

ABSTRACT
Adenocarcinoma of the Small Intestine at the
University of Iowa Hospitals and Clinics, 1975-1999

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BACKGROUND. The small bowel is the longest portion of the gastrointestinal (GI) tract, yet accounts for only 2% of GI cancers. The objective of this study was to review the incidence, patient factors, tumor factors, and survival of the patients presenting to the University of Iowa Hospitals and Clinics (UIHC) with small bowel adenocarcinoma (SBA), and to compare these results with those obtained from the National Cancer Data Base (NCDB) between 1985 and 1995.

METHODS. UIHC cancer registry data from patients diagnosed with primary SBA between 1975-99 were analyzed. Chi-square statistics were used to compare differences between groups. Overall survival was calculated using the life-table method for patients presenting between 1985-90, and univariate analyses performed using the Wilcoxon statistic. UIHC data was compared to data obtained from the NCDB with patients diagnosed with SBA between 1985-95.

RESULTS. There were 122 patients with small bowel cancers who received their first cancer-directed treatment at UIHC between 1975-99, with 45 SBA (37%), 37 carcinoids (30%), 26 lymphomas (21%), 8 sarcomas (7%), and 6 other tumors (5%). The mean age of patients with SBA was 62 years, with 47% of cases in males and 53% in females. Duodenal site accounted for 51% of cases, the jejunum in 29%, the ileum in 16%, and other/NOS sites 4%. The stage at presentation was localized in 26%, regional in 51%, and distant in 23%. Surgery was the only treatment received in 73%, 9% of patients had surgery and chemotherapy, 2% had surgery, radiation, and chemotherapy, and 16% had no treatment. The overall survival of patients with SBA was 33% with a median survival of 14 months. There was a significant decrease in 5 year survival in males relative to females (11% versus 51%, respectively; $p=0.0129$), and those with poorly or undifferentiated grade tumors relative to well or moderately differentiated tumors (0% versus 51%, respectively; $p=0.0280$). Five-year survival was 68% in patients with localized tumors (median 45 months) and 29% in those with regional disease (median 16 months), as opposed to 10% 5-year survival in those with distant disease (median 3 months; $p=0.0035$). Patient age and tumor site were not significantly correlated with survival.

CONCLUSIONS. The results obtained from this review of 45 cases of SBA from UIHC between 1975 and 1999 were fairly comparable to those obtained from a review of 4995 cases from 1985-1995 in the NCDB. The distribution of tumors by histologic subtype

was remarkably similar in the 2 databases. Patients at UIHC were slightly younger than seen in the NCDB (62 versus 65 years, respectively). The percentages of tumors at duodenal and ileal sites were similar, while the incidence of jejunal tumors was 11% higher in the UIHC group. There was a much lower incidence of UIHC patients presenting with localized tumors (26% vs. 44% in the NCDB), a higher incidence of regional disease (61% vs. 27%, respectively), and a slightly lower percentage of patients with distant disease (23% vs. 30%, respectively). The overall 5-year survival rate at UIHC was similar to that seen in the NCDB study (33% versus 31%, respectively), despite having less patients with localized tumors and more with regional disease. The five year survival of patients with localized tumors was higher at UIHC (68% vs. 48%, respectively), but similar for those with regional disease as in NCDB patients (29% vs. 31%, respectively). Factors significantly correlated with survival at UIHC by univariate analysis included sex, LRD stage, and tumor grade. In the NCDB study, age, site, grade, LRD stage, and cancer-directed surgery were all significant by univariate analysis, but grade was not significant in multivariate analysis. The finding of several additional factors significantly associated with survival in the NCDB study reflects differences in statistical power between a study of 4995 patients as compared to 45 patients.

