Diagnosis and Treatment of Sacroiliac Joint Pain
Corporate Medical Policy

File name: Diagnosis and Treatment of Sacroiliac Joint Pain
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Description

Sacroiliac joint arthrography using fluoroscopic guidance with injection of an anesthetic has been explored as a diagnostic test for sacroiliac joint pain. Duplication of the patient’s pain pattern with the injection of contrast medium suggests a sacroiliac etiology, as does relief of chronic back pain with injection of local anesthetic. Treatment of sacroiliac joint pain with corticosteroids, radiofrequency ablation (RFA), stabilization, or minimally invasive arthrodesis has also been explored.

Policy

Coding Information

Click the links below for attachments, coding tables & instructions.
Attachment I - CPT Coding Table & Instructions
Attachment II- Diagnosis Coding Table (ICD 9 & ICD 10)

When a service may be considered medically necessary

Injection for the purpose of diagnosing sacroiliac joint pain may be considered medically necessary when the following criteria have been met:

- Pain has failed to respond to 3 months of conservative management, which may consist of therapies such as nonsteroidal anti-inflammatory medications, acetaminophen, manipulation, physical therapy, and a home exercise program; AND
- Dual (controlled) diagnostic blocks with 2 anesthetic agents with differing duration of action are used; AND
- The injections are performed under imaging guidance

Injection of corticosteroid may be considered medically necessary for the treatment of sacroiliac joint pain when the following criteria have been met:
• Pain has failed to respond to 3 months of conservative management, which may consist of therapies such as nonsteroidal anti-inflammatory medications, acetaminophen, manipulation, physical therapy, and a home exercise program; AND
• The injection is performed under imaging guidance; AND
• No more than 3 injections are given in a rolling 12 month period (note: 3 is a combined limit)

Fusion/stabilization of the sacroiliac joint via open, percutaneous or minimally invasive technique may be considered medically necessary for members with low back/buttock pain that meet ALL of the following criteria:

• Have undergone and failed a minimum six (6) months of intensive treatment that must include medication optimization, activity modification, bracing and active therapeutic exercise targeted at the lumbar spine, pelvis, sacroiliac joint and hip including a home exercise program.
• A thorough physical examination demonstrating localized tenderness with palpation over the sacral sulcus (Fortin’s point, ie, at the insertion of the long dorsal ligament inferior to the posterior superior iliac spine or PSIS) in the absence of tenderness of similar severity elsewhere (eg, greater trochanter, lumbar spine, coccyx) and that other obvious sources for their pain do not exist.
• Positive response to a cluster of three (3) provocative tests (eg, thigh thrust test, compression test, Gaenslen’s test, distraction test, Patrick’s sign, posterior provocation test). Note that the thrust test is not recommended for members who are pregnant or those with a connective tissue disorder.
• Absence of generalized pain behavior (eg, somatoform disorder) or generalized pain disorders (eg, fibromyalgia)
• Diagnostic imaging studies that include ALL the following:
  o Imaging (plain radiographs and a CT or MRI) of the sacroiliac joint that excludes the presence of destructive lesions (eg, tumor, infection) or inflammatory arthropathy that would not be properly addressed by percutaneous sacroiliac joint fusion.
  o Imaging of the pelvis (AP plain radiograph) to rule out concomitant hip pathology.
  o Imaging of the lumbar spine (CT or MRI) to rule out neural compression or other degenerative condition that can be causing low back or buttock pain.
  o Imaging of the sacroiliac joint that indicates evidence of injury and/or degeneration
• At least 75% reduction of pain for the expected duration of the anesthestic used following an image-guided, contrast-enhanced intra-articular sacroiliac joint injection on two separate occasions.

A trial of at least one therapeutic intra-articular sacroiliac joint injection (ie, corticosteroid injection)
When a service is considered investigational

Fusion/stabilization of the sacroiliac joint via open, percutaneous or minimally invasive technique is considered investigational in ANY of the following circumstances:

- Any case that does not fulfill ALL of the above criteria
- Presence of systemic arthropathy such as ankylosing spondylitis or rheumatoid arthritis
- Presence of generalized pain behavior (eg, somatoform disorder) or generalized pain disorder (eg, fibromyalgia)
- Presence of infection, tumor or fracture
- Presence of acute, traumatic instability of the sacroiliac joint
- Presence of neural compression as seen on MRI or CT that correlates with the member’s symptoms or other more likely source of pain

Radiofrequency denervation of the sacroiliac joint is considered investigational.

