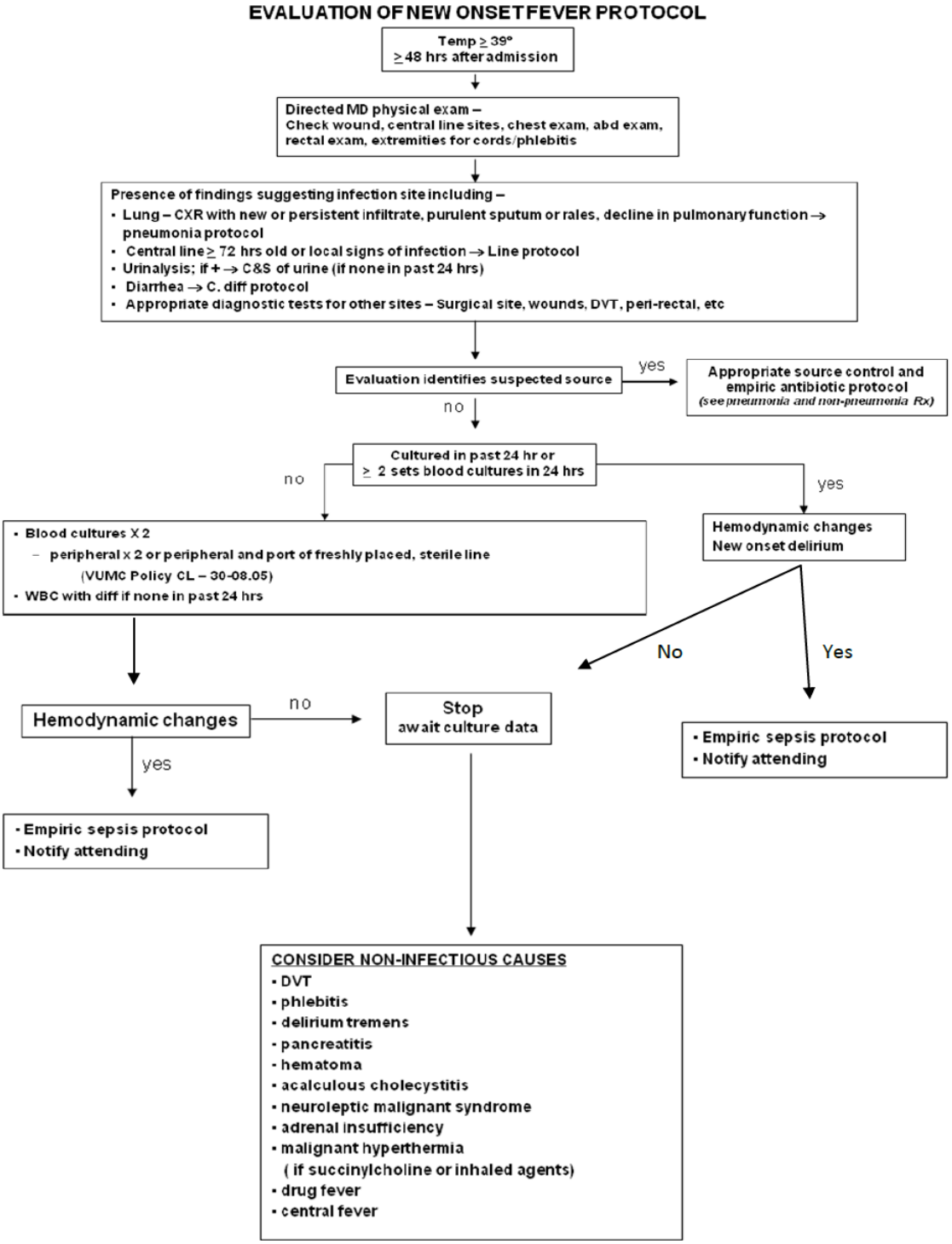
VANDERBILT UNIVERSITY MEDICAL CENTER
DIVISION OF TRAUMA AND SURGICAL CRITICAL CARE

GUIDELINE FOR THE EVALUATION, DIAGNOSIS, AND EMPIRIC TREATMENT OF SEPSIS

Fever and SIRS are very common in acutely traumatized or critically ill patients; most patients do not have infection (roughly 20% of patients with SIRS have infection). Data suggests that delay in therapy for patients whose only signs or symptoms of infection are fever and leukocytosis is not deleterious.

