Coverage Guidelines

Ultrasound Guided Needle Placement

Disclaimer:
Please note that Baptist Health Plan updates Coverage Guidelines throughout the year. A printed version may not be the most up to date version available. The health plan reserves the right to review and update this policy as needed. Refer to the website to ascertain that you are utilizing the most current available version. Clinical guideline policies are not intended to serve as treatment guidelines or treatment recommendation. Treating providers must use their own clinical judgment in rendering care to their patient population.

DEFINITION

Sonographic imaging, or ultrasound (US), can guide large-bore needle biopsy and/or fine-needle aspiration (FNA) to aid differentiation between malignant and benign lesions that are not clearly categorized on clinical or routine radiographic examination. It can also facilitate access and pharmacologic therapy to body cavities afflicted by disease (e.g., percutaneous drainage with follow-on injection of intra-abdominal abscess with antibiotic irrigation).

The goal of US-guided biopsy is to provide adequate tissue sample to the pathologist for clear diagnosis without the morbidity and expense associated with an open biopsy. In some cases needle biopsy can facilitate treatment discussion by providing the patient and attending physician with a diagnosis prior to formal surgical intervention under anesthesia, where patient preference and choice is compromised or impossible. Oftentimes the US-guided procedure can be performed with local anesthesia as an outpatient procedure in the office or clinic, reducing the financial and facilities burden on both the patient and the healthcare system. Finally, US-guided technique may obviate the need for more-invasive methods of treatment delivery, and reduce morbidity and mortality with equal or superior efficacy and patient safety.

COVERAGE CRITERIA

Baptist Health Plan considers the use of US-guided needle technique to be clinically proven and therefore medically necessary for, but not limited to, the following indications:

- Breast mass
- Thyroid nodule
- Prostate nodule or elevated prostate specific antigen (PSA)
- Pancreatic mass
- Hepatic mass
- Pulmonary or thoracic mass
• Intra-abdominal or intra-pelvic mass
• Soft tissue mass (including lymphadenopathy and head/neck conditions)
• Nephro-cutaneous access
• Intra-thecal drug delivery
• Peripheral nerve block
• Sclerotherapy
• Intravenous and arterial line placement
• Embryonic transfer (for plans that have infertility benefits)

Baptist Health Plan considers the use of US-guided needle technique to be investigational and therefore not medically necessary for, but not limited to, the following indications:

• Administration of Botulinum toxin type-A (Botox-A® and Myobloc®)
• Intra-articular injection of the upper and lower extremities, shoulders and pelvis
• Intramuscular and subcutaneous trigger-point injection
• Fascial and soft tissue injection including plantar fasciitis, Carpal tunnel syndrome and neuroma.

Baptist Health Plan considers all other uses of US-guided needle technique to be investigational and therefore not medically necessary.

**MEDICAL BACKGROUND**

There is substantial evidence that US-guided biopsy techniques are effective for evaluating lesions that are suspicious for malignancy. Indeed, the data indicate that US-guided technique is equivalent or superior to other minimally-invasive biopsy methods, including stereotactic localization. The reported accuracy rates for US-guided biopsy are high and there is evidence that use of these biopsy techniques may have a positive impact on patient management and may reduce the frequency of unnecessary surgery in patients with benign lesions.

The accuracy of FNA is generally lower than that of large-bore needle biopsy techniques, even when US-guidance is available. For many clinicians FNA is reserved for the diagnosis of cystic lesions where the fluid transudate may be examined cytologically by automated or manual means.

Randomized trials and observational studies in children and adults have found that real-time ultrasound imaging during needle placement reduces time to venous cannulation and reduces the risk of complications during central venous and peripheral venous access. The level of benefit varies depending upon operator skill and the anatomic site.

The efficacy of delivery methods using needle placement guided by US for lumbar facet injection of the spine has not been unequivocally established; but there is no doubt of benefit of safety with regard to diminished time of exposure to radiation for both provider and patient when US-guided technique is employed.

A systematic review (n=461) and meta-analysis studied the efficacy and safety of endobronchial ultrasonography plus fluoroscopically-guided transbronchial biopsy (EBUS + TBB) with that of conventional fluoroscopically-guided TBB for peripheral pulmonary lesions (PPLs). The groups broke down as 222 in the EBUS + TBB group and 239 in the TBB only group. The meta-analysis revealed that the group with EBUS + TBB was more favored in terms of positive diagnostic yield than the group diagnosed with only conventional TBB (odds ratio [OR] = 2.211, 95% confidence interval [CI] = 1.422-3.438, P < 0.001). Subgroup analysis based on lesion size

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found that smaller PPLs had higher accuracy (OR = 4.502, 95% CI = 2.002-10.126, P < 0.001) than PPLs of large size (OR = 1.849, 95% CI = 1.033-3.311, P = 0.039). The authors concluded that obtaining TBB samples for histopathological diagnosis is enhanced by the addition of EBUS to conventional fluoroscopic guidance; and that this is especially important for patients with small peripheral lung lesions who benefit greatly from early diagnosis.

