

The role of adipocytokinic markers in the prognosis of survival and sepsis at critical postsurgical patients

A.Florescu^{1,3}, I. Grigoraș^{1,2}, D. Ungureanu^{1,3}, D. Rusu^{1,2}, I. Ristescu^{1,2}, D. D. Brănișteanu^{1,3}

1 „Gr. T. Popa” University of Medicine and Pharmacy, Iași, România

2 Regional Institute of Oncology, Iași, România

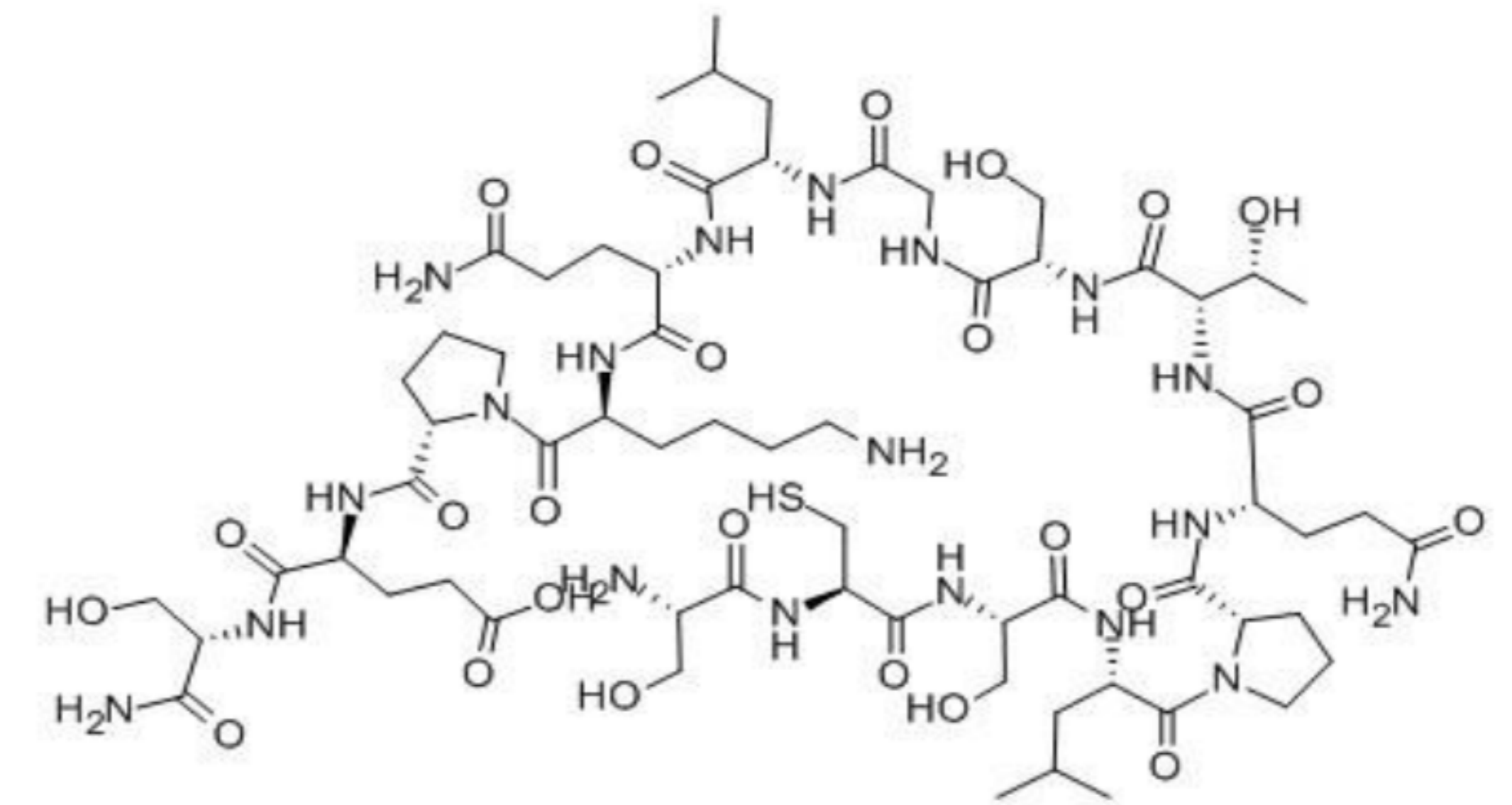
3 „St. Spiridon” University Emergency Hospital, Iași, România

Introduction

Aims: to characterize the early dynamics of a new inflammatory marker, leptin (LPT) in surgical critically ill patients, in parallel with two well described markers, CRP and IL-6.

