



Nutrition As Medicine: Predicting Wound Complications In Massive Weight Loss Patients Through Preoperative Biomarkers

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BACKGROUND

- Chronic malnutrition is linked to wound complications in massive weight loss (MWL) patients.
- MWL patients have pre-existing nutritional deficiencies & post-bariatric implications on appetite/nutrition.
- This study aimed to assess preoperative nutritional markers' predictive value for postop complications.

METHODS

Inclusion Criteria

- Panniculectomy for MWL
- Preoperative nutritional data
- 2022-2024

- Multivariate regression analysis, controlling for confounders (age, sex, race, pre-MWL BMI, preop BMI, diabetes, smoking, anemia, procedure duration, specimen weight, drain duration).

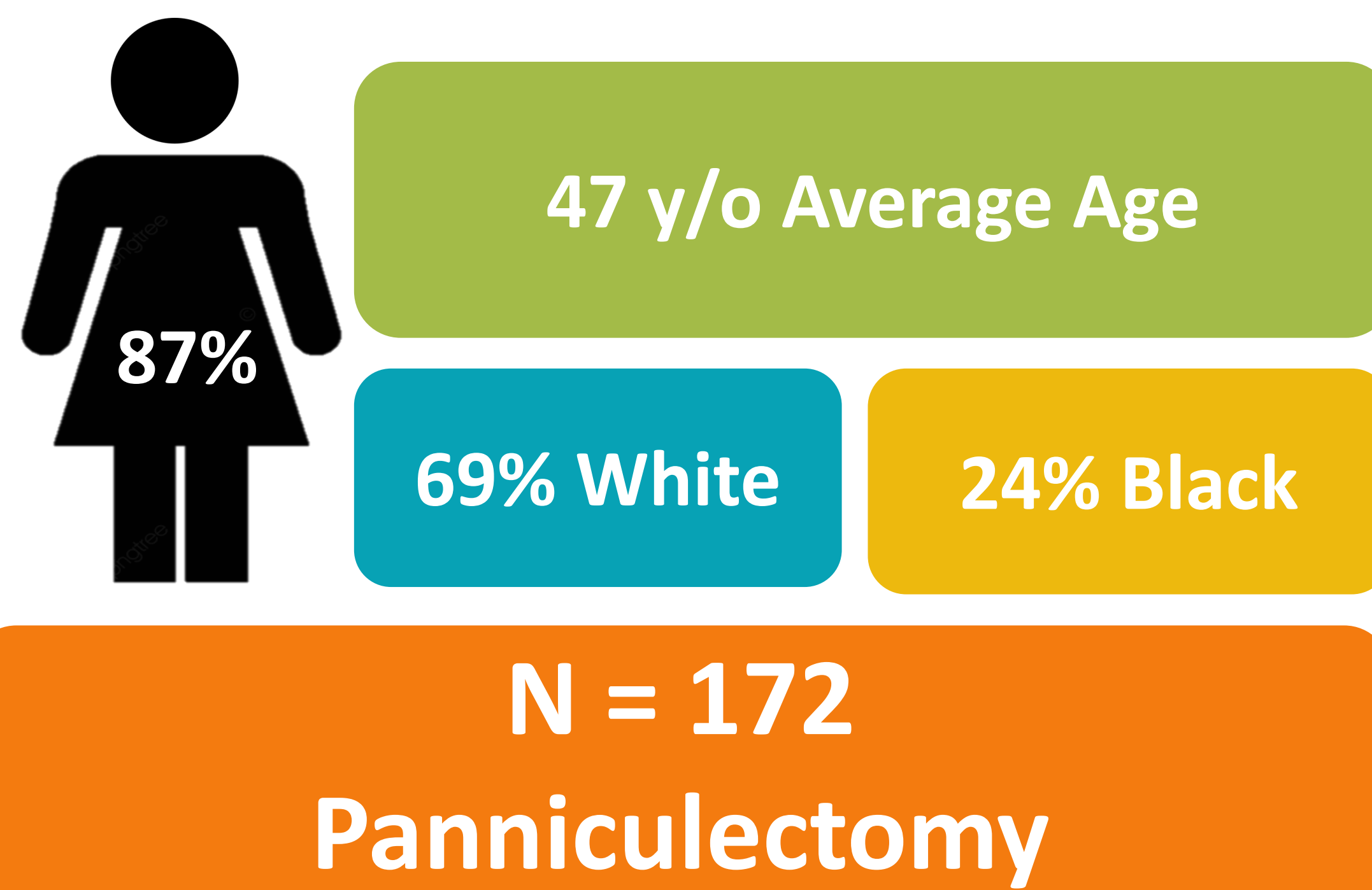


Figure 1. Cohort Demographics.

