Cigna Medical Coverage Policy- Therapy Services Acupuncture

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INSTRUCTIONS FOR USE

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1) the terms of the applicable benefit plan document in effect on the date of service
2) any applicable laws/regulations
3) any relevant collateral source materials including Cigna-ASH Medical Coverage Policies and
4) the specific facts of the particular situation

Where coverage for care or services does not depend on specific circumstances, reimbursement will only be provided if a requested service(s) is submitted in accordance with the relevant guidelines and criteria outlined in this policy, including covered diagnosis and/or procedure code(s) outlined in the Coding Information section of this policy. Reimbursement is not allowed for services when billed for conditions or diagnoses that are not covered under this policy. When billing, providers must use the most appropriate codes as of the effective date of the submission. Claims submitted for services that are not accompanied by covered code(s) under this policy will be denied as not covered.

Cigna / ASH Medical Coverage Policies relate exclusively to the administration of health benefit plans.

Cigna / ASH Medical Coverage Policies are not recommendations for treatment and should never be used as treatment guidelines.

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GUIDELINES

Medically Necessary

If coverage for acupuncture services are available in the applicable benefit plan document, acupuncture may be provided as treatment for ANY of the following conditions when ALL of the medical necessity factors and ALL of the treatment planning /outcomes listed below are met:

- Tension-type Headache; Migraine Headache with or without Aura
- Musculoskeletal joint and soft tissue pain (e.g., hip, knee, spine) resulting in a functional deficit (e.g., inability to perform household chores, interference with job functions, loss of range of motion)
- Nausea Associated with Pregnancy (only when co-managed)
- Post-Surgical Nausea (only when co-managed)

- Nausea Associated with Chemotherapy; (only when co-managed)

Medical Necessity Factors:

- Medically necessary services must be delivered toward defined reasonable and evidence-based goals;
- Medical necessity decisions must be based on patient presentation including diagnosis, severity, and documented clinical findings;
- Continuation of treatment is contingent upon progression towards defined treatment goals and evidenced by specific significant objective functional improvements (e.g., outcome assessment scales, range of motion)
- Certain conditions require that the patient is being co-managed by a medical physician in order to be considered medically necessary;
- Medically necessary services including monitoring of outcomes and progress with a change in treatment or withdrawal of treatment if the patient is not improving or is regressing.

Treatment Planning/Outcome Factors:

- An individualized treatment plan (e.g., frequency and duration of service) is appropriately correlated with clinical findings and clinical evidence;
- Treatment is expected to result in significant therapeutic improvement over a clearly defined period of time;
- Therapeutic goals are functionally oriented, realistic, measurable, and evidence-based;
- Proposed date of release/discharge from treatment is estimated;
- Functional Outcome Measures (FOM)*, when used, demonstrates Minimal Clinically Important Difference (MCID) from baseline results through periodic re-assessments;
- Documentation substantiates practitioner's diagnosis and treatment plan;
- Demonstration of progression toward active home/self-care and discharge, and;
- Maximum therapeutic benefit has not been reached.

*Not all outcome measures have MCID's determined and supported in the literature. Actual significance of these findings requires correlation with the overall clinical presentation, including updated subjective and objective examination findings

Not Medically Necessary

Acupuncture is considered not medically necessary for any of the following indications:

- Treatment intended to improve or maintain general physical condition
- Maintenance acupuncture services, when significant therapeutic improvement is not expected
- Services that do not require the skills of a qualified provider of acupuncture including but not limited to:
    - Activities and services that can be practiced independently and can be self-administered safely and effectively.
    - Home exercise programs that can be performed safely and independently to continue therapy without skilled supervision.

Not Medically Necessary
Acupuncture for any other indication, including infertility and recurrent pregnancy loss, is considered not medically necessary.

Experimental, Investigational, Unproven
Acupuncture point injection therapy is considered experimental, investigational or unproven.

DESCRIPTION

Acupuncture is a form of complementary and alternative medicine that has been widely practiced for many centuries. It involves the stimulation of specific anatomical locations on the skin through the penetration of fine needles, with the goal of relieving pain or treating disease. Stimulation can be accomplished manually (i.e., by a twisting motion of the hand) or through such methods as electrical stimulation (i.e., electroacupuncture). The practice of traditional acupuncture is predicated upon several fundamental underlying principles. It is predicated upon the existence of a series of meridians that course through the body along which are located discrete points that correspond to specific organs and/or have particular clinical significance. A vital energy, "chi," flows through the meridians and the acupuncture points and regulating bodily functions. It is the disruption of this flow of energy that therapeutic acupuncture is said to address.

Acupuncture typically utilizes unique diagnostic procedures to evaluate the meridian/chi system. This includes an evaluation of the patient's chief complaint and related health status through standardized diagnostic interviewing and examination techniques. Interviews are based on the traditional Ten Questions and examinations include, but are not limited to, evaluation of meridians, points, general vitality and behavior, the radial pulses and the tongue. Based upon the patient's complaint and the findings of these diagnostic procedures, individualized treatment regimens are developed that specify treatment variables such as the acupuncture points to be utilized, needle placement, and type of needle stimulation.

Acupuncture point injection therapy is a procedure where pharmaceuticals and natural biologic products such as vitamins, herbal extracts and other homeopathics, are injected into the body at acupuncture points to prevent or treat disease. One solution in particular, isotonic saline, when injected theoretically allows activation of the acupuncture point for a longer period of time enhancing the therapeutic effect.

GENERAL BACKGROUND

A majority of states provide licensure or registration for acupuncture practitioners, although the scope of practice allowed under state requirements varies. Depending upon the jurisdiction, those licensed to administer acupuncture may include licensed acupuncturists (LAc), medical/osteopathic physicians (MD/DO), chiropractors (DC), naturopaths (ND), oriental medicine doctors (OMD), podiatrists (DPM), dentists (DDS/DMD), nurse practitioners (NP), physician assistants (PA), as well as other designated health care providers. Depending upon the practitioner's training, different systems of acupuncture diagnosis and treatment may be used. The National Institutes of Health (NIH) Consensus Panel and the U.S. Food and Drug Administration (FDA) consider acupuncture safe when performed by qualified practitioners using sterile needles. The FDA requires that sterile, nontoxic needles be used and that they be labeled for single use by qualified practitioners. Acupuncture appears to be a relatively safe treatment with rare serious adverse side effects when performed by qualified practitioners who consistently adhere to the recommendations of the FDA regarding the use of sterile needles.

Depending on the pain condition being treated, a course of acupuncture may last several weeks. Although there is no consensus in the scientific literature regarding the optimal number of acupuncture treatments to administer or the duration of treatment for any condition, in general, there should be a reasonable expectation for clinical improvement. If no improvement is documented after an initial trial of two-four weeks treatment, an alternative treatment plan should be considered. If lack of clinical improvement continues following subsequent treatments re-evaluation by the referring provider may be indicated. If measurable objective improvement is made, then progress towards identified goals should be clearly documented and the treatment plan updated accordingly. The necessity of continued care beyond a therapeutic trial is dependent upon objective evidence of improvement (i.e., functional gain).

Multiple different biological mechanisms have been proposed and studied to explain acupuncture. All of these proposed mechanisms are centrally mediated and not merely local physiologic responses. Most commonly it is thought that the stimulation of the acupuncture needle triggers the release of endogenous opioids (endorphins). This effect seems the most pronounced in electro-acupuncture. Another possible mechanism is through the diffuse noxious inhibitory control pathway (DNIC). According to DNIC, a noxious stimulus applied to any region of the body can induce immediate suppression of pain transmission in neurons of the trigeminal caudalis and/or the spinal dorsal horn. Another theory proposes that the descending serotoninergic inhibitory pathway is key to acupuncture analgesia. In addition, there is some preliminary evidence that acupuncture may have effects on the inflammatory response mediated through the autonomic nervous system. Current available evidence indicates

that insertion of acupuncture needles has an effect above waiting list controls but there is limited available evidence to define whether exact needle placement on established “Traditional” Acupuncture points is necessary to produce a result.

None of the mechanisms of action postulated for acupuncture affects are sufficiently well understood to have established a dispositive answer to describe the exact physiological mechanism by which acupuncture produces its analgesic and antiemetic effects.

DOCUMENTATION GUIDELINES

Evaluation: An initial evaluation service is essential to determine whether any acupuncture services are medically necessary, to gather baseline data, establish a treatment plan, and develop goals based on the data. The initial evaluation service must include: An appropriate level of clinical history, examination, and medical decision-making relevant and appropriate to the individual’s complaint(s) and presentation;

- Subjective historical evaluation based on standardize method such as the 10 questions;
- Specific standardized and non-standardized tests, assessments, and tools;
- Interpretation and synthesis of all relevant clinical findings derived from history and physical examination for the purpose of clinical decision-making;
- Subjective and objective measurable, description of functional status using comparable and consistent methods;
- Summary of clinical reasoning and consideration of contextual factors with recommendations;
- The establishment of a working diagnosis;
- Plan of care with specific treatment techniques or activities to be used in treatment sessions that should be updated as the individual's condition changes;
- Frequency and duration of treatment (treatment dose);
- Functional, measurable, and time-framed long-term and short-term goals based on appropriate and relevant evaluation data; and
- Prognosis and discharge plan.

Treatment Sessions: Acupuncture treatment can vary from Acupuncture alone (CPT codes 97810, 97811, 97813, 97814) to the use of a variety of modalities and procedures depending on the patient’s condition, response to care, and treatment tolerance. All services must be supported in the treatment plan and be based on an individual’s clinical condition. An acupuncture treatment session may include:

- A brief evaluation of the patient’s progress and response to previous treatment(s);
- Acupuncture with or without electric stimulation
- Related passive modalities (e.g.: indirect moxibustion, hot/cold packs
- Functional education in self-care and home management
- Reassessment of the individual's condition, diagnosis, plan, and goals as part of the treatment session
- Coordination, communication, and documentation
- Reevaluation, if there is a significant change in the individual's condition or there is a need to update and modify the treatment plan

Documentation of treatment sessions should include at a minimum:

- Date of treatment
- Specific treatment(s) provided that match the procedure codes billed
- Total treatment time
- The individual's response to treatment
- Skilled ongoing reassessment of the individual's progress toward the goals
- Any progress toward the goals in objective, measurable terms using consistent and comparable methods
- Any barriers to expected progress or changes to the plan of care
- Name and credentials of the treating clinician

Measuring Progress in Acupuncture: Monitoring for clinically significant changes in historical/examination findings and functional status including, but not limited to:

- Pain level per VAS 1-10 scale and Frequency of symptoms
- Reported interference with daily functional activities
- Validated Functional Outcome Measures specific for condition (Clinically significant therapeutic progress (MCID, improvement in pain, impairments and objective evaluation findings)
- Length of time of relief after treatment rendered
- Monitoring for significant changes in reported patient medication or other resource utilization
- Tenderness on palpation
- Range of motion
- Observation (e.g. behavior, mobility, appearance of affected area)
- Barriers to expected progress (e.g.: co-morbid conditions, extremes of age, socio-economic factors)

Acupuncture Treatment Service: The Acupuncture service includes a brief assessment of the patient's condition, as well as documentation of the patient's response to the treatment. A reevaluation (an Established Patient E/M service) is indicated when services above and beyond the usual pre-service and post-service work associated with the acupuncture services is required. This may include circumstances where there are new clinical findings, a rapid change in the individual's status, or failure to respond to treatment interventions.

The E/M services may include all or some of the components of the initial evaluation, such as:

- Data collection with objective measurements taken based on appropriate and relevant assessment tests and tools using comparable and consistent methods;
- Clinical decision-making as to whether acupuncture care is still indicated;
- Organizing the composite of current health conditions and deciding a priority/focus of treatment;
- Identifying the appropriate intervention(s) for new or ongoing goal achievement;
- Modification of intervention(s);
- Revision in plan of care if needed;
- Evaluation of any meaningful changes in function;
- Deciphering effectiveness of intervention(s); and
- Updating the discharge plan as appropriate.

Standardized Tests and Measures/Functional Outcome Measures (FOMs): Measuring outcomes is an important component of an acupuncturist's practice. Outcome measures are important in direct management of individual patient care and for the opportunity they provide the profession in collectively comparing care and determining effectiveness.

The use of standardized tests and measures early in an episode of care establishes the baseline status of the patient, providing a means to quantify change in the patient's functioning. Outcome measures, along with other standardized tests and measures used throughout the episode of care provide information about whether predicted outcomes are being realized. As the patient reaches the termination of acupuncture services and the end of the episode of care, the acupuncturist, again, measures the outcomes of their services. Standardized outcome measures provide a common language with which to evaluate the success of interventions, thereby providing a basis for comparing outcomes related to different intervention approaches. Measuring outcomes of care within the relevant components of function (including body functions and structures), activity, and participation, among patients with the same diagnosis, is the foundation for determining which intervention approaches comprise best clinical practice

LITERATURE REVIEW

Acupuncture: The clinical utility of acupuncture is widely debated. Evaluating the clinical efficacy of acupuncture in the context of clinical trials is challenging primarily because of the difficulty of designing randomized trials with appropriate blinding of both subjects and providers. Many studies lack appropriate controls, adequate study size, randomization and/or consistent outcome measures.

Study controls for comparing real acupuncture (also referred to as verum acupuncture) typically include a placebo, sham acupuncture, standard treatment, or no treatment. Sham acupuncture is the most often used control in studies evaluating the efficacy of acupuncture. However, there is no standardized method for employing sham acupuncture and no consensus on needle placement, making it difficult to generalize findings across studies. The goal of applying sham acupuncture is to refrain from stimulating acupuncture points. In many studies, sham is done at irrelevant acupuncture sites; however, evidence has shown sham acupuncture evokes physiological responses. Because the evidence suggests that sham acupuncture is not truly a physiologically neutral event, its use as a control in clinical trials is debatable. It is difficult to distinguish between the specific effects of treatment versus that of the placebo. It has been reported that the ratio of improvement in sham groups was substantially higher than in truly inert placebo groups (Madsen, et al., 2009; Ezzo, et al., 2000). Although initially believed to have no effect, some researchers contend that needle placement in any position invokes a biological response that may interfere with the interpretation of findings.

There are now several thousand RCTs evaluating the effectiveness of acupuncture for hundreds of different conditions. The literature is examined below.

Chronic Pain: Vickers et al. conducted a meta-analysis of trials of acupuncture for chronic pain (Vickers et al., 2012). Eligible trials included those for mechanical low back and neck pain, shoulder pain, headache and osteoarthritis. Study subjects were required to have had pain for a minimum of four weeks and be followed for at least four weeks after the end of treatment. There were no restrictions on what outcomes measures could be used. The analysis identified 29 trials that met these criteria with a total of 17,922 individual patients analyzed. The analysis found acupuncture to be superior to both sham and no acupuncture control for each of the four conditions studied (all $p<0.001$). The effect sizes were similar across all pain conditions. Patients receiving acupuncture had less pain, with scores 0.23 and 0.15 standard deviations lower than sham controls for back and neck pain, osteoarthritis, and chronic headache respectively; the effect sizes in comparison to no acupuncture controls were 0.55, 0.57 and 0.42. It is worth noting that the differences between acupuncture and sham are quite modest when compared to the differences between acupuncture and no acupuncture. Sensitivity analyses including for publication bias did not change these findings. The authors concluded, “Our results from individual patient data meta-analyses of nearly 18,000 randomized patients on high quality trials provide the most robust evidence to date that acupuncture is a reasonable referral option for patients with chronic pain.”

