

**BCH 471**  
**Homework (1)**

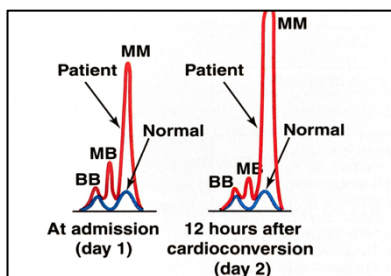
**-Case I-**

A 40-year-old obese woman presents to the emergency department with complaints of worsening nausea, vomiting, and abdominal pain. Her pain is presently constant and sharp in nature but previously was intermittent and cramping only after eating “greasy” foods. Laboratory values were normal except for increased liver function tests, white blood cell count, and serum amylase. Ultrasonography of the gallbladder revealed numerous gallstones. A surgery consult was immediately sought.

- What is the most likely diagnosis?
- What does liver function tests include?
- What is the causing factor of the diagnosed disease?
- What are the main biomarkers of this disease?

**-Case II-**

A 70-year-old man was admitted to the emergency room with 12-hour history of chest pain. Serum creatine kinase (CK) activity was measured at admission (day 1) and once daily (results are attached in the figure below). On day 2 after admission, he experienced cardiac arrhythmia, which was terminated by three cycles of electric cardio-conversion. Normal cardiac rhythm was reestablished. He had no recurrence of arrhythmia over the next several days but the patient. His chest pain subsided and he was released on day 10.



From the following answers below, choose (one or more) that are consistent with the data represented and explain the reason behind each choice **in detail**.

- a) The patient had a myocardial infraction 12 to 24 hours prior to admission.
- b) The patient had a myocardial infraction 48 to 64 hours prior to admission.
- c) The patient had a myocardial infraction on day 2
- d) The patient had angina prior to admission.
- e) The patient had a damage to his skeletal muscles on day 2 after cardio-conversion.