Following regionalization of gastric cancer care and surgical subspecialization, 80% of locoregional patients fit for curative-intent surgery received laparoscopic gastrectomy and D2 dissection, and 2-year survival increased from 73% to 86%

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| Challenge | **Regionalization of gastric cancer was accomplished in KPNC in 2016. Effects on surgical outcomes and survival of such changes have not been studied.** |
| Existing Evidence | Limited evidence exists of the safety and feasibility of performing laparoscopic gastrectomy and Japanese D2 lymphadenectomy in a Western population. Also, while evidence suggests that regionalization of technically difficult cancer operations such as gastrectomy may result in lower short-term adverse outcomes, longer-term effects on survival are unknown. |
| Target Population | KPNC patients that received a diagnosis of gastric cancer from 2010-2018. Pt were divided into a pre-regionalization cohort (2010-2015) and post-regionalization cohort (2016-20180). Nested cohorts of patients with loco-regional disease only and patients with loco-regional disease that additionally received curative-intent gastrectomy were also studied. |
| Intervention or Exposure | Interventions to be studied include pre- and post- exposure to regionalization process as well as curative-intent gastrectomy. |
| **Outcomes/Key Findings** | **Among 1429 eligible gastric cancer patients with all stages (942 before, 487 after), 650 had locoregional disease, of whom 394 (272 before, 122 after) underwent curative-intent surgery. After centralization, 90% of patients received laparoscopic gastrectomy compared with 19% before (p<0.0001) and 80% received D2 lymphadenectomy compared with 2% before (p<0.0001). Dissection of ≥15 lymph nodes increased from 61% to 95% (p<0.0001), while the fraction with ≥1 lymph node positive remained at about half (p=0.39). Overall mortality at 2 years declined from 67.4% to 64.1% (p=0.02) among all-stage patients; 45.1% to 39.3% among locoregional patients (p=0.01); and 30.9% to 16.3% among curative-intent gastrectomy patients (p<0.01). Surgical complication rates did not change.** |
| **Resulting Action/Change** | **Implementation of centralized gastric cancer care was feasible within an integrated community-based health care system with almost complete conversion to laparoscopic gastrectomy and D2 lymphadenectomy, increased overall survival, and no change in surgical complication rates.**  **Regionalization and increased subspecialization of cancer care is effective for gastric cancer and could be generalized to other cancer sites.** |
| Additional Recommendations | Manuscript in final stages of preparation in anticipation to submission to high-impact medical journal. |
| Implementation Tools | Standardized coding for monitoring diagnosis, outcomes, complications |
| Implementation Measurement | Disease incidence, proportion of cancers operated on at regional centers, and major outcomes (e.g. mortality) |
| Reference |  |