Objective: The purpose of this study is to determine whether the revised FIGO 2009 staging of patients with carcinoma can accurately predict patient survival, in comparison with previous FIGO staging.

Methods: From March 1988 until January 2010, patients with a diagnosis of carcinoma were retrospectively identified from tumor registry records at two large teaching institutions. Data was collected via tumor registry data, medical chart records, and social security death records. Patients were excluded if they had dual primary malignancies, if they did not undergo hysterectomy, and if data was missing. Patients were grouped into both broad stages (1-4) and all FIGO substages in order to detect differences. Time-dependent receiver operating characteristic curves were generated to predict death before the end of the second year post-diagnosis for both the new and revised systems. Kaplan-Meier estimated median survival time was utilized to compare actual patient survival.

Results: Of 112 patients with carcinoma, 37 patients (33%) had FIGO Stage I disease, 15 patients (13.4%) had Stage II disease, 36 patients (32%) were diagnosed as Stage III, and 24 patients (21.4%) had Stage IV disease. 106 of 112 (94.6%) patients underwent pelvic lymph node dissection (pelvic + extra-pelvic); and of these 106 patients, 71 also underwent infracolic omentectomy and/or additional biopsies. Only 4 patients (3.6%) were downstaged when utilizing broad staging criteria: 2 patients were downstaged from Stage II to Stage I, and 2 patients were downstaged from Stage III to Stage I and II respectively. When looking at subsite, the area under the receiver operating curve was 0.67 for the old staging system, and 0.65 for the revised staging for carcinoma. Kaplan-Meier estimated median survival time post-diagnosis was 610 days (95% CI [478, 930]).

Conclusions: Based upon our reclassification of 112 patients with uterine carcinoma, the revised 2009 FIGO staging system does not predict survival more accurately than previous staging. Based upon our analysis, carcinoma has an overall poor prognosis and better indicators of survival are needed.

Abstract

Materials and Methods

From March 1998 until January 2010, patients with a diagnosis of uterine carcinoma were retrospectively identified from tumor registry records at two large tertiary medical centers, Downstate Medical Center and Kings County Hospital Center. Demographic and surgical data were collected via tumor registry data, medical chart records and social security death records.

Patients were excluded if they had dual primary malignancies. They were also excluded if they did not undergo primary surgery at one of our two institutions and if they did not undergo a hysterectomy at minimum for type of surgery. Patients were grouped into four broad stages (FIGO Stage I-IV) from all substages (for example IA/IB) in order to detect differences. Using the method of Heagerty et al., time dependent receiver operating characteristic curves (ROC) were generated to predict death before the end of the second year post-diagnosis for both the new and revised system. Kaplan-Meier estimated median survival time was utilized to compare actual patient survival to the predicted survival from the ROC.

Table 1: Surgical Procedure

<table>
<thead>
<tr>
<th>Surgical Procedures Performed</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Abdominal Hysterectomy / Bilateral Salpingo-oophorectomy</td>
<td>8/112</td>
<td>5.4%</td>
</tr>
<tr>
<td>Total Abdominal Hysterectomy / Bilateral Salpingo-oophorectomy / Pelvic Lymph Node Dissection</td>
<td>8/112</td>
<td>7.1%</td>
</tr>
<tr>
<td>Total Abdominal Hysterectomy / Bilateral Salpingo-oophorectomy / Pelvic and Para-aortic Lymph Node Dissection</td>
<td>27/112</td>
<td>24.1%</td>
</tr>
<tr>
<td>Total Abdominal Hysterectomy / Bilateral Salpingo-oophorectomy / Pelvic and Para-aortic Lymph Node Dissection / Omentectomy</td>
<td>56/112</td>
<td>50%</td>
</tr>
<tr>
<td>Total Abdominal Hysterectomy / Bilateral Salpingo-oophorectomy / Biopsies and/or Other Procedures</td>
<td>15/112</td>
<td>13.4%</td>
</tr>
</tbody>
</table>

Conclusions

Based upon our analysis, the extent to which patients were restaged in any major way by the new staging system was minimal. Therefore, the ability of the FIGO 2009 staging system to predict death within 2 years was found to be similar to the FIGO 1998 staging system, and in both cases is a poor predictor of overall survival.

Since the goal of a staging system is to provide information regarding prognosis, based upon our reclassification of these 112 patients with uterine carcinoma, the revised staging system does not predict overall survival more accurately than previous staging. Uterine carcinoma has an overall poor prognosis and better predictors of survival are needed.

References