RESULTS

Fig 2. Risk Factors for Overall Complications (46%).

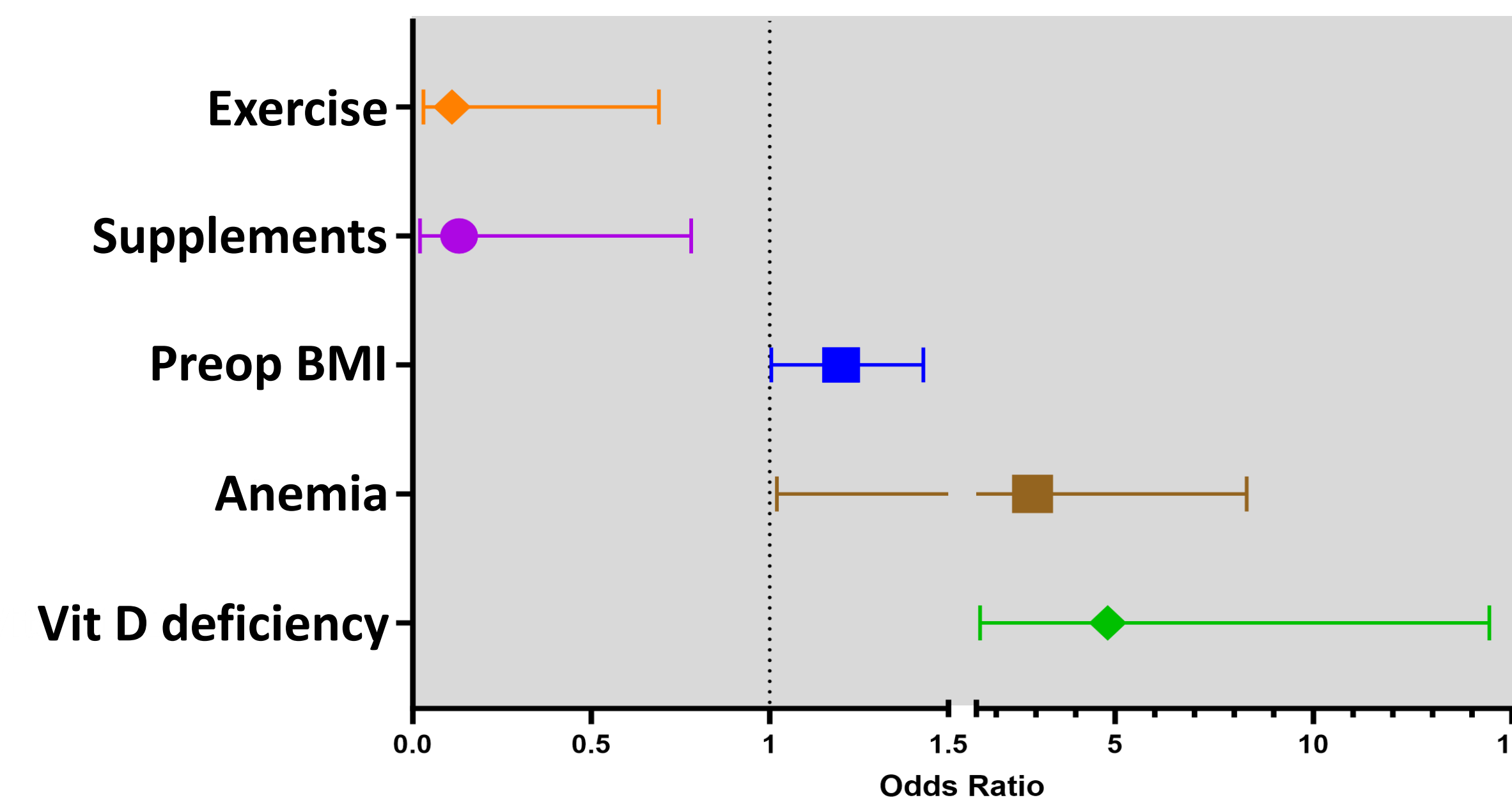


Fig 3. Risk Factors for Delayed Wound Healing (37%).

