VANDERBILT UNIVERSITY MEDICAL CENTER

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PROTOCOL

Title: Surgical Antibiotic Prophylaxis for Liver Transplant Recipients
Area/Department: Liver Transplant

Effective Date August 2025
Approval Date August 2025

The following protocol once initiated by a provider's order for a specific patient has been approved for implementation by ☐ RN ☐ LPN ☒ Licensed providers (MD, DO, PharmD, NP) caring for liver transplant recipients when a patient meets the criteria below.

Protocol: Outlines the appropriate intra-operative and post-operative antimicrobial prophylaxis to prevent surgical site infection in liver transplant recipients

INCLUSION CRITERIA

Patient must meet ALL inclusion criteria below:

- Patients 18 years old and older; and
- Patient has a planned liver transplant surgery

EXCLUSION CRITERIA

Patient meets any one of the following exclusion criteria:

- Patients less than 18 years of age; or
- Patient has not undergone liver transplant surgery

INTERVENTIONS

All liver transplant recipients should receive antibiotics before surgical incision.

Standard intra-operative surgical prophylaxis:

- If patient is receiving antibiotics for treatment of infection at the time of transplant offer, discuss selection of intra-operative antibiotics with transplant pharmacy +/- Transplant ID

Medication regimen		**Intra-operative redosing***
First line	Ampicillin/sulbactam 3g IV x 1, given within 60 minutes before surgical incision	2 hours after initial dose, then repeat at 6-hour intervals
If severe penicillin allergy (hives or anaphylaxis)	Vancomycin 15 mg/kg IV x 1, given within 120 minutes before surgical incision *AND* Levofloxacin 500mg IV x 1, given within 120 minutes before surgical incision	Vancomycin: 8 hours after initial dose Levofloxacin: 24 hours after initial dose
If severe penicillin AND fluoroquinolone allergy	Discuss with transplant pharmacy	

**Additional intra-operative doses may be needed to maintain adequate tissue concentrations based on the agent's half-life or in the case of excessive blood loss (defined as ≥20 units of pRBC). Re-dosing managed by Anesthesia.*

Post-operative prophylaxis for open abdomen:

- *If* biliary anastomosis is complete, no additional antibiotic prophylaxis recommended
- *If* bile duct left in discontinuity:
    - Ampicillin/sulbactam 3g IV every 6 hours until biliary anastomosis performed
        - Requires dose adjustment for renal dysfunction or renal replacement therapy (pharmacy to manage)
- Antifungal prophylaxis recommended for all recipients with open abdomen/planned return to the OR (Refer to Antifungal Prophylaxis Protocol)

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APPROVAL

Nursing Leadership Title	N/A
Physician Leadership	N/A
Pharmacy Leadership Title	N/A
Order Entry Advisory Committee	N/A

REFERENCES

Ban et al. American College of Surgeons and Surgical Infection Society: Surgical Site Infection Guidelines, 2016 Update. J Am Coll Surg 2017;224(1):59-74.

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