: Lumbar Fusion (Arthrodesis) without Decompression**
 - **CMM-609.6: Adjacent Segment Disease**
 - **CMM-609.7: Lumbar Fusion (with or without Decompression) Following Failed Disc Arthroplasty Surgery**
 - **CMM-609.8: Repeat Lumbar Fusion (Arthrodesis) at the Same Level**

Three-Column Osteotomy

Lumbar three-column osteotomy (i.e., pedicle subtraction osteotomy (PSO) or vertebral column resection [VCR]) is considered **medically necessary** (in addition to fusion) when ALL of the following criteria have been met:

- Performed for EITHER of the following:
 - fixed sagittal plane deformity requiring >30° of correction (PSO)
 - large, fixed coronal deformities >60° that are amenable to asymmetric osteotomy
- Criteria have been met in the applicable procedure-specific section:

- **CMM-609.3: Pediatric Spinal Deformity**
- **CMM-609.4: Lumbar Fusion (Arthrodesis) with Decompression (Indirect or Direct)**
- **CMM-609.5: Lumbar Fusion (Arthrodesis) without Decompression**
- **CMM-609.6: Adjacent Segment Disease**
- **CMM-609.7: Lumbar Fusion (with or without Decompression) Following Failed Disc Arthroplasty Surgery**
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CMM-609: Lumbar Fusion (Arthrodesis)

CMM-609.3: Pediatric Spinal Deformity

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Pediatric Lumbar Fusion

Lumbar fusion (arthrodesis) is considered **medically necessary** when the following criteria has been met:

- Imaging studies (advanced imaging or plain x-rays) show the presence of ANY of the following pediatric spinal deformities that warrant definitive surgical treatment:
 - adolescent idiopathic scoliosis with Cobb angle $>50^{\circ}$
 - congenital scoliosis
 - neuromuscular scoliosis
 - infantile/juvenile scoliosis

Pediatric Osteotomy

Lumbar osteotomy is considered **medically necessary** (in addition to fusion) when ALL of the criteria have been met in **CMM-609.2: Osteotomy**.

CMM-609: Lumbar Fusion (Arthrodesis)

CMM-609.4: Lumbar Fusion (Arthrodesis) with Decompression (Indirect or Direct)

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CMM-609: Lumbar Fusion (Arthrodesis)

CMM-609.4: Lumbar Fusion (Arthrodesis) with Decompression (Indirect or Direct)

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Lumbar fusion with lumbar decompression (indirect or direct) is considered **medically necessary** when performed for ANY of the following conditions when ALL of the associated criteria have been met:

Actual Instability

- The individual is a candidate for lumbar decompression or lumbar corpectomy per CMM-608: Lumbar Decompression.
- Imaging findings include ANY of the following:
 - degenerative spondylolisthesis **without spondylolysis** with EITHER of the following:
 - dynamic segmental instability on flexion-extension plain x-rays OR comparison of a supine and upright image, with a difference in translational alignment between vertebrae >3mm between views
 - Meyerding Grade II or higher spondylolisthesis
 - spondylolisthesis **with spondylolysis** (e.g., Isthmic Spondylolisthesis) with ANY of the following:
 - Meyerding Grade I or II spondylolisthesis (anterolisthesis) and plain x-rays support progression of anterolisthesis
 - Meyerding Grade III or higher spondylolisthesis (anterolisthesis) with ≥50% anterior slippage OR plain x-rays support progression of anterolisthesis
 - progressive spinal pain without confirmatory imaging showing progression of spondylolisthesis
 - multi-level spondylolysis on plain x-rays
 - post-operative instability created by the disruption of the posterior elements due to facet joint excision that exceeding 50% bilaterally or 75% or more of a single facet
 - pars fracture
 - previous spinal decompression that resulted in iatrogenic spondylolisthesis
 - **Criteria exception:** When instability is created and/or identified intra-operatively, the above imaging criteria are NOT required.
 - See **Anticipated Iatrogenic Instability**
- Documentation of nicotine-free status with EITHER of the following:
 - individual is a never-smoker

