Magnetic Resonance Cholangiopancreatography

Number: 0384

Policy
*Please see amendment for Pennsylvania Medicaid at the end of this CPB.

Aetna considers magnetic resonance cholangiopancreatography (MRCP) medically necessary when any of the following is met:

1. Based on the initial work-up, the member only requires diagnosis of suspected pancreaticobiliary pathology without the need for therapeutic intervention; or
2. Member has a documented allergy to iodine-based contrast materials, or has a general history of atopy; or
3. Member has altered biliary tract anatomy that precludes endoscopic retrograde cholangiopancreatography (ERCP) (e.g., post-surgical biliary tract alterations, prior gastrectomy, choledochojejunostomy, etc.); or
4. Member has undergone unsuccessful ERCP and requires further evaluation; or
5. Member is an infant or young child, or is an adult who is debilitated or uncooperative in such a manner that ERCP is unsafe or cannot be performed; or
6. Member requires definition of pancreaticobiliary anatomy proximal to a biliary tract system obstruction that cannot be opened by ERCP; or

Policy History

Last Review 04/13/2017
Effective: 02/01/2000
Next Review: 04/12/2018

Review History

Definitions

Additional Information

Clinical Policy Bulletin Notes
7. Member requires evaluation for a suspected congenital anomaly of the pancreaticobiliary tract (e.g., aberrant ducts, choledochal cysts, pancreas divisum, etc.); or 
8. Diagnosing biliary obstruction in orthoptic liver transplant recipients.

Aetna considers MRCP experimental and investigational for all other indications (e.g., diagnosing autoimmune pancreatitis, and monitoring of persons with primary sclerosing cholangitis) because its effectiveness for indications other than the ones listed above has not been established.

Aetna considers MRCP without IV contrast experimental and investigational in the staging of pancreatic cancer, except in cases of renal failure or other contraindications to administration of gadolinium intravenous contrast.

**Background**

Ultrasonography (US) and computed tomography (CT) scanning have been the standard non-invasive techniques for showing biliary calculi and pancreatic diseases, although magnetic resonance imaging (MRI) and more recently endoscopic ultrasound have shown excellent results. Magnetic resonance cholangiopancreatography (MRCP) is a new non-invasive modality that shows fluid in the biliary and pancreatic ducts in an axial or three-dimensional image format, somewhat comparable in appearance and diagnostic accuracy to radiographic techniques seen with direct contrast endoscopic retrograde cholangiopancreatography (ERCP). The major advantages of MRCP include: (i) does not require administration of exogenous contrast materials; and (ii) the potential avoidance of a purely diagnostic ERCP with its attendant complications of cholangitis and post-ERCP pancreatitis. The major disadvantages of MRCP include: (i) the lack of therapeutic capability; (ii) MRCP images are not satisfactorily comparable to those provided by ERCP; (iii) inability to provide information with regard to resectability of pancreatic cancer; and (iv) MRCP equipment is not available at every institution.

Endoscopic retrograde cholangiopancreatography remains the gold standard in the diagnostic work-up of the pancreaticobiliary tract. 
system. The real benefits of ERCP, as well as transhepatic cholangiography, include: (i) ability to offer therapeutic intervention at the time of the diagnostic procedure; (ii) manometry can be performed; (iii) the ampulla of Vater can be directly visualized; and (iv) the radiographic images obtained with ERCP have a higher spatial resolution.

In current clinical practice, the majority of patients evaluated for biliary tract disease have a high pre-test likelihood of having a problem requiring therapy (sphincterotomy, stone removal, stenting, etc.), and should be directed toward ERCP for this reason.

Magnetic resonance cholangiopancreatography may have a role in those situations where initial evaluation suggests a benign cause of biliary pathology requiring further cholangiographic confirmation but not necessarily intervention. It may also be useful in cases of failed ERCP before transhepatic cholangiography, especially in cases where minimal intrahepatic dilatation is suggested by ultrasound or CT, making percutaneous transhepatic cholangiography more difficult. With complex problems of the biliary tree, MRCP may allow a definitive diagnosis, which may help plan a directed intervention (endoscopic or transhepatic) that would have an increased likelihood of success, with decreased risk. The utility of MRCP to assess bile duct injuries, primary sclerosing cholangitis, sphincter of Oddi dysfunction, and acute pancreatitis is unknown.

