National Imaging Associates, Inc.*	
Clinical guidelines: **DEFORMITY SURGERY**	**Original Date: July 2015**
CPT Codes:** - **Deformity Surgery: 22800, 22802, 22804, 22808, 22810, 22812, 22830, 22630, 22632, 22206, 22207, 22208, 22210, 22212, 22214, 22216, 22220, 22222, 22224, 22226** ***See UM Matrix for allowable billed groupings and additional covered codes*	**Last Revised Date: ~~June~~ May 2021~~1~~**
Guideline Number: NIA_CG_311	**Implementation Date: January 2023~~2~~**

INDICATIONS

All surgery requests to treat adult deformity will be reviewed on a case-by-case basis. The most common type of surgery in adults is a posterior spinal fusion with instrumentation. Occasionally anterior fusion is performed for severe curves. The following criteria must be met prior to reconstructive adult deformity surgery:

THORACIC DEFORMITY (MINIMAL-/-SECONDARY-/-FLEXIBLE LUMBAR INVOLVEMENT) IN ADULTS

- Progressive neurological deficit (motor deficit, bowel or bladder dysfunction) or lower extremity weakness (0-3/5 on the strength scale) or paralysis with corresponding evidence of spinal cord or nerve root compression on an MRI or CT scan images — immediate surgical evaluation is indicated[1] ~~(Truumees, 2017)~~; **OR**

- When **ALL the following** criteria are met:
  - Individual~~Patient~~ has significant pain or symptoms that impairs daily activities for ~~>~~≥ 6 months~~; AND~~
  - Failure of symptom or pain improvement upon completion of at least 12 weeks of focused non-operative* therapy/rehabilitation in the past year[2,3] (NASS, 2015)~~; AND~~

* National Imaging Associates, Inc. (NIA) is a subsidiary of Magellan Healthcare, Inc.

- Imaging studies confirm spinal curvature and demonstrate at least one of the following[4] ~~(Frymoyer, 2004)~~:
    - Spinal curvature > 50 degrees (scoliosis); **OR**
    - Spinal curvature > 75 degrees (kyphosis); **OR**
    - Severe kyphosis (chin-brow vertical angle greater than 35 degrees)~~.~~

LUMBAR DEFORMITY (WITH OR WITHOUT SECONDARY THORACIC INVOLVEMENT) IN ADULTS

- Progressive neurological deficit (motor deficit, bowel or bladder dysfunction) or lower extremity weakness (0-3/5 on the strength scale) or paralysis with corresponding evidence of spinal cord or nerve root compression on an MRI or CT scan images — immediate surgical evaluation is indicated[5] ~~(Kreiner, 2014)~~; **OR**

- When **ALL the following** criteria are met:
    - Lumbar back pain, neurogenic claudication, and/or radicular leg pain without significant motor deficit (0-3/5) that impairs daily activities for **at least 6 months**~~;~~ ~~**AND**~~
    - Failure of symptom or pain improvement upon completion of at least 12 weeks of focused non-operative therapy/rehabilitation* in the past year[2,3~~3~~] ~~(NASS, 2015)~~~~;~~ ~~**AND**~~
    - Imaging studies that correspond to clinical findings and show at least one of the following[6,7] ~~(Chen, 2016; Garfin, 2017)~~:
        - Sagittal or coronal imbalance of at least 5 cm measured on long plate standing x-rays of the entire spine; **OR**
        - Documented progression of 10 degrees in one year in the coronal plane on x-ray (scoliosis); **OR**
        - A fixed scoliosis of at least 40 degrees.

