



The Use of PSMA PET/CT in a Prospective, Multicentre Registry for Patients with Recurrent Prostate Cancer – PREP Registry

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INTRODUCTION

Prostate Specific Membrane Antigen (PSMA) Positron Emission Tomography (PET) is often positive in patients with biochemical failure (BCF) after radical prostatectomy (RP) or radiation therapy (RT), even when conventional imaging (CI) is negative.

METHODS

The PREP registry is open at six centers across Ontario and enrollment is according to six clinical cohorts (Table 1). When first initiated (PREP 1), CI was required for all patients^{1,2}. This has been modified (PREP 2) to require CI only when the prostate specific antigen (PSA) is greater than 10 ng/mL at the time of PSMA PET. Most PSMA PET scans in PREP used 18-Fluorine DCFPyL as a radiotracer. The primary endpoint is overall detection rate, with secondary endpoints including detection rate by clinical cohort, patterns of recurrence and change in planned management based on PSMA PET results.

CONCLUSIONS

The PREP registry is a large, multicenter collection of patients with recurrent prostate cancer who have received PSMA PET imaging prior to salvage treatment. PSMA avid disease and a change in management was seen in most men. The omission of CI in patients with PSA less than 10 ng/mL did not seem to dramatically change patterns of disease detection or management change.

