

Quality of care for bladder cancer patients and rate of salvage radiation therapy in patients with biochemical recurrence after radical prostatectomy

RCN Genitourinary Disease Site Group

GU2 – Quality of care for bladder cancer patients

- Bladder cancer is the most common malignancy of the urinary tract
- It is the 5th most common cancer in Canada, 4th most common among men and 12th most common among women
- An estimated 8900 Canadians were diagnosed with bladder cancer in 2017
- Because of a 60-70% recurrence rate, bladder cancer is the most expensive cancer to treat on a per-patient basis

Cystectomy

Standard treatment for T2 and T3 bladder cancer is neo-adjuvant chemotherapy (NAC) followed by radical cystectomy (RC); NAC has been shown to improve survival outcomes¹. In addition, preoperative delays have been associated with worse long-term outcome. Studies show that a delay in definitive surgical treatment beyond 90 days confer an increased risk of mortality among patients with muscle invasive bladder cancer (MIBC)². The proportion of patients treated with NAC is therefore an outcomes measure of quality, as is the delay to first treatment (cystectomy or NAC).

1 International phase III trial assessing neoadjuvant cisplatin, methotrexate, and vinblastine chemotherapy for muscle-invasive bladder cancer: long-term results of the BA06 30894 trial.

2 Gore JL, et al. Mortality increases when radical cystectomy is delayed more than 12 weeks. *Cancer*. 2009 March 1; 115(5): 988–996.

Table 1: Patients' characteristics (2014-17, N=168)

Characteristics	Values
Age at diagnosis	
N	166
Mean (SD)	68 (9.9)
Median (IQR)	69 (61-76)
Range	38-88
Gender, n (%)	
Female	34 (20)
Male	134 (80)
Clinical Stage, n (%)	
T1	34 (20)
T2	116 (69)
T3	13 (8)
T4	5 (3)
Diagnosis location, n (%)	
Outside the RCN hospitals	106 (63)
JGH	19 (11)
MUHC	35 (21)
SMH	8 (5)
Referral status, n (%)	
External	115 (68)
Internal	13 (8)
Non	40 (24)