Primary objective: to define early dynamics of LPT plasma levels in patients with intra-abdominal sepsis and patients with postoperative SIRS after major abdominal surgery compared with a control group.

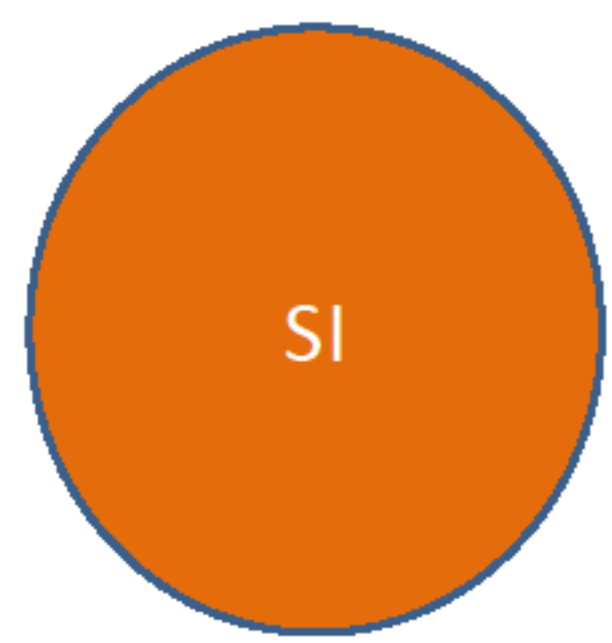
Secondary objective: to compare early dynamics of LPT versus CRP and IL-6 in surgical critically ill patients.



