

## Ascending Cholangitis Diagnosis and Treatment



PLAY PICMONIC

### Imaging

#### ERCP

##### EoR-Sees-through-P

Endoscopic Retrograde Cholangiopancreatography or ERCP may be performed in patients for whom there is a high enough clinical suspicion for ascending cholangitis. Some sources recommend proceeding directly to ERCP if patients have all three components of Charcot's Triad PLUS elevated LFT's. ERCP is both diagnostic and therapeutic, as it allows the physician to both visualize pathology and obstruction in the duct and physically remove the offending obstruction.

#### CT Scan

##### Cat

In patients who do not have high enough clinical suspicion for immediate ERCP, a CT Abdomen/Pelvis may be performed to assess for the presence of common bile duct dilation or stones.

#### Ultrasound

##### Ultrasound-machine

In patients suspected of having ascending cholangitis but for whom clinical suspicion is not high enough to warrant immediate ERCP, an abdominal ultrasound is commonly used to look for a dilated common bile duct or presence of stones. If this is inconclusive and a patient cannot undergo MRCP, an endoscopic ultrasound (EUS) may be performed.

#### Biliary Duct Dilation and/or Stones

##### Stone and dilated-beads around dilated-duck-neck

CT or ultrasound may show dilated biliary ducts or stones in patients with ascending cholangitis.

### Labs

#### Hyperbilirubinemia

##### Hiker-belly-ribbon-dancer

To make an official diagnosis of ascending cholangitis, laboratory evidence such as elevated bilirubin is necessary. Specifically, these patients typically have an elevated direct or conjugated bilirubin component.

#### Elevated Alkaline Phosphatase

##### Up-Arrow-Elk-P

Elevated alkaline phosphatase, which is most commonly seen related to bile duct obstruction, inflammation, or injury, may also be seen on labs and is helpful in making a definitive diagnosis of ascending cholangitis. Notably, certain bone conditions such as tumors may also cause elevated alkaline phosphatase. An elevated GGT suggests that an elevated alk phos is due to biliary pathology and not bone pathology.

### **Elevated GGT**

#### [Up-arrow-goat](#)

An elevated GGT indicates liver pathology, though does not indicate specifically what liver pathology. In the setting of acute cholangitis it is useful because it indicates that high alkaline phosphatase is due to biliary pathology as opposed to bone pathology.

## **Treatment**

### **Broad Spectrum Antibiotics**

#### [Broad spectrum of colors](#)

All patients diagnosed with ascending cholangitis require treatment with broad-spectrum antibiotics, typically covering for gram positives, gram negatives, and anaerobes. Some examples commonly used include ertapenem, Piperacillin-tazobactam (Zosyn), or combinations such as Metronidazole (Flagyl) plus a cephalosporin such as Ceftriaxone or Cefazolin.

### **Biliary Drainage**

#### [Drain](#)

Relief of any obstruction and biliary drainage are also necessary to relieve pressure and inflammation as well as to remove any purulent or infected fluid. This can be done by various methods depending on the severity and nature of the obstruction and resulting inflammation.