Figure 1: Overall survival of UIHC SBA patients by sex

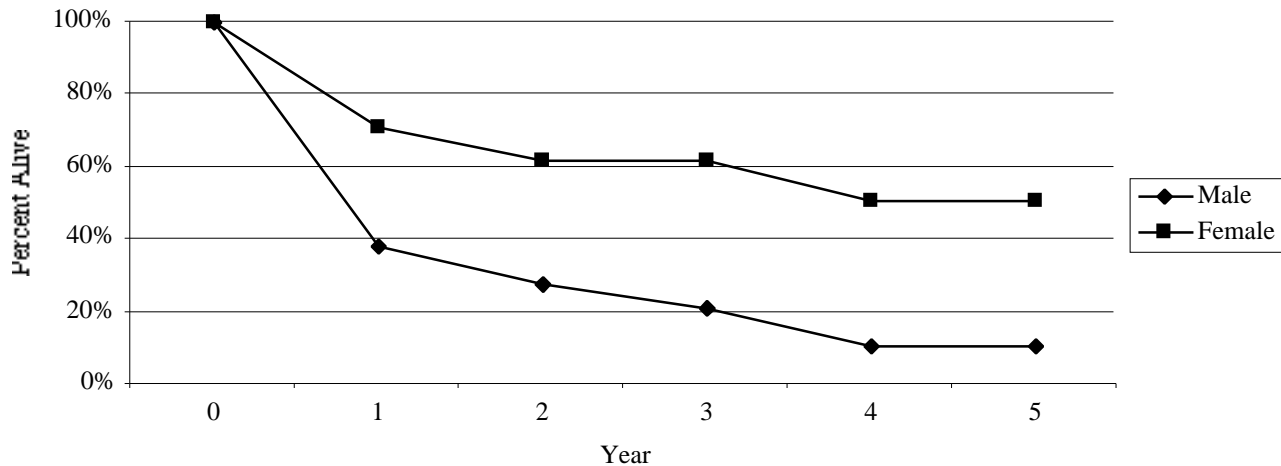


Figure 2: Overall survival of UIHC SBA patients by tumor stage

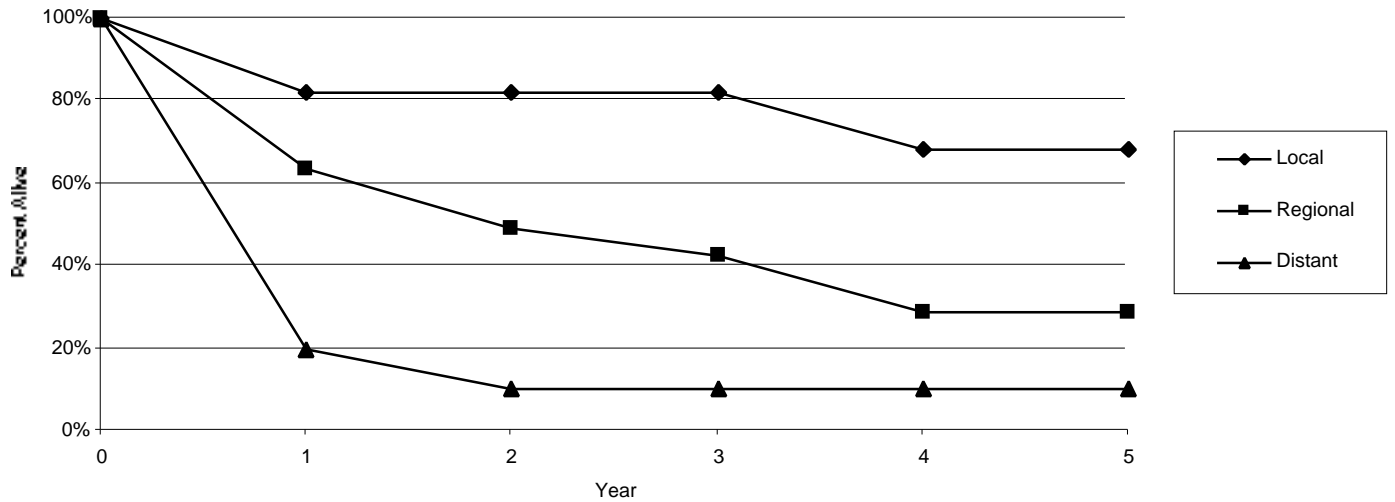


Figure 3: Overall survival of UIHC SBA patients by tumor grade (Well/Moderately, Poorly/Undiff, Unknown) over 5 years.