Policy Guidelines

Documentation required:

Conservative nonsurgical therapy for the duration specified should include the following:

- Use of prescription strength analgesics for several weeks at a dose sufficient to induce a therapeutic response
- Analgesics should include anti-inflammatory medications with or without adjunctive medications such as nerve membrane stabilizers or muscle relaxants AND
- Participation in at least 6 weeks of physical therapy (including active exercise) or documentation of why the patient could not tolerate physical therapy, AND
- Evaluation and appropriate management of associated cognitive, behavioral, or addiction issues
- Documentation of patient compliance with the preceding criteria.

A successful trial of controlled diagnostic lateral branch blocks consists of 2 separate positive blocks on different days with local anesthetic only (no steroids or other drugs), or a placebo-controlled series of blocks, under fluoroscopic guidance, that has resulted in a reduction in pain for the duration of the local anesthetic used (e.g., 3 hours longer with bupivacaine than lidocaine). There is not a consensus on whether a minimum of 50% or 75% reduction in pain would be required to be considered a successful diagnostic block, although evidence supports a criterion standard of 75% to 100% reduction in pain with dual blocks. No therapeutic intra-articular injections (i.e., steroids, saline, other substances) should be administered for a period of at least 4 weeks before the diagnostic lateral branch block. The diagnostic blocks should not be conducted under intravenous sedation unless specifically indicated (e.g., the patient is unable to cooperate with the procedure).
**Background**

Similar to other structures in the spine, it is assumed that the sacroiliac joint may be a source of low back pain. In fact, before 1928, the sacroiliac joint was thought to be the most common cause of sciatica. In 1928, the role of the intervertebral disc was elucidated, and from that point forward, the sacroiliac joint received less research attention.

Research into sacroiliac joint pain has been thwarted by any criterion standard to measure its prevalence and against which various clinical examinations can be validated. For example, sacroiliac joint pain is typically without any consistent, demonstrable radiographic or laboratory features and most commonly exists in the setting of morphologically normal joints. Clinical tests for sacroiliac joint pain may include various movement tests, palpation to detect tenderness, and pain descriptions by the patient. Further confounding study of the sacroiliac joint is that multiple structures, such as posterior facet joints and lumbar discs, may refer pain to the area surrounding the sacroiliac joint.

Because of inconsistent information obtained from history and physical examination, some have proposed the use of image-guided anesthetic injection into the sacroiliac joint for the diagnosis of sacroiliac joint pain. Treatments being investigated for sacroiliac joint pain include prolotherapy (see policy No. 2.01.26), corticosteroid injection, RFA, stabilization, and arthrodesis.

**Regulatory Status**

A number of radiofrequency generators and probes have been cleared for marketing through the U.S. Food and Drug Administration’s (FDA) 510(k) process. One device, the SInergy® by Kimberly Clark/Baylis, is a water-cooled single-use probe that received FDA clearance in 2005, listing the Baylis Pain Management Probe as a predicate device. The intended use is in conjunction with a radiofrequency generator to create radiofrequency lesions in nervous tissue.

Several percutaneous or minimally invasive fixation/fusion devices have received marketing clearance by FDA. These include the SI-FIX Sacroiliac Joint Fusion System (Medtronic), the IFUSE® Implant System (SI Bone), the Slmetry® Sacroiliac Joint Fusion System (Zyga Technologies), Silex™ Sacroiliac Joint Fusion System (X-Spine Systems) and the SI-LOK® Sacroiliac Joint Fixation System (Globus Medical). FDA Product Code: OUR.

**Rationale**

This policy was created in 2015 and has since been periodically updated with searches of the MEDLINE database. The most recent literature review was performed through July 15, 2016. Following is a summary of key references to date.

**Diagnosis**

The use of diagnostic blocks to evaluate sacroiliac joint pain builds on the experience of use of diagnostic blocks in other joints to evaluate pain. Blinded studies with placebo controls (although difficult to conduct when dealing with invasive procedures) are ideally required for scientific validation of sacroiliac joint blocks, particularly when dealing with pain relief well-known to respond to placebo controls. In the typical evaluation of a diagnostic test, the results of sacroiliac diagnostic block would then be compared with a criterion standard. However, there is no current
criterion standard for sacroiliac joint injection. In fact, some authors have positioned sacroiliac joint injection as the criterion standard against which other diagnostic tests and physical exam may be measured. Finally, one would like to know how the results of a diagnostic test will be used in the management of the patient and whether the subsequent treatment plan results in beneficial health outcomes.

