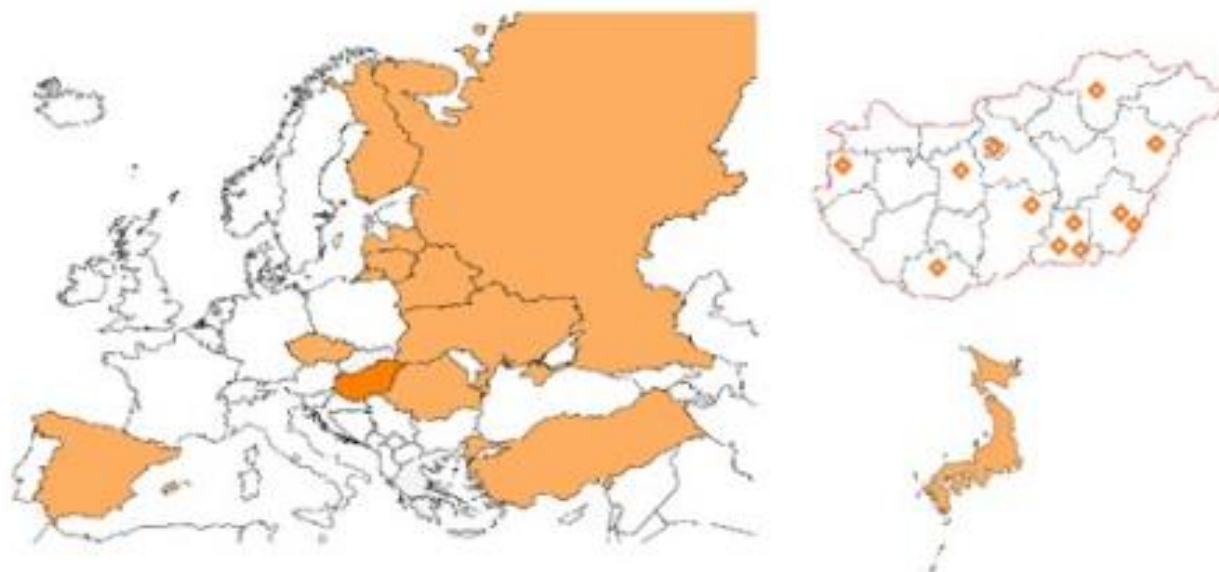


Supplementary Figure 1 – Centre distribution



Acute Pancreatitis Registry Centers			
Country	City	Institute	No. of patients
Hungary	Pécs	First Department of Medicine, Medical School, University of Pécs	363
	Szeged	First Department of Medicine, University of Szeged	247
		Second Department of Medicine, University of Szeged	36
		Department of Emergency, University of Szeged	10
		Department of Surgery, University of Szeged	4
	Székesfehérvár	Szent György Teaching Hospital of County Fejér	199
	Budapest	Bajcsy-Zsilinszky Hospital	138
		Polyclinic of Hospitaller Brothers of Saint John of God	5
		Heim Pál National Institute of Pediatrics	1
		Military Hospital	1
	Debrecen	Department of Internal Medicine, University of Debrecen	76
		Institute of Surgery, University of Debrecen	7
	Békéscsaba	Dr. Réthy Pál Hospital	54
Gyula	Pándy Kálmán Hospital	27	
Szentes	Dr. Bugyi István Hospital	16	
Miskolc	Borsod-Abaúj-Zemplén County Hospital and University Teaching Hospital	14	
Kecskemét	Bács-Kiskun County Hospital	11	
Makó	Healthcare Center of County Csongrád	10	
Szombathely	Markusovszky University Teaching Hospital	9	
Romania	Targu Mures	Mures County Emergency Hospital	41
Lithuania	Vilnius	Vilnius University Hospital Santariskiu Klinikos	31
Spain	Barcelona	Consorci Sanitari del Garraf, sant Pere de Ribes	30
Finland	Helsinki	Helsinki University Hospital	27
Turkey	Istanbul	Hospital of Bezmialem Vakif University	20
Russia	St. Petersburg	Saint Luke Clinical Hospital	18
Czech Republic	Ostrava	Vítkovická Hospital a.s.	11
Belarus	Gomel	Gomel Regional Clinical Hospital	8
Latvia	Riga	Pauls Stradius Clinical University Hospital	8
Ukraine	Kiev	Bogomolets National Medical University	8
Japan	Tokyo	Keio University	2

Supplementary Table 1. Data quality (%)

Variable	Overall (n=1432)	Pain Intensity group (n=727)	Pain Type group (n=1148)	Pain Localization group (n=1134)	Pain Duration (n=1202)
Age at the time of admission	100	100	100	100	100
Sex	100	100	100	100	100
BMI (kg/m2)	87.7	96.8	90.4	87.7	89.1
Etiology	100	100	100	100	100
Length of hospital stay	100	100	100	100	100
Mortality	100	100	100	100	100
Severity of pancreatitis	100	100	100	100	100
Local complications	95.5	95.5	99.5	99.4	99.7
Fluid collection	95.5	95.5	99.5	99.4	99.7
Pseudocyst	99.6	99.6	99.6	99.5	99.8
Necrosis	99.6	99.6	99.6	99.5	99.8
Systemic complication	99.3	100	99.4	99.3	99.3
Respiratory failure	99.2	100	99.3	99.2	99.2
Heart failure	99.3	100	99.4	99.3	99.3
Renal failure	99.3	100	99.4	99.3	99.3
AP in the personal history	94.1	99.8	95.9	94.9	95.6
CP in the personal history	94.1	99.9	95.9	94.9	95.6
DM in the personal history	98.8	100	99	98.9	99.3
Current smoking (Y/N)	99.6	99.2	99.7	98.8	99.7
Cigarettes/day	91.7	98.2	92.1	90.8	92.6
Pack year	65.1	91.4	70.3	65.1	69.1
Current alcohol (Y/N)	99.7	100	99.7	99.7	99.8
Amount of alcohol consumption (g/occasion)	73.4	92.8	85.1	75.2	77.1
Amount of alcohol consumption (g/day)	76.7	90.7	81.8	77.1	78.7
Pleural fluid	82	89.1	84.1	82.6	84.8
Lung infiltrate	81.6	89.0	83.7	82.2	84.3
Ascites	86.5	92.0	88.1	87	88.7
Abnormal pancreas structure	86.5	92.0	88.1	87	88.7
Hypoechoogenicity	86.5	92.0	88.1	87	88.7
Hyperechoogenicity	86.5	92.0	88.1	87	88.7
Edematous pancreas	86.5	92.0	88.1	87	88.7
Irregular blurred contours	86.5	92.0	88.1	87	88.7
Wirsung-dilatation	86.5	92.0	88.1	87	88.7
Pancreatic calcification	86.5	92.0	88.1	87	88.7
Fatty tissue infiltration	86.5	92.0	88.1	87	88.7
Peripancreatic fluid collection	86.5	92.0	88.1	87	88.7
On-admission necrosis	87.9	92.4	89.6	88.4	82.5
On-admission pseudocyst	87.4	92.2	89.1	87.8	89.8
On-admission fluid collection	87.4	92.2	89.1	87.9	89.7

