ANNEX 2. Definition of complications

These definitions are based on those proposed by the European Society of Anesthesiology (ESA) and the European Society of Intensive Care Medicine (ESICM).

Jammer Ib, Wickboldt N, Sander M, et al. Standards for definitions and use of outcome measures for clinical effectiveness research in perioperative medicine: European Perioperative Clinical Outcome (EPCO) definitions. A statement from de ESA-ESCIM joint taskforce on perioperative outcome measures. Eur J Anaesthesiol 2015; 32:88-105.

Complication	Definition	Severity
Acute Kidney Injury	Mild: Serum creatinine Increase of 1.5-1.9 times baseline value within 7 days or ≥0.3mg/dL (30 µmol/L) within 48 hours. Urine output ≤0.5ml/kg/h for 6-12 hours Moderate: Serum creatinine Increase of 2.0-2.9 times baseline value within 7 days. Urine output ≤0.5 ml/kg/h for 12 hours. Severe : Serum creatinine Increase of 3.0 times baseline within 7 days or increase in serum creatinine to ≥4.0 mg/dL (≥350 µmol/L) with an acute rise of >0.5 mg/dL (>50 µmol/L) or initiation of renal replacement therapy. Urine output ≤0.3 ml/kg/h for 24 hours or Anuria for 12 hours.	Included in the definition
Acute Respiratory Distress Syndrome (ARDS)	Respiratory failure, or new or worsening respiratory symptoms, commencing within one week of surgery; and a chest radiograph or computed tomography scan which demonstrates bilateral opacities not fully explained by effusions, lobar/lung collapse, or nodules; and respiratory failure not fully explained by cardiac failure or fluid overload. Need objective assessment (e.g. echocardiography) to exclude hydrostatic oedema if no risk factor present.	Mild: PaO2:FiO2 between 200 and 300 mmHg with PEEP or CPAP ≥5 cmH2O Moderate:PaO2:FiO2 between 100 and 200 mmHg with PEEP ≥5 cmH2O Severe: PaO2:FiO2 ≤100 mmHg with PEEP ≥5 cmH2O
Pneumonia	Chest radiographs with new or progressive and persistent infiltrates, or consolidation, or cavitation, and at least one of the following: a)Fever (>38°C) with no other recognized cause b)Leucopaenia (<4,000 white blood cells/mm3) or leucocytosis (>12,000 white blood cells/mm3) c)For adults >70 years old, altered mental status with no other recognised cause …and at least two of the following: New onset of purulent sputum or change in character of sputum, or increased respiratory	*Mild*: it produces only temporary damage and generally does not require a specific clinical treatment. *Moderate*: more serious complication, but usually does not cause permanent damage or functional limitation. It usually requires clinical treatment *Serious*: it produces a significant prolongation of the hospital stay

	secretions, or increased suctioning requirements New onset or worsening cough, or dyspnoea, or tachypnoea Râles or bronchial breath sounds Worsening gas exchange (hypoxia, increased oxygen or ventilator demand)	and / or permanent functional limitation or death. It almost always requires clinical treatment.
Cardiac arrest	The cessation of cardiac mechanical activity, as confirmed by the absence of signs of circulation. ECG changes may corroborate the incidence of cardiac arrest.	Severity grading: None, yes or no
Arrhythmia	Electrocardiograph (ECG) evidence of cardiac rhythm disturbance.	*Mild*: it produces only temporary damage and generally does not require a specific clinical treatment. *Moderate*: more serious complication, but usually does not cause permanent damage or functional limitation. It usually requires clinical treatment *Serious*: it produces a significant prolongation of the hospital stay and / or permanent functional limitation or death. It almost always requires clinical treatment.
Deep Venous Thrombosis	Un nuevo coágulo de sangre o trombo dentro del sistema venoso. Se requiere un examen sistemático en los ensayos en los que la TVP es una medida de resultado importante. Las pruebas diagnósticas apropiadas incluyen ecografía, venografía, tomografía computarizada o resonancia magnética	
Stroke	Embolic, thrombotic, or haemorrhagic cerebral event with persistent residual motor, sensory, or cognitive dysfunction (e.g. hemiplegia, hemiparesis, aphasia, sensory deficit, impaired memory	
Pulmonary oedema	Evidence of fluid accumulation in the alveoli due to poor cardiac function.	*Mild*: it produces only temporary damage and generally does not require a specific clinical treatment. *Moderate*: more serious complication, but usually does not cause permanent damage or functional limitation. It usually requires clinical treatment *Serious*: it produces a significant prolongation of the hospital stay and / or permanent functional limitation or death. It almost always requires clinical treatment.
Pulmonary embolism (PE)	A new blood clot or thrombus within the pulmonary arterial system. Guidance: Appropriate diagnostic tests include scintigraphy and CT angiography. Plasma D- dimer measurement is not recommended as a diagnostic test in the first three weeks following surgery.	
	Infection involving only superficial surgical incision which meets the following criteria:	

