

Table S1 Modified Marshall scoring system for organ dysfunction Score (1)

Organ system	Score				
	0	1	2	3	4
Respiratory (PaO ₂ /FiO ₂)	>400	301–400	201–300	101–200	≤101
Renal*					
(serum creatinine, mmol/l)	≤134	134–169	170–310	311–439	>439
(serum creatinine, mg/dl)	<1.4	1.4–1.8	1.9–3.6	3.6–4.9	>4.9
Cardiovascular (systolic blood pressure, mm Hg) [†]	>90	<90, fluid responsive	<90, not fluid responsive	<90, pH<7.3	<90, pH<7.2
For non-ventilated patients, the FiO ₂ can be estimated from below:					
Supplemental oxygen (l/min)	FiO ₂ (%)				
Room air	21				
2	25				
4	30				
6–8	40				
9–10	50				

A score of 2 or more in any system defines the presence of organ failure. *A score for patients with pre-existing chronic renal failure depends on the extent of further deterioration of baseline renal function. No formal correction exists for a baseline serum creatinine ≥134 μmol/l or ≥1.4 mg/dL. [†]Off inotropic support.

Table S2 The grades of severity according to the 2012 revised Atlanta classification (1)

The grades of severity	define
Mild acute pancreatitis	No organ failure No local or systemic complications
Moderately severe acute pancreatitis	Organ failure that resolves within 48 h (transient organ failure) and/or Local or systemic complications without persistent organ failure
Severe acute pancreatitis	Persistent organ failure (>48 h) –Single organ failure –Multiple organ failure

Table S3 Acute Physiology and Chronic Health Evaluation II score, APACHE II score (2)

A. age	≤44,0	45-54, 2	55-64, 3	65-74, 5	≥75,6					A point	
B. Past health score: patients with severe organ system dysfunction or immune damage.	Non-operative or after elective surgery				2					B point	
	Unable to operate or after emergency surgery				5						
	None of the above				0						
Glasgow coma score (GCS)	6	5	4	3	2					1	
1. eye opening reponse			spontaneous	to speech	to pain					none	
2. language reponse			oriented	confused	inappropriate words	unintelligible sounds					none
3. motor response	obey commands	localize	with drawal	decorticate flexion	decerebrate extension					no response	
GCS score=1+2+3					C point= 15 minus actual GCS						
D= Acute Physiology Score (APS)	score									D point	
	+4	+3	+2	+1	0	+1	+2	+3	+4		
Temperature rectal (°C)	≥41	39-40.9		38.5-38.9	36-38.4	34-35.9	32-33.9	30-31.9	≤29.9		
Mean arterial perssure (mmHg)	≥160	130-159	110-129		70-109		50-69		≤49		
heart rate ventricular response	≥180	140-179	110-139		70-109		55-69	40-54	≤39		
Respiratory frequency	≥50	35-49		25-34	12-24	10-11	6-9		≤5		
PaO ₂ (mmHg) (FiO ₂ <50%)					70	61-70		55-60	<55		
A-aDO ₂ (FiO ₂ >50%)	≥500	350-499	200-349		200						
Arterial PH	≥7.7	7.6-7.69		7.5-7.59	7.33-7.49		7.25-7.32	7.15-7.24	<7.15		
Serum HCO ₃ (vernous-mmol/L) (Not preferred, use if no ABGs)	≥52	41-51.9		32-40.9	23-31.9		18-21.9	15-17.9	<15		
Serum Sodium (mmol/L)	≥180	160-179	155-159	150-154	130-149		120-129	111-119	≤110		
Serum Potassium (mmol/L)	≥7	6-6.9		5.5-5.9	3.5-5.4	3-3.4	2.5-2.9		<2.5		
Serum creatinine (ummol/L)	≥305	170-304	130-169		54-129		<54				
Hematocrit (%)	≥60		50-59.9	46-49.9	30-45.9		20-29.9		<20		
White blood score (total/mm ³) (in 1,000s)	≥40		20-39.9	15-19.9	3-14.9		1-2.9		<1		
APACHE II toltal point =A+B+C+D											

