

THE CLINICAL UTILITY AND COST EFFECTIVENESS OF PREOPERATIVE CT SCANNING IN PATIENTS WITH COLON CANCER

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Introduction: CT scans remain of uncertain benefit in the preoperative assessment of patients with colon cancer. The aims of this study were to assess the clinical utility of a practice of routine preoperative CT scanning and to determine the cost effectiveness of such a strategy for colon cancer patients treated in a tertiary care Veterans Affairs (VA) Medical Center.

Methods: From 11/1/98 to 5/31/03, patients with diagnosed colon cancer treated at a single VA medical center underwent routine preoperative CT scanning as a component of a clinical pathway. Medical records and operative notes were reviewed to determine the influence of preoperative CT scanning on clinical management. Cost information was obtained from the hospital Decision Support Service (DSS). Cost analysis involved comparison of the calculated institutional cost of CT scanning against the cost savings provided by avoiding nontherapeutic operations and duplication of operative procedures in patients with multiple pathologic processes.

Results: CT scans were obtained in 130 of 140 consecutive patients. Preoperative CT scans demonstrated major locoregional disease extension in 12(9%) patients and distant metastases in 20 (15%) patients. CT provided information that was used in treatment planning in 43 (33%) patients and CT data definitively altered the mode of treatment in 21 (16%) of patients. These treatment changes included avoiding laparotomy in patients with extensive metastases as well as ureteral stenting, and planned multivisceral resections for patients with extensive tumors.

Cost summary:

Cost of Scans	Cost Savings	Total Savings
\$28,601	\$52,619	\$24,018

Conclusion: Routine preoperative CT scanning provides information that assists in treatment planning in a significant number of cases. This information definitively alters treatment in a smaller number of cases. However, by avoiding laparotomy in a limited number of patients, the routine application of preoperative CT is cost effective in a VA medical center.