TITLE: Treatments for Bladder Cancer: Clinical and Cost-Effectiveness

DATE: 11 January 2017

RESEARCH QUESTIONS

1. What is the clinical effectiveness of bladder preservation treatment in patients with bladder cancer?

2. What is the cost-effectiveness of treatments for bladder cancer?

KEY FINDINGS

Three systematic reviews and meta-analyses, six non-randomized studies, and one economic evaluation were identified regarding the clinical and cost-effectiveness of treatments for bladder cancer.

METHODS

A limited literature search was conducted with main concepts appearing in title or major subject heading, on key resources including PubMed, The Cochrane Library, University of York Centre for Reviews and Dissemination (CRD) databases, Canadian and major international health technology agencies, as well as a focused Internet search. To address research question one, methodological filters were applied to limit retrieval to health technology assessments, systematic reviews, meta-analyses, randomized controlled trials, and non-randomized studies. To address research question two, methodological filters were applied to limit retrieval to economic studies. Where possible, retrieval was limited to the human population. The search was also limited to English language documents published between January 1, 2012 and December 19, 2016. Internet links were provided, where available.

The summary of findings was prepared from the abstracts of the relevant information. Please note that data contained in abstracts may not always be an accurate reflection of the data contained within the full article.
SELECTION CRITERIA

One reviewer screened citations and selected studies based on the inclusion criteria presented in Table 1.

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<th>Table 1: Selection Criteria</th>
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<td><strong>Population</strong></td>
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<td><strong>Comparator</strong></td>
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<td><strong>Study Designs</strong></td>
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RESULTS

Rapid Response reports are organized so that the higher quality evidence is presented first. Therefore, health technology assessment reports, systematic reviews, and meta-analyses are presented first. These are followed by randomized controlled trials, non-randomized studies, and economic evaluations.

Three systematic reviews and meta-analyses, six non-randomized studies, and one economic evaluation were identified regarding the clinical and cost-effectiveness of treatments for bladder cancer. No health technology assessments or randomized controlled trials were identified.

Additional references of potential interest are provided in the appendix.

OVERALL SUMMARY OF FINDINGS

Three systematic reviews and meta-analyses\textsuperscript{1-3} were identified regarding the clinical effectiveness of bladder preservation treatment in patients with bladder cancer. One systematic review\textsuperscript{1} reported that trimodality treatment (including bladder preservation) had better outcomes for patients with muscle-invasive bladder cancer compared with radical cystectomy. One systematic review\textsuperscript{2} reported the results of multiple studies: one randomized controlled trial found no difference between bladder preservation treatment versus radical cystectomy, although bladder preservation treatment was associated with increased risk of local or regional recurrence (the strength of evidence was listed as insufficient); multiple cohort studies of bladder preservation treatments versus radical cystectomy reported inconsistent results (the strength of evidence was listed as insufficient). A third systematic review\textsuperscript{3} reported that, for selected cases, bladder preservation treatment leads to similar overall survival compared to radical cystectomy for muscle invasive bladder cancer.

Six non-randomized studies (NRS)\textsuperscript{4-9} were identified regarding the clinical effectiveness of bladder preservation treatment in patients with bladder cancer. One NRS\textsuperscript{4} reported similar rates in overall survival using radical cystectomy or bladder preservation treatment in patients older than 76 years, but stated patients younger than 76 years may have better outcomes undergoing
radical cystectomy. One NRS\textsuperscript{5} reported that radical cystectomy had superior outcomes to bladder preservation treatment. Another NRS\textsuperscript{5} found that a radical or partial cystectomy offered the best overall survival and cancer-specific survival for men over the age of 80 years with T2 bladder cancer when compared to bladder preservation treatment. Another NRS\textsuperscript{7} reported that after propensity score adjustment, bladder preservation treatment had greater mortality than radical cystectomy, while instrument variable (IV) analysis and simulation suggested that the two treatments were associated with similar survival outcomes. One NRS\textsuperscript{8} reported no clear survival benefit with octogenarians (patients in their 80s) with either radical cystectomy or bladder preservation treatment. The final NRS\textsuperscript{9} found that bladder preservation treatment was a viable treatment option within a select patient population with high grade cT1 urothelial cell carcinoma.

One economic evaluation\textsuperscript{10} was identified regarding the cost-effectiveness of treatments for bladder cancer. The economic evaluation reported that office-based cystoscopy and fulguration was more cost-effective than bladder preservation treatment (transurethral resection of the bladder or TURB) for treating recurrent low-risk non-muscle-invasive bladder cancer.
REFERENCES SUMMARIZED

Health Technology Assessments
No literature identified.

Systematic Reviews and Meta-analyses


Randomized Controlled Trials
No literature identified.

Non-Randomized Studies


Economic Evaluations


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APPENDIX – FURTHER INFORMATION:

Systematic Reviews and Meta-Analyses

No Comparator


Alternate Comparator

