Locoregional Recurrence patterns in colon cancer surgery

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Background

- Colon Cancer is a surgical curable disease

- Survival of 90% for localized disease
  Based on data from SEER 18 2005-2011

- 15% will develop Peritoneal Metastases-Cytoreductive Surgery and HIPEC
Survival curves according to the plane of mesocolic dissection

West et al. Lancet Oncol. 2008
Survival Curves according to LN #

<table>
<thead>
<tr>
<th># LN</th>
<th>OS (mos)</th>
<th>5 Yr OS</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>45*</td>
<td>45%</td>
</tr>
<tr>
<td>1-7</td>
<td>77</td>
<td>66%</td>
</tr>
<tr>
<td>8-14</td>
<td>99*</td>
<td>70%</td>
</tr>
<tr>
<td>≥15</td>
<td>131*</td>
<td>78%</td>
</tr>
</tbody>
</table>

Chen S, Bilchik A, Annals of Surgery 2006: 244
Lymphadenectomy in colon cancer

Japanese LN mapping for colorectal cancer

N1 - Pericolic nodes
N2 - Intermediate nodes
N3 - Main nodes
Colon Cancer 4-Year DFS Rates

<table>
<thead>
<tr>
<th>UICC-Stage</th>
<th>Standard surgery</th>
<th>Extended</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>90%</td>
<td>100%</td>
</tr>
<tr>
<td>II</td>
<td>78%</td>
<td>92%</td>
</tr>
<tr>
<td>III</td>
<td>67%</td>
<td>73%</td>
</tr>
<tr>
<td>all stages</td>
<td>76%</td>
<td>86%</td>
</tr>
</tbody>
</table>

Bertelsen et al. Lancet Oncol. 2015
Colon Cancer Local Recurrence

• 10y LR higher for right colectomy than left colectomy
  14.7% vs. 5.2%


• What is the explanation for the difference?
  – Inadequate lymphadenectomy?
  – Poor planes of mesenteric resection?
  – Tumor biology?
Aim

• To characterize locoregional recurrence patterns of colon cancers
  – Perianastomotic
  – Mesenteric/nodal
  – Retroperitoneal
  – Peritoneal

  Bowne et al. Dis Colon Rectum 2005

• Compare right side recurrences to left side
Methods

• Patients will be identified from the HIPEC registry- 450 patients → 200 colon cancer

• Inclusion:
  – Primary colon cancer
  – Curative surgery at presentation

• Exclusion:
  – Distant metastasis at presentation
  – Synchronous and metachronous tumors
  – Hereditary cancers
Data collected

- Demographics
- Primary tumor characteristics
- Adjuvant chemotherapy
- Time interval from primary surgery to recurrence
- Recurrence patterns
  1. Perianastomotic
  2. Mesenteric/nodal
  3. Retroperitoneal
  4. Peritoneal
- Survival outcomes