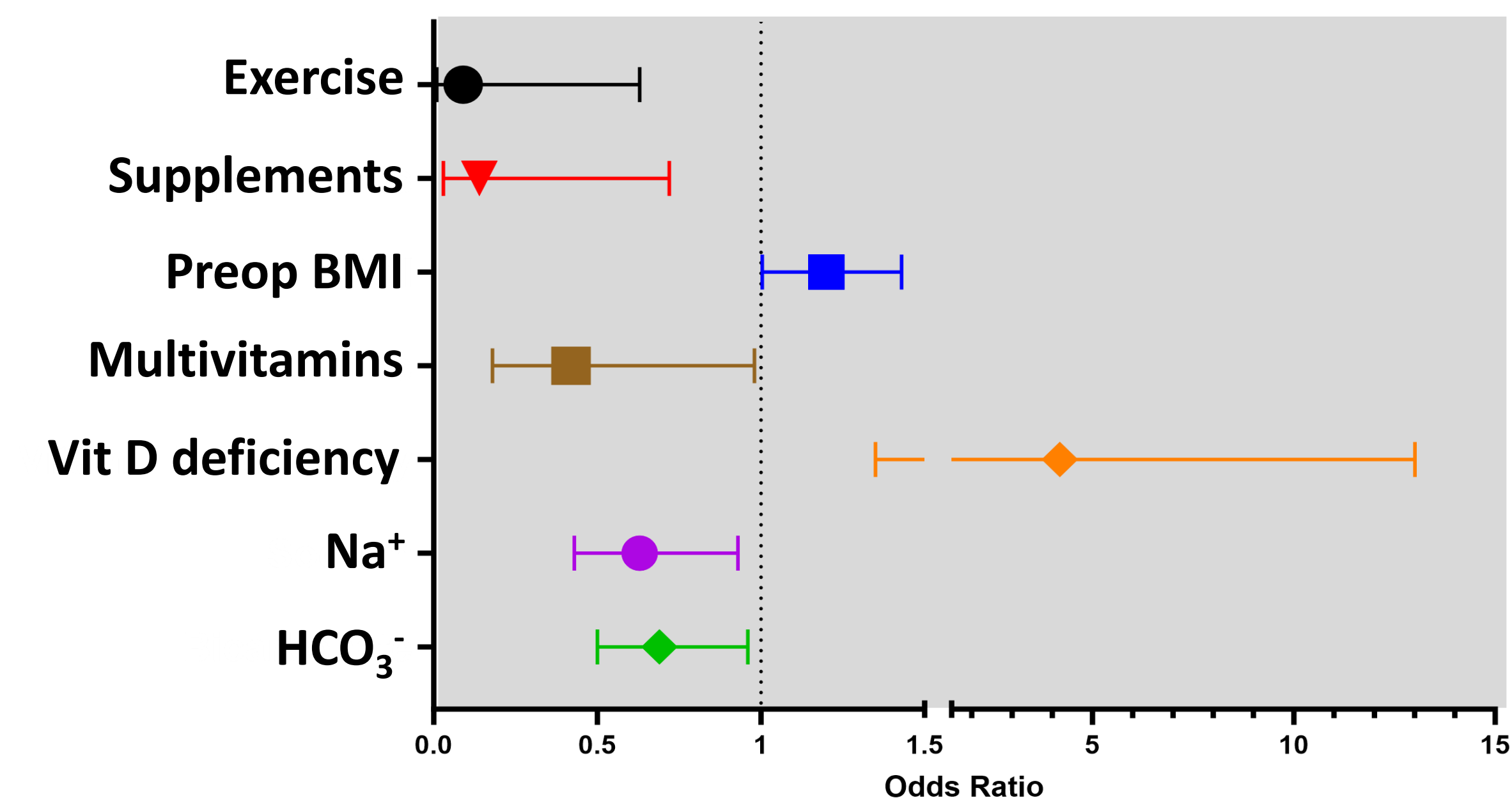


Fig 4. Risk Factors for Seroma (10%).

