The Long-Lasting Relationship of Distress on Radiation Oncology-Specific Clinical Outcomes

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Symptoms associated with distress in cancer patients:

- Loss of appetite
- Difficulty concentrating
- Sleeplessness
NCCN Distress Thermometer and Problem List for Patients

NCCN DISTRESS THERMOMETER

Instructions: Please circle the number (0–10) that best describes how much distress you have been experiencing in the past week including today.

- Extreme distress
- No distress

PROBLEM LIST

Please indicate if any of the following has been a problem for you in the past week including today. Be sure to check YES or NO for each.

<table>
<thead>
<tr>
<th>Physical Problems</th>
<th>Family Problems</th>
<th>Emotional Problems</th>
<th>Practical Problems</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Dealing with partner</td>
<td>Depression</td>
<td>Child care</td>
</tr>
<tr>
<td>Bathing/dressing</td>
<td>Dealing with children</td>
<td>Fears</td>
<td>Housing</td>
</tr>
<tr>
<td>Breathing</td>
<td>Ability to have children</td>
<td>Nervousness</td>
<td>Insurance/financial</td>
</tr>
<tr>
<td>Changes in urination</td>
<td>Family health issues</td>
<td>Sorrow</td>
<td>Transportation</td>
</tr>
<tr>
<td>Constipation</td>
<td></td>
<td>Loss of interest in</td>
<td>Work/school</td>
</tr>
<tr>
<td>Diarrhea</td>
<td></td>
<td>usual activities</td>
<td>Treatment decisions</td>
</tr>
<tr>
<td>Eating</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fatigue</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Feeling swollen</td>
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<td></td>
<td></td>
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<tr>
<td>Fevers</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Getting around</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Indigestion</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Memory/concentration</td>
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<td></td>
<td></td>
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<tr>
<td>Mouth sores</td>
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<td></td>
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<tr>
<td>Nausea</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Nose dry/congested</td>
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<td></td>
<td></td>
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<tr>
<td>Pain</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sexual</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skin dry/itchy</td>
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<td></td>
<td></td>
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<tr>
<td>Sleep</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Substance abuse</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Tingling in hands/feet</td>
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</tbody>
</table>

Other Problems: ____________________________
Purpose/Objective

• Explore association between the NCCN distress thermometer and radiation oncology-specific outcomes:
  o Missed treatment appointments
  o Inpatient admissions during treatment
  o Delay to starting treatment
  o Weight

• Also, how do social work consults influence our targeted outcomes?
Method

- Retrospective review of 129 NCCN distress thermometers between July 2015 and July 2016 at our institution.

- 54 patients received definitive treatment and were included in this analysis.

- Distress scores were separated into 4 categories based on score:
Results

DISTRESS SCORE BREAKDOWN

<table>
<thead>
<tr>
<th></th>
<th>Severe Distress Scores</th>
<th>Other Distress Scores</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Missed Treatment Appointments</td>
<td>57%</td>
<td>18%</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Hospital Admissions During Treatment</td>
<td>50%</td>
<td>11%</td>
<td>&lt;0.01</td>
</tr>
</tbody>
</table>

*Severe distress NOT associated with delay to starting treatment or weight changes
Results

Discrepancy in Concerns of Patients of Different Race

Distribution of Distress Scores Based on Cancer Stage

Percent with Concern

- Housing
- Insurance/Financial
- Transportation
- Work/School

Distress Score

Cancer Stage (AJCC)

African American  Caucasian

I  II  III  IV

0  2  4  6  8  10

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Conclusions

Severe Distress: increased specific undesirable outcomes

Social work alone did not decrease risk of undesirable outcomes

Need improved resources for patients with severe distress

Study limited by sample size and use of retrospective data
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- Social work alone did not decrease risk of undesirable outcomes
- Need improved resources for patients with severe distress
- Study limited by sample size and use of retrospective data
Recommendations

• The NCCN distress thermometer may serve as a prognostic tool for certain adverse outcomes for patients undergoing radiation therapy

• Early interventions by various members of the multi-disciplinary oncology team, including social work, may have proportionally larger benefits to patients reporting high levels of distress