Clinical Policy: Sacroiliac Joint Fusion

Reference Number: PA.CP.MP.126
Effective Date: 01/18
Last Revision Date: 1/24/2022

Coding Implications
Revision Log

Description
Sacroiliac joint fusion, or arthrodesis, is a surgical technique that fuses the iliac bone to the sacrum for stabilization. This procedure may be performed in a minimally invasive manner or as an open surgical procedure requiring a larger incision and subsequent increased recovery time.

Policy/Criteria

I. It is the policy of Pennsylvania Health and Wellness® (PHW) that open sacroiliac joint fusion is **medically necessary** for any of the following indications:
- A. Stabilization of a traumatic, severe disruption, or fracture of the pelvic ring;
- B. As an adjunct to sacrectomy or partial sacrectomy for the treatment of sacral tumors; or
- C. As an adjunct to the medical treatment of sacroiliac joint infection or sepsis (e.g., osteomyelitis, pyogenic sacroiliitis); or
- D. During multisegment spinal constructs (e.g., correction of deformity in scoliosis or kyphosis surgery, extending to the ilium).

II. It is the policy of Pennsylvania Health and Wellness® (PHW) that minimally invasive sacroiliac joint fusion is **medically necessary** for the treatment of low back/buttock pain when meeting all of the following:
- A. Failure of at least 6 consecutive months of conservative treatment that includes all of the following:
  1. Medication optimization (unless contraindicated);
  2. Activity modification;
  3. Active therapeutic exercise targeted at the lumbar spine, pelvis, SIJ and hip, including a home exercise program; and/or osteopathic or chiropractic manipulation;
- B. Non-radiating, unilateral pain that is caudal to the lumbar spine (L5 vertebrae), localized over the posterior SIJ, and consistent with SIJ pain, that interferes with activities of daily living (ADLs);
- C. Localized tenderness with palpation of the posterior SIJ in the absence of tenderness of similar severity elsewhere (e.g., greater trochanter, lumbar spine, coccyx) and other obvious sources of pain do not exist;
- D. Positive response to the thigh thrust test or compression test and at least 2 of the following additional provocative tests (distraction, Gaenslen's, Patrick's test/FABER test);
- E. Absence of generalized pain behavior (e.g., somatoform disorder) or generalized pain disorders (e.g., fibromyalgia);
- F. Recent (within 6 months) diagnostic imaging studies that include all of the following:
  1. Plain radiographs and CT or MRI of the SI joint that excludes the presence of destructive lesions (e.g., tumor, infection) or inflammatory arthropathy;
  2. Plain radiographs of the ipsilateral hip that excludes the presence of osteoarthritis;
  3. CT or MRI of the lumbar spine that excludes neural compression or other degenerative conditions that can cause low back or buttock pain.

G. At least 75% reduction in pain for the expected duration of the anesthetic used following an image guided, contrast-enhanced intra-articular (diagnostic) SIJ injection on 2 separate occasions, at least 2 weeks apart;
H. A failure of at least one therapeutic intra-articular SIJ injection (i.e., corticosteroid injection), or a therapeutic injection is contraindicated.

III. It is the policy of Pennsylvania Health and Wellness® (PHW) that the long-term safety and effectiveness of sacroiliac joint fusion procedures, either open or minimally invasive has not been proven for all other indications, including but not limited to, treatment of mechanical or axial low back pain, radicular pain syndromes, sacral insufficiency fractures, and pelvic girdle pain, due to limited clinical evidence.

Background

Low back pain may become chronic and disabling for about 5-10% of the adults in the United States. When the sacroiliac joint is the source of this pain, and all appropriate conservative measures fail to relieve symptoms of trauma associated with fracture, infection/sepsis, tumors involving the sacrum, cancer, or spinal instability, options may include fusion of this joint or implantation of devices that stabilize this joint with minimally invasive surgery. To stabilize the sacroiliac joint, the iliac crest bone and the sacrum are held together by plates and/or screws or an interbody fusion cage, until the two bones fuse.