Leptin structure

Material and Methods

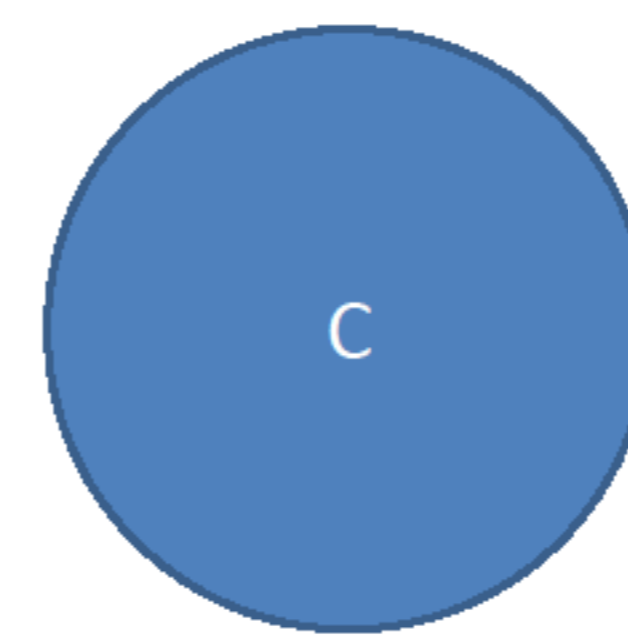
