

INTRODUCTION

- Malnutrition: dietary deficiency due to lack of vitamins, minerals, and other essential substances OR excess of wrong types of food [1].
 - Diminishes HIV patient's ability to fight off infection [2].
- Goal: What percentage of HIV patients in the data set are classified at risk of malnourishment. Are there any relationships between age, race, and sex, and nutritional risk index (NRI)?

METHODS

- Final data set = 829 TMC outpatients at ID clinic
- Dependent variable = NRI
- 4 categories of NRI – no risk, borderline risk, mild risk, severe nutritional risk
- Independent variables = Age, Sex, Race
- Age vs NRI: Pearson correlation
- Sex and Race vs NRI: Two way ANOVA

Devine Ideal Body Weight (M)

$$50(\text{kg}) + 2.3(\text{kg}) \times (\text{height inches} - 60)$$

Devine Ideal Body Weight (F)

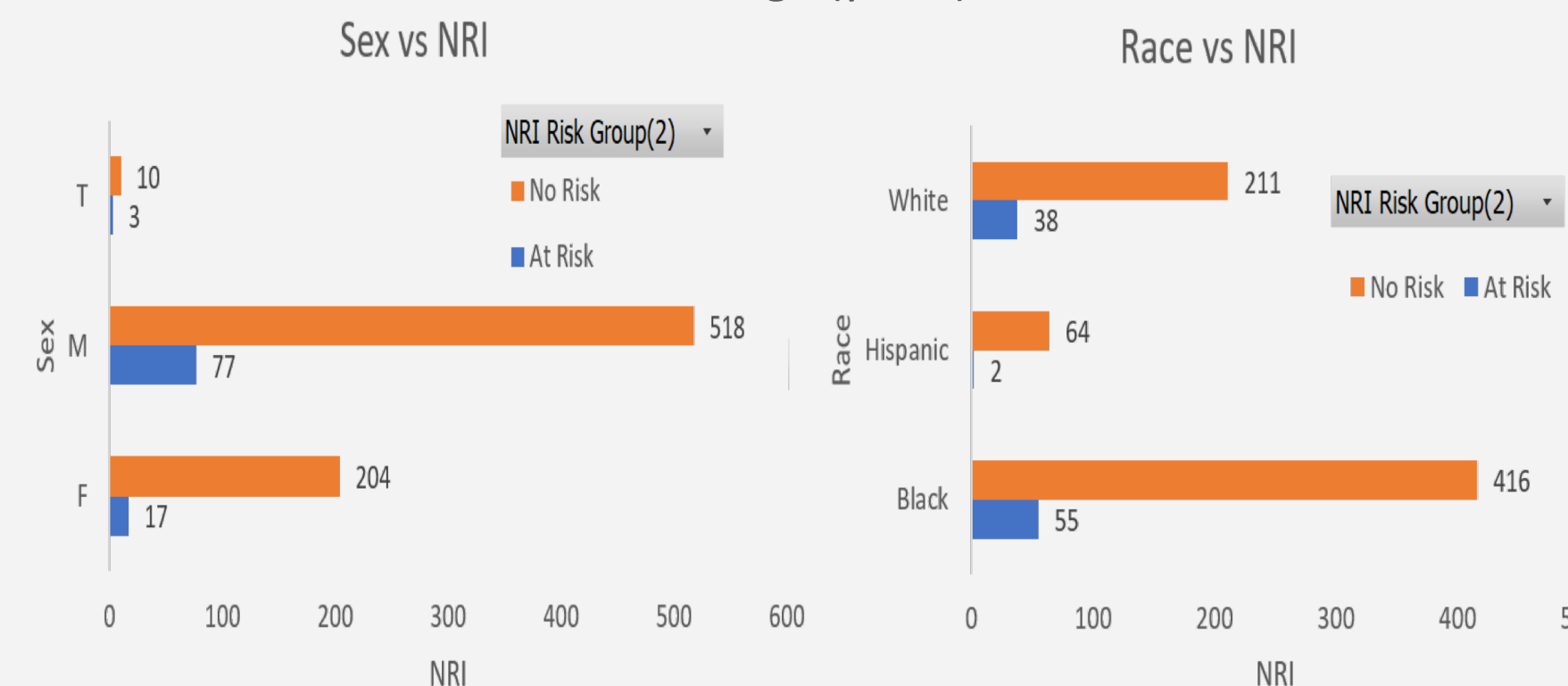
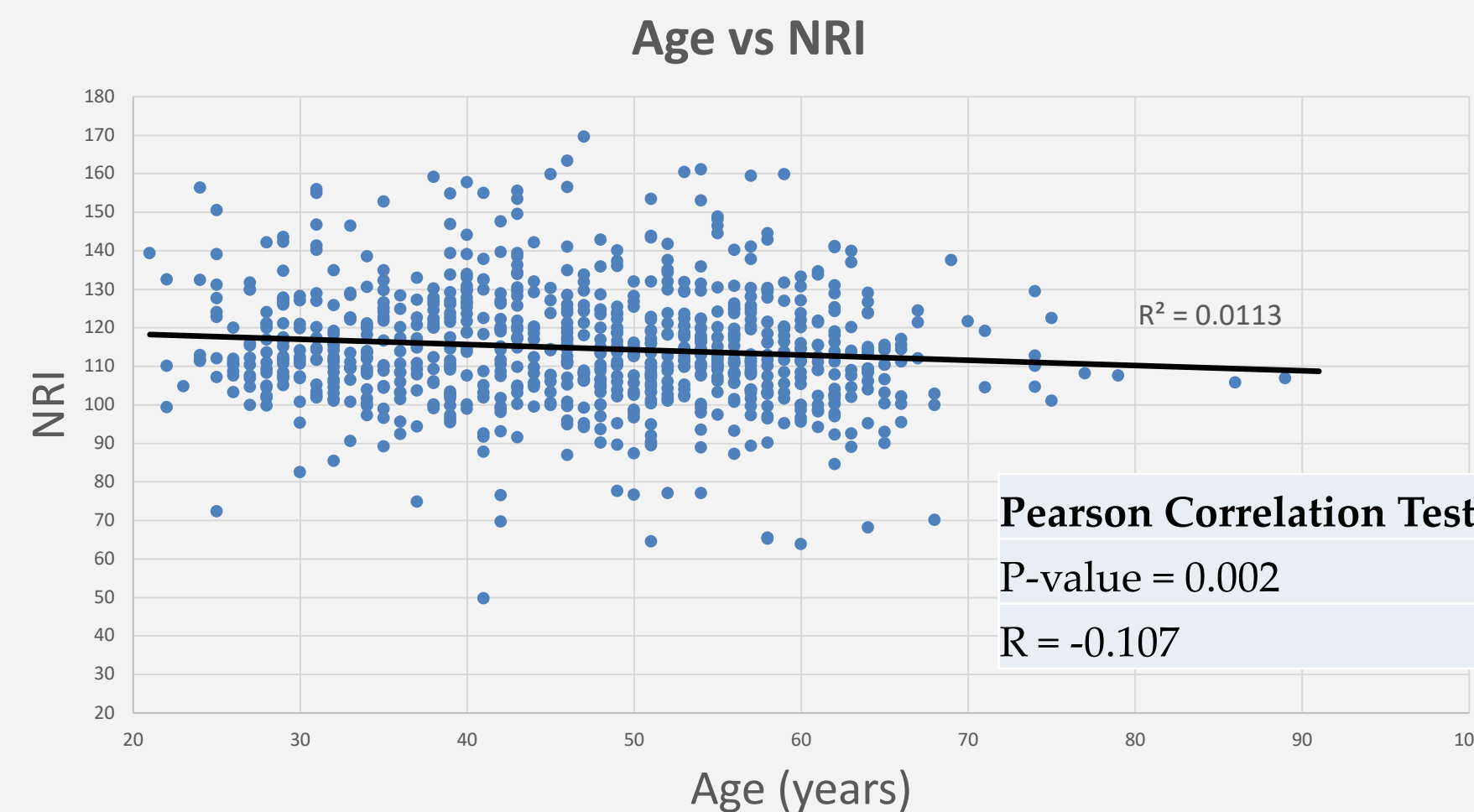
$$45.5(\text{kg}) + 2.3(\text{kg}) \times (\text{height inches} - 60)$$