Fernandez-Esparrach and colleagues (2007) compared the diagnostic value of endoscopic ultrasonography (EUS) and MRCP in: (i) patients with a dilated biliary tree unexplained by US (group 1), and (ii) the diagnosis of choledocholithiasis in patients with non-dilated biliary tree (group 2). Patients were prospectively evaluated with EUS and MRCP. The gold standard used was surgery or EUS-FNA and ERCP, intra-operative cholangiography, or follow-up when EUS and/or MRCP disclosed or precluded malignancy, respectively. Likelihood ratios (LR) and pre-test and post-test probabilities for the diagnosis of malignancy and choledocholithiasis were calculated. A total of 159 patients met one of the inclusion criteria but 24 of them were excluded for
different reasons. Therefore, 135 patients constituted the study population. The most frequent diagnosis was choledocholithiasis (49% in group 1 and 42% in group 2, \( p = 0.380 \)) and malignancy was more frequent in group 1 (35% versus 7%, respectively, \( p < 0.001 \)). When EUS and MRCP diagnosed malignancy, its prevalence in this series (35%) increased up to 98% and 96%, respectively, whereas it decreased to 0% and 2.6% when EUS and MRCP precluded this diagnosis. In patients in group 2, when EUS and MRCP made a positive diagnosis of choledocholithiasis, its prevalence (42%) increased up to 78% and 92%, respectively, whereas it decreased to 6% and 9% when any pathological finding was ruled out. The authors concluded that EUS and MRCP are extremely useful in diagnosing or excluding malignancy and choledocholithiasis in patients with dilated and non-dilated biliary tree. Thus, they are critical in the approach to the management of these patients.

McMahon (2008) evaluated the relative roles of MRCP and EUS in the investigation of common bile duct (CD) calculi using "evidence-based practice" methods. A focused clinical question was constructed. A structured search of primary and secondary evidence was performed. Retrieved studies were appraised for validity, strength and level of evidence (Oxford/CEBM scale: 1 to 5). Retrieved literature was divided into group A: MRCP slice thickness greater than or equal to 5 mm, group B: MRCP slice thickness = 3 mm or 3D-MRCP sequences. Six studies were eligible for inclusion (3 = level 1b, 3 = level 3b). Group A: sensitivity and specificity of MRCP and EUS were (40%, 96%) and (80%, 95%), respectively. Group B: sensitivity and specificity of MRCP and EUS were (87%, 95%) and (90%, 99%), respectively. The authors concluded that MRCP should be the first-line investigation for CD calculi and EUS should be performed when MRCP is negative in patients with moderate or high pre-test probability.

Autoimmune pancreatitis (AIP) represents a special type of chronic pancreatitis. It occurs most commonly in elderly males with painless jaundice or mild abdominal pain. It is a relatively newly recognized type of pancreatitis that is characterized by diffuse or focal swelling of the pancreas due to lympho-
plasmacytic infiltration and fibrosis of the pancreatic parenchyma. It is also known as ducto-centric AIP, lobulo-centric AIP, idiopathic duct-destructive pancreatitis, and lymphoplasmacytic sclerosing pancreatitis. The differential diagnosis of AIP versus pancreatic cancer is important because AIP has been found to respond to steroid treatment.

Fukumori and colleagues (20050 stated that MRCP visualizes only the main pancreatic duct (MPD) in the pancreas head region. Furthermore, while MRCP imaging of the MPD may be helpful in the diagnosis of AIP, a negative result does not preclude such diagnosis.