At the time this policy was created, there was minimal literature regarding sacroiliac joint blocks. For example, Schwarzer et al reported on a case series of 43 patients with unexplained low back pain below L5-S1. These 43 patients were chosen opportunistically from a larger group of patients referred for discography or zygapophyseal joint blocks. Thus all patients underwent multiple procedures. A total of 13 of the 43 patients (30%) reported relief of their pain with sacroiliac joint blocks. There were no blinded controls, although the authors felt that the use of pain blocks at the zygapophyseal joints functioned as internal controls. Maigne et al reported on a series of 54 patients with low back pain who received double sacroiliac joint block. The first block used lidocaine, a short-acting anesthetic. If the patient reported pain relief, a second, confirmatory block was performed 1 week later using a long-acting anesthetic. If similar relief was obtained with the second block, it was concluded that the sacroiliac joint was the source of the pain. A total of 18% of patients met these criteria. Similar to the Schwarzer et al study, this study was primarily designed to demonstrate that sacroiliac pain exists and to assess its prevalence. No studies were identified that described how the results of sacroiliac joint arthrography might be used in the management of the patient.

In 2007, the American Society of Interventional Pain Physicians (ASIPP) published a systematic review and Practice Guidelines, including sacroiliac joint interventions. Evidence was determined to be moderate (level III, nonrandomized comparative trials) for the accuracy of sacroiliac joint diagnostic injections for the diagnosis of sacroiliac joint pain. The authors report that “even though short-term relief from sacroiliac joint injection is considered as a gold standard for the diagnosis of sacroiliac joint pain, there was no blinded comparison of the test or reference standard in evaluation of these investigations.” The evidence for intra-articular sacroiliac joint injections for short- and long-term relief was found to be limited (level IV, case series).

In 2009, ASIPP based their updated guideline on a systematic review of sacroiliac injections by Rupert et al. This systematic review included 13 studies using fluoroscopically guided controlled diagnostic blocks (ie, placebo-controlled or comparative local anesthetic) in patients with chronic low back and/or lower extremity pain for greater than 3 months’ duration. Five studies, considered level II-2 evidence (well-designed cohort or case-control studies), were reviewed on the topic of diagnosis of sacroiliac joint pain using a double-block paradigm (comparative controlled local anesthetic blocks). The false positive rate for use of a single, uncontrolled, sacroiliac joint injection was 20% to 54%. With a double-block paradigm, the prevalence of sacroiliac joint pain was estimated to range between 10% and 38% in patients with a high likelihood of sacroiliac joint pain. Interpretation of these results is limited by the lack of a “gold” standard for reference comparison. ASIPP concluded that sacroiliac joint blocks appear to be the evaluation of choice to provide appropriate diagnosis, because of the inability to make the diagnosis of sacroiliac joint-mediated pain with noninvasive tests. For therapeutic intra-articular sacroiliac joint interventions, 4 randomized trials were excluded from review due to
a lack of a valid diagnosis before therapeutic interventions. None of the 14 observational reports met the inclusion criteria, because of the lack of controlled diagnostic blocks to establish diagnosis, evaluating only patients with spondyloarthropathy, or not following patients for 6 months. Limitations were noted as a paucity of literature evaluating the role of both diagnostic and therapeutic interventions and widespread methodologic flaws.

ASIPP updated their evidence review and guidelines in 2013. Seven studies met the inclusion criteria of 75% to 100% relief with dual blocks. The prevalence of sacroiliac joint pain ranged from 10% to 44.4% with false positive rates ranging from 20% to 26%. The evidence for diagnostic sacroiliac intra-articular injections was considered to be good, with 75% to 100% pain relief as criterion standard with controlled local anesthetic or placebo blocks.

2009 practice guidelines from the American Pain Society (APS) were based on a systematic review that was commissioned by the APS and conducted at the Oregon Evidence-based Practice Center. The systematic review concluded that no reliable evidence existed to evaluate validity or utility of diagnostic sacroiliac joint block as a diagnostic procedure for low back pain with or without radiculopathy, with a resulting guideline recommendation of insufficient evidence. Data on sacroiliac joint steroid injection were limited to 1 small controlled trial, resulting in a recommendation of insufficient evidence for therapeutic injection of this joint. In 2010, Manchikanti et al published critical reviews of the APS guidelines for interventional techniques, including sacroiliac injections. Evidence for diagnostic sacroiliac injections was considered to be fair to poor, and no additional literature was identified since the 2009 systematic review by Rupert et al.

Treatment

Hansen et al published an updated systematic review of sacroiliac joint interventions in 2012. The primary outcome was short-term (≤6 months) or long-term (>6 months) pain relief. Evidence was classified as good, fair, or limited/poor based on the quality of evidence. A total of 11 studies (6 randomized, 5 nonrandomized trials) met inclusion criteria. Review found that evidence for intra-articular steroid injections is limited/poor, as is the evidence for periarticular injections (local anesthetic and steroid or botulinum toxin). For radiofrequency neurotomy, the evidence for cooled radiofrequency was found to be fair (2 randomized controlled trials [RCTs]), while evidence for conventional radiofrequency or pulsed radiofrequency was limited/poor. The 2013 ASIPP evidence review found no additional studies on intra-articular or periarticular injections besides those identified by Hansen et al in 2012.