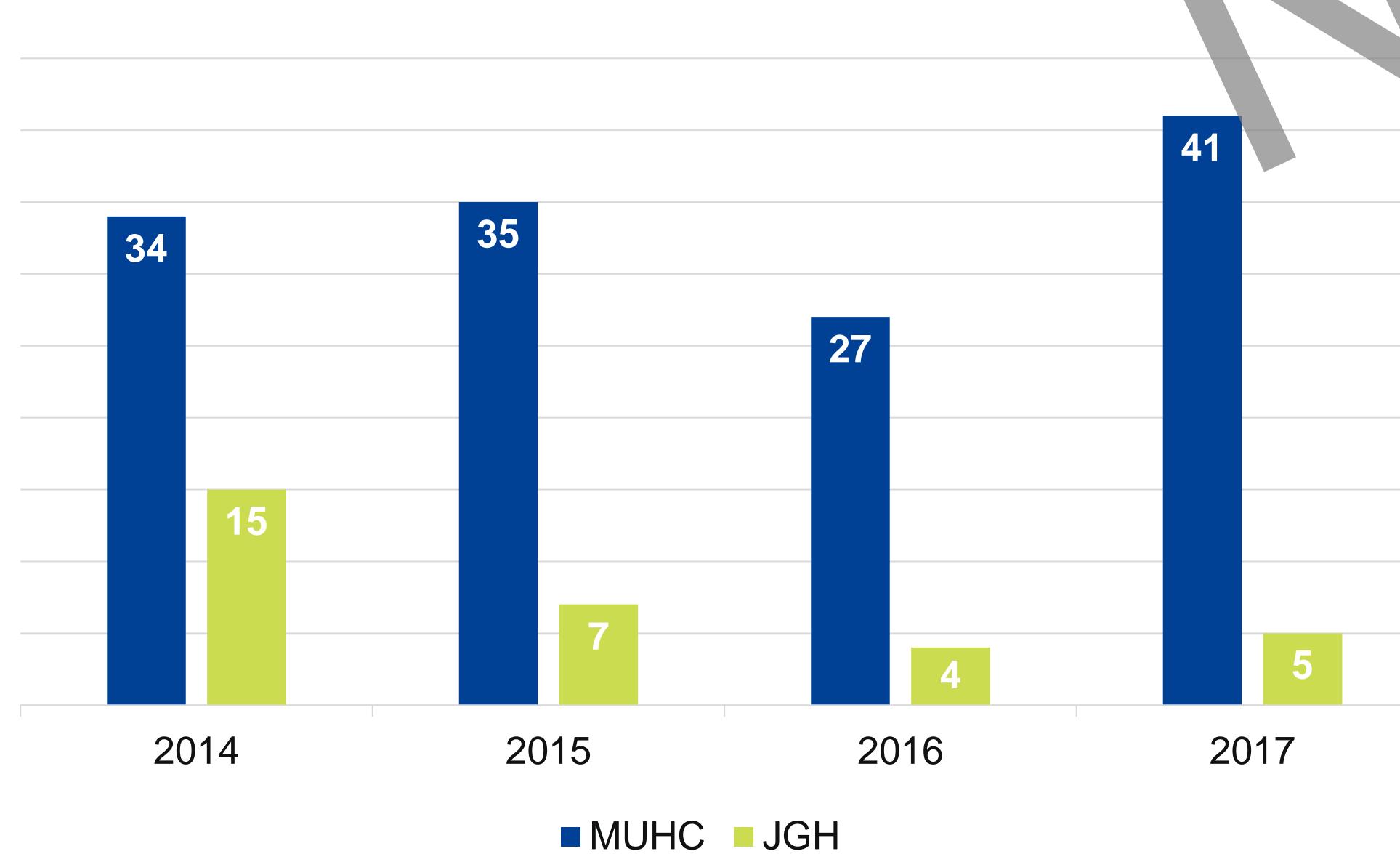