Carbognin et al (2009) retrospectively determined MRI, MRCP, and secretin-MRCP findings in patients with AIP. A total of 28 patients with histopathologically proven AIP were reviewed. In 14 cases, secretin-enhanced MRCP was performed. The observers evaluated pancreatic parenchymal enlargement, signal intensity abnormalities, enhancement, vascular involvement, bile-duct diameter and MPD narrowing (diffuse/focal/segmental). After secretin administration, the presence of the "duct-penetrating" sign was evaluated. Magnetic resonance imaging showed diffuse pancreatic enlargement in 8/28 (29 %) cases, focal pancreatic enlargement in 16/28 (57 %) cases and no enlargement in 4/28 (14 %) cases. The alteration of pancreatic signal intensity was diffuse in 8/28 (29 %) cases (8 diffuse AIP) and focal in 20/28 (71 %) cases (20 focal AIP). Delayed pancreatic enhancement was present in all AIP, with peripheral rim of enhancement in 8/28 (29 %) AIP (1/8 diffuse, 7/20 focal); vascular encasement was present in 7/28 (25 %) AIP (1/8 diffuse, 6/20 focal); distal common bile duct narrowing was present in 12/28(43 %) AIP (5/8 diffuse, 7/20 focal). Magnetic resonance cholangiopancreatography showed MPD narrowing in 17/28 (61 %) AIP (4/8 diffuse, 15/20 focal), MPD dilation in 8/28 (29 %) AIP (3/8 diffuse, 5/20 focal) and normal MPD in 1/8 diffuse AIP. Secretin-MRCP showed the duct-penetrating sign in 6/14 (43 %) AIP (1 diffuse AIP with MPD segmental narrowing, 5 focal AIP with MPD focal narrowing), demonstrating integrity of the MPD. The authors concluded that delayed enhancement and MPD stenosis are suggestive for AIP on MR and MRCP imaging.
Kamisawa et al (2009) stated that it is important to differentiate AIP from pancreatic cancer. Irregular narrowing of the MPD is a characteristic finding in AIP; it is useful for differentiating AIP from pancreatic cancer stenosis. These investigators evaluated the usefulness of MRCP for the diagnosis of AIP and assessed if MRCP could replace ERCP for diagnosing AIP. The MRCP and ERCP findings of 20 AIP patients were compared. On MRCP, the narrowed portion of the MPD was not visible, while the non-involved segments of the pancreatic duct were visible. The degree of upstream dilatation of the proximal MPD was milder in AIP than in pancreatic cancer patients. In the skipped type, only skipped narrowed lesions were not visible. After steroid therapy for AIP, the non-visualized MPD became visible. The authors concluded that MRCP can not replace ERCP for the diagnosis of AIP, since narrowing of the MPD in AIP was not visible on MRCP. Moreover, MRCP findings of segmental or skipped non-visible MPD accompanied by a less dilated upstream MPD may suggest the presence of AIP.

In a review on AIP, Detlefsen and Drewes (2009) stated that pathologically, AIP shows narrowing of the pancreatic ducts and the intra-pancreatic portion of the common bile duct. Obstructive jaundice is a common symptom at presentation, and pancreatic cancer represents an important clinical differential diagnosis. In late stages of the disease, the normal pancreatic parenchyma is often replaced by large amounts of fibrosis. Histologically, there seem to be 2 subtypes of the disease: (i) one showing infiltration with IgG4-positive plasma cells but lacking granulocytic epithelial lesions (GELs), and (ii) the other showing GELs but lacking strong IgG4 positivity. On the basis of conventional pancreatic imaging (e.g., contrast-enhanced CT, EUS, dynamic T2-weighted MRI, and trans-abdominal US), together with serological measurement of IgG4 and evaluation of other organ involvement, many AIP patients can be identified. The remaining patients require further diagnostic work-up. In these patients, pancreatic core needle biopsy and a trial with steroids (since AIP responds to steroid treatment) can help to differentiate AIP from pancreatic cancer.

