

# VASCULAR ACCESS

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## Diagnosis & Management of AV Access Infections



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# Checklists for Prevention of AV Access (AVF/AVG) Infections

## Prevention - Preoperative

- Conduct History and Physical Examination to exclude any possible infections
- Infections should be managed prior to AV access creation

CPG 8.1

## Prevention and Monitoring – Post Creation

- Wash arm before cannulation
- Check access before each cannulation\*
- Use proper cannulation technique (See How to Cannulate and Manage Complications)

CPG 11, 16.1-2

\* Physical exam prior to cannulation to identify complications if possible

# Checklist for AV Access Infection Diagnosis and Management

## Diagnosis

- When AV access check or Physical Examination is equivocal, consider radiologic imaging to confirm diagnosis of infection
- Obtain blood cultures or culture of easily available AV access materials prior to starting empiric antibiotics

CPG 16.3

CPG 16.5

## Management and Follow-up

- Start broad spectrum empiric antibiotic coverage
- Refer to surgeon for surgical management
- Adjust antibiotics based on culture sensitivities
- Surgical treatment based on patient, extent of infection, organism, and future vascular access options
- Investigate and closely monitor for metastatic infections, especially in patients with buttonhole infections

CPG 16.6

CPG 16.8

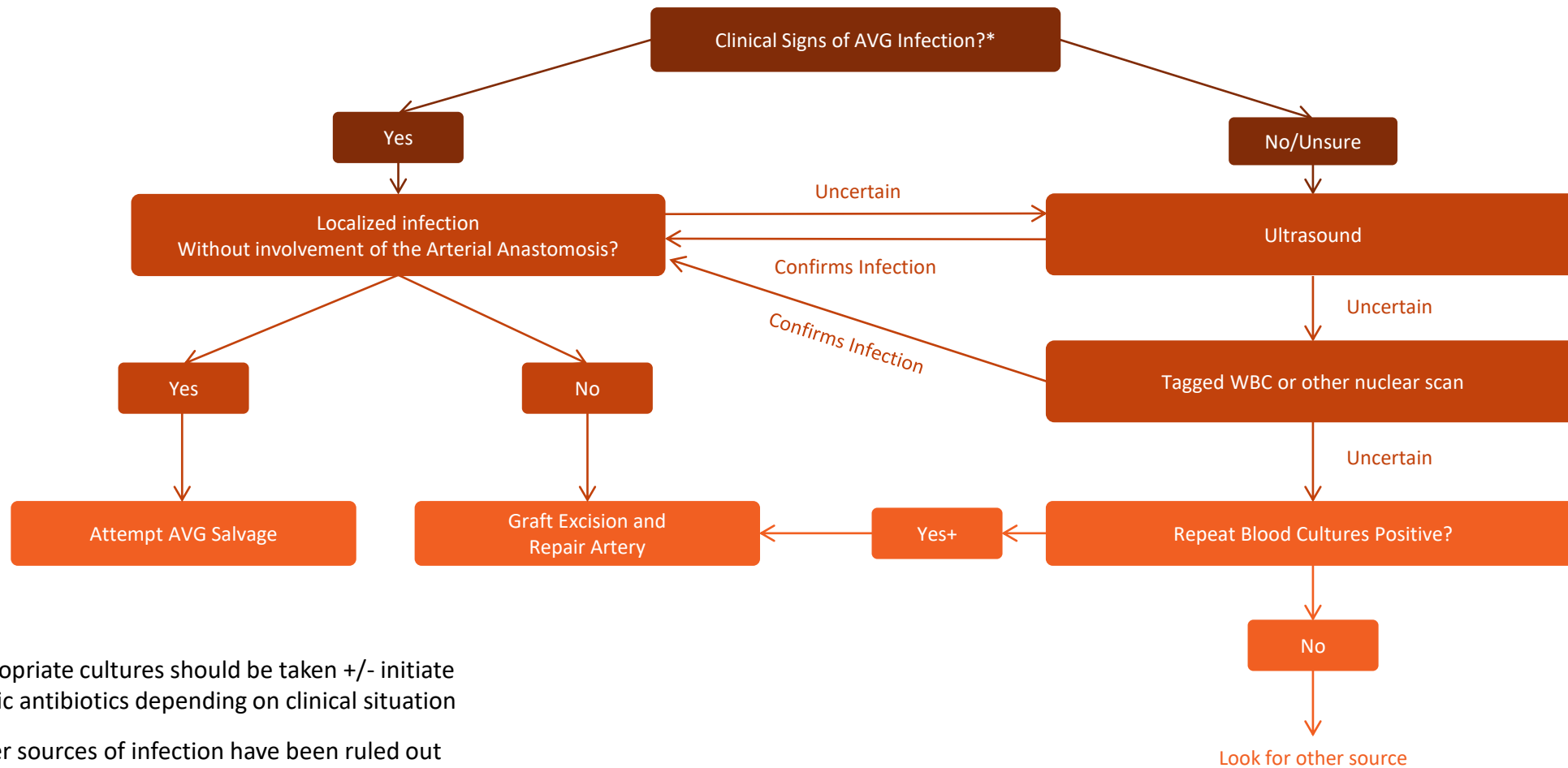
CPG 16.7

CPG 16.8

CPG 16.4

# Flow Diagram 16.a.

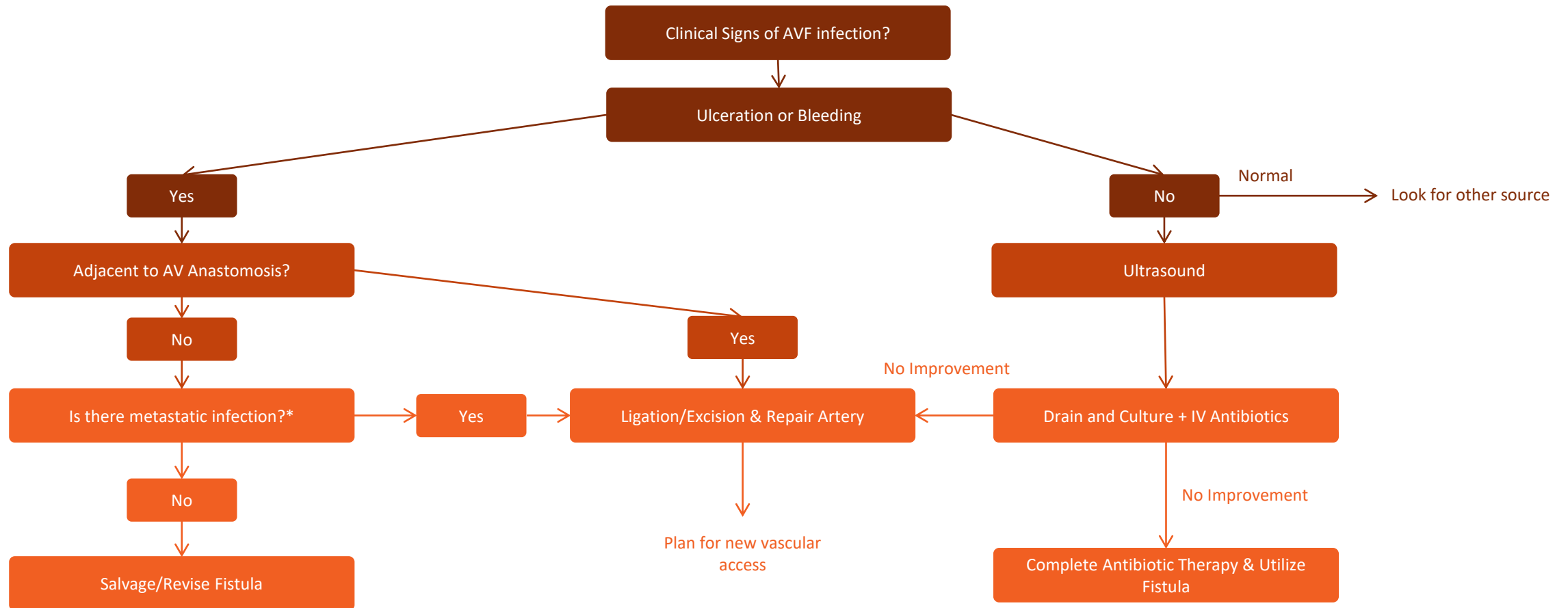
## Diagnosis and Management of AV graft Infection



\*Appropriate cultures should be taken +/- initiate empiric antibiotics depending on clinical situation

+ Other sources of infection have been ruled out

# Flow Diagram 16.b. Diagnosis and Management of AV fistula Infection



\* Consult Infectious Disease Specialists for guidance.

# AV Access Infections – Other Key Notes

- Spectrum of infection (cellulitis → sepsis/death)
- Surgical principles - antibiotics and source control
- Early recognition and definitive treatment – physical exam and ultrasound
- Determinants of surgical treatment – extent/bleeding/systemic signs/organism/access type/anastomotic involvement/future access options
  - “Extra-anatomic” bypass with resection
  - Subtotal excision
  - Total excision with arterial reconstruction vs. ligation