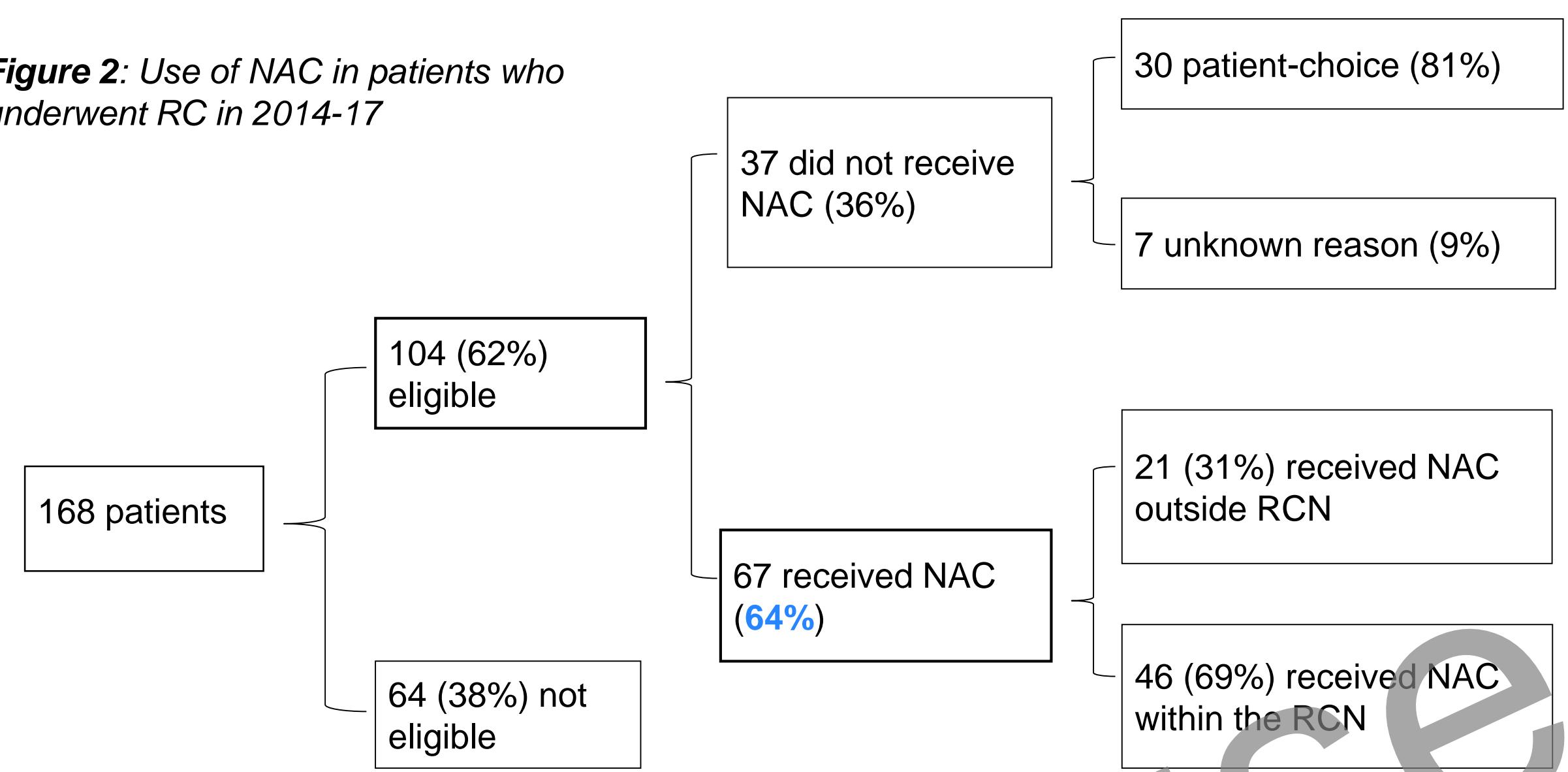