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RESULTS

Figure 1. Overall Detection Rate by Clinical Cohort

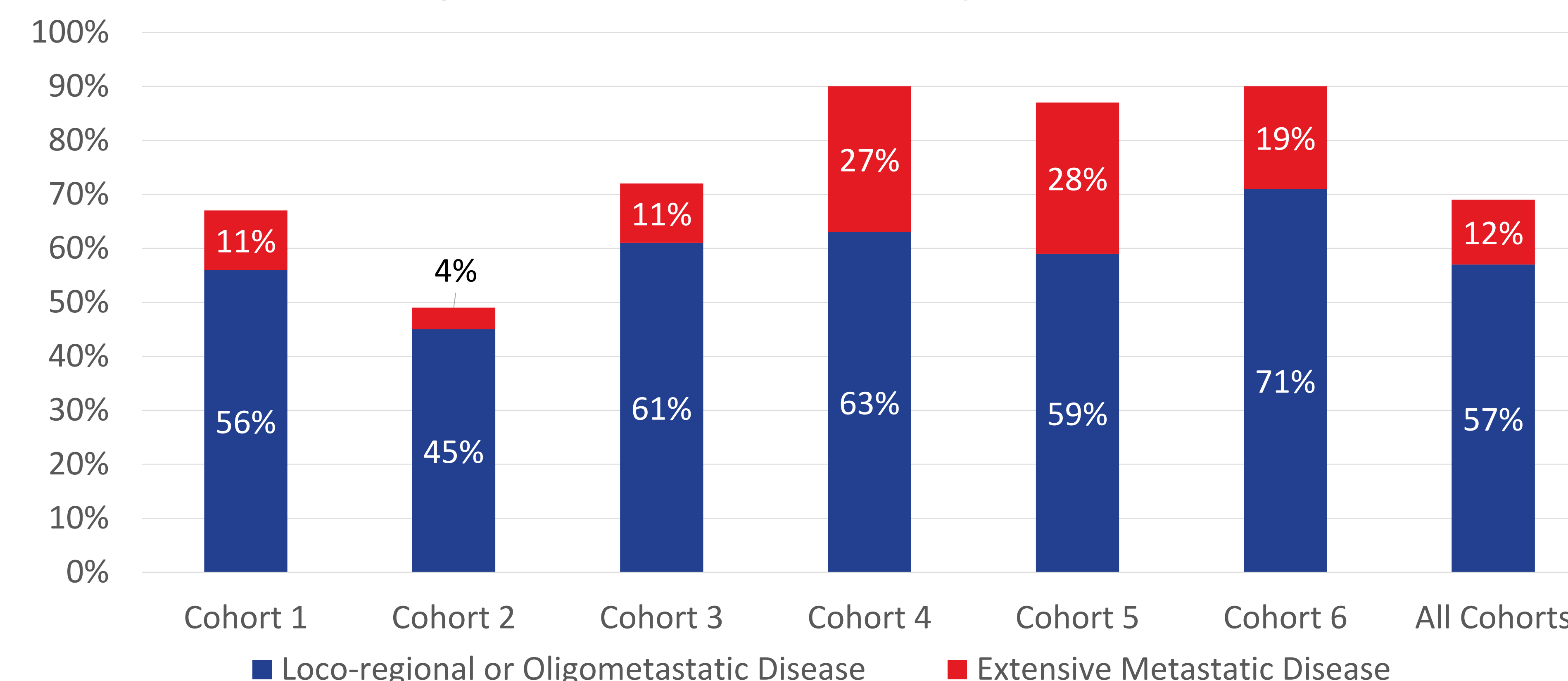


Table 1. Details of the Clinical Cohorts evaluated in the PREP Registry.			
Cohort Number	Patient Cohort	Number of Scans	PSA (ng/mL) Median (IQR)
1	Node positive or persistently detectable PSA post-RP	239	0.73 (0.27 - 2.5)
2	BCF after initial RP	1383	0.33 (0.2 – 0.93)
3	BCF after RP and adjuvant or salvage RT	1104	1.0 (0.45 – 2.57)
4	BCF after RP and salvage ADT	256	3.31 (1.5 – 7.12)
5	BCF after RP and lesion-directed treatment	169	2.4 (1.0 – 4.91)
6	BCF (per Phoenix definition) after primary RT	816	4.4 (3.1 – 7.5)
Total		3967	1.2 (0.34 – 3.77)

