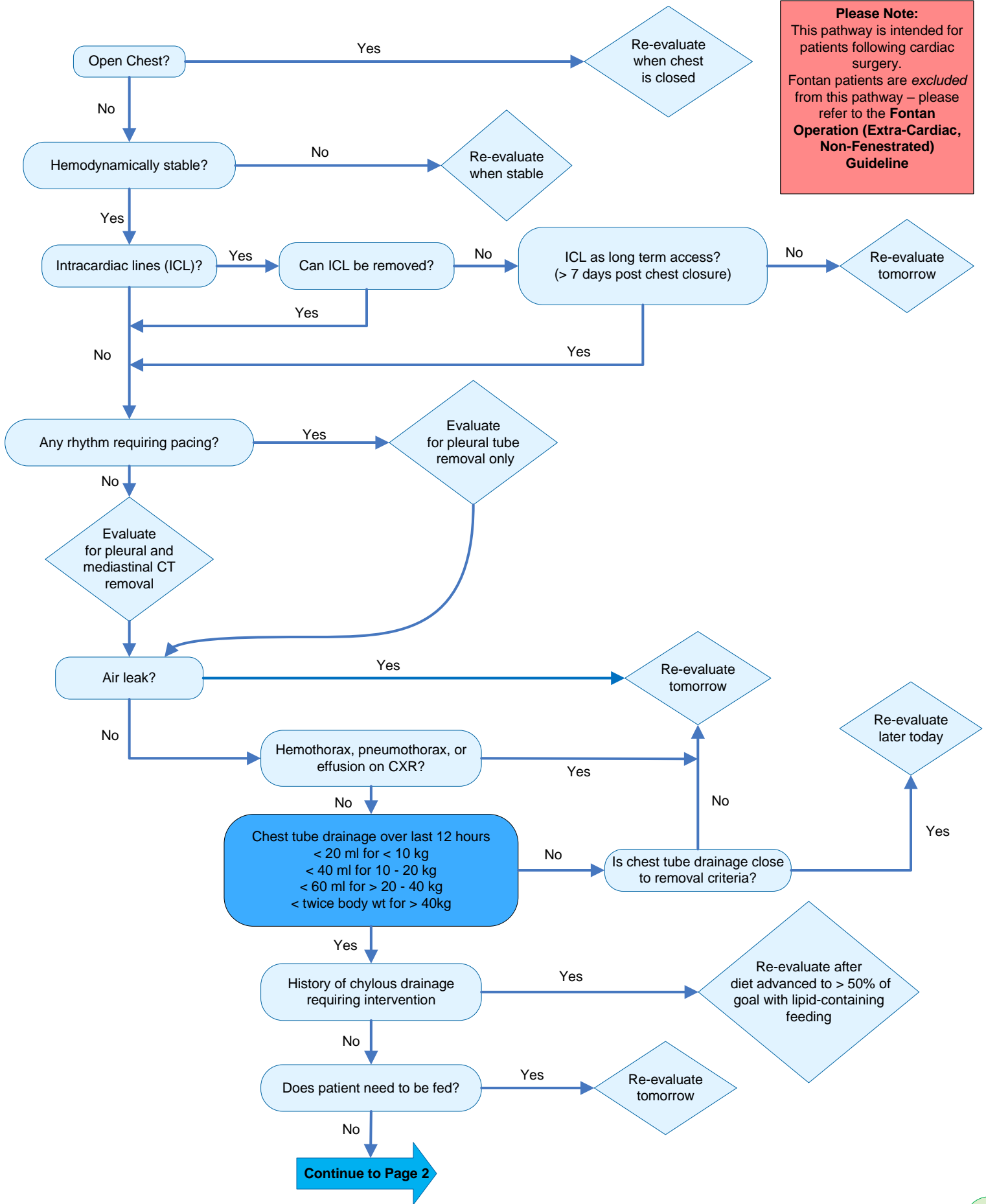


CVICU Postoperative Chest Tube Removal Algorithm



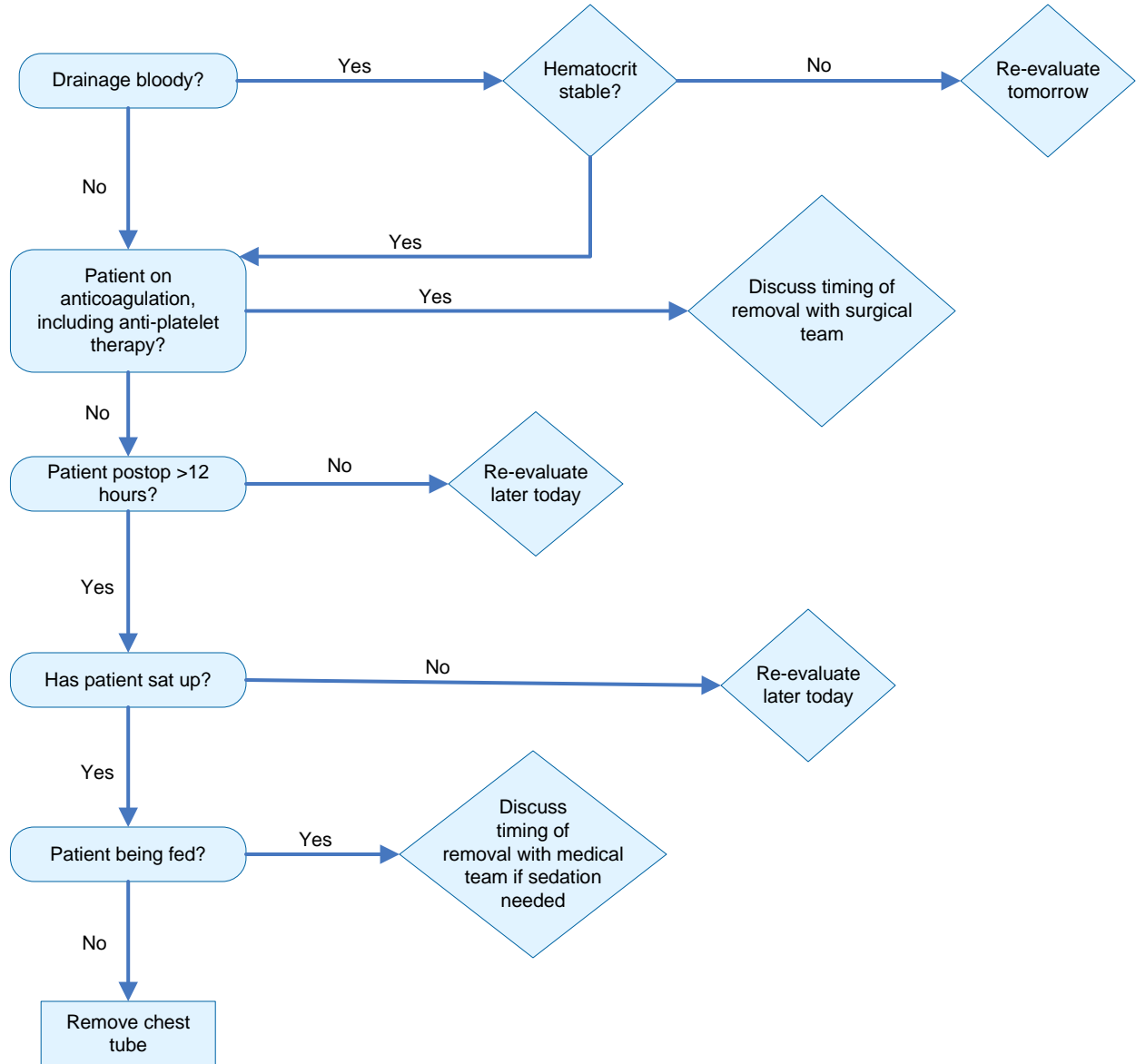
Please Note:
 This pathway is intended for patients following cardiac surgery. Fontan patients are *excluded* from this pathway – please refer to the **Fontan Operation (Extra-Cardiac, Non-Fenestrated) Guideline**



CVICU Postoperative Chest Tube Removal Algorithm



Continued from Page 1



CVICU Postoperative Chest Tube Removal Algorithm References

- Bates, K. E., Connelly, C., Khadr, L., Graupe, M., Hlavacek, A. M., Morell, E., Pasquali, S. K., Russell, J. L., Schachtner, S. K., Strohacker, C., Tanel, R. E., Ware, A. L., Wooton, S., Madsen, N. L., & Kipps, A. K. (2021). Successful reduction of postoperative chest tube duration and length of stay after congenital heart surgery: a multicenter collaborative improvement project. *Journal of the American Heart Association*, 10(21), e020730. <https://doi.org/10.1161/JAHA.121.020730> (Level IV)