Figure 1: RP volumes by calendar year (2014-17) and hospital site (n=168)

Figure 2: Use of NAC in patients who underwent RC in 2014-17



- 64% (67/104) of eligible patients received NAC
- Of the eligible patients who did not receive NAC, 81% were offered NAC but declined
- 134 of 168 radical cystectomies had a clinical staging of T2 and higher (MIBC)
- Since collecting this indicator, documentation has been improved for all eligible patients who did not receive NAC

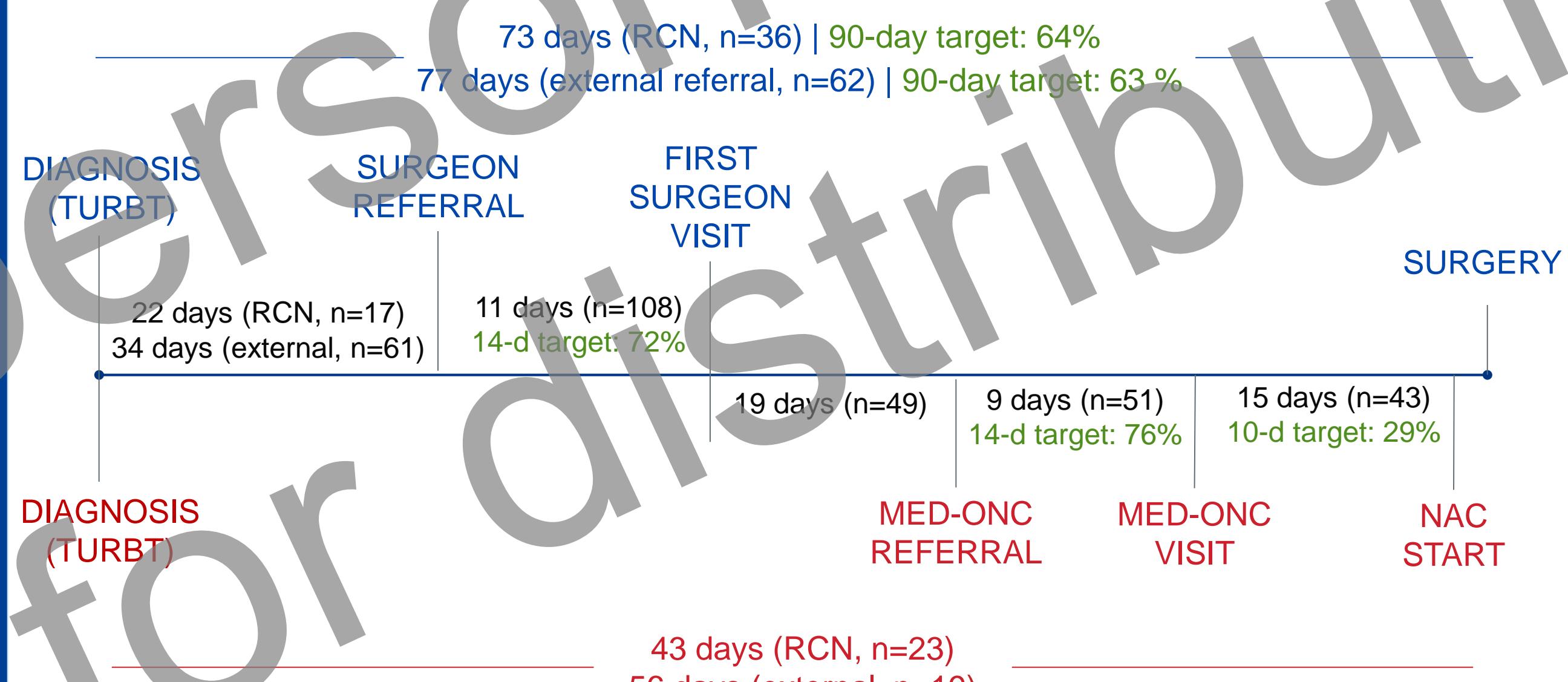


Figure 3: Turnaround time in median days from diagnosis (TURBT) to first treatment (RC or NAC)

- Patients who received NAC within the RCN partner hospitals have significantly shorter treatment turn-around-times (TATs) from diagnosis comparing to those who received NAC outside of the RCN hospitals