Supplementary Table 2. Representativeness

	Overall cohort (n=1432)	Pain Intensity group (n=727)	Pain Type group (n=1148)	Pain Local. group (n=1132)	Pain Duration group (n=1202)	Pain Management Group (n=885)
Age, years, median (Q1-Q3)	57 (43-69)	56 (43-68)	57 (43-69)	57 (43-69)	57 (42-69)	57 (43-69)
Gender						
Male, n (%)	817 (56.9)	413 (56.8)	641 (55.8)	642 (56.7)	690 (57.4)	509 (57.5)
Female, n (%)	618 (43.1)	314 (43.2)	507 (44.2)	490 (43.3)	512 (42.6)	376 (42.5)
Etiology (pure)						
Biliary, n (%)	535 (37.3)	269 (37.0)	444 (33.7)	535 (37.3)	457 (38.0)	331 (37.4)
Alcoholic, n (%)	258 (18.2)	165 (22.7)	216 (18.8)	258 (18.2)	226 (18.8)	190 (21.5)
Length of hospital stay, median (Q1-Q3)	9 (6-13)	8 (5-11)	8 (6-13)	8 (6-12)	8 (6-13)	8 (5-11)
Mortality, n (%)	36 (2.5)	15 (2.1)	20 (1.7)	36 (2.5)	29 (2.4)	20 (2.3)
Severity of pancreatitis						
Mild, n (%)	987 (68.9)	540 (74.3)	811 (70.6)	987 (68.9)	845 (70.3)	656 (74.1)
Moderate, n (%)	368 (25.7)	159 (21.9)	289 (25.2)	368 (25.7)	297 (24.7)	189 (21.4)
Severe, n (%)	77 (5.38)	28 (3.9)	48 (4.2)	77 (5.38)	60 (5.0)	40 (4.5)
Local complications, n (%)	435 (30.5)	184 (25.5)	331 (29.0)	435 (30.5)	350 (29.2)	226 (25.7)
Fluid collection, n (%)	373 (26.2)	167 (23.1)	293 (25.7)	373 (26.2)	302 (25.2)	204 (23.2)
Pseudocyst, n (%)	126 (8.8)	48 (6.6)	89 (7.8)	126 (8.8)	95 (7.9)	63 (7.1)
Necrosis, n (%)	132 (9.3)	66 (9.1)	101 (8.8)	132 (9.3)	106 (8.8)	77 (8.7)
Systemic complication, n (%)	115 (8.1)	58 (8.0)	83 (7.3)	115 (8.1)	94 (7.9)	68 (7.7)
Respiratory failure, n (%)	68 (4.8)	41 (5.7)	50 (4.4)	68 (4.8)	60 (5.0)	44 (5.0)
Heart failure, n (%)	26 (1.8)	15 (2.1)	21 (1.8)	26 (1.8)	23 (1.9)	18 (2.0)
Renal failure, n (%)	43 (3.0)	19 (2.6)	33 (2.9)	43 (3.0)	36 (3.0)	27 (3.0)

Supplementary Table 3. Definition of local and systemic complication adapted from the revised Atlanta classification

Collection	Time after onset of pain (week)	Imaging features
APFC	≤4	Homogeneous, fluid attenuation, conforms to retroperitoneal structures, no wall
ANC	≤4	Inhomogeneous, non-liquified components, no wall
Pseudocyst	>4	Homogeneous, fluid filled, circumscribed, encapsulated with wall

Criterion for local pancreatic complications (Banks et al., 2012; Foster et al., 2016)

APFC: acute peripancreatic fluid collection, ANC: acute necrotic collection

Organ system	Score 0	Score 1	Score 2	Score 3	Score 4
Respiratory (PaO ₂ /FIO ₂)*	>400	301-400	201-300	101-200	≤100
Renal: serum creatinine (μmol/L)**	<134	134-169	170-310	311-439	>439
Heart: systemic blood pressure***	>90	<90, responsive to fluid resuscitation	<90, not responsive to fluid resuscitation	<90 with pH <7.3	<90 with pH <7.2

Criterion for systemic complications – Modified Marshall Scoring system (Banks et al., 2012; Foster et al., 2016)

Note: a score 2 or higher indicates organ failure

* If partial pressure of oxygen/fraction of inspired oxygen, or PaO₂/FIO₂ was not available, patients with oxygen therapy was considered as having respiratory failure.

