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# 10-YEAR EXPERIENCE OF RITE THERMOCHEMOTHERAPY FOR HIGH RISK NON MUSCLE INVASIVE BLADDER CANCER THAT HAS FAILED BCG

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### INTRODUCTION AND OBJECTIVES

Patients with high risk non muscle invasive bladder cancer (NMIBC) who fail BCG should be offered a radical cystectomy. Alternative intravesical treatments have been tried in those unfit for cystectomy, such as radiofrequency induced thermochemotherapy (RITE). We present our 10-year experience with this device-assisted treatment.

### METHODS

Between October 2006 and August 2017, 135 patients with high risk NMIBC (grade 3 or high grade and/or T1 and/or carcinoma in situ (CIS)) who failed BCG were considered for RITE thermochemotherapy at our institution. They had significant co-morbidities making cystectomy a less desirable treatment option. Induction and maintenance thermochemotherapy was delivered using Synergo for 1 hour with 40mg mitomycin C. Surveillance cystoscopies +/- biopsies and urine cytology were performed 3-monthly for 2 years and then 6-monthly. The upper urinary tracts were imaged annually. Data was collected prospectively and Kaplan Meier analysis was performed.

### RESULTS

5 patients (4%) were unable to complete induction treatment due to significant side effects of pain, incontinence or severe rash. Of the 130 that completed treatments, 114 (88%) were male and median age was 74 years (IQR 68-80). 55 (42%) had T1G3 with CIS, 26 (20%) had TaG3 with CIS, 26 (20%) had CIS alone, 16 (12%) were T1G3 and 7 (5%) were TaG3. 45 (35%) were BCG unresponsive. 1-, 5- and 10-year recurrence free survival was 63%, 34% and 24% respectively. 1-, 5- and 10-year progression free survival was 92%, 71% and 62% respectively. Progression to muscle invasive disease occurred in 11 (8%), prostatic urethral stromal disease in 6 (5%) and metastatic disease in 6 (5%) including 2 with inguinal node involvement. 8 (6%) developed subsequent upper urinary tract recurrences. 30 patients (23%) eventually had a cystectomy for their disease, 20 for persistent CIS. 1-, 5- and 10-year overall survival was 98%, 63% and 54% respectively. 1-, 5- and 10-year cancer specific survival was 100%, 79% and 75% respectively.

### CONCLUSIONS

RITE thermochemotherapy has a role in the management of selected patients with high risk NMIBC who fail BCG, with a 5-year cancer specific survival rate of 79%. Just under a quarter of patients subsequently required a cystectomy for persistent or progressive disease and 5% developed metastatic disease whilst on the treatment. Urothelial cancer can recur in the upper urinary tracts and progress in the prostatic urethra despite initial negative scans and biopsies, so careful surveillance of these patients is required.