A retrospective review (n=81) noted reduced complication rates of ultrasound guided percutaneous transhepatic biliary drainage (US-PTBD) as opposed to standard fluoroscopically assisted percutaneous transhepatic biliary drainage (F-PTBD). The authors found that US-PTBD was technically successful in 94% of attempts with a mean of 2.2 needle passes. Procedural success was achieved in 86% of cases. There were no procedure-related deaths or severe complications. Minor complications were catheter dislodgement (15%) as well as one case each of a porto-biliary fistula, hematoma, and biloma. A systematic review of the literature by the same authors also showed that US-PTBD has a similar technical success rate to F-PTBD but lower median rates of severe early complications (0% versus 8%) and procedural death (0% versus 1%). They concluded that US-PTBD is as effective as F-PTBD and has significantly lower complication rates.

A systematic review evaluated the surgical management of complex intra-abdominal infection (i.e., infection originating from abdominal or pelvic sources) with regard to imaging and other diagnostic modalities including novel techniques in percutaneous and endoscopic source control. The authors opined that logistical challenges relating to rapid access to cross-sectional imaging, interventional radiology and operating theaters have to date confounded international consensus on management of such infections.

A systematic review examined ultrasound-guided technique in cases of difficult peripheral venous access among adult patients and pediatric patients in Taiwan. Ultrasound-guided technique was found to improve the success rate of intravenous access significantly (OR = 3.00, p < .0001) and to decrease the number of attempts to access the venous system (MD = -0.61, p = .03) in the overall group of difficult intravenous-access patients. Subgroup analysis found a significantly improved success rate and decreased number of attempts in difficult intravenous-access adult patients and significantly decreased procedural times in difficult intravenous-access pediatric patients. The authors posited that ultrasound-guided technique may improve the efficacy of attempts at intravenous access by helping health care professionals visualize the peripheral veins.

A systematic review (n=2919) and meta-analysis compared the safety and efficacy of fluoroscopy versus ultrasound guidance in creating percutaneous access to the renal collecting system to treat nephrolithiasis. There was no significant difference in stone-free rate (RR: 1.0; 95% CI, 0.98 to 1.05; p = 0.41), operation time (MD: 1.75; 95% CI, -9.15 to 12.65; p = 0.75), hospital stay (MD: -1.02; 95% CI, -3.08 to 1.05; p = 0.34), and success rate of tract creation (RR: 1.00; 95% CI, 0.98-1.02; p = 0.88) between ultrasonography and fluoroscopy. Compared to fluoroscopy, ultrasonography had shorter puncture time (MD: -4.71; 95% CI, -6.43 to -3.0; p < 0.0001), higher success rate of fist puncture (RR: 1.16; 95% CI, 1.04 to 1.3; p = 0.01), less blood loss (MD: -0.42, 95% CI -0.81 to -0.02; p = 0.04), and less transfusion requirement (RR: 0.73; 95% CI, 0.33-1.6; p = 0.44). Two patients in each group experienced perforation of the renal pelvis. Five patients in fluoroscopy and two in ultrasonography group had pneumothorax. One patient in the fluoroscopy group had intestinal injury. The authors concluded that both fluoroscopy and ultrasound guidance can aid to obtain successful percutaneous renal access; but the advantages of ultrasonography over fluoroscopy include shorter puncture time, higher success rate of fist puncture, less blood loss, and fewer complications.

The United Kingdom national multidisciplinary guidelines for management of thyroid cancer...
indicate that ultrasound scanning (USS) of the nodule or goiter is a crucial maneuver in guiding fine needle aspiration cytology (FNAC). FNAC should be considered for all nodules with suspicious ultrasound features. If a nodule is smaller than 10 mm in diameter, USS guided FNAC is not recommended unless clinically suspicious lymph nodes on USS are also present. The group also recommends that ultrasound scanning assessment of cervical nodes should be done in FNAC-proven cancer. In patients with thyroid cancer, assessment of extrathyroidal extension and lymph node disease in the central and lateral neck compartments should be undertaken pre-operatively by USS and cross-sectional imaging (CT or MRI) if indicated.

A systematic review (n=9313) of intravascular ultrasound (IVUS) found the use of this technology improves clinical outcomes during implantation of first- and second-generation drug-eluting stents (DES); but it is unknown whether this benefit is limited to either first- or second-generation devices. First-generation DES were implanted in 6,156 patients (3,064 IVUS-guided and 3,092 angiography-guided) and second-generation in 3,157 patients (1,528 IVUS-guided and 1,629 angiography-guided). IVUS guidance was associated with a significant reduction in MACE (odds ratio [OR] 0.73, 95% CI: 0.64-0.85, p<0.001), across both first- (OR 0.79, 95% CI: 0.67-0.92, p=0.01) and second-generation DES (0.57, 95% CI: 0.43-0.77, p<0.001). For second-generation DES, IVUS guidance was associated with significantly lower rates of cardiac death (OR 0.33, 95% CI: 0.14-0.78, p=0.02), TVR (OR 0.47, 95% CI: 0.28-0.79, p=0.006), TLR (OR 0.61, 95% CI: 0.42-0.90, p=0.01) and ST (OR 0.31, 95% CI: 0.12-0.78, p=0.02). Cumulative meta-analysis highlighted progressive temporal benefit towards IVUS-guided PCI to reduce MACE (OR 0.60, 95% CI: 0.48-0.75, p<0.001).

