

Management of Cholangitis (Initial Episode) in Adult Patients with Pancreatobiliary Tumor

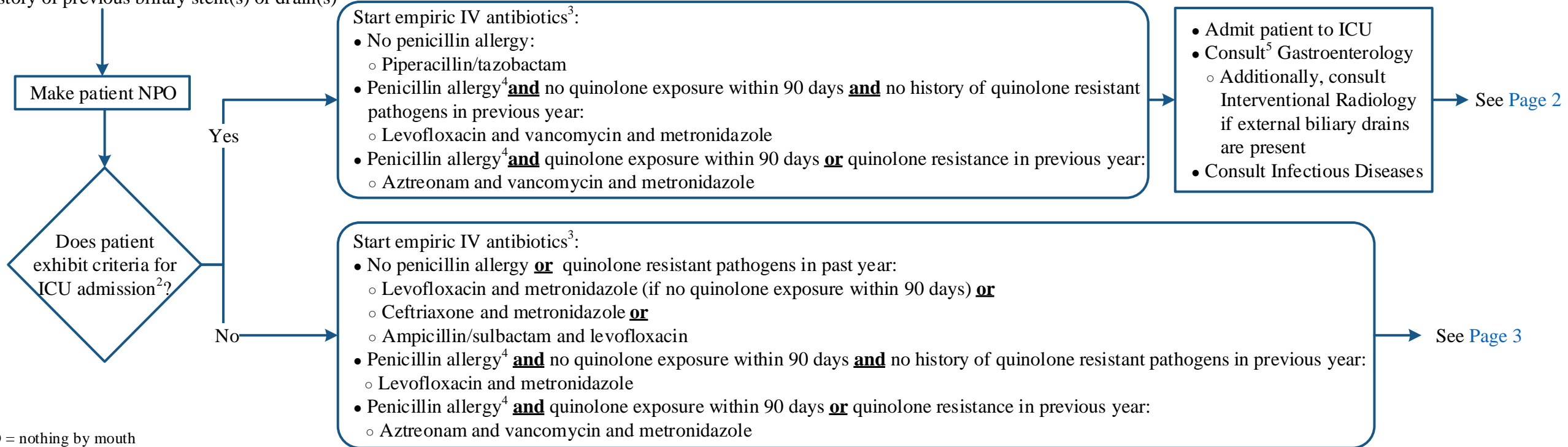
Disclaimer: This algorithm has been developed for MD Anderson using a multidisciplinary approach considering circumstances particular to MD Anderson's specific patient population, services and structure, and clinical information. This is not intended to replace the independent medical or professional judgment of physicians or other health care providers in the context of individual clinical circumstances to determine a patient's care. This algorithm should not be used to treat pregnant women.

PATIENT PRESENTATION

Patient presentation suspicious of cholangitis:

- Abdominal pain¹ (right upper quadrant)
- Fever (temperature greater than 38°C)
- Jaundice
- History of pancreatobiliary tumor
- History of previous biliary stent(s) or drain(s)

EMPIRIC THERAPY FOR INITIAL EPISODE



NPO = nothing by mouth

¹ Abdominal pain alone (without the other signs/symptoms above) is not specific for the diagnosis of cholangitis

² Criteria for ICU admission or dependent on clinician discretion

- Hypotension not responsive to fluid resuscitation
 - SBP less than 90 mmHg or
 - SBP less than 120 mmHg for patients with a history of hypertension and currently on anti-hypertensives
- Respiratory rate greater than 24 breaths per minute
- Altered mental status

³ Consider meropenem if patient has any of the following:

- Non-IgE-mediated allergy to alternative beta-lactam agents
- Recent treatment (of at least 3 days duration) with cefepime or piperacillin/tazobactam within past 30 days
- Infection with ESBL organism or any history of ESBL in culture
- Infection with organism only susceptible to carbapenem