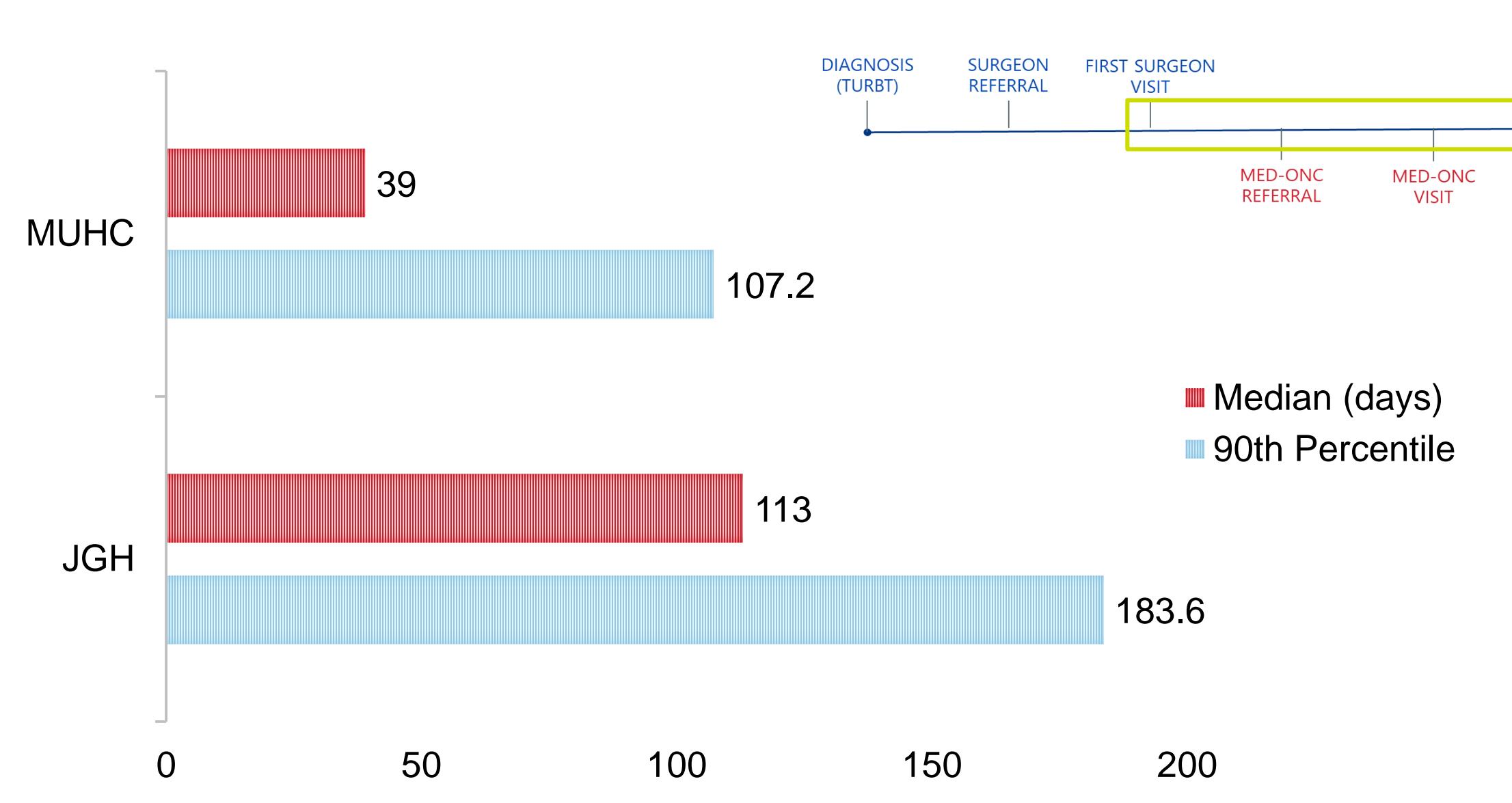


Figure 4: Turnaround time in median days from surgeon visit to surgery, by hospital site

GU3 - Biochemical recurrence after radical prostatectomy

After undergoing a radical prostatectomy, the prostate-specific antigen (PSA) is expected to decrease to an undetectable level. Biochemical recurrence (BCR) occurs when the PSA level rises above 0.1 ng/ml; at this point radiation is considered. 2014 ESMO guidelines recommend administering salvage RT (SRT) early (PSA < 0.5 ng/ml), which can prevent or delay metastases and is associated with a significant reduction in prostate cancer mortality.^{3,4}

3. Parker et al., Cancer of the prostate: ESMO Clinical Practice Guidelines for diagnosis, treatment and follow-up, *Annals of Oncology* 26 (2015)
4. Trock BJ, Han M, Freedland SJ et al. Prostate cancer-specific survival following salvage radiotherapy vs observation in men with biochemical recurrence after radical prostatectomy

