Grand Rounds

Neoadjuvant Therapy for the Treatment of Rectal Cancer
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Rectal Cancer

- Incidence
- Staging
- Survival

*Primary tumor (T)*
- Tx: Primary tumor cannot be assessed
- Tis: Tumor invades submucosa
- T1: Tumor invades muscularis propria
- T2: Tumor invades through the muscularis propria into the subserosa
- T4: Tumor invades other organs or structures, or perforates visceral peritoneum

*Regional lymph nodes*
- Nx: Regional lymph nodes cannot be assessed
- N0: No regional lymph node metastasis
- N1: Metastasis in one to three regional lymph nodes
- N2: Metastasis in four or more regional lymph nodes

*Distant metastasis*
- Mx: Presence or absence of distant disease cannot be determined
- M0: No distant metastasis detected
- M1: Distant metastasis detected

<table>
<thead>
<tr>
<th>Stage</th>
<th>Grouping</th>
<th>Five-Year Survival</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>T1-2, N0, M0</td>
<td>&gt;90%</td>
</tr>
<tr>
<td>IIA</td>
<td>T3, N0, M0</td>
<td>60%–85%</td>
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<tr>
<td>IIB</td>
<td>T4, N0, M0</td>
<td>60%–85%</td>
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<tr>
<td>IIIA</td>
<td>T1-2, N1, M0</td>
<td>55%–60%</td>
</tr>
<tr>
<td>IIIB</td>
<td>T3-4, N1, M0</td>
<td>35%–42%</td>
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<tr>
<td>IIIC</td>
<td>T1-4, N1, M0</td>
<td>25%–27%</td>
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<tr>
<td>IV</td>
<td>T1-4, N0-2, M1</td>
<td>5%–7%</td>
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Treatment

- Surgical Resection
  - APR or LAR with TME
- Neoadjuvant vs Adjuvant Therapy
Prognostic Indicator
20 pts with T3 or T4 (locally invasive) cancer on transrectal ultrasound

Treated preoperatively with radiation and 5-FU

APR 13 pts, LAR 5 pts, Proctectomy 2 pts

17/20 pts with no evidence of disease at average follow-up of 26 months
88 pts T3 or T4 disease
56/88 sphincter-saving operations
16/88 with complete pathologic response (18%)
Downstaging in 36/88 pts (41%)
42 pts positive LN on ultrasound, 27 had no nodal involvement on path (64%)
Does Downstaging Predict Improved Outcome After Preoperative Chemoradiation for Extraperitoneal Locally Advanced Rectal Cancer? A Long-Term Analysis of 165 Patients

- 165 pts
- Chemoradiation Protocol, surgery 6-8 weeks later (sphincter-saving 121/165, 73%)

<table>
<thead>
<tr>
<th>Downstage</th>
<th>n</th>
<th>LC (%)</th>
<th>p</th>
<th>FDM (%)</th>
<th>p</th>
<th>DFS (%)</th>
<th>p</th>
<th>OS (%)</th>
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<tbody>
<tr>
<td>T</td>
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<tr>
<td>Yes</td>
<td>99</td>
<td>87.8</td>
<td>0.0054+</td>
<td>80.3</td>
<td>0.0048+</td>
<td>73.1</td>
<td>0.0043+</td>
<td>82.9</td>
<td>0.0230+</td>
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<td>70.5</td>
<td>0.0054+</td>
<td>57.8</td>
<td>0.0073+</td>
<td>47.2</td>
<td>0.0063+</td>
<td>60.9</td>
<td>0.0328+</td>
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<tr>
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<td>93</td>
<td>84.3</td>
<td>0.0439+</td>
<td>76.7</td>
<td>0.0002+</td>
<td>67.1</td>
<td>0.0019+</td>
<td>74.3</td>
<td>0.0307+</td>
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<td>No</td>
<td>35</td>
<td>72.0</td>
<td>0.0217$</td>
<td>43.0</td>
<td>&lt;0.0001$</td>
<td>42.2</td>
<td>0.0001$</td>
<td>56.1</td>
<td>0.0034$</td>
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</table>
Downstaging and Sphincter Preservation Surgery
60 pts, 43/60 underwent sphincter-saving surgery
50 Gy and 5-FU, surgery 6 weeks later
18/43 pts had downstaging (42%)
Local recurrence 1/43 (2%)
3-year overall and disease free survival 85%
Tumor Downstaging and Sphincter Preservation with Preoperative Chemoradiation in Locally Advanced Rectal Cancer: The MD Anderson Cancer Center Experience

- 117 pts
- Radiation (45 Gy) and continuous 5-FU
- Surgery 6 weeks after chemoradiation
- Downstaging 62%, Stable disease 36%, Tumor progression 3%
Anal Sphincter Preservation in Locally Advanced Low Rectal Adenocarcinoma After Preoperative Chemoradiation Therapy and Coloanal Anastomosis

- 32 pts, 17 males, 15 females
- Tumors 4.7 ± 1.1 cm from anal verge
- Radiation: 45 Gy, Chemotherapy: bolus 5-FU
- Bowel prep, surgery 5-6 weeks later
- 22 pts coloanal anastomosis with J pouch, 10 pts straight anastomosis
- 3-year disease free survival 81%
- 4 recurrences: 1 local, 3 local and distant
- Median follow-up 25 months, all pts were alive
Improved Local Control and Survival
Improved Survival with Preoperative Radiotherapy in Resectable Rectal Cancer
Preoperative Radiotherapy for Resectable Rectal Cancer: A Meta-analysis
Thank You