Surgical site infection (superficial)	1)Infection occurs within 30 days after surgery and 2)Involves only skin and sub-cutaneous tissues of the incision and 3)The patient has at least one of the following: a) Purulent drainage from the superficial incision b) Organisms isolated from an aseptically obtained culture of fluid or tissue from the superficial incision and at least one of the following signs or symptoms of infection: pain or tenderness, localized swelling, redness, or heat, or superficial incision is deliberately opened by surgeon and is culture positive or not cultured. A culture-negative finding does not meet this criterion. c) Diagnosis of a incisional surgical site infection by a surgeon or attending physician	
Surgical site infection (deep)	An infection which involves both superficial and deep parts of surgical incision and meets the following criteria: 1) Infection occurs within 30 days after surgery if no surgical implant is left in place or one year if an implant is in place and 2) The infection appears to be related to the surgical procedure and involves deep soft tissues of the incision (e.g. fascial and muscle layers) and 3) The patient has at least one of the following: a) Purulent drainage from the deep incision but not from the organ/space component of the surgical site b) A deep incision spontaneously dehisces or is deliberately opened by a surgeon and is culture-positive or no cultures were taken whilst the patient has at least one of the following signs or symptoms of infection: fever (>38°C) or localized pain or tenderness. A culture-negative finding does not meet this criterion. c) An abscess or other evidence of infection involving the deep incision is found on direct examination, during surgery, or by histopathologic or radiologic examination d) Diagnosis of a deep incisional surgical site infection by a surgeon or attending physician	*Mild*: it produces only temporary damage and generally does not require a specific clinical treatment. *Moderate*: more serious complication, but usually does not cause permanent damage or functional limitation. It usually

		requires clinical treatment *Serious*: it produces a significant prolongation of the hospital stay and / or permanent functional limitation or death. It almost always requires clinical treatment.
Surgical site infection (organ/space)	An infection which involves any part of the body excluding the fascia or muscle layers and meets the following criteria: 1) Infection occurs within 30 days after surgery and 2) The infection appears to be related to the surgical procedure and involves any part of the body, excluding the skin incision, fascia, or muscle layers, that is opened or manipulated during the operative procedure and 3) The patient has at least one of the following: a) Purulent drainage from a drain that is placed through a stab wound into the organ/space b) Organisms isolated from an aseptically obtained culture of fluid or tissue in the organ/ space c) An abscess or other evidence of infection involving the organ/space that is found on direct examination, during reoperation, or by histopathologic or radiologic examination d) Diagnosis of an organ/space surgical site infection by a surgeon or attending physician	
Bloodstream infection	An infection which is not related to infection at another site and which meets either of the following criteria: 1)Patient has a recognised pathogen cultured from blood cultures which is not related to an infection at another site 2)Patient has at least one of the following signs or symptoms: fever (>38°C), chills, or hypotension and at least one of the following: a) Common skin contaminant cultured from two or more blood cultures drawn on separate occasions b) Common skin contaminant cultured from at least one blood culture from a patient with an intravascular line, and a physician starts antimicrobial therapy c) Positive blood antigen test	*Mild*: it produces only temporary damage and generally does not require a specific clinical treatment. *Moderate*: more serious
Myocardial infarction	Increase in serum cardiac biomarker values (preferably cardiac troponin) with at least	

	one value above the 99th percentile upper reference limit and at least one of the following criteria: - Symptoms of ischaemia - New or presumed new ST-segment or T-wave ECG changes or new left bundle branch block - Development of pathological Q-waves on ECG - Radiological or echocardiographic evidence of new loss of viable myocardium or new regional wall motion abnormality - Identification of an intra-coronary thrombus at angiography or autopsy	complication, but usually does not cause permanent damage or functional limitation. It usually requires clinical treatment *Serious*: it produces a significant prolongation of the hospital stay and / or permanent functional limitation or death. It almost always requires clinical treatment.
Urinary tract infection	An infection associated with at least one of the following signs or symptoms which should be identified within a 24 hour period: Fever (>38 °C), urgency, frequency, dysuria, suprapubic tenderness, costovertebral angle pain or tenderness with no other recognised cause and a positive urine culture of ≥105 colony forming units/mL with no more than two species of microorganisms	
Paralytic ileus	Failure to tolerate solid food or defecate for three or more days after surgery	*Mild*: it produces only temporary damage and generally does not require a specific clinical treatment. *Moderate*: more serious complication, but usually does not cause permanent damage or functional limitation. It usually requires clinical treatment *Serious*: it produces a significant prolongation of the hospital stay and / or permanent functional limitation or death. It almost always requires clinical treatment.
Delirium	Delirium may be identified using the Intensive Care Delirium Screening Checklist. Patients are first evaluated for an altered level of consciousness. Those with a response to mild or moderate stimulation, an exaggerated response to stimulation or normal wakefulness are evaluated	Included in the definition

	fully. Patients receive one point for each of the following criteria: inattention, disorientation, hallucination-delusion-psychosis, psychomotor agitation or retardation, inappropriate speech or mood, sleep/wake cycle disturbance or symptom fluctuation.	
Post-operative haemorrhage	Blood loss occurring within 72 hours after the end of surgery which would normally result in transfusion of blood. Gastro-intestinal bleeding is defined above.	*Mild*: Any sign of hemorrhage (any bleeding that is more than expected, including bleeding that was only identified in an imaging study), that does not meet the criteria for the moderate-severe type, but requires at least one of the following points: • Non-surgical medical intervention by a health professional (examples include stopping antiplatelet therapy, antithrombotic medications, compression at the bleeding site, use of drugs to reverse the anticoagulant effect, such as: protamine and vitamin k). • Requires hospitalization or higher level of care. • Requires rapid evaluation with tests such as: blood count, urinalysis, coagulation tests, endoscopy and tomography. *Moderate*: • Bleeding with a decrease in hemoglobin from ≥ 3 to <5 g / dl (related to bleeding). • Any need for transfusion due to obvious bleeding. • Decrease in hemoglobin ≥ 5 g / dl (related to bleeding). • Bleeding that requires surgical intervention to control it. • Bleeding that requires the use of vasoactive agents . *Severe*: Transfusion of ≥ 5 units of red blood cells, in a period of 48 hours. Fatal bleeding.