There are a number of FDA-approved implants that have been proposed for sacroiliac joint disorders, but the majority of clinical trials and studies have been done on the iFuse implant system. This was initially called the SI Joint Fusion and received the original 510(k) clearance from the Food and Drug Administration in November 2008, for fracture fixation of long bones, large bone fragments of the pelvis and for conditions including sacroiliac joint disruptions and degenerative sacroiliitis. Additional FDA clearances were given on April 21, 2011 and on April 17, 2015. The iFuse system involves the fluoroscopically guided insertion of titanium implants across the sacroiliac joint. Under general anesthesia, a 2 to 3 centimeter incision is created, and after determining the appropriate size of the implant, a cannulated delivery system is used to insert the implants into the proper position. While the number varies, most patients receive 3 implants to stabilize the joint.[13, 14]

Wang and Polly completed two randomized controlled trials with a six month and one year follow up, respectively, on sacroiliac joint fusion using iFuse verses non-surgical management. The iFuse led to better outcomes and similar safety compared with nonsurgical management, and to better operative outcomes and at least comparable efficacy compared with open surgery. However, uncertainty remains due to the lack of longer-term efficacy and safety follow-up with radiologic confirmation, and to the lack of comparisons with other minimally invasive approaches. [15, 10]

The sacroiliac joint remains a controversial source of primary low back pain, and surgery is rarely performed for sacroiliac joint dysfunction. Although there are ongoing published peer-reviewed studies, there is a paucity of long-term, scientific literature to support sacroiliac joint fusion for low back pain. Additional randomized, controlled trials or comparison studies are

needed to compare sacroiliac joint fusion for low back pain to non-surgical treatments to determine the impact on health outcomes and long-term efficacy and safety. [17]

State of Colorado, Department of Labor and Employment, Division of Workers' Compensation, recommends: sacroiliac (SI) joint fusion may be indicated for stabilization of a traumatic severe disruption of the pelvic ring. This procedure has limited use in minor trauma and would be considered only on an individual, case-by-case basis. In patients with typical, mechanical low back pain, this procedure is considered to be investigational. Until the efficacy of this procedure for mechanical low back pain is determined by an independent, valid, prospective outcome study, this procedure is not recommended for mechanical low back pain. [12]

American Association of Neurological Surgeons (AANS)
At the Current Procedural Terminology (CPT®) Editorial Panel meeting, the American Association of Neurological Surgeons and Congress of Neurological Surgeons presented the following proposal: for a new Category I CPT code for minimally invasive sacroiliac joint fusion. The new code was approved and went into effect on January 1, 2015, replacing the previous Category III code 0334T. CPT code 27280 was revised to clarify that it is for open procedures only. [2]

International Society for the Advancement of Spine Surgery (ISASS)
ISASS published a policy statement on minimally invasive sacroiliac joint fusion, with criteria for determining a patient's eligibility regarding minimally invasive SI joint fusion. Several limitations of their recommendations include, but are not limited to: the literature review method, lack of formal assessment of the quality of the evidence, and no clear link between the recommendations for fusion with supporting evidence.[8,21]

North American Spine Society (NASS)
NASS recommends percutaneous sacroiliac joint (SIJ) fusion for the treatment of sacroiliac joint pain for patients with low back/buttock pain who meet specific criteria. [9]

Coding Implications
This clinical policy references Current Procedural Terminology (CPT®). CPT® is a registered trademark of the American Medical Association. All CPT codes and descriptions are copyrighted 2020, American Medical Association. All rights reserved. CPT codes and CPT descriptions are from the current manuals and those included herein are not intended to be all-inclusive and are included for informational purposes only. Codes referenced in this clinical policy are for informational purposes only. Inclusion or exclusion of any codes does not guarantee coverage. Providers should reference the most up-to-date sources of professional coding guidance prior to the submission of claims for reimbursement of covered services.