Figure 2. Overall Detection Rate by PSA level

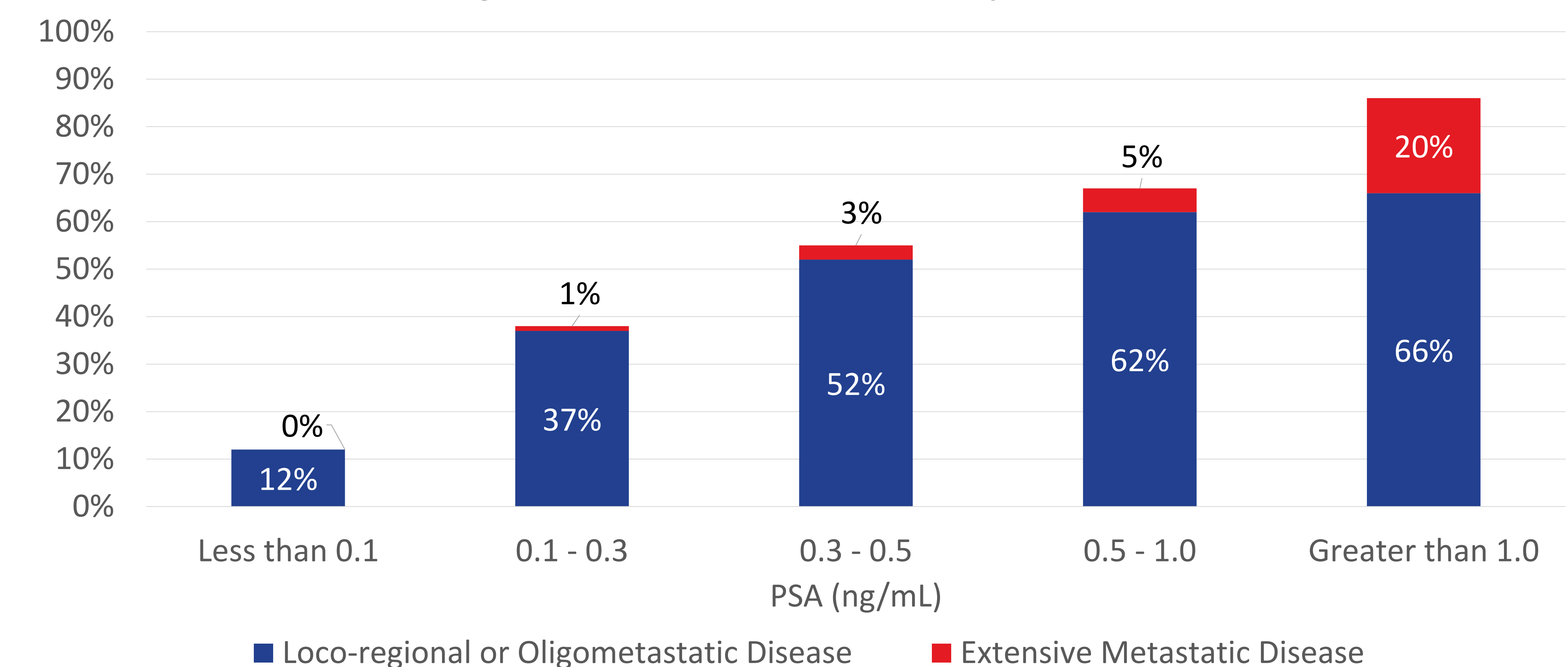
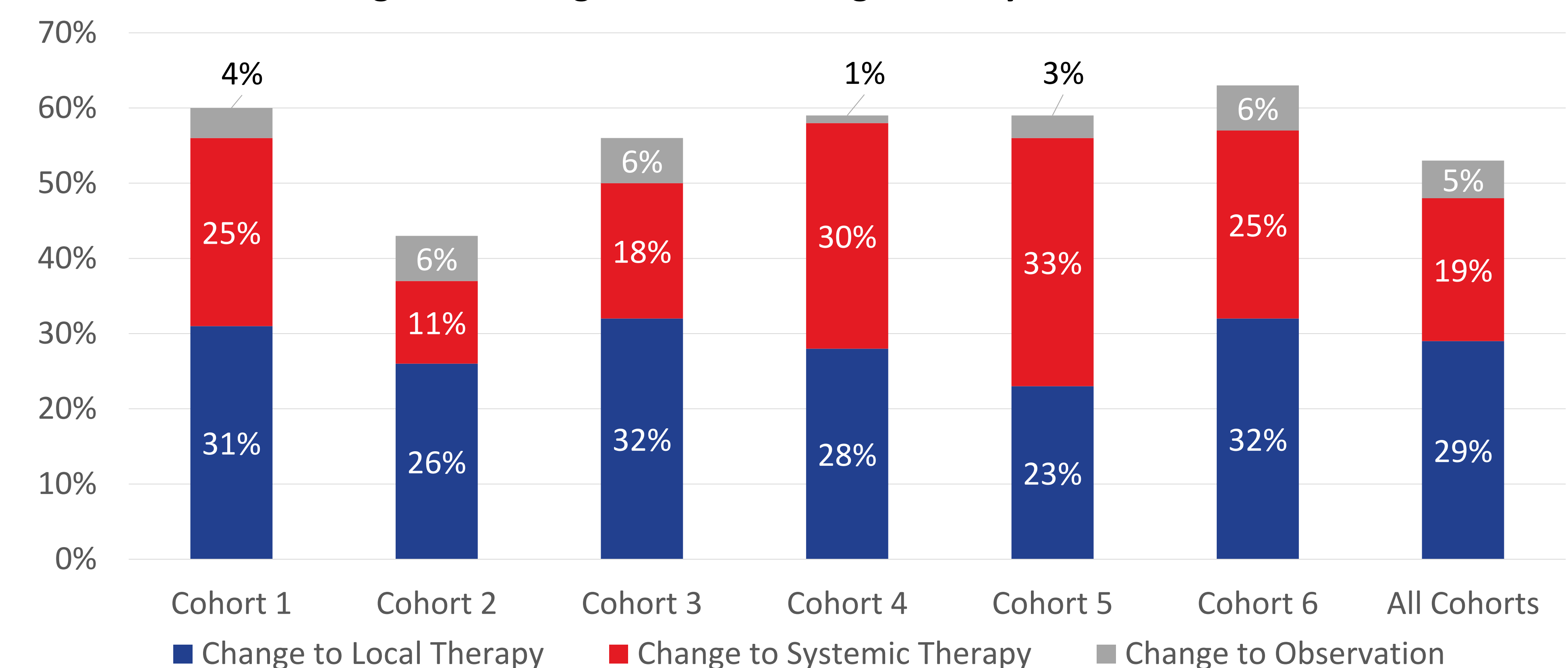


Figure 3. Change in Initial Management by Clinical Cohort



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DISCLOSURE

The presenting author, Aneesh Dhar, has no potential conflicts of interest.