

Appendix A: Lists of complications

Level	Complication list AAA
1	Elevated troponin levels requiring surveillance by a cardiologist
2	Acute myocardial infarction requiring percutaneous coronary intervention
3	Acute myocardial infarction requiring resuscitation
1	Allergic reaction (due to contrast allergy) requiring to abort treatment and start medication
2	Allergic reaction (due to contrast allergy) requiring to abort treatment and ventilator support
2	Aneurysm rupture requiring endovascular surgical re-intervention
3	Aneurysm rupture requiring open surgical repair
1	Bowel ischemia requiring no additional support
2	Bowel ischemia requiring temporary total parenteral nutrition
3	Bowel ischemia requiring bowel resection
1	Buttock claudication requiring no additional support
2	Buttock claudication requiring long-term use of analgesics
3	Buttock claudication requiring surgical intervention
1	Congestive heart failure requiring no additional support
2	Congestive heart failure requiring permanent medication
3	Congestive heart failure requiring resuscitation
2	Deep venous thrombosis requiring long-term anticoagulant therapy
3	Deep venous thrombosis requiring lytic therapy
1	Superficial wound infection requiring oral antibiotics
2	Superficial wound infection requiring opening of the wound at bedside
3	Deep wound infection requiring surgical debridement
1	De novo or worsened peripheral artery disease requiring medicinal support
2	De novo or worsened peripheral artery disease requiring intervention
2	Endoleak type 1 requiring secondary endovascular treatment
3	Endoleak type 1 requiring explantation and open repair
1	Endoleak type 2 resolved after 6 months
2	Endoleak type 2 with no evidence of aneurysm expansion requiring additional follow-up imaging
3	Endoleak type 2 requiring secondary endovascular treatment
2	Endoleak type 3 requiring secondary endovascular treatment
3	Endoleak type 3 requiring explantation and open repair
1	Erectile dysfunction with spontaneous recovery within 6 months
2	Erectile dysfunction functional with medical therapy
3	Erectile dysfunction requiring penile implant
1	Hemorrhage requiring 1 blood transfusion
2	Hemorrhage requiring both blood transfusion and local surgical intervention for control
3	Hemorrhage requiring both massive transfusion and laparotomy
1	Incisional hernia requiring a hernia support belt
2	Incisional hernia requiring surgical repair
2	Pulmonary embolism requiring anticoagulant therapy
3	Pulmonary embolism requiring surgical therapy due to hemodynamic instability
1	Pulmonary infection requiring oral antibiotics
2	Pulmonary infection requiring IV antibiotics
3	Pulmonary infection requiring ventilator support
1	Renal insufficiency requiring surveillance by a nephrologist
2	Renal failure requiring temporary dialysis with permanently reduced renal function requiring surveillance by a nephrologist
3	Renal failure requiring permanent dialysis

2	Sepsis based on a positive blood culture requiring IV antibiotics and monitoring on the surgical ward
3	Sepsis based on a positive blood culture requiring IV antibiotics and ICU support due to hemodynamic instability
1	Spinal cord ischemia resolved within 24 hours
2	Spinal cord ischemia regaining the ability to walk without support within 1 month
3	Spinal cord ischemia with permanent paraplegia
1	Transient ischemic attack requiring no additional treatment
2	Stroke with permanent deficit but the ability to walk without support
3	Stroke with permanent severe impairment and inability to live independently
2	Thrombo-embolic event requiring minor toe or foot amputation
3	Thrombo-embolic event requiring lytic therapy
3	Vascular graft limb thrombosis requiring fem-fem crossover surgery
1	Urinary retention requiring one-time catheterization
2	Urinary retention requiring intravesical catheter for 2 weeks
3	Urinary retention requiring permanent intermittent self-catheterization
2	Vascular graft infection controlled with antibiotics
3	Vascular graft infection requiring graft removal with in situ repair
1	Vascular graft migration requiring no additional intervention
2	Vascular graft migration requiring secondary endovascular treatment
3	Vascular graft migration requiring explantation and open repair
1	Vascular graft technical deployment problem without conversion
2	Vascular graft technical deployment problem requiring conversion to open surgery
3	Vascular graft technical deployment problem with permanent disability and inability to live independently
1	Wound hematoma with spontaneous resolution
2	Wound hematoma requiring surgical evacuation
3	Wound hematoma with nerve compression requiring arterial repair
1	Arterial access site pseudoaneurysm requiring no additional intervention
2	Arterial access site pseudoaneurysm requiring thrombin injection
3	Arterial access site pseudoaneurysm requiring surgical repair
2	Ureteral lesion causing a urinoma requiring percutaneous drainage
3	Ureteral lesion requiring surgical repair
2	Bowel lesion requiring primary closure or anastomosis
3	Bowel lesion requiring a colostomy

First column: 1 = mild level of severity, 2 = moderate level of severity, 3 = severe level of severity.