A systematic review provided additional medical evidence supporting the clinical use of IVUS-guided DES implantation, including randomized trials, observational studies, and meta-analyses of both. IVUS provides cross-sectional views of the coronary artery wall, and facilitated assessments of stenosis severity, plaque morphology, stent implantation, and causes of stent failure. The authors concluded that IVUS guidance can increase DES efficacy and decrease clinical events.

A systematic review (n=441) sought to assess first attempt success rates and complication rates when ultrasound guidance is used for arterial line placement in the pediatric population, as compared with traditional techniques (palpation, Doppler auditory assistance) at all potential sites for arterial cannulation (left or right radial, ulnar, brachial, femoral or dorsalis pedis artery). Meta-analysis showed that ultrasound guidance produces superior success rates at first attempt (risk ratio (RR) 1.96, 95% confidence interval (CI) 1.34 to 2.85, 404 catheters, four RCTs, moderate-quality evidence) and fewer complications, such as hematoma formation (RR 0.20, 95% CI 0.07 to 0.60, 222 catheters, two RCTs, moderate-quality evidence). The results suggest, but do not confirm, that a possible advantage of ultrasound guidance for the first attempt success rate over other techniques is more pronounced in infants and small children than in older children. Similarly, these results suggest, but do not confirm, the possibility of a positive influence of expertise in the use of ultrasound on the first attempt success rate. There was improved success rates within two attempts (RR 1.78, 95% CI 1.25 to 2.51, 134 catheters, two RCTs, moderate-quality evidence) with ultrasound guidance compared with other types of guidance. No studies reported data about ischemic damage. The quality of evidence for all outcomes was moderate owing to imprecision due to wide confidence intervals, modest sample sizes and limited numbers of events.

A systematic review outlined the medical evidence for the use of contrast-harmonic EUS (CH-EUS) in routine clinical practice according to different pathologic conditions. For pancreatic solid neoplasms, the pooled sensitivity and specificity in the diagnosis of pancreatic carcinoma were very high; quantitative analysis and guidance of FNA were reported as investigational research. For pancreatic cystic lesions, the identification of neoplastic solid components as
hyperenhanced lesions represented a promising application of CH-EUS. For lymph nodes, CH-EUS increased the diagnostic yield of B-mode EUS for the detection of malignancy. For submucosal tumors, CH-EUS seemed useful for differential diagnosis and risk stratification. For other applications, differential diagnosis of gallbladder and vascular abnormalities by CH-EUS were reported. The authors opined that the differential diagnosis between benign and malignant lesions is the main field of application of CH-EUS. With regard to pancreatic solid neoplasms, the concomitant use of both CH-EUS and EUS-FNA may have additive value in increasing the overall accuracy by overcoming the false-negative results associated with each individual technique.

A narrative review highlighted point-of-care ultrasound as a prevalent diagnostic and guidance technology used in pediatric emergency departments that is cost-effective, safe for unstable patients, and easily repeatable as a patient’s clinical status changes. Point-of-care ultrasound does not expose the patient to ionizing radiation and may care ultrasound in pediatric emergency medicine is relatively new, the body of literature evaluating its utility is small, but growing. Data from adult emergency medicine, radiology, critical care, and anesthesia evaluating the utility of ultrasound guidance must be extrapolated to pediatric emergency medicine.

A systematic review assessed the clinical efficacy of ultrasound-guided vs. landmark-based techniques to perform ilioinguinal/iliohypogastric (II/IH) nerve and transversus abdominus plane (TAP) blocks in patients undergoing open inguinal surgery. Ultrasound-guided II/IH nerve or TAP blocks were associated with a reduced use of intraoperative additional analgesia and a significant reduction of pain scores during day-stay. The use of rescue drugs was also significantly lower in the ultrasound-guided group. The authors concluded that the use of ultrasound-guidance to perform an II/IH nerve or a TAP block was associated with improved perioperative analgesia in patients following open inguinal surgery compared to landmark-based methods.

A narrative review noted that CT-guided percutaneous drainage is a minimally invasive procedure that allows for accurate diagnosis and therapy with minimal complications. The drawback is that CT guidance carries a significant amount of radiation exposure. CT-guided percutaneous drainage techniques have been widely used in adults and have been gaining momentum within the pediatric population. A thorough understanding of the risks associated in the additive radiation exposure to children is still not completely formed.

A systematic review (n=6218) assessed ultrasound-guided embryo transfer (UGET) compared with 'clinical touch' (CTET), the latter defined as the clinician’s tactile senses employed to judge when the transfer catheter is in the correct position. UGET was associated with an increased chance of a live birth/ongoing pregnancy compared with CTET (OR 1.47, 95% CI 1.30 to 1.65; 13 trials; n = 5859 women; I(2) = 74%; low-quality evidence). Sensitivity analysis by including only trials with low risk of selection bias or by using a random-effects model did not alter the effect. We estimate that for women with a chance of a live birth/ongoing pregnancy of 23% using CTET, this would increase to between 28% and 33% using UGET. The evidence using GRADE methodology was adjudged to be low. UGET was associated with an increase in the chance of a clinical pregnancy (OR 1.31, 95% CI 1.17 to 1.45; 20 trials; n = 6711 women; I(2) = 42%; moderate-quality evidence). There were no identified differences between groups for the incidence of adverse events including multiple pregnancy, ectopic pregnancy, or miscarriage. The evidence suggests ultrasound guidance improves the chance of live birth/ongoing and clinical pregnancies compared with clinical touch, without increasing the chance of multiple pregnancy, ectopic pregnancy, or miscarriage.