CPT® Codes	Description
27279	Arthrodesis, sacroiliac joint, percutaneous or minimally invasive (indirect visualization), with image guidance, includes obtaining bone graft when performed, and placement of transfixing device

CPT® Codes	Description
27280	Arthrodesis, open, sacroiliac joint, including obtaining bone graft, including instrumentation, when performed

HCPCS Codes	Description
N/A	

ICD-10-CM Diagnosis Codes that Support Coverage Criteria

ICD-10-CM Code	Description
C41.4, C79.51	Malignant neoplasm of pelvic bones, sacrum and coccyx Secondary malignant neoplasm of bone
D16.8, D48.0, D49.2	Begnign neoplasm of pelvic bones, sacrum and coccyx Neoplasm of uncertain behavior of bones and articular cartilage Neoplasm of unspecified behavior of bone, soft tissue, and skin
M43.27-M43.28	Fusion of spine, lumbosacral to sacral and sacrococcygeal region
M46.1	Sacroiliitis, not elsewhere classified
M46.28, M46.38	Osteomyelitis of vertebra, sacral and sacrococcygeal region Infection of intervertebral disc (pyogenic), sacral and sacrococcygeal region
M53.2X6-M53.2X8	Spinal instabilities, lumbar – sacral and sacrococcygeal region
M53.3	Sacrococcygeal disorders, not elsewhere classified

Reviews, Revisions, and Approvals	Revision Date	Approval Date
New Policy	9/18	
References reviewed and updated. Codes reviewed and updated. ICD-10 codes added: C41.4, C79.51, D16.8, D48.0, D49.2, M46.28, M46.38, and S32.810A-S32.811S. Specialty review.	10/19	
Annual review completed. References reviewed and updated. Changed ICD-10 code M53.2X7 to M53.2X6. Corrected numbering in Reference Section and applicable footnotes. Added clarification to section II., "that sacroiliac joint fusion procedures, either open or minimally invasive (e.g., iFuse), are investigational for all other indications, including but not limited to, treating treatment of……"	10/2020	3/2/2021
Annual review complete. References reviewed, updated and reformatted. Background updated. Section I updated to indicate criteria specific to open SIJ fusion. New criteria added for section II, specific to minimally invasive SIJ fusion. Updated section III "experimental/investigational" verbiage: replaced with "long-term safety and effectiveness has not been proven" and removed reference to iFUSE and sacroiliac joint examples. Reviewed by specialist.	1/24/2022	

Reviews, Revisions, and Approvals	Revision Date	Approval Date
Changed "review date" in the header to "last revision date; changed "date" in the revision log header to "revision date."		

References

1. American association of neurological surgeons (AANS) and CNS support minimally invasive sacroiliac joint fusion code. Neurosurgeons Taking Action. 2014; Vol. 30. https://www.aans.org/pdf/Legislative/Washington_E-newsletter/Washington_E-news_Vol30_2014.pdf. Accessed May 20, 2021.
2. Chou R, Loeser JD, Owens DK, et al. Interventional therapies, surgery, and interdisciplinary rehabilitation for low back pain: an evidence-based clinical practice guideline from the American Pain Society. Spine (Phila Pa 1976). 2009;34(10):1066-1077. doi:10.1097/BRS.0b013e3181a1390d.
3. Minimally invasive sacroiliac joint fusion using triangular titanium implants (iFuse Implant System, SI-Bone Inc.). Hayes. http://www.hayesinc.com/. Published March 3, 2014. (Updated and retitled September 3, 2020). Accessed May 20, 2021.
4. Open sacroiliac joint fusion for unspecified sacroiliac joint dysfuction. Hayes. http://www.hayesinc.com/. Published February 24, 2008. (Archived July 22, 2020). Accessed May 20, 2021.
5. Ledonio CG, Polly DW Jr, Swiontkowski MF. Minimally invasive versus open sacroiliac joint fusion: are they similarly safe and effective? Clin Orthop Relat Res. 2014;472(6):1831-1838. doi:10.1007/s11999-014-3499-8.
6. Lorio MP, Rashbaum R. ISASS policy statement - minimally invasive sacroiliac joint fusion. Int J Spine Surg. 2014;8:25. Published 2014 Dec 1. doi:10.14444/1025.
7. North American Spine Society (NASS). Coverage policy recommendations percutaneous sacroiliac joint fusion. June 2015.
8. Polly DW, Cher DJ, Wine KD, et al. Randomized Controlled Trial of Minimally Invasive Sacroiliac Joint Fusion Using Triangular Titanium Implants vs Nonsurgical Management for Sacroiliac Joint Dysfunction: 12-Month Outcomes. Neurosurgery. 2015;77(5):674-691. doi:10.1227/NEU.0000000000000988.
9. SI-BONE, Inc. Announces Medicare Palmetto Removes MIS SI Joint Fusion from Non-Coverage. Published February 25, 2014. https://www.prnewswire.com/news-releases/si-bone-inc-announces-medicare-palmetto-removes-mis-si-joint-fusion-from-non-coverage-247035941.html. Accessed May 21, 2021.
10. U.S. Food and Drug Administration (FDA) 510(k) Premarket Notification Database. iFuse SI Fusion System. No. K110838. April 21, 2011. https://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfPMN/pmn.cfm?ID=K110838. Accessed May 21, 2021.
11. U.S. Food and Drug Administration (FDA) 510(k) Premarket Notification Database. SI-BONE iFuse Implant System. No. K150714. April 17, 2015. https://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfPMN/pmn.cfm?ID=K150714. Accessed May 21, 2021.
12. Vanaclocha V, Herrera JM, Sáiz-Sapena N, Rivera-Paz M, Verdú-López F. Minimally Invasive Sacroiliac Joint Fusion, Radiofrequency Denervation, and Conservative