National Institute for Health and Care Excellence (NICE) guideline (2021) examined the literature on acupuncture and chronic pain. Findings included the following:

- Acupuncture versus sham acupuncture
  - Pain reduction
    - Very low quality evidence from 13 studies with 1230 participants showed a clinically important benefit of acupuncture compared to sham acupuncture at ≤3 months.
    - Low quality evidence from 2 studies with 159 participants showed a clinically important benefit of acupuncture compared to sham acupuncture at ≤3 months.
    - Low quality evidence from 4 studies with 376 participants showed no clinically important difference between acupuncture and sham acupuncture at >3 months.
    - Moderate quality evidence from 2 studies with 159 participants showed a clinically important benefit of acupuncture compared to sham acupuncture at >3 months.
    - Low quality evidence from 1 study with 61 participants showed no clinically important difference between acupuncture and sham acupuncture at >3 months
  - Quality of life
    - Low to moderate quality evidence from 2 studies with 210 participants showed a clinically important benefit of acupuncture compared to sham acupuncture at ≤3 months.
    - Moderate quality evidence from 1 study with 158 participants showed sham acupuncture to have a clinically important improvement compared to acupuncture at ≤3 months.
    - Very low quality evidence from 3 studies with 244 participants showed no clinically important difference between acupuncture and sham acupuncture at ≤3 months.
    - Very low quality evidence from 2 studies with 168 participants showed a clinically important benefit of acupuncture compared to sham acupuncture at ≤3 months.
    - Very low to low quality evidence from 1 study with 178 participants showed a clinically important benefit, clinically important harm and no clinically important difference of

acupuncture compared to sham acupuncture at ≤3 months (various quality of life subscales).
        - Moderate quality evidence from 2 studies with 159 participants showed a clinically important benefit of acupuncture compared to sham acupuncture at ≤3 months.
        - Low quality evidence from 1 study with 72 participants showed a clinically important benefit of acupuncture compared to sham acupuncture at ≤3 months.
        - Very low quality evidence from 1 study with 76 participants showed a clinically important benefit of sham acupuncture compared to verum acupuncture at >3 months.
        - Low quality evidence from 1 study with 96 participants showed no clinically important difference between acupuncture and sham acupuncture at >3 months.
        - Low quality evidence from 1 study with 153 participants showed a clinically important benefit of acupuncture compared to sham acupuncture at >3 months.
        - Moderate quality evidence from 1 study with 159 participants showed a clinically important benefit of acupuncture compared to sham acupuncture at >3 months.
    - Physical function
        - Very low quality evidence from 1 study with 118 participants showed no clinically important difference between acupuncture and sham acupuncture at ≤3 months.
        - Very low quality evidence from 1 study with 106 participants showed no clinically important difference between acupuncture and sham acupuncture at >3 months.

- Acupuncture versus usual care
    - Pain reduction
        - Low quality evidence from 5 studies with 234 participants showed a clinically important benefit of acupuncture compared to usual care at ≤3 months. Low quality evidence from 2 studies with 384 participants showed no clinically important difference between acupuncture and usual care at ≤3 months.
        - Moderate quality evidence from 1 study with 3162 participants showed a clinically important benefit of acupuncture compared to usual care at ≤3 months.
        - Moderate quality evidence from 1 study with 344 participants showed no clinically important difference between acupuncture and usual care at >3 months.
    - Quality of life
        - Moderate quality evidence from 1 study with 3213 participants showed a clinically important benefit of acupuncture compared to usual care at ≤3 months. Very low quality evidence from 1 study with 100 participants showed both a clinically important benefit and no clinically important difference between acupuncture and usual care at ≤3 months (various quality of life subscales).
        - Low quality evidence from 1 study with 204 participants showed a clinically important benefit of acupuncture compared to usual care at >3 months.
    - Physical function
        - Very low quality evidence from 1 study with 45 participants showed no clinically important difference between acupuncture and usual care at ≤3 months.
        - Very low quality evidence from 1 study with 100 participants showed a clinically important benefit of acupuncture compared to usual care at ≤3 months.
    - Pain self-efficacy
        - Very low quality evidence from 1 study with 294 participants showed a clinically important benefit of acupuncture compared to usual care at ≤3 months.
    - Pain interference
        - Very low quality evidence from 1 study with 100 participants showed a clinically important benefit of acupuncture compared to usual care at >3 months.

Nielsen et al. (2022) updated the evidence base for acupuncture therapy for acute pain with a review of systematic reviews and meta-analyses on postsurgical/perioperative pain with opioid sparing and acute nonsurgical/trauma pain, including acute pain in the emergency department. There are 22 systematic reviews, 17 with meta-analyses of acupuncture in acute pain settings, and a review for acute pain in the intensive care unit. There are additional studies of acupuncture in acute pain settings. The majority of reviews found acupuncture therapy to be an efficacious strategy for acute pain, with potential to avoid or reduce opioid reliance. Future multicenter trials are

needed to clarify the dosage and generalizability of acupuncture for acute pain in the emergency department. With an extremely low risk profile, acupuncture therapy is an important strategy in comprehensive acute pain care.

Busse et al. (2023) completed a comparative effectiveness study of available therapies for chronic pain associated with temporomandibular disorders (TMD), Because current clinical practice guidelines are largely consensus-based and provide inconsistent recommendations, they wanted to summarize the current evidence. Based on findings, patients living with chronic pain (≥3 months) associated with TMD, and compared with placebo or sham procedures, the guideline panel issued conditional recommendations in favor of manipulation, supervised jaw exercise with mobilization, CBT with non-steroidal anti-inflammatory drugs (NSAIDS), manipulation with postural exercise, and acupuncture; (3) conditional recommendations against reversible occlusal splints (alone or in combination with other interventions), arthrocentesis (alone or in combination with other interventions), cartilage supplement with or without hyaluronic acid injection, low level laser therapy (alone or in combination with other interventions), transcutaneous electrical nerve stimulation, gabapentin, botulinum toxin injection, hyaluronic acid injection, relaxation therapy, trigger point injection, acetaminophen (with or without muscle relaxants or NSAIDS), topical capsaicin, biofeedback, corticosteroid injection (with or without NSAIDS), benzodiazepines, and β blockers; and (4) strong recommendations against irreversible oral splints, discectomy, and NSAIDS with opioids. These recommendations apply to patients living with chronic pain (≥3 months duration) associated with TMD as a group of conditions, and do not apply to the management of acute TMD pain. When considering management options, clinicians and patients should first consider strongly recommended interventions, then those conditionally recommended in favor, then conditionally against. In doing so, shared decision making is essential to ensure patients make choices that reflect their values and preference, availability of interventions, and what they may have already tried. Further research is warranted and may alter recommendations in the future.

Park et al. (2023) aimed to assess the effectiveness and safety of acupuncture for TMD via a systematic review of randomized clinical trials. The qualitative analysis of randomized clinical trials with acupuncture as the intervention included 32 articles, 22 of which were included in the quantitative analysis (471 participants). Acupuncture significantly improved outcomes versus active controls. In the analysis of add-ons, acupuncture significantly improved the effect rate and pain intensity. However, the quality of evidence was determined to range from low to very low. Acupuncture in TMD significantly improved outcomes versus active controls and when add-on treatments were applied. However, as the quality of evidence was determined to be low, well-designed clinical trials should be conducted in the future.

Yu et al. (2023) assess the effect of sham acupuncture (SA) on chronic musculoskeletal pain syndrome (MPS). SA included superficial acupuncture on non-acupoints (SANAs), non-penetration on acupoints (NPAs), and non-penetration on non-acupoints (NPNAs). The pain-related indicators were set as primary outcomes. Forty-two RCTs were included in this study, encompassing a total of 6876 patients and incorporating 3 types of SA procedures. In the traditional meta-analysis, true acupuncture (TA) was more effective than SANAs, NPAs, and NPANAs concerning MPSThe quality of the evidence for outcomes ranged from "low" to "moderate." Authors concluded that compared with SA, TA was effective in treating MPS. The effects produced by different SA procedures were different, and the order of effects from greatest to least was as follows: SANA, NPA, and NPANA.

Di Francisco et al. (2024) performed a qualitative and quantitative analysis of the scientific literature regarding the use of acupuncture and laser acupuncture in the treatment of pain associated with temporomandibular disorders (TMDs). The aim of this article was to assess the clinical evidence for acupuncture and laser acupuncture therapies as treatment for temporomandibular joint disorder (TMD). This systematic review includes randomized clinical trials (RCTs) of acupuncture and laser acupuncture as a treatment for TMD compared to other treatments. A total of 11 RCTs met inclusion criteria. The findings show that acupuncture is short-term helpful for reducing the severity of TMD pain with muscle origin. Meta-analysis revealed that the Acupuncture group and Laser Acupuncture group had a higher efficacy rate than the Placebo control group, showing a high efficacy of Acupuncture and Laser Acupuncture group in the treatment of temporomandibular. In conclusion, this systematic review demonstrated that the evidence for acupuncture as a symptomatic treatment of TMD is limited. Further rigorous studies are required to establish whether acupuncture has therapeutic value.

Qin et al. (2024) evaluated the efficacy and safety of traditional acupuncture for pain relief based on rigorously designed RCTs with double-blind. The findings show a significant positive effect on pain improvement, evidenced

by changes in visual analog scale scores. Safety analysis showed no significant differences in adverse reactions between the acupuncture and control groups, with no serious adverse effects reported. Traditional acupuncture is effective and safe in pain management. This suggests that acupuncture can be a valuable approach in clinical practice. Future studies should explore optimal treatment durations and frequency, using larger sample sizes for more comprehensive insights.

Calafiore et al. (2024) evaluated the efficacy of rehabilitation interventions in patients with vulvodynia in a meta-analysis. At the end of the search, 9 studies were included for a total of 332 patients. A pairwise meta-analysis was performed to highlight the efficacy of rehabilitative approaches for reducing pain during intercourse, as measured with a visual analog scale or a numerical rating scale. Meta-analysis showed that all these rehabilitative approaches had an overall effect size of -1.43 in decreasing vulvodynia pain in terms of the visual analog scale. In the subgroup analysis, a significant effect size in acupuncture (and extracorporeal shockwave therapy was observed. According to the Cochrane risk-of-bias tool, a low risk of bias for outcome selection in 89% of studies.Authors concluded that findings from this meta-analysis suggested that the physical agent modalities and complementary medicine techniques in people with vulvodynia appear to be more effective than placebo, sham, or waiting list. Further evidence on physical agent modalities and complementary therapies are warranted in the future.

Osteoarthritis: A Cochrane Review of acupuncture for peripheral joint arthritis identified sixteen trials (3498 individual patients) of adequate quality for review (Manheimer et al., 2010). Twelve of these trials included only people with OA of the knee, three were for OA of the hip and one trial included both hip and knee. Acupuncture showed statistically significant, short term improvements in OA pain and function. However these differences were not considered to be clinically significant. Using only studies with sham controls deemed adequate to blind participants, these differences were small and not statistically significant. On a pain scale of 0-20, these differences were in the range of 3-4 points. On a functional scale of 0-68, improvements ranged from 3 to 11 points. However, greater effects were seen when compared to waiting list controls. The overall conclusion was that at both 8 and 26 week end points, acupuncture offered small benefits in pain and function. These benefits were deemed to be at least partially due to non-specific treatment effects. Atalay et al. (2021) sought to determine the effect of acupuncture treatment and physiotherapy on pain, physical function, and quality of life (QOL) in patients with knee osteoarthritis (KOA). One hundred patients with KOA were randomly divided into the acupuncture group and the physiotherapy group. Both treatments were given in 12 sessions over 6 weeks. Thirteen acupuncture points were selected for the knee. Local points were GB34, SP10, SP9, ST36, ST35, ST34, EX-LE2, EX-LE5, EXLE4, and distal (distant) points were defined as KI3, SP6, LI4, and ST41. The Visual Analog Scale (VAS) was used to measure pain intensity. The Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC) and the 36-Item Short Form Health Survey (SF-36) were used to determine functional status and health-related QOL, respectively. All patients were evaluated at baseline, after the last treatment, and at the 12-week follow-up period. There was no statistically significant difference between the acupuncture group and physiotherapy group in terms of pain, total WOMAC, and SF-36 levels at baseline, after treatment, and at the 12th week after treatment ($P > 0.05$). Both treatments significantly improved functional status and decreased the level of pain assessed by VAS at the 12-week follow-up of the study. There was no adverse advent related to therapeutic methods. Authors concluded that the acupuncture and physiotherapy performed twice weekly for 6 weeks have similar effects with regard to pain, functional status, and QOL. There were no significant differences between the acupuncture and physiotherapy groups in relief of pain, improved functional status, and QOL in the treatment of KOA. Both acupuncture and physiotherapy treatments were found to yield significantly superior results when compared with baseline values.

Lin et al. (2022) systematically evaluated the efficacy and safety effectiveness of acupuncture inactivation of myofascial pain trigger points in the treatment of osteoarthritis of the knee. A total of 724 patients from 9 RCTs were finally included, and the results of meta-analysis showed that the acupuncture myofascial pain trigger point group was better than the control group in terms of total effective rate, cure rate, VAS score, Lysholm score, and WOMAC score. Authors concluded that the efficacy and safety of acupuncturing myofascial pain trigger points in the treatment of knee osteoarthritis is positive, but due to the limited number of literature included in this study and the low quality of the included literature, there is still a need for high-quality and large sample size RCTs for the analysis of this treatment option.

Gibbs et al. (2023) appraised the quality and consistency in recommendations across higher-quality hip and knee osteoarthritis guidelines in a systematic review. Seven higher-quality and 18 lesser-quality guidelines were included. Higher-quality guidelines consistently recommended in favour of education, exercise, and weight management and non-steroidal anti-inflammatory drugs (hip and knee), and intra-articular corticosteroid injections (knee). Higher quality guidelines consistently recommended against hyaluronic acid (hip) and stem cell (hip and knee) injections. Other pharmacological recommendations in higher-quality guidelines (e.g., paracetamol, intra-articular corticosteroid (hip), hyaluronic acid (knee)) and adjunctive treatments (e.g., acupuncture) were less consistent. Arthroscopy was consistently recommended against in higher-quality guidelines. No higher-quality guidelines considered arthroplasty.

Chen et al. (2023) investigated the clinical efficacy of acupuncture combined with active exercise training in improving pain and function of knee osteoarthritis (KOA) individuals. Authors analyzed trials of acupuncture combined with active exercise training for KOA. They performed systematic analyses based on different outcome measures, including total efficiency rate, visual analogue scale (VAS), the Western Ontario and Mcmaster Universities Osteoarthritis Index (WOMAC), the Lysholm Knee Scale (LKS) and range of motion (ROM). A total of 11 high-quality studies including 774 KOA individuals were included in this review for meta-analysis. The results showed that acupuncture combined with active exercise training (combined group) was superior to the acupuncture group in improving the total effective rate, reducing the pain level (VAS), improving knee joint function (WOMAC) and improving joint range of motion (ROM). Similarly, the combined group showed significant improvements in the total effective rate, pain (VAS) and knee function (WOMAC) compared with the non-acupuncture group. Authors concluded that the combined effect of all studies showed significant benefits of acupuncture combined with active exercise training in improving the total effective rate, reducing pain, promoting recovery of knee function and expanding range of motion. However, some evaluation indicators are highly subjective and need to be further confirmed by more objective and evidence-based high-quality RCTs in future.Kwak et al. (2023) aimed to find out whether the combined treatment of acupuncture and oral medication is more effective than sole oral medication in reducing pain and improving knee function at the end of treatment and after short-term period (4-6 weeks after treatment). Second, if it is effective, they investigated whether the effect surpasses the minimal clinically important difference. The combined treatment of oral medication and adjuvant acupuncture showed statistically significant improvement in VAS and WOMAC scores at the end of acupuncture treatment and short-term follow-up time (between 4 and 6 weeks after acupuncture). In addition, the degree of improvement of VAS and WOMAC index showed effects beyond minimal clinically important differences compared to pretreatment at both the end of acupuncture treatment and the short-term follow-up of acupuncture treatment.Authors concluded that the existing evidence suggests that adjuvant acupuncture may play a role in the treatment of knee osteoarthritis. However, physicians should be aware of adverse effects such as hematoma in adjuvant acupuncture treatment.