⁴ IgE-mediated allergy to penicillin

⁵ If patient is admitted to the ICU, place STAT emergent GI consult

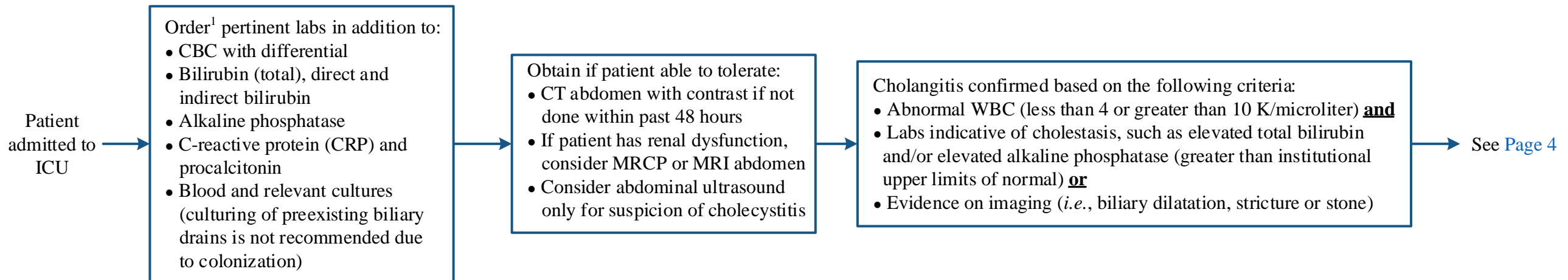
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ICU MANAGEMENT

EVALUATION

FINDINGS



¹ Order labs if not already done within the last 24 hours

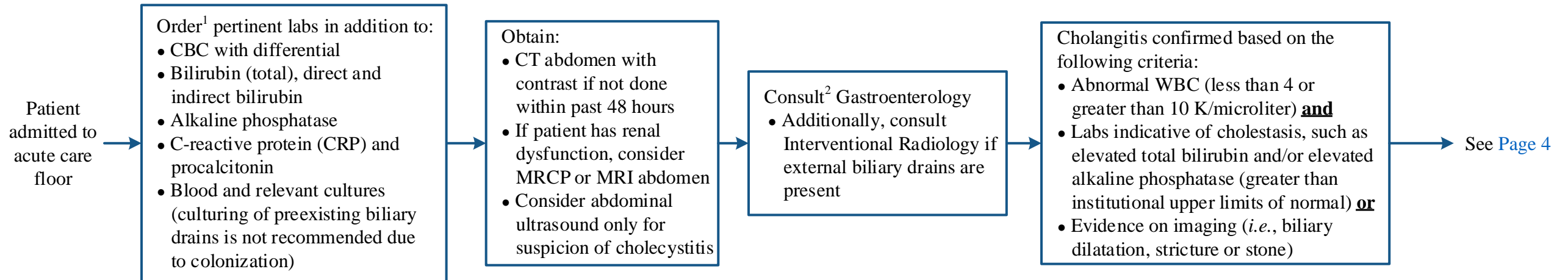
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ACUTE CARE FLOOR MANAGEMENT