Greenberger (2009) noted that the diagnostic criteria of AIP
proposed by the Mayo Clinic (the "HISORT" criteria) are most commonly used in the United States and include the presence of one or more of the following:

- Diagnostic histology (based on resection specimen or pancreatic core needle biopsy)
- Response to steroid therapy of pancreatic (only in those patients in whom a trial with steroid is indicated)/extra-pancreatic manifestations
- Typical imaging (CT and pancreatography) plus any of the following:
  - Compatible histology (i.e., at least supportive of AIP); or
  - Elevated serum IgG4 levels; or
  - Other organ involvement.

Moreover, Greenberger (2009) stated that ERCP or MRCP may reveal a narrowed MPD and dorsal pancreatic duct; diffuse, irregular narrowing of the pancreatic duct (beaded appearance), or a focal stricture of the pancreatic duct, proximal or distal common bile duct; or irregular narrowing of the intra-hepatic ducts. A stricture in the common bile duct or the finding of a lesion in the head of the pancreas often prompts consideration of malignancy. Thus, it may not be possible to distinguish AIP from pancreatic cancer based upon the results of these imaging tests alone.

Primary sclerosing cholangitis (PSC) is an immune-mediated, chronic cholestatic liver disease characterized by progressive inflammation and fibrosis of the bile ducts, resulting in biliary cirrhosis and is associated with a high-risk of cholangiocarcinoma (CCA), which develops in 10 to 30 % of PSC patients. Early detection of CCA in PSC is achieved by using serum tumor markers (carbohydrate antigen 19-9 [CA 19-9] and carcinoembryonic antigen [CEA]), endoscopic ultrasonography [EUS], as well as fluorescent in situ hybridization [FISH] techniques to enhance the accuracy of biliary cytology (Abbas and Lindor, 2009). Weismüller and colleagues (2008) stated that the diagnosis of PSC is primarily based on endoscopic cholangiography although MRI is increasingly used; biochemistry
and immuno-serology as well as histology play only a minor role. Due to the high-risk of developing CCA and also other tumours of the GI tract, surveillance strategies are essential, however they have yet to be established and evaluated. Karnam and associates (2009) stated that ERCP remains preferred in patients with PSC. Moreover, the role of MRCP in the diagnosis and management of bile duct malignancy is not yet defined.

Weber and associates (2008) stated that MRCP is a less-invasive alternative to ERCP for the diagnosis of PSC. These investigators evaluated the diagnostic accuracy of MRCP in PSC compared with ERCP, and assessed the diagnostic accuracy of different T2w sequences. A total of 95 patients (69 PSC, 26 controls) were evaluated using both ERCP and MRCP. Exclusion criteria included secondary sclerosing cholangitis and contraindications to MRCP. The diagnosis of PSC was confirmed in 69 patients based on ERCP as the reference gold standard. Magnetic resonance cholangiopancreatography was performed using a 1.5 Tesla MR unit, using breath hold, coronal and transverse half-Fourier acquisition single-shot turbo spin-echo (HASTE), coronal-oblique, fat-suppressed half-Fourier rapid acquisition with relaxation enhancement (RARE), and coronal-oblique, fat-suppressed, multi-section, thin-section HASTE (TS-HASTE) sequences. The MRCP morphological criteria of PSC were evaluated and compared with ERCP. The sensitivity, specificity, and diagnostic accuracy were 86 %, 77 %, and 83 %, respectively, using the MRCP-RARE sequence, and increased further to 93 %, 77 %, and 88 %, respectively, by the inclusion of follow-up MRCP in 52 patients, performed at 6- and 12-month intervals. HASTE and TS-HASTE sequences showed significantly lower diagnostic accuracy but provided additional morphologic information. The authors concluded that MRCP can diagnose PSC but has difficulties in early PSC and in cirrhosis, and in the differentiation of cholangiocarcinoma, Caroli’s disease, and secondary sclerosing cholangitis. A positive MRCP would negate some diagnostic ERCP studies; but a negative MRCP would not obviate the need for ERCP.