Management for Sacroiliac Joint Pain: 6-Year Comparative Case Series. Neurosurgery. 2018 Jan 1;82(1):48-55. doi: 10.1093/neuros/nyx185. PMID: 28431026.
13. Whang P, Cher D, Polly D, Frank C, Lockstadt H, Glaser J, Limoni R, Sembrano J. Sacroiliac Joint Fusion Using Triangular Titanium Implants vs. Non-Surgical Management: Six-Month Outcomes from a Prospective Randomized Controlled Trial. Int J Spine Surg. 2015 Mar 5;9:6. doi: 10.14444/2006. PMID: 25785242; PMCID: PMC4360612.
14. Wheeler SG, Wipf JE, Staiger TO, et al. Evaluation of low back pain in adults. UpToDate. https://www.uptodate.com. Updated January 6, 2021. Accessed May 20, 2021.
15. Zaidi HA, Montoure AJ, Dickman CA. Surgical and clinical efficacy of sacroiliac joint fusion: a systematic review of the literature. J Neurosurg Spine. 2015 Jul;23(1):59-66. doi: 10.3171/2014.10.SPINE14516. Epub 2015 Apr 3. PMID: 25840040.
16. Bornemann R, Roessler PP, Strauss AC, Sander K, Rommelspacher Y, Wirtz DC, Pflugmacher R, Frey SP. Two-year clinical results of patients with sacroiliac joint syndrome treated by arthrodesis using a triangular implant system. Technol Health Care. 2017;25(2):319-325. doi: 10.3233/THC-161272. PMID: 27858725.
17. Polly DW, Swofford J, Whang PG, et al. Two-Year Outcomes from a Randomized Controlled Trial of Minimally Invasive Sacroiliac Joint Fusion vs. Non-Surgical Management for Sacroiliac Joint Dysfunction. Int J Spine Surg. 2016;10:28. Published 2016 Aug 23. doi:10.14444/3028.
18. Lorio MP. ISASS Policy 2016 Update - Minimally Invasive Sacroiliac Joint Fusion. Int J Spine Surg. 2016;10:26. Published 2016 Jul 13. doi:10.14444/3026.
19. Minimally-invasive surgical (MIS) fusion of the sacroiliac (SI) joint (L36494). Centers for Medicare and Medicaid Services (CMS). https://www.cms.gov/medicare-coverage-database/new-search/search.aspx. Published February 01, 2016. Updated December 24, 2020. Accessed May 25, 2021.