Chen et al. (2024) investigated the durability of the efficacy after completion of treatment of acupuncture for knee osteoarthritis. Primary outcomes were changes from baseline in pain and function measured using the Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC) pain and function subscales. Secondary outcomes included response rate, overall pain, the WOMAC stiffness subscale, total WOMAC index, and physical and mental health components of 12/36-item Short-Form Health Survey. A total of 10 randomized controlled trials (RCTs) involving 3221 participants were included. Pooled estimates suggested that acupuncture may offer potential improvements in function and overall pain for 4.5 months post-treatment versus sham acupuncture (SA). Acupuncture may provide durable clinically important pain relief and functional improvement up to 5 months post-treatment versus usual care, and up to 6 months post-treatment versus diclofenac. For acupuncture versus no treatment, one trial with large sample size indicated that improvements in pain and function persisted for 3 months post-treatment, while the other trial reported that significant pain reduction and functional improvement were only observed at the end of the treatment, not at 9 months post-treatment. However, acupuncture as adjunct to exercise-based physical therapy (EPT) showed no superiority to SA as an adjunct to EPT or EPT alone up to 11.25 months after completion of treatment. Acupuncture may provide pain alleviation and functional improvements in KOA patients for 3 to 6 months after completion of treatment with a good safety profile.

Liu et al. (2024) aimed to evaluate (1) the effect and safety of acupuncture in patients with knee osteoarthritis (KOA) and explore (2) whether the effect of acupuncture differed according to acupuncture type, acupuncture dose and follow-up time in a systematic review and pairwise and exploratory network meta-analysis. Randomised

controlled trials comparing acupuncture with sham acupuncture, non-steroidal anti-inflammatory drugs (NSAIDs), usual care or waiting list groups, intra-articular (IA) injection and blank groups in patients with KOA. Eligible interventions included manual acupuncture (MA) and electroacupuncture (EA). The primary outcome was pain intensity at the end of treatment. Eighty trials (9933 participants) were included. Very low certainty evidence suggested that acupuncture may reduce pain intensity compared with sham acupuncture, NSAIDs, usual care or waiting list groups and blank groups, but not IA injection. Similar results were also found in other outcomes. For most of the subgroup analyses, acupuncture type, acupuncture dose and follow-up time did not show a significant relative effect. Only when compared with NSAIDs, a higher dose of acupuncture may provide greater pain relief. The network meta-analysis revealed that electroacupuncture had a greater effect on pain relief in patients with KOA compared with manual acupuncture. The findings suggest that acupuncture may provide clinically important effects in reducing pain and improving physical function in patients with KOA, but the certainty of evidence was very low.

Headache: Linde et al. conducted a Cochrane Review of acupuncture for tension-type headaches (Linde et al., 2009). Eleven trials with 2317 subjects met the inclusion criteria. Two of the trials compared acupuncture to routine care (including self-care) and found clinically and statistically significant benefits to acupuncture for both headache frequency and pain intensity. In these two trials 47% of patients receiving acupuncture reported a decrease in the number of headache days by at least 50%, compared to 16% of patients in the control groups. Six of the trials compared acupuncture to some form of sham acupuncture where needle placement was not guided by any specific acupuncture findings. In this comparison, 50% of the “true” acupuncture patients experienced a greater than 50% reduction in headache pain compared to 41% in the sham controls. Three trials compared acupuncture to massage, physiotherapy, or relaxation. The methodological quality of these studies was poor and the results difficult to interpret, but overall there appeared to be a slight benefit to acupuncture compared to these interventions. A previous Cochrane review of this topic yielded inconclusive results. However, the addition of six newer trials in this review led the authors to conclude that acupuncture could be “a valuable non-pharmacological tool in patients with frequent episodic or chronic tension-type headaches.”

Another Cochrane Review examined acupuncture for migraine headache prophylaxis (Linde et al., 2009). Twenty-two trials with 4419 participants met the inclusion criteria. Six of the trials compared acupuncture to no treatment or routine care. The acupuncture care resulted in fewer headaches than in the controls over 3-4 months. One of the trials followed patients for nine months and the treatment effects were undiminished. Fourteen trials compared acupuncture to some form of sham intervention. The results of single trials varied considerably, but the pooled results did not show any clinically or statistically significant benefit to the “true” acupuncture. Four trials compared acupuncture to drug prophylaxis and demonstrated slightly better outcomes and fewer side effects in the acupuncture groups. Overall the authors conclude that acupuncture should be considered a valid treatment option for migraine prophylaxis.

Turkistani et al. (2021) evaluated the effectiveness of acupuncture and manual therapy in tension-type headaches. Eight articles involving 3846 participants showed evidence that acupuncture and manual therapy can be valuable non-pharmacological treatment options for tension-type headaches. Acupuncture was compared to routine care or sham intervention. Acupuncture was not found to be superior to physiotherapy, exercise, and massage therapy. Randomized controlled trials done in various countries showed manual therapy also significantly decreased headache intensity. Manual therapy has an efficacy that equals prophylactic medication and tricyclic antidepressants in treating tension-type headaches. The available data suggests that both acupuncture and manual therapy have beneficial effects on treating symptoms of tension-type headache. However, further clinical trials looking at long-term benefits and risks are needed.

Zheng et al. (2022) examined the effectiveness of acupuncture with a follow-up period of 32 weeks. They conducted a randomized controlled trial, and 218 participants who were diagnosed with chronic tension-type headache (CTTH). The participants in the intervention group received 20 sessions of true acupuncture (TA group) over 8 weeks. The acupuncture treatments were standardized across participants, and each acupuncture site was needled to achieve deqi sensation. Each treatment session lasted 30 minutes. The participants in the control group received the same sessions and treatment frequency of superficial acupuncture (SA group)-defined as a type of sham control by avoiding deqi sensation at each acupuncture site. A responder was defined as a participant who reported at least a 50% reduction in the monthly number of headache days (MHDs). The responder rate was

68.2% in the TA group (n=110) versus 48.1% in the SA group (n=108) at week 16; and it was 68.2% in the TA group versus 50% in the SA group at week 32. The reduction in MHDs was 13.1±9.8 days in the TA group versus 8.8±9.6 days in the SA group at week 16, and the reduction was 14±10.5 days in the TA group versus 9.5±9.3 days in the SA group at week 32. Four mild adverse events were reported; three in the TA group versus one in the SA group. Authors concluded that the 8-week TA treatment was effective for the prophylaxis of CTTH. Further studies might focus on the cost-effectiveness of the treatment.

Liu et al. (2024) analyzed and evaluated the clinical effect of acupuncture on cervicogenic headache (CEH), and provide evidence-based basis for clinical selection of acupuncture for CEH. A total of 400 articles were retrieved, and eventually, 20 clinical randomized controlled trials were included in the analysis. Comparing with control, acupuncture exhibited a higher total effective rate in treating CEH. The cure rate was also higher in the experimental group, and improvements in short-term and long-term visual analogue scale scores outcomes were significantly greater than those in the control group. The quality-of-life scores were higher in CEH patients treated with acupuncture. Authors concluded that acupuncture treatment is effective for CEH relief and worthy of clinical application.

Cui (2024) aimed to evaluate the effectiveness of acupuncture treatment in improving emotional disorders (such as anxiety and depression), pain intensity, headache frequency, and quality of life in patients with migraines. A particular focus is placed on acupuncture's ability to alleviate migraine pain (assessed through VAS scores), reduce the frequency of headache attacks, and improve specific emotional disorders. A total of 15 studies involving 2121 migraine patients were included. Compared to the control group, acupuncture combined with medication showed no significant difference in improving the latest Self-Rating Anxiety Scale (SAS) score and the latest Self-Rating Depression Scale (SDS)score. However, acupuncture was more effective in improving patients' VAS score, SF-36 score, number of headache days, headache score, and Migraine-Specific Quality of Life Questionnaire (MSQ) score. Acupuncture and moxibustion in improving the SAS and SDS scores of migraine patients were similar to Western medication and sham acupuncture, but they were more effective in reducing VAS score, MSQ score, headache days, and headache score than sham acupuncture and Western medication treatments. However, due to the limited number of studies included in this research, more high-quality randomized controlled trials are still needed to further strengthen the evidence base in evidence-based medicine.

Low Back and Neck Pain: Liu et al. examined the set of systematic reviews of acupuncture for low back pain (Liu et al., 2015). They identified 16 systematic reviews, the overall quality of which they judged to be low. They found inconclusive evidence of a benefit for acupuncture compared to a sham for acute low back pain. For chronic low back pain there was consistent evidence of a benefit for short term pain relief and functional improvement when compared to sham or to no treatment. This benefit was found both when acupuncture was used in isolation and when used as an adjunct treatment.

In another AHRQ publication by Chou et al. (2016) titled Noninvasive Treatments for Low Back Pain, noted the following key points:

- For acute low back pain, a systematic review found acupuncture associated with lower pain intensity versus sham acupuncture using nonpenetrating needles; three other trials reported effects consistent with these findings. One trial of sham acupuncture using penetrating needles to nonacupuncture points found no effect on pain. These were no clear effects on function in 5 trials (Strength of Evidence (SOE): low for pain and function).

- For chronic low back pain, a systematic review found acupuncture associated with lower pain intensity versus sham acupuncture (superficial needling at acupuncture or nonacupuncture points, or nonpenetrating pressure at acupuncture points) immediately at the end of treatment and at up to 12 weeks, but there were no differences in function. Four additional trials reported results consistent with these findings (SOE: moderate for pain and function).

- For chronic low back pain, a systematic review found acupuncture associated with lower pain intensity and better function immediately after treatment versus no acupuncture. Mean effects on pain ranged from 7 to 24 points on a 0- to 100-point scale; for function one trial reported a difference of 8 points on a 0- to 100-point scale and the other two trials; two trials showed small or no clear differences at longer-term

follow-up (SOE: moderate for pain and function).

- For acute low back pain, a systematic review found acupuncture associated with slightly greater likelihood of overall improvement versus NSAIDs at the end of treatment (SOE: low).
- For chronic low back pain, a systematic review found acupuncture associated with better pain relief and improvement in function immediately postintervention (SOE: low).
- Harms of acupuncture were poorly reported in the trials, though no serious adverse events were reported (SOE: low).

Qaseem et al. (2017) provided clinical recommendations on noninvasive treatment of low back pain: Recommendation 1: Given that most patients with acute or subacute low back pain improve over time regardless of treatment, clinicians and patients should select nonpharmacologic treatment with superficial heat (moderate-quality evidence), massage, acupuncture, or spinal manipulation (low-quality evidence). (Grade: strong recommendation). Recommendation 2: For patients with chronic low back pain, clinicians and patients should initially select nonpharmacologic treatment with exercise, multidisciplinary rehabilitation, acupuncture, mindfulness-based stress reduction (moderate-quality evidence), tai chi, yoga, motor control exercise, progressive relaxation, electromyography biofeedback, low-level laser therapy, operant therapy, cognitive behavioral therapy, or spinal manipulation (low-quality evidence). (Grade: strong recommendation).

Chou et al. (2017) updated the 2007 American College of Physicians guideline that addressed nonpharmacologic treatment options for low back pain. New evidence was available. Authors systematically reviewed the current evidence on nonpharmacologic therapies for acute or chronic non radicular or radicular low back pain. Randomized trials of 9 nonpharmacologic options versus sham treatment, wait list, or usual care, or of 1 nonpharmacologic option versus another were included. New evidence indicated that tai chi (strength of evidence [SOE], low) and mindfulness-based stress reduction (SOE, moderate) are effective for chronic low back pain and strengthens previous findings regarding the effectiveness of yoga (SOE, moderate). Evidence continues to support the effectiveness of exercise, psychological therapies, multidisciplinary rehabilitation, spinal manipulation, massage, and acupuncture for chronic low back pain (SOE, low to moderate). Limited evidence shows that acupuncture is modestly effective for acute low back pain (SOE, low). The magnitude of pain benefits was small to moderate and generally short term; effects on function generally were smaller than effects on pain.

Wong et al. (2017) authored a systematic review for the Ontario Protocol for Traffic Injury Management (OPTIMa) Collaboration. According to high-quality guidelines: (1) all patients with acute or chronic LBP should receive education, reassurance and instruction on self-management options; (2) patients with acute LBP should be encouraged to return to activity and may benefit from paracetamol, nonsteroidal anti-inflammatory drugs (NSAIDs), or spinal manipulation; (3) the management of chronic LBP may include exercise, paracetamol or NSAIDs, manual therapy, acupuncture, and multimodal rehabilitation (combined physical and psychological treatment); and (4) patients with lumbar disc herniation with radiculopathy may benefit from spinal manipulation. According to Tice et al. (2017), the strength of evidence appears adequate to support coverage of acupuncture, CBT, MBSR, and yoga for chronic low back pain. Evidence-based boundaries on duration of therapy and on repetitive courses of therapy are reasonable given the potential for inappropriate overuse of services. Authors reported that there was no evidence on the concurrent use of multiple modalities, so concurrent treatment should be treated on a case-by-case basis.

Xiang et al. (2017) sought to establish whether sham acupuncture (SA) or placebo acupuncture (PA) was more efficacious for reducing low back pain (LBP) than other routine treatments and to discuss whether SA or PA is appropriate for randomized controlled trials of acupuncture for LBP. Review identified 7 trials (1768 participants); all were included in the meta-analysis. They found statistically significant differences in pain reduction post-intervention between SA or PA and routine care or a waiting list, however, no significant difference was observed between SA or PA and routine care or no treatment for post-intervention function. Authors concluded that compared with routine care or a waiting list, SA or PA was more efficacious for pain relief post-intervention. Concluding that SA or PA is appropriate for acupuncture research would be premature. Guidelines evaluating SA or PA control methods are needed to determine the specific effect of acupuncture over placebo.

Mu et al. (2020) authored an updated Cochrane review. This review is a split from an earlier Cochrane review and it focuses on chronic LBP. Mu et al. (2020) assessed the effects of acupuncture compared to sham intervention, no treatment, or usual care for chronic nonspecific LBP. Authors included only randomized controlled trials (RCTs) of acupuncture for chronic nonspecific LBP in adults. They excluded RCTs that investigated LBP with a specific etiology. Trials comparing acupuncture with sham intervention, no treatment, and usual care were included. The primary outcomes were pain, back-specific functional status, and quality of life; the secondary outcomes were pain-related disability, global assessment, or adverse events. Authors included 33 studies (37 articles) with 8270 participants. The majority of studies were carried out in Europe, Asia, North and South America. Seven studies (5572 participants) conducted in Germany accounted for 67% of the participants. Sixteen trials compared acupuncture with sham intervention, usual care, or no treatment. Most studies had high risk of performance bias due to lack of blinding of the acupuncturist. A few studies were found to have high risk of detection, attrition, reporting or selection bias. Mu et al. (2020) found low-certainty evidence (seven trials, 1403 participants) that acupuncture may relieve pain in the immediate term (up to seven days) compared to sham intervention, visual analogue scale (VAS) 0-100). The difference did not meet the clinically important threshold of 15 points or 30% relative change. Very low-certainty evidence from five trials (1481 participants) showed that acupuncture was not more effective than sham in improving back-specific function in the immediate term; corresponding to the Hannover Function Ability Questionnaire (HFAQ, 0 to 100, higher values better) change. Three trials (1068 participants) yielded low-certainty evidence that acupuncture seemed not to be more effective clinically in the short term for quality of life; corresponding to the physical 12-item Short Form Health Survey (SF-12, 0-100, higher values better) change. The reasons for downgrading the certainty of the evidence to either low to very low were risk of bias, inconsistency, and imprecision. We found moderate-certainty evidence that acupuncture produced greater and clinically important pain relief; (VAS, 0 to 100), and improved back function; five trials, 2960 participants; corresponding to the HFAQ change in the immediate term compared to no treatment. The evidence was downgraded to moderate certainty due to risk of bias. No studies reported on quality of life in the short term or adverse events. Low-certainty evidence (five trials, 1054 participants) suggested that acupuncture may reduce pain; not clinically important on 0 to 100 VAS), and improve back-specific function immediately after treatment; five trials, 1381 participants; corresponding to the HFAQ change compared to usual care. Moderate-certainty evidence from one trial (731 participants) found that acupuncture was more effective in improving physical quality of life but not mental quality of life in the short term. The certainty of evidence was downgraded to moderate to low because of risk of bias, inconsistency, and imprecision. Low-certainty evidence suggested a similar incidence of adverse events immediately after treatment in the acupuncture and sham intervention groups (four trials, 465 participants), and the acupuncture and usual care groups (one trial, 74 participants). The certainty of the evidence was downgraded due to risk of bias and imprecision. No trial reported adverse events for acupuncture when compared to no treatment. The most commonly reported adverse events in the acupuncture groups were insertion point pain, bruising, hematoma, bleeding, worsening of LBP, and pain other than LBP (pain in leg and shoulder). Authors concluded that acupuncture may not play a more clinically meaningful role than sham in relieving pain immediately after treatment or in improving quality of life in the short term, and acupuncture possibly did not improve back function compared to sham in the immediate term. However, acupuncture was more effective than no treatment in improving pain and function in the immediate term. Trials with usual care as the control showed acupuncture may not reduce pain clinically, but the therapy may improve function immediately after sessions as well as physical but not mental quality of life in the short term. The evidence was downgraded to moderate to very low-certainty considering most of studies had high risk of bias, inconsistency, and small sample size introducing imprecision. The decision to use acupuncture to treat chronic low back pain might depend on the availability, cost and patient's preferences.