- Bates, K. E., Madsen, N. L., Khadr, L., Gao, Z., Crawford, K., Gaies, M., . . . Kipps, A. K. (2020). Center variation in chest tube duration and length of stay after congenital heart surgery. *The Annals of Thoracic Surgery*, 110, 221-227. <https://doi.org/10.1016/j.athoracsur.2019.09.078> (Level V)
- Bertrandt, R. A., Saudek, D. M., Scott, J. P., Madrzak, M., Miranda, M. B., Ghanayem, N. S., & Woods, R. K. (2019). Chest tube removal algorithm is associated with decreased chest tube duration in pediatric cardiac surgical patients. *The Journal of Thoracic and Cardiovascular Surgery*, 158(4), 1209-1217. <https://doi.org/10.1016/j.jtcvs.2019.03.120> (Level IV)
- Fuller, S., Kumar, S. R., Roy, N., Mahle, W. T., Romano, J. C., Nelson, J. S., Hammel, J. M., Imamura, M., Zhang, H., Fremes, S. E., McHugh-Grant, S., & Nicolson, S. C. (2021). The American Association for Thoracic Surgery Congenital Cardiac Surgery Working Group 2021 consensus document on a comprehensive perioperative approach to enhanced recovery after pediatric cardiac surgery. *The Journal of Thoracic and Cardiovascular Surgery*, 162(3), 931-954. <https://doi.org/10.1016/j.jtcvs.2021.04.072> (Level IV)