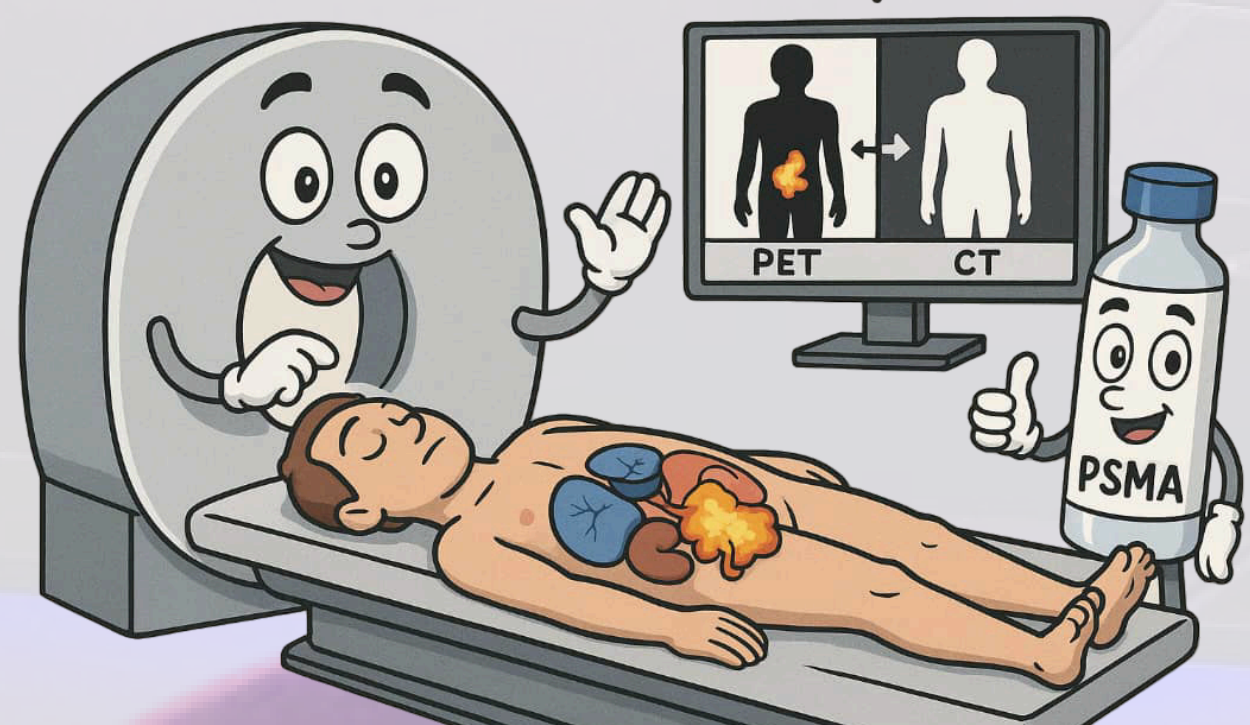


TEMPORAL VARIATION IN SUV_{max} on Ga-68 PSMA PET/CT: A REPEATED MEASURES ANALYSIS

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Ga68-PSMA PET/CT



INTRODUCTION

Ga68-PSMA PET/CT

- Diagnostic & treatment planning for prostate cancer (PC)
- Different time points show different temporal variation in image (SUV_{max})

OBJECTIVES

1. To evaluate the temporal variation in SUV_{max} across multiple time points for Ga68-PSMA PET/CT
2. To study the association between PSA levels & SUV_{max}

LIMITATION &

RECOMMENDATION

- Inclusive to only intra-prostate lesions - future studies include two categories; intra- & extra-prostate lesions, more accurate results
- Correlation between PSA level & SUV_{max} can't be statistically proven - future studies needs larger cohort

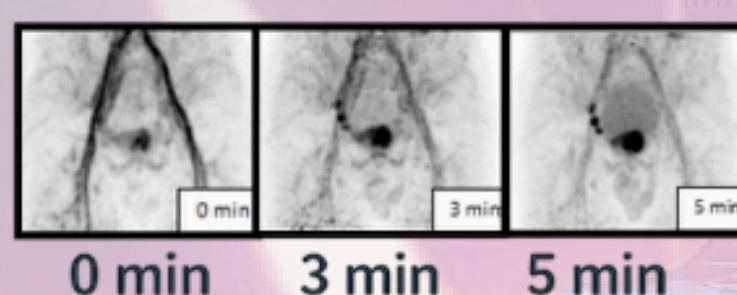
MATERIALS & METHODS

- Retrospective study
- 16 PC patients Jul -Dec 2022 (age range: 54-83)
- uMI780 PET/CT Scanner
- Repeated measures ANOVA using IBM SPSS v23