Therapeutic Sacroiliac Injections

The available literature on therapeutic sacroiliac injections is limited, consisting of 1 small RCT that compared intra-articular injection with physiotherapy or manual therapy, 1 small RCT that compared steroid injections with prolotherapy, and case series. There are no RCTs that compare therapeutic sacroiliac injections with placebo to determine the efficacy above placebo.

A 2013 study randomized 51 patients with sacroiliac joint and leg pain to physiotherapy, manual therapy, or intra-articular injection of corticosteroid. Diagnosis of sacroiliac joint pain was based on provocation tests and not sacroiliac joint injections. In a blinded assessment, 25 patients (56%) were considered to be successfully treated at the 12-week follow-up visit based on complete relief of pain.
and improvement in the visual analog score (VAS) for pain. Physical therapy was successful in 20%, manual therapy in 72%, and intra-articular injection in 50%.

Kim et al reported a randomized double-blind, controlled trial of intra-articular prolotherapy (see policy No. 2.01.26) compared with steroid injection for sacroiliac joint pain in 2010. The study included 48 patients with sacroiliac joint pain, confirmed by 50% or greater improvement in response to a single local anesthetic block, who had failed medical treatment. Intra-articular dextrose water prolotherapy or steroid injections were administered under fluoroscopic guidance on a biweekly schedule, with a maximum of 3 injections. Injections were stopped when pain relief was 90% or greater, which required a mean of 2.7 prolotherapy injections and 1.5 steroid injections. Pain (numerical rating scale) and disability scores (Oswestry Disability Index) were assessed at baseline, 2 weeks, and monthly after completion of treatment. At 2-week follow-up, pain and disability scores were significantly improved in both groups, with no significant difference between the groups. Pain on the numerical rating scale improved from 6.3 to 1.4 in the prolotherapy group and from 6.7 to 1.9 in the steroid group. At 6 months after treatment, 63.6% of patients in the prolotherapy group remained improved from baseline (≥50%), compared with 27.2% in the steroid group. At 15-month follow-up, the cumulative incidence of sustained pain relief was 58.7% in the prolotherapy group compared with 10.2% in the steroid group. The median duration of survival (recurrence of severe sacroiliac joint pain) was 3 months for the steroid group.

Results from these small trials are insufficient to permit conclusions regarding the effect of this procedure on health outcomes. Comparisons to placebo, ideally using sham injections, are needed to determine the degree of benefit over placebo.

In 2007 Weksler et al reported results of diagnostic/therapeutic blocks in a series of patients who were referred for low back pain and disc herniation without claudication or neurologic abnormalities. Fifty patients who had at least 3 positive pain provocation tests for sacroiliac joint dysfunction received sacroiliac injection of bupivacaine and betamethasone. Pain, assessed by visual analog scores (VAS), improved from 7.8 to 1.3 at 30 minutes after the injection. At a 12-week follow-up, 46 patients (92%) reported VAS scores of 3 or less. Four patients required hospitalization for an unanticipated motor block.

Questions also remain about intra-articular versus periarticular sources of sacroiliac pain. For example, 1 prospective comparison found that periarticular lidocaine injections (25/25 patients) were more effective than intra-articular injection (9/25 patients).

Radiofrequency Denervation

The literature on radiofrequency denervation of the sacroiliac joint is limited. Two small RCTs using a cooled radiofrequency probe were identified. Aydin et al published a meta-analysis of radiofrequency ablation (RFA) for sacroiliac pain in 2010. Nine studies were included that reported the primary outcome measure of a reduction of pain of 50% or greater, including 1 randomized placebo controlled study, 3 prospective observational studies, and 5 retrospective studies. All of the studies used injection of local anesthetic to determine if RFA was indicated for the patient. Seven studies reported follow-up to 3 months, and 6 studies reported follow-up to 6 months. Meta-analysis indicated that half or greater of the patients who received RFA to the sacroiliac joint showed a reduction in their pain of 50% or more.
at 3 and 6 months. Analysis found no evidence of publication bias, but heterogeneity in studies was observed for the 6-month follow-up. This systematic review is limited by the low quality of included studies and lack of RCTs. In addition, as noted by the authors, no standards have been established for the specific nerves to ablate or type of technique.

The single RCT included in the systematic review was published in 2008. This study examined the effect of lateral branch radiofrequency denervation with a cooled probe in 28 patients with injection-diagnosed sacroiliac joint pain. Two of 14 patients (14%) in the placebo-control group reported pain relief at 1-month follow-up. None reported benefit at 3-month follow-up. Of 14 patients treated with radiofrequency denervation, 11 (79%) reported pain relief at 1 month, 9 (64%) at 3 months, and 8 (57%) at 6 months.