In a meta-analysis, Dave et al (2010) determined the diagnostic accuracy of MRCP for detection of PSC in patients with biochemical cholestasis. Two reviewers searched MEDLINE,
EMBASE, and other electronic databases to identify prospective studies in which MRCP was evaluated and compared with ERCP, clinical examination, and/or histologic analysis for diagnosis of PSC in cholestasis and control cases. Main study inclusion criteria were (i) use of ERCP or percutaneous transhepatic cholangiography (PTC) as part of the reference standard for the diagnosis of PSC, (ii) inclusion of patients with hepatobiliary disease other than PSC (i.e., non-healthy control subjects), (iii) blinding of MRCP image readers to reference-standard results, (iv) prospective study with ERCP or MRCP performed after subject recruitment into the study, and (v) inclusion of raw data (for true-positive, false-positive, true-negative, and false-negative results) that could be found or calculated from the original study data. Major exclusion criteria were duplicate article (on a primary study) that contained all or some of the original study data and inclusion of fewer than 10 patients with PSC. Methodologic quality was assessed by using the Quality Assessment of Diagnostic Accuracy Studies tool. Bi-variate random-effects meta-analytic methods were used to estimate summary, sensitivity, specificity, and receiver operating characteristic (ROC) curves. A total of 6 manuscripts with 456 subjects (with 623 independent readings) -- 185 with PSC -- met the study inclusion criteria. The summary area under the ROC curve was 0.91. High heterogeneity (inconsistency index, 78 %) was found but became moderate (inconsistency index, 36 %) with the exclusion of 1 study in which the diagnostic threshold was set for high sensitivity. There was no evidence of publication bias (p = 0.27, bias coefficient analysis). Sensitivity and specificity of MRCP for PSC detection were 0.86 and 0.94, respectively. Positive and negative likelihood ratios with MRCP were 15.3 and 0.15, respectively. In patients with high pre-test probabilities, MRCP enabled confirmation of PSC; in patients with low pre-test probabilities, MRCP enabled exclusion of PSC. Worst-case-scenario (pre-test probability, 50 %) post-test probabilities were 94 % and 13 % for positive and negative MRCP results, respectively. The authors concluded that MRCP has high sensitivity and very high specificity for diagnosis of PSC. In many cases of suspected PSC, MRCP is sufficient for diagnosis, and, thus, the risks associated with ERCP can be avoided.
In a prospective study, Nebiker and colleagues (2009) analyzed the rate of clinically inapparent common bile duct (CBD) stones, the predictive value of elevated liver enzymes for CBD stones, and the influence of the radiological results on the peri-operative management. A total of 465 patients were cholecystectomized within 18 months, mainly laparoscopically. Pre-operative MRCP was performed in 454 patients. With MRCP screening, clinically silent CBD stones were found in 4%. Elevated liver enzymes have only a poor predictive value for the presence of CBD stones (positive predictive value, 21%; negative predictive value, 96%). Compared to the recent literature, the post-operative morbidity in this study was low (0% bile duct injury, 0.4% residual gallstones). The authors concluded that although MRCP is diagnostically useful in the peri-operative management in some cases, its routine use in the diagnosis related group (DRG)-era may not be justified due to the costs.

Jorgensen et al (2011) stated that biliary complications are the second leading cause of morbidity and mortality in orthotopic liver transplant (OLT) recipients. Endoscopic retrograde cholangiography is considered the diagnostic criterion standard for post-orthotopic liver transplantation biliary obstruction, but incurs significant risks. These researchers ascertained the diagnostic accuracy of MRCP for biliary obstruction in OLT patients. A systematic literature search identified studies primarily examining the utility of MRCP in detecting post-orthotopic liver transplantation biliary obstruction. A meta-analysis was then performed according to the Quality of Reporting Meta-Analyses statement. A meta-analysis of 9 studies originally performed at major transplantation centers was carried out. A total of 382 OLT patients with clinical suspicion of biliary obstruction were included in this analysis. Major outcome measures were sensitivity and specificity of MRCP for diagnosis of biliary obstruction. The composite sensitivity and specificity were 0.96 (95% confidence interval [CI]: 0.92 to 0.98) and 0.94 (95% CI: 0.90 to 0.97), respectively. The positive and negative likelihood ratios were 17 (95% CI: 9.4 to 29.6) and 0.04 (95% CI: 0.02 to 0.08), respectively. All but 1 included study had significant design flaws that may have falsely increased the reported diagnostic accuracy. The authors concluded that high
sensitivity and specificity demonstrated in this meta-analysis suggested that MRCP is a promising test for diagnosing biliary obstruction in patients who have undergone liver transplantation. However, given the significant design flaws in most of the component studies, additional high-quality data are necessary before unequivocally recommending MRCP in this setting.

