Gastric cancer (GC) is the fourth most common cancer globally and an important cause of mortality and morbidity in the US. Prognosis is poor, treatment options are limited, and there has been little progress in improving outcomes over the last 25 years. The objective of the study was to describe the demographic and clinical characteristics, mortality, healthcare utilization and cost of patients with gastric cancer.

Methods: A retrospective cohort study on GC and non-cancer patients was conducted using the HealthCore Integrated Research Environment (HIRE) between 2007-2010. GC cases were ≥18 years, had at least 180 days’ pre-index and 18 months’ post-index health plan enrollment, and were matched 1:3 with patients having no diagnosed cancer on age, gender, health plan type and geographic region. All analyses were performed for healthcare utilization and cost, and mortality. Stratified analyses were conducted by patient age, site of cancer and coding for metastatic disease.

Background/Objectives: Gastric cancer is the fourth most common cancer globally and an important cause of morbidity and mortality in the US. Based on rates from 2007 to 2009, 1 in 116 men and women will suffer from stomach cancer during their lifetime and more than 70% of the diagnoses occur in patients aged 65 years or older.

The aim of this study was to describe the demographic and clinical characteristics of US patients with stomach cancer and assess mortality, healthcare utilization and cost.

Treatments and resource use:
- The most commonly observed treatment pattern during the 18-month post-period was chemotherapy and/or chemoradiation without curative surgery (~53%). The advanced stage group had a higher proportion of patients with this treatment than the unknown stage group (56.0% vs. 49.3%).
- Among one-third of the unknown stage patients had curative intent surgery only, which was higher than advanced stage patients (30.3% vs. 17.4%).
- Advanced stage patients had a substantially lower survival rate at each time point. After 36 months of follow-up, 24.9% of advanced stage patients survived, while around 68.6% patients in the unknown stage group remained alive (Figure 3).

Conclusions: Advanced stage gastric cancer patients incurred substantially more total GC-related medical costs than unknown stage patients ($61,467 vs. $20,574), mainly due to higher total inpatient visit costs ($63,849 vs. $11,336), office visit costs ($6750 vs. $1138), and outpatient visit costs ($24,997 vs. $44,454).

Costs:
- Patients with GC incurred more than ten times the healthcare costs than those without cancer ($68,571 vs. $8338), particularly those with advanced disease ($131,330) (Figure 5).

Results:
- Among patients who had at least one event, the cases had significantly longer average lengths of stay (22.1 days vs. 8.6 days), hospital and pharmacy costs, visits to emergency department per patient (7.7 vs. 1.8), office visits (26 vs. 10.3), and outpatient visits (94 vs. 16.9).

- There were 1688 GC cases and 16,680 cancer-free patients. Mean age was 66 years and 65% were male. Patients with GC incurred more than ten times the healthcare costs than those without cancer ($68,571 vs. $8338) during the follow-up period, particularly those with advanced disease ($131,330). When including only those costs specifically linked to gastric cancer, these differences remain. Three-year survival was 45% and 94% in patients with GC and without cancer, respectively (hazard ratio= 14.9). Chemotherapy and/or chemoradiation without curative surgery was the most common treatment (58.1%) among GC patients during the first 18 months of follow-up (57%); taxotuzumab use was detected in only 17 patients. Compared with those without cancer, patients with GC had a significantly higher burden to both the individual and healthcare system, with considerably higher resource use and costs than matched patients without cancer.

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Statistical analysis:
- Unadjusted statistical testing was performed for the overall population of cases versus controls and two-tailed; P-value <0.05 was considered significant.

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Figure 5: All cause healthcare costs over the 18-month post-index period (mean, US $)

Figure 6: Gastric cancer-related healthcare cost during the 18-month post-index period