In 2012, Patel et al reported a randomized double-blind placebo-controlled trial of lateral branch neurotomy with a cooled radiofrequency probe. Fifty-one patients who had a positive response to 2 lateral branch blocks were randomized in a 2:1 ratio to lateral branch radiofrequency or sham. At 3-month follow-up, significant improvements in pain (-2.4 vs -0.8), physical function (14 vs 3), disability (-11 vs 2), and quality of life (0.09 vs 0.02) were observed for radiofrequency treatment compared with controls (all respectively). With treatment success defined as a 50% or greater reduction in the numerical rating scale (NRS), 47% of radiofrequency-treated patients and 12% of sham patients achieved treatment success. The treatment response was durable out to 9 months.

No additional studies were identified in the 2013 ASIPP evidence review, which concluded that evidence is limited for conventional radiofrequency neurotomy, limited for pulsed radiofrequency neurotomy, and fair for cooled radiofrequency neurotomy.

**Arthrodesis**

The literature on arthrodesis (open or minimally invasive) for sacroiliac joint pain consists of case series. No randomized trials were identified.

The largest study identified was a multicenter retrospective comparison of open versus minimally invasive sacroiliac joint fusion in 263 patients. Because all patients received fusion, this trial does not offer evidence on the comparative effectiveness of sacroiliac fusion versus alternative treatment approaches. This study had a pragmatic design that included 7 participating sites; 3 surgeons had performed open sacroiliac joint surgery (n=149), and 4 had performed minimally invasive fusion with the iFuse Implant system (n=114). Patients who underwent minimally invasive fusion were an average of 10 years older and were more likely to have had prior lumbar fusion (47.4% vs 23.5%). Perioperatively, they had lower estimated blood loss (33 vs 288 mL), operating time (70 vs 163 min), and length of hospitalization (1.3 vs 5.1 days). At 12 months postsurgery, and after matching for age, gender, and history of prior lumbar fusion, pain scores were an average of 3 (of 10) points lower in the minimally invasive group (95% confidence interval, 2.1 to 4.0; p<0.001). Implant repositioning was performed in 3.5% of patients in the minimally invasive group, while 44% of patients in the open surgical group underwent removal of spinal implants for pain. (Note: A 2012 survey by the International Society for the Advancement of Spinal Surgery found that nearly 90% of surgeons who replied to the survey used a minimally invasive technique to perform sacroiliac joint fusion.)
In 2012, Rudolf reported a retrospective analysis of his first 50 consecutive patients treated with the iFuse Implant System. There were 10 perioperative complications, including implant penetration into the sacral neural foramen (2 patients) and compression of the L5 nerve (1 patient); these resolved with surgical retraction of the implant. At a minimum of 24 months’ follow-up (mean, 40 months), the treating surgeon was able to contact 45 patients. The mean pain score was 2, and 82% of patients had attained the minimum clinically important difference (MCID, defined as ≥2 of 10).

Percutaneous fusion of the sacroiliac joint with hollow modular anchorage screws was reported by Mason et al in 2013. In this prospective single surgeon series, 73 patients underwent sacroiliac joint fusion and 55 patients (75%) were available for follow-up. At a mean follow-up of 36 months (range, 12-84), VAS for pain had decreased from 8.1 preoperatively to 4.5. This finding is limited by the high loss to follow-up. Notably, outcomes were worse for patients who had sacroiliac joint pain after spine surgery (VAS improvement, 1.76) compared with patients with degenerative sacroiliac joint pain (improvement, 4.85).

**Comparative Studies**

In 2010, Ashman et al conducted a systematic review to compare fusion versus denervation for chronic sacroiliac pain. Six articles on fusion (95 patients) and 5 on denervation (68 patients) were included in the review. All studies on fusion were case series evaluating a single treatment. There were 2 small RCTs on radiofrequency denervation; 1 is previously described, and the other had only 9 patients. The strength of the evidence was considered to be very low to low, preventing conclusions regarding the comparative efficacy of the treatments.

A 2012 systematic review found that the quality of evidence for surgical treatment (débridement, fusion) vs injection treatment (corticosteroid, botulinum toxin, prolotherapy) for chronic sacroiliac pain was very low. Seven case series on surgical treatment and 5 on injection treatment met their selection criteria. Although most studies reported more than 40% improvement in pain and more than 20% improvement in functionality, the literature was considered insufficient to evaluate the comparative effectiveness.

