Appendix 1: Text, Supplemental Digital Content

For the first four CT scanners, a nonenhanced scan was performed first, and 1.5 mL/kg of an iodinated contrast medium (Ultravist 370; Bayer Schering Pharma, Guangzhou, China) was subsequently injected into the vein at a rate of 3.5–4 mL/s using a motorized syringe pump (Ulrich CT Plus 150; Ulrich Medical, Boston, USA). Arterial and portal vein phase CECT scans were obtained with delays of 25–30 and 65–70 s, respectively, after contrast material injection.

For the SOMATOM Definition Flash system, the conventional unenhanced phase scan was performed in the single-energy mode, whereas the arterial and portal vein phase scans were carried out in the dual-energy mode. The A tube and B tube data were simultaneously obtained. Dual-energy scanning was conducted using an automatic exposure control system (CARE Dose 4D; Siemens Medical Solutions, Germany) to simultaneously obtain a collimation of 128×0.6 mm, a pitch of 0.9, a field of view of 33 cm, and a B30f reconstruction kernel. For routine nonenhanced scans, a pump sampler (MEDRAD; Stellant, USA) was used to intravenously inject 1.5 mL/kg of an iodinated contrast agent (300 mg I/mL, Omnipaque; GE Healthcare, Boston, USA) at a flow rate of 3.5 mL/s. Bolus tracking (CARE Bolus; Siemens Medical Solutions) was conducted for timing in each phase. A nonlinear data combination algorithm was used to reconstruct the images acquired at 140 and 80–120 kV.

Table S1 Specific computed tomography scanners and parameters

CT parameters	Tube voltage (kV)	Tube current (Ma)	FOV (cm)	Matrix	Reconstruction kernels	Collimation (mm)	Pitch (mm)	Slice thickness (mm)
SOMATOM Definition AS + 128	120	200	35×35	512×512	B30f	128×0.6	1.0	5
LightSpeed VCT 128	120	200	35×35	512×512	B30f	64×0.6	0.9	5
Brilliance 64	120	200	35×35	512×512	B30f	64×0.6	0.8	5
Toshiba Aquilion ONE 320	120	250	35×35	256×256	B30f	64×0.6	0.5	5
SOMATOM Definition Flash	140/80	200/155	50×50/33×33	512×512	B30f	2×128×0.6	0.9	5

CT, computed tomography.

Table S2 Types of the pancreatitis of recurrent acute pancreatitis and initial acute pancreatitis in all patients on CT

Types of pancreatitis	All			The early phase			The late phase		
	RAP (n=683)	AP (n=1,829)	P	RAP (n=517)	AP (n=1,100)	P	RAP (n=166)	AP (n=729)	P
NP, n (%)	262 (38.36)	641 (35.05)	0.13	145 (28.05)	226 (20.55)	0.001	117 (70.48)	415 (56.93)	0.001
Types of pancreatitis, n (%)			0.34			0.008			0.001
IEP	421 (61.64)	1,188 (64.95)		372 (71.95)	874 (79.45)		49 (29.52)	314 (43.07)	
PN	11 (1.61)	32 (1.75)		10 (1.93)	12 (1.09)		1 (0.60)	20 (2.74)	
EXPN	46 (6.73)	127 (6.94)		26 (5.03)	37 (3.36)		20 (12.05)	90 (12.35)	
BN	205 (30.01)	482 (26.35)		109 (21.08)	177 (16.09)		96 (57.83)	305 (41.84)	

CT, computed tomography; RAP, recurrent acute pancreatitis; AP, acute pancreatitis; n, number of patients; IEP, interstitial edematous pancreatitis; NP, necrotizing pancreatitis; PN, pancreatic parenchymal necrosis alone; EXPN, extrapancreatic necrosis alone; BN, both pancreatic parenchymal and peripancreatic necrosis.

Table S3 Types of the pancreatitis of recurrent acute pancreatitis and initial acute pancreatitis in the number of CT examinations of all patients

Types of pancreatitis	All			The early phase			The late phase		
	RAP (n'=726)	AP (n'=1,964)	P	RAP (n'=529)	AP (n'=1,141)	P	RAP (n'=197)	AP (n'=823)	P
NP, n' (%)	285 (39.26)	707 (35.60)	0.12	150 (28.36)	239 (20.95)	0.001	135 (68.53)	469 (56.99)	0.003
Types of pancreatitis, n' (%)			0.41			0.006			0.02
IEP	441 (60.74)	1,257 (64.00)		379 (71.64)	903 (79.14)		62 (31.47)	354 (43.01)	
PN	15 (2.07)	36 (1.83)		10 (1.89)	12 (1.05)		5 (2.54)	24 (2.92)	
EXPN	52 (7.16)	142 (7.23)		27 (5.10)	37 (3.24)		25 (12.69)	105 (12.76)	
BN	218 (30.03)	529 (26.93)		113 (21.36)	189 (16.56)		105 (53.30)	340 (41.31)	

CT, computed tomography; RAP, recurrent acute pancreatitis; AP, acute pancreatitis; n', number of CT examinations of all patients; IEP, interstitial edematous pancreatitis; NP, necrotizing pancreatitis; PN, pancreatic parenchymal necrosis alone; EXPN, extrapancreatic necrosis alone; BN, both pancreatic parenchymal and peripancreatic necrosis.

Table S4 Local complications of recurrent acute pancreatitis and initial acute pancreatitis on computed tomography

Local complications, n' (%)	All			The early phase			The late phase		
	RAP (n'=726)	AP (n'=1,964)	P	RAP (n'=529)	AP (n'=1,141)	P	RAP (n'=197)	AP (n'=823)	P
APFCs	193 (26.58)	631 (32.13)	0.006	166 (31.38)	478 (41.89)	<0.001	27 (13.71)	153 (18.59)	0.11
ANCs	231 (31.82)	561 (28.56)	0.10	128 (24.20)	224 (19.63)	0.03	103 (52.28)	337 (40.95)	0.004
WON	43 (5.92)	110 (5.60)	0.87	15 (2.84)	0	<0.001	28 (14.21)	110 (13.37)	0.76
PPCs	1 (0.14)	3 (0.15)	0.93	1 (0.19)	0	0.32	0	3 (0.36)	0.40

RAP, recurrent acute pancreatitis; AP, acute pancreatitis; n', number of CT examinations; APFCs, acute peripancreatic fluid collections; ANCs, acute necrotic collections; WON, walled-off necrosis; PPCs, pancreatic pseudocysts.