

MRCP vs. ERCP

- Studies show patients prefer MRCP to diagnostic ERCP.
- MRI should be performed in all patients with suspicion of extraintestinal complications, as they are more reliably detected by MRI
- MRCP is particularly useful where ERCP is difficult, hazardous or impossible. It's also an important option for patients with failed ERCPs.
- MRCP **does not carry the risk of complications** (pancreatitis, hemorrhage, perforation and sepsis) ERCP does.
- Patients with elevated liver function test which have no evidence of hepato-biliary ductal dilatation on abdominal ultrasound nor CT in which the risks of ERCP are especially high.
- With the higher spatial resolution of these invasive methods, visualization of bile duct morphology with MRCP equals or exceeds that of ERCP without the associated morbidity or mortality.
- Biliary-enteric anastomoses and obstructions can also make ERCP difficult, if not impossible.
- 40% to 70% of patients who undergo ERCP have negative findings. If MRCP were performed before ERCP, mortality, morbidity and costs could be reduced by limiting ERCP only to those individuals who would benefit from this more invasive procedure.
- With MRCP, ducts are seen in their passive state because contrast material does not need to be injected forcefully to opacify them. Thus, images reflect the diameter of strictures more closely than they do with invasive cholangiography.
- Grading of hilar cholangiocarcinoma by MRCP may also prevent patients from undergoing an unnecessary ERCP when endoscopic drainage is not the optimal treatment (segmentally occluded ducts).
- MRCP can evaluate the biliary tract proximal and distal to a duct lacerated at cholecystectomy where ERCP may result in incomplete visualization, showing only a cut-off sign of the distal bile duct.
- Lack of opacification of ductal structures in the pancreas at ERCP may erroneously suggest occlusion of the main pancreatic duct, leading to an incorrect diagnosis of pancreatic carcinoma. In contrast, MRCP is **excellent for diagnosing pancreas divisum** because this technique can show the ventral and dorsal ducts simultaneously without need for cannulation of the major and minor papillae.