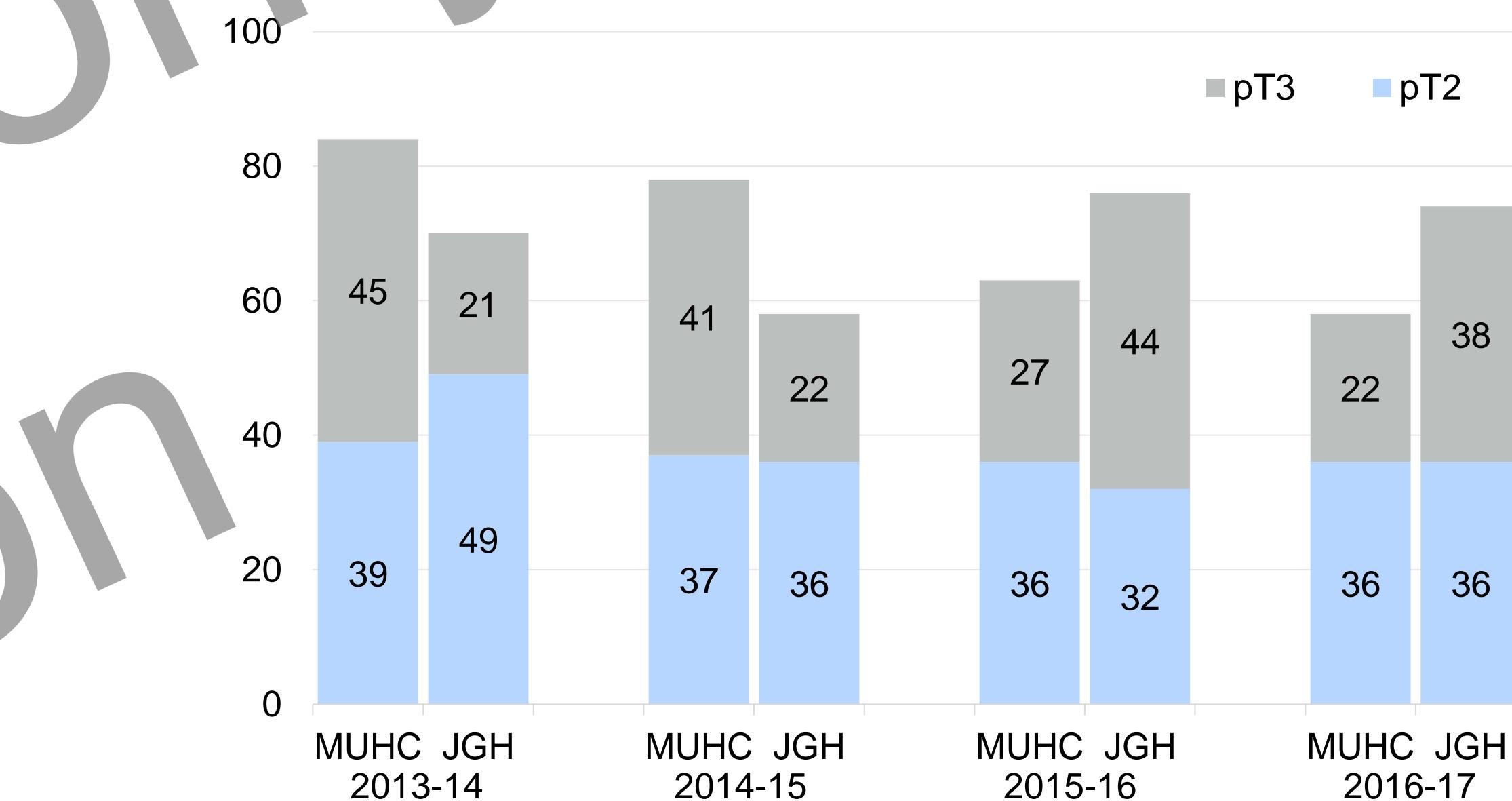


Figure 5: Radical prostatectomy volumes by pT stage and hospital site (FY2013-17)

- 563 RP cases within fiscal years (FY) 2013-17
- pT3 RPs decreased at the MUHC and increased at the JGH
- The JGH has also seen a slight decrease in pT2 RPs since FY2013/14

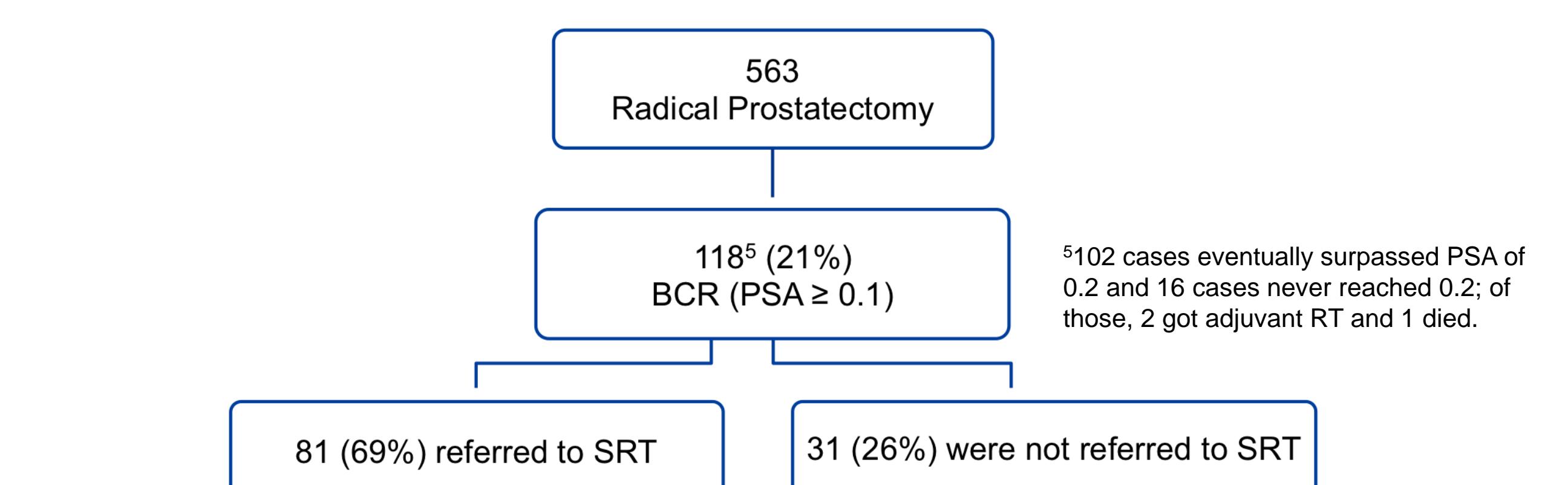


Figure 6: BCR and SRT across the RCN (FY2013-17)