Our critical patients



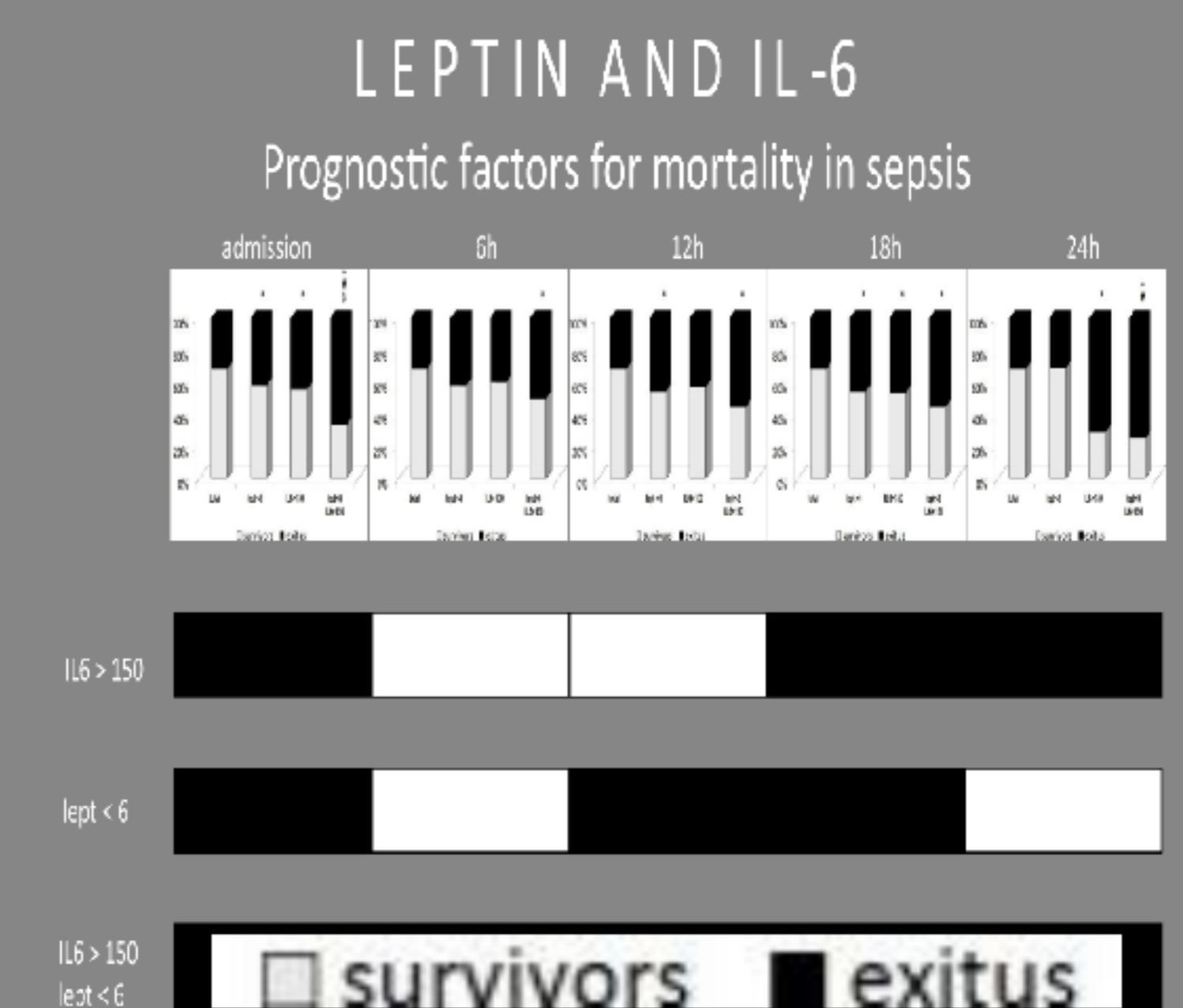
