

# Bladder-Preserving Trimodality Treatment for High-Grade T1 Bladder Cancer: Results From Phase II Protocol NRG Oncology/RTOG 0926

Douglas M. Dahl, MD<sup>1</sup> ; Joseph P. Rodgers, MS<sup>2</sup>; William U. Shipley, MD<sup>2</sup> ; M. Dror Michaelson, MD, PhD<sup>2</sup> ; Chin-Lee Wu, MD, PhD<sup>2</sup>; William Parker, MSc<sup>3</sup>; Ashesh B. Jani, MD<sup>4</sup> ; Fabio L. Cury, MD<sup>3</sup> ; Richard S. Hudes, MD<sup>5</sup> ; Jeff M. Michalski, MD<sup>6</sup> ; Alan C. Hartford, MD, PhD<sup>7</sup>; Daniel Song, MD<sup>8</sup>; Deborah E. Citrin, MD<sup>9</sup> ; Theodore G. Karrison, PhD<sup>2</sup>; Howard M. Sandler, MD<sup>10</sup> ; Felix Y. Feng, MD<sup>11</sup> ; and Jason A. Efstathiou, MD<sup>1</sup> 

DOI <https://doi.org/10.1200/JCO.23.02510>

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**Dr. Nikhil Kalyani**  
**Radiation Oncologist**



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# Background

**Bladder Ca:** Uncommon Cancer

**TMT Vs Cystectomy:** Comparable for Muscle invasive ca

Recurrent **High Grade T1:** Cystectomy SOC

Role of TMT: Undefined



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# Material and Methods

Single arm, Phase II, Cooperative group trial

High grade T1 Bladder Cancer

Failed BCG or Ineligible for BCG

Planned and fit for Cystectomy

## **Primary end point:**

3 Year Freedom from cystectomy

## **Secondary end points:**

Freedom from cystectomy at 5 years, DM at 3 and 5 years, LR, death from bladder cancer at 5 years, OS, treatment-related adverse events



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# Treatment Protocols

## TURBT:

ReTURBT, No e/o muscle invasion

## RT: 3DCRT

41.4 Gy /23 fractions to Primary + LNs

Boost: 19.8 Gy / 11 Fractions to primary

## CT:

Cisplatin: 15mg/m<sup>2</sup> 3 times per week, Wk-1,3,5

MMC / 5-FU: 12mg/m<sup>2</sup> d1, 500mg/m<sup>2</sup>, 5 days WK 1 and 4



# Results

2009-2017

n= 37

34 pts included for analysis

All pts completed protocol  
treatment

Commonest Gr 3 toxicities: GI  
and Myelosuppression

Median FU=5.1 years

Med FU Surviving pt= 6.9 years

**TABLE 1.** Patient Demographics and Tumor Characteristics

Patient or Tumor Characteristic	N = 34, No. (%)
Age, years	
≤59	4 (11.8)
60-69	12 (35.3)
70-79	14 (41.2)
≥80	4 (11.8)
Gender	
Male	31 (91.2)
Female	3 (8.8)
Race	
Black or African American	2 (5.9)
White	32 (94.1)
Ethnicity	
Not Hispanic or Latino	34 (100.0)
Zubrod performance status	
0	29 (85.3)
1	5 (14.7)
Previous BCG	
Yes	34 (100.0)
No	0
Stage	
T1	34 (100.0)
Grade	
1	1 (2.9)
2	1 (2.9)
3	32 (94.1)

