**Appendix 1.** ICU admission protocol in Dong-A University Hospital

1. Level I: Patients who need prompt ICU admission

Level I patients admit ICU with top priority

< Indication >

1. CPR survivor
2. On ECMO
3. Mechanical ventilation after endotracheal intubation or tracheostomy

2. Level II: Patients who need ICU admission

The ICU admission priority for level II patients is determined by intensivist

< Indication >

1. Unstable vital sign

A. Continuous use of vasopressor: norepinephrine ≥ 0.2 mcg/kg/min, dopamine ≥ 10 mcg/kg/min, or more than two types of vasopressor

B. Respiratory rate > 30 rate/min, heart rate > 130 rate/min (except, atrial fibrillation), Systolic blood pressure < 80mmHg

1. Massive bleeding

A. Massive hemoptysis ≥ 50cc/day

B. Gastrointestinal bleeding with mental status change or decreased hemoglobin more than 2

1. Fulminant hepatic failure, severe pancreatitis, DKA, HHS
2. On CRRT
3. High probability of clinical deterioration

A. Altered mental status without central nervous system lesion

B. Metabolic acidosis: pH < 7.2, bicarbonate < 16, or total CO2 < 16

1. Severe electrolyte imbalance

A. Na+ < 120 or Na+ > 155

B. K+ < 2.5 or K+ > 6.0

1. Endotracheal intubation for keeping airway, no mechanical ventilation
2. For monitoring

Frequent vital sign, intake/output, or BST check

3. Level III: Patients who do not benefit from ICU care

Level III patients are postponed the ICU admission

1. critically ill patients with poor prognosis

Malignant tumor without chemotherapy plan

ECOG performance status 4 with chronic disease

1. patients without critical illness

Stable vital sign and low probability of clinical deterioration

ICU, intensive care unit; CPR, cardiopulmonary resuscitation; ECMO, extra-corporeal membrane oxygenation; DKA, diabetic ketoacidosis; HHS, hyperosmolar hyperglycemic state; CRRT, continuous renal replacement therapy; BST, blood sugar test; ECOG, Eastern cooperative oncology group.