** In the case of chronic kidney disease, further deterioration was considered as acute renal failure.

*** Besides, patients with vasopressor therapy was considered as having heart failure.

1. Banks, P. A., Bollen, T. L., Dervenis, C., Gooszen, H. G., Johnson, C. D., Sarr, M. G., . . . Acute Pancreatitis Classification Working, G. (2013). Classification of acute pancreatitis-2012: revision of the Atlanta classification and definitions by international consensus. *Gut*, 62(1), 102-111. doi:10.1136/gutjnl-2012-302779
2. Foster BR, Jensen KK, Bakis G, Shaaban AM, Coakley FV. Revised Atlanta Classification for Acute Pancreatitis: A Pictorial Essay. *Radiographics*. 2016 May-Jun;36(3):675-87. doi: 10.1148/rg.2016150097.

Supplementary Table 4. On-admission imaging findings

	Pain Intensity			Pain Type				Pain Duration					Pain localization		
	VAS 1-6	VAS 7-10	OR (95% CI)	cramping	dull	sharp	P value	<24 h	25-48 h	49-72 h	>72 h	p	Typical	Atypical	OR (95% CI)
Pleural fluid n (%)	9 (4.8)	37 (8.0)	NS	31 (5.4)	11 (6.2)	14 (6.5)	NS	41 (7.0)	11 (7.0)	4 (3.8)	10 (6.0)	NS	29 (6.3)	26 (5.4)	NS
Abnormal pancreas structure n (%)	90 (47.1)	280 (58.6)	1.587 (1.133-2.224)	306 (50.5)	108(58.4)	115 (52.3)	NS	328 (52.7)	90 (55.2)	55 (51.4)	78 (44.8)	NS	252 (52.5)	258 (50.9)	NS
Hypoechogenecity n (%)	20 (10.5)	58 (12.1)	NS	61 (10.1)	29(15.7)	29 (13.2)	NS	74 (11.9)	20 (12.3)	9 (8.4)	20 (11.5)	NS	62 (12.9)	56 (11.1)	NS
Hyperechogenecity n (%)	11 (5.8)	33 (4.0)	NS	24 (4.0)	16 (8.7)	7 (3.2)	NS	29 (4.7)	11 (6.8)	7 (6.5)	5 (2.9)	NS	26 (5.4)	21 (4.1)	NS
Edematous pancreas n (%)	6 (3.1)	40 (8.4)	2.816 (1.174-6.756)	27 (4.5)	13 (7.0)	12 (5.5)	NS	42 (6.8)	6 (3.7)	3 (2.8)	3 (1.7)	<0.05*	20 (4.1)	24 (4.7)	NS
Enlarged pancreas n (%)	27(14.1)	83 (17.4)	NS	129 (19.4)	28 (14.9)	34 (15.7)	NS	119 (19.4)	32 (20.1)	14 (13.3)	33 (18.8)	NS	84 (17.2)	108 (21.7)	NS
Wirsung-dilatation n (%)	20 (10.5)	47 (9.8)	NS	59 (9.7)	16 (8.7)	22 (10.0)	NS	54 (8.7)	18 (11.0)	9 (8.4)	19 (10.9)	NS	44 (9.2)	55 (10.9)	NS
Pancreatic calcification n (%)	3 (1.6)	15 (3.4)	NS	7 (1.2)	9 (4.9)	5 (2.3)	NS	12 (1.9)	4 (2.5)	4 (3.7)	3 (1.7)	NS	9 (1.9)	12 (2.4)	NS
Peripancreatic fluid collection n (%)	21 (10.1)	93 (19.5)	1.955 (1.178-3.246)	103 (17.0)	23 (12.4)	43 (19.6)	NS	110 (17.7)	28 (17.2)	14 (13.1)	22 (12.6)	NS	89 (18.5)	64 (12.6)	NS
On-admission necrosis n (%)	7 (3.7)	9 (1.9)	NS	14 (2.3)	4 (2.1)	8 (3.6)	NS	9 (1.4)	6 (3.6)	5 (4.6)	3 (1.7)	NS	13 (2.6)	9 (1.8)	NS

Supplementary Table 5 – Pain intensity. Description and main outcomes

	VAS 1-6	VAS 7-10	p value / OR (95% CI)
n (%)	216 (29.7)	511 (70.3)	
EPIDEMIOLOGY			
Age, years, median (Q1-Q3) [n]	57.5 (42-68) [216]	56 (43-67.3) [511]	0.205
Gender			
Male, n (%)	129 (59.7)	284 (55.6)	0.844 (0.602-1.166)
Female, n (%)	87 (40.3)	227 (44.4)	
BMI (kg/m ²), mean (SD)	27.8 (6.1) [203]	27.8 (5.6) [500]	0.905
Obesity (BMI ≥30 kg/m ²), n (%)	81 (37.3%)	155 (30.4)	0.747 (0.535-1.044)
ETIOLOGY			
Biliary, n (%)	79 (36.6)	197 (38.6)	NS
Alcoholic, n (%)	56 (25.9)	129 (25.2)	
Hypertriglyceridemic, n (%)	10 (4.6)	31 (6.1)	
Post-ERCP, n (%)	5 (2.3)	8 (1.6)	
Idiopathic, n (%)	45 (20.8)	105 (20.6)	
Other, n (%)	21 (9.7)	41 (8.0)	
ANAMNESTIC DATA			
AP in the personal history, n (%)	61 (28.2)	141 (27.7)	0.899 (0.624-1.296)
CP in the personal history, n (%)	7 (3.2)	27 (5.3)	1.622 (0.692-3.086)
HT in the personal history, n (%)	114 (55.6)	255 (51.0)	0.832 (0.600-1.155)
HL in the personal history, n (%)	24 (11.1)	65 (12.8)	1.253 (0.757-2.074)
DM in the personal history, n (%)	37 (17.1)	80 (15.7)	0.898 (0.586-1.386)
CCI			
0, n (%)	67 (37.9)	131 (36.6)	NS
1, n (%)	37 (20.1)	97 (27.1)	
2, n (%)	23 (13.0)	54 (15.1)	
≥3, n (%)	50 (28.3)	76 (21.2)	
Symptoms (Y/N), n (%)			
abdominal tenderness, n (%)	184 (84.8)	468 (91.8)	2.014 (1.237-3.277)
abdominal guarding, n (%)	31 (14.3)	92 (18.0)	1.379 (0.882-2.155)
Current smoking (Y/N), n (%)	69 (31.9)	151 (29.6)	0.894 (0.634-1.260)
Cigarettes/day median (Q1-Q3) [n]	20 (10-20) [67]	15 (10-20) [149]	0.201
Pack year median (Q1-Q3) [n]	20 (10-30) [79]	15.5 (8.7-30) [212]	0.266
Current alcohol (Y/N), n (%)	88 (40.7)	246 (48.1)	1.350 (0.978-1.863)
Amount of alcohol consumption (g/day) median (Q1-Q3) [n]	75 (26.8-112.5) [39]	50 (10.7-100) [106]	0.168