Su et al. (2021) critically evaluated the evidence for acupuncture as an effective treatment for acute LBP (ALBP). Of the 13 eligible RCTs identified, 11 RCTs (involving 707 patients) provided moderate-quality evidence that acupuncture has a statistically significant association with improvements in VAS (visual analog scale) score. Two studies indicated that acupuncture did not influence the RMDQ (Roland-Morris Disability Questionnaire) scores more than the control treatment. Three studies suggested that acupuncture influenced the ODI (Oswestry Disability Index) scores more than the control treatment. Two studies suggested that acupuncture influenced the number of medication taken more than the control treatment. Authors conclude that acupuncture treatment of acute LBP was associated with modest improvements in the VAS score, ODI score, and the number of pills, but not the RMDQ score. However findings should be considered with caution due to the low power original studies.

High-quality trials are needed to assess further the role of acupuncture in the treatment of acute LBP.

Wu et al. (2021) evaluated and compared the efficacy and safety of different acupuncture therapies for ALBP. In total, nineteen randomized controlled trials (RCTs) comprising 1,427 participants were included. Results showed the following: (I) compared with placebo, motion style acupuncture (MSA), manual acupuncture (MA), and electroacupuncture (EA) were found to be more effective for decreasing VAS score; (II) compared with pharmacotherapy, MSA and MA were found to be more effective in reducing ROM score. Results of the surface under the cumulative ranking curve indicated that all acupuncture types were superior to placebo or pharmacotherapy in lowering VAS and ROM score. It was noted that MSA was the most effective treatment. Authors concluded that this study indicated that acupuncture therapy achieved good therapeutic effects in the treatment of ALBP, especially MSA therapy. Nevertheless, due to the low quality of the included trials, the credibility of conclusions is low. Further well-designed RCTs with high quality and large samples are still needed to evaluate the efficacy and safety of acupuncture therapy for ALBP.

Huang et al. (2021) investigated the effect and safety of acupuncture for the treatment of chronic spinal pain. Data was extracted from 22 RCTs including 2588 patients. Pooled analysis revealed that acupuncture can reduce chronic spinal pain compared to sham acupuncture), mediation control, usual care control, and no treatment control. In terms of functional disability, acupuncture can improve physical function at immediate-term follow-up, short-term follow-up, and long-term follow-up. In summary, compared to no treatment, sham acupuncture, or conventional therapy such as medication, massage, and physical exercise, acupuncture has a significantly superior effect on the reduction in chronic spinal pain and function improvement. Acupuncture might be an effective treatment for patients with chronic spinal pain and it is a safe therapy.

Baroncini et al. (2022) investigated the available randomized control trials (RCTs) to point out which acupuncture protocol is the most effective for chronic aspecific low back pain (LBP). Efficacy was measured in terms of pain (Visual Analogic Scale, VAS) and disability (Roland Morris Disability Questionnaire, RMQ), Transcutaneous Electrical Nerve Stimulation (TENS). Data from 44 RCTs (8338 procedures) were retrieved. 56% of patients were women. The mean age of the patients was 48 ± 10.6 years. The mean BMI was 26.3 ± 2.2 kg/m2. Authors concluded that verum acupuncture is more effective than sham treatment for the non-pharmacological management of LBP. Among the verum protocols, individualized acupuncture and standard acupuncture with TENS were the protocols that resulted in the highest improvement in pain and quality of life.

Feise et al. (2023) The compared the benefits and harms of treatments for the management of chronic low back pain without radiculopathy. Systematic review and meta-analysis of randomized controlled trials were evaluated. Adults with chronic nonspecific low back pain, excluding radicular pain, in any clinical setting were included. Outcome measures included comparison of pain at immediate-term (≤2 weeks) and short-term (>2 weeks to ≤12 weeks) and serious adverse events. Three studies provided data on the benefits of interventions, and 30 provided data on harms. Studies included interventions of acupuncture (n=8); manipulation (n=2); pharmacological therapies (n=9), including NSAIDs and opioid analgesics; surgery (n=8); and epidural corticosteroid injections (n=3). Acupuncture (moderate quality of evidence, benefit rating of 3) and manipulation (moderate quality of evidence, benefit rating of 5) were effective in reducing pain intensity compared to sham. The benefit of the other interventions was scored as uncertain due to not being effective, statistical heterogeneity preventing pooling of effect sizes, or the absence of relevant trials. The harms level warnings were at the lowest (eg, indicating rarer risk of events) for acupuncture, spinal manipulation, NSAIDs, combination ingredient opioids, and steroid injections, while they were higher for single ingredient opioid analgesics (level 4) and surgery (level 6). Authors concluded that there is uncertainty about the benefits and harms of all the interventions reviewed due to the lack of trials conducted in patients with chronic nonspecific low back pain without radiculopathy. From the limited trials conducted, nonpharmacological interventions of acupuncture and spinal manipulation provide safer benefits than pharmacological or invasive interventions. However, more research is needed. There were high harms ratings for opioids and surgery.

Yu et al. (2023) evaluated benefits and harms of needling therapies (NT) for chronic primary low back pain (CPLBP) in adults to inform a World Health Organization (WHO) standard clinical guideline. Authors screened 1831 citations and 109 full text RCTs, yeilding 37 RCTs. The certainty of evidence was low or very low across all included outcomes. There was little or no difference between NT and comparisons across most outcomes; there

may be some benefits for certain outcomes. Compared with sham, NT improved health-related quality of life (HRQoL) (physical) at 6 months. Compared with no intervention, NT reduced pain at 2 weeks and 3 months; and reduced functional limitations at 2 weeks and 3 months. In older adults, NT reduced functional limitations at 2 weeks and 3 months. Compared with usual care, NT reduced pain and functional limitations. Authors concluded that based on low to very low certainty evidence, adults with CPLBP experienced some benefits in pain, functioning, or HRQoL with NT; however, evidence showed little to no differences for other outcomes.

Yan et al. (2023) reevaluated the methodological quality, report quality, and evidence quality of systematic reviews (SRs)/meta-analyses (MAs) of acupuncture for low back pain to determine whether acupuncture effectively treats LBP. Twenty-three SRs/MAs were deemed eligible for the present overview. Results from the GRADE evaluation indicated that 13 of 255 outcomes were rated as moderate, 88 were low, and 154 were very low. Acupuncture effectively treated LBP in the SRs/MAs included in the reevaluation. However, the methodological, report, and evidence-based quality of the SRs/MAs on acupuncture for LBP was low. Therefore, further rigorous and comprehensive studies are warranted to improve the quality of SRs/MAs in this field.

Plener et al. (2023) assess the effectiveness and safety of conservative interventions compared with other interventions, placebo/sham interventions, or no intervention on disability, pain, function, quality of life, and psychological impact in adults with cervical radiculopathy (CR). Of the 2561 records identified, 59 trials met inclusion criteria (n = 4108 participants). Due to clinical and statistical heterogeneity, the findings were synthesized narratively. There is very-low certainty evidence supporting the use of acupuncture, prednisolone, cervical manipulation, and low-level laser therapy for pain and disability in the immediate to short-term, and thoracic manipulation and low-level laser therapy for improvements in cervical range of motion in the immediate term. There is low to very-low certainty evidence for multimodal interventions, providing inconclusive evidence for pain, disability, and range of motion. There is inconclusive evidence for pain reduction after conservative management compared with surgery, rated as very-low certainty. Authors concluded that there is a lack of high-quality evidence, limiting their ability to make any meaningful conclusions.

Takakura et al. (2023) assessed whether acupuncture treatment with superficial skin piercing is superior to placebo treatment. Four hundred patients with essential neck/shoulder stiffness were randomly assigned to penetrating needle treatment (acupuncture ritual and skin penetration), skin-touch needle treatment (acupuncture ritual and skin touch), no-touch needle treatment (acupuncture ritual alone), and no-treatment control. Each of the six acupuncturists applied a needle to each of the four acupoints in the neck/shoulder of 50 patients. Each of the three treatments significantly improved neck/shoulder stiffness compared with the no-treatment control immediately and 24 h after treatment. There was a significant improvement in penetrating needle treatment over no-touch needle treatment 24 h later. However, there was no significant difference between the penetrating and skin-touch and skin-touch vs. no-touch. Authors concluded that all treatments that received the ritual of acupuncture were better than the no-treatment control. Only genuine acupuncture involves the specific effects of needle insertion into the body. The acupuncture ritual had a significant impact on the subjective improvement of neck/shoulder stiffness; however, improvement with ritual alone versions of placebo acupuncture was not maintained as with superficial skin piercing. Authors suggest that this study provides important evidence of acupuncture efficacy and information regarding inert no-touch placebo control in acupuncture research.

Lee et al. (2024) aimed to establish clinical evidence for acupuncture by analysing data from trials that demonstrated the efficacy of acupuncture for whiplash-associated disorder (WAD) with the following research question: Is acupuncture treatment effective for symptom alleviation in patients with WAD compared with other usual care? Authors included RCTs using acupuncture on patients with WAD. The outcomes were the pain visual analogue scale (VAS) score or numerical rating scale score for neck pain, the range of motion (ROM) of the neck, the Neck Disability Index and safety. A total of 525 patients with WAD from eight RCTs were included in this study. The meta-analysis revealed that the outcomes showed significant differences in the pain VAS score and ROM-extension. Authors cocluded that acupuncture may have clinical value in pain reduction and increasing the ROM for patients with WAD. High-quality RCTs must be conducted to confirm the efficacy of acupuncture in patients with WAD.

Tu et al. (2024) investigated the efficacy and safety of acupuncture compared with sham acupuncture in patients with chronic sciatica from herniated disk. Participants were randomly assigned to receive 10 sessions of

acupuncture (n = 110) or sham acupuncture (n = 110) over 4 weeks. Participants, outcome assessors, and statisticians were blinded. The 2 coprimary outcomes were changes in visual analog scale (VAS) for leg pain and Oswestry Disability Index (ODI) from baseline to week 4. Secondary outcomes were adverse events. A total of 216 patients (mean [SD] age, 51.3 [15.2] years; 147 females [68.1%] and 69 males [31.9%]) were included in the analyses. The VAS for leg pain decreased 30.8 mm in the acupuncture group and 14.9 mm in the sham acupuncture group at week 4. The ODI decreased 13.0 points in the acupuncture group and 4.9 points in the sham acupuncture group at week 4. For both VAS and ODI, the between-group difference became apparent starting in week 2 and persisted through week 52. No serious adverse events occurred. Authors concluded that this randomized clinical trial found that in patients with chronic sciatica from herniated disk, acupuncture resulted in less pain and better function compared with sham acupuncture at week 4, and these benefits persisted through week 52. Acupuncture should be considered as a potential treatment option for patients with chronic sciatica from a herniated disk.

Fang et al. (2024) aimed to evaluate the durable effects of acupuncture on chronic neck pain in a systematic review and meta-analysis. Eighteen randomized controlled trials were included in the analysis. Acupuncture as an adjunct therapy could provide sustained pain relief at three and six months post-treatment. Compared to sham acupuncture, acupuncture did not show a statistically significant difference in pain alleviation. However, it significantly improved functional outcomes as evidenced by Northwick Park Neck Pain Questionnaire scores 3 months post-treatment. Although nine studies reported an 8.5%-13.8% probability of adverse events, these were mild and transitory adverse events. Authors concluded that acupuncture as an adjunct therapy may provide post-treatment pain relief lasting at least 3 months for patients with chronic neck pain, although it is not superior to sham acupuncture, shows sustained efficacy in improving functional impairment for over 3 months, with a good safety profile.

Lin et al. (2024) assessed efficacy and safety of acupuncture for acute/subacute NSLBP as alternative treatment. A total of 6 784 records were identified, and 14 studies were included 1 263 participants in this review. The results of the meta-analysis indicated that acupuncture therapy was slightly more effective than oral medication in improving pain. According to the results of the meta-analysis, acupuncture therapy exhibited a significant advantage over oral medication with a substantial effect. Based on the results of the meta-analysis, acupuncture therapy was associated with a 12% improvement rate compared to oral medication in patients with acute/subacute NSLBP. Authors conclude that acupuncture is more effective and safer than oral medication in treating acute/subacute NSLBP.

Zhang et al. (2024) compared the effects of different acupuncture methods on chronic nonspecific low back pain (CNLBP) in a network meta-analysis. A total of 27 articles were included, involving 2579 patients. The results of the network meta-analysis showed that the top three treatment schemes were warm needle acupuncture, intensive silver needle therapy and meridian-sinew theory-based treatment. In terms of relieving pain, the top three treatments were electrical warm needling, intensive silver needle therapy and warm needle acupuncture. In improving mobility, the top three were meridian-sinew theory-based treatment, routine acupuncture and electroacupuncture. Authors concluded that for CNLBP patients, warm needle acupuncture, electrical warm needling and meridian-sinew theory-based treatment are mainly recommended. If patients have significant pain, electroacupuncture is strongly suggested. On the contrary, for patients with decreased joint mobility, meridian-sinew theory-based treatment is advocated.

Macedo et al. (2024) note that acupuncture may be helpful for CLBP in a Synopsis of the 2021 US Department of Veterans Affairs and US Department of Defense Clinical Practice Guideline. Evidence favored acupuncture over sham for reduction of pain intensity.Evidence for improvement of function and disability was mixed. Small improvements in back-specific function compared with sham and small improvements in function compared with usual care were seen in one study. Impacts on disability were mixed and there was no clinically meaningful change in QoL.

Zhao et al. (2024) evaluated the efficacy and safety of pressure pain, sensory-based individualized acupuncture for relieving CNP. 716 participants with CNP were randomly assigned to a waiting list (WL) group or to 1 of 3 interventions, which consisted of 10 sessions over 4 weeks: higher sensitive acupoints (HSA), lower sensitive acupoints (LSA), and sham acupoints (SA) acupuncture groups. The primary outcome was the change in the

visual analogue scale (VAS) score for neck pain (range, 0 to 100) from baseline to 4 weeks, with a difference of 10 points considered the minimum clinically important threshold. The VAS was also assessed every 4 weeks through 24 weeks. The modified intention-to-treat population included 683 participants. The mean baseline VAS was 50.36, 50.10, 49.24, and 49.16 for HSA, LSA, SA, and WL, respectively. Compared with a mean baseline to week 4 change of -12.16 in the HSA group, the mean changes were -10.19 in the LSA group (net difference [ND], -1.97 [95% CI, -5.03 to 1.09]), -6.11 in the SA group (ND, -6.05 [CI, -9.10 to -3.00]), and -2.24 in the WL group (ND, -9.93 [CI, -12.95 to -6.90]). The intervention effects persisted at 24-week follow-up. Authors concluded that individualized acupuncture interventions using high- or low-sensitivity acupuncture points were more effective in reducing CNP than SA and WL control groups sustained through 24 weeks, but the magnitude of relative improvement did not reach a minimal clinically important difference.