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- individual has refrained from smoking, use of smokeless tobacco products, and/or nicotine replacement therapy for at least six (6) weeks prior to planned surgery validated by objective cotinine testing methods (serum, urinary, or saliva) verified as within the normal range for the testing method and lab at which the test was performed

Anticipated Iatrogenic Instability

- The individual is a candidate for lumbar decompression or lumbar corpectomy per CMM-608: Lumbar Decompression.
- Anticipated iatrogenic instability with ANY of the following:
 - created by disruption of the posterior elements due to facet joint excision exceeding 50% bilaterally or 75% or more of a single facet during spinal decompression
 - created by removal of the pars interarticularis that requires fusion to stabilize
 - created by decompression for Meyerding Grade I or higher spondylolisthesis with foraminal stenosis
 - created by complete or partial corpectomy (i.e., removal of at least one-third of the vertebral body [not for resection of osteophytes alone])
- Documentation of nicotine-free status with EITHER of the following:
 - individual is a never-smoker
 - individual has refrained from smoking, use of smokeless tobacco products, and/or nicotine replacement therapy for at least six (6) weeks prior to planned surgery validated by objective cotinine testing methods (serum, urinary, or saliva) verified as within the normal range for the testing method and lab at which the test was performed

Adult Symptomatic Degenerative Spinal Deformity

- The individual is a candidate for lumbar decompression or lumbar corpectomy per CMM-608: Lumbar Decompression.
- Imaging findings include EITHER of the following:
 - coronal plane deformity which includes ANY of the following:
 - Cobb angle $>30^{\circ}$
 - asymmetric disk collapse causing symptomatic foraminal narrowing
 - global coronal imbalance causing head and trunk shift off the midline
 - sagittal imbalance which includes ANY of the following:
 - sagittal vertebral axis measurement $>8\text{cm}$
 - pelvic incidence-lumbar lordosis $>15^{\circ}$
- Documentation of nicotine-free status with EITHER of the following:
 - individual is a never-smoker

- individual has refrained from smoking, use of smokeless tobacco products, and/or nicotine replacement therapy for at least six (6) weeks prior to planned surgery validated by objective cotinine testing methods (serum, urinary, or saliva) verified as within the normal range for the testing method and lab at which the test was performed

Initial Disc Herniation

- The individual is a candidate for an initial primary lumbar discectomy per the applicable section below:
 - For an initial primary lumbar discectomy, see **CMM-606.2: Initial Primary Lumbar Microdiscectomy (Laminotomy, Laminectomy, or Hemilaminectomy)**.
 - For information related to excision of extradural lesion other than neoplasm, see **CMM 606.1: General Guidelines**.
- Advanced imaging shows ANY of the following:
 - primary extraforaminal disc herniation at L5-S1, in which a far lateral approach is not feasible because of the presence of the iliac wings
 - primary foraminal disc herniation for which facet resection is necessary to retrieve the disc, which will result in iatrogenic instability
 - primary disc herniation in the lumbar spine that is at the level of the spinal cord (i.e., low lying conus medullaris)
- Documentation of nicotine-free status with EITHER of the following:
 - individual is a never-smoker
 - individual has refrained from smoking, use of smokeless tobacco products, and/or nicotine replacement therapy for at least six (6) weeks prior to planned surgery validated by objective cotinine testing methods (serum, urinary, or saliva) verified as within the normal range for the testing method and lab at which the test was performed

Recurrent Disc Herniation

- The individual is a candidate for repeat lumbar discectomy per **CMM 606.3: Repeat Lumbar Microdiscectomy (Laminotomy or Laminectomy) at the Same Level**.
- Imaging findings include evidence of anterolisthesis at the requested level(s) that results in EITHER of the following:
 - dynamic segmental instability on flexion-extension plain x-rays OR comparison of a supine and upright image, with a difference in translational alignment between vertebrae >3mm between views
 - Meyerding Grade II or higher spondylolisthesis
- Documentation of nicotine-free status with EITHER of the following:
 - individual is a never-smoker