	VAS 1-6	VAS 7-10	OR (reference: VAS 1-6)	95% CI
MAIN OUTCOMES				
Length of hospital stay median (Q1-Q3) [n]	8 (6-13) [216]	7.5 (5-10) [511]	p<0.001	
Mortality, n (%)	4 (1.9)	11 (2.2)	1.562	0.431-5.655
Mild+moderate vs severe pancreatitis				
Severity of pancreatitis				
Mild, n (%)	161 (74.5)	379 (74.2)	1.989	0.746-5.302
Moderate, n (%)	50 (23.2)	109 (21.3)		
Severe, n (%)	5 (2.3)	23 (4.5)		
All local complication	56 (25.9)	128 (25.3)	0.956	0.682-1.342
Fluid collection n (%)	45 (20.8)	122 (24.1)	1.343	0.927-1.944
Necrosis n (%)	18 (8.3)	48 (9.5)	0.814	0.450-1.472
Pseudocyst n (%)	16 (7.4)	32 (6.3)	1.07	0.620-1.845
All systemic complications	18 (8.3)	40 (9.5)	1.392	0.648-2.994
New onset diabetes n (%)	7 (3.2)	23 (4.5)	0.909	0.508-1.628
Renal failure n (%)	8 (3.7)	11 (2.2)	0.572	0.227-1.442
Respiratory failure n (%)	10 (4.6)	31 (6.1)	1.33	0.640-2.764
Heart failure n (%)	2 (0.9)	13 (6.1)	2.793	0.625-12.484
ANALGESIC REQUIREMENT				
Opioid use, n (%)	22 (10.5)	111 (22.2)	2.561	1.573-4.169
Number of days with analgesic median (Q1-Q3) [n]	2 (1-5) [169]	3 (2-5) [429]	p=0.009	
Number of days with opioid, median (Q1-Q3) [n]	2 (1-3.75) [22]	2 (1-3.5) [115]	p=0.844	

Supplementary Table 6. Pain type. Description and main outcomes

n (%)	Pain type			p value*
	cramping	dull	sharp	
	705 (61.4)	207 (18.0)	236 (20.6)	
EPIDEMIOLOGY				
Age, years, median (Q1-Q3) [n]	58 (43.5-69)	55 (42-68.3)	54 (42-67)	0.144
Gender				
Male, n (%)	378 (53.6)	125 (60.4)	138 (58.5)	NS
Female, n (%)	327 (45.4)	82 (39.6)	98 (41.5)	
BMI (kg/m ²), mean (SD)	28.0±5.8 [625]	27.7±5.9 [197]	27.9±5.3 [216]	0.807
Obesity (BMI ≥30 kg/m ²), n (%)	281 (39.9)	68 (32.9)	75 (31.8)	NS
ETIOLOGY				
Biliary, n (%)	310 (44.0)	69 (33.3)	88 (27.3)	<0.05*
Alcoholic, n (%)	130 (18.4)	59 (28.5)	61 (25.9)	
Hypertriglyceridemic, n (%)	39 (5.5)	10 (4.8)	16 (6.8)	
Post-ERCP, n (%)	15 (2.1)	5 (2.4)	5 (2.1)	
Idiopathic, n (%)	147 (20.9)	52 (25.1)	43 (18.2)	
Other, n (%)	64 (9.1)	12 (5.8)	23 (9.8)	
ANAMNESTIC DATA				
AP in the personal history, n (%)	158 (23.8)	66 (32.2)	56 (24.1)	NS
CP in the personal history, n (%)	28 (4.2)	15 (7.3)	6 (2.6)	NS
HT in the personal history, n (%)	359 (57.4)	102 (51.8)	99 (54.8)	NS
HL in the personal history, n (%)	90 (17.1)	26 (13.4)	32 (14.6)	NS
DM in the personal history, n (%)	117 (16.9)	35 (16.9)	32 (13.4)	NS
CCI				
0, n (%)	252 (38.2)	45 (32.4)	56 (35.2)	NS
1, n (%)	180 (27.3)	25 (18.0)	46 (28.9)	
2, n (%)	100 (15.4)	25 (18.0)	22 (13.8)	
≥3, n (%)	128 (19.4)	44 (31.7)	35 (22.0)	
Symptoms (Y/N), n (%)				
abdominal tenderness, n (%)	589 (87.5)	179 (86.9)	203 (87.1)	NS
abdominal guarding, n (%)	56 (8.4)	34 (16.5)	61 (26.2)	<0.05
Current smoking (Y/N), n (%)	188 (26.8)	66 (31.9)	69 (29.4)	NS
Cigarettes/day median (Q1-Q3) [n]	17.5 (10-20) [170]	15.0 (10-20) [63]	20 (10-20) [68]	0.163
Pack year median (Q1-Q3) [n]	18 (10-30) [184]	15 (8-30) [65]	18.5 (10-35) [84]	0.602
Amount of alcohol consumption (g/day) median (Q1-Q3) [n]	75 (25-16) [131]	50 (22-81) [39]	50 (25-125) [47]	0.859