**Ongoing and Unpublished Clinical Trials**

Ongoing: NCT01640353 - Sacroiliac joint fusion with iFuse Implant System® (SIFI) is a manufacturer-sponsored multicenter single-arm clinical trial that is being conducted at 23 sites in the U.S. The study has completed enrollment with an estimated 250 patients; study completion is expected December 2015. (ongoing as of 04/2017)

Ongoing: NCT01861899 is a manufacturer-sponsored observational study of SI-LOK® sacroiliac joint fixation. An estimated 55 patients will be recruited. Study completion is expected August 2017.

Unpublished: NCT01104051 is a randomized crossover study of radiofrequency nerve ablation using Simplicity III in patients with chronic low back pain caused by sacroiliac joint dysfunction. Thirty-nine patients will be enrolled. (Study completed January 2015).

**Clinical Input Received Through Physician Specialty Societies and Academic Medical Centers**
While the various physician specialty societies and academic medical centers may collaborate with and make recommendations during this process through the provision of appropriate reviewers, input received does not represent an endorsement or position statement by the physician specialty societies or academic medical centers, unless otherwise noted.

2010
In response to requests, input was received from 4 physician specialty societies (6 responses) and 3 academic medical centers (5 responses) while this policy was under review in 2010. Clinical input was mixed. There was general agreement that the evidence for sacroiliac joint injections is limited, although most reviewers considered sacroiliac injections to be the best available approach for diagnosis and treatment in defined situations.

2014
In response to requests, input was received from 4 physician specialty societies and 4 academic medical centers (5 responses) while this policy was under review in 2014. Input was mixed concerning the use of arthrography, RFA, and fusion of the sacroiliac joint. Most reviewers considered injection for diagnostic purposes to be medically necessary when using controlled blocks with at least 75% pain relief, and for injection of corticosteroids for treatment purposes. Treatment with prolotherapy, periarticular corticosteroid, and periarticular botulinum toxin were considered investigational by most reviewers.

2015
In response to requests from provider community while this policy was under review in 2015. Concern brought forth that policy did not address treatment for pain in the sacroiliac joint due to infection, trauma, or neoplasm. Provider community presented literature and criteria for consideration during medical necessity review, with understanding that ongoing studies were being performed and reported on.

2017
Updated literature received from provider community for consideration during annual review. Literature considered and changes to position statements made accordingly.

Summary
Sacroiliac joint arthrography using fluoroscopic guidance with injection of an anesthetic has been explored as a diagnostic test for sacroiliac joint pain. Duplication of the patient’s pain pattern with the injection of contrast medium suggests a sacroiliac etiology, as does relief of chronic back pain with injection of local anesthetic. Treatment of sacroiliac joint pain with corticosteroids, radiofrequency ablation (RFA), stabilization, or minimally invasive arthrodesis has also been explored.

There is limited prospective or controlled evidence for sacroiliac joint arthrography, injection therapy, RFA, or fixation/fusion. For RFA, there are 2 small randomized controlled trials that report short-term benefit, but these are insufficient to determine the overall effect on health outcomes. Further high-quality controlled trials are needed that compare this procedure in defined populations with placebo and with alternative treatments. Clinical input supports the use of controlled diagnostic blocks with at least 75% pain relief for diagnosis of sacroiliac pain. In
general, the literature regarding injection therapy on joints in the back is of poor quality, although clinical input supported the use of corticosteroids for the treatment of sacroiliac joint pain. For sacroiliac fusion, 2 large randomized trials are ongoing.

Based on clinical input and the established use of injections to diagnose and treat pain in other joints, controlled diagnostic (2 blocks with anesthetics of different duration) and therapeutic (corticosteroid) injections may be considered medically necessary for the diagnosis and treatment of sacroiliac joint pain. The current evidence on sacroiliac joint arthrography, RFA, and fixation/fusion is insufficient to permit conclusions regarding the effect of these procedures on health outcomes. Therefore, these techniques are considered investigational for the diagnosis and treatment of sacroiliac joint pain.

**Practice Guidelines and Position Statements**

The ASIPP Interventional Pain Management guidelines were updated in 2009. The guidelines for diagnostic and therapeutic sacroiliac joint injections were based on the systematic review by Manchikanti et al and Rupert et al described earlier. Evidence for sacroiliac joint injections was considered to be level II-2 (evidence obtained from at least 1 properly designed small diagnostic accuracy study). The guidelines indicate that sacroiliac joint blocks appear to be the evaluation of choice to provide appropriate diagnosis, due to the inability to make the diagnosis of sacroiliac joint-mediated pain with noninvasive tests. Evidence was determined to be unavailable to establish efficacy of intra-articular sacroiliac joint injections for therapeutic purposes. Updated ASIPP guidelines from 2013 recommend the use of controlled sacroiliac joint blocks with placebo or controlled comparative local anesthetic block when indications are satisfied with suspicion of sacroiliac joint pain. A positive response to a joint block is considered to be at least a 75% improvement in pain or in the ability to perform previously painful movements. For therapeutic interventions, the only effective modality with fair evidence was cooled radiofrequency neurotomy, when used after the appropriate diagnosis was confirmed by diagnostic sacroiliac joint injections.