- individual has refrained from smoking, use of smokeless tobacco products, and/or nicotine replacement therapy for at least six (6) weeks prior to planned surgery validated by objective cotinine testing methods (serum, urinary, or saliva) verified as within the normal range for the testing method and lab at which the test was performed

Second or Greater Recurrent Disc Herniation

- The individual is a candidate for repeat lumbar discectomy per **CMM 606.3: Repeat Lumbar Microdiscectomy (Laminotomy or Laminectomy) at the Same Level.**
- Documentation of nicotine-free status with EITHER of the following:
 - individual is a never-smoker
 - individual has refrained from smoking, use of smokeless tobacco products, and/or nicotine replacement therapy for at least six (6) weeks prior to planned surgery validated by objective cotinine testing methods (serum, urinary, or saliva) verified as within the normal range for the testing method and lab at which the test was performed

CMM-609.5: Lumbar Fusion (Arthrodesis) without Decompression

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CMM-609.5: Lumbar Fusion (Arthrodesis) without Decompression

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Lumbar fusion (arthrodesis) without decompression is considered **medically necessary** when performed for ANY of the following conditions when ALL of the associated criteria have been met:

Degenerative Spondylolisthesis without Spondylolysis

- Imaging findings include EITHER of the following at the requested level(s):
 - dynamic segmental instability on flexion-extension plain x-rays OR comparison of a supine and upright image, with a difference in translational alignment between vertebrae >3mm between views
 - Meyerding Grade II or higher spondylolisthesis
- Symptoms include significant level of pain on a daily basis defined as clinically significant functional impairment (e.g., inability to perform household chores, prolonged standing, etc.)
- Less than clinically meaningful improvement with EITHER of the following (unless contraindicated) for at least three (3) consecutive months:
 - prescription strength analgesics, steroids, gabapentinoids, and/or nonsteroidal anti-inflammatory drugs (NSAIDs)
 - provider-directed exercise program (prescribed by a physical therapist, chiropractic provider, osteopathic or allopathic physician)
- Absence of unmanaged significant mental and/or behavioral health disorders (e.g., major depressive disorder, chronic pain syndrome, secondary gain, opioid and alcohol use disorders)
- Documentation of nicotine-free status with EITHER of the following:
 - individual is a never-smoker
 - individual has refrained from smoking, use of smokeless tobacco products, and/or nicotine replacement therapy for at least six (6) weeks prior to planned surgery validated by objective cotinine testing methods (serum, urinary, or saliva) verified as within the normal range for the testing method and lab at which the test was performed

Spondylolisthesis with Spondylolysis (e.g., Isthmic Spondylolisthesis)

- Imaging findings include ANY of the following at the requested level(s):

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- Meyerding Grade I or II spondylolisthesis (anterolisthesis) and plain x-rays support progression of anterolisthesis
- Meyerding Grade III or higher spondylolisthesis (anterolisthesis) with $\geq 50\%$ anterior slippage OR plain x-rays support progression of anterolisthesis
- progressive spinal pain without confirmatory imaging showing progression of spondylolisthesis
- multi-level spondylolysis on plain x-rays
- Symptoms include significant level of pain on a daily basis defined as clinically significant functional impairment (e.g., inability to perform household chores, prolonged standing, etc.)
- Less than clinically meaningful improvement with EITHER of the following (unless contraindicated) for at least three (3) consecutive months:
 - prescription strength analgesics, steroids, gabapentinoids, and/or nonsteroidal anti-inflammatory drugs (NSAIDs)
 - provider-directed exercise program (prescribed by a physical therapist, chiropractic provider, osteopathic or allopathic physician)
- Absence of unmanaged significant mental and/or behavioral health disorders (e.g., major depressive disorder, chronic pain syndrome, secondary gain, opioid and alcohol use disorders)
- Documentation of nicotine-free status with EITHER of the following:
 - individual is a never-smoker
 - individual has refrained from smoking, use of smokeless tobacco products, and/or nicotine replacement therapy for at least six (6) weeks prior to planned surgery validated by objective cotinine testing methods (serum, urinary, or saliva) verified as within the normal range for the testing method and lab at which the test was performed

