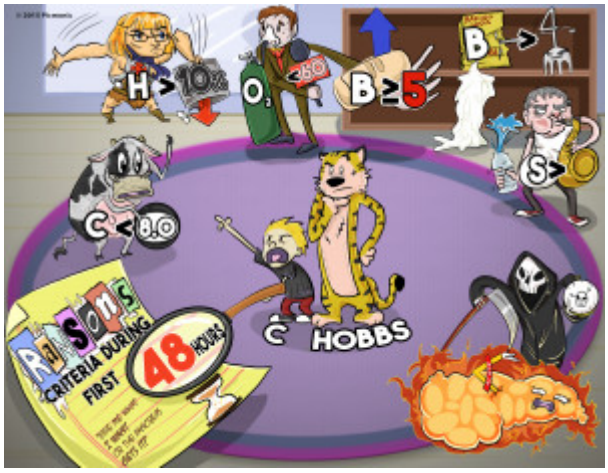
Ransons Criteria During First 48 Hours

A commonly used scaling system used to predict the prognosis and severity of acute pancreatitis, Ranson's criteria consists of eleven parameters; five are assessed immediately on admission, and six are assessed as they develop over the next 48 hours, and the score is totaled. This card details the six criteria measured during the 48 hours following admission.



PLAY PICMONIC

Use

Mortality Predictor for Acute Pancreatitis

Death Prediction and Acute-angle Pancreas-on-fire

The Ranson’s criteria can be thought of as a mortality predictor in patients with acute pancreatitis. With an increasing score, the mortality, or the likelihood of the patient dying due to the current episode of acute pancreatitis, will also increase. One point is assigned per criterion met.

Criteria Present at 48 Hours

C HOBBS (Each is +1)

C. Calvin and Hobbes

The acronym, C HOBBS, can be used to organize the criteria used to assess the patient during the first 48 hours. C HOBBS stands for Calcium, Hematocrit, O2, Base Deficit, BUN increase, and Sequestered fluid.

Calcium < 8.0 mg/dL

Calcium-cow Less-than (8) Ball

A serum calcium level of <8.0 mg/dL means the patient should have 1 point added to their score. A serum calcium level may be obtained as an independent lab but is most often included in a basic metabolic panel (BMP).

Hematocrit Decreased by > 10%

He-man-critic Down-arrow Greater-than (10) Tin

Though it is expected that the hematocrit should decrease, a precipitous drop of hematocrit by >10% is associated with pancreatic necrosis, organ failure, or possible hemorrhage.

Oxygen (PO2) < 60 mmHg

O2-tank Less-than (60) Minute-reporter

The arterial partial pressure of oxygen can be measured on an arterial blood gas, or ABG. Low PO2 represents hypoxemia, and indicates a higher risk of acute respiratory distress syndrome (ARDS) which can be a life-threatening complication of pancreatitis.

BUN Increased by Greater or Equal to 5 mg/dL

Bun Up-arrow Greater-than or Equal-to (5) Hand

Another value obtained on a BMP, BUN is used to assess renal function along with the creatinine value. In pancreatitis, patients may have decreased renal function due to third spacing and loss of fluid into the extravascular compartment, leading to hypovolemic shock with renal failure. An increase in BUN of >5 mg/dL from the previous value means the patient should have 1 point added to their score.

Base Deficit > 4 mEq/L

Broken Baking-soda-base Greater-than (4) Fork

When there is a base deficit, it implies there is an acidosis occurring. Base deficits can arise secondary to various causes of acidosis, such as when shock leads to decreased tissue perfusion and lactic acidosis. A base deficit of >4 mEq/L means the patient should have 1 point added to their score.

Sequestered Fluid > 6 L

Squeezed-sequestered Fluid Greater-than (6) Sax

In pancreatitis, systemic inflammation can lead to third spacing of fluid, where intravascular fluid escapes into the extravascular compartment. If a patient is given over 6 liters of resuscitative fluid and vital signs remain unaffected, this suggests abnormal fluid shifts are occurring and indicates a higher severity of pancreatitis. If the patient has sequestered more than 6 L of fluid, they should have 1 point added to their score.