A prospective trial examined US guidance for axillary brachial plexus block (AXB) in 2042
patients: 1157 patients underwent AXB using US guidance (US group) and the control group included 885 patients (246 patients using traditional approach (TRAD) and 639 patients using nerve stimulation (NS)). Analysis showed that the success rate was higher in the US group compared to the control group (90.64% vs. 82.21%, p<0.00001). The average time to perform the block and the onset of sensory time were shorter in the US group than the controlled group. The authors concluded that real-time ultrasound guidance for axillary brachial plexus block improves the success rate and reduces the mean time to onset of anesthesia.

A systematic review (n=1241) sought to determine whether ultrasound guidance offers any clinical advantage when neuraxial and peripheral nerve blocks are performed in children in terms of increasing the success rate or decreasing the rate of complications. In 14 studies (939 participants), ultrasound guidance increased the success rate by decreasing the occurrence of a failed block: risk difference (RD) -0.11 (95% confidence interval (CI) -0.17 to -0.05); I(2) = 64%; number needed for additional beneficial outcome for a peripheral nerve block (NNTB) 6 (95% CI 5 to 8). Blocks were performed under general anesthesia (usual clinical practice in this population); therefore, hemodynamic changes to the surgical stimulus (rather than classic sensory/motor blockade evaluation) were used to define success. For peripheral nerve blocks, the younger the child, the greater was the benefit. In eight studies (414 participants), pain scores at one hour in the post-anesthesia care unit were reduced when ultrasound guidance was used; however, the clinical relevance of the difference was unclear (equivalent to -0.2 on a scale from 0 to 10). In eight studies (358 participants), block duration was longer when ultrasound guidance was used: standardized mean difference (SMD) 1.21 (95% CI 0.76 to 1.65; I(2) = 73%; equivalent to 62 minutes). Younger children benefited most from ultrasound guidance. Time to perform the procedure was reduced when ultrasound guidance was used for pre-scanning before a neuraxial block (SMD -1.97, 95% CI -2.41 to -1.54; I(2) = 0%; equivalent to 2.4 minutes; two studies with 122 participants) or as an out-of-plane technique (SMD -0.68, 95% CI -0.96 to -0.40; I(2) = 0%; equivalent to 94 seconds; two studies with 204 participants). In two studies (122 participants), ultrasound guidance reduced the number of needle passes required to perform the block (SMD -0.90, 95% CI -1.27 to -0.52; I(2) = 0%; equivalent to 0.6 needle pass per participant). For two studies (204 participants), the authors could not demonstrate a difference in the incidence of bloody puncture when ultrasound guidance was used for neuraxial blockade, but found that the number of participants was well below the optimal information size (RD -0.07, 95% CI -0.19 to 0.04). No major complications were reported for any of the 1241 participants. The quality of evidence was adjudged as high for success, pain scores at one hour, block duration, time to perform the block and number of needle passes. The authors concluded that US guidance seems advantageous, particularly in young children, for whom it improves the success rate and increases the block duration.

A clinical trial studied ultrasound guidance (USG) for lower-extremity peripheral nerve blocks in comparison with other peripheral nerve localization techniques and those that compared different ultrasound-guided techniques investigating optimal perineural local anesthetic distribution patterns. Analysis of the literature supported the use of USG for decreased block performance time, decreased block onset time, increased rate of complete sensory block, and increased analgesic efficacy. Ultrasound was never inferior to peripheral nerve stimulation.

A systematic review (n=202) assessed the comparative effectiveness of ultrasound-guided (USG) versus computed tomography (CT)/fluoroscopy-guided lumbar facet joint injections in adults. There was no statistically significant difference between the 2 groups in pain score and Modified Oswestry Disability score after injection (weighted mean difference [WMD] -0.07; 95% confidence interval [CI], -0.51 to 0.65; P=.80; I(2)=78%; WMD, -0.55; 95% CI, -1.31 to .22; P=.16; I(2)=0%, respectively). There was also no statistically significant difference in the mean procedure duration between the 2 groups (standardized mean difference [SMD], .97; 95% CI,
1.01 to 2.94; P=.34; I(2)=97%). The authors reported that no significant differences in pain and functional improvement were noted between the USG and CT-/fluoroscopy-guided techniques in facet joint injection; and that USG injection is feasible and minimizes exposure of radiation to patients and practitioners in the lumbar facet joint injection process.