Discogenic Lower Back Pain/Degenerative Disc Disease

- Plain x-rays and advanced imaging (i.e., CT, MRI) show moderate to severe single-level disc degeneration at the requested level(s).
- Presence of chronic, unremitting, discogenic axial lower back pain and associated disability secondary to single-level degenerative lumbar disc disease (DDD) for at least one year
- Symptoms include significant level of pain on a daily basis defined as clinically significant functional impairment (e.g., inability to perform household chores, prolonged standing, etc.)
- Structured physician-supervised, multi-modal, nonoperative management of medical care with licensed healthcare professionals which includes ALL of the following:
 - regularly scheduled appointments
 - follow-up evaluation

- less than clinically meaningful improvement with at least TWO of the following (unless contraindicated):
 - prescription strength analgesics, steroids, gabapentinoids, and/or nonsteroidal anti-inflammatory drugs (NSAIDs) for at least 12 consecutive months
 - provider-directed exercise program (prescribed by a physical therapist, chiropractic provider, osteopathic or allopathic physician) for at least 12 consecutive months
 - epidural steroid injection(s) or selective nerve root block(s) performed at the same level(s) as the requested surgery
 - facet joint injection(s)/medial branch block(s)/radiofrequency ablation(s)
- Absence of unmanaged significant mental and/or behavioral health disorders (e.g., major depressive disorder, chronic pain syndrome, secondary gain, opioid and alcohol use disorders)
- Documentation of nicotine-free status with EITHER of the following:
 - individual is a never-smoker
 - individual has refrained from smoking, use of smokeless tobacco products, and/or nicotine replacement therapy for at least six (6) weeks prior to planned surgery validated by objective cotinine testing methods (serum, urinary, or saliva) verified as within the normal range for the testing method and lab at which the test was performed

Adult Symptomatic Degenerative Spinal Deformity

- Imaging findings include EITHER of the following:
 - coronal plane deformity which includes ANY of the following:
 - Cobb angle $>30^{\circ}$
 - asymmetric disk collapse causing symptomatic foraminal narrowing
 - global coronal imbalance causing head and trunk shift off the midline
 - sagittal imbalance which includes ANY of the following:
 - sagittal vertebral axis measurement $>8\text{cm}$
 - pelvic incidence-lumbar lordosis $>15^{\circ}$
- Less than clinically meaningful improvement with EITHER of the following (unless contraindicated) for at least three (3) consecutive months:
 - prescription strength analgesics, steroids, gabapentinoids, and/or nonsteroidal anti-inflammatory drugs (NSAIDs)
 - provider-directed exercise program (prescribed by a physical therapist, chiropractic provider, osteopathic or allopathic physician)
- Absence of unmanaged significant mental and/or behavioral health disorders (e.g., major depressive disorder, chronic pain syndrome, secondary gain, opioid and alcohol use disorders)
- Documentation of nicotine-free status with EITHER of the following:

- individual is a never-smoker
- individual has refrained from smoking, use of smokeless tobacco products, and/or nicotine replacement therapy for at least six (6) weeks prior to planned surgery validated by objective cotinine testing methods (serum, urinary, or saliva) verified as within the normal range for the testing method and lab at which the test was performed

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CMM-609: Lumbar Fusion (Arthrodesis)

CMM-609.6: Adjacent Segment Disease

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Lumbar fusion (arthrodesis) for adjacent segment disease is considered **medically necessary** when ALL of the following criteria have been met:

- The prior adjacent-level lumbar fusion was performed at least 6 months prior
- Criteria have been met in the applicable procedure-specific section:
 - CMM-609.4: Lumbar Fusion with Decompression
 - CMM-609.5: Lumbar Fusion (Arthrodesis) without Decompression