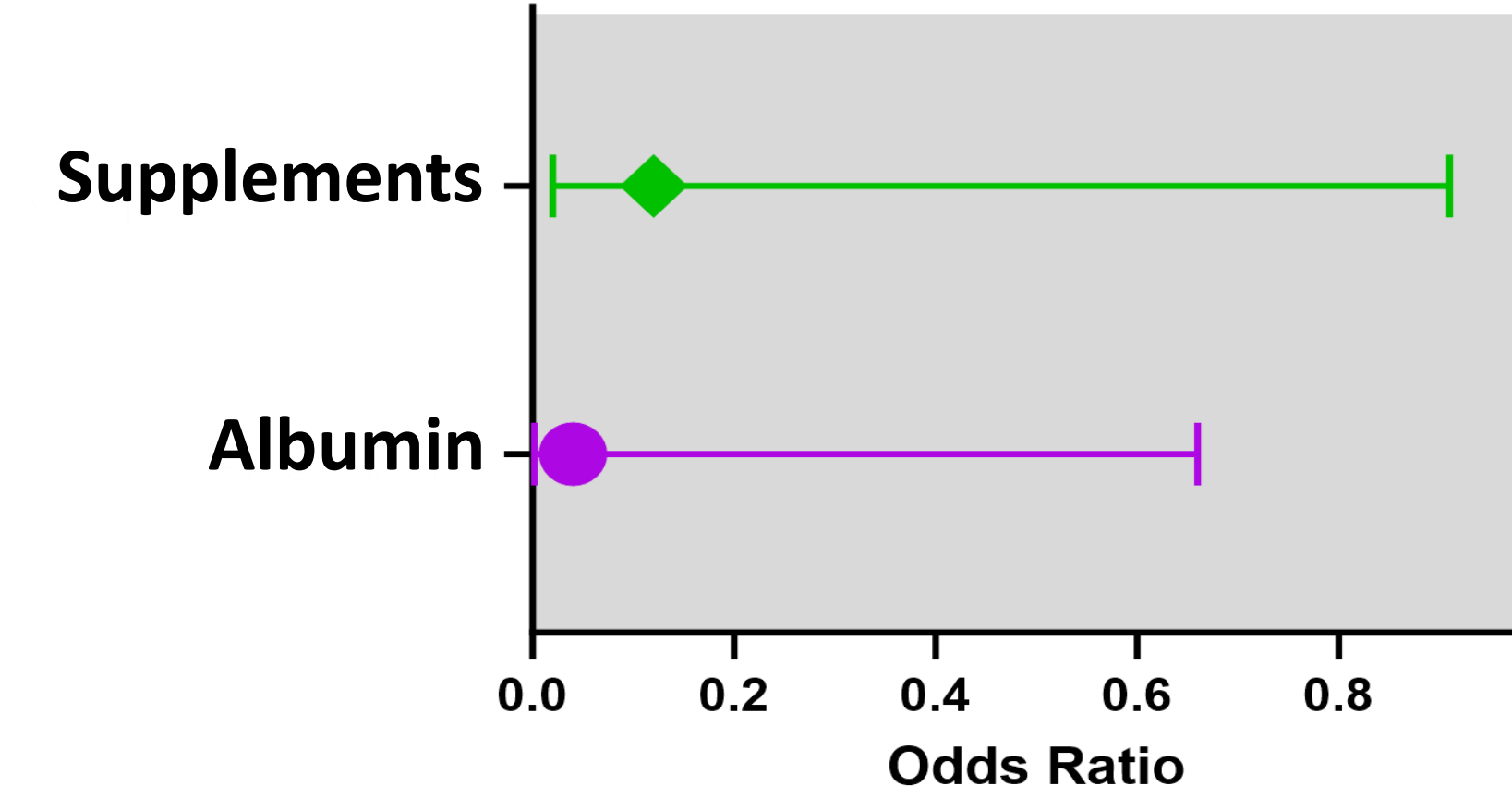


Fig 5. Risk Factors for Wound Dehiscence (12%).