Yu et al. (2024) investigated the efficacy and safety of acupuncture in the treatment of stiff neck. This study evaluated 10 clinical randomized controlled trials comparing acupuncture therapy with conventional treatment, involving 754 patients. The treatment group received acupuncture alone or in combination with conventional treatment, whereas the control group received only conventional treatment. The analysis results showed that the treatment group was significantly superior to the control group in improving the total effective rate, reducing visual analog scale scores, reducing neck disability index scores, and restoring cervical range of motion. Authors concluded that acupuncture is an effective and safe method for treating stiff neck. However, to validate this conclusion, more rigorously designed and higher-quality studies are needed in the future.

Cancer Pain: A Cochrane Review by Paley et al. reviewed the trials of acupuncture for cancer pain in adults (Paley et al., 2011). Three RCTs with 204 patients met the inclusion criteria. One study compared traditional auricular acupuncture with auricular acupuncture at non-acupuncture points and with a control using non-invasive “ear seeds,” at non-acupuncture points. The remaining two studies compared acupuncture with pain medication. The reviewers concluded that while there was some evidence of acupuncture effectiveness there was a high risk of bias in all studies and no conclusions could be reached regarding acupuncture effectiveness. Paley et al. (2015) updated the Cochrane review. They found five studies (with a total of 285 participants) that compared acupuncture against either sham acupuncture or pain-killing medicines. All five identified studies had small sample sizes, which reduces the quality of their evidence. Authors reported that none of the studies described in this review were big enough to produce reliable results. None of the studies reported any harm to the participants. They concluded that there was insufficient evidence to judge whether acupuncture is elective in relieving cancer pain in adults and that larger, well-designed studies are needed to provide evidence in this area.

Yang et al. (2021) analyzed currently available publications regarding the use of acupuncture for pain management among patients with cancer in palliative care settings. Five studies (n=189) were included in this systematic review. Results indicated a favourable effect of acupuncture on pain relief in palliative care for patients with cancer. Authors concluded that acupuncture may be an effective and safe treatment associated with pain reduction in the palliative care of patients with cancer. Further high-quality, adequately powered studies are needed in the future.

Li et al. (2021) evaluated the effect of acupuncture on treatment-related symptoms among breast cancer survivors. The primary outcomes were pain, hot flashes, sleep disturbance, fatigue, depression, lymphedema, and neuropathy as individual symptoms. They also evaluated adverse events reported in acupuncture studies. Of 26 selected trials (2055 patients), 20 (1709 patients) were included in the meta-analysis. Acupuncture was more effective than control groups in improving pain intensity, fatigue, and hot flash severity. The subgroup analysis indicated that acupuncture showed trends but not significant effects on all the treatment-related symptoms compared with the sham acupuncture groups. Compared with waitlist control and usual care groups, the acupuncture groups showed significant reductions in pain intensity, fatigue, depression, hot flash severity, and neuropathy. No serious adverse events were reported related to acupuncture intervention. Mild adverse events (i.e., bruising, pain, swelling, skin infection, hematoma, headache, menstrual bleeding) were reported in 11 studies. This systematic review and meta-analysis suggest that acupuncture significantly reduces multiple treatment-related symptoms compared with the usual care or waitlist control group among breast cancer survivors. The safety of acupuncture was inadequately reported in the included studies. Based on the available data, acupuncture seems to be generally a safe treatment with some mild adverse events. These findings provide evidence-based recommendations for incorporating acupuncture into clinical breast cancer symptom

management. Due to the high risk of bias and blinding issues in some RCTs, more rigorous trials are needed to confirm the efficacy of acupuncture in reducing multiple treatment-related symptoms among breast cancer survivors.

Zhang et al. (2021) evaluated the effects of acupuncture in women with breast cancer (BC), focusing on patient-reported outcomes (PROs). Out of the 2, 524 identified studies, 29 studies representing 33 articles were included in this meta-analysis. At the end of treatment (EOT), the acupuncture patients' quality of life (QoL) was measured by the QLQ-C30 QoL subscale, the Functional Assessment of Cancer Therapy-Endocrine Symptoms (FACT-ES), the Functional Assessment of Cancer Therapy-General/Breast (FACT-G/B), and the Menopause-Specific Quality of Life Questionnaire (MENQOL), which depicted a significant improvement. The use of acupuncture in BC patients lead to a considerable reduction in the scores of all subscales of the Brief Pain Inventory-Short Form (BPI-SF) and Visual Analog Scale (VAS) measuring pain. Moreover, patients treated with acupuncture were more likely to experience improvements in hot flashes scores, fatigue, sleep disturbance, and anxiety compared to those in the control group, while the improvements in depression were comparable across both groups. Long-term follow-up results were similar to the EOT results. Authors concluded that current evidence suggests that acupuncture might improve BC treatment-related symptoms measured with PROs including QoL, pain, fatigue, hot flashes, sleep disturbance and anxiety. However, a number of included studies report limited amounts of certain subgroup settings, thus more rigorous, well-designed and larger RCTs are needed to confirm our results.

Ge et al. (2022) developed an evidence-based clinical practice guideline of acupuncture in the treatment of patients with moderate and severe cancer pain. Recommendations were developed through a Delphi consensus of an international multidisciplinary panel including 13 western medicine oncologists, Chinese medicine/acupuncture clinical practitioners, and two patient representatives. The certainty of evidence, patient preferences and values, resources, and other factors were fully considered in formulating the recommendations. The Grading of Recommendations Assessment, Development, and Evaluation (GRADE) approach was employed to rate the certainty of evidence and the strength of recommendations. The guideline proposed three recommendations: (1) a strong recommendation for the treatment of acupuncture rather than no treatment to relieve pain in patients with moderate to severe cancer pain; (2) a weak recommendation for the combination treatments with acupuncture/acupressure to reduce pain intensity, decrease the opioid dose, and alleviate opioid-related side effects in moderate to severe cancer pain patients who are using analgesics; and (3) a strong recommendation for acupuncture in breast cancer patients to relieve their aromatase inhibitor-induced arthralgia. This proposed guideline provides recommendations for the management of patients with cancer pain. The small sample sizes of evidence limit the strength of the recommendations and highlights the need for additional research.

Zhang et al. (2022) evaluated and summarized the systematic reviews (SRs) that assess the effects and safety of acupuncture for cancer-related conditions, and to inform clinical practice and future studies. Fifty-one SRs of RCTs on acupuncture for cancer-related conditions were included and synthesized. The methodological quality of SRs included 1 "high", 5 "low" and 45 "very low" by AMSTAR 2. Acupuncture showed effectiveness on systemic conditions in relation to different cancers, including cancer-related pain (17 SRs, 80 RCTs), fatigue (7 SRs, 18 RCTs), insomnia (4 SRs, 10 RCTs), quality of life (2 SRs, 15 RCTs); conditions in relation to chemo-radiotherapy, including nausea and vomiting (3 SRs, 36 RCTs) and bone marrow suppression (2 SRs, 21 RCTs); and conditions in relation to specific cancers, including breast cancer-related menopause (3 SRs, 6 RCTs), hot flashes (12 SRs, 13 RCTs), arthralgia (5 SRs, 10 RCTs), and nasopharyngeal cancer-related dysphagia (1 SRs, 7 RCTs). Acupuncture appeared to have benefit for patients with lymphoedema (3 SRs, 3 RCTs), gastrointestinal function (5 SRs, 27 RCTs), and xerostomia (4 SRs, 7 RCTs). Limited evidence showed inconsistent results on acupuncture for chemotherapy-induced peripheral neuropathy (3 SRs, 6 RCTs), depression and anxiety (3 SRs, 9 RCTs). Acupuncture was regarded as a safe therapy for cancer patients as no severe adverse events related were reported. Authors concluded that evidence from SRs showed that acupuncture is beneficial to cancer survivors with cancer-related pain, fatigue, insomnia, improved quality of life, nausea and vomiting, bone marrow suppression, menopausal symptoms, arthralgia, and dysphagia, and may also be potential for lymphoedema, gastrointestinal function, and xerostomia. For neuropathy, depression and anxiety, acupuncture should be used as an option based on individual conditions. Acupuncture is relatively safe without serious adverse events. More well-designed clinical trials of acupuncture are recommended on cancer-related depression and anxiety, arthralgia, xerostomia, gastrointestinal dysfunction and dysphagia.

Abe et al. (2022) aimed to identify the current treatment options for pain and numbness in cancer survivors and to evaluate their effects. Cancer survivors were defined as patients diagnosed with cancer who had completed active cancer treatment, whose conditions were stable, and who had no evidence of recurrent or progressive disease. A meta-analysis was conducted using the random-effects model to obtain the effect sizes of 7 types of treatments: opioid therapy, nonopioid pharmacotherapy, interventional therapy, acupuncture, education/cognitive behavioral therapy (CBT), physical exercise, and alternative medicine. A total of 36 studies involving 2,870 cancer survivors were included. Among them, 35 (n=2,813) were included in the meta-analysis for pain. The analysis suggested that physical exercise, acupuncture, and alternative medicine could significantly reduce pain. Nonopioid pharmacotherapy and education/CBT did not demonstrate significant effects. No studies were identified that investigated the effects of opioid therapy or interventional therapy on pain. Regarding numbness, 5 studies (n=566) were included in the meta-analysis. Acupuncture (n=99; 2 studies) did not demonstrate significant effects on numbness, and the effects of nonopioid pharmacotherapy, education/CBT, and physical exercise could not be determined due to the small number of included studies. No studies were identified that investigated the effects of opioid therapy, interventional therapy, or alternative medicine on numbness. Authors concluded that this meta-analysis suggested that physical exercise, acupuncture, and alternative medicine may reduce pain in cancer survivors, with a very small to moderate amount of evidence.

Mao et al. (2022) authored a joint guideline to provide evidence-based recommendations to practicing physicians and other health care providers on integrative approaches to managing pain in patients with cancer. The Society for Integrative Oncology and ASCO convened an expert panel of integrative oncology, medical oncology, radiation oncology, surgical oncology, palliative oncology, social sciences, mind-body medicine, nursing, and patient advocacy representatives. The literature search included systematic reviews, meta-analyses, and randomized controlled trials published from 1990 through 2021. Outcomes of interest included pain intensity, symptom relief, and adverse events. Expert panel members used this evidence and informal consensus to develop evidence-based guideline recommendations. The literature search identified 227 relevant studies to inform the evidence base for this guideline. Recommendations included the following:

- Among adult patients, acupuncture should be recommended for aromatase inhibitor-related joint pain.
- Acupuncture or reflexology or acupressure may be recommended for general cancer pain or musculoskeletal pain.

These recommendations are based on an intermediate level of evidence, benefit outweighing risk, and with moderate strength of recommendation. There is insufficient or inconclusive evidence to make recommendations for pediatric patients.

Hershman et al. (2022) examined the effect of acupuncture in reducing AI-related joint pain through 52 weeks. A randomized clinical trial was conducted at 11 sites in the US from May 1, 2012, to February 29, 2016, with a scheduled final date of follow-up of September 5, 2017, to compare true acupuncture (TA) with sham acupuncture (SA) or waiting list control (WC). Participants were randomized 2:1:1 to the TA (n = 110), SA (n = 59), or WC (n = 57) group. The TA and SA protocols were composed of 6 weeks of intervention at 2 sessions per week (12 sessions overall), followed by 6 additional weeks of intervention with 1 session per week. Participants randomized to WC received no intervention. All participants were offered 10 acupuncture sessions to be used between weeks 24 and 52. Among 226 randomized, 191 (84.5%) completed the trial. In this randomized clinical trial, women with AI-related joint pain receiving 12 weeks of TA had reduced pain at 52 weeks compared with controls, suggesting long-term benefits of this therapy.

de Sousa et al. (2023) described the main acupuncture techniques and parameters that have been used in the most varied symptoms of different types of cancer in a systematic review. After the selection and evaluation phase, 23 studies were included and analysed. Authors concluded that based on this analysis, it is concluded that acupuncture is safe and there is evidence of the reduction of gastrointestinal symptoms, chemotherapy-induced peripheral neuropathy, pain, dry mouth, fatigue, insomnia, and improvement of cognitive capacity.

Frenkel et al. (2023) reviewed research findings on the beneficial effect of use of CIM modalities in regard to pancreatic cancer, with emphasis on pancreatic ductal adenocarcinoma (PDAC). This data reveal that nutrition counselling; digestive enzyme therapy; microbiome support; dietary supplements; lifestyle interventions (physical

activity and circadian health/sleep hygiene) appear to improve QoL of these patients through reduced symptom burden and meeting psychological needs, such as distress and fatigue. Acupuncture, mindfulness, yoga, reflexology, massage, and homeopathy may also contribute to symptom reduction, both physical and psychological, in all stages of the disease. There is supporting evidence that some CIM modalities may alleviate side effects and symptoms related to pancreatic cancer and its treatment, suggesting that practitioners might consider integrating these modalities in certain situations encountered in the treatment of pancreatic cancer. Further investigation is needed to define the optimal integration of CIM into the treatment and supportive care of patients affected by pancreatic cancer.

Epstein et al. (2023) compared the effects of acupuncture and massage on musculoskeletal pain among patients with advanced cancer. Participants included patients with advanced cancer with moderate to severe pain and clinician-estimated life expectancy of 6 months or more. The intervention included weekly acupuncture or massage for 10 weeks with monthly booster sessions up to 26 weeks. The primary end point was the change in worst pain intensity score from baseline to 26 weeks. The secondary outcomes included fatigue, insomnia, and quality of life. The Brief Pain Inventory (range, 0-10; higher numbers indicate worse pain intensity or interference) was used to measure the primary outcome. The secondary outcomes included fatigue, insomnia, and quality of life. A total of 298 participants were enrolled were women, 33 [11.1%] Black, 220 [74.1%] White, 46 [15.4%] Hispanic, and 78.5% with solid tumors). The mean (SD) baseline worst pain score was 6.9 (1.5). During 26 weeks, acupuncture reduced the worst pain score, with a mean change of -2.53 points, and massage reduced the Brief Pain Inventory worst pain score, with a mean change of -3.01 points; the between-group difference was not significant. Both treatments also improved fatigue, insomnia, and quality of life without significant between-group differences. Adverse events were mild and included bruising (6.5% of patients receiving acupuncture) and transient soreness (15.1% patients receiving massage). Authors concluded that given results of this study, for patients with advanced cancer, both acupuncture and massage were associated with pain reduction and improved fatigue, insomnia, and quality of life over 26 weeks; however, there was no significant different between the treatments. More research is needed to evaluate how best to integrate these approaches into pain treatment to optimize symptom management for the growing population of people living with advanced cancer.

Yang et al. (2023) performed a study aims to investigate the historical development, recent hotspots and research trends in cancer-related pain (CRP) in a bibliometric analysis. This bibliometric analysis was conducted from 2000 to 2022. A total of 664 publications were included in this work. The number of publications has steadily increased over the last 2 decades. The United States has the largest number of published articles (244 papers). This study explored the application value of acupuncture in the management of CRP with bibliometric analysis, offering an intuitive understanding of this topic and revealing the hotspots and research trends. Overall, it demonstrates the prominent role of acupuncture as an integrated medicine and a complementary alternative medicine. Traditional acupuncture and electroacupuncture play an important role as alternative therapies to relieve pain and improve the quality of life of cancer patients. The main types of cancer pain treated with acupuncture are breast pain, neuralgia and low back pain, which are commonly characterized by chronic pain. These researches provide sufficiently compelling evidence for acupuncture in the treatment of breast cancer-related pain. In addition, acupuncture is one of the important interventions that can help breast cancer patients improve their pain symptoms after surgery. Numerous experts in Evidence-based Clinical Practice Guidelines strongly recommend using acupuncture for the relief of aromatase inhibitor-induced arthralgia in breast cancer patients. Acupuncture is also one of the frontiers and hotspots in the treatment of post-chemotherapy peripheral neuropathy and neuropathic pain. This research is expanding in depth and breadth.

