



# CREATION OF A DATABASE, INCONSISTENCIES THAT ARISE, AND IMPLICATIONS ON CLINICAL OUTCOMES FOR PATIENTS UNDERGOING MRI FUSION PROSTATE BIOPSY

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## INTRODUCTION

- Accurate and complete charting is important for patient care and continued follow up
- MRI fusion prostate biopsy is becoming increasingly utilized for patients undergoing repeat prostate biopsies

## OBJECTIVES

- To create a database on MRI fusion prostate biopsies performed by urology at MU health
- To analyze outcomes of care and determine accuracy of clinical charting in the EHR

## METHODS

- IRB approval was obtained
- RedCap database was created
- Patients who underwent MRI fusion prostate biopsy from January to August 2017 were added to the database and data collected from the electronic health record
- Missing variables were identified and categorized according to clinical relevance for further analysis

## RESULTS

- Patients who underwent MRI fusion biopsy, n=56
- Mean age of patients, 65 years
- Mean number of lesions biopsied per patient, 3.32 (range 1-7)
- Variables created in database, n=182
  - All data available on 88 variables
- Variable determined as absolutely clinically necessary for patient care:
  - PSA value
  - PiRADs Score
  - Antibiotic regimen
  - Pathology results
  - Tumor staging for positive results
- Positive for prostate cancer, n=34 (60.7%)
  - Surgery, 9
  - Radiation, 6
  - Active surveillance, 7
  - Returned to primary urologist for treatment, 10
  - Undecided treatment plan, 2
- Mean Gleason score for positive prostate cancer screen, 6.62 (range 6-9)

## RESULTS

### Patient Demographics

Variable	n=56
Ethnicity	
Non-Hispanic or Latino or Spanish Origin	55 (98%)
Hispanic	1 (2%)
Race	
White	52 (93%)
Black or African American	4 (7%)
Age (mean, years)	65
BMI (mean, kg/m <sup>2</sup> )	30.3
# of lesions biopsied per pt (mean)	3.32
PSA (mean, ng/dL)	10.04
Prostate Volume (mean, cm <sup>3</sup> )	54.1