In 2010, the American Society of Anesthesiologists Task Force on Chronic Pain Management and the American Society of Regional Anesthesia and Pain Medicine Practice updated their guidelines for chronic pain management. The guidelines recommend that diagnostic sacroiliac joint injections or lateral branch blocks may be considered for the evaluation of patients with suspected sacroiliac joint pain. Based on opinions of consultants and society members, the guidelines recommend that water-cooled RFA or sacroiliac joint injections may be used for chronic sacroiliac joint pain.

The 2009 practice guidelines from the APS were based on a systematic review that was commissioned by the APS and conducted at the Oregon Evidence-based Practice Center. The APS guideline states that there is insufficient evidence to evaluate validity or utility of diagnostic sacroiliac joint block as a diagnostic procedure for low back pain with or without radiculopathy and that there is insufficient evidence to adequately evaluate benefits of sacroiliac joint steroid injection for nonradicular low back pain.

**Medicare National Coverage**

No national coverage determination (NCD) was identified. In the absence of an NCD, coverage decisions are left to the discretion of local Medicare carriers.
Reference Resources


Document Precedence

Blue Cross and Blue Shield of Vermont (BCBSVT) Medical Policies are developed to provide clinical guidance and are based on research of current medical literature and review of common medical practices in the treatment and diagnosis of disease. The applicable group/individual contract and member certificate language, or employer’s benefit plan if an ASO group, determines benefits that are in effect at the time of service. Since medical practices and knowledge are constantly evolving, BCBSVT reserves the right to review and revise its medical policies periodically. To the extent that there may be any conflict between medical policy and contract/employer benefit plan language, the member’s contract/employer benefit plan language takes precedence.

Audit Information

BCBSVT reserves the right to conduct audits on any provider and/or facility to ensure compliance with the guidelines stated in the medical policy. If an audit identifies instances of non-compliance with this medical policy, BCBSVT reserves the right to recoup all non-compliant payments.

Administrative and Contractual Guidance

Benefit Determination Guidance

Prior approval is required and benefits are subject to all terms, limitations and conditions of the subscriber contract.

Incomplete authorization requests may result in a delay of decision pending submission of missing information. To be considered compete, see policy guidelines above.

An approved referral authorization for members of the New England Health Plan (NEHP) is required. A prior approval for Access Blue New England (ABNE) members is required. NEHP/ABNE members may have different benefits for services listed in this policy. To confirm benefits, please contact the customer service department at the member’s health plan.

Federal Employee Program (FEP): Members may have different benefits that apply. For further information please contact FEP customer service or refer to the FEP Service Benefit Plan Brochure. It is important to verify the member’s benefits prior to providing the service to determine if benefits are available or if there is a specific exclusion in the member’s benefit.

Coverage varies according to the member’s group or individual contract. Not all groups are required to follow the Vermont legislative mandates. Member Contract language takes precedence over medical policy when there is a conflict.

If the member receives benefits through an Administrative Services Only (ASO) group, benefits may vary or not apply. To verify benefit information, please refer to the member’s employer benefit plan documents or contact the customer service department. Language in the employer benefit plan documents takes precedence over medical policy when there is a conflict.
Policy Implementation/Update information

<table>
<thead>
<tr>
<th>Date</th>
<th>Description</th>
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<tbody>
<tr>
<td>04/2015</td>
<td>Adoption of BCBSA medical policy #06.01.23 for the Diagnosis and Treatment of Sacroiliac Joint Pain. Approved by MPC - 04/2015.</td>
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<tr>
<td>04/2017</td>
<td>External feedback provided. Updated criteria for medically necessary SI Joint fusion and investigational based on NASS coverage recommendations. Clarified number of injections per year and per side. Removed arthrography as investigational as it is inherent in CPT® Codes. Updated clinical trial status. Added 2015 provider input. Added reference #29. Updated Coding Table. Removed PA requirement for 27096, G0259, G0260. Deleted CPT code 0334T and replaced with CPT Code 27279 as requiring PA. ICD9 Table removed, Added updated ICD10 Table.</td>
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Health Care Procedure Coding System (HCPCS) codes related to chemotherapy drugs, drugs administered other than oral method, and enteral/parenteral formulas may be subject to National Drug Code (NDC) processing and pricing. The use of NDC on medical claims helps facilitate more accurate payment and better management of drug costs based on what was dispensed and may be required for payment. For more information on BCBSVT requirements for billing of NDC please refer to the provider portal http://www.bcbsvt.com/provider-home latest news and communications.