Nutritional Risk Index (NRI) [3]

$$\text{NRI} = (1.519 \times \text{serum albumin, g/L}) + \{41.7 \times \text{weight (kg)} / \text{IBW (kg)}\}$$

RESULTS

NRI Risk Group	Number of Patients	Percentage of Total Patients
No Risk (NRI >100)	732	88.30%
At Risk (NRI <100)	97	11.70%
Mild (NRI 97.5 - 100)	25	3.02%
Moderate (NRI 83.5 - 97.5)	56	6.76%
Severe (NRI <83.5)	16	1.93%



CONCLUSION

- 11.7% of HIV outpatients are at risk for malnourishment: 1.93% have severe, 6.76% have moderate, and 3.02% have mild malnutrition.
- With age, NRI declines (small correlation).
- Mean F NRI (117.6) > Mean M NRI (113.8)
- 23.1% transsexual patients are at risk of malnutrition.
- Hispanic patients have higher NRI compared to White and Black patients.
- Other factors aside from sex or race affect NRI.
- No significant interaction between sex and race.

DISCUSSION/ FUTURE DIRECTIONS

- Malnutrition in HIV outpatients is likely multifactorial.
- Need larger sample size & better understanding of transsexual population.
- With age, NRI decreases possibly due to poor diet.
- Hispanics have higher NRI potentially due to cultural differences or small sample size.
- Will correlate degrees of malnutrition with immune function in subsequent study.
- Will study the malnourished group to determine other contributing variables.

References

- Duggal S et al. HIV and Malnutrition: Effects on Immune System. *Clin Dev Immunol.* 2012; 2012: 1-6.
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- World J. NRI as predictor of post op wound complications after gastrectomy. *Gastroenterol.* 2012; 18:673-678