MAIN OUTCOMES	cramping	dull	sharp	OR (reference: VAS 1-6)	95% CI
Length of hospital stay median (Q1-Q3) [n]	9 (6-13) [705]	8 (6-11) [205]	8 (5-12) [236]	p<0.05	
Mortality, n (%)	9 (1.3)	3 (1.4)	8 (3.4)	2.632	1.063-6.514
Severity of pancreatitis Mild+moderate vs severe pancreatitis					
Mild, n (%)	496 (70.4)	158 (76.3)	157 (66.5)	2.206	1.199-4.059
Moderate, n (%)	185 (26.2)	42 (20.3)	62 (26.3)		
Severe, n (%)	24 (3.4)	7 (3.4)	17 (7.2)		
All local complication	203 (28.9)	51 (24.9)	77 (32.8)	0.779	0.571-1.062
Fluid collection n (%)	177 (25.2)	48 (23.4)	68 (28.9)	1.197	0.881-1.627
Necrosis n (%)	57 (8.1)	14 (6.8)	30 (12.7)	1.653	1.060-2.580
Pseudocyst n (%)	57 (8.8)	14 (6.3)	30 (5.9)	0.571	0.313-1.043
All systemic complications	35 (5.0)	17 (8.2)	31 (13.1)	2.481	1.550-3.969
New onset diabetes n (%)	18 (2.6)	10 (4.9)	19 (8.1)	2.561	1.472-4.456
Renal failure n (%)	17 (2.4)	8 (3.9)	8 (3.4)	1.235	0.550-2.775
Respiratory failure n (%)	19 (2.7)	9 (4.3)	22 (9.3)	3.22	1.806-5.740
Heart failure n (%)	10 (1.0)	2 (1.4)	9 (3.8)	3.222	1.319-7.869
ANALGESIC REQUIREMENT					
Opioid use, n (%)	65 (15.4)	29 (15.9)	48 (24.9)	2.25	1.585-3.194
Number of days with analgesic median (Q1-Q3) [n]	4 (2-6) [598]	2 (2-6) [170]	4 (2-7) [208]	p=0.005	
Number of days with opioid, median (Q1-Q3) [n]	2 (1-4) [89]	2 (1-4) [31]	2 (1-5) [60]	p=0.938	

Supplementary Table 7. Pain localization (atypical/typical). Description and main outcomes

n (%)	Pain type		
	Typical	Atypical	p value / OR (95% CI)
EPIDEMIOLOGY			
Age, years, median (Q1-Q3) [n]	56 (42-69) [557]	57 (44-70) [577]	0.192
Gender			
Male, n (%)	321 (57.6)	322 (55.8)	1.077 (0.852-1.363)
Female, n (%)	236 (42.4)	255 (44.2)	
BMI (kg/m ²), mean (SD)	27.5±5.5 [506]	28.1±6.0 [504]	0.137
Obesity (BMI ≥30 kg/m ²), n (%)	188 (44.8)	232 (55.2)	1.320 (1.036-1.681)
ETIOLOGY			
Biliary, n (%)	224 (40.2)	236 (40.9)	NS
Alcoholic, n (%)	137 (24.6)	106 (18.4)	
Hypertriglyceridemic, n (%)	28 (5.0)	35 (6.1)	
Post-ERCP, n (%)	11 (2.0)	15 (2.6)	
Idiopathic, n (%)	111 (19.9)	130 (22.5)	
Other, n (%)	46 (8.3)	55 (9.5)	
ANAMNESTIC DATA			
AP in the personal history, n (%)	137 (25.8)	126 (23.1)	0.840 (0.628-1.124)
CP in the personal history, n (%)	23 (4.3)	28 (5.1)	1.204 (0.677-2.141)
HT in the personal history, n (%)	258 (51.0)	290 (57.5)	1.303 (1.016-1.669)
HL in the personal history, n (%)	53 (12.0)	86 (20.4)	1.889 (1.302-2.741)
DM in the personal history, n (%)	96 (17.4)	96 (16.8)	0.962 (0.705-1.313)
CCI			
0, n (%)	168 (30.8)	180 (34.8)	NS
1, n (%)	127 (27.8)	149 (28.8)	
2, n (%)	70 (15.3)	80 (15.5)	
≥3, n (%)	92 (20.1)	108 (20.9)	
Symptoms (Y/N), n (%)			
abdominal tenderness, n (%)	455 (85.7)	472 (85.4)	0.973 (0.694-1.365)
abdominal guarding, n (%)	66 (12.5)	64 (11.6)	0.920 (0.638-1.327)
Current smoking (Y/N), n (%)	162 (29.2)	161 (28.0)	0.943 (0.729-1.221)
Cigarettes/day median (Q1-Q3) [n]	15 (10-20) [148]	15 (10-20) [149]	0.719
Pack year median (Q1-Q3) [n]	16.5 (10-30) [144]	18.8 (8.6-34.1) [159]	0.662
Current alcohol (Y/N), n (%)	252 (45.1)	241 (41.8)	0.865 (0.684-1.094)
Amount of alcohol consumption (g/day) median (Q1-Q3) [n]	75 (25-125) [112]	62.5 (25-100) [92]	NS