### Database Totals

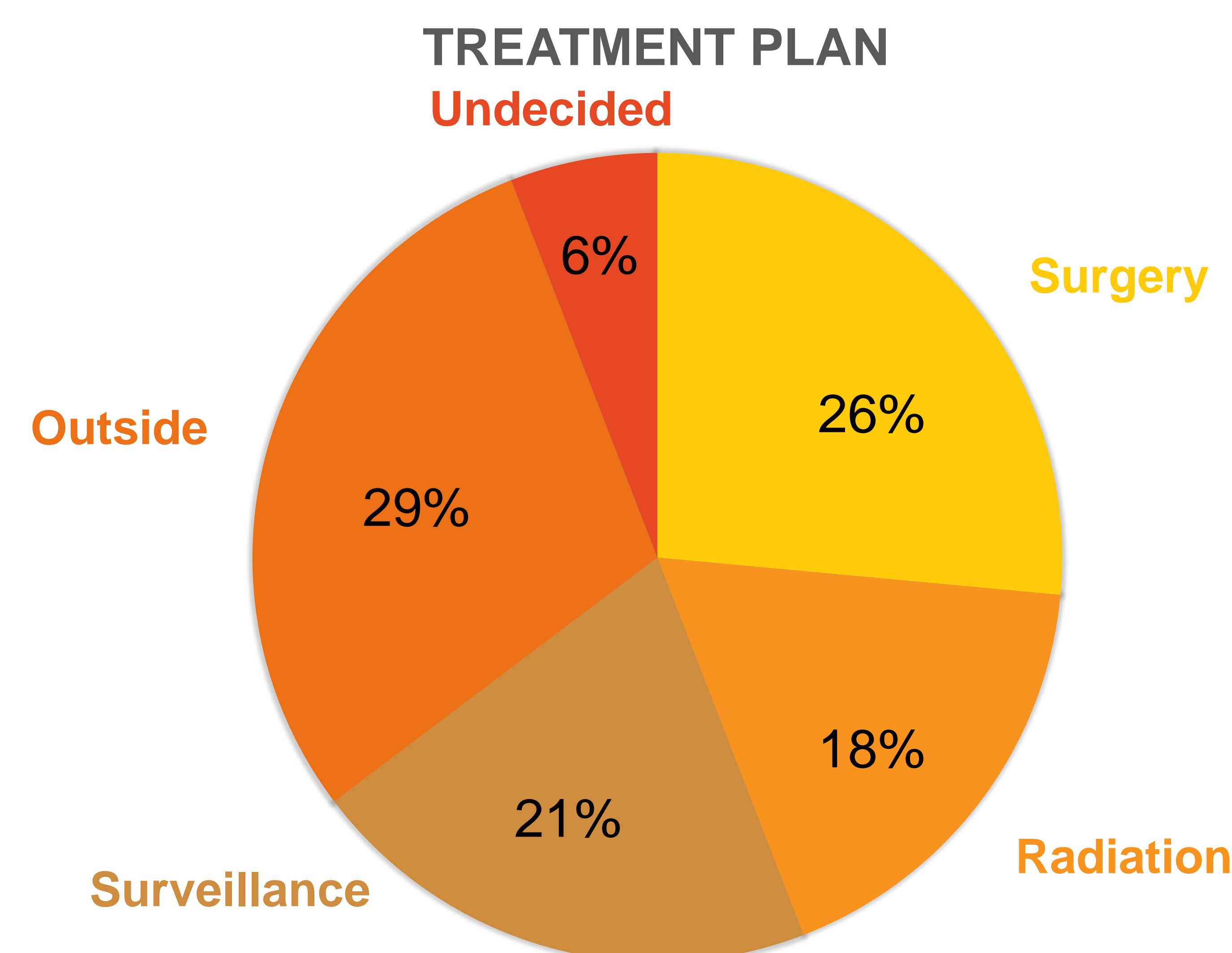
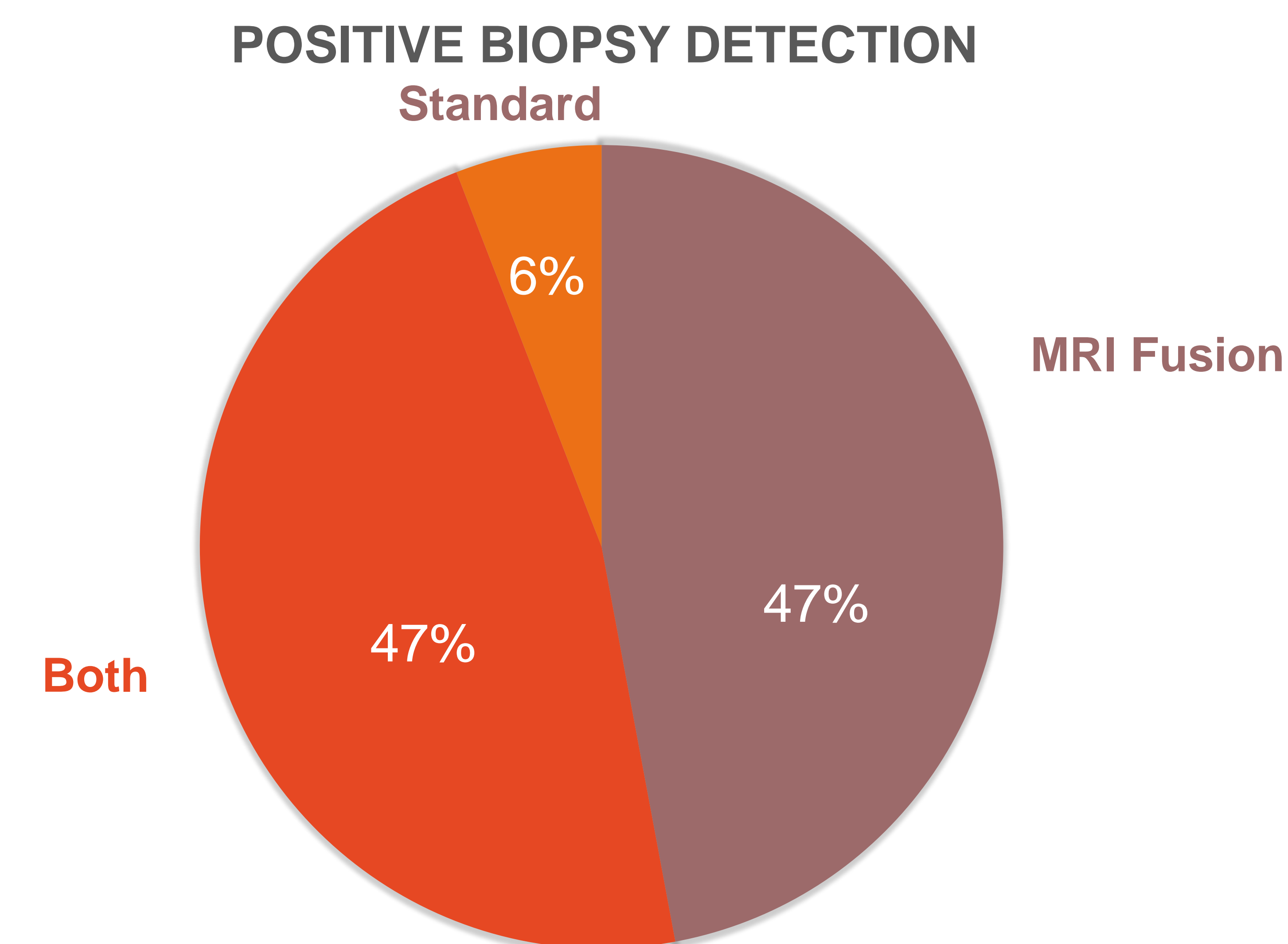
Category	Total
Patients who underwent MRI fusion biopsy	56
Variables created	182
Lesions biopsied	186
Standard biopsies performed	41
Positive biopsy for cancer	34

### Data Available in EHR

Variable	Number (%)
PSA value	44 (78.6%)
PiRADs score	63 (33.9%)
Antibiotic regimen	54 (96.4%)
Pathology results	56 (100%)
Tumor staging	34 (100%)

## RESULTS

### Breakdown of Positive Biopsies (n = 34)



## CONCLUSIONS

- Accurate clinical charting and information is highly critical for quality patient care and follow up
- The utilization of MRI fusion biopsy identified prostate cancer in 60.7% of screened patients compared to historical 25% using standard biopsy
- Our results show the potential need for a charting template that captures all relevant information, otherwise there is variable and incomplete data collection. This demonstrates the potential need for a phase 2 of this project