I. Fever protocol:



II. Evaluation of suspected infection or sepsis:

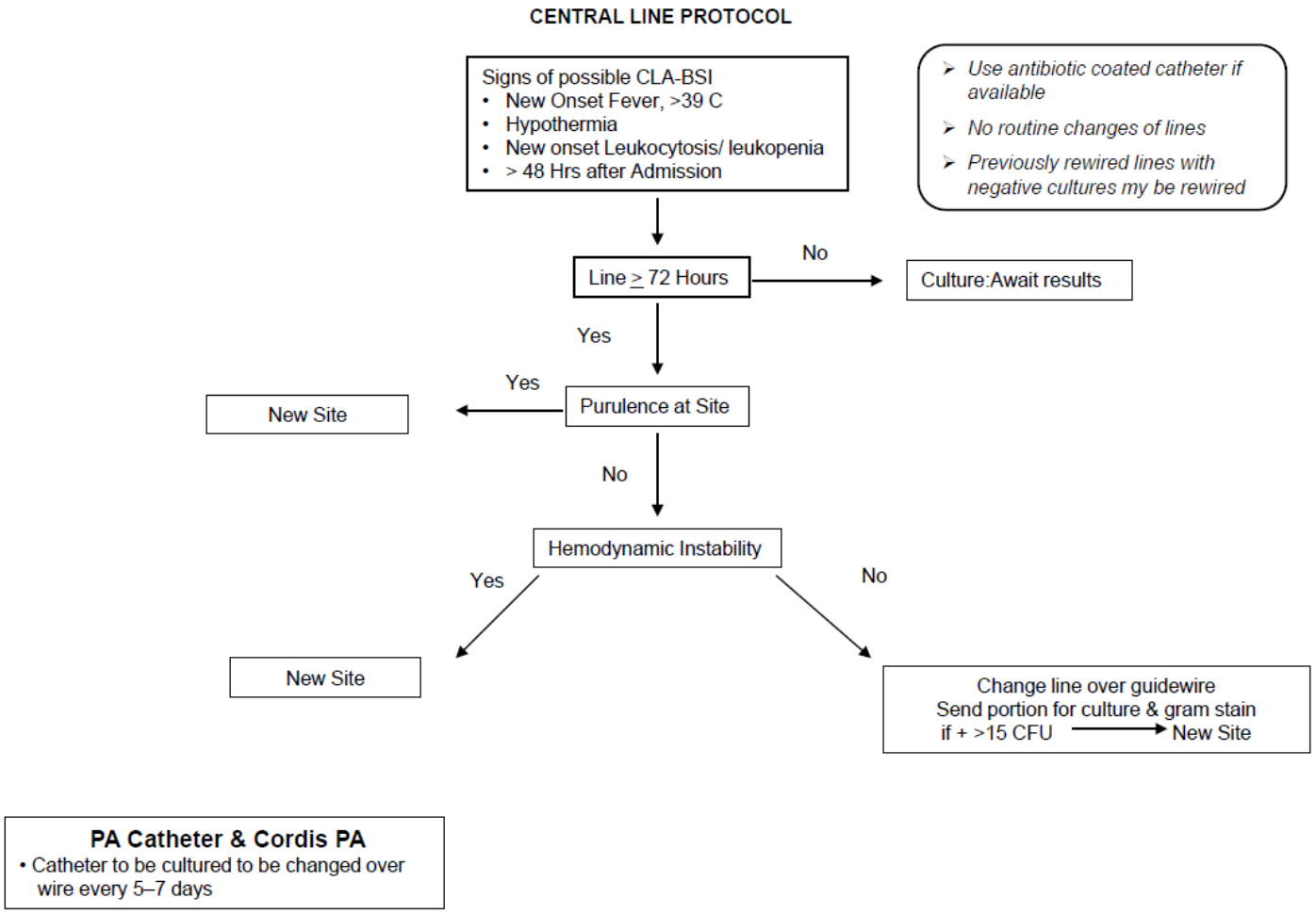
The most frequent causes of sepsis in acutely ill surgical patients are

1) pneumonia *{risk increases exponentially with time of intubation}*
2) surgical or traumatic site infection
3) bacteremia - usually related to vascular access (75-90%).

These three etiologies cause roughly 90% of infections in this population. Work up should be directed towards these three sources predominately and expanded if the workup is negative.