Qi et al. (2023) evaluated the efficacy and safety of acupuncture by systematically reviewing the literature on colorectal cancer resection. Twenty-two studies with 1878 patients were included. Results of the meta-analysis showed there was a low level evidence that acupuncture may improve early postoperative symptoms, such as time to first flatus, time to first bowel movement, time to first defecation, and nausea/vomiting compared with usual care and sham acupuncture. However, there were no statistically significant differences in postoperative pain. And there was no sufficient evidence of improving long-term functional outcomes. There was substantial heterogeneity across trials. The adverse events associated with acupuncture stimulation were minor in include studies. Authors concluded that there is currently low-level evidence supporting the use of acupuncture on postoperative symptoms for patients after colorectal cancer resection.

Faria et al. (2024) evaluated the current evidence regarding the efficacy of acupuncture for cancer in a systematic review and meta-analysis. Studies included were randomized controlled trials (RCTs) where acupuncture was compared with no treatment, placebo acupuncture or usual care. The primary outcome was pain intensity, measured with the visual analog scale, numeric rating scale, or brief pain inventory. Secondary outcomes also assessed were quality of life, functionality, xerostomia, pain interference, and analgesic consumption. Sixteen RCTs with a total of 1124 participants were included in the meta-analysis, with the majority of the studies presenting a low or unclear risk of bias. Acupuncture was more effective in reducing pain than no treatment, sham acupuncture or usual care. Authors concluded that the results of this study suggest that acupuncture may be an effective intervention to reduce pain associated with cancer. Despite some limitations due to the low quality and small sample size of some included studies, as well as the different types and stages of cancer, acupuncture might provide an effective and safe treatment to reduce cancer pain.

Neuropathic Pain: Ju et al. (2017) assessed the analgesic efficacy and adverse events of acupuncture treatments for chronic neuropathic pain in adults. Randomized controlled trials (RCTs) with treatment duration of eight weeks or longer comparing acupuncture (either given alone or in combination with other therapies) with sham acupuncture, other active therapies, or treatment as usual, for neuropathic pain in adults were included in this review. The primary outcomes were pain intensity and pain relief. The secondary outcomes were any pain-related outcome indicating some improvement, withdrawals, participants experiencing any adverse event, serious adverse events and quality of life. Authors included six studies involving 462 participants with chronic peripheral neuropathic pain (442 completers (251 male), mean ages 52 to 63 years). Most studies included a small sample size (fewer than 50 participants per treatment arm) and all studies were at high risk of bias for blinding of participants and personnel. Authors concluded that due to the limited data available, there was insufficient evidence to support or refute the use of acupuncture for neuropathic pain in general, or for any specific neuropathic pain condition when compared with sham acupuncture or other active therapies. Yu et al. (2021) evaluated the clinical efficacy of acupuncture through a review and analysis of systematic reviews of acupuncture for the treatment of diabetic peripheral neuropathy. Eighty eight reviews were retrieved. The inclusion criteria were a published systematic evaluation/meta-analysis/systematic review of acupuncture treatment for diabetic peripheral neuropathy, which included subjects meeting the diagnostic criteria for diabetic peripheral neuropathy, and which compared acupuncture treatment with non-acupuncture treatment. After the inclusion criteria had been applied, 18 reviews were finally included. Authors report that evidence shows that acupuncture improves diabetic peripheral neuropathy and increases nerve conduction velocity. However, the methodological quality of the reviews is generally extremely low, and most of the reviews had certain defects, showing that there is still much room for improvement in terms of the methodology and quality of the research reports.

Ben-Arye et al. (2022) explored the impact of acupuncture with other complementary and integrative medicine (CIM) modalities on chemotherapy-induced peripheral neuropathy (CIPN) and quality of life (QoL) in oncology patients. In this prospective, pragmatic, and patient-preference study, patients with CIPN were treated with acupuncture and CIM therapies (intervention group) or standard care alone (controls) for 6 weeks. Patients in the intervention arm were randomized to twice-weekly acupuncture-only (group A) or acupuncture with additional manual-movement or mind-body CIM therapies (group B). Severity of CIPN was assessed with various outcome measures. Of 168 participants, 136 underwent the study intervention (group A, 69; group B, 67), with 32 controls. Baseline-to-6-week assessment scores improved significantly in the intervention arm (vs controls) on FACT-Tax and emotional well-being scores; FACT-TAX scores for hand numbness/tingling and discomfort; and EORTC physical functioning. Intervention groups A and B showed improved FACT-Tax physical well-being, FACT-TAX total score, FACT-TAX feet discomfort, and EORTC pain scores. Authors concluded that acupuncture, with or without CIM modalities, can relieve CIPN-related symptoms during oncology treatment. This is most pronounced for hand numbness, tingling, pain, discomfort, and for physical functioning.

Pei et al. (2023) performed a systematic review to evaluate whether acupuncture is effective for treating chemotherapy-induced peripheral neuropathy (CIPN). Nine studies involving 582 patients were included in this review. Most of the studies exhibited unclear risk of bias because some details were not mentioned. As the clinical heterogeneity was significant, qualitative analysis was performed to describe nerve conduction velocity, effective rate for motor neuropathy, pain scores, quality of life and adverse events. Meta-analysis was performed on four studies to analyze the effective rate for sensory neuropathy due to inconspicuous heterogeneity. The results indicated that acupuncture may generate a better effect on sensory neuropathy than vitamin B. The efficacy of

EA plus glutathione (GSH) appeared to be better than that of GSH alone in alleviating sensory neurotoxicity and in improving nerve conduction velocity. Acupuncture plus methylcobalamin showed more favorable effects than methylcobalamin alone in relieving neuralgia, restoring nerve conduction velocity and improving quality of life. In terms of pain relief and improved CIPN-specific quality of life, acupuncture plus standard care was better than standard care alone. In terms of pain relief, EA was more effective than usual care. Authors concluded that acupuncture may be effective and safe in the treatment of CIPN according to the analyzed studies. However, more studies with higher methodological quality are warranted in order to be able to draw firmer conclusions. Future rigorous RCTs will be necessary to confirm the effectiveness and safety of acupuncture for CIPN.

Shi et al. (2023) summarized and evaluated the evidence from current systematic reviews/meta-analyses (SRs/MAs) on the effectiveness of acupuncture treatment for CIPN. This umbrella review includes 9 SRs/MAs, and their methodological quality, risk of bias, reporting quality, and evidence quality were all deemed unsatisfactory. Authors state that their updated meta-analysis suggests that CIPN patients can benefit from acupuncture therapy, as indicated by effectiveness in measures including BPI-SF, VAS, FACT-NTX, NRS, SCV, and NCI-CTCAE. Authors concluded that based on the existing evidence, acupuncture is effective and safe for patients with CIPN, as it can significantly improve effective rate, pain symptoms, quality of life, and nerve conduction velocity. However, given the low quality of current evidence, caution should be taken interpreting this conclusion.

Yeh et al. (2024) sought to determine the hierarchical effects of acupuncture-related interventions on symptoms, pain, and QoL associated with CIPN in cancer patients undergoing chemotherapy in a systematic review and network meta-analysis. A total of 33 studies involving 2,027 participants were included. Pairwise meta-analysis revealed that acupuncture-related interventions were superior to usual care, medication, or dietary supplements in improving CIPN symptoms, CIPN pain, and QoL. Furthermore, network meta-analysis indicated that acupuncture plus electrical stimulation (acupuncture-E) had the greatest overall effect among the various interventions. Acupuncture alone was most effective in reducing CIPN pain, and acupuncture plus moxibustion (acupuncture-M) ranked highest in enhancing QoL. This finding suggests that acupuncture-related interventions can provide patients with benefits in improving CIPN symptoms, pain, and QoL. In particular, acupuncture-E could be the most effective approach in which the provided evidence offers diverse options for cancer patients and healthcare professionals.

Musculoskeletal and Pain Disorders of the Extremities: Cox et al. (2016) assessed the effectiveness and safety of acupuncture therapies for musculoskeletal disorders of the extremities. The search revealed 5180 articles; 15 were included (10 with a low risk of bias, 5 with a high risk of bias). Authors concluded that the evidence for the effectiveness of acupuncture for musculoskeletal disorders of the extremities was inconsistent. Traditional needle acupuncture may be beneficial for CTS and Achilles tendinopathy, but not for nonspecific upper extremity pain and patellofemoral syndrome. Electroacupuncture may be effective for shoulder injuries and may show similar effectiveness to that of night wrist splinting for CTS. The effectiveness of dry needling for plantar fasciitis is equivocal. Leggit (2018) summarized the consensus on acupuncture as a musculoskeletal therapy. Evidence regarding efficacy in the management of musculoskeletal conditions is heterogeneous and subject to several limitations. Despite these limitations, acupuncture consistently has been shown to be more effective than no treatment and is relatively safe. For chronic back pain, it is recommended as a first-line noninvasive therapy. For neck pain, acupuncture provides benefits when it is combined with other treatments.

Babatunde et al. (2021) evaluated the comparative effectiveness of treatment options for relieving pain and improving function in patients with subacromial shoulder conditions (SSCs). The review identified 177 eligible trials. Current evidence shows small to moderate effect sizes for most treatment options for SSCs. Six treatments had a high probability of being most effective, in the short term, for pain and function [acupuncture, manual therapy, exercise, exercise plus manual therapy, laser therapy and Microcurrent (MENS) (TENS)], but with low certainty for most treatment options. After accounting for risk of bias, there is evidence of moderate certainty for the comparative effects of exercise on function in patients with SSCs. Future large, high-quality pragmatic randomized trials or meta-analyses are needed to better understand whether specific subgroups of patients respond better to some treatments than others.

Fredy et al. (2022) described the role of acupuncture for myofascial pain syndrome (MPS) in interventional pain

management. They summarized that acupuncture, combined with other therapies, is effective in reducing pain and improving physical function. Acupuncture can enhance endogenous opioids such as endorphins to relieve pain and enhance the healing process. Authors concluded that acupuncture could be considered as one of nonpharmacological options in Interventional Pain Management for MPS. Interventions with acupuncture are safe and have minimal side effects when performed by a trained and competent practitioner.

Zhan et al. (2023) assess the efficacy of acupuncture versus rehabilitation therapy (RT) for post-stroke shoulder pain PSSP. Eighteen studies were included in qualitative synthesis, fifteen (83%) studies with 978 patients were included in meta-analysis (MA) because of the outcomes of 3 studies were inappropriate. Nine (50%) studies were considered as moderate to high quality. The effectiveness of acupuncture for patients with PSSP was similar to that of RT on shoulder pain alleviation, improvement of upper limb motor function, and ADL. Two (11%) studied reported no acupuncture-related AEs, and fourteen (78%) studies did not mention AEs resulting from acupuncture. Authors concluded that acupuncture is similar to RT in relieving shoulder pain, improving upper limb motor function and ADL in patients with PSSP. Either acupuncture or RT might be the optimal treatment of PSSP. More well-designed RCTs of this topic are needed in the future.

Luan et al. (2023) investigated the efficacy of acupuncture or similar needling therapy on pain, proprioception, balance, and self-reported function in individuals with CAI. Twelve trials (n = 571) were found, of which the final meta-analysis was conducted with eight. Different studies employ varying treatments, including specific needle types, techniques, and therapeutic frameworks. Compared to control without acupuncture or similar needling therapy, acupuncture or similar needling intervention resulted in improved pain, proprioception, balance, and self-reported function (Cumberland Ankle Instability Tool); American Orthopedic Foot and Ankle; Foot and Ankle Ability Measure: activities of daily living for individuals with CAI. Authors concluded that the available evidence suggests that acupuncture or similar needling therapy may improve pain, proprioception, balance, and self-reported function in individuals with CAI, but more trials are needed to verify these findings. Furthermore, various needles and techniques using in different studies have resulted in methodologic limitations that should be addressed in the future.

An et al. (2024) examined the exclusive impact of manual acupuncture on shoulder impingement syndrome (SIS). This study included 5 randomized controlled trials. The primary outcome assessment revealed significantly reduced pain and improvements in shoulder function and disability. A subgroup analysis based on treatment duration indicated that short-term acupuncture treatment (≤4 weeks) exhibited a high level of confidence with low heterogeneity. Manual acupuncture is effective for relieving pain and improving shoulder function and disability in patients with SIS. However, further research is necessary to validate these findings owing to the limited number of patients and heterogeneity among the studies reviewed.

Nausea and Vomiting: A 2009 Cochrane Review (Lee and Fan, 2009) evaluated studies of the stimulation of wrist acupuncture point P6 for the prevention of postoperative nausea and vomiting. Forty trials were identified with 4858 individual subjects. Overall, acupuncture was found to be equally effective as anti-emetic drugs. This was true for both adults and children. It was also found equally effective whether using invasive needles or non-invasive stimulation of the acupuncture point.

Zhang et al. performed a meta-analysis (Zhang et al., 2015) on the use of wristband at acupuncture points for postoperative nausea and vomiting. They found a significant reduction in post-operative vomiting through the use of the wrist band compared to controls. However, they found no difference in the rates of nausea between wrist band and control.

Lu et al. (2021) explored acupuncture's clinical efficacy in treating hyperemesis gravidarum HG. A total of 16 trials covering 1043 gravidas were included. Compared with the conventional treatment, acupuncture had a significantly higher effective rate, a higher conversion rate of urine ketone, an improvement rate of nausea and vomiting, and a relatively higher improvement rate of food intake. Acupuncture also shortened hospitalization time and manifested with a lower pregnancy termination rate and fewer adverse events. Nevertheless, no statistical variation in the improvement of nausea intensity, vomiting episodes, and lassitude symptom, recurrence rate, and serum potassium was observed. Authors concluded suggested that acupuncture was effective in treating HG.

However, as the potential inferior quality and underlying publication bias were found in the included studies, there is a need for more superior-quality RCTs to examine their effectiveness and safety.

Mora et al. (2022) performed a systematic review and meta-analysis about the use and effect of complementary and alternative medicine (CAM) modalities to treat adverse effects of conventional cancer treatment among children and young adults. Twenty RCTs comprising 1,069 participants were included in this review. The included studies investigated acupuncture, mind-body therapies, supplements, and vitamins for chemotherapy-induced nausea and vomiting (CINV), oral mucositis, and anxiety among children and young adults who underwent conventional cancer treatment. Seven studies (315 participants) were included in the meta-analysis. The overall effect of CAM (including acupuncture and hypnosis only) on chemotherapy-induced nausea and/or vomiting and controls was statistically significant. There was a significant difference between acupuncture and controls (n = 5) for intensity and/or episodes of CINV. Authors concluded that current evidence from this meta-analysis of randomized controlled trials shows that CAM, including acupuncture and hypnosis only, is effective in reducing chemotherapy-induced nausea and vomiting in children and young adults. More rigorous trials and long-term effects should be investigated if acupuncture and hypnosis are to be recommended for clinical use.

Yan et al. (2023) assessed the effectiveness and safety of acupuncture for the prevention of chemotherapy-induced nausea and vomiting (CINV), with a specific intention on exploring sources of between-study variation in treatment effects. Thirty-eight RCTs with a total of 2503 patients were evaluated. Acupuncture in addition to usual care (UC) may increase the complete control of acute vomiting and delayed vomiting when compared with UC only. No effects were found for all other review outcomes. The certainty of evidence was generally low or very low. Authors concluded that acupuncture in addition to usual care may increase the complete control of chemotherapy-induced acute vomiting and delayed vomiting but the certainty of evidence was very low. Well-designed RCTs with larger sample sizes, standardized treatment regimens, and core outcome measures are needed.

