

VASCULAR ACCESS

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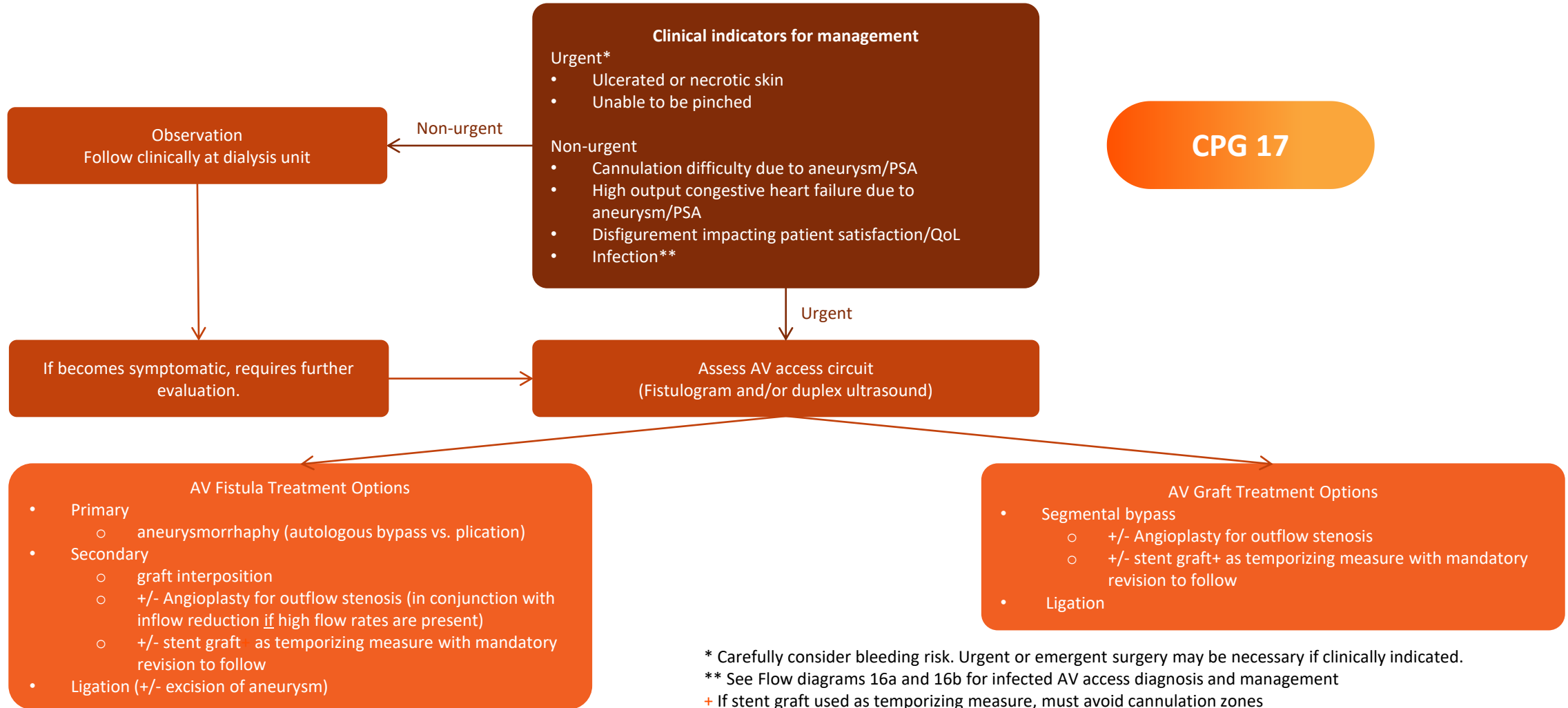
# AV Access Aneurysm and Pseudoaneurysm Management



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# Flow Diagram 17

## AV Access Aneurysm or Pseudoaneurysm (PSA)







**Table 17.1.** Physical Examination Findings That Are Clinically Relevant to Differentiate Between Aneurysm/Pseudoaneurysm That Do Not Require Urgent Intervention and Those of Urgent Concern

<b>Physical Examination Findings</b>	<b>Nonurgent: Monitor Closely Aneurysm/Pseudoaneurysm</b>	<b>Urgent: Rapid Attention Aneurysm/Pseudoaneurysm</b>
Size	Not enlarging	Enlarging
Overlying skin	Can be pinched easily (supple, mobile skin)	Thin, shiny, depigmented
Skin erosion	None	Ulcers, scabs
Arm elevation sign	Collapses	May not collapse
Bleeding from puncture sites	Uncommon	Often prolonged

# AV Access Aneurysms/PSA – Recognition and Diagnosis

- Check AV access for aneurysm/pseudoaneurysm at each dialysis session **CPG 17.1**
- Educate patients on emergency procedures for aneurysm rupture **CPG 17.2**
- When clinical findings suggest an AV access aneurysm to be at risk of complications, obtain a proactive surgical assessment **CPG 17.2**
- Obtain an emergent surgical assessment and treatment for serious AV access aneurysm/pseudoaneurysm complications such as erosion or hemorrhage **CPG 17.3**
- Consider corroborating physical exam findings with duplex ultrasound to determine size, presence of stenosis/thrombosis, access flow, and characteristics of arterial inflow and venous outflow **CPG 17.4**

# AV Access Aneurysm/PSA Management

- Asymptomatic aneurysm/PSA do not need definitive treatment **CPG 17.5**
- Avoid cannulation of access segments that involve the aneurysm/PSA, if alternative cannulation sites are available **CPG 17.6**
- If alternative cannulation sites are not available, cannulate at the sides or base of the aneurysm/PSA **CPG 17.6**
- In asymptomatic aneurysm/PSA, obtain appropriate imaging of the arterial inflow and venous outflow to assess volume flow or stenosis that may need to be corrected before definitive treatment **CPG 17.7**
- Symptomatic, large or rapidly expanding aneurysm/PSA should be surgically managed **CPG 17.8**
- Anastomotic aneurysm/PSA typically need surgical management **CPG 17.9**

# AV Access Aneurysm/PSA Definitive Treatment

- Definitive treatment of symptomatic, large or rapidly expanding AV access aneurysm/PSA is open surgical treatment with the specific approach determined by local expertise
- Under special circumstances (e.g. patient contraindication to surgery or lack of surgical option), stent grafts may be an alternative treatment for AV access aneurysm/PSA but the risk of infection must be carefully considered and cannulation over the stent graft must be avoided whenever possible

CPG 17.10

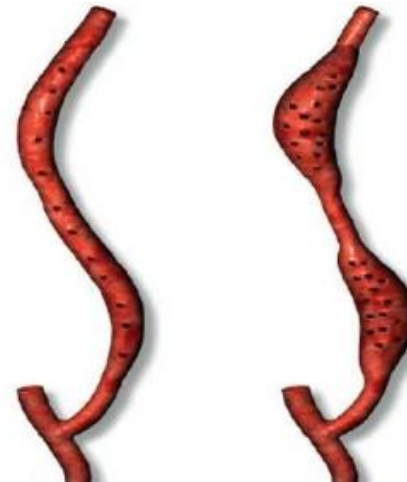
CPG 17.11-12

# Prevention of AV Access Aneurysm/PSA

- Prevent AV access aneurysms and pseudoaneurysms by using appropriate cannulation techniques (e.g. avoid "onesiteitis")

CPG 17.13

Properly conducted Rope Ladder cannulation is the best way to avoid aneurysms/ pseudoaneurysms



Poor constant site cannulation can lead to aneurysms/ pseudoaneurysms