Eligible providers

Qualified healthcare professionals practicing within the scope of their license(s).

Approved by BCBSVT Medical Directors

Gabrielle Bercy-Roberson, MD, MPH
Senior Medical Director
Chair, Health Policy Committee

Joshua Plavin, MD, MPH
Chief Medical Officer

Attachment I
CPT Coding Table & Instructions

<table>
<thead>
<tr>
<th>Code Type</th>
<th>Number</th>
<th>Description</th>
<th>Policy Instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPT</td>
<td>27096</td>
<td>Injection procedure for sacroiliac joint, anesthetic/ steroid, with image guidance (fluoroscopy or CT) including arthrography when performed.</td>
<td>Prior Approval Not Required</td>
</tr>
</tbody>
</table>
CPT 27279  Arthrodesis, sacroiliac joint, percutaneous or minimally invasive (indirect visualization), with image guidance, includes obtaining bone graft when performed, and placement of transfixing device  Prior Approval Required

CPT 27280  Arthrodesis, sacroiliac joint (include obtaining graft).  Prior Approval Required

HCPCS G0259  Injection procedure for sacroiliac joint; arthrography  No Prior Approval Required

HCPCS G0260  Injection procedure for sacroiliac joint; provision of anesthetic, steroid and/or other therapeutic agent, with or without arthrography  No Prior Approval Required

The following code is unlisted and requires clinical documentation at time of claims submission. Clinical documentation will be reviewed and coverage determination will be made by a medical director.

CPT 27299  Unlisted procedure, pelvis or hip joint

Attachment II
Diagnosis Coding Table (ICD 10)

<table>
<thead>
<tr>
<th>Code Type</th>
<th>Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICD 10</td>
<td>M46.1</td>
<td>Sacroiliitis, not elsewhere classified</td>
</tr>
<tr>
<td>ICD 10</td>
<td>M47.898</td>
<td>Other spondylosis, sacral and sacrococcygeal region</td>
</tr>
<tr>
<td>ICD 10</td>
<td>M47.899</td>
<td>Other spondylosis, site unspecified</td>
</tr>
<tr>
<td>ICD 10</td>
<td>M48.08</td>
<td>Spinal stenosis, sacral and sacrococcygeal region</td>
</tr>
<tr>
<td>ICD 10</td>
<td>M53.2X8</td>
<td>Spinal instabilities, sacral and sacrococcygeal region</td>
</tr>
<tr>
<td>ICD 10</td>
<td>M54.18</td>
<td>Radiculopathy, sacral and sacrococcygeal region</td>
</tr>
<tr>
<td>ICD 10</td>
<td>M54.30</td>
<td>Sciatica, unspecified side</td>
</tr>
<tr>
<td>ICD 10</td>
<td>Code</td>
<td>Description</td>
</tr>
<tr>
<td>--------</td>
<td>--------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>M54.31</td>
<td>Sciatica, right side</td>
<td></td>
</tr>
<tr>
<td>M54.32</td>
<td>Sciatica, left side</td>
<td></td>
</tr>
<tr>
<td>M54.40</td>
<td>Lumbago with sciatica, unspecified side</td>
<td></td>
</tr>
<tr>
<td>M54.41</td>
<td>Lumbago with sciatica, right side</td>
<td></td>
</tr>
<tr>
<td>M54.42</td>
<td>Lumbago with sciatica, left side</td>
<td></td>
</tr>
<tr>
<td>M54.5</td>
<td>Low back pain</td>
<td></td>
</tr>
<tr>
<td>M54.6</td>
<td>Pain in thoracic spine</td>
<td></td>
</tr>
<tr>
<td>S33.2XXA</td>
<td>Dislocation of sacroiliac and sacrococcygeal joint, initial encounter</td>
<td></td>
</tr>
<tr>
<td>S33.2XXD</td>
<td>Dislocation of sacroiliac and sacrococcygeal joint, subsequent encounter</td>
<td></td>
</tr>
<tr>
<td>S33.2XXS</td>
<td>Dislocation of sacroiliac and sacrococcygeal joint, sequela</td>
<td></td>
</tr>
<tr>
<td>S33.6XXA</td>
<td>Sprain of sacroiliac joint, initial encounter</td>
<td></td>
</tr>
<tr>
<td>S33.6XXD</td>
<td>Sprain of sacroiliac joint, subsequent encounter</td>
<td></td>
</tr>
<tr>
<td>S33.6XXS</td>
<td>Sprain of sacroiliac joint, sequela</td>
<td></td>
</tr>
</tbody>
</table>