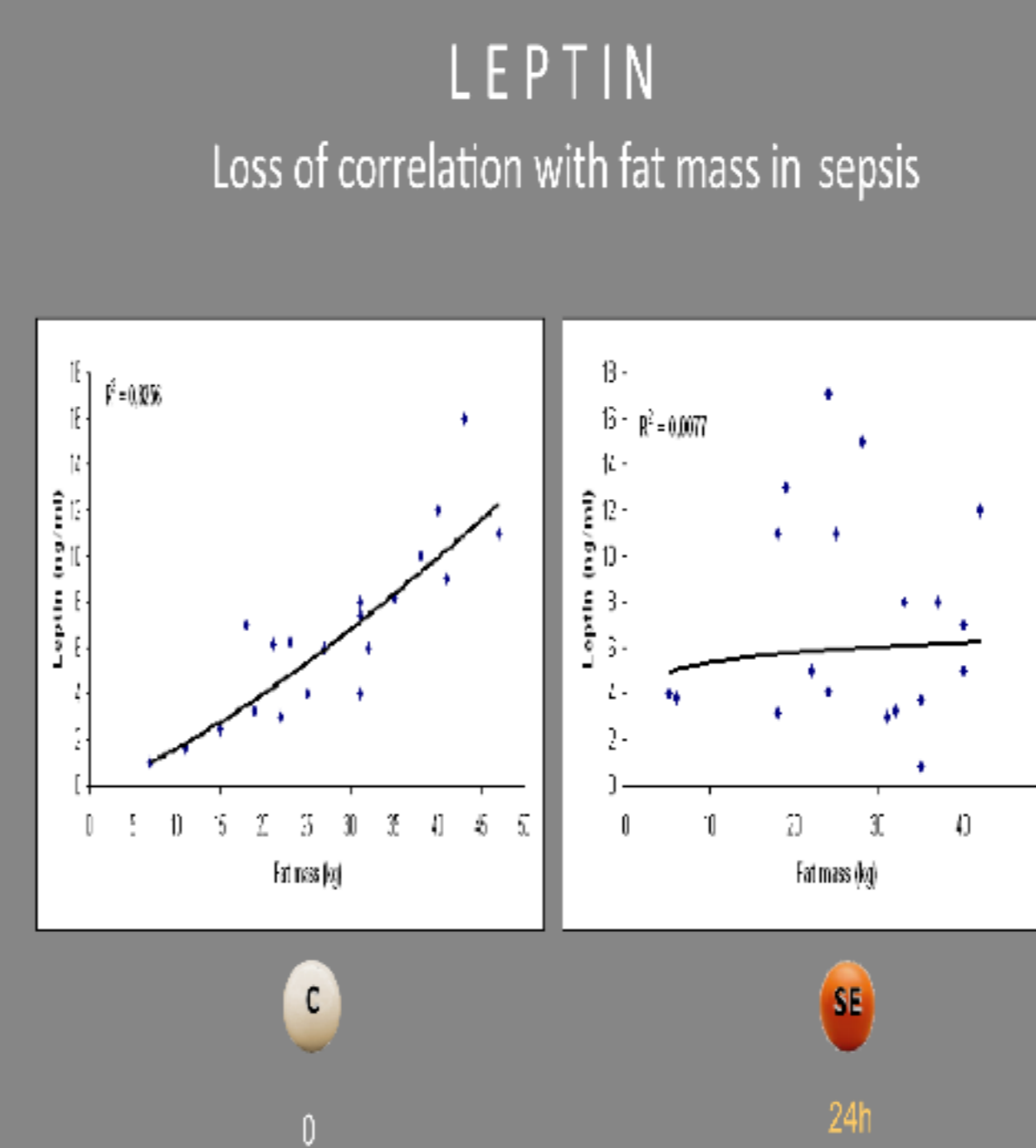
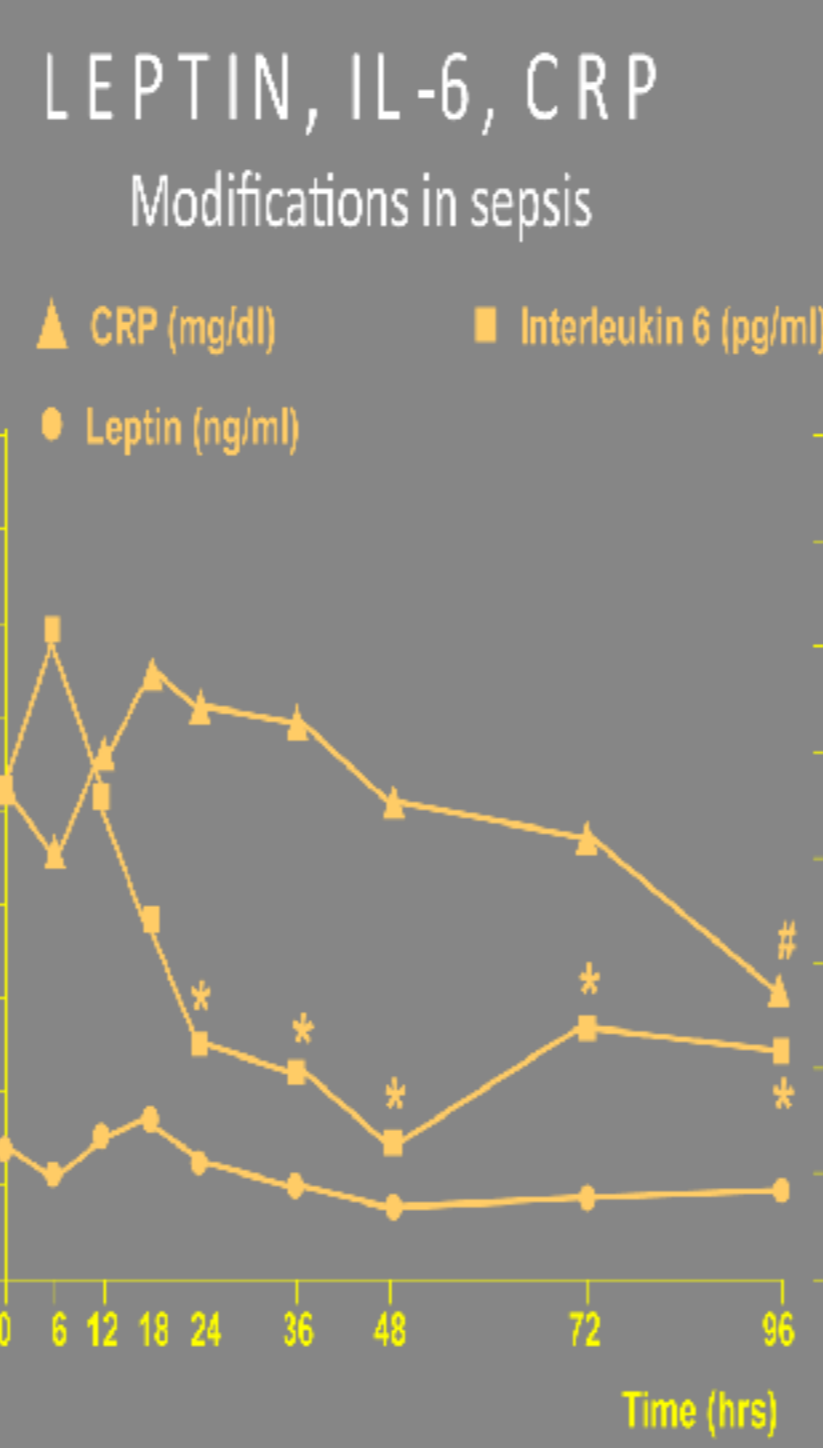
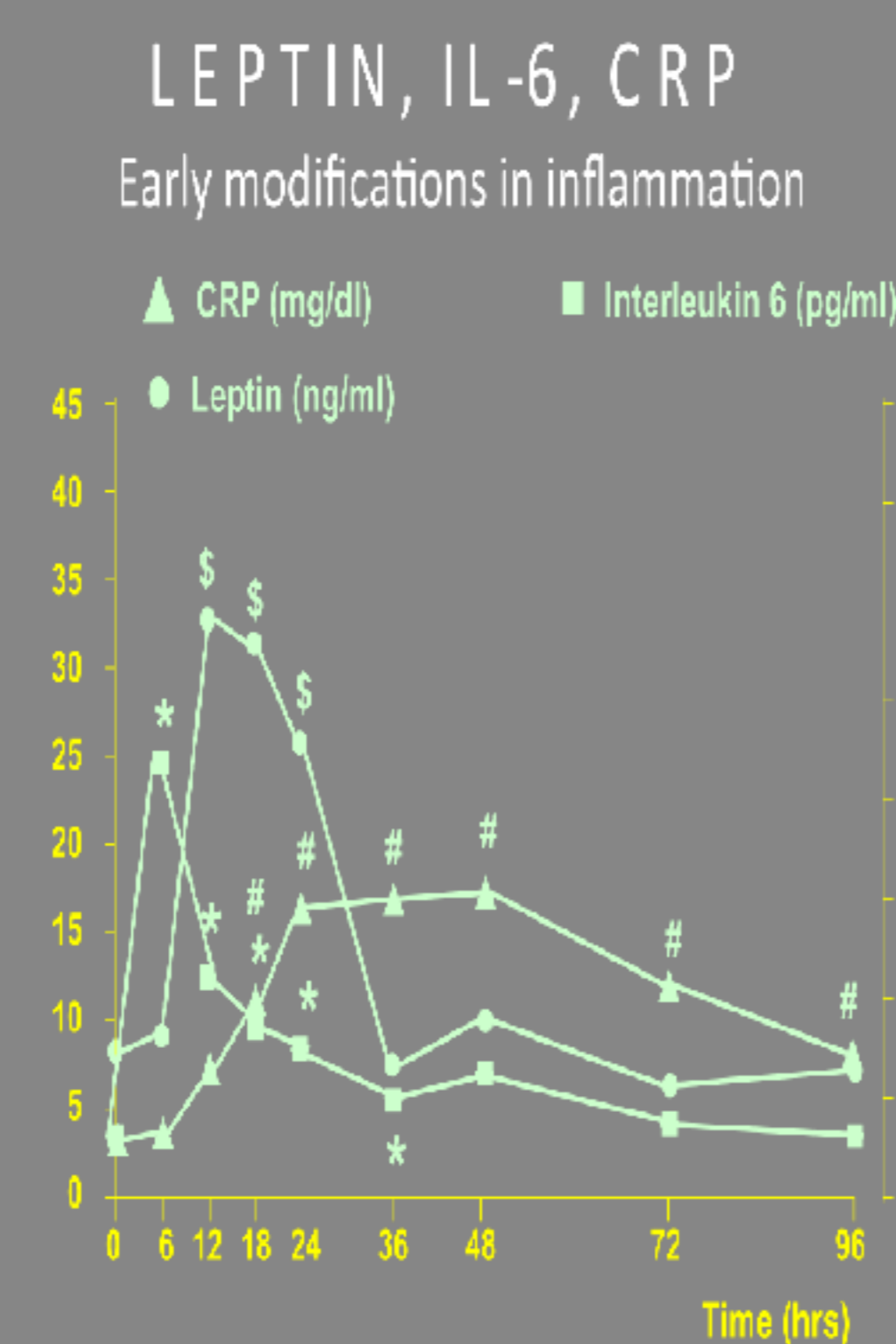
