

# A Prospective Trial on the Effect of Body Mass Index and Gender on Plasma Octreotide Levels in Patients Undergoing Long Term Therapy With Octreotide LAR

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## Goals

We prospectively studied 82 pts undergoing long-term LAR treatment.

We attempted to understand the relationship between height, weight, BMI, and gender as it pertained to Octreotide dose levels.

We hope to develop a new dosing regimen guided by pt characteristics that would allow for faster titration of LAR in the clinical setting.

## Background

Octreotide LAR is standard of care for most NET tumors.

Currently, the manufactures suggestion is to start all patients on 20mg/month as a starting dose.

This leads to delays in adequate dosing and symptom relief.

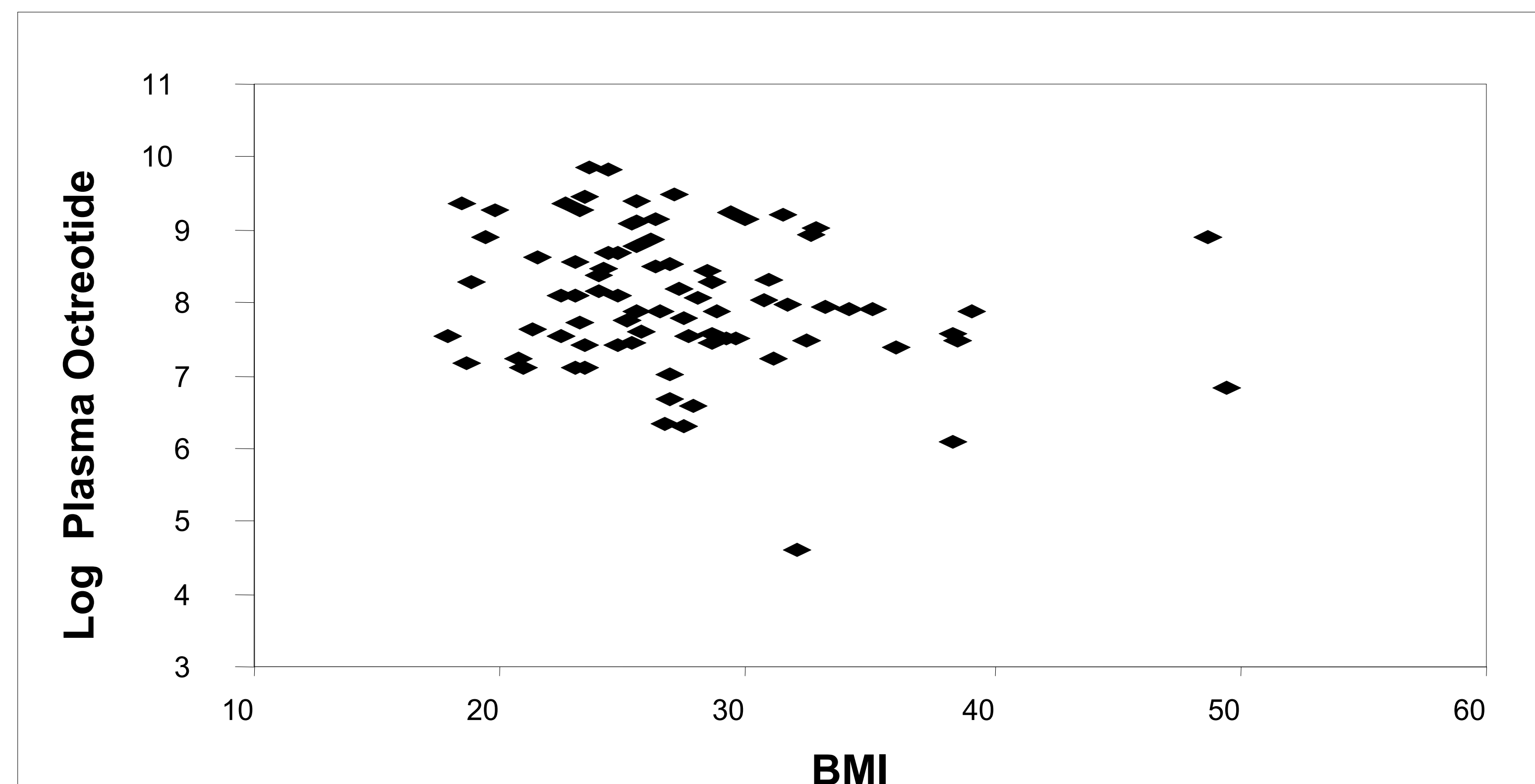
## Methods

82 pts enrolled

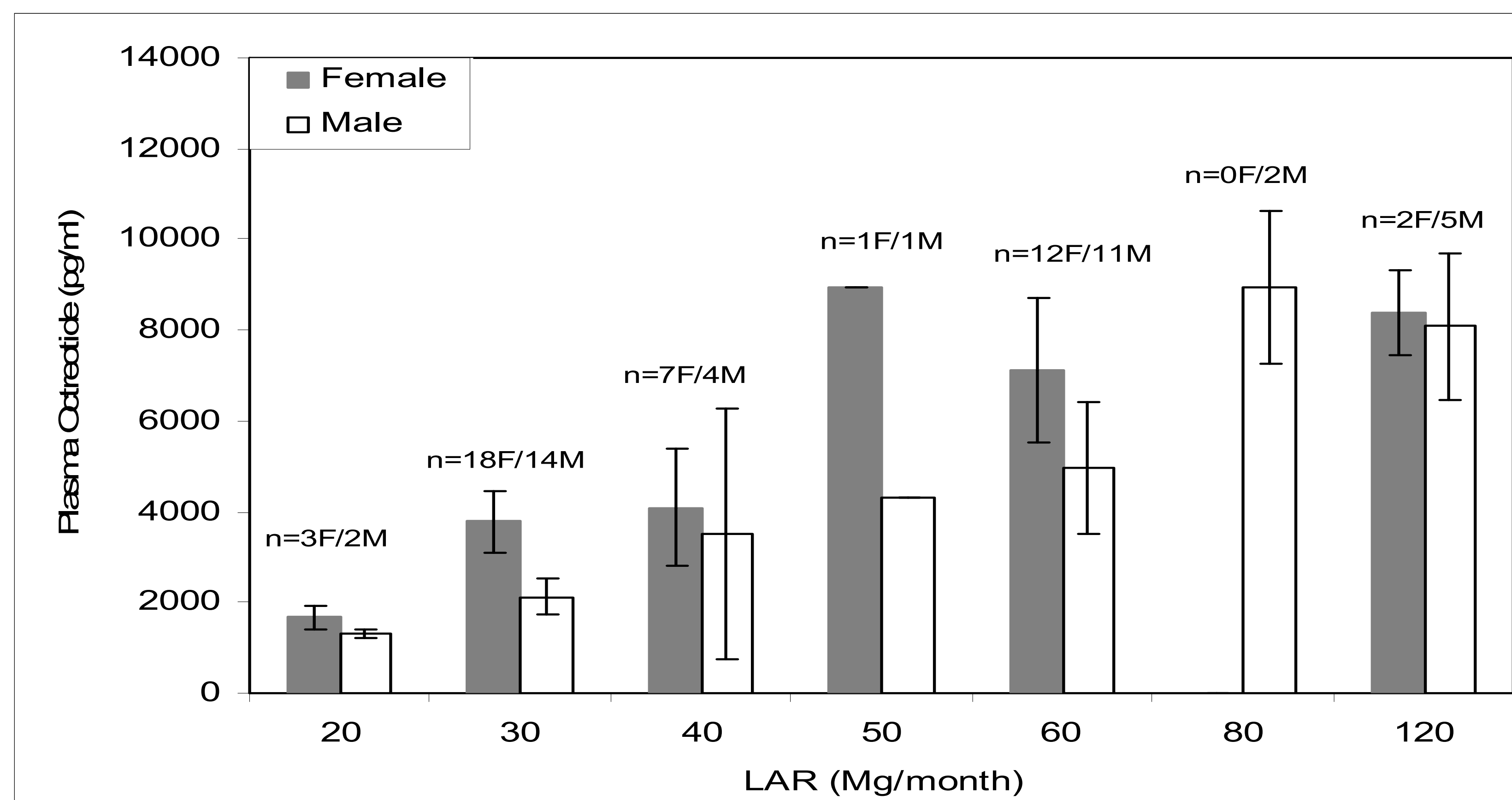
Height, Weight, and BMI calculated

Monthly LAR doses recorded along with trough Octreotide blood levels

Pearson's correlation with natural log-transformed data used to identify factors affecting Octreotide blood levels



Natural log-transformed plasma octreotide level versus BMI (Kg/m<sup>2</sup>)



Summary (mean and standard deviation) of plasma octreotide level (pg/ml) by LAR dose (Mg/month) and gender