	Typical	Atypical	OR (reference: typical)	95% CI
MAIN OUTCOMES				
Length of hospital stay median (Q1-Q3) [n]	9 (6-13) [557]	8 (6-12) [577]	NS	
Mortality, n (%)	9 (1.6)	14 (2.4)	1.706	0.527-1.622
Severity of pancreatitis Mild+moderate vs severe pancreatitis				
Mild, n (%)	388 (69.7)	418 (72.4)	0.924	0.527-5.302
Moderate, n (%)	143 (25.7)	134 (23.2)		
Severe, n (%)	26 (4.7)	25 (4.3)		
All local complication	171 (30.8)	149 (26.1)	0.8	0.625-1.025
Fluid collection n (%)	151 (27.2)	130 (22.8)	0.83	0.641-1.076
Necrosis n (%)	55 (9.9)	42 (7.3)	0.716	0.475-1.079
Pseudocyst n (%)	39 (7.0)	45 (7.9)	1.019	0.659-1.574
All systemic complications	40 (7.2)	46 (8.0)	1.096	0.701-1.715
New onset diabetes n (%)	41 (7.2)	18 (3.2)	0.408	0.231-0.720
Renal failure n (%)	13 (2.4)	19 (3.3)	1.425	0.697-2.913
Respiratory failure n (%)	26 (4.7)	27 (4.7)	0.963	0.552-1.691
Heart failure n (%)	9 (1.6)	10 (1.8)	0.36	0.360-2.449
ANALGESIC REQUIREMENT				
Opioid use, n (%)	88 (15.8)	92 (15.9)	1.011	0.735-1.390
Number of days with analgesic median (Q1-Q3) [n]	4 (2-7) [464]	4 (2-6) [488]	p=0.701	
Number of days with opioid, median (Q1-Q3) [n]	2 (1-5) [88]	2 (1-5) [92]	p=0.705	

Supplementary Table 8. Pain localization (horizontal and vertical). Description and main outcomes

