



<b>Title</b>	<b>Clinical Effectiveness and Costs of the Sugarbaker Procedure for the Treatment of Pseudomyxoma Peritonei</b>
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<b>Reference</b>	Health Technol Assess 2004;8(07). Feb 2004. <a href="http://www.ncchta.org/execsumm/summ807.htm">www.ncchta.org/execsumm/summ807.htm</a>

## Aim

This systematic review examines the clinical and cost effectiveness of the Sugarbaker procedure for treating pseudomyxoma peritonei (PMP) and the costs of the procedure in the UK.

## Conclusions and results

Five retrospective case-series reports assessing the Sugarbaker procedure met the inclusion criteria for review. No studies comparing the Sugarbaker procedure with standard treatment or observational studies of standard treatment were included. All case-series were found to be of poor quality when judged against standard criteria for assessing methodological quality. Details of cytoreductive surgery and chemotherapy differed between studies, and not all patients in a series received the same treatment. There appears to be some benefit for people with PMP who undergo treatment with the Sugarbaker procedure. People with PMP have a 5-year and 10-year survival of approximately 50% and 18% respectively. Survival of patients undergoing the Sugarbaker procedure is about 90% at 2 years, between 60% and 90% at 3 years (depending on IPEC) and between 60% and 68% at 10 years. Complications of the Sugarbaker procedure were anastomotic leaks, fistula formation, wound infection, small bowel perforations/obstructions, and pancreatitis. One costing study (poor methodological quality, set in USA) was found. This study, along with UK unit price data and expert advice, was used to populate a Monte-Carlo simulation model to estimate the marginal cost of operating a service to provide treatment for PMP using the Sugarbaker technique rather than standard treatment. The Monte-Carlo simulation model showed that the cost for one patient over 5 years (max.) would be about £9,700 (SD about £1,300). The US study showed a ten-fold higher cost. The Monte-Carlo analysis showed modest variation around the mean. Length of procedure was most likely to influence cost variation. Sensitivity analysis could not be done for the alternative treatment.

## Recommendations

The economic results are an example of the likely marginal costs of the Sugarbaker procedure, but more information about the current alternative is required. Trained, experienced staff is required, and inevitably time and cost will be involved in developing appropriate teams. Although the procedure requires some specialist equipment and maintenance these should have limited effect on setting up the service. PMP is a relatively rare condition (approx. 50 new cases per year in the UK) and the impact of increased demand for services should be limited. Evidence is needed on the effectiveness of maximal cytoreductive surgery compared with surgical debulking, using different intraoperative intraperitoneal chemotherapy strategies and for the effectiveness of treatments in patients with residual disease after maximal efforts at cytoreduction.

## Methods

Evidence of the clinical effectiveness of the Sugarbaker procedure for PMP was synthesized through a narrative review with full tabulation of results of all included studies. The economic modeling used a Monte-Carlo simulation model populated with UK price data to estimate likely UK costs.

## Further research/reviews required

Further research involving high-quality prospective cohort studies with economic evaluations would be valuable.