Giljaca et al (2015) stated that EUS and MRCP are tests used in the diagnosis of common bile duct stones in patients suspected of having common bile duct stones prior to undergoing invasive treatment. There has been no systematic review of the accuracy of EUS and MRCP in the diagnosis of common bile duct stones using appropriate reference standards. These researchers determined and compared the accuracy of EUS and MRCP for the diagnosis of common bile duct stones. They searched MEDLINE, EMBASE, Science Citation Index Expanded, BIOSIS, and Clinicaltrials.gov until September 2012. In addition, they searched the references of included studies to identify further studies and of systematic reviews identified from various databases (Database of Abstracts of Reviews of Effects (DARE), Health Technology Assessment (HTA), Medion, and ARIF (Aggressive Research Intelligence Facility)). They did not restrict studies based on language or publication status, or whether data were collected prospectively or retrospectively. These investigators included studies that provided the number of true positives, false positives, false negatives, and true negatives for EUS or MRCP. They only accepted studies that confirmed the presence of common bile duct stones by extraction of the stones (irrespective of whether this was done by surgical or endoscopic methods) for a positive test, and absence of common bile duct stones by surgical or endoscopic negative exploration of the common bile duct or symptom free follow-up for at least 6 months for a negative test, as the reference standard in people suspected of having common bile duct stones. They included participants with or without prior diagnosis of cholelithiasis; with or without symptoms and complications of common bile duct stones, with or without prior treatment for common bile duct stones; and before or after cholecystectomy. At least 2 authors independently screened abstracts and selected studies for
inclusion. Two authors independently collected the data from each study. They used the bi-variate model to obtain pooled estimates of sensitivity and specificity. The authors included a total of 18 studies involving 2,366 participants (976 participants with common bile duct stones and 1,390 participants without common bile duct stones); 11 studies evaluated EUS alone, and 5 studies evaluated MRCP alone; 2 studies evaluated both tests. Most studies included patients who were suspected of having common bile duct stones based on abnormal liver function tests; abnormal trans-abdominal ultrasound; symptoms such as obstructive jaundice, cholangitis, or pancreatitis; or a combination of the above. The proportion of participants who had undergone cholecystectomy varied across studies. Not one of the studies was of high methodological quality. For EUS, the sensitivities ranged between 0.75 and 1.00 and the specificities ranged between 0.85 and 1.00. The summary sensitivity (95 % CI) and specificity (95 % CI) of the 13 studies that evaluated EUS (1,537 participants; 686 cases and 851 participants without common bile duct stones) were 0.95 (95 % CI: 0.91 to 0.97) and 1.97 (95 % CI: 0.94 to 0.99). For MRCP, the sensitivities ranged between 0.77 and 1.00 and the specificities ranged between 0.73 and 0.99. The summary sensitivity and specificity of the 7 studies that evaluated MRCP (996 participants; 361 cases and 635 participants without common bile duct stones) were 0.93 (95 % CI: 0.87 to 0.96) and 0.96 (95 % CI: 0.90 to 0.98). There was no evidence of a difference in sensitivity or specificity between EUS and MRCP (p value = 0.5). From the included studies, at the median pre-test probability of common bile duct stones of 41 % the post-test probabilities (with 95 % CI) associated with positive and negative EUS test results were 0.96 (95 % CI: 0.92 to 0.98) and 0.03 (95 % CI: 0.02 to 0.06). At the same pre-test probability, the post-test probabilities associated with positive and negative MRCP test results were 0.94 (95 % CI: 0.87 to 0.97) and 0.05 (95 % CI: 0.03 to 0.09). The authors concluded that both EUS and MRCP have high diagnostic accuracy for detection of common bile duct stones. People with positive EUS or MRCP should undergo endoscopic or surgical extraction of common bile duct stones and those with negative EUS or MRCP do not need further invasive tests. However, if the symptoms persist, further investigations will be indicated. The 2 tests are similar in terms of diagnostic
accuracy and the choice of which test to use will be informed by availability and contra-indications to each test.