	Horizontal deviation				Vertical deviation			
	Upper	Middle Hor	Lower	Other Hor	Right	Middle Ver	Left	Other Ver
n (%)	525 (46.3)	259 (22.8)	34 (3.0)	316 (27.9)	99 (8.7)	407 (35.9)	41 (3.6)	587 (51.8)
EPIDEMIOLOGICAL DATA								
Age, years, median (Q1-Q3) [n]	54 (42-67) [525]	58 (43-72) [259]	56 (45.3-66.8) [34]	60 (45-71) [316]	60 (45-72) [99]	56 (43-70) [407]	55 (41-68) [41]	57 (43.5-68) [587]
Gender								
Male, n (%)	293 (55.8)	162 (62.3)	20 (58.8)	168 (53.2)	50 (50.5)	244 (60.0)	27 (65.9)	322 (54.9)
Female, n (%)	232 (44.2)	97 (37.5)	14 (41.2)	148 (46.8)	49 (49.5)	163 (40.1)	14 (34.2)	265 (45.1)
BMI (kg/m ²)	28.2±5.8 [480]	27.8±5.7 [210]	27.6±5.7 [29]	25.6±5.8 [291]	27.7±5.6 [76]	27.6±5.8 [358]	29.0±7.0 [36]	27.5±4.9 [540]
Obesity (BMI ≥30 kg/m ²), n (%)	177 (33.7)	108 (41.7)	10 (29.4)	125 (40.0)	47 (47.5)	152 (37.6)	14 (34.2)	207 (35.3)
ETIOLOGY								
Biliary, n (%)	223 (42.5)	97 (37.5)	9 (26.5)	131 (41.5)	59 (59.6)	150 (36.9)	9 (22.0)	242 (41.2)
Alcoholic, n (%)	129 (24.6)	55 (21.2)	6 (17.7)	53 (16.8)	9 (9.1)	99 (24.3)	10 (24.4)	125 (21.3)
Hypertriglyceridemic, n (%)	26 (5.0)	14 (5.4)	2 (5.9)	21 (6.7)	6 (6.1)	29 (7.1)	2 (4.9)	26 (4.4)
Post-ERCP, n (%)	10 (2.0)	4 (1.5)	0 (0.0)	12 (3.8)	5 (5.1)	7 (1.7)	1 (2.4)	13 (2.2)
Idiopathic, n (%)	96 (18.3)	62 (23.9)	12 (35.3)	71 (22.5)	13 (13.1)	94 (23.1)	12 (29.3)	122 (20.8)
Other, n (%)	41 (7.8)	27 (10.4)	5 (10.4)	28 (8.9)	7 (7.1)	28 (6.9)	7 (17.1)	59 (10.1)
ANAMNESTIC DATA								
AP in the personal history, n (%)	113 (22.7)	71 (28.7)	4 (12.1)	75 (25.1)	9 (9.9)	99 (26.0)	6 (16.7)	149 (26.2)
CP in the personal history, n (%)	21 (4.2)	13 (5.3)	1 (3.0)	16 (5.4)	1 (1.1)	21 (5.5)	1 (2.8)	28 (4.9)
DM in the personal history, n (%)	88 (16.9)	40 (15.6)	4 (11.8)	60 (19.4)	21 (21.7)	81 (20.0)	1 (2.4)	89 (15.4)
Current smoking (Y/N), n (%)	145 (27.7)	79 (30.5)	11 (32.4)	88 (28.0)	25 (25.5)	110 (27.1)	13 (31.7)	175 (29.9)
Cigarettes/day median (Q1-Q3) [n]	15 (10-20) [133]	20 (10-20) [74]	20 (20-30) [9]	15 (10-20) [81]	15 (5-10) [25]	15 (10-20) [105]	15 (10-27.5) [11]	20 (10-20) [156]
Pack year median (Q1-Q3) [n]	15 (7.8-30) [143]	20 (12-61) [59]	25 (15-33.3) [13]	18.4 (8.5-36.4) [88]	12 (7.5-30) [17]	18 (10-30.8) [109]	13.5 (6.4-18.9) [11]	18.8 (10-30) [11]
Current alcohol (Y/N), n (%)	232 (44.2)	113 (44.0)	11 (52.9)	130 (41.3)	33 (33.7)	185 (45.5)	15 (36.6)	260 (44.4)
Amount of alcohol consumption (g/occasion) median (Q1-Q3) [n]	50 (25-100) [182]	50 (25-100) [79]	62.5 (25-100) [16]	50 (25-100) [96]	50 (25-100) [25]	75 (25-100) [149]	62.3 (31.3-93.8) [10]	50 (25-100) [195]
Amount of alcohol consumption (g/day) median (Q1-Q3) [n]	75 (25-125) [96]	75 (25-100) [53]	75 (20.5-175) [10]	75 (25-100) [46]	50 (32.1-100) [13]	75 (50-112.5) [79]	50 (20.5-81.3) [79]	75 (25-125) [105]
Length of hospital stay median (Q1-Q3) [n]	8 (6-13)	9 (6-13.5)	7.5 (6-10)	8 (6-11)	9 (6.5-12.5)	8 (6-13)	9 (6-14)	8 (6-12)
MAIN OUTCOMES								
Mortality, n (%)	10 (1.9)	3 (1.2)	2 (5.9)	8 (2.5)	1 (1.0)	8 (2.0)	1 (2.4)	13 (2.4)
Severity of pancreatitis								
Mild, n (%)	375 (71.4)	175 (67.6)	25 (75.5)	231 (73.1)	77 (77.8)	281 (69.0)	21 (51.2)	427 (72.7)
Moderate, n (%)	125 (23.8)	76 (29.3)	6 (17.7)	70 (22.2)	19 (19.2)	106 (26.0)	16 (39.0)	136 (23.1)
Severe, n (%)	25 (4.8)	8 (3.1)	3 (8.8)	15 (4.8)	3 (3.0)	20 (4.9)	4 (9.8)	24 (4.1)
All local complication	148 (17.6)	84 (20.8)	10 (13.3)	78 (12.6)	19 (19.4)	126 (31.3)	20 (48.8)	155 (26.7)
Fluid collection n (%)	130 (24.8)	73 (28.5)	9 (26.5)	69 (22.0)	15 (15.3)	108 (26.8)	19 (46.3)	139 (23.8)
Necrosis n (%)	50 (9.5)	19 (7.4)	3 (8.8)	25 (8.0)	6 (6.1)	41 (10.2)	2 (4.9)	48 (8.2)
Pseudocyst n (%)	31 (5.9)	22 (8.6)	4 (11.8)	27 (8.6)	8 (8.2)	29 (7.2)	6 (14.6)	41 (7.0)
All systemic complications	39 (7.5)	16 (6.3)	4 (11.8)	27 (8.6)	8 (8.3)	31 (7.6)	7 (17.1)	40 (6.9)
New onset diabetes n (%)	28 (5.3)	11 (4.3)	1 (2.9)	12 (3.8)	4 (4.1)	21 (5.2)	0 (0.0)	27 (4.6)
Renal failure n (%)	14 (2.7)	6 (2.3)	3 (8.8)	9 (2.9)	4 (4.1)	12 (3.0)	2 (4.9)	14 (2.4)
Respiratory failure n (%)	24 (4.6)	8 (3.1)	2 (5.9)	19 (6.1)	2 (2.1)	21 (5.2)	4 (9.8)	26 (4.5)
Heart failure n (%)	9 (1.7)	2 (0.8)	2 (5.9)	6 (1.9)	1 (1.0)	11 (2.7)	0 (0.0)	7 (1.2)
ANALGESIC REQUIREMENT								
Opioid use, n (%)	104 (19.8)	29 (11.2)	4 (11.8)	43 (13.6)	10 (10.1)	62 (15.2)	9 (22.0)	99 (16.9)
Number of days with analgesic median (Q1-Q3) [n]	4 (2-7) [445]	4 (1-7) [210]	4 (1-4.3) [21]	3 (2-5) [267]	5 (2-7) [79]	4 (2-7) [356]	4 (2-7.5) [35]	4 (1-6) [482]
Number of days with opioid, median (Q1-Q3) [n]	2 (1-4) [104]	2 (1-5) [29]	1 (1-1.5) [4]	2 (1-7) [44]	5 (1.3-10.8) [10]	2 (1-5) [62]	2 (1-4) [9]	2 (1-4) [99]
ABDOMINAL IMAGING								
Pleural fluid n (%)	21 (4.8)	15 (7.2)	4 (14.3)	15 (5.8)	1 (1.4)	24 (6.8)	1 (3.2)	29 (6.0)
Abnormal pancreas structure n (%)	238 (52.2)	123 (55.4)	15 (50.0)	134 (48.0)	31 (38.8)	210 (58.2)	14 (42.4)	255 (49.7)
Hypoechoogenicity n (%)	59 (12.9)	28 (12.7)	2 (6.7)	29 (10.4)	9 (11.3)	49 (13.6)	4 (12.1)	56 (10.9)
Hyperechoogenicity n (%)	25 (5.5)	8 (3.6)	2 (6.7)	12 (4.3)	0 (0.0)	20 (5.5)	0 (0.0)	27 (5.3)
Edematous pancreas n (%)	29 (6.7)	10 (4.5)	1 (3.3)	4 (1.4)	1 (1.3)	13 (3.6)	5 (15.2)	25 (4.9)
Enlarged pancreas n (%)	77 (16.9)	48 (21.7)	4 (13.3)	54 (19.4)	9 (11.3)	64 (17.7)	8 (24.2)	102 (19.9)
Wirsung-dilatation n (%)	45 (9.9)	27 (12.2)	2 (6.7)	25 (8.9)	8 (10.0)	45 (12.5)	2 (6.1)	44 (8.6)
Pancreatic calcification n (%)	76 (1.5)	40 (2.7)	4 (3.3)	33 (2.5)	1 (1.3)	7 (1.9)	1 (3.0)	12 (2.3)
Peripancreatic fluid collection n (%)	76 (16.7)	40 (18.0)	4 (13.3)	33 (11.8)	4 (5.0)	67 (18.6)	8 (24.2)	74 (14.4)
On-admission necrosis n (%)	9 (1.9)	8 (3.6)	1 (3.3)	4 (1.4)	1 (1.3)	9 (2.4)	0 (0.0)	12 (2.3)

Supplementary Table 9. Pain duration prior to hospitalization. Description and main outcomes