- 69% (81/118) of BCR patients referred to radiation-oncology for SRT at median PSA level 0.3 ng/ml
- 94% (76/81) of referred patients to radiation-oncology got SRT at median PSA level 0.34 ng/ml

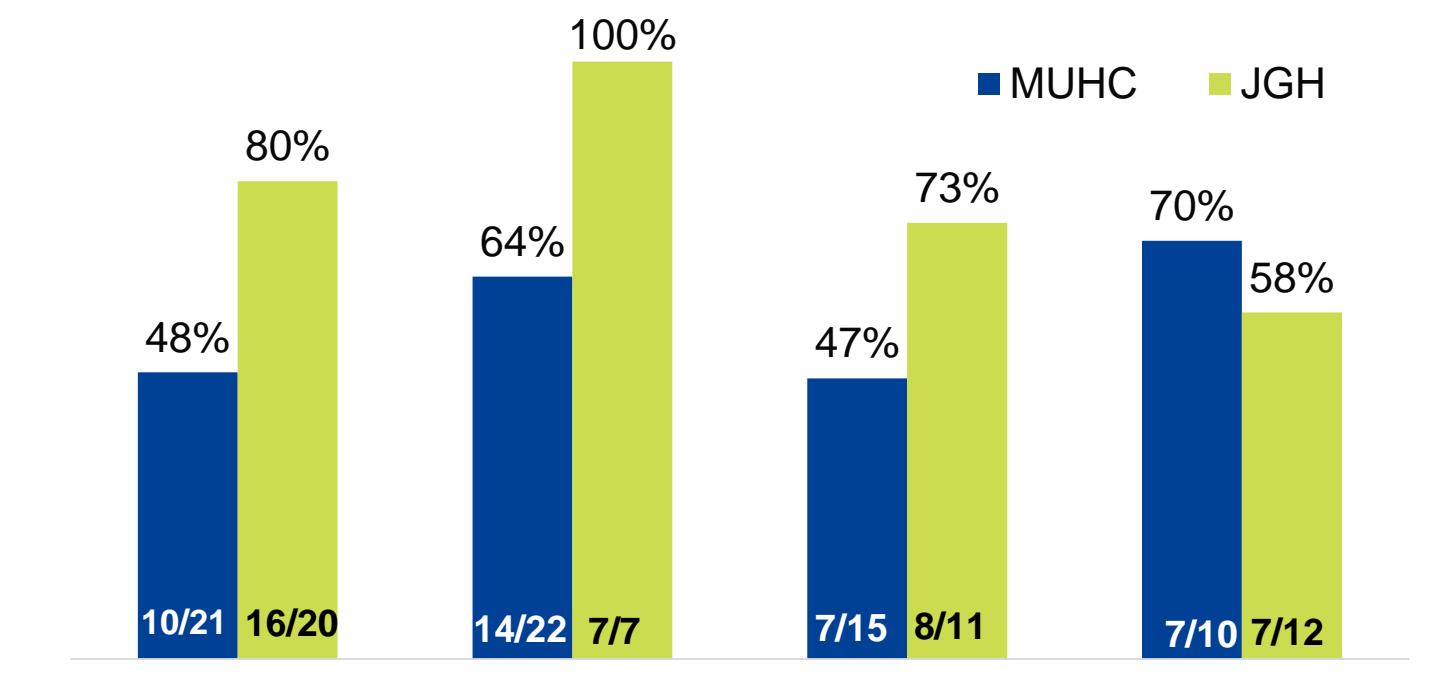


Figure 7: Percent of patients with BCR who received SRT by hospital site and fiscal year (N=118)

Table 2: PSA level at referral and initiation of SRT (FY2013-17)

PSA level at referral for SRT (n=77), median (range)	0.3 (0.12-9.7)
PSA level at SRT initiation (n=26*), median (range)	0.34 (0.11-1.23)

*4 patients excluded: 2 lost to follow up and one refused referral at beginning and one referred from outside

^{*}50 patients with no data available or had already started ADT were excluded