Second column: complications divided in levels of severity.

Level	Complication list CAD
1	Elevated troponin levels requiring surveillance by a cardiologist
2	Acute myocardial infarction requiring percutaneous coronary intervention
3	Acute myocardial infarction requiring resuscitation
1	Allergic reaction (due to contrast allergy) requiring to abort treatment and start medication
2	Allergic reaction (due to contrast allergy) requiring to abort treatment and ventilator support
1	Arterial access site arteriovenous fistula requiring no additional treatment
2	Arterial access site arteriovenous fistula formation requiring endovascular repair
3	Arterial access site arteriovenous fistula formation requiring surgical repair
1	Arterial access site pseudoaneurysm requiring no additional treatment
2	Arterial access site pseudoaneurysm requiring thrombin injection
3	Arterial access site pseudoaneurysm requiring surgical repair
1	Bradycardia resolved within 24 hours
2	Bradycardia requiring short-term medicinal support
3	Bradycardia requiring pacemaker implantation
1	Cardiac arrhythmias with spontaneous resolution
2	Cardiac arrhythmias requiring permanent anticoagulant therapy
3	Cardiac arrhythmias requiring cardioversion
1	Congestive heart failure requiring no additional support
2	Congestive heart failure requiring permanent medication
3	Congestive heart failure requiring resuscitation
2	Deep venous thrombosis requiring long-term anticoagulant therapy
3	Deep venous thrombosis requiring lytic therapy
1	Superficial wound infection requiring oral antibiotics
2	Superficial wound infection requiring opening of the wound at bedside
3	Deep wound infection requiring surgical debridement
1	De novo or worsened peripheral artery disease requiring medicinal support
2	De novo or worsened peripheral artery disease requiring intervention
3	De novo or worsened peripheral artery disease requiring below-knee amputation
1	Dissection requiring no additional intervention
2	Dissection requiring endovascular repair
3	Dissection requiring open repair
1	Hypertension resolved within 24 hours
2	Hypertension requiring medicinal support
3	Hyperperfusion syndrome requiring intensive monitor surveillance on brain care unit
1	Ipsilateral non-disabling stroke causing prolonged hospital stay
2	Ipsilateral disabling stroke with permanent deficit with mild impairment
3	Ipsilateral disabling stroke with permanent severe impairment and inability to live independently
2	Embolic or hemodynamic stroke resulting in mild or temporary cognitive function impairment
1	Transient nerve palsy causing numbness of face/neck area
2	Persistent but not disabling cranial nerve palsy requiring speech therapy
3	Persistent disabling cranial nerve palsy with difficulty to eat and speak
2	Pulmonary embolism requiring anticoagulant therapy
3	Pulmonary embolism requiring surgical therapy due to hemodynamic instability
1	Pulmonary infection requiring oral antibiotics
2	Pulmonary infection requiring IV antibiotics
3	Pulmonary infection requiring ventilator support
1	Renal insufficiency requiring surveillance by a nephrologist.
2	Renal failure requiring temporary dialysis with permanently reduced renal function requiring surveillance by a nephrologist.

3	Renal failure requiring permanent dialysis
1	Retroperitoneal hemorrhage without the need for blood transfusion
2	Retroperitoneal hemorrhage requiring both blood transfusion and limited surgical or endovascular intervention for control
3	Retroperitoneal hemorrhage requiring massive transfusion and major open surgical intervention
2	Sepsis requiring IV antibiotics
3	Sepsis based on a positive blood culture requiring IV antibiotics and ICU support due to hemodynamic instability
1	Technical failure without conversion
2	Technical failure leading to conversion to open surgery
3	Technical failure with permanent disability and inability to live independently
1	Transient ischemic attack not requiring prolonged hospital stay
2	Transient ischemic attack requiring prolonged hospital stay
1	Transposition of stent without conversion
2	Transposition of stent requiring open surgery
3	Transposition of stent with permanent disability and inability to live independently
1	Wound hematoma requiring prolonged compression
2	Respiratory distress due to neck hematoma requiring surgical evacuation
3	Wound hematoma with nerve compression or cervical blow-out requiring arterial repair
2	Patch infection controlled with antibiotics
3	Patch infection requiring vascular reconstruction
1	Carotid artery re-stenosis or occlusion asymptomatic requiring no additional intervention
2	Carotid artery re-stenosis or occlusion with TIA/minor stroke requiring endovascular or open re-intervention
3	Carotid artery re-stenosis or occlusion with major stroke
1	Contrast encephalopathy resolved within 24 hours
2	Contrast encephalopathy resulting in temporary cognitive function impairment
3	Contrast encephalopathy with permanent disability and inability to live independently

First column: 1 = mild level of severity, 2 = moderate level of severity, 3 = severe level of severity.