An UpToDate review on “Magnetic resonance cholangiopancreatography” (Karnam et al, 2015) states that “Common bile duct stones -- The choice of procedure varies with the clinical setting and local availability. In patients with cholangitis, for example, ERCP is preferred because it permits therapeutic drainage of the obstruction. However, MRCP may be performed if cholangitis is not severe and the risks of ERCP are high. MRCP may also be useful after unsuccessful or incomplete ERCP and in imaging the CBD in patients undergoing laparoscopic cholecystectomy. Endoscopic ultrasound may also be an option in individuals considered at increased risk for ERCP”.

National Comprehensive Cancer Network’s clinical practice guideline on “Pancreatic adenocarcinoma” (Version 1.2017) states that “MR cholangiopancreatography (MRCP) without IV contrast should not be utilized in the staging of pancreatic cancer, except in cases of renal failure or other contraindications to administration of gadolinium intravenous contrast”.

<table>
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<tr>
<th>CPT Codes / HCPCS Codes / ICD-10 Codes</th>
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**Information in the [brackets] below has been added for clarification purposes. Codes requiring a 7th character are represented by "+":**

**Other CPT codes related to the CPB:**

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<th>Code</th>
<th>Description</th>
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<td>43260</td>
<td>Endoscopic retrograde cholangiopancreatography (ERCP); diagnostic, including collection of specimen(s) by brushing or washing, when performed (separate procedure)</td>
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<td>74181-74183</td>
<td>Magnetic resonance (e.g., proton) imaging, abdomen</td>
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**HCPCS codes covered if selection criteria are met:**

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**ICD-10 codes covered if selection criteria are met:**

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<td>Code</td>
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<tr>
<td>C22.1</td>
<td>Intrahepatic bile duct carcinoma</td>
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<td>C23</td>
<td>Malignant neoplasm of gallbladder</td>
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<td>C24.0 - C24.9</td>
<td>Malignant neoplasm of other and unspecified parts of biliary tract</td>
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<td>C25.0 - C25.9</td>
<td>Malignant neoplasm of pancreas</td>
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<td>C78.80 - C78.89</td>
<td>Secondary malignant neoplasm of other and unspecified digestive organ</td>
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<td>D01.5</td>
<td>Carcinoma in situ of liver, gallbladder and bile ducts</td>
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<td>D37.8 - D37.9</td>
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<td>K83.0 - K83.9</td>
<td>Other diseases of biliary tract</td>
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<td>K85.00 - K86.9</td>
<td>Pancreatitis and other diseases of the pancreas</td>
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<td>K87</td>
<td>Disorders of gallbladder, biliary tract and pancreas in diseases classified elsewhere</td>
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<td>R94.5</td>
<td>Abnormal results of liver function studies</td>
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<td>S36.13x+</td>
<td>Injury of bile duct</td>
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<tr>
<td>Z94.4</td>
<td>Liver transplant status</td>
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The above policy is based on the following references:


17. Barish MA, Soto JA, Yucel EK. Magnetic resonance


49. McMahon CJ. The relative roles of magnetic resonance cholangiopancreatography (MRCP) and endoscopic


57. Greenberger NJ. Autoimmune pancreatitis. UpToDate [online serial]. Waltham, MA: UpToDate; reviewed September 2009.


71. Shen Z, Munker S, Zhou B, et al. The accuracies of


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Amendment to
Aetna Clinical Policy Bulletin Number:
0384 Magnetic Resonance Cholangiopancreatography

There are no amendments for Medicaid.