***Non-Operative Care**

- Documented failure of **at least twelve (12)** consecutive weeks in the past year of **any 2** of the following physician-directed conservative treatments[2,3] ~~(NASS, 2015)~~:
    - Analgesics, steroids, and/or NSAIDs
    - Structured program of physical therapy aimed at increasing core muscle strength
    - Structured home exercise program prescribed by a physical therapist, chiropractic provider or physician
    - Epidural steroid injections and or facet injections~~-~~/selective nerve root block

RELATIVE CONTRAINDICATIONS FOR SPINE SURGERY

- **Medical contraindications** to surgery (~~,~~ e.g., severe osteoporosis; infection of soft tissue adjacent to the spine, whether or not it has spread to the spine; severe cardiopulmonary disease; anemia; malnutrition and systemic infection) ~~(Fu, 2011; Smith, 2011)~~.[8,9]

- **Psychosocial risk factors**. It is imperative to rule out non-physiologic modifiers of pain presentation or non-operative conditions mimicking radiculopathy or instability (e.g., peripheral neuropathy, piriformis syndrome, myofascial pain, sympathetically mediated pain syndromes, sacroiliac dysfunction, psychological conditions, etc.) prior to consideration of elective surgical intervention ~~(Graham, 2016; Smith, 2015)~~.[10,11]

- **Active Nicotine Use** prior to **fusion** surgery. The individual~~patient~~ must refrain from nicotine use for at least six weeks prior to surgery and during the period of fusion healing ~~(Graham, 2016)~~.[11]

- **Morbid Obesity.** Contraindication to surgery in cases where there is significant risk and concern for improper post-operative healing, post-operative complications related to morbid obesity, and/or an inability to participate in post-operative rehabilitation ~~(Graham, 2016; Smith, 2015)~~.[10,11]

BACKGROUND

This guideline covers the surgical indications for adult spinal deformity. The criteria for spine surgery for deformity are organized by the involved region of the spine. Whenever possible, spinal deformity in adults is treated non-operatively. Individual~~Patient~~s often experience significant pain relief from non-operative measures including:

- Pain medication such as non-steroidal anti-inflammatory drugs or mild narcotic medications
- Physical therapy aimed at increasing core muscle strength
- Postural training
- Ideal weight maintenance or appropriate weight loss
- Activity modification
- Braces can provide symptomatic relief
- Individual~~Patient~~s who fail initial conservative therapy may benefit from steroidal epidural injections, facet joint blocks.

All operative interventions must be based on a positive correlation with clinical findings, the natural history of the disease, the clinical course, and diagnostic tests or imaging results.

POLICY HISTORY

Date	Summary
~~June~~ May 2022	Replaced "patient" with "individual" where appropriate
June 2021	No change
October 2020	No change
October 2019	• "In the past year" added to further define the conservative care requirement. • Modified contraindication section to specify 'relative'
November 2018	• Removed worsening lung function and exercise tolerance criteria from thoracic deformity indications • Changed spinal curvature to >75 degrees kyphosis • Added and updated references

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Chen PG, Daubs MD, Berven S, et al. Surgery for degenerative lumbar scoliosis: The development of appropriateness criteria. *Spine*. 2016; 41(10):910-18.

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~~**GENERAL INFORMATION**~~

~~It is an expectation that all patients receive care/services from a licensed clinician. All appropriate supporting documentation, including recent pertinent office visit notes, laboratory data, and results of any special testing must be provided. If applicable: All prior relevant imaging results and the reason that alternative imaging cannot be performed must be included in the documentation submitted.~~

1. Truumees E, Prather H. *Orthopaedic Knowledge Update: Spine 5*. American Academy of Orthopaedic Surgeons; 2017.
2. Coverage Recommendations. North American Spine Society (NASS). Accessed June 15, 2015. https://www.spine.org/PolicyPractice/CoverageRecommendations/CoverageRecommendations.aspx
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6. Garfin SR, Eismont FJ, Bell GR, Bono CM, Fischgrund J. *Rothman-Simeone The Spine E-Book*. Elsevier Health Sciences; 2017.
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11. Graham RB, Sugrue PA, Koski TR. Adult Degenerative Scoliosis. *Clin Spine Surg*. Apr 2016;29(3):95-107. doi:10.1097/bsd.0000000000000367

ADDITIONAL RESOURCES

1. York PJ, Kim HJ. Degenerative Scoliosis. *Curr Rev Musculoskelet Med*. Dec 2017;10(4):547-558. doi:10.1007/s12178-017-9445-0

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