Second column: complications divided in levels of severity.

Level	Complication list PAD
2	Acute limb ischemia due to distal embolization requiring lytic therapy
2	Acute limb ischemia requiring below-knee amputation
3	Acute limb or worsened ischemia requiring above-knee amputation
1	Elevated troponin levels requiring surveillance by a cardiologist
2	Acute myocardial infarction requiring percutaneous coronary intervention
3	Acute myocardial infarction requiring resuscitation or coronary artery bypass graft surgery
1	Allergic reaction (due to contrast allergy) requiring to abort treatment and start medication
2	Allergic reaction (due to contrast allergy) requiring to abort treatment and ventilator support
1	Arteriovenous fistula at puncture site requiring no additional intervention
2	Arteriovenous fistula at puncture site requiring endovascular repair
3	Arteriovenous fistula at puncture site requiring surgical repair
1	Cardiac arrhythmias with spontaneous resolution
2	Cardiac arrhythmias requiring life-long anti-coagulant therapy
3	Cardiac arrhythmias requiring cardioversion
1	Congestive heart failure requiring no additional support
2	Congestive heart failure requiring diuretics
3	Congestive heart failure requiring resuscitation
1	Renal insufficiency requiring surveillance by a nephrologist.
2	Renal failure requiring temporary dialysis with permanently reduced renal function requiring surveillance by a nephrologist.
3	Renal failure requiring permanent dialysis
2	Deep venous thrombosis requiring long-term anticoagulant therapy
3	Deep venous thrombosis requiring lytic therapy
1	Superficial wound infection requiring oral antibiotics
2	Superficial wound infection requiring opening of the wound at bedside
3	Deep wound infection requiring surgical debridement
1	Dissection requiring no additional intervention
2	Dissection requiring endovascular repair
3	Dissection requiring open repair
1	Femoral pseudo-aneurysm at puncture site requiring no additional intervention
2	Femoral pseudo-aneurysm at puncture site requiring thrombin injection
3	Femoral pseudo-aneurysm at puncture site requiring endovascular or surgical repair
2	Vascular graft infection controlled with antibiotics
3	Vascular graft infection requiring vascular reconstruction
1	Hemorrhage requiring 1 blood transfusion
2	Hemorrhage requiring both blood transfusion and limited surgical or endovascular intervention for control
3	Hemorrhage requiring both massive transfusion and extensive surgical intervention
1	Lymphocele or lymphorrhea resolution without aspiration
2	Lymphocele requiring drainage or lymphorrhea
3	Lymphocele or lymphorrhea with permanent debilitating edema or continuous lymphorrhea
2	No improvement after treatment requiring re-intervention
3	Worsened peripheral artery disease requiring above-knee amputation
2	Pulmonary embolism requiring anticoagulant therapy
3	Pulmonary embolism requiring surgical therapy due to hemodynamic instability
1	Pulmonary infection requiring oral antibiotics
2	Pulmonary infection requiring IV antibiotics
3	Pulmonary infection requiring ventilator support 20
2	Sepsis requiring IV antibiotics

3	Sepsis based on a positive blood culture requiring IV antibiotics and ICU support due to hemodynamic instability
1	Transient ischemic attack not requiring prolonged hospital stay
2	Transient ischemic attack requiring prolonged hospital stay
2	Stroke with permanent deficit but the ability to walk without support
3	Stroke with permanent severe impairment inability to live independently
1	Wound hematoma with spontaneous resolution
2	Wound hematoma requiring surgical evacuation
3	Wound hematoma with nerve compression requiring arterial repair
1	Decubitus requiring frequent patient repositioning and local wound care
2	Decubitus requiring surgical debridement
3	Decubitus requiring flap reconstruction
1	Transient loss of sensibility on medial side or lower leg
2	Permanent loss of sensibility on medial side or lower leg
1	Artery re-stenosis or occlusion asymptomatic requiring no additional intervention
2	Artery re-stenosis or occlusion with ischemic rest pain requiring endovascular or open re-intervention
3	Artery re-stenosis or occlusion requiring below-knee amputation
1	Aneurysm formation requiring observation
2	Aneurysm formation requiring endovascular treatment
3	Aneurysm formation requiring surgical repair

First column: 1 = mild level of severity, 2 = moderate level of severity, 3 = severe level of severity.

Second column: complications divided in levels of severity.