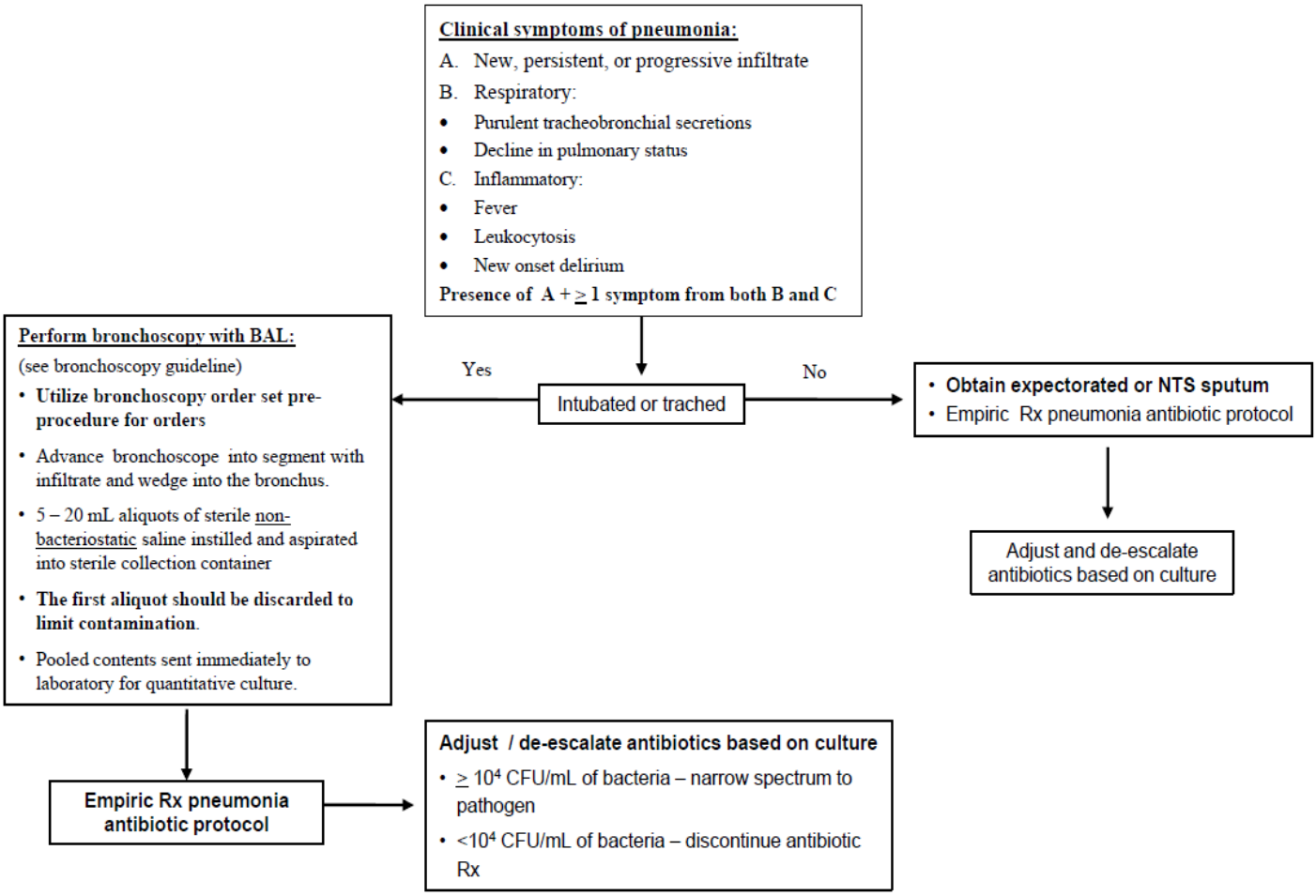
See "Diagnosis of pneumonia" and "Central Line" guidelines for the evaluation of these sites.

a. Central line protocol for the evaluation of fever:



b. Diagnosis and empiric treatment of pneumonia

- 40-50% of ventilated patients who have clinical signs and symptoms of pneumonia will have using quantitative culture techniques
- Bacteria within tracheobronchial secretions correlate poorly with the presence and cause of VAP



- Antibiotic therapy should be continued for 7 days
- Patients with persistent signs and symptoms suggestive of pneumonia > 4 days should undergo repeat evaluation for pneumonia

III. Empiric antibiotic therapy for sepsis protocol:

Patients with signs and symptoms identifying a likely source of sepsis or with hemodynamic changes associated with fever should be treated empirically with empiric antibiotics as directed by the **order set** for the suspected site:

1. pneumonia
2. non-pneumonia

The empiric order sets provide antibiotic coverage according to the rotation schedule below:

Trauma Antibiotic Rotation Schedule:

	Pneumonia (hospital day 1-3)	Pneumonia (hospital day ≥ 4) [a]	Non – pneumonia [b]
1st quarter	Ceftriaxone	Levofloxacin	Piperacillin/tazobactam
2nd quarter	Ampicillin/sulbactam	Doripenem	Cefepime / metronidazole
3rd quarter	Levofloxacin	Cefepime	Doripenem
4th quarter	Ertapenem	Piperacillin/tazobactam	Levofloxacin / metronidazole

[a] Empiric Rx includes Vancomycin and Aminoglycoside until culture data is available
[b] Vancomycin included except in secondary peritonitis. Fluconazole included for high risk patients & tertiary peritonitis