A systematic review (n = 5647) and meta-analysis examined the sensitivity and specificity of FNA under USG in distinguishing benign from malignant parotid disease. The I(2) point estimate was >70% for all analyses, except within prospectively obtained and ultrasound-guided results. Among the prospective subgroup, the pooled analysis demonstrated a sensitivity of 0.882 (95% confidence interval [95% CI], 0.509-0.982) and a specificity of 0.995 (95% CI, 0.960-0.999). The probabilities of nondiagnostic and indeterminate cytology were 0.053 (95% CI, 0.030-0.075) and 0.147 (95% CI, 0.106-0.188), respectively. The authors concluded that FNA has moderate sensitivity and high specificity in differentiating malignant from benign parotid lesions. Considerable heterogeneity is present.

UpToDate rightfully observes that establishing venous access is critically important and is sometimes technically challenging. Among the many indications for bedside ultrasound, ultrasound-guided venous catheter placement is well described and increasingly used.

Ultrasound-guided venous access is indicated in any patient for whom central vascular access via the internal jugular vein or femoral vein is necessary when equipment and operator expertise is available. Static vein localization and/or dynamic ultrasound guidance is also helpful for identifying or confirming a patent vein site prior to central vein catheter or peripherally-inserted central catheter (PICC) placement, or for establishing peripheral intravenous access in adults and children when difficulty is expected or when the traditional blind technique has failed.

A Hayes Rating of A (established benefit) has been assigned to US-guided needle biopsy or similar large-gauge needle biopsy technique for diagnosis of breast cancer in patients with suspicious or equivocal nonpalpable or palpable masses on mammograms or US scans that require histological evaluation.

A Hayes Rating of B (some proven benefit) has been assigned to US-guided FNAB for diagnosis of breast cancer in patients with suspicious or equivocal nonpalpable or palpable masses on mammograms or US scans that require histological evaluation. This Rating reflects the evidence regarding use of US-guided FNAB for solid lesions; the evidence regarding the use of FNAB for diagnosis of cystic lesions, which are frequently benign, has not been specifically reviewed in this technology assessment report.

A Hayes Rating of C (potential but unproven benefit) has been assigned for men suspected of having prostate cancer based on an elevated prostate-specific antigen (PSA) level and/or enlarged prostate. This Rating reflects evidence suggesting that magnetic resonance imaging and transrectal ultrasound (MRI-TRUS) fusion-guided biopsy may detect more clinically significant cancers and fewer clinically insignificant cancers compared with standard biopsy, but not MRI in-bore biopsy, as well as remaining uncertainties regarding optimal methodology, definition of clinical significance, patient selection criteria, and outcomes related to clinical utility.

A Hayes Rating of C (potential but unproven benefit) has been assigned for men suspected of having prostate cancer based on MRI-suspicious lesions. This Rating reflects evidence suggesting that MRI-TRUS fusion-guided biopsy may detect more clinically significant cancers and fewer clinically insignificant cancers compared with standard biopsy, as well as remaining uncertainties regarding optimal methodology, definition of clinical significance, patient selection criteria, and outcomes related to clinical utility.
REGULATORY INFORMATION

Kentucky – No statutory requirements were found for the use of US-guided needle technique beyond those of professional licensure.

Indiana – No statutory requirements were found for the use of US-guided needle technique beyond those of professional licensure.

Tennessee – No statutory requirements were found for the use of US-guided needle technique beyond those of professional licensure.

Center for Medicare and Medicaid Services (CMS) National Coverage Determination (NCD):


"Ultrasound diagnostic procedures utilizing low energy sound waves are being widely employed to determine the composition and contours of nearly all body tissues except bone and air-filled spaces. This technique permits noninvasive visualization of even the deepest structures in the body. The use of the ultrasound technique is sufficiently developed that it can be considered essential to good patient care in diagnosing a wide variety of conditions.

Ultrasound diagnostic procedures are listed below and are divided into two categories. Medicare coverage is extended to the procedures listed in Category I. Periodic claims review by the A/Medicare Administrative Contractor (A/MAC) medical consultants should be conducted to ensure that the techniques are medically appropriate and the general indications specified in these categories are met. Techniques in Category II are considered experimental and should not be covered at this time.

Indications and Limitations of Coverage

Nationally Covered Indications

Category I - (Clinically effective, usually part of initial patient evaluation, may be an adjunct to radiologic and nuclear medicine diagnostic technique)

Echoencephalography, (Diencephalic Midline) (A-Mode).

Echoencephalography, Complete (Diencephalic Midline and Ventricular Size).

Ocular and Orbital Sonography (A-Mode).

Covered procedures include efforts to determine the suitability of aphakic patients for implantation of an artificial lens (pseudophakoi) following cataract surgery.

Ocular and Orbital Sonography (B-Mode).

Echocardiography, Pericardial Effusion (M-Mode).

Pericardiocentesis, by Ultrasonic Guidance.

Echocardiography, Cardiac Valve(s) (M-Mode).

Echocardiography, Complete (M-Mode).

Echocardiography, limited (e.g., follow-up or limited study) (M-Mode).