Tan et al. (2023) performed a meta-analysis to assess the improvement of complementary and alternative medicine (CAM) therapies on nausea and vomiting during pregnancy (NVP). Thirty-three RCTs were included in this study. Specific to acupuncture as CAM, acupuncture treatment was superior to conventional medicine; (low-quality evidence].

Jin et al. (2024) evaluated the effectiveness and safety of acupuncture in managing NVP, considering the traditional meridian and acupoint theories. Twenty-four RCTs involving 2390 women were included. Acupuncture plus western medicine (WM) significantly led to a reduction in Pregnancy-Unique Quantification of Emesis (PUQE) scores and ineffective rates compared with WM alone. It also resulted in a greater improvement in ketonuria, shorter length of stay, and lower scores on the NVP Quality of Life and Chinese Medicine Syndrome Scale. Acupuncture was superior to WM in terms of reduction in ineffective rates. Acupuncture and WM had comparable results in improvement in PUQE scores and ketonuria negative rates. The evidence is not clear regarding the impact of acupuncture on depression and anxiety compared with that of sham acupuncture. The incidence of severe adverse events was not significantly different between acupuncture and WM or sham acupuncture. Evidence certainty ranged from moderate to very low. Of the 24 RCTs, 19 used the Neiguan (PC6) acupoint, 16 used the Zusanli (ST36) acupoint, and 13 used the Zhongwan (CV12) acupoint. According to the current systematic review and meta-analysis, acupuncture combined with WM may be a more effective treatment for NVP than WM alone. Furthermore, acupuncture may be as effective as WM. PC6, ST36, and CV12 are the most commonly used acupoints. Although more robust and larger studies are required, the current evidence supports the use of acupuncture in NVP treatment, as it has been demonstrated to be safe.

Wang et al.(2025) evaluated the efficacy of non-pharmacological interventions in improving chemotherapy induced delayed nausea and vomiting symptoms using a network meta-analysis. A total of 58 RCTs 4081 patients were selected, involving 14 non-pharmacological interventions. The results of meta-analysis showed that acupoint patch was identified as the most probable superior intervention in the improvement of chemotherapy induced delayed nausea and vomiting, and acupuncture was identified as the most probable superior intervention on the improvement of Karnofsky Performance Scale (KPS) scores. Non-pharmacological interventions can serve as an effective complementary approach to managing delayed chemotherapy-induced nausea and vomiting. In particular, acupoint application may be the optimal complementary therapy to mitigate the incidence of delayed nausea and vomiting, though more high-quality, large-scale evidence is required to conclusively demonstrate the efficacy of acupuncture in enhancing the quality of life for cancer patients.

Acupuncture Point Injection Therapy: There is insufficient evidence in the peer-reviewed published scientific literature to support safety and efficacy of acupuncture point injection therapy (Wang et al., 2015; Cho et al., 2018; Huang et al., 2019; Xie et al, 2020; Yang et al., 2020; Zhai, et. al., 2022; Xue et. al., 2023). Data comparing the effectiveness of different products, methods of stimulation and overall clinical utility is lacking.

Providers of Acupuncture Services: Acupuncture services are delivered by a qualified provider of acupuncture acting within the scope of their license as regulated by the Federal and State governments. Generally, only those healthcare practitioners who hold an active license, certification, or registration with the applicable state board or agency may provide services. Benefits for services provided by these healthcare providers may also be dependent upon the member's benefit contract language.

Coding Information

Notes:

1. This list of codes may not be all-inclusive since the American Medical Association (AMA) and Centers for Medicare & Medicaid Services (CMS) code updates may occur more frequently than policy updates.
2. Deleted codes and codes which are not effective at the time the service is rendered may not be eligible for reimbursement.

Considered Medically Necessary when criteria in the applicable policy statements listed above are met:

CPT®* Codes	Description
97810	Acupuncture, 1 or more needles; without electrical stimulation, initial 15 minutes of personal one-on-one contact with the patient
97811	Acupuncture, 1 or more needles; without electrical stimulation, each additional 15 minutes of personal one-one contact with the patient, with re-insertion of needle(s) (List separately in addition to code for primary procedure)
97813	Acupuncture, 1 or more needles; with electrical stimulation, initial 15 minutes of personal one-on-one contact with the patient
97814	Acupuncture, 1 or more needles; with electrical stimulation, each additional 15 minutes of personal one-one contact with the patient, with re-insertion of needle(s) (List separately in addition to code for primary procedure)

ICD-10-CM Diagnosis Codes	Description
G43.001-G43.919	Migraine
G44.201	Tension-type headache, unspecified, intractable
G44.209	Tension-type headache, unspecified, not intractable
G44.211	Episodic tension-type headache, intractable
G44.219	Episodic tension-type headache, not intractable
G44.221-G44.229	Chronic tension-type headache
G44.301-G44.329	Post traumatic headache
G89.11	Acute pain due to trauma
G89.12	Acute post-thoracotomy pain
G89.18	Other acute postprocedural pain
G89.21	Chronic pain due to trauma
G89.22	Chronic post-thoracotomy pain

G89.28	Other chronic postprocedural pain
G89.29	Other chronic pain
G89.3	Neoplasm related pain (acute) (chronic)
G89.4	Chronic pain syndrome
K91.0	Vomiting following gastrointestinal surgery
M16.0-M16.9	Osteoarthritis of hip
M17.0-M17.9	Osteoarthritis of knee
M18.0-M18.9	Osteoarthritis of first carpometacarpal joint
M19.011-M19.93	Other and unspecified osteoarthritis
M25.511	Pain in right shoulder
M25.512	Pain in left shoulder
M25.519	Pain in unspecified shoulder
M25.521	Pain in right elbow
M25.522	Pain in left elbow
M25.529	Pain in unspecified elbow
M25.531	Pain in right wrist
M25.532	Pain in left wrist
M25.539	Pain in unspecified wrist
M25.541	Pain in joints of right hand
M25.542	Pain in joints of left hand
M25.549	Pain in joints of unspecified hand
M25.551	Pain in right hip
M25.552	Pain in left hip
M25.559	Pain in unspecified hip
M25.561	Pain in right knee
M25.562	Pain in left knee
M25.569	Pain in unspecified knee
M25.571	Pain in right ankle and joints of right foot
M25.572	Pain in left ankle and joints of left foot
M25.579	Pain in unspecified ankle and joints of unspecified foot
M47.11	Other spondylosis with myelopathy, occipito-atlanto-axial region
M47.12	Other spondylosis with myelopathy, cervical region
M47.13	Other spondylosis with myelopathy, cervicothoracic region
M47.16	Other spondylosis with myelopathy, lumbar region
M47.21	Other spondylosis with radiculopathy, occipito-atlanto-axial region
M47.22	Other spondylosis with radiculopathy, cervical region
M47.23	Other spondylosis with radiculopathy, cervicothoracic region
M47.24	Other spondylosis with radiculopathy, thoracic region
M47.25	Other spondylosis with radiculopathy, thoracolumbar region
M47.26	Other spondylosis with radiculopathy, lumbar region
M47.27	Other spondylosis with radiculopathy, lumbosacral region
M47.28	Other spondylosis with radiculopathy, sacral and sacrococcygeal region
M47.811	Spondylosis without myelopathy or radiculopathy, occipito-atlanto-axial region
M47.812	Spondylosis without myelopathy or radiculopathy, cervical region
M47.813	Spondylosis without myelopathy or radiculopathy, cervicothoracic region
M47.814	Spondylosis without myelopathy or radiculopathy, thoracic region
M47.815	Spondylosis without myelopathy or radiculopathy, thoracolumbar region
M47.816	Spondylosis without myelopathy or radiculopathy, lumbar region
M47.817	Spondylosis without myelopathy or radiculopathy, lumbosacral region
M47.818	Spondylosis without myelopathy or radiculopathy, sacral and sacrococcygeal region
M47.891	Other spondylosis, occipito-atlanto-axial region

M47.892	Other spondylosis, cervical region
M47.893	Other spondylosis, cervicothoracic region
M47.894	Other spondylosis, thoracic region
M47.895	Other spondylosis, thoracolumbar region
M47.896	Other spondylosis, lumbar region
M47.897	Other spondylosis, lumbosacral region
M47.898	Other spondylosis, sacral and sacrococcygeal region
M48.01	Spinal stenosis, occipito-atlanto-axial region
M48.02	Spinal stenosis, cervical region
M48.03	Spinal stenosis, cervicothoracic region
M48.04	Spinal stenosis, thoracic region
M48.05	Spinal stenosis, thoracolumbar region
M48.061	Spinal stenosis, lumbar region without neurogenic claudication
M48.07	Spinal stenosis, lumbosacral region
M48.08	Spinal stenosis, sacral and sacrococcygeal region
M50.00	Cervical disc disorder with myelopathy, unspecified cervical region
M50.01	Cervical disc disorder with myelopathy, high cervical region
M50.020	Cervical disc disorder with myelopathy, mid-cervical region, unspecified level
M50.021	Cervical disc disorder at C4-C5 level with myelopathy
M50.022	Cervical disc disorder at C5-C6 level with myelopathy
M50.023	Cervical disc disorder at C6-C7 level with myelopathy
M50.03	Cervical disc disorder with myelopathy, cervicothoracic region
M50.11	Cervical disc disorder with radiculopathy, high cervical region
M50.120	Mid-cervical disc disorder, unspecified level
M50.121	Cervical disc disorder at C4-C5 level with radiculopathy
M50.122	Cervical disc disorder at C5-C6 level with radiculopathy
M50.123	Cervical disc disorder at C6-C7 level with radiculopathy
M50.13	Cervical disc disorder with radiculopathy, cervicothoracic region
M50.20	Other cervical disc displacement, unspecified cervical region
M50.21	Other cervical disc displacement, high cervical region
M50.220	Other cervical disc displacement, mid-cervical region, unspecified level
M50.221	Other cervical disc displacement at C4-C5 level
M50.222	Other cervical disc displacement at C5-C6 level
M50.223	Other cervical disc displacement at C6-C7 level
M50.23	Other cervical disc displacement, cervicothoracic region
M50.30	Other cervical disc degeneration, unspecified cervical region
M50.31	Other cervical disc degeneration, high cervical region
M50.320	Other cervical disc degeneration, mid-cervical region, unspecified level
M50.321	Other cervical disc degeneration at C4-C5 level
M50.322	Other cervical disc degeneration at C5-C6 level
M50.323	Other cervical disc degeneration at C6-C7 level
M50.33	Other cervical disc degeneration, cervicothoracic region
M51.06	Intervertebral disc disorders with myelopathy, lumbar region
M51.14	Intervertebral disc disorders with radiculopathy, thoracic region
M51.15	Intervertebral disc disorders with radiculopathy, thoracolumbar region
M51.16	Intervertebral disc disorders with radiculopathy, lumbar region
M51.17	Intervertebral disc disorders with radiculopathy, lumbosacral region
M51.24	Other intervertebral disc displacement, thoracic region
M51.25	Other intervertebral disc displacement, thoracolumbar region
M51.26	Other intervertebral disc displacement, lumbar region
M51.27	Other intervertebral disc displacement, lumbosacral region
M51.34	Other intervertebral disc degeneration, thoracic region
M51.35	Other intervertebral disc degeneration, thoracolumbar region
M51.36	Other intervertebral disc degeneration, lumbar region (Code deleted 9/30/2024)
M51.360	Other intervertebral disc degeneration, lumbar region with discogenic back pain only

M51.361	Other intervertebral disc degeneration, lumbar region with lower extremity pain only
M51.362	Other intervertebral disc degeneration, lumbar region with discogenic back pain and lower extremity pain
M51.37	Other intervertebral disc degeneration, lumbosacral region (Code deleted 9/30/2024)
M51.370	Other intervertebral disc degeneration, lumbosacral region with discogenic back pain only
M51.371	Other intervertebral disc degeneration, lumbosacral region with lower extremity pain only
M51.372	Other intervertebral disc degeneration, lumbosacral region with discogenic back pain and lower extremity pain
M51.84	Other intervertebral disc disorders, thoracic region
M51.85	Other intervertebral disc disorders, thoracolumbar region
M51.86	Other intervertebral disc disorders, lumbar region
M51.87	Other intervertebral disc disorders, lumbosacral region
M51.A1	Intervertebral annulus fibrosus defect, small, lumbar region
M51.A2	Intervertebral annulus fibrosus defect, large, lumbar region
M51.A4	Intervertebral annulus fibrosus defect, small, lumbosacral region
M51.A5	Intervertebral annulus fibrosus defect, large, lumbosacral region
M53.0	Cervicocranial syndrome
M53.1	Cervicobrachial syndrome
M53.3	Sacrococcygeal disorders, not elsewhere classified
M54.2	Cervicalgia
M54.30-M54.32	Sciatica
M54.40-M54.42	Lumbago with sciatica
M54.50	Low back pain, unspecified
M54.51	Vertebrogenic low back pain
M54.59	Other low back pain
M54.6	Pain in thoracic spine
M54.89	Other dorsalgia
M54.9	Dorsalgia, unspecified
M77.40	Metatarsalgia, unspecified foot
M77.41	Metatarsalgia, right foot
M77.42	Metatarsalgia, left foot
M79.11	Myalgia of mastication muscle
M79.12	Myalgia of auxillary muscles, head and neck
M79.18	Myalgia, other site
M79.2	Neuralgia and neuritis, unspecified
M79.601	Pain in right arm
M79.602	Pain in left arm
M79.603	Pain in arm, unspecified
M79.604	Pain in right leg
M79.605	Pain in left leg
M79.606	Pain in leg, unspecified
M79.621	Pain in right upper arm
M79.622	Pain in left upper arm
M79.629	Pain in unspecified upper arm
M79.631	Pain in right forearm
M79.632	Pain in left forearm
M79.639	Pain in unspecified forearm
M79.641	Pain in right hand
M79.642	Pain in left hand
M79.643	Pain in unspecified hand
M79.644	Pain in right finger(s)
M79.645	Pain in left finger(s)
M79.646	Pain in unspecified finger(s)

M79.651	Pain in right thigh
M79.652	Pain in left thigh
M79.659	Pain in unspecified thigh
M79.661	Pain in right lower leg
M79.662	Pain in left lower leg
M79.669	Pain in unspecified lower leg
M79.671	Pain in right foot
M79.672	Pain in left foot
M79.673	Pain in unspecified foot
M79.674	Pain in right toe(s)
M79.675	Pain in left toe(s)
M79.676	Pain in unspecified toe(s)
M79.7	Fibromyalgia
M99.01	Segmental and somatic dysfunction of cervical region
M99.02	Segmental and somatic dysfunction of thoracic region
M99.03	Segmental and somatic dysfunction of lumbar region
M99.04	Segmental and somatic dysfunction of sacral region
M99.05	Segmental and somatic dysfunction of pelvic region
M99.06	Segmental and somatic dysfunction of lower extremity
M99.07	Segmental and somatic dysfunction of upper extremity
M99.08	Segmental and somatic dysfunction of rib cage
M99.11	Subluxation complex (vertebral) of cervical region
M99.12	Subluxation complex (vertebral) of thoracic region
M99.13	Subluxation complex (vertebral) of lumbar region
M99.14	Subluxation complex (vertebral) of sacral region
M99.15	Subluxation complex (vertebral) of pelvic region
M99.16	Subluxation complex (vertebral) of lower extremity
M99.17	Subluxation complex (vertebral) of upper extremity
M99.18	Subluxation complex (vertebral) of rib cage
M99.21	Subluxation stenosis of neural canal of cervical region
M99.22	Subluxation stenosis of neural canal of thoracic region
M99.23	Subluxation stenosis of neural canal of lumbar region
M99.24	Subluxation stenosis of neural canal of sacral region
M99.25	Subluxation stenosis of neural canal of pelvic region
M99.26	Subluxation stenosis of neural canal of lower extremity
M99.27	Subluxation stenosis of neural canal of upper extremity
M99.28	Subluxation stenosis of neural canal of rib cage
M99.31	Osseous stenosis of neural canal of cervical region
M99.32	Osseous stenosis of neural canal of thoracic region
M99.33	Osseous stenosis of neural canal of lumbar region
M99.34	Osseous stenosis of neural canal of sacral region
M99.35	Osseous stenosis of neural canal of pelvic region
M99.36	Osseous stenosis of neural canal of lower extremity
M99.37	Osseous stenosis of neural canal of upper extremity
M99.38	Osseous stenosis of neural canal of rib cage
M99.41	Connective tissue stenosis of neural canal of cervical region
M99.42	Connective tissue stenosis of neural canal of thoracic region
M99.43	Connective tissue stenosis of neural canal of lumbar region
M99.44	Connective tissue stenosis of neural canal of sacral region
M99.45	Connective tissue stenosis of neural canal of pelvic region
M99.46	Connective tissue stenosis of neural canal of lower extremity
M99.47	Connective tissue stenosis of neural canal of upper extremity
M99.48	Connective tissue stenosis of neural canal of rib cage
M99.51	Intervertebral disc stenosis of neural canal of cervical region
M99.52	Intervertebral disc stenosis of neural canal of thoracic region

