















classification, imaging features, infection, and major treatment events, and these labels highly condense the clinical characteristics of cases. (c) After treatment, cases are already labeled with feature marks. Researchers can screen for specific feature marks based on their research needs, to obtain a series of homogeneous cases.

## References

- Boxhoorn L, Voermans RP, Bouwense SA, et al., 2020. Acute pancreatitis. *Lancet*, 396(10252):726-734.  
[https://doi.org/10.1016/S0140-6736\(20\)31310-6](https://doi.org/10.1016/S0140-6736(20)31310-6)
- Finazzi S, Paci G, Antiga L, et al., 2020. PROSAFE: a European endeavor to improve quality of critical care medicine in seven countries. *Minerva Anesthesiol*, 86(12):1305-1320.  
<https://doi.org/10.23736/S0375-9393.20.14112-9>
- Leppäniemi A, Tolonen M, Tarasconi A, et al., 2019. WSES guidelines for the management of severe acute pancreatitis. *World J Emerg Surg*.  
<https://doi.org/10.1186/s13017-019-0247-0>
- Johnson A, Bulgarelli L, Pollard T, et al., 2020. MIMIC-IV (version 0.4). *PhysioNet*.  
<https://doi.org/10.13026/a3wn-hq05>
- Ke L, Zhou J, Mao W, et al., 2022. Immune enhancement in patients with predicted severe acute necrotising pancreatitis: a multicentre double-blind randomised controlled trial. *Intensive care medicine*, 48(7), 899–909.  
<https://doi.org/10.1007/s00134-022-06745-7>
- Pollard TJ, Johnson AEW, Raffa JD, et al., 2018. The eICU Collaborative Research Database, a freely available multi-center database for critical care research. *Scientific data*, 5, 180178.  
<https://doi.org/10.1038/sdata.2018.178>
- Docherty AB, Mulholland RH, Lone NI, et al., 2021. Changes in in-hospital mortality in the first wave of COVID-19: a multi-centre prospective observational cohort study using the WHO Clinical Characterisation Protocol UK. *The Lancet. Respiratory medicine*, 9(7), 773–785.  
[https://doi.org/10.1016/S2213-2600\(21\)00175-2](https://doi.org/10.1016/S2213-2600(21)00175-2)
- Rajaram A, Hickey Z, Patel N, et al., 2020. Training medical students and residents in the use of electronic health records: a systematic review of the literature. *J Am Med Inform Assoc*, 27(1):177–180.  
<https://doi.org/10.1093/jamia/ocz178>
- Zhang SY, Liang ZY, Yu WQ, et al., 2014. Early enteral nutrition with polymeric feeds was associated with chylous ascites in patients with severe acute pancreatitis. *Pancreas*, 43(4):553-558.  
<https://doi.org/10.1097/MPA.0000000000000067>
- Zhang Y, Gao SL, Zhang SY, et al., 2014. Six cases of severe acute pancreatitis complicated with vancomycin-resistant enterococcus enteritis. *Shock*, 42(5):439-406. <https://doi.org/10.1097/SHK.0000000000000237>
- Zhang Y, Zhang SY, Gao SL, et al., 2014. Successful Resolution of Gastric Outlet Obstruction Caused by Pancreatic Pseudocyst or Walled-Off Necrosis After Acute Pancreatitis: The Role of Percutaneous Catheter Drainage. *Pancreas*, 44(8):1290-1295.  
<https://doi.org/10.1097/MPA.0000000000000429>
- Yu WQ, Zhang Y, Zhang SY, et al., 2016. Impact of misplaced subclavian vein catheter into jugular vein on transpulmonary thermodilution measurement variables. *J Zhejiang Univ Sci B*, 17(1):60-66.  
<https://doi.org/10.1631/jzus.B1500167>
- Zhang Y, Yu WQ, Zhang J, et al., 2020. Efficacy of Early Percutaneous Catheter Drainage in Acute Pancreatitis of Varying Severity Associated With Sterile Acute Inflammatory Pancreatic Fluid Collection. *Pancreas*, 49(9):1246-1254.  
<https://doi.org/10.1097/MPA.0000000000001666>
- Huang F, Meng H, Sun Y, et al., 2020. Factors Causing Abnormal Heart Failure After Successful Fluid Resuscitation on Acute Pancreatitis Patients. *Pancreas*, 49(4):e33-e35. <https://doi.org/10.1097/MPA.0000000000001532>
- Zhang Y, Zhang C, Yu WQ, et al., 2021. The "Two-Step" approach for classifying the severity of acute pancreatitis: A retrospective study. *J Hepatobiliary Pancreat Sci*, 28(10):902-912. <https://doi.org/10.1002/jhbp.943>
- Schepers NJ, Bakker OJ, Besselink MG, et al., 2019. Impact of characteristics of organ failure and infected necrosis on mortality in necrotising pancreatitis. *Gut*, 68(6):1044-1051. <https://doi.org/10.1136/gutjnl-2017-314657>
- Botta M, Tsonas AM, Pillay J, et al., 2021. Ventilation management and clinical outcomes in invasively ventilated patients with COVID-19 (PROVENT-COVID): a national, multicentre, observational cohort study. *Lancet Respir Med*, 9(2):139-148.  
[https://doi.org/10.1016/S2213-2600\(20\)30459-8](https://doi.org/10.1016/S2213-2600(20)30459-8)
- Abul-Husn NS, Kenny EE, 2019. Personalized Medicine and the Power of Electronic Health Records. *Cell*, 177(1):58-69.  
<https://doi.org/10.1016/j.cell.2019.02.039>

## Supplementary information:

Tables S1 and S2; Figs. S1 and S2