CMM-609: Lumbar Fusion (Arthrodesis)

CMM-609.7: Lumbar Fusion (with or without Decompression) Following Failed Lumbar Disc Arthroplasty Surgery

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CMM-609.7: Lumbar Fusion (with or without Decompression) Following Failed Lumbar Disc Arthroplasty Surgery

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Lumbar fusion (with or without decompression) following a failed lumbar disc arthroplasty is considered **medically necessary** when performed for EITHER of the following conditions when ALL of the associated criteria have been met:

Failed Lumbar Disc Arthroplasty Implant

- Post-operative imaging shows evidence of lumbar disc arthroplasty implant malposition or failure (e.g., subsidence, loosening, infection, dislocation, subluxation, vertebral body fracture, dislodgement)

Evidence of Neural Structure Compression

- Greater than six (6) months since the prior lumbar total disc arthroplasty at the same level
- Criteria have been met in the applicable procedure-specific section:
 - **CMM-609.4 : Lumbar Fusion (Arthrodesis) with Decompression**
 - **CMM-609.5: Lumbar Fusion (Arthrodesis) without Decompression**
- Post-operative MRI /CT shows evidence of neural structure compression (e.g., either retained disc material or a recurrent disc herniation)

CMM-609: Lumbar Fusion (Arthrodesis)

CMM-609.8: Repeat Lumbar Fusion (Arthrodesis) at the Same Level

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CMM-609.8: Repeat Lumbar Fusion (Arthrodesis) at the Same Level

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Repeat lumbar fusion (arthrodesis) (with or without decompression) at the same level is considered **medically necessary** for when performed for EITHER of the following conditions when ALL of the associated criteria have been met:

Malposition or Failure of Implant/Instrumentation or Structural Bone Graft

- Post-operative imaging shows evidence of malposition or failure of the implant/instrumentation or structural bone graft (e.g., migration, pedicle screw breakage, pedicle screw loosening, dislodged hooks, rod breakage, rod bending, rod loosening, loss of curve correction, decompensation, etc.)

Symptomatic Pseudoarthrosis

- Greater than six (6) months since the prior lumbar fusion
- Symptoms include significant level of pain on a daily basis defined as clinically significant functional impairment (e.g., inability to perform household chores, prolonged standing, etc.)
- Post-operative physical exam findings are concordant with the individual's symptoms
- Less than clinically meaningful improvement with BOTH of the following (unless contraindicated):
 - prescription strength analgesics, steroids, gabapentinoids, and/or nonsteroidal anti-inflammatory drugs (NSAIDs) for six (6) weeks
 - provider-directed exercise program (prescribed by a physical therapist, chiropractic provider, osteopathic or allopathic physician) for six (6) weeks
- Post-operative imaging (performed at no less than six (6) months after the prior lumbar fusion) shows pseudoarthrosis at the requested level(s)
- Post-operative MRI/CT findings are concordant with the individual's symptoms
- Absence of unmanaged significant mental and/or behavioral health disorders (e.g., major depressive disorder, chronic pain syndrome, secondary gain, opioid and alcohol use disorders)
- Documentation of nicotine-free status with EITHER of the following:
 - individual is a never-smoker
 - individual has refrained from smoking, use of smokeless tobacco products, and/or nicotine replacement therapy for at least six (6) weeks prior to planned surgery validated by objective cotinine testing methods (serum, urinary, or saliva) verified

as within the normal range for the testing method and lab at which the test was performed

CMM-609.9: Non-Indications

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CMM-609.9: Non-Indications

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Not Medically Necessary

- Lumbar fusion performed without meeting the criteria in the **General Guidelines** (when applicable for urgent/emergent conditions) and the criteria in the applicable procedure-specific section(s) (**pediatric spinal deformity**; **fusion with decompression**; **fusion without decompression**; **adjacent segment disease**; **fusion following failed disc arthroplasty**; or, **repeat fusion**) is considered **not medically necessary**.
- Lumbar osteotomy performed without meeting the criteria in **General Guidelines** (when applicable for urgent/emergent conditions) and the criteria in the applicable procedure-specific section (**osteotomy**; **pediatric spinal deformity**; **fusion with decompression**; **fusion without decompression**; **adjacent segment disease**; **fusion following failed disc arthroplasty**; or, **repeat fusion**) is considered **not medically necessary**.