Parameter	Parameter Estimate	P-value
BMI	-0.03	0.0299
Gender	0.39	0.0451
Monthly LAR dose	0.03	<.0001

Multiple regression analysis for the effects of BMI, Gender and Monthly LAR Dose on the Natural Log-transformed Plasma Octreotide Level

## Results

Females have a higher Octreotide level as compared to men.

As BMI increases, Octreotide levels decrease by 3.4%

Overall, men will require 14.1 mg/month more than women of the same size.

Also, with increasing BMI a dose increase of 1.3mg/month is required to maintain blood levels.

## Conclusions

Individualized Octreotide LAR dosing is necessary for patients with NET.

BMI and gender affect blood levels of Octreotide.

Dosing needs to be increased for males compared to females and with increasing BMI.

## References

- 1) Woltering EA, Mamikunian PM, Zietz S, Krutzik SR, Go VLW, Vinik AI, Vinik E, O'Dorisio TM, Mamikunian G. Effect of octreotide LAR dose and weight on octreotide blood levels in patients with neuroendocrine tumors. *Pancreas*. 31: 392-400, 2005.
- 2) Woltering EA, Salvo VA, O'Dorisio TM, Lyons J, Li G, Zhou Y, Seward JR, Go VW, Vinik AI, Mamikunian P and Mamikunian G. Clinical Value of Monitoring Plasma Octreotide Levels During Chronic Octreotide Long-Acting Repeatable Therapy in Carcinoid Patients. *Pancreas* 37(1): 94-100, 2008.