M99.53	Intervertebral disc stenosis of neural canal of lumbar region
M99.54	Intervertebral disc stenosis of neural canal of sacral region
M99.55	Intervertebral disc stenosis of neural canal of pelvic region
M99.56	Intervertebral disc stenosis of neural canal of lower extremity
M99.57	Intervertebral disc stenosis of neural canal of upper extremity
M99.58	Intervertebral disc stenosis of neural canal of rib cage
M99.61	Osseous and subluxation stenosis of intervertebral foramina of cervical region
M99.62	Osseous and subluxation stenosis of intervertebral foramina of thoracic region
M99.63	Osseous and subluxation stenosis of intervertebral foramina of lumbar region
M99.64	Osseous and subluxation stenosis of intervertebral foramina of sacral region
M99.65	Osseous and subluxation stenosis of intervertebral foramina of pelvic region
M99.66	Osseous and subluxation stenosis of intervertebral foramina of lower extremity
M99.67	Osseous and subluxation stenosis of intervertebral foramina of upper extremity
M99.68	Osseous and subluxation stenosis of intervertebral foramina of rib cage
M99.71	Connective tissue and disc stenosis of intervertebral foramina of cervical region
M99.72	Connective tissue and disc stenosis of intervertebral foramina of thoracic region
M99.73	Connective tissue and disc stenosis of intervertebral foramina of lumbar region
M99.74	Connective tissue and disc stenosis of intervertebral foramina of sacral region
M99.75	Connective tissue and disc stenosis of intervertebral foramina of pelvic region
M99.76	Connective tissue and disc stenosis of intervertebral foramina of lower extremity
M99.77	Connective tissue and disc stenosis of intervertebral foramina of upper extremity
M99.78	Connective tissue and disc stenosis of intervertebral foramina of rib cage
O21.0-O21.9	Excessive vomiting in pregnancy
R07.82	Intercostal pain
R07.9	Chest pain, unspecified
R11.0	Nausea
R11.10	Vomiting, unspecified
R11.11	Vomiting without nausea
R11.12	Projectile vomiting
R11.2	Nausea with vomiting, unspecified
R51.0	Headache with orthostatic component, not elsewhere classified
R51.9	Headache, unspecified
S13.4XXA	Sprain of ligaments of cervical spine, initial encounter
S13.4XXD	Sprain of ligaments of cervical spine, subsequent encounter
S13.4XXS	Sprain of ligaments of cervical spine, sequela
S13.8XXA	Sprain of joints and ligaments of other parts of neck, initial encounter
S13.8XXD	Sprain of joints and ligaments of other parts of neck, subsequent encounter
S13.8XXS	Sprain of joints and ligaments of other parts of neck, sequela
S16.1XXA	Strain of muscle, fascia and tendon at neck level, initial encounter
S16.1XXD	Strain of muscle, fascia and tendon at neck level, subsequent encounter
S16.1XXS	Strain of muscle, fascia and tendon at neck level, sequela
S16.8XXA	Other specified injury of muscle, fascia and tendon at neck level, initial encounter
S16.8XXD	Other specified injury of muscle, fascia and tendon at neck level, subsequent encounter
S16.8XXS	Other specified injury of muscle, fascia and tendon at neck level, sequela
S23.3XXA	Sprain of ligaments of thoracic spine, initial encounter
S23.3XXD	Sprain of ligaments of thoracic spine, subsequent encounter
S23.3XXS	Sprain of ligaments of thoracic spine, sequela
S23.8XXA	Sprain of other specified parts of thorax, initial encounter
S23.8XXD	Sprain of other specified parts of thorax, subsequent encounter
S23.8XXS	Sprain of other specified parts of thorax, sequela
S29.011A	Strain of muscle and tendon of front wall of thorax, initial encounter
S29.011D	Strain of muscle and tendon of front wall of thorax, subsequent encounter
S29.011S	Strain of muscle and tendon of front wall of thorax, sequela
S29.012A	Strain of muscle and tendon of back wall of thorax, initial encounter

S29.012D	Strain of muscle and tendon of back wall of thorax, subsequent encounter
S29.012S	Strain of muscle and tendon of back wall of thorax, sequela
S33.5XXA	Sprain of ligaments of lumbar spine, initial encounter
S33.5XXD	Sprain of ligaments of lumbar spine, subsequent encounter
S33.5XXS	Sprain of ligaments of lumbar spine, sequela
S33.6XXA	Sprain of sacroiliac joint, initial encounter
S33.6XXD	Sprain of sacroiliac joint, subsequent encounter
S33.6XXS	Sprain of sacroiliac joint, sequela
S33.8XXA	Sprain of other parts of lumbar spine and pelvis, initial encounter
S33.8XXD	Sprain of other parts of lumbar spine and pelvis, subsequent encounter
S33.8XXS	Sprain of other parts of lumbar spine and pelvis, sequela
S39.012A	Strain of muscle, fascia and tendon of lower back, initial encounter
S39.012D	Strain of muscle, fascia and tendon of lower back, subsequent encounter
S39.012S	Strain of muscle, fascia and tendon of lower back, sequela
S39.013A	Strain of muscle, fascia and tendon of pelvis, initial encounter
S39.013D	Strain of muscle, fascia and tendon of pelvis, subsequent encounter
S39.013S	Strain of muscle, fascia and tendon of pelvis, sequela
S43.491A	Other sprain of right shoulder joint, initial encounter
S43.491D	Other sprain of right shoulder joint, subsequent encounter
S43.491S	Other sprain of right shoulder joint, sequela
S43.492A	Other sprain of left shoulder joint, initial encounter
S43.492D	Other sprain of left shoulder joint, subsequent encounter
S43.492S	Other sprain of left shoulder joint, sequela
S43.81XA	Sprain of other specified parts of right shoulder girdle, initial encounter
S43.81XD	Sprain of other specified parts of right shoulder girdle, subsequent encounter
S43.81XS	Sprain of other specified parts of right shoulder girdle, sequela
S43.82XA	Sprain of other specified parts of left shoulder girdle, initial encounter
S43.82XD	Sprain of other specified parts of left shoulder girdle, subsequent encounter
S43.82XS	Sprain of other specified parts of left shoulder girdle, sequela
S46.811A	Strain of other muscles, fascia and tendons at shoulder and upper arm level, right arm, initial encounter
S46.811D	Strain of other muscles, fascia and tendons at shoulder and upper arm level, right arm, subsequent encounter
S46.811S	Strain of other muscles, fascia and tendons at shoulder and upper arm level, right arm, sequela
S46.812A	Strain of other muscles, fascia and tendons at shoulder and upper arm level, left arm, initial encounter
S46.812D	Strain of other muscles, fascia and tendons at shoulder and upper arm level, left arm, subsequent encounter
S46.812S	Strain of other muscles, fascia and tendons at shoulder and upper arm level, left arm, sequela
S53.411A	Radiohumeral (joint) sprain of right elbow, initial encounter
S53.411D	Radiohumeral (joint) sprain of right elbow, subsequent encounter
S53.411S	Radiohumeral (joint) sprain of right elbow, sequela
S53.412A	Radiohumeral (joint) sprain of left elbow, initial encounter
S53.412D	Radiohumeral (joint) sprain of left elbow, subsequent encounter
S53.412S	Radiohumeral (joint) sprain of left elbow, sequela
S53.419A	Radiohumeral (joint) sprain of unspecified elbow, initial encounter
S53.419D	Radiohumeral (joint) sprain of unspecified elbow, subsequent encounter
S53.419S	Radiohumeral (joint) sprain of unspecified elbow, sequela
S53.421A	Ulnohumeral (joint) sprain of right elbow, initial encounter
S53.421D	Ulnohumeral (joint) sprain of right elbow, subsequent encounter
S53.421S	Ulnohumeral (joint) sprain of right elbow, sequela
S53.422A	Ulnohumeral (joint) sprain of left elbow, initial encounter
S53.422D	Ulnohumeral (joint) sprain of left elbow, subsequent encounter
S53.422S	Ulnohumeral (joint) sprain of left elbow, sequela

S53.429A	Ulnohumeral (joint) sprain of unspecified elbow, initial encounter
S53.429D	Ulnohumeral (joint) sprain of unspecified elbow, subsequent encounter
S53.429S	Ulnohumeral (joint) sprain of unspecified elbow, sequela
S53.431A	Radial collateral ligament sprain of right elbow, initial encounter
S53.431D	Radial collateral ligament sprain of right elbow, subsequent encounter
S53.431S	Radial collateral ligament sprain of right elbow, sequela
S53.432A	Radial collateral ligament sprain of left elbow, initial encounter
S53.432D	Radial collateral ligament sprain of left elbow, subsequent encounter
S53.432S	Radial collateral ligament sprain of left elbow, sequela
S53.439A	Radial collateral ligament sprain of unspecified elbow, initial encounter
S53.439D	Radial collateral ligament sprain of unspecified elbow, subsequent encounter
S53.439S	Radial collateral ligament sprain of unspecified elbow, sequela
S53.441A	Ulnar collateral ligament sprain of right elbow, initial encounter
S53.441D	Ulnar collateral ligament sprain of right elbow, subsequent encounter
S53.441S	Ulnar collateral ligament sprain of right elbow, sequela
S53.442A	Ulnar collateral ligament sprain of left elbow, initial encounter
S53.442D	Ulnar collateral ligament sprain of left elbow, subsequent encounter
S53.442S	Ulnar collateral ligament sprain of left elbow, sequela
S53.449A	Ulnar collateral ligament sprain of unspecified elbow, initial encounter
S53.449D	Ulnar collateral ligament sprain of unspecified elbow, subsequent encounter
S53.449S	Ulnar collateral ligament sprain of unspecified elbow, sequela
S53.491A	Other sprain of right elbow, initial encounter
S53.491D	Other sprain of right elbow, subsequent encounter
S53.491S	Other sprain of right elbow, sequela
S53.492A	Other sprain of left elbow, initial encounter
S53.492D	Other sprain of left elbow, subsequent encounter
S53.492S	Other sprain of left elbow, sequela
S63.591A	Other specified sprain of right wrist, initial encounter
S63.591D	Other specified sprain of right wrist, subsequent encounter
S63.591S	Other specified sprain of right wrist, sequela
S63.592A	Other specified sprain of left wrist, initial encounter
S63.592D	Other specified sprain of left wrist, subsequent encounter
S63.592S	Other specified sprain of left wrist, sequela
S63.8X1A	Sprain of other part of right wrist and hand, initial encounter
S63.8X1D	Sprain of other part of right wrist and hand, subsequent encounter
S63.8X1S	Sprain of other part of right wrist and hand, sequela
S63.8X2A	Sprain of other part of left wrist and hand, initial encounter
S63.8X2D	Sprain of other part of left wrist and hand, subsequent encounter
S63.8X2S	Sprain of other part of left wrist and hand, sequela
S73.191A	Other sprain of right hip, initial encounter
S73.191D	Other sprain of right hip, subsequent encounter
S73.191S	Other sprain of right hip, sequela
S73.192A	Other sprain of left hip, initial encounter
S73.192D	Other sprain of left hip, subsequent encounter
S73.192S	Other sprain of left hip, sequela
S83.411A	Sprain of medial collateral ligament of right knee, initial encounter
S83.411D	Sprain of medial collateral ligament of right knee, subsequent encounter
S83.411S	Sprain of medial collateral ligament of right knee, sequela
S83.412A	Sprain of medial collateral ligament of left knee, initial encounter
S83.412D	Sprain of medial collateral ligament of left knee, subsequent encounter
S83.412S	Sprain of medial collateral ligament of left knee, sequela
S83.421A	Sprain of lateral collateral ligament of right knee, initial encounter
S83.421D	Sprain of lateral collateral ligament of right knee, subsequent encounter
S83.421S	Sprain of lateral collateral ligament of right knee, sequela
S83.422A	Sprain of lateral collateral ligament of left knee, initial encounter

S83.422D	Sprain of lateral collateral ligament of left knee, subsequent encounter
S83.422S	Sprain of lateral collateral ligament of left knee, sequela
S83.511A	Sprain of anterior cruciate ligament of right knee, initial encounter
S83.511D	Sprain of anterior cruciate ligament of right knee, subsequent encounter
S83.511S	Sprain of anterior cruciate ligament of right knee, sequela
S83.512A	Sprain of anterior cruciate ligament of left knee, initial encounter
S83.512D	Sprain of anterior cruciate ligament of left knee, subsequent encounter
S83.512S	Sprain of anterior cruciate ligament of left knee, sequela
S83.521A	Sprain of posterior cruciate ligament of right knee, initial encounter
S83.521D	Sprain of posterior cruciate ligament of right knee, subsequent encounter
S83.521S	Sprain of posterior cruciate ligament of right knee, sequela
S83.522A	Sprain of posterior cruciate ligament of left knee, initial encounter
S83.522D	Sprain of posterior cruciate ligament of left knee, subsequent encounter
S83.522S	Sprain of posterior cruciate ligament of left knee, sequela
S83.8X1A	Sprain of other specified parts of right knee, initial encounter
S83.8X1D	Sprain of other specified parts of right knee, subsequent encounter
S83.8X1S	Sprain of other specified parts of right knee, sequela
S83.8X2A	Sprain of other specified parts of left knee, initial encounter
S83.8X2D	Sprain of other specified parts of left knee, subsequent encounter
S83.8X2S	Sprain of other specified parts of left knee, sequela
S83.91XA	Sprain of unspecified site of right knee, initial encounter
S83.91XD	Sprain of unspecified site of right knee, subsequent encounter
S83.91XS	Sprain of unspecified site of right knee, sequela
S83.92XA	Sprain of unspecified site of left knee, initial encounter
S83.92XD	Sprain of unspecified site of left knee, subsequent encounter
S83.92XS	Sprain of unspecified site of left knee, sequela
S93.401A	Sprain of unspecified ligament of right ankle, initial encounter
S93.401D	Sprain of unspecified ligament of right ankle, subsequent encounter
S93.401S	Sprain of unspecified ligament of right ankle, sequela
S93.402A	Sprain of unspecified ligament of left ankle, initial encounter
S93.402D	Sprain of unspecified ligament of left ankle, subsequent encounter
S93.402S	Sprain of unspecified ligament of left ankle, sequela

Considered Not Medically Necessary:

ICD-10-CM Diagnosis Codes	Description
	All other codes

Acupuncture Point Injection

Considered Experimental, Investigational and/or Unproven when used to report acupuncture point injection therapy:

CPT®* Codes	Description
20550	Injection(s); single tendon sheath, or ligament, aponeurosis (eg, plantar "fascia")
20551	Injection(s); single tendon origin/insertion
20552	Injection(s); single or multiple trigger point(s), 1 or 2 muscle(s)
20553	Injection(s); single or multiple trigger point(s), 3 or more muscle(s)

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