- **Constant-site technique cannulation:** Another term for *buttonhole cannulation*. This should NOT be confused with *general area cannulation*. General area cannulation is neither rope ladder nor buttonhole cannulation, whereby new arterial and venous needle insertions are chronically inserted within close proximity (eg, millimeters) of prior insertions each time, that is, always in the same general areas. This poor technique leads to AV access aneurysms and damage and should be avoided.
- **Rope-ladder (also known as step-ladder) cannulation:** The cannulation needle sites for both arterial and venous needles are rotated along the length of the AV access each dialysis to reduce vessel damage.

Catheter: A device providing access to the central veins or right atrium, permitting high-volume flow rates.

Clinically significant lesion: One that contributes to clinical signs and symptoms (see AV Access Monitoring Table 13.2) without other cause, with or without a sustained change in surveillance measurements (eg, change in blood flow [Qa] or venous pressures) in the dialysis access circuit. Such a lesion is found during monitoring of vascular access (surveillance findings are supplementary) and shows >50% narrowing relative to adjacent normal vein diameter by angiography or ultrasound.

Clinical monitoring: Monitoring refers to the examination and evaluation of the access by means of physical examination or check to detect clinical signs that suggest the presence of AV access flow dysfunction, other dysfunction, or pathology. These abnormal clinical signs may include arm swelling, changes in the access bruit or thrill, or prolonged bleeding after dialysis (Tables 13.1 and 13.2). The patient's physical examination can be supplemented with concurrent dialysis measures such as those indicating recirculation (when needle placement is correctly spaced and placed) or other measures of reduced dialysis adequacy (eg, urea reduction ratio or Kt/V), in the absence of other contributing factors.

Complications:

- **Thrombotic flow–related complications or dysfunction:** Complications specifically related to the risk of or occurrence of thrombosis that leads to a clinically important reduction in intra-access flow that threatens the required access patency to achieve prescribed dialysis and/or results in clinical signs and symptoms (eg, stenosis or thrombosis).
- **Non–thrombotic flow–related complications or dysfunction:** Such complications may or may not threaten flow or patency but are associated with clinical signs and symptoms, eg, AV access aneurysms, steal syndrome.
- **Infectious complications or dysfunction:** Any infection involving the vascular access (intraluminal/access, extraluminal/access, peri-access, ie, cannulation or entry site) that results in clinically important infectious signs and symptoms.

Contingency plan: The plan of remedial measures for the anticipated problems the chosen vascular access might have. The contingency plan should be considered even before the vascular access is created or inserted.

Cumulative patency: A duration of time measuring intra-access patency that starts from the date of vascular access creation (AV access) or insertion (central venous catheter) to the date of vascular access abandonment.

Diagnostic testing: Specialized testing that is prompted by some abnormality or other medical indication and that is undertaken to diagnose the cause of the vascular access problem.

Dialysis usability: A dialysis access that can reliably and safely provide prescribed dialysis, per definition of mature fistula or graft.

Distal revascularization and interval ligation: A surgical procedure to reduce ischemia to the hand caused by steal syndrome.

Dysfunction: *AV access* or *vascular access dysfunction* has been replaced by 3 terms:

- Thrombotic flow–related complications or dysfunction
- Non–thrombotic flow–related complications or dysfunction
- Infectious complications or dysfunction

Note: Access dysfunction *is a very general term that is not specific in its terminology with regard to etiology of dysfunction. For this reason, it has been replaced with these three terms (see definition of complications).*

ESKD (End-Stage Kidney Disease) Life-Plan: The individualized set of kidney replacement modalities (hemodialysis, peritoneal dialysis, transplantation) required to sustain the life of a patient with ESKD that considers the patient's current and anticipated medical and life circumstances and preferences. The Life-Plan should be regularly re-evaluated given expected changes in a patient's life circumstances. See Rationale/Background section of Guideline 1 for further explanation and discussion about its special relevance for dialysis access.

Exit site: The location on the skin through which the catheter exits the skin surface. See also *insertion site*.

Failure to mature: An AV access that, despite radiologic or surgical intervention (ie, endovascular or open procedural management), cannot be used successfully for dialysis by 6 months after its creation.[1]

Fistula (plural, fistulae or fistulas): Autologous arteriovenous fistula, also referred to as *native fistula*.