# Results

CR post treatment: 30 patients

**3 Year Freedom from cystectomy:** 88%

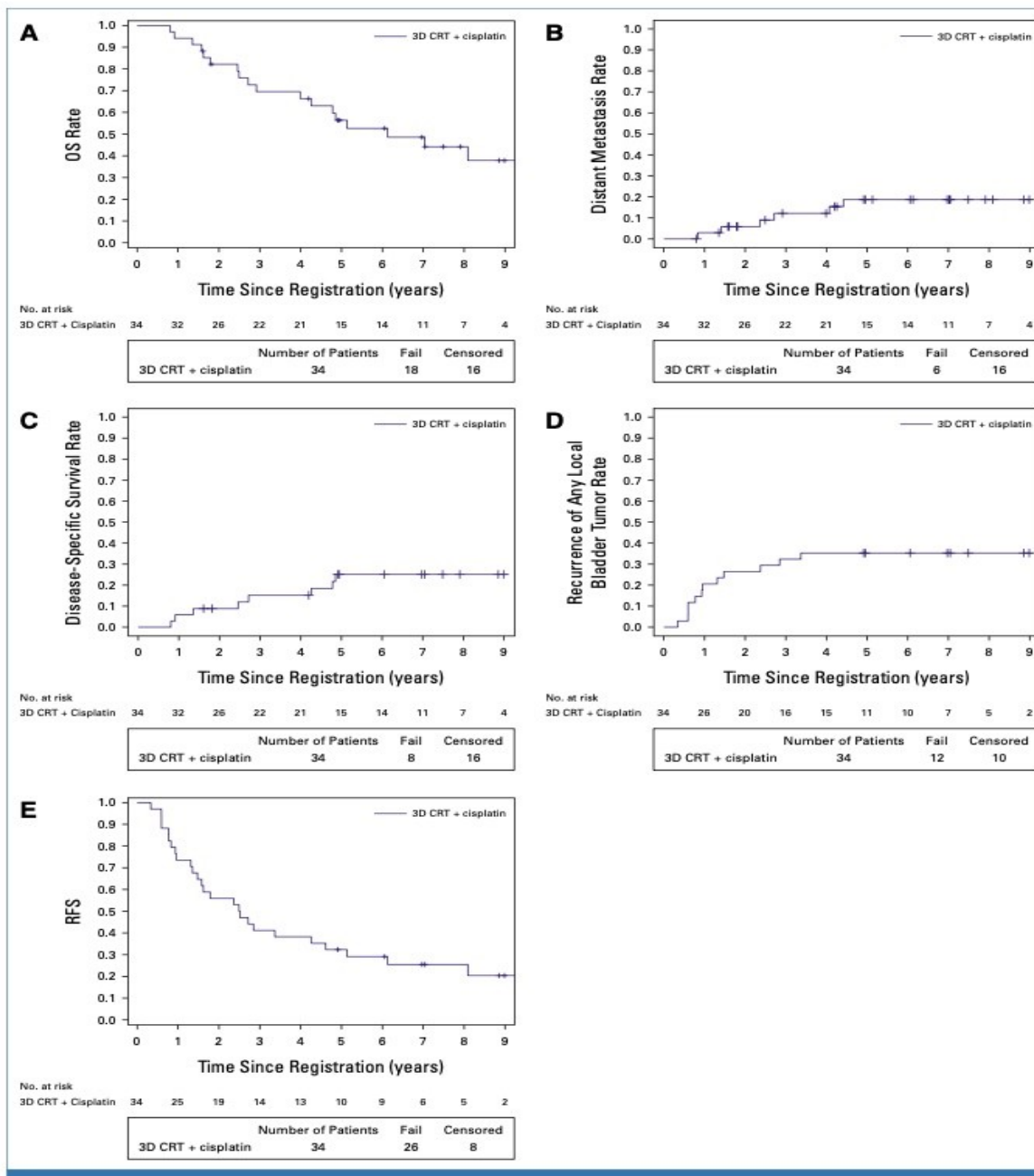
**OS:** 3 year= 69.5%, 5 Year= 56.4%

8/18 patients died of disease

**DM:** 3 year= 12.2%, 5 Year= 18.7%

**LR:** 12 patients at 3 years, 5 Year LC: 32.4%





**FIG 1.** Kaplan-Meier estimates of (A) OS, (B) cumulative incidence estimates of distant metastasis, (C) disease-specific survival, (D) local recurrence, and (E) RFS. 3D CRT, three-dimensional conformal radiotherapy; OS, overall survival; RFS, recurrence-free survival.



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# Limitations

Small no of patients

Heterogenous population

Long accrual period



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# Conclusion

**High grade T1** bladder cancer:

TMT feasible

Offers an alternative to cystectomies

LR and DM still a challenge

Role of IO needs to be explored

*“There are things known and there are things unknown, and in between that are the doors of **perception**.”*



Thank  
You...