Pleural Effusion Echography.
Thoracentesis, by Ultrasonic Guidance.
Abdominal Sonography, complete survey study (B-Scan).
Abdominal Sonography, limited (e.g., follow-up or limited study) (B-Scan).
Abdominal Sonography is not synonymous with ultrasound examination of individual organs.
Renal Cyst Aspiration, by Ultrasonic Guidance.
Renal Biopsy, by Ultrasonic Guidance.
Pancreas Sonography (B-Scan).
Pancreatic Sonography has proven effective in diagnosing pseudocysts.
Spleen Sonography (B-Scan).
Abdominal Aorta Echography (A-Mode).
Abdominal Aorta Sonography (B-Scan).
Retroperitoneal Sonography (B-Scan).
Retroperitoneal Sonography does not include planning of fields for radiation therapy.
Urinary Bladder Sonography (B-Scan).
Urinary bladder Sonography does not include staging of bladder tumors.
Pregnancy Diagnosis Sonography (B-Scan).
Fetal Age Determination (Biparietal Diameter) Sonography (B-Scan).
Fetal Growth Rate Sonography (B-Scan).
Placenta Localization Sonography (B-Scan).
Pregnancy Sonography, Complete (B-Scan).
Molar Pregnancy Diagnosis Sonography (B-Scan).
Ectopic Pregnancy Diagnosis Sonography (B-Scan).
Passive Testing (Antepartum Monitoring of Fetal Heart Rate In the Resting Fetus).
Intrauterine Contraceptive Device Sonography (B-Scan).
Pelvic Mass Diagnosis Sonography (B-Scan).
Amniocentesis, by Ultrasonic Guidance.
Arterial Flow Study, Peripheral (Doppler).
Venous Flow Study, Peripheral (Doppler).
Arterial Aneurysm, Peripheral (B-Scan).
Radiation Therapy Planning Sonography (B-Scan).
Thyroid Echography (A-Mode).
Thyroid Sonography (B-Scan).
Breast Echography (A-Mode).
Breast Sonography (B-Scan).
Hepatic Sonography (B-Scan).
Gallbladder Sonography.
Renal Sonography.
Two-Dimensional Echocardiography (B-Mode).
Monitoring of cardiac output (Esophageal Doppler) for ventilated patients in the ICU and operative patients with a need for intra-operative fluid optimization."

**COVERAGE DETAIL**

For self-funded plans, consult individual plan documents. If there is a conflict between this policy and a self-funded plan document, the provisions of the plan document will govern. In addition, coverage for Medicare Advantage members may differ. This is a result of applicable coverage statements by the Center for Medicare and Medicaid Services (CMS). The National Coverage Determinations, Local Coverage Determinations, and Local Medical Review Policies may be found at the CMS website, http://www.cms.gov. Please note that for all plans, the member’s health plan benefits that are in effect on the rendered date of service must be used in coverage determinations.

