

3-year outcomes in bariatric surgery patients after successful weight loss during the pre-operative hypocaloric diet phase

F Fontan, MD; DT Thompson, MD; R Carroll, MD; R Lehmann, DO, FACS, FASMBS; J Smith, MD, FACS, FASMBS; P Nau, MD, MS, FACS

University of Iowa Hospitals and Clinics; Department of Surgery; Iowa City, Iowa 52242

Introduction

- Preoperative weight loss, reflecting patient compliance to a preconditioning hypocaloric liquid diet, has been utilized as a predictor of metabolic surgery success.
- This study investigated the relationship between preoperative weight loss and successful post-operative outcomes in the short- and long-term.

Methods

- A retrospective review of a prospectively collected database from a single academic institution was conducted.
- Ten days preoperatively, we placed patients on a liver conditioning diet by alternating them on an every-other-day low-calorie and a very low-calorie liquid diet of 1200 and 800 kcal respectively.
- Weight measurements at 6 months, 1, 2, and 3 years were reviewed.
- A greater than 50% excess weight loss (EWL) was used as a benchmark for a successful level of weight loss.
- Multivariate regression analyses were conducted to account for significant preoperative factors such as surgery type and patient comorbidities.

Preoperative Conditioning Diets

- **1200 calorie plan**
 - Each meal should be 300 calories and 7 to 14 grams of protein.
- **800 calorie plan**
 - Each meal should be 175 calories and 7 to 14 grams of protein.
- Eat 3 blended meals each day.
- Drink 3 cups of skim milk for snacks.
- Drink 6 or more cups of plain water each day.

Results

- 514 patients were included
 - 54% Laparoscopic sleeve gastrectomy
 - 46% Roux-en-Y gastric bypass

Figure 1: Univariate Analysis of Postoperative %EWL from Quartile of Preoperative Weight Loss

