**Case of the week**

24 F presents to the ED. Unwell over the last 3 days with, fever, vomiting, abdominal pain

Today she has been more drowsy and SOB

On arrival to the ED patient appears unwell

HR 150 BP 80/50 Sats 88% RA RR 30 Temp 38

Moaning, eyes open to painful stimulus, withdrawing from pain

An ABG is performed promptly on arrival FiO2 0.6

pH 7.1 hco3 10

pO2 300 bXS -14

pCO2 44 lactate 4

Na 138 / K 6.5 / Cl 102 / Ur 15 / Cr 200 Glu 38

**Describe the acid-base disturbance and discuss relevant calculations**

**List further investigation choices with reasoning**

**What is the likely cause of patient’s presentation? List 4 differential diagnoses**

**What are the possible complications of this condition in this patient?**

**Outline and justify the your ED management and disposition of this patient?**