EVALUATION

FINDINGS



¹ Order labs if not already done within the last 24 hours

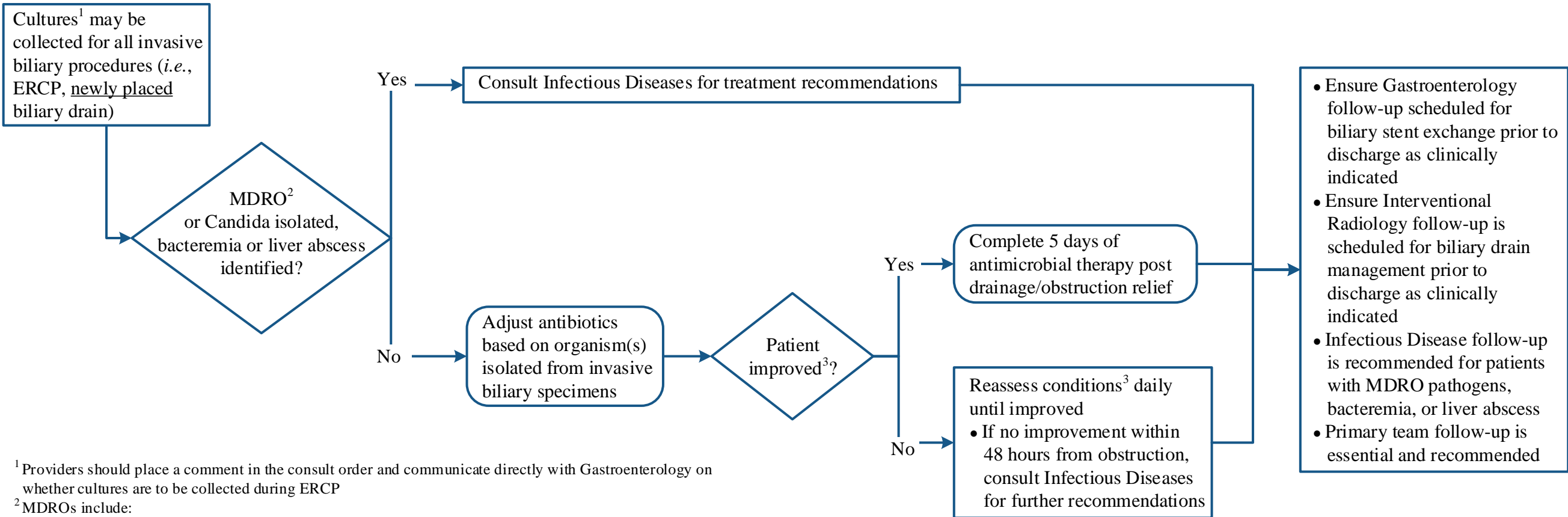
² Place routine GI consult

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TREATMENT

FOLLOW-UP



¹ Providers should place a comment in the consult order and communicate directly with Gastroenterology on whether cultures are to be collected during ERCP

² MDROs include:

- Enterococcus resistant to vancomycin
- *S. aureus* resistant to methicillin (oxacillin)
- *S. pneumoniae* resistant to penicillin and streptococci resistant to ceftriaxone
- *Stenotrophomonas maltophilia*
- Any extended spectrum beta-lactamase (ESBL)-producing gram negative bacilli
- Any carbapenem resistant gram negative bacilli

³ Improved conditions include:

- Clinical improvement (resolution of fever, hemodynamically stable, improving and/or normalized WBC)
- Drainage/obstruction relief obtained

ERCP = endoscopic retrograde cholangiopancreatography

MDRO = multi-drug resistant organism

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SUGGESTED READINGS

- Gomi, H., Solomkin, J.S., Schlossberg, D., Okamoto, K., Takada, T., Strasberg, S. M., . . . Yamamoto, M. (2018). Tokyo guidelines 2018: Antimicrobial therapy for acute cholangitis and cholecystitis. *Journal of Hepato-Biliary-Pancreatic Sciences*, 25(1), 3-16. doi:10.1002/jhbp.518
- Gomi, H., Takada, T., Hwang, T.-L., Akazawa, K., Mori, R., Endo, I., . . . Yamamoto, M. (2017). Updated comprehensive epidemiology, microbiology, and outcomes among patients with acute cholangitis. *Journal of Hepato-Biliary-Pancreatic Sciences*, 24(1), 310-318. doi:10.1002/jhbp.452
- Kiriyama, S., Kozaka, K., Takada, T., Strasberg, S. M., Pitt, H. A., Gabata, T., . . . Yamamoto, M. (2018). Tokyo guidelines 2018: Diagnostic criteria and severity grading of acute cholangitis (with video). *Journal of Hepato-Biliary-Pancreatic Sciences*, 25(1), 17-30. doi:10.1002/jhbp.512
- Kiriyama, S., Takada, T., Hwang, T.-L., Akazawa, K., Miura, F., Gomi, H., Mori, R., . . . Yamamoto, M. (2017). Clinical application and verification of the TG13 diagnostic and severity grading criteria for acute cholangitis: An international multicenter observational study. *Journal of Hepato-Biliary-Pancreatic Sciences*, 24(6), 329-337. doi:10.1002/jhbp.458
- Mayumi, T., Okamoto, K., Takada, T., Strasberg, S. M., Solomkin, J. S., Schlossberg, D., . . . Yamamoto, M. (2017). Tokyo guidelines 2018: Management bundles for acute cholangitis and cholecystitis. *Journal of Hepato-Biliary-Pancreatic Sciences*, 25(1), 96-100. doi:10.1002/jhbp.519
- Miura, F., Okamoto, K., Takada, T., Strasberg, S. M., Asbun, H. J., Pitt, H. A., Gomi, H., . . . Yamamoto, M. (2018). Tokyo guidelines 2018: Initial management of acute biliary infection and flowchart for acute cholangitis (with videos). *Journal of Hepato-Biliary-Pancreatic Sciences*, 25(1), 31-40. doi: 10.1002/jhbp.509
- Mukai, S., Itoi, T., Baron, T. H., Takada, T., Strasberg, S. M., Pitt, H. A., Ukai, T., . . . Yamamoto, M. (2017). Indications and techniques of biliary drainage for acute cholangitis in updates Tokyo guidelines 2018. *Journal of Hepato-Biliary-Pancreatic Sciences*, 24(10), 537-549. doi:10.1002/jhbp.496

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DEVELOPMENT CREDITS

This practice consensus statement is based on majority opinion of the Cholangitis Management Workgroup at the University of Texas MD Anderson Cancer Center for the patient population. These experts included:

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