Gastroesophageal junction cancer compliance with NCCN guidelines

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Data Source: Cancer registry information on gastroesophageal (GE) junction cancers diagnosed in 1/1/2006 through 6/30/2009.

Reason for Report: 1) To determine how well providers at St. Joseph Hospital (SJH) are following National Comprehensive Cancer Network (NCCN) guidelines for GE junction cancers. 2) To compare SJH outcomes with national statistics.

Demographics:

During this time period, there were 30 cases of primary GE junction carcinoma diagnosed between 1/1/2006 and 6/30/2009. The following graph shows the staging distribution for these cases and comparison to the National Oncology Data Base (NODB) through Elekta IMPAC medical systems.

For this study, it was decided to concentrate on the Stage group I through III, including T4 N1 M0 (Local Stage IV) cancers. There were 20 cases left after disseminated Stage IV cases were excluded. Of those 20, 6 cases had all their treatment at facilities in Seattle and 14 had some or all of their treatment locally.

Of those 6 patients who had diagnosis here and had all of their treatment in Seattle: 3 had surgery only (2 at UWM, 1 at VMMC); 1 had radiation & chemo at UWM; 1 had surgery, radiation and chemo at VMMC; and 1 had surgery and chemo at VMMC.
Of the 14 patients who had all or part of their treatment locally, only 1 had chemo at UWMC but had radiation here. The other 3 patients who had surgery elsewhere had their chemo/radiotherapy here.

The average age of the patients in this study is 70; the youngest was 55 and oldest was 87. The average for of the patients who were treated in Seattle is 68; the youngest was 62 and oldest was 85.

Thirteen of the 14 cases had adenocarcinoma histology (two specifically signet ring) and one case was a small cell carcinoma.

**NCCN Staging Guidelines:**

Work-up for these cancers per NCCN guidelines should include esophagogastroduodenoscopy (EGD), CBC, chemistry profile, CT or CT-PET and endoscopic ultrasound. All 14 of the patients in the study group had EGD, CBC, chemistry profiles and CT or CT-PETs done; however only 28.6% (4/14) had endoscopic ultrasounds done. This procedure was not available in Whatcom County during the interval time of this study.

<table>
<thead>
<tr>
<th>Work-up Tests Completed</th>
<th>GE junction cancer at SJH</th>
<th>Diagnosed 12/1/06 to 6/30/09</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Completed</td>
<td>Percent</td>
</tr>
<tr>
<td>EGD</td>
<td>14</td>
<td>100%</td>
</tr>
<tr>
<td>CT</td>
<td>14</td>
<td>100%</td>
</tr>
<tr>
<td>PET</td>
<td>12</td>
<td>88%</td>
</tr>
<tr>
<td>CBC</td>
<td>14</td>
<td>100%</td>
</tr>
<tr>
<td>Chem prof</td>
<td>14</td>
<td>100%</td>
</tr>
<tr>
<td>EUS</td>
<td>4</td>
<td>29%</td>
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</tbody>
</table>

**NCCN Treatment Guidelines:**

According to NCCN guidelines, treatment options vary by stage. For patients who are staged as IA (T1 N0 M0), the recommended treatment is surgery only, if patient is medically fit. Stage IB through IIIB recommended treatment is pre-operative chemotherapy or pre-operative chemo/radiotherapy followed by surgery or chemo/radiotherapy alone.

Regardless of Stage, if the patient is documented to be medically unfit, then supportive care, chemotherapy, or radiation therapy alone is acceptable.
In this study there was only one stage IA patient treated locally. This patient was 82 years old and treated with chemotherapy alone. This was the patient’s second cancer; the first being of the distal stomach. He was not felt to be a surgical candidate.

Of the remaining 13 cases – (Stage IB - Stage IIIB)
1) 15.4% (2/13) had pre-operative radio/chemotherapy followed by surgery
2) 23.1% (3/13) had planned pre-operative radio/chemotherapy but due to disease progression did not have surgery. Therefore 5/13 (38.5%) had an intent to treat with pre-operative radio/chemotherapy followed by surgery.
3) 7.7% (1/13) had surgery (in Seattle) with adjuvant chemo/radiotherapy delivered locally.
4) 30.8% (4/13) were treated with chemo/radiotherapy alone.
5) 7.7% (1/13) had planned chemo/radiotherapy but complications interfered, so “intent to treat” with planned chemo/radiation was 38.5% (5/13).
6) 15.4% (2/13) had radiation therapy alone. One was felt to be too unfit for chemotherapy and one refused chemotherapy.

The plan of care was according to NCCN guidelines. Not all patients were treated according to guidelines due to progression, patient refusal or comorbidities.

There were ten patients who had metastatic disease at diagnosis. Of these ten their treatments were as follows:
1) 1/10 (10%) received palliative radiation therapy alone.
2) 4/20 (40%) received palliative radio/chemotherapy.
3) 3/10 (30%) received palliative chemotherapy alone.
4) 2/10 (20%) received comfort care.

**Survival Information:**

Survival data from the SJH Cancer Registry for these patients was compared with the NODB data for approximately the same time period. Survival for all cases is presented in the first graph, and survival by stage presented in the following graphs. Local numbers are small so statistical confidence can not be guaranteed.
Conclusions:

For patients with GE Junction cancers, this study evaluates appropriate staging, and treatment, as well as survival.

Patients in the SJH registry were appropriately staged with the exception of trans-esophageal ultrasounds which was a procedure not available in the community during the time of this evaluation. This procedure is now available locally and one would expect improved compliance with this specific NCCN staging recommendation.

Many of local patients leave the community for all or part of their care. Certainly esophagectomy surgery is a complex and uncommon surgery and data supports referrals to large centers for this type of procedure. However, all patients could have had their radiation and/or chemotherapy in the community. The finding of “out of area treatments” will require careful monitoring now that Trans Esophageal Ultrasound is locally available.

The plan of care for all patients was according to NCCN guidelines. The NCCN guidelines allow a variety of care choices, all of which were met when patients were evaluated by overall medical conditions and “intent to treat”.

Regardless of treatment guideline compliance, the most important information relating to the treatment of any malignancy is survival data, and it is quite reassuring to observe that SJH patients have at least as good, if not better survival that the NODB registry data.

References:

2. National Oncology Database. Elekta IMPAC Medical systems website. Restricted access to clients only. Requested February 2010.