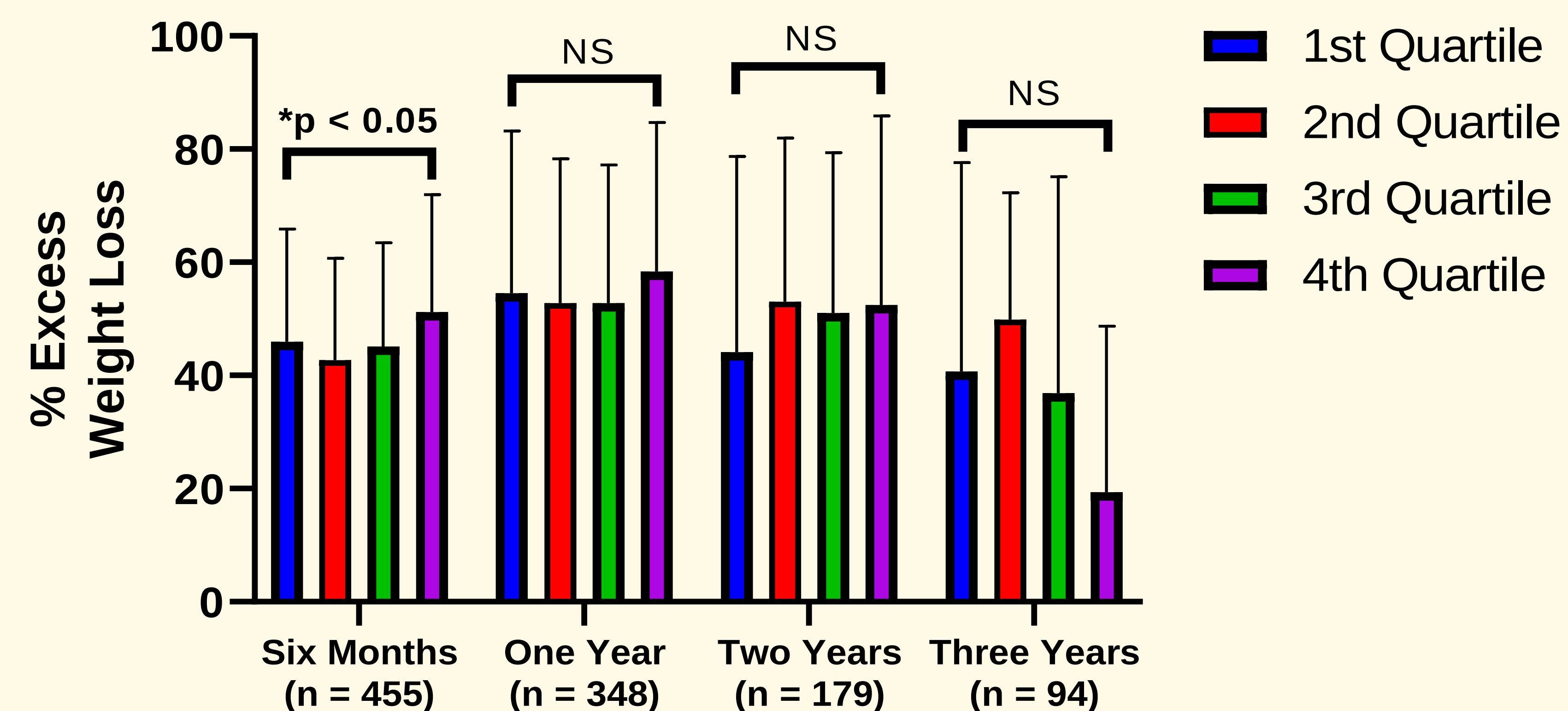
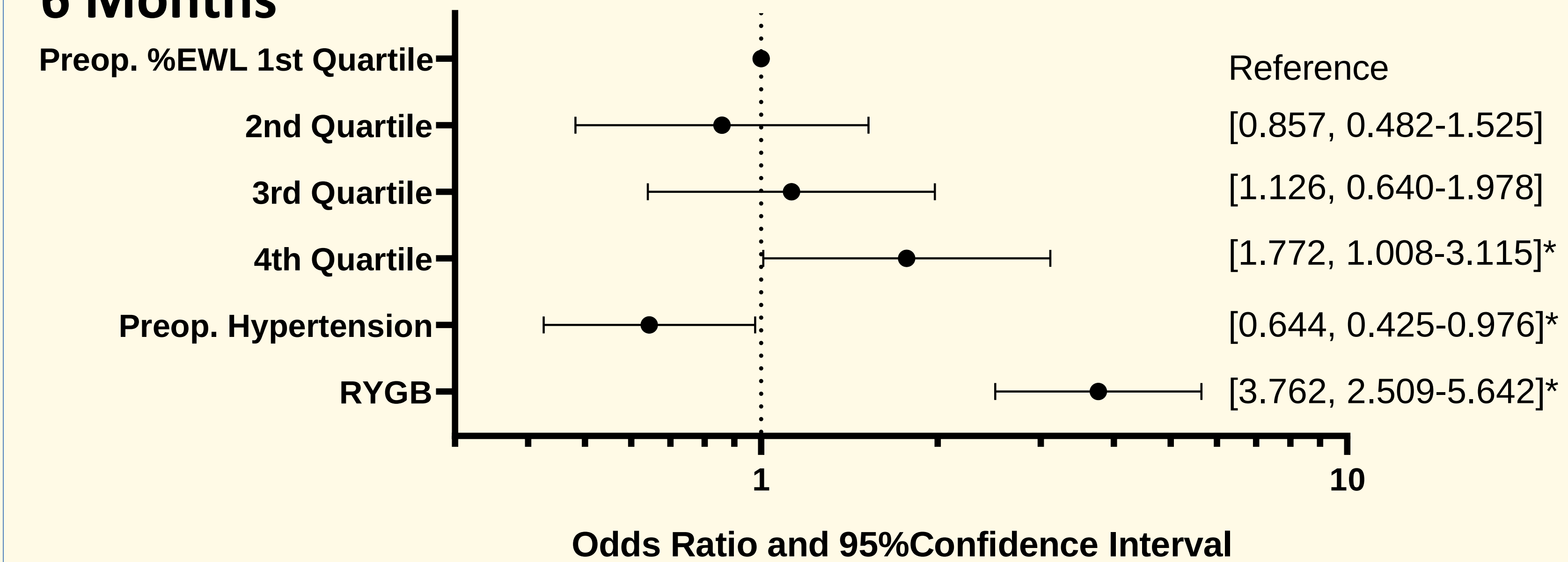


Figure 2: MV Regression Analysis for achieving a 50% EWL at 6 Months



- Patients that had a gastric bypass showed higher odds of achieving over 50% reduction of their excess weight at all time points.

Conclusions

- Improved EWL at six months was predicted by higher weight loss in the preoperative liver conditioning period.
- This result was not durable with the correlation disappearing at 1, 2, and 3 years post-operatively.
- Early identification of the population at risk for inadequate weight loss could improve outcomes.
- Multiple strategies such as increasing the frequency of nutrition specialist appointments, early pharmaceutical rescue interventions, and the potential role of telemedicine represent measures that could have a significant positive impact in bariatric surgery patients.