Experimental, Investigational, or Unproven (EIU)

ALL of the following devices/procedures are considered **experimental, investigational, or unproven** (not an all-inclusive list):

- pre-sacral interbody fusion including AxiaLIF
- percutaneous lumbar spinal fusion (i.e., performed with indirect visualization of the spine)
- endoscopic lumbar spinal fusion
- anterior interbody fusion or implantation of intervertebral body fusion devices using laparoscopic approach
- device/implant not FDA approved
- dynamic (intervertebral) stabilization (e.g., Dynesys®, Stabilimax NZ®)
- interlaminar lumbar instrumented fusion (e.g., ILIF)
- interspinous and interlaminar distraction devices
- interspinous fixation/posterior non-pedicle supplemental fixation devices for spinal fusion (e.g., Affix®, Aspen® Spinous Process Fixation System, Coflex®-F)
- personalized anterior and lateral body interbody cage (implantable) (e.g., Aprevo®)
- least invasive lumbar decompression interbody fusion (e.g., LINDIF)
- isolated facet fusion (with or without instrumentation) including allograft bone graft substitutes used exclusively as stand-alone stabilization devices (e.g., TruFuse® [any level], NuFix® [any level])

- total facet arthroplasty

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Codes (CMM-609)

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The inclusion of any code in this table does not imply that the code is under management or requires prior authorization. Refer to the applicable health plan for management details. Prior authorization of a code listed in this table is not a guarantee of payment. The Certificate of Coverage or Evidence of Coverage policy outlines the terms and conditions of the member's health insurance policy.

Code	Code Description/Definition
22207	Osteotomy of spine, posterior or posterolateral approach, 3 columns, 1 vertebral segment (e.g., Pedicle/vertebral body subtraction); lumbar
+22208	Osteotomy of spine, posterior or posterolateral approach, 3 columns, 1 vertebral segment (e.g., Pedicle/vertebral body subtraction); each additional vertebral segment (List separately in addition to code for primary procedure)
22214	Osteotomy of spine, posterior or posterolateral approach, 1 vertebral segment; lumbar
+22216	Osteotomy of spine, posterior or posterolateral approach, 1 vertebral segment; each additional vertebral segment (List separately in addition to code for primary procedure)
22224	Osteotomy of spine, including discectomy, anterior approach, single vertebral segment; lumbar
+22226	Osteotomy of spine, including discectomy, anterior approach, single vertebral segment, each additional vertebral segment (List separately in addition to code for primary procedure)
22533	Arthrodesis, lateral extracavitary technique, including minimal discectomy to prepare interspace (other than for decompression); lumbar

CMM-609: Lumbar Fusion (Arthrodesis)

Code	Code Description/Definition
+22534	Arthrodesis, lateral extracavitary technique, including minimal discectomy to prepare interspace (other than for decompression); thoracic or lumbar, each additional vertebral segment (List separately in addition to code for primary procedure)
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 interspace
22612	Arthrodesis, posterior or posterolateral technique, single interspace; lumbar (with lateral transverse technique, when performed)
+22614	Arthrodesis, posterior or posterolateral technique, single interspace; each additional vertebral segment (List separately in addition to code for primary procedure)
22630	Arthrodesis, posterior interbody technique, including laminectomy and/or discectomy to prepare interspace (other than for decompression), single interspace; lumbar
+22632	Arthrodesis, posterior interbody technique, including laminectomy and/or discectomy to prepare interspace (other than for decompression), single interspace; each additional interspace (List separately in addition to code for primary procedure)
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; lumbar