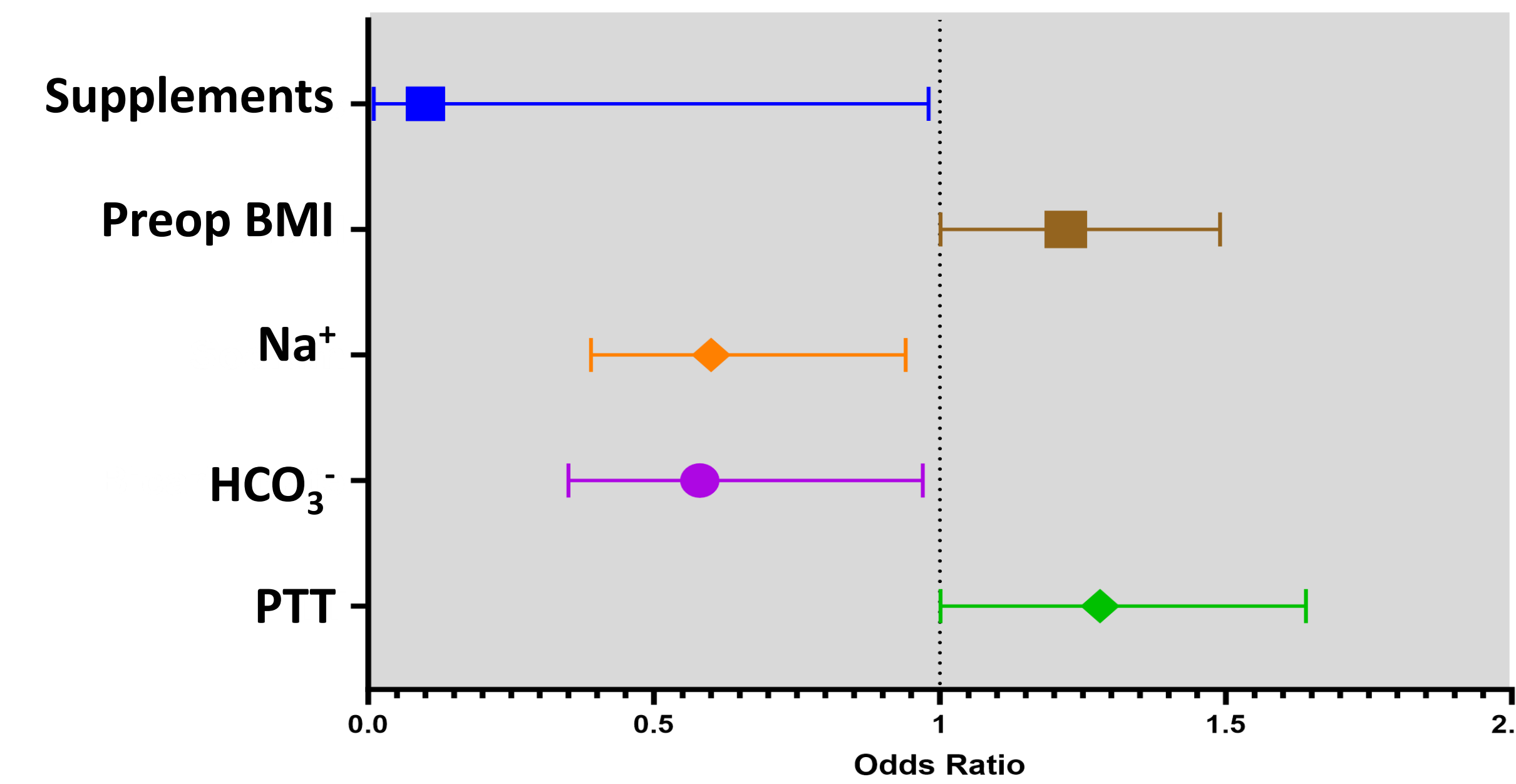
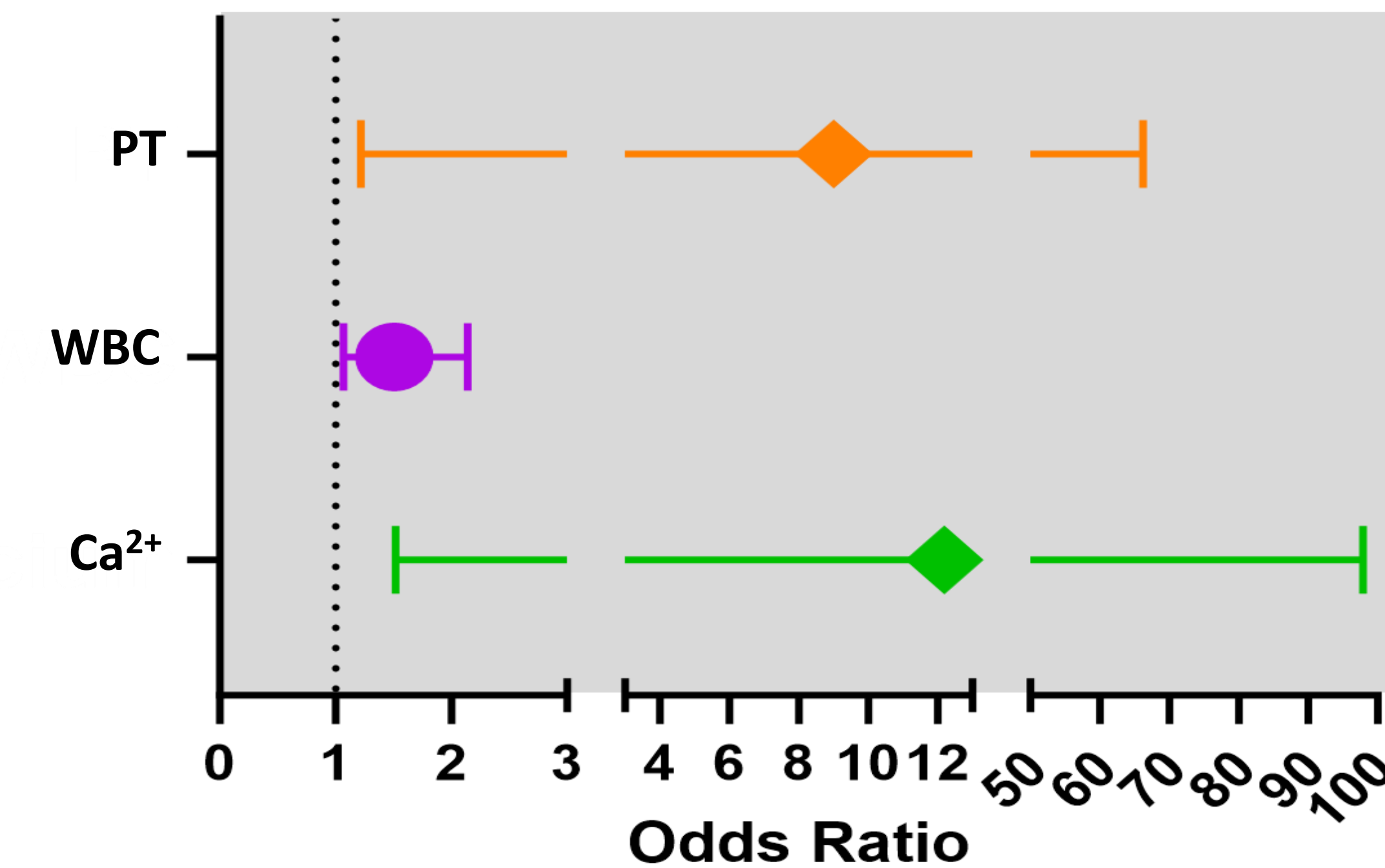


Fig 6. Risk Factors for Hematoma (8%).



RESULTS

GLP-1 RA
4%

Median Weight Loss
112 lbs

Diet/Exercise
19%

Median Pre-MWL BMI
48.7

Bariatric Surgery
77%

Median Preop BMI
31.8

Figure 7. Cohort MWL Characteristics.

	Median (IQR)
Hgb	13.1 (1.7)
WBC	6.2 (2)
Sodium	139 (3)
Bicarbonate	26 (3)
Calcium	9.2 (0.5)
Albumin	4.1 (0.4)
PTT	28.1 (3.3)
PT	13.1 (2.4)

Figure 8. Cohort Preoperative Labs.

CONCLUSIONS

- Preoperative nutritional status **SIGNIFICANTLY impacts postoperative outcomes.**
- Nutritional biomarkers like albumin, sodium, bicarbonate, and coagulation factors were predictive of poor wound healing.
- Targeted interventions based on preoperative nutritional assessment are critical for improving patient outcomes & minimizing complications in this high-risk patient population.