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THE UNIVERSITY OF TEXAS MDAnderson Adult Paracentesis

Making Cancer History®

Cancer Center

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.



¹ For patients requiring additional Interventional Radiology (IR) procedure(s), order paracentesis using IR Procedure Request. For all other patients, order paracentesis using the IP Mobile Procedure Team Paracentesis/ Lumbar Puncture Procedure Order Set for inpatients and the Ambulatory INS Mobile Procedure Team smart set for ambulatory patients.

² Patients with End Stage Renal Disease (ESRD) do not require calculation of SAAG

³ Ambulatory patients requiring albumin or other blood product administration will need to be scheduled for Ambulatory Treatment Center (ATC) appointment by ordering provider

⁴Refer to Peri-Procedure Management of Anticoagulants algorithm

⁵ For patients on warfarin: higher doses of vitamin K result in extended duration of subtherapeutic INR. Consider limiting dose of vitamin K for patients with a thrombotic risk who will need to be restarted on warfarin.

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SUGGESTED READINGS

- Biggins, S. W., Angeli, P., Garcia-Tsao, G., Ginès, P., Ling, S. C., Nadim, M. K., . . . Kim, W. R. (2021). Diagnosis, evaluation, and management of ascites, spontaneous bacterial peritonitis and hepatorenal syndrome: 2021 practice guidance by the American Association for the Study of Liver Diseases. *Hepatology*, 74(2), 1014-1048. https://doi.org/10.1002/hep.31884
- Cavazzoni, E., Bugiantella, W., Graziosi, L., Franceschini, M. S., & Donini, A. (2013). Malignant ascites: Pathophysiology and treatment. International Journal of Clinical Oncology, 18(1), 1-9. https://doi.org/10.1007/s10147-012-0396-6
- De Gottardi, A., Thévenot, T., Spahr, L., Morard, I., Bresson-Hadni, S., Torres, F., . . . Hadengue, A. (2009). Risk of complications after abdominal paracentesis in cirrhotic patients: A prospective study. Clinical Gastroenterology and Hepatology, 7(8), 906-909. https://doi.org/10.1016/j.cgh.2009.05.004
- Hodge, C., & Badgwell, B. D. (2019). Palliation of malignant ascites. Journal of Surgical Oncology, 120(1), 67-73. https://doi.org/10.1002/jso.25453
- Ito, T., Yokomichi, N., Ishiki, H., Kawaguchi, T., Masuda, K., Tsukuura, H., ... Yamaguchi, T. (2021). Optimal paracentesis volume for terminally ill cancer patients with ascites. Journal of Pain and Symptom Management, 62(5), 968-977. https://doi.org/10.1016/j.jpainsymman.2021.04.010
- Nazeer, S. R., Dewbre, H., & Miller, A. H. (2005). Ultrasound-assisted paracentesis performed by emergency physicians vs the traditional technique: A prospective, randomized study. The American Journal of Emergency Medicine, 23(3), 363-367. https://doi.org/10.1016/j.ajem.2004.11.001
- Orman, E. S., Hayashi, P. H., Bataller, R., & Barritt, A. S. (2014). Paracentesis is associated with reduced mortality in patients hospitalized with cirrhosis and ascites. *Clinical* Gastroenterology and Hepatology, 12(3), 496-503. https://doi.org/10.1016/j.cgh.2013.08.025
- Pache, I., & Bilodeau, M. (2005). Severe haemorrhage following abdominal paracentesis for ascites in patients with liver disease. Alimentary Pharmacology & Therapeutics, 21(5), 525-529. https://doi.org/10.1111/j.1365-2036.2005.02387.x
- Pines, J. M., Kelly, J. J., Meisl, H., Augustine, J. J., Broida, R. I., Clarke, J. R., . . . Wears, R. L. (2012). Procedural safety in emergency care: A conceptual model and recommendations. The Joint Commission Journal on Quality and Patient Safety, 38(11), 516-526. https://doi.org/10.1016/S1553-7250(12)38069-0
- Runyon, B. A., Hoefs, J. C., & Morgan, T. R. (1988). Ascitic fluid analysis in malignancy-related ascites. *Hepatology*, 8(5), 1104-1109. https://doi.org/10.1002/hep.1840080521

Thomsen, T. W., Shaffer, R. W., White, B., & Setnik, G. S. (2006). Paracentesis. The New England Journal of Medicine, 355(19), e21. https://doi.org/10.1056/NEJMvcm062234

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DEVELOPMENT CREDITS

This practice consensus statement is based on majority expert opinion of the Acute Care Services Department at the University of Texas MD Anderson Cancer Center for the patient population. These experts included:

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