CMM-609: Lumbar Fusion (Arthrodesis)

Code	Code Description/Definition
+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 (List separately in addition to code for primary procedure)
22800	Arthrodesis, posterior, for spinal deformity, with or without cast; up to 6 vertebral segments
22802	Arthrodesis, posterior, for spinal deformity, with or without cast; 7 to 12 vertebral segments
22804	Arthrodesis, posterior, for spinal deformity, with or without cast; 13 or more vertebral segments
22808	Arthrodesis, anterior, for spinal deformity, with or without cast; 2 to 3 vertebral segments
22810	Arthrodesis, anterior, for spinal deformity, with or without cast; 4 to 7 vertebral segments
22812	Arthrodesis, anterior, for spinal deformity, with or without cast; 8 or more vertebral segments
+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)

Code	Code Description/Definition
+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)
+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)
+22848	Pelvic fixation (attachment of caudal end of instrumentation to pelvic bony structures) other than sacrum (List separately in addition to code for primary procedure)
22849	Reinsertion of spinal fixation device
+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)
+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)

Code	Code Description/Definition
+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)
0202T	Posterior vertebral joint(s) arthroplasty (e.g., facet joint[s] replacement), including facetectomy, laminectomy, foraminotomy, and vertebral column fixation, injection of bone cement, when performed, including fluoroscopy, single level, lumbar spine
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
+0222T	Placement of a posterior intrafacet implant(s), unilateral or bilateral, including imaging and placement of bone graft(s) or synthetic device(s), single level; each additional vertebral segment (List separately in addition to code for primary procedure)

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CMM-609: Lumbar Fusion (Arthrodesis)

Evidence Discussion (CMM-609)

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Lumbar Fusion (Arthrodesis)

Risks of lumbar fusion surgery include, but are not limited to, the following: infection; neurovascular injury; persistent or incomplete relief of symptoms; pseudoarthrosis; hardware failure; possible need for more surgery; dural tear; deep vein thrombosis; pulmonary embolus; paralysis; and death.^{34,66,91,159,185} Given the potential possibility for significant complications, proper surgical candidacy selection is critical to minimize the risk benefit ratio.

As recommended by the North American Spine Society (NASS) *Coverage Policy Recommendations: Lumbar Fusion*, there are multiple indications for fusion, including the following: infection; tumor; traumatic injuries; deformity; stenosis; disc herniation; synovial facet cysts; discogenic low back pain; and pseudoarthrosis.¹⁴²

In the cases of infection, tumor, and traumatic injuries there will be underlying instability or anticipated instability from the appropriate debridement, resection, or decompression. In the cases of stenosis, disc herniation, and synovial cysts there needs to be documented instability or anticipated iatrogenic instability from the approach or need for removal of greater than 50 percent of facets.^{120,221}

For discogenic low back pain and pseudoarthrosis, there is need for a longer presence of pain and failed conservative measures. More complex revision surgeries are required for the treatment of pseudoarthrosis and persistent pseudoarthrosis is not uncommon.⁴⁹ Regarding fusion surgery for discogenic low back pain, studies have noted no significant differences in outcomes between fusion and non-surgical conservative measures.^{26,27} Multiple studies support spinal fusion for spinal stenosis associated with degenerative spondylolisthesis graded of at least Meyerding Grade II.^{68,75,91,144,213}

It has been shown in the literature that individuals with psychosocial disorders or with a smoking history undergoing fusion have poorer outcomes and higher complication rates.^{45,100} Proper identification and treatment of these conditions prior to surgery may significantly improve many outcome measures.

Evidence supports that the various methods of cotinine testing (serum, saliva, urinary) are sufficiently equivalent in accuracy to confirm nicotine abstinence. Serum testing cutoff values ranged from 3.0ng/mL to 20ng/mL. Salivary testing cutoff values ranged from 10ng/mL to 44ng/mL. Urinary testing cutoff is 10ng/mL.^{2,20,42,107}

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