	Pain duration				P value*
	<24 h	25-48 h	49-72 h	>72 h	
n (%)	682 (57.7)	170 (14.4)	119 (10.1)	211 (17.8)	
EPIDEMIOLOGY					
Age, years, median (Q1-Q3) [n]	57 (43-70)	53 (40.5-67)	57.5 (43-71)	57 (42-67)	0.099
Gender					
Male, n (%)	398 (58.4)	101 (59.4)	71 (59.7)	113 (53.4)	NS
Female, n (%)	284 (41.6)	69 (40.6)	48 (40.3)	98 (40.6)	
BMI (kg/m2), mean (SD)	27.9±5.3	27.5±6.1	27.6±5.1	27.1±6.4	0.012*
Obesity (BMI 30 ≥kg/m2), n (%)	245 (35.9) [682]	72 (34.1) [187]	60 (32.1) [122]	44 (36.1) [211]	NS
ETIOLOGY					
Biliary, n (%)	275 (40.3)	71 (38.0)	48 (39.3)	85 (40.3)	NS
Alcoholic, n (%)	141 (20.7)	48 (25.7)	29 (23.8)	45 (21.3)	
Hypertriglyceridemic, n (%)	45 (6.6)	7 (3.7)	8 (6.6)	7 (3.3)	
Post-ERCP, n (%)	10 (1.5)	5 (2.7)	3 (2.5)	9 (4.3)	
Idiopathic, n (%)	144 (21.1)	40 (21.4)	21 (17.2)	46 (21.8)	
Other, n (%)	67 (9.8)	16 (8.6)	13 (10.7)	19 (9.0)	
ANAMNESTIC DATA					
AP in the personal history, n (%)	170 (25.9)	42 (23.9)	29 (25.9)	44 (21.6)	NS
CP in the personal history, n (%)	31 (5.9)	7 (4.0)	7 (6.3)	10 (4.9)	NS
HT in the personal history, n (%)	345 (54.8)	86 (49.4)	60 (54.1)	101 (54.3)	NS
HL in the personal history, n (%)	104 (18.2)	18 (12.4)	10 (10.8)	30 (18.5)	NS
DM in the personal history, n (%)	123 (18.1)	23 (12.4)	17 (14.1)	36 (17.1)	NS
CCI					
0, n (%)	188 (34.2)	57 (37.5)	39 (37.1)	77 (38.1)	NS
1, n (%)	155 (28.2)	50 (32.9)	28 (26.7)	44 (21.8)	
2, n (%)	83 (15.1)	21 (13.8)	14 (13.3)	35 (17.3)	
≥3, n (%)	124 (22.6)	24 (15.8)	24 (22.9)	46 (22.8)	
Symptoms (Y/N), n (%)					
abdominal tenderness, n (%)	591 (88.7)	158 (88.3)	103 (87.3)	163 (81.5)	NS
abdominal guarding, n (%)	109 (16.4)	18 (10.1)	12 (10.2)	22 (10.1)	NS
Current smoking (Y/N), n (%)	178 (26.2)	50 (26.7)	37 (30.6)	81 (38.6)	NS
Cigarettes/day median (Q1-Q3) [n]	15 (10-20) [167]	20 (10-20) [49]	15 (10-20) [36]	15 (10-20) [74]	0.981
Pack year median (Q1-Q3) [n]	15 (9-30) [197]	19.5 (10-27) [49]	20 (10-30) [34]	20 (13-30) [66]	0.386
Current alcohol (Y/N), n (%)	292 (43.0)	90 (48.1)	53 (43.4)	91 (43.1)	NS
Amount of alcohol consumption (g/day) median (Q1-Q3) [n]	50 (25-100)	75 (45-106)	75 (22-106)	100 (50-143)	0.867

MAIN OUTCOMES					
Length of hospital stay median (Q1-Q3) [n]	9 (6-13) [682]	8 (6-13) [170]	8 (6-12.3) [179]	8 (6-13) [211]	0.162
Mortality, n (%)	17 (2.5)	5 (2.7)	3 (2.5)	4 (1.9)	NS
Severity of pancreatitis					
Mild, n (%)	463 (67.9)	132 (70.6)	86 (70.5)	164 (77.7)	NS
Moderate, n (%)	183 (26.8)	44 (23.5)	28 (23.0)	42 (19.9)	
Severe, n (%)	36 (5.3)	11 (5.9)	8 (6.6)	5 (2.4)	
All local complication	211 (31.1)	56 (29.9)	36 (29.5)	47 (22.3)	NS
Fluid collection n (%)	187 (27.6)	50 (26.2)	28 (23.0)	37 (17.5)	NS
Necrosis n (%)	52 (7.7)	24 (12.8)	18 (14.8)	12 (5.7)	NS
Pseudocyst n (%)	52 (7.7)	24 (7.5)	18 (5.7)	12 (10.4)	NS
All systemic complications	56 (8.3)	16 (8.7)	10 (8.2)	12 (5.7)	NS
New onset diabetes n (%)	31 (4.6)	12 (6.4)	7 (5.7)	1 (0.5)	NS
Renal failure n (%)	19 (2.8)	8 (4.3)	6 (4.9)	3 (1.4)	NS
Respiratory failure n (%)	37 (5.5)	9 (4.9)	6 (5.0)	8 (3.8)	NS
Heart failure n (%)	15 (2.2)	5 (2.7)	2 (1.6)	1 (0.5)	NS
ANALGESIC REQUIREMENT					
Opioid use, n (%)	108 (22.9)	19 (15.5)	7 (8.9)	13 (9.2)	p<0.001*
Number of days with analgesic median (Q1-Q3) [n]	4 (2-7) [603]	4 (2-6) [153]	3 (2-6) [103]	3 (2-6) [165]	p=0.13
Number of days with opioid, median (Q1-Q3) [n]	2 (1-4) [138]	4 (1.5-9) [25]	2 (1.75-3) [8]	2 (1-3) [17]	p=0.14