

The outcome of patients with high-risk non-muscle invasive bladder cancer in Sweden

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Background

At the time of bladder cancer detection, about 2/3 are non-muscle invasive bladder cancer (NMIBC). The high-risk NMIBC tumor types (TaG3, T1G2, T1G3 or/ and Tis) present an increased risk of progression to deep-growing cancer and metastasis. Our aim was to identify this group of patients in the Bladder Cancer Data Base Sweden (BladderBaSe) and analyze the outcome of the different managements.

Materials & Methods

BladderBaSe was created in 2015. This database links information from the Swedish National Register of Urinary Bladder Cancer (SNRUBC) from 1997 to 2014, with a number of national health care and demographic registers through the use of the personal identification numbers. The national register has detailed data on 97% of the bladder cancer cases diagnosed in Sweden. In 1997-2014 in Sweden, a total of 26808 patients were diagnosed with NMIBC, of whom 10209 were high-risk cancer with median age 71 and 80 % male. 5660 patients were treated with TURBT only, 3862 had initial Bacillus Calmette-Guérin (BCG). Radical cystectomy was performed in 687 patients initially while 399 had delayed cystectomy after BCG.

Results

Fig. 1 Flowchart showing inclusion of patients from BladderBaSe.

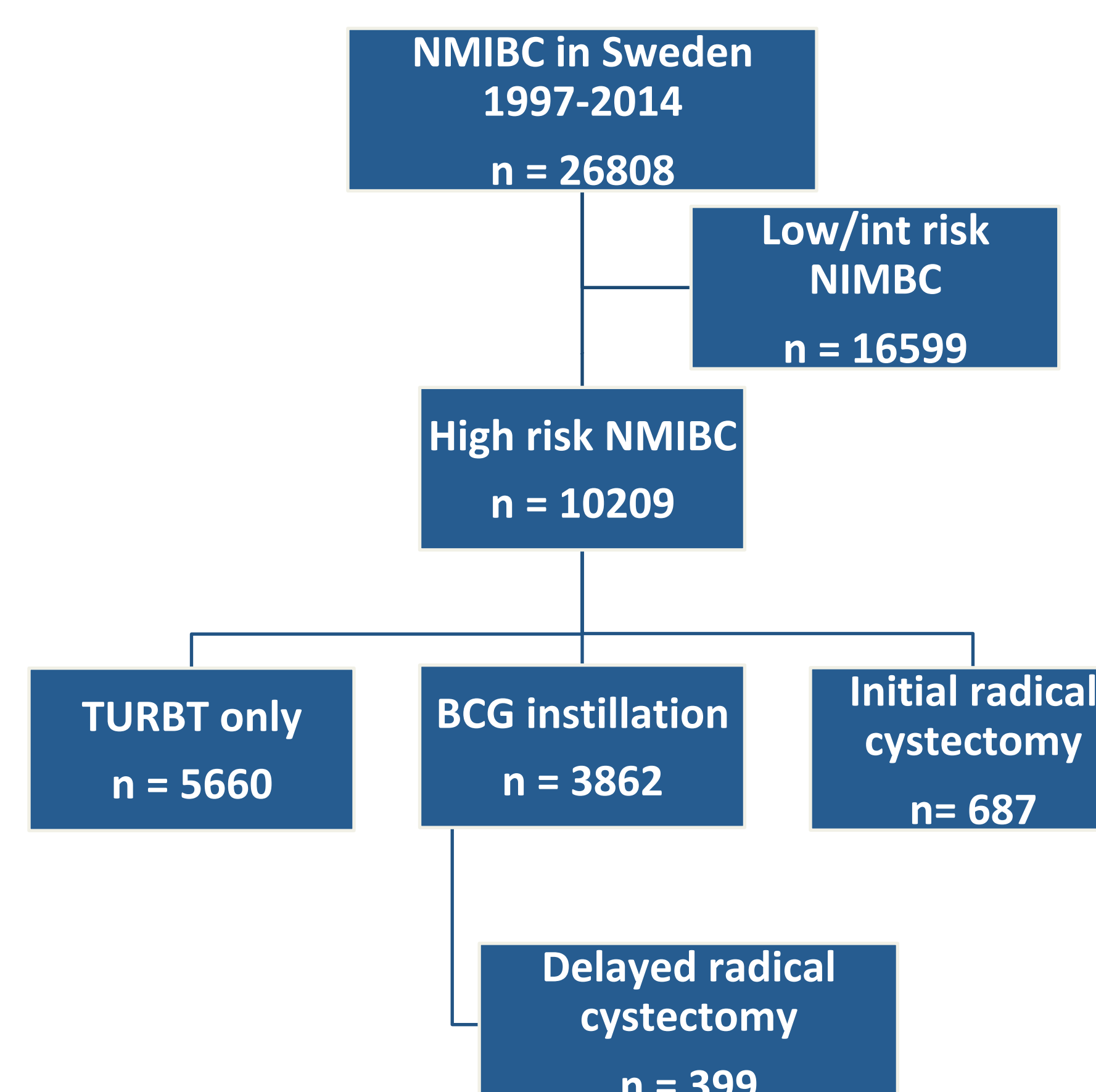


Fig. 2. Kaplan-Meier analysis of cancer-specific survival for patients with high risk NMIBC who underwent BCG instillation therapy (blue), initial radical cystectomy (green) or TURBT only (red) in Sweden, 2007-2014

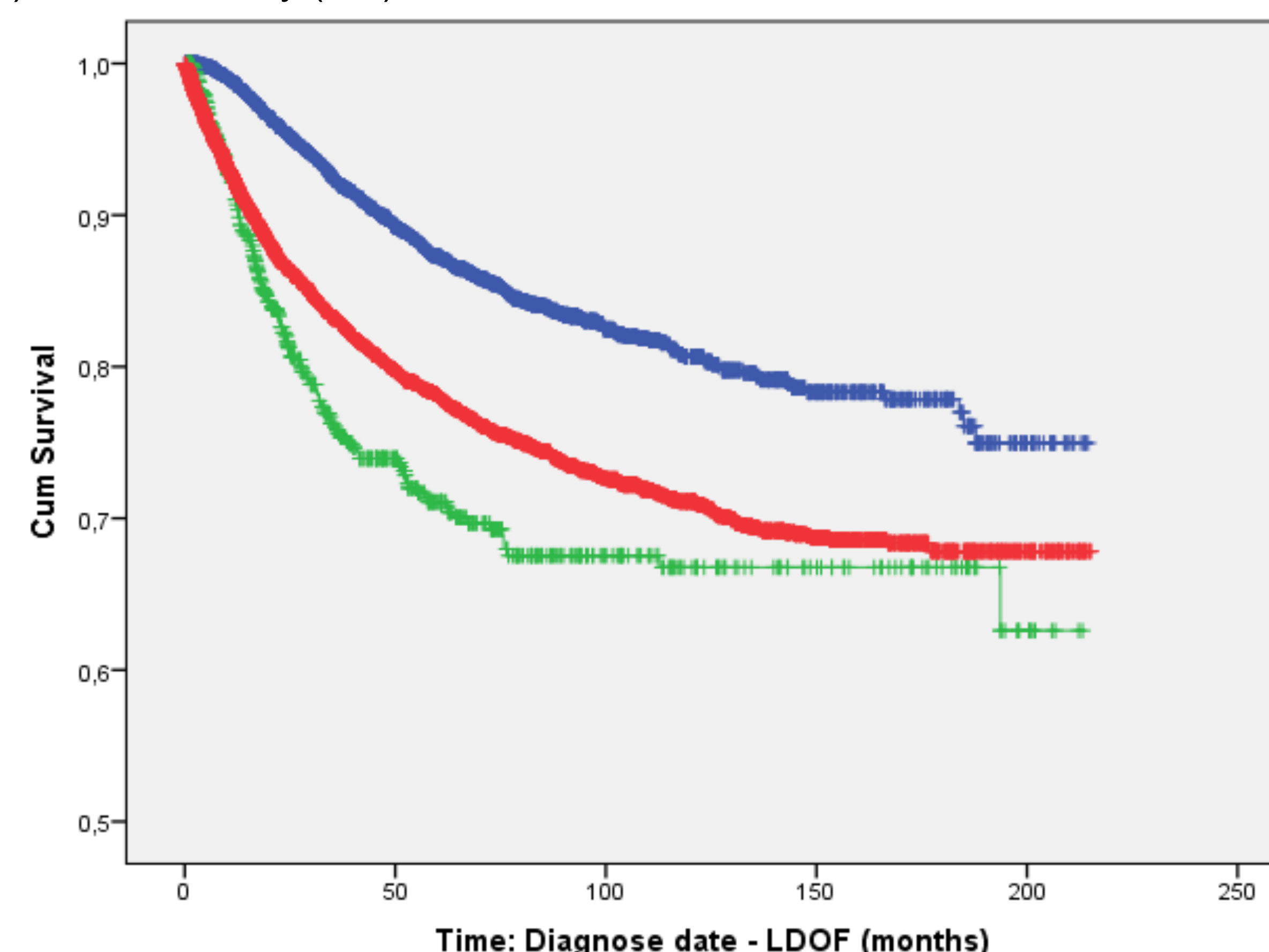
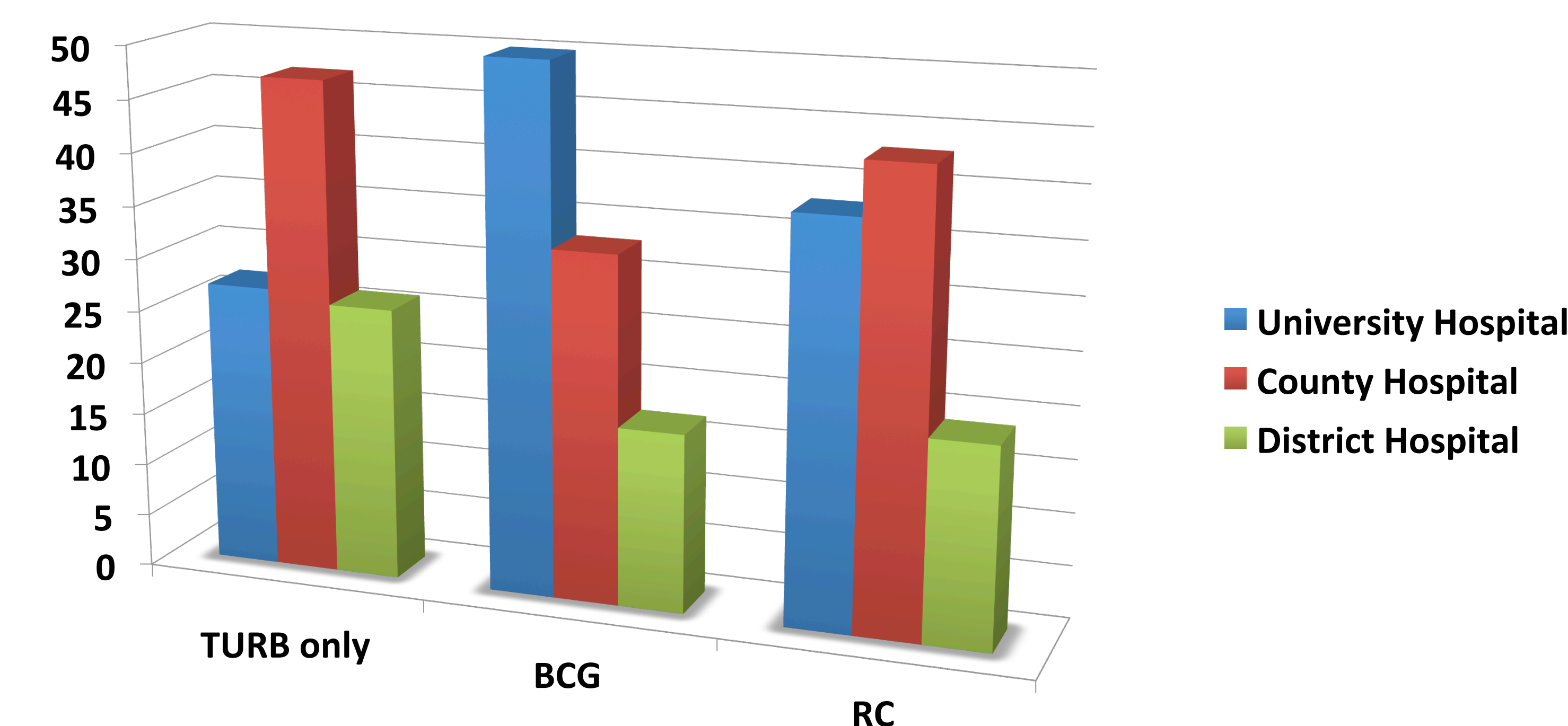


Table 1: Characteristics of patients with high risk NMIBC in Sweden, 1997-2014.

	Initial treatments		
	TURB only	BCG instillation	Radical Cystectomy
Numbers (%)	5660 (55)	3862 (39)	687 (7)
Age at presentation (years)	77	71	67
Gender			
Female	1310 (23)	735 (19)	135 (20)
Male	4350 (77)	3127 (81)	552 (80)
Tumour type			
Cis + G3	145 (3)	482 (12)	17 (2)
Ta + G3	867 (15)	659 (17)	41 (6)
T1 + G2,G3	4648 (82)	2721 (71)	629 (92)

Fig. 3. There were different strategies for treatment of high risk NMIBC in different types of hospitals



Conclusion

Based on the data analysis from the Swedish nationwide register BladderBaSe from 1997 to 2017, the outcome for patients with high risk NMIBC was influenced by initial treatment choices in different types of hospitals. However selection criteria could be a cause for confounding and will be further studied.



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