**CODES INCLUDE BUT MAY NOT BE LIMITED TO THE FOLLOWING**

<table>
<thead>
<tr>
<th>CPT Codes</th>
<th>Description</th>
<th>Coverage Information</th>
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<tbody>
<tr>
<td>01991</td>
<td>Anesthesia for diagnostic or therapeutic nerve blocks and injections (when block or injection is performed by a different physician or other qualified health care professional); other than the prone position</td>
<td>Appropriate as an integral part of a medically necessary anesthetic procedure (no further reimbursement). May be medically necessary when criteria are met for other outpatient nerve block indications.</td>
</tr>
<tr>
<td>01992</td>
<td>Anesthesia for diagnostic or therapeutic nerve blocks and injections (when block or injection is performed by a different physician or other qualified health care professional); prone position</td>
<td>Appropriate as an integral part of a medically necessary anesthetic procedure (no further reimbursement). May be medically necessary when criteria are met for other outpatient nerve block</td>
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<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Indications</th>
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<tbody>
<tr>
<td>10022</td>
<td>Fine needle aspiration; with imaging guidance</td>
<td>May be medically necessary for breast, pancreas, prostate and thyroid cancer diagnosis, when criteria are met. <strong>Not medically necessary and/or experimental/investigational for common benign cystic lesions</strong></td>
</tr>
<tr>
<td>19083</td>
<td>Biopsy, breast, with placement of breast localization device(s)(eg, clip, metallic pellet), when performed, and imaging of the biopsy specimen, when performed, percutaneous; first lesion, including ultrasound guidance</td>
<td>May be medically necessary when criteria are met</td>
</tr>
<tr>
<td>19084</td>
<td>Biopsy, breast, with placement of breast localization device(s)(eg, clip, metallic pellet), when performed, and imaging of the biopsy specimen, when performed, percutaneous; each additional lesion, including ultrasound guidance (list separately in addition to code for primary procedure)</td>
<td>May be medically necessary when criteria are met</td>
</tr>
<tr>
<td>19285</td>
<td>Placement of breast localization device(s)(eg, clip, metallic pellet, wire/needle, radioactive seeds), percutaneous; first lesion, including ultrasound guidance</td>
<td>May be medically necessary when criteria are met</td>
</tr>
<tr>
<td>19286</td>
<td>Placement of breast localization device(s)(eg, clip, metallic pettet, wire/needle, radioactive seeds), percutaneous; each additional lesion, including ultrasound guidance (list separately in addition to code for primary procedure)</td>
<td>May be medically necessary when criteria are met</td>
</tr>
<tr>
<td>20552</td>
<td>Injection(s); single or multiple trigger point(s), 1 or 2 muscle(s)</td>
<td>US guidance for trigger point injection for myofascial pain syndromes is not medically necessary and/or experimental/investigational</td>
</tr>
<tr>
<td>20553</td>
<td>Injection(s); single or multiple trigger point(s), 3 or more muscle(s)</td>
<td>US guidance for trigger point injection for myofascial pain syndromes is not medically necessary and/or experimental/investigational</td>
</tr>
<tr>
<td>Code</td>
<td>Description</td>
<td>Investigational</td>
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<tr>
<td>36475</td>
<td>Endovenous ablation therapy of incompetent vein, extremity, inclusive of all imaging guidance and monitoring, percutaneous, radiofrequency; first vein treated</td>
<td>May be medically necessary when criteria are met for the treatment of varicose veins</td>
</tr>
<tr>
<td>36476</td>
<td>Endovenous ablation therapy of incompetent vein, extremity, inclusive of all imaging guidance and monitoring, percutaneous, radiofrequency; second and subsequent veins treated in a single extremity, each through separate access sites (list separately in addition to code for primary procedure)</td>
<td>May be medically necessary when criteria are met for the treatment of varicose veins</td>
</tr>
<tr>
<td>36478</td>
<td>Endovenous ablation therapy of incompetent vein, extremity, inclusive of all imaging guidance and monitoring, percutaneous, laser; first vein treated</td>
<td>May be medically necessary when criteria are met for the treatment of varicose veins</td>
</tr>
<tr>
<td>36479</td>
<td>Endovenous ablation therapy of incompetent vein, extremity, inclusive of all imaging guidance and monitoring, percutaneous, laser; second and subsequent veins treated in a single extremity, each through separate access sites (list separately in addition to code for primary procedure)</td>
<td>May be medically necessary when criteria are met for the treatment of varicose veins</td>
</tr>
<tr>
<td>48100</td>
<td>Biopsy of pancreas, open (eg, fine needle aspiration; needle core biopsy, wedge biopsy)</td>
<td>May be medically necessary when criteria are met for endoscopic ultrasound guided FNAB for pancreatic cancer</td>
</tr>
<tr>
<td>48102</td>
<td>Biopsy of pancreas, percutaneous needle</td>
<td>May be medically necessary when criteria are met for endoscopic ultrasound guided FNAB for pancreatic cancer</td>
</tr>
<tr>
<td>55700</td>
<td>Biopsy, prostate; needle or punch, single or multiple, any approach</td>
<td>May be medically necessary when criteria are met for transrectal ultrasound guided biopsy of the prostate</td>
</tr>
<tr>
<td>55705</td>
<td>Biopsy, prostate; incisional, any approach</td>
<td>May be medically necessary when criteria are met for</td>
</tr>
<tr>
<td>Code</td>
<td>Description</td>
<td>Medical Necessity Details</td>
</tr>
<tr>
<td>------</td>
<td>-----------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>55706</td>
<td>Biopsies, prostate, needle, transperineal, stereotactic template guided saturation sampling, including imaging guidance</td>
<td>Not medically necessary or experimental / investigational for initial transrectal ultrasound guided prostate saturation biopsy, consisting of at least 20 core samples taken at the same time</td>
</tr>
<tr>
<td>64600-64681</td>
<td>Destruction by neurolytic agent (eg, chemical, thermal, electrical or Radiofrequency), chemodenervation (Fluoroscopy guidance for needle placement is included in these codes)</td>
<td>Not medically necessary and/or experimental/investigational for US guidance for Botulinum toxin type A (Botox-A).</td>
</tr>
<tr>
<td>76872</td>
<td>Ultrasound, transrectal</td>
<td>May be medically necessary for diagnosis of prostate cancer, when criteria are met</td>
</tr>
<tr>
<td>76937</td>
<td>Ultrasound guidance for vascular access requiring ultrasound evaluation of potential access sites, documentation of selected vessel patency, concurrent real-time ultrasound visualization of vascular needle entry, with permanent recording and reporting (list separately in addition to code for primary procedure)</td>
<td>May be medically necessary when criteria are met.</td>
</tr>
<tr>
<td>76942</td>
<td>Ultrasonic guidance for needle placement (eg, biopsy, aspiration, injection, localization device), imaging supervision and interpretation</td>
<td>May be medically necessary when criteria are met. <strong>Not medically necessary and/or experimental/investigational for any therapeutic joint injection indication</strong></td>
</tr>
<tr>
<td>95990</td>
<td>Refilling and maintenance of implantable pump or reservoir for drug delivery, spinal (intrathecal, epidural) or brain (intraventricular), includes electronic analysis of pump, when performed;</td>
<td>Ultrasound guidance for intrathecal drug delivery systems refills is <strong>not medically necessary</strong></td>
</tr>
<tr>
<td>ICD.9® Procedure Codes</td>
<td>Description</td>
<td>Coverage Information</td>
</tr>
<tr>
<td>------------------------</td>
<td>------------------------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>06.11</td>
<td>Closed [percutaneous][needle] biopsy of thyroid gland</td>
<td>May be medically necessary when criteria are met (thyroid nodules)</td>
</tr>
<tr>
<td></td>
<td>Aspiration biopsy of thyroid</td>
<td></td>
</tr>
<tr>
<td>39.92</td>
<td>Injection of sclerosing agent into vein</td>
<td>May be medically necessary when criteria are met for ultrasound guided foam sclerotherapy (UGFS) of varicose veins</td>
</tr>
<tr>
<td>52.11</td>
<td>Closed [aspiration] [needle] [percutaneous] biopsy of pancreas</td>
<td>May be medically necessary when criteria are met (pancreatic cancer)</td>
</tr>
<tr>
<td>60.11</td>
<td>Closed [percutaneous] [needle] biopsy of prostate</td>
<td>May be medically necessary when criteria are met (prostate cancer)</td>
</tr>
<tr>
<td></td>
<td>Approach: transrectal, transurethral</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Punch biopsy</td>
<td></td>
</tr>
<tr>
<td>85.11</td>
<td>Closed [percutaneous][needle] biopsy of breast</td>
<td>May be medically necessary when criteria are met</td>
</tr>
<tr>
<td>ICD.9® Diagnosis Codes</td>
<td>Description</td>
<td>Coverage Information</td>
</tr>
<tr>
<td>------------------------</td>
<td>------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>157.0-157.9</td>
<td>Malignant neoplasm of pancreas</td>
<td>May be medically necessary when criteria are met</td>
</tr>
<tr>
<td>174.0-174.9</td>
<td>Malignant neoplasm of female breast</td>
<td>May be medically necessary when criteria are met</td>
</tr>
<tr>
<td>185</td>
<td>Malignant neoplasm of pancreas</td>
<td>May be medically necessary when criteria are met</td>
</tr>
<tr>
<td>193</td>
<td>Malignant neoplasm of thyroid gland</td>
<td>May be medically necessary when criteria are met</td>
</tr>
<tr>
<td>241.0</td>
<td>Nontoxic uninodular goiter</td>
<td>May be medically necessary when criteria are met</td>
</tr>
<tr>
<td>354.0</td>
<td>Carpal tunnel syndrome</td>
<td>May be medically necessary when criteria are met</td>
</tr>
<tr>
<td>355.6</td>
<td>Lesion of plantar nerve</td>
<td>Not medically necessary and/or experimental/investigational</td>
</tr>
<tr>
<td>454.0-454.9</td>
<td>Varicose veins of lower extremities</td>
<td>May be medically necessary when criteria are met</td>
</tr>
</tbody>
</table>