Dual Time Point Imaging

Injection

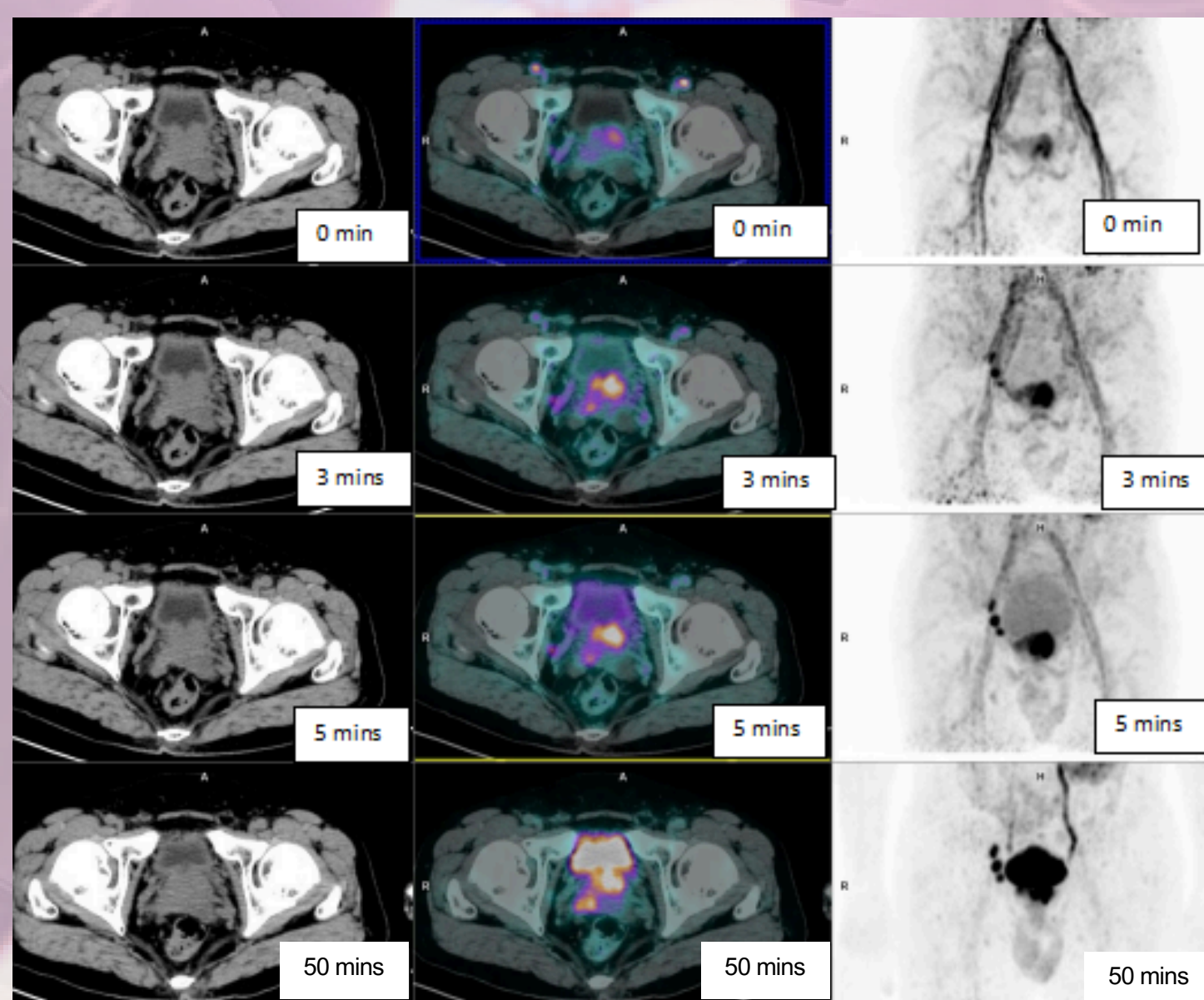
1. Pelvis Flow Imaging



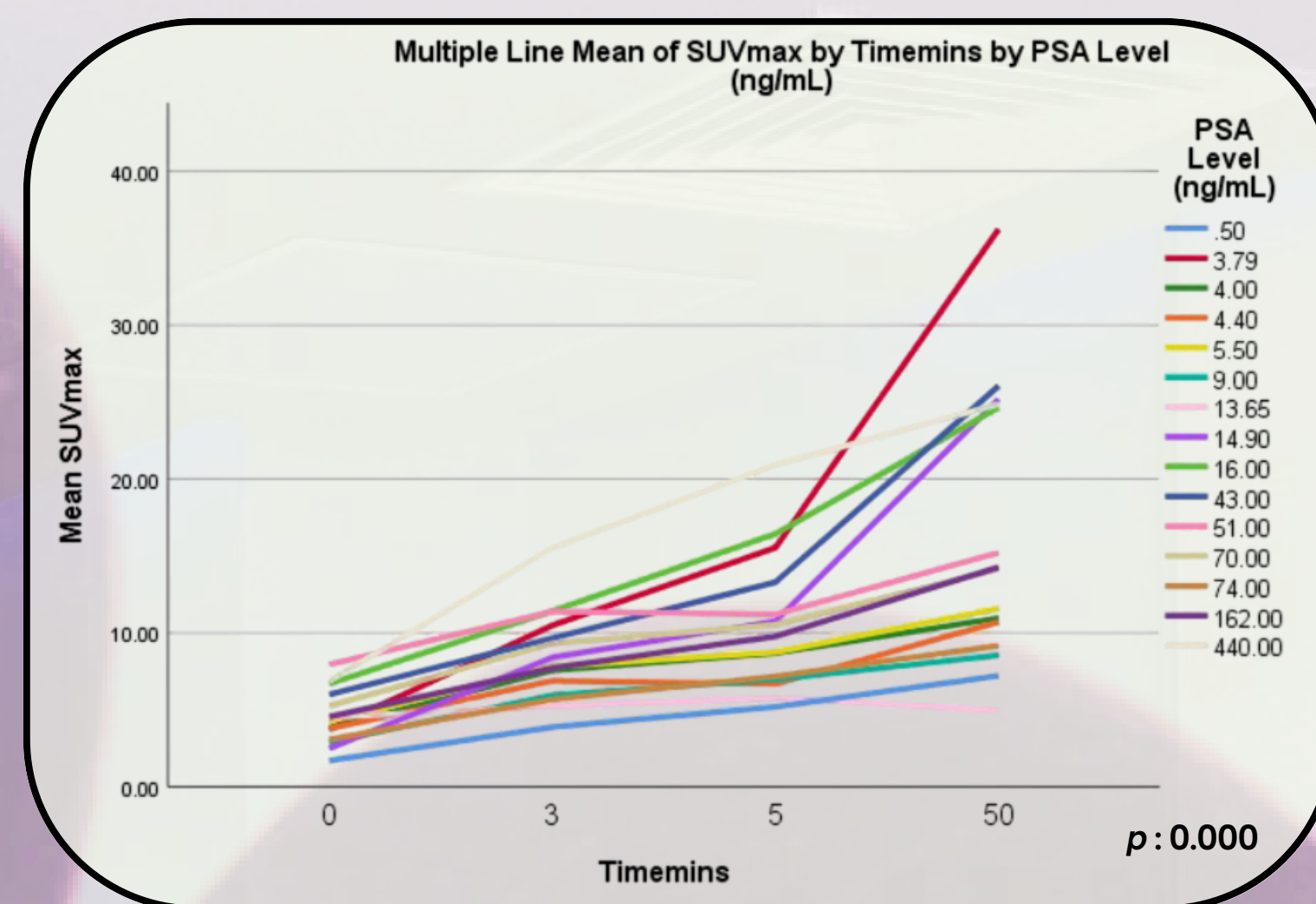
2. Delayed Whole Body Imaging



50 min after injection



Proven PSMA-avid lesion with increased uptake on delayed imaging. Early Ga-68 PSMA-11 PET/CT clearly differentiates tumor from bladder activity



RESULTS

- SUV_{max} varied significantly at all four-time intervals ($p < 0.001$)
- Linear increase in SUV_{max} mean shows progressive tracer uptake
- Graph shows the results with apparent association between PSA levels with SUV_{max}

CONCLUSIONS

- SUV_{max} increases significantly with longer uptake time
- PSA levels show apparent positive correlation with SUV_{max}

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