Chronic Health Points

If the patient has a history of severe organ system insufficiency or is immuno-compromised assign points as follows: (i) for nonoperative or emergency postoperative patients, 5 points or (II) for elective postoperative patients, 2 points. Definitions: Organ Insufficiency or immuno-compromised state must have been evident prior to this hospital admission and conform to the following criteria: LIVER: Biopsy proven cirrhosis and documented portal hypertension; episodes of past upper GI bleeding attributed to portal hypertension; or prior episodes of hepatic lailurelencephalopathy/coma. CARDIOVASCULAR: New York Heart Association Class IV. RESPIRATORY: Chronic restrictive, obstructive, or vascular disease resulting in severe exercise restriction, i.e., unable to climb stairs or perform household duties; or documented chronic hypoxia, hypercapnia, secondary polycythemia, severe pulmonary hypertension (>40 mmHg), or respirator dependency. RENAL: Receiving chronic dialysis. IMMUNO-COMPROMISED: The patient has received therapy that suppresses resistance to infection, e.g., immuno-suppression, chemotherapy, radiation, long term or recent high dose steroids, or has a disease that is sufficiently advanced to suppress resistance to infection, e.g., leukemia, lymphoma, AIDS.

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Cardiovascular: New York Heart Association Class IV.

Respiratory: Chronic restrictive, obstructive, or vascular disease resulting in severe exercise restriction, i.e. , unable to climb stairs or perform household duties; or documented chronic hypoxia, hypercapnia, secondary polycythemia, severe pulmonary hypertension (> 40mmHg), or respirator dependency.

Renal: Receiving chronic dialysis.

Immuno-compromised: The patient has received therapy that suppresses resistance to infection, e.g.. immuno-suppression, chemotherapy, radiation, long term or recent high dose steroids, or has a disease that is sufficiently advanced to suppress resistance to infection, e.g. leukemia, lymphoma, AIDS.

Table S4 An overview of CT scan models and their important parameters

CT scanning model	Tube current (mA)	Tube voltage (kVp)	Reconstructed kernel function	collimator (mm)	Pitch	layer thickness (mm)
Siemens Definition AS+ 128	200	120	B30f	128×0.6	1.0	5.0
GE LightSpeed VCT	200	120	B30f	64×0.6	0.9	5.0
Brilliance 64	200	120	B30f	64×0.6	0.8	1.5
SOMATOM Definition Flash	200/155	140/80	B30f	2×128×0.6	0.9	5.0
Toshiba Aquilion ONE 320	250	120	B30f	64×0.6	0.5	5.0

Table S5 Modified CT severity index, MCTSI score (3)

Grade score	Definition
0	Normal pancreas
2	pancreas and / or peripancreatic inflammation
4	Single or more ill-defined collections or pancreatic/peripancreatic gas
Necrosis score	
0	Uniform pancreatic enhancement
2	Non-enhancement of lower 30% of the gland
4	Non-enhancement of over 30% of the gland
Extrapancreatic complications	
2	One or more of pleural effusion, ascites, vascular complications, parenchymal complications, or gastrointestinal tract involvement.

Mild (0–2 points), moderate (4–6 points), or severe (8–10 points).

References

1. Banks PA, Bollen TL, Dervenis C, Gooszen HG, Johnson CD, Sarr MG, et al. Classification of acute pancreatitis--2012: revision of the Atlanta classification and definitions by international consensus. *GUT* 2013;62:102-111.
2. Knaus WA, Zimmerman JE, Wagner DP, Draper EA, Lawrence DE. APACHE-acute physiology and chronic health evaluation: a physiologically based classification system. *CRIT CARE MED* 1981;9:591-597.
3. Bollen TL, Singh VK, Maurer R, Repas K, van Es HW, Banks PA, et al. Comparative evaluation of the modified CT severity index and CT severity index in assessing severity of acute pancreatitis. *AJR Am J Roentgenol* 2011;197:386-392.