Criteria are met (suspicious breast lesions, lumps and cancer)

May be medically necessary when criteria are met (suspicious breast lesions)

May be medically necessary when criteria are met (suspicious lesions of other parts of the body such as pancreas, prostate, thyroid)

May be medically necessary when criteria are met

May be medically necessary when criteria are met

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<table>
<thead>
<tr>
<th>ICD.10 Codes</th>
<th>Description</th>
<th>Coverage Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>728.71</td>
<td>Plantar fascial fibromatosis, contracture of plantar fascia, plantar fasciitis (traumatic)</td>
<td>Not medically necessary and/or experimental/investigational</td>
</tr>
<tr>
<td>729.1</td>
<td>Myalgia and myositis, unspecified (Myofascial pain syndrome)</td>
<td>Not medically necessary and/or experimental/investigational</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ICD.10 Codes</th>
<th>Description</th>
<th>Coverage Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>C25.0-C25.9</td>
<td>Malignant neoplasm of pancreas</td>
<td>May be medically necessary when criteria are met</td>
</tr>
<tr>
<td>C50.011-C50.929</td>
<td>Malignant neoplasm of breast</td>
<td>May be medically necessary when criteria are met</td>
</tr>
<tr>
<td>C61</td>
<td>Malignant neoplasm of prostate</td>
<td>May be medically necessary when criteria are met</td>
</tr>
<tr>
<td>C73</td>
<td>Malignant neoplasm of thyroid gland</td>
<td>May be medically necessary when criteria are met</td>
</tr>
<tr>
<td>E04.1</td>
<td>nontoxic single thyroid nodule thyroid (cystic) nodule NOS</td>
<td>May be medically necessary when criteria are met</td>
</tr>
<tr>
<td>G56.00-G56.02</td>
<td>Carpal tunnel syndrome</td>
<td>May be medically necessary when criteria are met</td>
</tr>
<tr>
<td>G57.60-G57.62</td>
<td>Lesion of plantar nerve Morton’s metatarsalgia</td>
<td>Not medically necessary and/or experimental/investigational</td>
</tr>
<tr>
<td>M72.2</td>
<td>Plantar fascial fibromatosis Plantar fasciitis</td>
<td>Not medically necessary and/or experimental/investigational</td>
</tr>
<tr>
<td>M79.1</td>
<td>Myalgia Myofascial pain syndrome</td>
<td>Not medically necessary and/or experimental/investigational</td>
</tr>
<tr>
<td>I83.201-I83.93</td>
<td>Varicose veins of lower extremities</td>
<td>May be medically necessary when</td>
</tr>
</tbody>
</table>
REFERENCES


**SEARCH TERMS**

Centers for Medicaid and Medicare Services

Cytology

Fine needle aspiration

Needle biopsy

Sonography