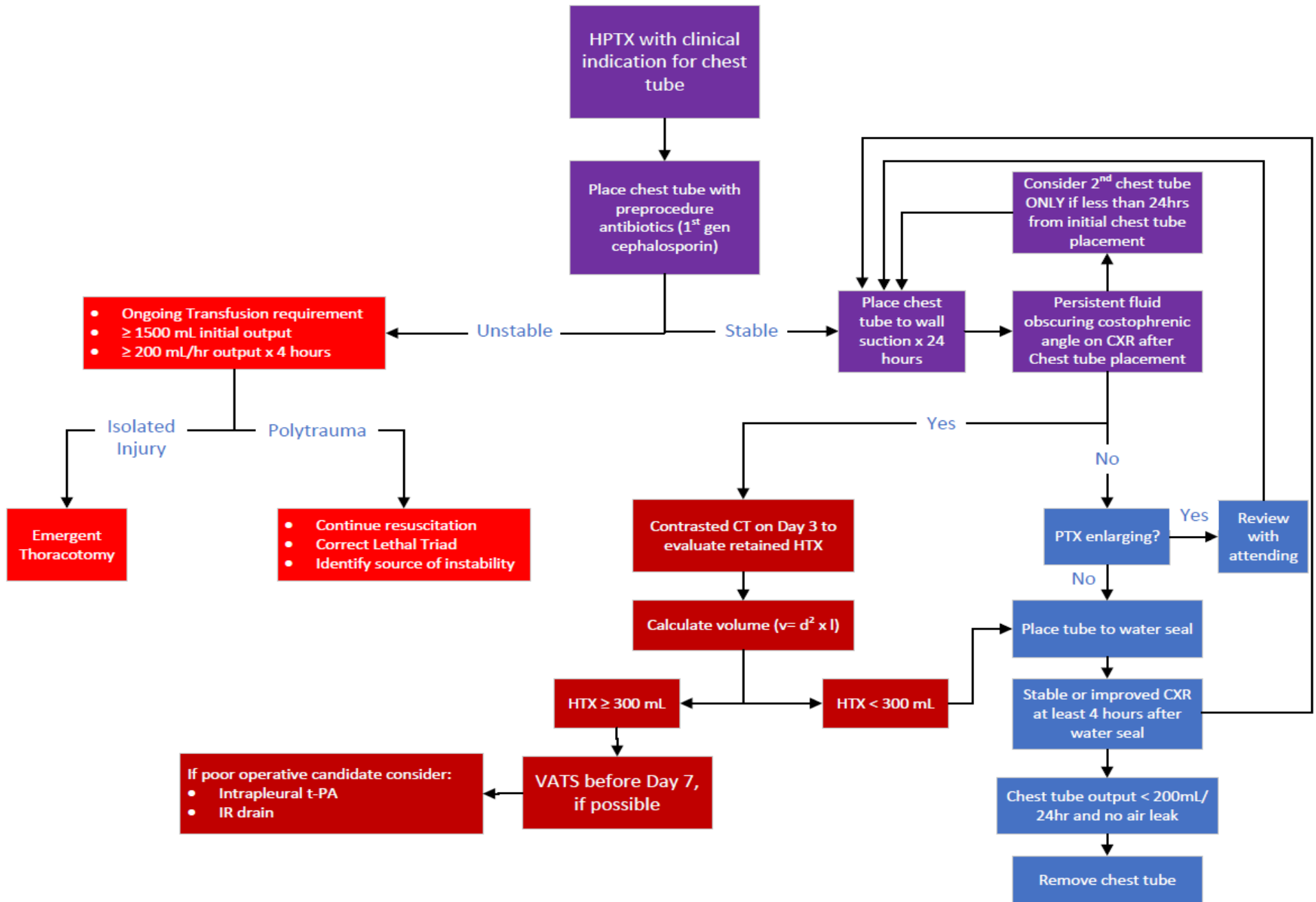


Hemopneumothorax Guideline



Hemopneumothorax Guideline

1. Place chest tube if HPTX requires evacuation per chest tube protocol (1)
 - a. Pigtail or Large bore chest tube (14-32F) (2-4)
 - i. Large bore chest tube (20-32F) if chest tube need is emergent.
 - ii. Pigtail (14F) is effective for PTX and HTX
 - b. One dose of antibiotics starting just prior to placement (5, 6)
 - i. 1st generation cephalosporin
 - c. Place to -20 cm H₂O wall suction x **24 hours**
2. Order post-procedure CXR and daily CXR while tube in place
3. If no radiographic evidence of retained HTX and PTX enlarging
 - a. Place tube to water seal
 - b. CXR after at least 4 hours on water seal
 - i. If PTX worsened, place back to -20 cm H₂O wall suction, restart at 1c, and review with Trauma Attending.
 - ii. If HPTX stable or improved, remove chest tube when output < 200 mL/24hr (22) and no air leak present
4. If radiographic evidence of retained HTX
 - a. **If within 24 hours**, consider placing 2nd chest tube.
 - b. Order a **contrasted chest CT on day 3** if HTX is still present on CXR (7)
 - i. If $\geq 300\text{mL}$ HTX (formula $v=d^2 \times l$)¹ present on CT (8, 9)
 1. VATS on or before day 7 (1, 7-13)
 2. Consider intrapleural t-PA (11, 14-18) if poor operative candidate or other indications (t-PA is contraindicated in any patient with intrathoracic arterial bleeding/injury including pulmonary laceration and/or intercostal bleeding). Administration of TPA is not intended to prevent VATS in operative candidates.²
 - a. 24mg t-PA in 48mL NS (t-PA concentration 0.5mg/mL) injected in chest tube daily x 3 days (16, 19-21) using sterile technique.
 - b. Clamp chest tube x 1 hour (20)
 - c. Roll patient to ensure distribution throughout chest.
 - d. Unclamp tube and allow drainage.

¹ **d** = greatest depth of hemothorax on a single CT image, **l** = greatest cephalad-caudad length of the hemothorax.

² To find the Trauma Retained Hemothorax order set in eStar you must type "hemothorax" in the order section, order set will then populate for you. It will not come up if you type t-PA or alteplase.

Hemopneumothorax Guideline

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