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Utilization of Radiotherapy for Bladder Cancer: Evolving referral and practice patterns in the general population

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Introduction

Definitive treatment for muscle invasive bladder cancer (MIBC) includes either cystectomy or radical radiotherapy (RT). Despite the growing evidence suggesting that cystectomy and RT may offer comparable survival benefit, utilization of RT and referral rate to radiation oncology (RO) have historically been low in routine practice.

Conclusion/Implications

A minority of patients underwent curative intent therapy for bladder cancer received RT. Recent data suggest that referral rates to RO are increasing; future data will identify the extent to which this has altered practice. Collaborative efforts promoting multidisciplinary care and RO consultation at the urologist and hospital-level are warranted.

Objectives and Approach

The aims were to describe the use of RT and RO referral patterns in the contemporary era. A retrospective cohort study was conducted by linking administrative treatment records with the Ontario Cancer Registry to identify all patients who received treatment with curative intent for bladder cancer in Ontario from 1994-2013. Physician billing records were linked to identify RO consultation before radical treatment. Practice patterns in the contemporary era (2009-2013) were compared with data from 1994 to 2008. Multilevel (patient-, surgeon- and hospital-level) logistic regression models were used to examine sociodemographic and organizational variation in referral to RO.

Results

In total, 7461 patients underwent cystectomy or RT for bladder cancer in Ontario from 1994-2013; 5574 (75%) had primary cystectomy and 1887 (25%) primary had RT. Use of RT decreased from 43% in 1994 to 23% in 2008 and remained stable during 2009-2013 (23%). RO referral rate among all cases decreased from 46% in 1994 to 30% in 2008; however, the rates began to rise in the contemporary era from 31% in 2009 to 37% in 2013. A similar trend was seen in preoperative referral rate among patients treated with cystectomy (11% in 1994-1998, 9% in 1999-2008, and 14% in 2009-2013). Patient, surgeon, and hospital-level factors associated with preoperative referral to RO include older age, year of cystectomy, higher surgeon case volume, and teaching hospital.

