Economic Consequences of Preventable Bladder Tumor Recurrences in Non-Muscle Invasive Bladder Cancer

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ABSTRACT

OBJECTIVES: In 2010, an estimated 75,000 new cases of bladder cancer will be diagnosed in the United States.1-3 We will present economic consequences of preventable NMIBC recurrences in patients not receiving PC. Two sources were used to estimate rates for the model because neither data source had both of the rates required: 1,010 NMIBC patient records from the randomized trial and national data from the Surveillance, Epidemiology, and End Results (SEER) Program. This study sought to develop a decision analytic model to estimate the economic burden associated with these preventable bladder tumor recurrences.

METHODS: A decision analytic model estimated the economic consequences of preventable NMIBC recurrences in patients not receiving PC. Two sources were used to estimate rates for the model because neither data source had both of the rates required: 1,010 NMIBC patient records from the randomized trial and national data from the Surveillance, Epidemiology, and End Results (SEER) Program. The cost of BCG induction/maintenance was estimated at $8,504 per course. The cost of a single MMC instillation was estimated at $2,608, and the cost of a single BCG induction was estimated at $3,000. A decision analytic model estimated the economic consequences of preventable NMIBC recurrences in patients not receiving PC.

RESULTS: The model assumed that all patients received MMC, since it was the threshold for variation in model parameters without meaningful results. Despite these changes, model results were robust in that they may therefore be candidates for more aggressive therapy, such as BCG or even destruction. However, it was noted that these changes resulted in a model economic advantage.

CONCLUSIONS: Greater use of PC after TURBT can reduce economic loss related to preventable bladder tumor recurrences with substantial savings to the healthcare system over two years.

REFERENCES

LIMITATIONS
- Recurrence rates for BCG and MMC are heterogeneous, and individual patient prognosis depends upon numerous clinical factors. Despite this heterogeneity, the difference in recurrence rates is sufficiently large to yield meaningful differences in recurrence rates across the low- and high-risk groups and found a similar economic advantage of 45% in all groups ( hypothetical 10%)
- As with all modeling studies, combining data from different sources involves numerous assumptions. While the current model suggests that immediate perioperative instillation of chemotherapy will be cost effective, only a comparative effectiveness (data étaient) trial would be necessary to determine if this would be an economic advantage.

CONCLUSIONS
- Improved compliance with treatment guidelines from increased use of perioperative intravesical chemotherapy can reduce the economic burden of NMIBC.
- Use of a single immediate perioperative instillation of chemotherapy would be cost saving over a two-year time horizon.

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