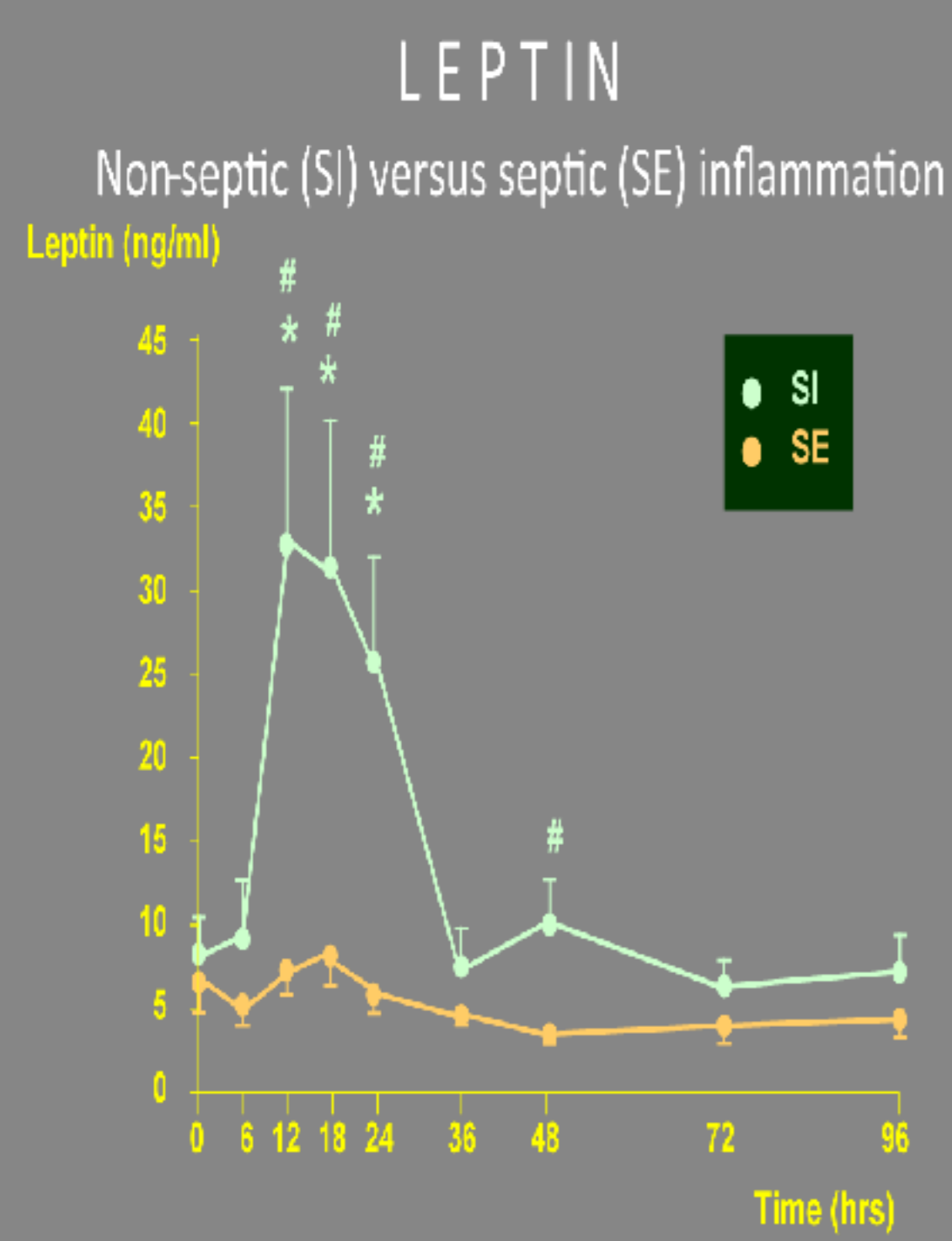
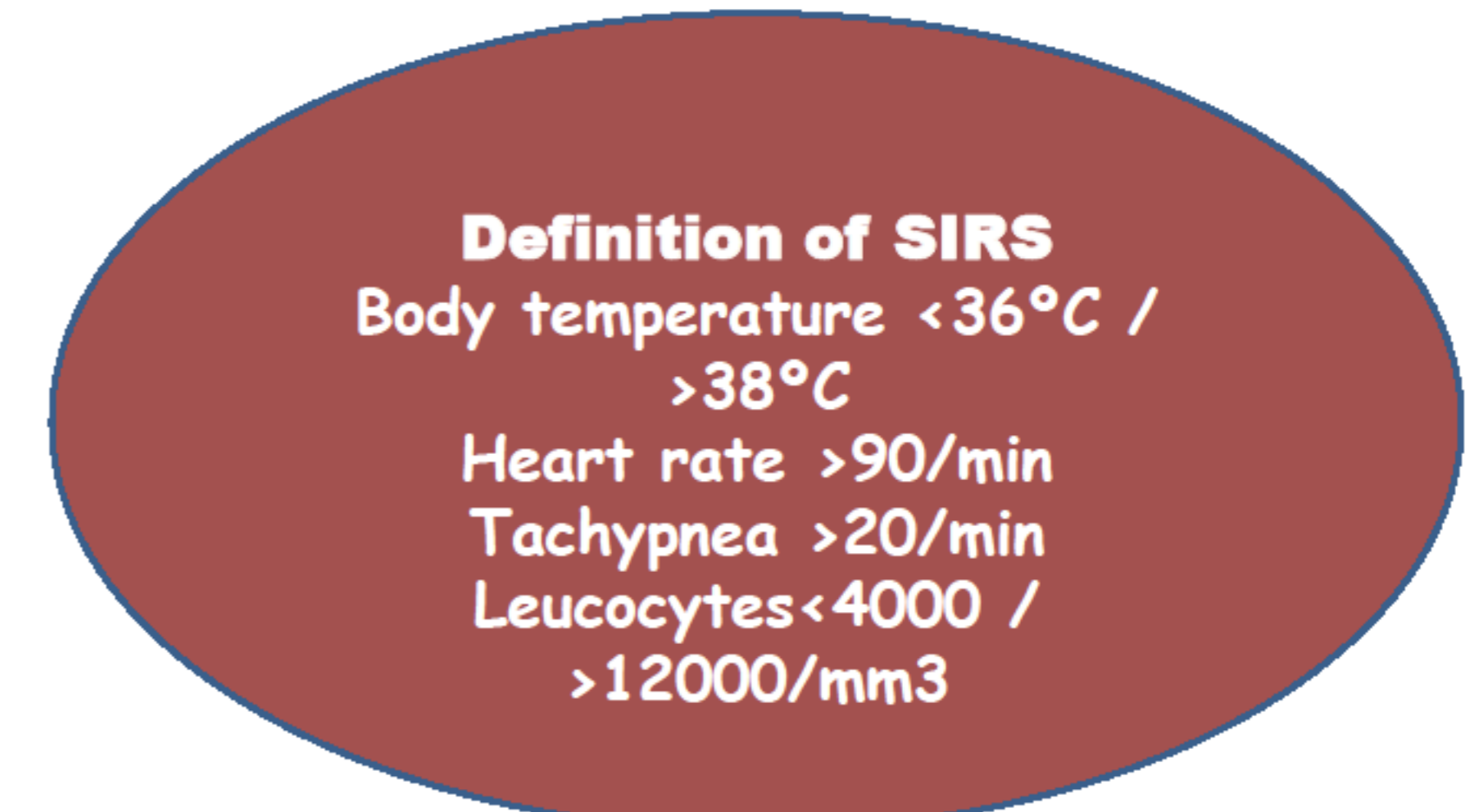
SI
 Major abdominal surgery (20 patients)
 > 2 SIRS criteria



