RESULTS

Table 1: Summary of observed means and frequencies of demographic and covariate data (N = 72)

<table>
<thead>
<tr>
<th>Measure</th>
<th>Mean (SD) / n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>64.8 (8.9) / 40</td>
</tr>
<tr>
<td>Female</td>
<td>37 (51.4%) / 32</td>
</tr>
<tr>
<td>Caucasian</td>
<td>61 (84.7%) / 32</td>
</tr>
<tr>
<td>Married</td>
<td>44 (61.1%) / 28</td>
</tr>
<tr>
<td>Stage IV</td>
<td>44 (61.1%) / 28</td>
</tr>
<tr>
<td>Adenocarcinoma</td>
<td>32 (44.4%) / 28</td>
</tr>
<tr>
<td>Smoking History</td>
<td>58 (80.6%) / 32</td>
</tr>
<tr>
<td>ECOG Score: 0</td>
<td>36 (50.0%) / 28</td>
</tr>
<tr>
<td>Chemotherapy alone</td>
<td>44 (61.1%) / 28</td>
</tr>
<tr>
<td>1st Line of Treatment</td>
<td>53 (73.6%) / 32</td>
</tr>
</tbody>
</table>

Figure 2: Means and standard deviations of outcomes at baseline and 3-4-week follow-up for PMR group (n = 40); 3-4-week follow-up only for SOC group (n = 32)

DISCUSSION

- PMR group showed significant improvements from baseline to follow-up:
  - Dyspnea ($b=2.07$, $p=.071$), controlling for age and ECOG
  - Pain ($b=1.96$, $p=.036$), controlling for smoking status and ECOG
- PMR group compared to SOC group at 3-4-week follow-up:
  - Less pain ($b=2.48$, $p=.046$), controlling for smoking and ECOG
  - Less fatigue ($b=2.44$, $p=.014$), controlling for ECOG

OBJECTIVE

To improve standard of care (SOC) and reduce symptoms after 3-4 weeks as compared to SOC group, by providing PMR training and practice at the first pre-treatment clinic appointment

**WHAT WE LEARNED:** Progressive muscle relaxation intervention is feasible and effective in managing symptom burden among adults with advanced thoracic malignancy.

**INTRODUCTION**

- Patients with lung cancer experience severe and distressing symptoms – including anxiety, dyspnea, insomnia, pain, fatigue
- Management of psychological and physical symptoms is critical, especially at the initial pretreatment visit
- Many interventions targeting these symptoms require much time and effort from patients and providers
- Progressive muscle relaxation (PMR) may effectively reduce symptoms after just one 20-minute training session in the clinic
  - Monitors tension in specific muscle groups – tense/release one at a time, with diaphragmatic breathing
  - Alters stress response by reducing physiologic effects, heart rate, and muscle tension

**METHODS**

- Patients ($N=72$) seeking treatment for advanced (Stage III-IV) lung cancer
- At initial clinic visit, patients in PMR group ($n=40$) met with PMR instructor for 20 minutes.
  - PMR education, instruction, practice
  - Materials provided for home use

**DATA ANALYSIS**

- Linear regression analyses compared:
  - Baseline and 3-4-week assessments for PMR group
  - 3-4-week assessments between PMR and SOC groups
  - Covariates: age, sex, race, relationship status, disease stage and history, smoking history, ECOG score, treatment regimen
  - Alpha level of $p < .10$

**OUTCOMES IN ADVANCED LUNG CANCER**

**RESULTS**

- PMR group compared to SOC group at 3-4-week follow-up:
  - Less pain ($b=2.48$, $p=.046$), controlling for smoking and ECOG
  - Less fatigue ($b=2.44$, $p=.014$), controlling for ECOG

**DISCUSSION**

- PMR training and practice can reduce physical symptoms for patients with advanced lung cancer
- PMR can be implemented in a brief session during the first pretreatment clinic visit – improving SOC practices
- Limitation: Not randomized
- Heightened need for this type of quality improvement research, as new treatments enable longer survival

**ACKNOWLEDGEMENTS**

We would like to give special thanks to the individuals who participated in this study. Without their contribution, research like this would not be possible. Additionally, we would like to thank the staff of the James Thoracic Oncology Clinic and the Stress and Immunity Cancer Projects Lab.

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