SE
 Intraabdominal infection (20 patients)
 Positive culture
 > one organ dysfunction



C
 Controls before surgery (20 patients)
 0 SIRS criteria



Discussion

The study investigates the early dynamics of LPT and of other inflammatory markers in surgical patients with systemic inflammation or sepsis in order to test the hypothesis that early LPT plasma levels may be a diagnostic marker to discriminate between inflammation and infection. We characterized early dynamics of the 3 inflammatory markers by measuring their plasma value every 6 hours in the first 24 hours, every 12 hours in the next day and once a day in the next three days. In our study, LPT values in SIRS patients steeply increased above the normal range in the first 24 hours with a peak at 12 hours and in septic patients remained all the time within the normal range. This data suggests that LPT may have a different early dynamic during SIRS and sepsis. The main limit of our study is the small group size.

Conclusions

During inflammation and infection LPT may act as an inflammatory mediator involved in immune response modulation. Our study characterizes for the first time the LPT plasma level variations during the early stages of these conditions in surgical patients. LPT has a different early dynamic during SIRS and sepsis. Appropriate LPT plasma levels may offer a survival advantage. LPT measurement may be a useful marker in the diagnosis and prognosis of critical illness in surgical patients.

Această lucrare a beneficiat de suport financiar prin proiectul "CERO - PROFIL DE CARIERĂ: CERCETĂTOR ROMÂN", contract NR. POSDRU/159/1.5/S/135760, proiect cofinanțat din Fondul Social European prin Programul Operațional Sectorial Dezvoltarea Resurselor Umane 2007-2013